

***Exxon Valdez* Oil Spill**

**State Trial Transcript**

**Case Number 3AN-89-2533 civil**

**1994**

**Volume 12 - Volume 24**

**Includes State Court Hearing Excerpts**

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**NOTEBOOK 2**

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- (1) Q Describe what that s all about for the jury
- (2) A Well Section 17(b) required that certain types of
- (3) easements be reserved in Native land claims documents the
- (4) title documents My job among others was to - to look over
- (5) the - or review the Native land conveyance proposed
- determine
- (6) where it would be appropriate to reserve certain trail or camp
- (7) site easements or other type of easements that would show up
- in
- (8) their land conveyance documents
- (9) Q Now you worked at the BLM during what period of time
- (10) please?
- (11) A 72 to 77 approximately
- (12) Q And in your experience at the BLM was the land selection
- (13) process with the BLM and the Alaska Natives did that run
- (14) smoothly and go quickly or were there problems?
- (15) A No it did not proceed smoothly It was a very difficult
- (16) process As a bureaucrat working with ANCSA it was a very
- (17) unusual program something that had never been seen before
- it
- (18) was very difficult to implement
- (19) Q Were the people at the BLM always eager to get the land
- (20) conveyed and in the hands of those that Congress determined
- (21) should have it?
- (22) A Not necessarily It was such a new process that many many
- (23) of us just didn t know how to handle it It was a very new
- (24) program
- (25) Q Now after you completed your work at the Bureau of Land

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- (1) Management did you work for Native corporations?
- (2) A I left BLM in 1977 to join Interior Village Association
- (3) It was a nonprofit corporation in Fairbanks owned by the
- (4) village corporations in the Doyon Region I provided training
- (5) and technical assistance in land and resource matters
- (6) Q Where is the Doyon Region
- (7) A Its s north of here basically north of the village of
- (8) Cantwell up to the Brooks Range from the village of Kaltag out
- (9) in the Yukon to the Canadian border
- (10) Q Who else did you work for on behalf of Native corporations?
- (11) A I had one small job for Nana Corporation and of course
- (12) the Tattilek Corporation
- (13) Q When did you begin working for the Tattilek Corporation?
- (14) A In 1987
- (15) Q What did you do for them?
- (16) A I began by working on the ANCSA 14C Land Conveyance
- Program
- (17) for the corporation ANCSA requires that certain lands be
- (18) reconveyed to individuals who are living on corporate land in
- (19) 1971 The corporation had to establish policies advertise
- (20) their claim and adjudicate those claims My job was to go out
- (21) into the field investigate the claims and make
- (22) recommendations to the board There was approximately 20 to
- 25
- (23) claims
- (24) Q Did you also assist the Tattilek Corporation in the process
- (25) of making land selections under ANCSA?

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- (1) A Not the initial selection no I did not
- (2) Q Did you subsequently do that?
- (3) A I was involved with the corporation in helping them making
- (4) final prioritization of their land selections
- (5) Q Are you familiar with the corporate policies and practices
- (6) of the Tattilek Corporation in making those final selections?
- (7) A Yes I am
- (8) Q Based upon your experience at the BLM your work for these
- (9) other corporations and your work for Tattilek can you
- comment
- (10) upon the duties and priorities of a Native corporation in the
- (11) selection of lands under ANCSA
- (12) A Yes I can The corporations selected their lands for a
- (13) variety of reasons mostly cultural But then there was also
- (14) economic considerations too for the future of the
- (15) corporation
- (16) Q Are there times when decisions relating to economic
- (17) well being of the corporation and its people and the
- (18) preservation of Native life styles and things like that clash
- (19) or where judgments have to be made?
- (20) A You bet That s a day to day occurrence
- (21) Q Are there times when a corporation may elect to forego an
- (22) economic opportunity with their land in order to preserve a
- (23) Native lifestyle issue?
- (24) A That s correct
- (25) Q In the case of Tattilek can you think of any example where

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- (1) that happened?
- (2) A Definitely I was - one of the jobs that I had with the
- (3) corporation was to develop a land use plan and come up with
- (4) some administrative land use administrative policies for the
- (5) corporation I did that in I believe it was 88 and early
- (6) 89 Bligh Island we identified areas that were valuable for
- (7) different resources both subsistence resources and timber for
- (8) example Bligh Island which is directly across Tattilek
- (9) narrows from the village was deliberately set aside by the
- (10) corporation for subsistence purposes and placed off limits to
- (11) development
- (12) Q Were there opportunities to development Bligh Island that
- (13) were foregone because of that decision?
- (14) A Yes there were because Bligh Island has a lot of timber
- (15) on it
- (16) Q In the selection process as you observed it at the BLM
- (17) and as you observed it in your work for Native corporations
- (18) did the issue of potential land swaps or exchanges figure into
- (19) the selection process?
- (20) A Yes that did
- (21) Q First tell the jury what we mean when we talk about land
- (22) swaps or exchanges?
- (23) A Its a very complicated process A land swap is used when
- (24) one party wants to exchange land it has that s valuable
- (25) typically for the federal or state government for lands that it

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- (1) can develop elsewhere and make money on  
 (2) Q And typically when land is swapped to the federal  
 (3) government what is the purpose that the federal government is  
 (4) generally – or the State government is generally interested in  
 (5) obtaining the lands for?  
 (6) A Typically to protect natural resource values wildlife  
 (7) habitat this kind of –  
 (8) Q Does that then leave the land available to Natives for use  
 (9) in the traditional ways?  
 (10) A Typically it does  
 (11) Q And then they in return can obtain land that might have  
 (12) more commercial or economic value in exchange?  
 (13) A That s correct  
 (14) Q So those sorts of things are a good deal for the Native  
 (15) corporation?  
 (16) A If they re done right yes they are  
 (17) Q Now can you think of some areas within the Tattilek  
 (18) selection process that fit that description?  
 (19) A The Tasnuna Pass area and Heather Island area  
 (20) MR PETUMENOS Could I have the map on the screen?  
 (21) BY MR PETUMENOS  
 (22) Q And do I have the witness light pen on? If you wouldn t  
 (23) mind taking your light pen there and put a little color on it  
 (24) Do you know how to do that or could I show you help? That  
 (25) might be good enough just go ahead and point to it

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- (1) A That s Heather Island right there  
 (2) Q And Heather Island was the area where you are describing  
 (3) what in the selection process?  
 (4) A Heather Island was specifically selected for its long term  
 (5) commercial potential which – either development or potential  
 (6) land swap  
 (7) Q Or exchange?  
 (8) A Right  
 (9) Q Where is the Bligh Island area you were talking about that  
 (10) was held off limits to the timber?  
 (11) A This is Bligh Island right there and Tattilek is that  
 (12) point right there  
 (13) Q Right behind it?  
 (14) A Right  
 (15) Q You mentioned Thompson Pass as a potential exchange  
 (16) point?  
 (17) Where is that?  
 (18) A That s off the map in the upper right hand corner  
 (19) Q Tap it twice That was way off the map that s true  
 (20) Okay  
 (21) Now you remember where you were when the Exxon Valdez –  
 (22) let me ask you this do you remember how you found out about  
 (23) the Exxon Valdez running aground?  
 (24) A I ll never forget it A local radio personality in  
 (25) Fairbanks by the name of Gail Malloy woke me up with the news  
 that the Exxon Valdez had gone aground on Bligh Reef

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- (1) Q Now at the time that that happened and you learned that  
 (2) what was your duty or role with the Tattilek Corporation?  
 (3) A I was a land consultant for the Village Corporation  
 (4) Q What did that entail?  
 (5) A Like I described earlier I provided land and resource  
 (6) advice and services to the corporation First on the 14C and  
 (7) then on the land use plan and permits and leases this kind of  
 (8) thing  
 (9) Q Did the Tattilek Corporation also use your services to  
 (10) determine the status of their land at given points in time and  
 (11) ask you to inspect it?  
 (12) A That s correct  
 (13) Q Describe that to the jury and why that s important ?  
 (14) A Well a number of times during the time I worked with the  
 (15) Tattilek Corporation we did field examinations and went out  
 (16) through Port Fidalgo which is this area here  
 (17) Q There it is  
 (18) A There we go  
 (19) Q Before we touch it again hit that where it says color on  
 (20) the right there tap it right there on the margin  
 (21) A Oh here?  
 (22) Q Yeah Okay now you can draw  
 (23) A All right We d usually start out from the village and go  
 (24) Boulder Bay and Landlock Bay Fish Bay and come around in  
 (25) through Two Moon Bay down to – that s Irish Cove – no that s

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- (1) not Irish Cove Come around through there land selections  
 (2) over to Hell s Hole and back On other trips we d go north in  
 (3) the Valdez arm into Galena Bay over to Sawmill Bay and around  
 (4) to Heather Bay Columbia Glacier is up in this area here  
 (5) Q Now why is it important to the corporation that you  
 (6) conduct these land inspections from time to time?  
 (7) A It s a large land area and it s very popular The whole  
 (8) Prince William Sound is very popular and there s a lot of  
 (9) people that go out and camp and otherwise utilize corporation  
 (10) resources and we needed to keep a handle on that to make  
 (11) sure  
 (12) the people weren t occupying the corporation land or using  
 (13) their resources It s private land  
 (14) Q Now soon after the Exxon Valdez went aground did you get  
 (15) a call from Tattilek?  
 (16) A Yes I did I talked to Mrs Gordaoff  
 (17) Q And is that Mary Gordaoff?  
 (18) A That s correct  
 (19) Q What was her position with Tattilek?  
 (20) A She was president of the corporation  
 (21) Q And what is Mary Gordaoff s relationship to Keith Gordaoff  
 (22) the person the jury s heard from?  
 (23) A I believe that she s his mother  
 (24) Q What were you asked to do?  
 (25) A I was asked to come down and work with the corporation and  
 the Tattilek Village Council to survey the Village Corporation

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- (1) lands to see what damages there were and to work with the  
 (2) council in any way that I could  
 (3) Q When did you arrive in the Tattilek area?  
 (4) A Saturday the 25th  
 (5) Q Did you do an inspection?  
 (6) A I flew over the wreck I arrived in Cordova and then I  
 (7) chartered a plane and along with Darrell Olson we flew to  
 (8) Tattilek and picked up Gary Kompkoff who was the Tattilek  
 (9) Village Council president and flew around the wreck  
 (10) Q Then did you get in a boat?  
 (11) A Yes I did  
 (12) Q When did you do that?  
 (13) A It was either late that afternoon or the first thing Sunday  
 (14) morning  
 (15) Q And did you - let s see if we can do one more thing here  
 (16) Perhaps you can exchange it over here just for a minute  
 (17) Okay why don t you give it back to him Can you show me  
 (18) the path that you took?  
 (19) A Sure can we enlarge the Tattilek area?  
 (20) Q Yes just let me have it back one more time How s that?  
 (21) A That s fine  
 (22) Q Why don t you give it back?  
 (23) A The village of Tattilek is here and I believe our first  
 (24) trip with a boat was up through Tattilek Narrows This is  
 (25) Bligh Island here We went through a cut between Busby  
 Island

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- (1) which is here and Bligh Island and out into this general area  
 (2) past this island - this is Reef Island and motored out into  
 (3) here in a skiff The Exxon Valdez was out in here someplace  
 (4) I m not exactly sure But it was quite close to Reef Island  
 (5) We went around Reef Island we went down the southern  
 (6) portion of Bligh Island We also went up north into this bay  
 (7) which is West Bay We went around Busby Island in the Tattilek  
 (8) Narrows Up through the Narrows into Boulder Bay and I think  
 (9) the next day we also went into - into Landlock Bay and Fish  
 (10) Bay and then I think we snuck over into Two Moon and came  
 back  
 (11) to the village  
 (12) MR PETUMENOS Could I get a print of that please?  
 (13) Now can I take this down and it will still print?  
 (14) Did you take a videotape of your - portions of your trip  
 (15) that day?  
 (16) A Pretty much all the trip  
 (17) Q All right  
 (18) MR PETUMENOS Your Honor we have I think an  
 (19) understanding of the preadmission of Exhibit 1122 a videotape  
 (20) which I would move into evidence and play to the jury at this  
 (21) time  
 (22) (Exhibit 1122 offered)  
 (23) MR CLOUGH No objection Your Honor  
 (24) THE COURT That s 1122  
 (25) MR PETUMENOS That s correct Your Honor

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- (1) THE COURT Okay 1122 is admitted  
 (2) (Exhibit 1122 received)  
 (3) (Videotape Played)  
 (4) Off Busby Island as they said all the boats have left  
 (5) Tattilek with the exception of one You can see Bligh Island  
 (6) the oil spill in the middle of the photo and as we pan on the  
 (7) tanker you can see the oil in the water Columbia Glacier  
 (8) Point Freemantle in the background You can see the oil as it  
 (9) spreads out  
 (10) Ellamar is off to the right hand side of the photo  
 (11) Tattilek Narrows as I pan left West Bay is in the immediate  
 (12) center of the picture This is West Bay here Valdez Narrows  
 (13) in the background Valdez Arm Panning left long rectangular  
 (14) island is Reef Island the one in the center of the picture  
 (15) now  
 (16) You can see the oil in the background touching Reef Island  
 (17) the tanker and a boom Point Freemantle in the background  
 (18) Growler Island at the top of the picture Village of Tattilek  
 (19) in the upper right hand corner the Tattilek Narrows Ellamar  
 (20) Cloudman Bay on the foreground West Bay in the back That s  
 (21) West Bay Bligh Island Reef Island the tanker  
 (22) This is a view across Bligh Island from Cloudman Bay As I  
 (23) bring it up closer you can see the grounded tanker on the  
 (24) left the tanker they re off loading on the right hand side  
 (25) off loading to

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- (1) West Bay Valdez Arm Tattilek Narrows Ellamar is now in  
 (2) about the center of the picture That s Tattilek  
 (3) Good morning this is Sunday morning March 26th 1989  
 (4) Tattilek Alaska This is the view from the dock Tattilek  
 (5) Narrows are in front of us Busby Island In the center of the  
 (6) frame directly over this hillside is where the tanker s  
 (7) located That s Busby Island  
 (8) This is Busby Island Tattilek Narrows looking toward  
 (9) Fidalgo and Two Moon Bay That s Two Moon Bay on the  
 (10) right hand side of the frame Tattilek Boulder Mountain -  
 (11) Copper Mountain excuse me The mountains on the left side  
 are  
 (12) the mountains behind and on the other side of Valdez Arm  
 (13) Tattilek Narrows again Busby Island and Bligh Island are now  
 (14) in view Behind this hillside directly in the center of the  
 (15) photo is the location of the tanker grounding  
 (16) Tattilek Narrows Ellamar Copper Mountain Prince William  
 (17) Sound and the tankers  
 (18) That must be Reef Island between us and the tankers - no  
 (19) it s to the left Looking across Valdez Arm in the middle we  
 (20) got Point Freemantle and Glacier Island The grounded tanker  
 (21) is the tanker in the rear The tanker that s taking on oil is  
 (22) the one in the foreground And Reef Island is the island to  
 (23) the left And Busby Island - excuse me Bligh Island Bligh  
 (24) Island and West Bay  
 (25) This is an oil boom on Bligh Island You notice the dead

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(1) duck in the center of the photo Come back toward Tattilek  
 (2) Narrows up Valdez Arm Point Freemantle notice the glacier  
 (3) with - the iceberg with oil on it On the right is the Exxon  
 (4) Valdez On the left is the tanker that s off loading Glacier  
 (5) Island in the background That s Glacier Island Storey  
 (6) Island Peak Island and Naked Island  
 (7) The boat that you see in the center of the screen is Henry  
 (8) Millet s from Tattilek  
 (9) We re at the end of Reef Island looking toward Bligh  
 (10) Island In the background you can see Goose Island as a small  
 (11) speck There s a boom operation Those ducks we looked at  
 (12) earlier they re covered with oil I don t think they re going  
 (13) to last very long  
 (14) This is the head of - north head of Reef Island and as I  
 (15) pan around Bligh Island will come into view This is the  
 (16) shoreline of Bligh Island If you look real close you can  
 (17) begin to see along the shoreline in the center of the picture  
 (18) the tide mark and the oil left on the rocks  
 (19) Tuesday morning March 27th we re looking down from the  
 (20) peak of Reef Island at the Exxon Valdez on the right hand side  
 (21) and on the left hand side the off loading tankers and  
 (22) tugboats The noise in the background is the Alascom crews  
 (23) starting some kind of a four cycle engine  
 (24) As you can see there s no boom around the ship and the  
 (25) oil slick is trailing off to the left There s two ships out

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(1) there but I believe they re both heading down to Knight  
 (2) Island where most of the ships have been - or boats have been  
 (3) deployed  
 (4) (Videotape concluded)  
 (5) BY MR PETUMENOS  
 (6) Q Mr Costello the trip that you took could you describe  
 (7) for the jury how much oil was in the water and around the  
 (8) water how thick it was what it appeared like to you when you  
 (9) were there?  
 (10) A It was - it s really hard to describe It was  
 (11) overwhelming We - when we left Tattilek and -  
 (12) Q Let me stop you here and make sure you re set up  
 (13) A Thank you  
 (14) When we left Tattilek and went through between Busby Island  
 (15) and Bligh Island we started to encounter crude in this area  
 (16) and basically it traveled through patches of crude and then  
 (17) thick deposits of crude all the way around Reef Island until we  
 (18) came around its southern tip The Exxon Valdez was over here  
 (19) and I think there was a boat with a boom out in here  
 (20) someplace  
 (21) The thickness varied We didn t get very close to the  
 (22) Exxon Valdez although I wanted to We were very concerned  
 (23) about the skiff s outboard motor because they re cooled by  
 (24) water and the oil was so thick that we were afraid that if it  
 (25) got down to the depth of the prop or the water intake it would

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(1) overheat the engine and then we d be stuck out there in the  
 (2) midst of all that mess  
 (3) Q There were a couple of scenes in the videotape the one  
 (4) where we saw the oiled bird How far when we saw all that oil  
 (5) gathered behind the boom were you from the shoreline when -  
 (6) when we saw that picture?  
 (7) A The first dead duck was right up against the shore in  
 (8) this - in this little bite right in here between Reef Island  
 (9) and Bligh Island  
 (10) Q Were you close to the shore?  
 (11) A I was within a stone s throw of the shore  
 (12) Q And was the oil very apparent and thick that close to the  
 (13) shore in the water?  
 (14) A It was yes it was  
 (15) Q Now you showed us in the film a high tide strip of giling  
 (16) across the rock And you went back to visit those areas again  
 (17) in subsequent years is that right?  
 (18) A That s correct  
 (19) Q Now it would appear that it s hard to find or there wasn t  
 (20) very much oil on the rocks themselves as compared to what  
 (21) in the water is that right?  
 (22) A That s correct  
 (23) Q And based upon what you saw does the amount of oil that  
 (24) you saw on the shoreline compare to the amount of oil that was  
 (25) in the surrounding waters when you saw it after the spill?

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(1) A There s absolutely no way to make a comparison It s like  
 (2) seeing one of the icebergs typically there s 95 percent or 98  
 (3) percent of the iceberg below the surface of the water and  
 (4) that s the same kind of perception I had when you look at that  
 (5) oil that it s such a thin strip along the beach it has no  
 (6) comparison at all to what was in the water at that time  
 (7) Q And it was in the water very close to the shore?  
 (8) A That s correct  
 (9) Q Based upon your experience with the Tattilek Corporation  
 (10) and the people there do you know whether or not there was  
 (11) substantial amounts of uncertainty expressed - apparent from  
 (12) the shareholders there regarding whether the resources  
 (13) surrounding the land were safe?  
 (14) MR CLOUGH Objection foundation hearsay Your  
 (15) Honor  
 (16) THE COURT Sustained objection is sustained  
 (17) MR PETUMENOS I have no further questions  
 (18) CROSS EXAMINATION OF PAUL C COSTELLO  
 (19) BY MR CLOUGH  
 (20) Q Hi Mr Costello  
 (21) A Good morning  
 (22) Q Good morning sir My name s John Clough I m from down  
 (23) in Juneau and I m here representing Exxon Corporation in this  
 (24) litigation along with some of my co counsel sir  
 (25) Couple things I wanted to clarify about your employment

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- (1) with Tattilek Corporation if I could just to start off This
- (2) wasn't a full time job for you as a consultant was it sir?
- (3) A That's correct
- (4) Q And in fact during that period of time did you have
- (5) full time employment elsewhere?
- (6) A When - when I first started with the corporation in 1987
- (7) I was a full time land consultant Toward the end of my tenure
- (8) with the Village Corporation in 1990 or 91 I was working for
- (9) the State
- (10) Q The State of Alaska?
- (11) A Right
- (12) Q And so your work in 1989 at the time you went to Bligh
- (13) Island that was a part time job for the -
- (14) A It was full time That was essentially my full time
- (15) commitment as a land consultant
- (16) Q Let me rephrase when you went down there how long were
- (17) you there in Tattilek during that trip in March of 1989?
- (18) A Four or five days
- (19) Q And you didn't return again to Tattilek lands until May of
- (20) that year?
- (21) A That's correct
- (22) Q And how long were you down there then?
- (23) A I think for the same period of time
- (24) Q About the same period and during the intervening time you
- (25) were at your regular job with the State?

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- (1) Q Do you recall those observations?
- (2) A Uh huh
- (3) Q Those observations were made on I believe you said
- (4) March 26th which was Sunday when you went out on the boat?
- (5) A Yeah
- (6) Q Do you recall what happened weather wise in that area on
- (7) Sunday afternoon into Sunday night?
- (8) A Sunday was - if I remember Sunday was a pretty calm day
- (9) I think the wind began to pick up on Monday if I remember
- (10) correct and then picked up more on Tuesday
- (11) Q And in fact there was a fairly substantial storm in those
- (12) waters over the course of Sunday into Monday wasn't there?
- (13) A Not that I remember
- (14) Q You do remember the wind picking up let me ask you that?
- (15) A The wind picked up but we were out there both days in a,
- (16) skiff
- (17) Q And wasn't there one day where you weren't able to get out
- (18) there because the wind and waves were too high?
- (19) A I think that was Tuesday
- (20) Q And so it was after that period of time that stretch of
- (21) weather that you came back out again in the skiff and we saw
- (22) that last segment of your video is that correct?
- (23) A No I don't believe that's correct I believe that I was
- (24) out in the skiff in successive days and then the wind did pick
- (25) up and then I - it was a pretty heavy wind We decided not to

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- (1) A No I was at - at my office in Fairbanks I had an office
- (2) in my home
- (3) Q How many people live in Tattilek - or excuse me how many
- (4) people lived there at the time of the spill?
- (5) A It was I'd say around a hundred to a hundred and fifty I
- (6) think
- (7) Q And how many of those if you know were shareholders of
- (8) the corporation?
- (9) A I would say the majority of them were
- (10) Q I'd like you to look at sir what's on the screen as yet
- (11) another map We've got one offer Tattilek lands here It's
- (12) DX15704 and I'd like to ask you generally Is this map a fair
- (13) and accurate representation of the geographic location of the
- (14) lands owned by the Tattilek Corporation?
- (15) A Owned or selected yes
- (16) Q And if I could if it's all right with you I'd like to use
- (17) this map as we go over some of the test - your testimony about
- (18) your trips there in March - trip there in March?
- (19) A Okay
- (20) Q Would this map work for those purposes?
- (21) A I think so
- (22) Q First I'd like to ask you about your observations in the
- (23) oil on the water you were describing for the jury You were in
- (24) Reef Island area?
- (25) A Uh huh

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- (1) go out About that time I hitched a ride into Cordova to talk
- (2) with the Village Corporation president
- (3) Q And I believe you went back out there on the 28th to the
- (4) same waters around Reef Island do you recall that?
- (5) A I don't remember the exact date
- (6) Q Do you remember that you after your trip on about
- (7) March 30th prepared a written report summarizing your
- (8) observations out there?
- (9) A That's correct
- (10) MR CLOUGH Could we have a copy of that please?
- (11) MR CLOUGH Counsel I'm going to put up here what
- (12) has been marked as DX1544 and I believe a copy was
- (13) previously
- (14) presented to you
- (15) MR PETUMENOS I'm sure it was Could I just look at
- (16) it for one second?
- (17) MR CLOUGH Sure
- (18) MR PETUMENOS I have no objection Your Honor
- (19) BY MR CLOUGH
- (20) Q I'm going to have my first experience with the Elmo here
- (21) so give me a moment There we go I understand this is going
- (22) to be somewhat hard to read but for now I'd just like to ask
- (23) you generally Mr Costello if you recognize DX1540 as a
- (24) report you wrote in 1989 summarizing your observations of the
- (25) days before?
- (26) A That's correct that's mine

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- (1) Q And I'd like to if I could direct your attention to  
 (2) what's going to be Page 4 of that report and I've got the  
 (3) highlighted copy here and if you would like sir I can give  
 (4) you - in fact I will give you a complete copy of the report  
 (5) up there if there's anything you want to refer to in it  
 (6) MR CLOUGH Permission to approach the witness Your  
 (7) Honor  
 (8) THE COURT Okay  
 (9) BY MR CLOUGH  
 (10) Q All I wanted to draw your attention to sir on Page 4 was  
 (11) the highlighted language there and specifically at the top  
 (12) this is describing your second trip out after the wind and the  
 (13) waves It says we did not see any oil slicks around Reef  
 (14) Island  
 (15) Do you recall that that was the case when you went back out  
 (16) there after the weather?  
 (17) A That's correct  
 (18) Q And looking a little bit farther down it said concerning  
 (19) West Bay our investigation of West Bay indicated that whatever  
 (20) oil had been there for two days before had disappeared for  
 (21) whatever reason?  
 (22) A Whatever was on the surface right  
 (23) Q That's all I'm talking about is the oil you had seen on the  
 (24) surface so by the time you had gone back out there on  
 (25) March 28th the thick oil that you had seen on the surface was

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- (1) gone?  
 (2) A That's correct  
 (3) Q Now I'd like to ask you just a couple of questions sir  
 (4) about the oil that you described and the videotape as having  
 (5) been on the shoreline Can you locate for us on the map where  
 (6) that spot was?  
 (7) A Do you want me to blow that section up around Bligh  
 (8) Island?  
 (9) Q In fact we can - we've got a better map of Bligh Island  
 (10) why don't we put that one up there If you'll bear with me for  
 (11) one moment sir I think I can give you a better version Does  
 (12) this work a little better?  
 (13) A That's fine I can't - oh there you go get the color  
 (14) on The - what was the question again please?  
 (15) Q Sure I just wanted to see if you could locate for us where  
 (16) on Bligh Island the shoreline oiling the band of oil where  
 (17) you said if you look real close you can see the tide mark and  
 (18) the oil left on the rocks if you could show us where that  
 (19) was  
 (20) A It was right in here  
 (21) Q Okay And in the course of your videotape that was the  
 (22) only portion of oiled shoreline that your videotape depicted  
 (23) isn't that correct sir?  
 (24) A That's correct  
 (25) Q And in fact in the course of your investigations that

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- (1) was the only place where you personally observed any oil on  
 the  
 (2) shore of Bligh Island isn't that correct sir?  
 (3) A That's correct  
 (4) Q You didn't at any time sir see any oil on the shoreline  
 (5) of Reef Island did you?  
 (6) A I saw a lot of crude around the shoreline of - of Reef  
 (7) Island I couldn't get on this shore of Reef Island It's  
 (8) pretty vertical And there's a lot of wave action there on  
 (9) that particular day We could get on Reef Island by coming  
 (10) around this side here there's a little cove right there  
 (11) Q But my question to you is Did you ever personally observe  
 (12) any oil on any of the shores of Reef Island?  
 (13) A No I did not  
 (14) Q And did you ever personally observe any oil on any of the  
 (15) shores of Busby Island?  
 (16) A No I did not  
 (17) Q If I could go back to the parcel map please Are all -  
 (18) to your knowledge are all the parcels of land owned by the  
 (19) Tatitlek Corporation shown on what's been marked as  
 defendant's  
 (20) 15704 as on the screen here sir?  
 (21) A That's correct And there are some selected lands the  
 (22) last I knew were still selected and not conveyed  
 (23) Q Thank you again for that clarification  
 (24) Looking again to the Heather Bay lands to the northwest  
 (25) portion you never observed any oil on any of those properties

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- (1) did you sir?  
 (2) A No I did not  
 (3) Q Did you ever observe any oil on the Sawmill Bay properties?  
 (4) A No I did not  
 (5) Q Did you ever observe any oil whatsoever on the Galena Bay  
 (6) properties?  
 (7) A No  
 (8) Q Did you ever observe any oil whatsoever on the shorelines  
 (9) of the Boulder Bay properties?  
 (10) A No I did not  
 (11) Q Did you ever observe any oil sir on the shorelines of  
 (12) Landlock Bay?  
 (13) A No  
 (14) Q Did you ever observe any oil whatsoever sir on the lands  
 (15) of Port Fidalgo?  
 (16) A No  
 (17) Q Did you ever observe any oil sir whatsoever in the Whalen  
 (18) Bay parcel?  
 (19) A No  
 (20) Q And did you ever observe any oil in that lump them  
 (21) together the whole area surrounding Two Moon Bay?  
 (22) A No I did not  
 (23) Q And in fact the only oil you ever observed on any portion  
 (24) of Tatitlek land was that one cove on Bligh Island is that  
 (25) correct?

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- (1) A That s correct  
 (2) Q Could you using the color pen mark on this map I think  
 (3) you can see now where that cove was?  
 (4) A (Witness complies)  
 (5) Q Now according to the scale here Mr Tatitlek - excuse me  
 (6) Mr Costello I apologize sir  
 (7) A Not a bad name really  
 (8) Q It s a good name and I m working on Tatitlek because I  
 (9) understand that is the proper pronunciation  
 (10) According to the scale you ve got something over a mile  
 (11) long there The striping you observed wasn t nearly that long  
 (12) was it?  
 (13) A No it was not  
 (14) Q In fact it was only about an eighth of a mile long wasn t  
 (15) it?  
 (16) A Somewhere in that vicinity  
 (17) Q Could you mark in the margin with the marker pen  
 (18) one eighth  
 (19) of a mile or approximately one-eighth of a mile so when we  
 (20) submit this to the jury when they re out In the Sound you can  
 (21) put length of marking approximately We ll use that and put  
 (22) that out - I m sorry I meant literally write on it one-eighth  
 (23) of a mile I m sorry I apologize  
 (24) And then just put an arrow back towards the - towards the  
 (25) area of the cove that was oiled so we know approximately what  
 (26) we re talking about That s fine Could we have a print of

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- (1) that please?  
 (2) While they re printing that I had just a - and I can now  
 (3) delete this screen Thank you  
 (4) If we could put it back up again without the - the parcel  
 (5) map Just a couple of quick questions on the selections sir  
 (6) You indicated a number of the selections made by the  
 (7) Tatitlek Corporation were for various types of commercial or  
 (8) development purposes do you recall that?  
 (9) A That s correct  
 (10) Q And isn t it true that the Sawmill Bay portion was selected  
 (11) as a potential recreational development site?  
 (12) A Either that or a land exchange  
 (13) Q And the - I believe also the Heather Bay was selected for  
 (14) potential commercial development as a recreational site?  
 (15) A Either that or land exchange  
 (16) Q And the Whalen Bay parcel I believe was selected for  
 (17) timbering wasn t that correct?  
 (18) A I believe that was one of the values  
 (19) Q In fact Tatitlek has conducted considerable timbering  
 (20) operations throughout its lands hasn t it?  
 (21) A As part of an effort to generate income for the  
 (22) corporation yes  
 (23) Q And they ve conducted timbering operations at Two Moon  
 (24) Bay  
 (25) area?  
 (26) A That s correct

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- (1) Q And in the landlocked bay area?  
 (2) A Not that I m aware of no that s not part of the timber  
 (3) contract  
 (4) Q The timbering operations conducted by Tatitlek were going  
 (5) on at least some of them prior to the oil spill weren t  
 (6) they?  
 (7) A I believe there were some being initiated at that time  
 (8) Q And in fact at the time of the oil spill I believe down  
 (9) at two moon some portion of the videotape you mentioned that  
 (10) they re putting in logging roads to do further operations down  
 (11) there?  
 (12) A That was in the Two Moon Bay area  
 (13) Q And the logging in that area continued unabated after the  
 (14) oil spill didn t it?  
 (15) A To my knowledge it did It might have stopped  
 (16) occasionally for seasonal reasons  
 (17) Q Let me ask you this To your knowledge did those logging  
 (18) operations were they interrupted at all as a result of the oil  
 (19) spill?  
 (20) A I don t know  
 (21) Q And finally Mr Costello - oh do we have that printout  
 (22) now? It s coming okay  
 (23) Finally Mr Costello are you aware that I guess during  
 (24) about 1990 Tatitlek Corporation started a mariculture project  
 (25) in the village?

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- (1) A That s correct  
 (2) Q To raise oysters?  
 (3) A Right  
 (4) Q And you were still working as their land consultant at that  
 (5) time?  
 (6) A Yes on a part time basis  
 (7) Q And can you describe the mariculture project for us a  
 (8) little bit?  
 (9) A Not very well It actually was not the corporation but  
 (10) the Village Council that did the project And I wasn t really  
 (11) directly involved with it  
 (12) Q Were they raising oysters there?  
 (13) A Oysters and butter clams I believe  
 (14) Q And they were raising them in the waters off the coast of  
 (15) the village?  
 (16) A That s correct They were located I believe here and out  
 (17) in Boulder Bay  
 (18) Q And in fact those oysters starting a couple years ago  
 (19) have actually been marketed here in Anchorage as Aleutic Pride  
 (20) oysters?  
 (21) A That s correct  
 (22) MR CLOUGH Your Honor I d like to move into  
 (23) evidence DX15704 as marked upon by the witness  
 (24) (Exhibit DX15704 offered)  
 (25) MR PETUMENOS No objection Your Honor

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- (1) THE COURT It's admitted 15704  
 (2) (Exhibit 15704 received)  
 (3) MR CLOUGH No further questions Thank you  
 (4) Mr Costello  
 (5) MR PETUMENOS I have no redirect  
 (6) THE COURT You may step down thank you  
 (7) MR FORTIER Your Honor the plaintiffs call Mr Dan  
 (8) Lawn It will be just a moment Your Honor  
 (9) THE CLERK Sir would you please step up into the  
 (10) witness box Would you put the microphone onto your tie and  
 (11) remain standing for the oath Would you raise your right  
 (12) hand?  
 (13) (The Witness Is Sworn)  
 (14) THE CLERK Thank you You may be seated  
 (15) Sir for the record would you please state your full name?  
 (16) A Daniel Lawn L a w n  
 (17) THE CLERK And what is your occupation?  
 (18) A I'm an environmental engineer for the Department of  
 (19) Environmental Conservation in Valdez Alaska  
 (20) THE CLERK Thank you  
 (21) DIRECT EXAMINATION OF DANIEL LAWN  
 (22) BY MR FORTIER  
 (23) Q Good morning Mr Lawn If you need some water there's  
 (24) some right in front of you there  
 (25) Mr Lawn how long have you been employed by the State of

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- (1) Alaska as an environmental engineer?  
 (2) A Oh since 1977  
 (3) Q What does an environmental engineer do?  
 (4) A Oh we do a lot of things deal with environmental issues  
 (5) which include drinking water waste water solid waste oil  
 (6) air quality water quality  
 (7) Q And where do you live now?  
 (8) A Valdez Alaska  
 (9) Q And where did you live when you began working for the State  
 (10) in 1977?  
 (11) A Valdez Alaska  
 (12) Q When you were working for the State in Valdez Alaska  
 (13) between 1977 and 1989 can you describe briefly to the jury  
 (14) what your duties were?  
 (15) A Well I was initially hired as the - as an environmental  
 (16) engineer for the State I dealt with the tankers and in the  
 (17) terminal I developed the State's oil tanker inspection  
 (18) program and dealt with a number of environmental issues  
 (19) dealing  
 (20) with the oil industry  
 (21) Q Now you were employed in Valdez in March of 1989 weren't  
 (22) you for the State?  
 (23) A I was  
 (24) Q Okay And what was your job at the time in 1989 for the  
 (25) State?  
 (26) A I was the principal investigator dealing with Alyeska oil

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- (1) tanker issues Principally ballast water air quality  
 (2) contingency plan tanker inspection issue I was also the  
 (3) district office supervisor  
 (4) Q Mr Lawn will you tell the jury how you first heard about  
 (5) the Exxon Valdez at Bligh - Bligh Reef?  
 (6) A I received a phone call from the terminal operations  
 (7) control center refer to it as OCC notifying me as a state  
 (8) person that the Exxon Valdez had run aground on Bligh Reef in  
 (9) Prince William Sound  
 (10) Q And about what time was this Mr Lawn?  
 (11) A Oh it was around 1 00 a m or so  
 (12) Q You were at home I take it?  
 (13) A I was asleep at home yes  
 (14) Q And what did you do after you received the call?  
 (15) A I immediately called the Coast Guard to discuss the issue  
 (16) with them because the terminal people had very scant  
 (17) information When I identified myself to the Coast Guard  
 (18) Commander McCall commander heard my name and took the  
 (19) phone  
 (20) and then we discussed what the Coast Guard knew and what  
 (21) our  
 (22) options were  
 (23) Q What if anything did you do next?  
 (24) A Immediately afterwards I called my supervisor in Anchorage  
 (25) to notify him of the incident and requested additional DEC  
 (26) people be notified and immediately sent to Valdez  
 (27) Q Did you request anything else Mr Lawn at that time?

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- (1) A Well requested aircraft or helicopter from Anchorage and  
 (2) about a half dozen to eight other people  
 (3) Q And then what can you tell us what happened next  
 (4) Mr Lawn?  
 (5) A Well then I went to the office and made another phone call  
 (6) or two and looked - to other DEC people Some of my staff in  
 (7) Valdez happened to be training in Anchorage so I had to call  
 (8) wives to find out where they were and then got my gear  
 (9) cameras video cameras and notebook and went to the Coast  
 (10) Guard  
 (11) Q Why did you go to the Coast Guard?  
 (12) A Well during my initial conversation with Commander McCall  
 (13) the Coast Guard was going to send some people out there and  
 (14) I  
 (15) was going to go along with them So I went to the Coast Guard  
 (16) to meet their two investigators that were going to go to the  
 (17) ship and then go on out to the - to their dock with the pilot  
 (18) what was to pick us up and take us to the ship  
 (19) Q And what kind of a boat did you - did you get on a boat a  
 (20) Coast Guard boat?  
 (21) A It was a fast pilot boat rather small boat I don't  
 (22) recall the name of it  
 (23) Q About what time of the morning was this Mr Lawn?  
 (24) A I would guess somewhere between 2 00 and 2 30  
 (25) Q It was between 2 00 and 2 30 that you departed from the  
 (26) dock is that correct?

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- (1) A In that - in that neighborhood Might have been a little  
 (2) later than that  
 (3) Q And this would be on March 24th?  
 (4) A That s correct  
 (5) Q And how long did it take you to get from Valdez to where  
 (6) the Exxon Valdez was?  
 (7) A Well I don t know Half hour to an hour I don t  
 (8) recall We arrived near the ship at a little after 3 00 a m  
 (9) Q And did you take a video of your arrival?  
 (10) A Yes I shot some footage as we approached the ship and as  
 (11) we waited there at the ship going around behind it had to wait  
 (12) for them to change the boarding ladder s location before we  
 (13) could board the ship  
 (14) Q And approximately what time did you board the Exxon  
 Valdez?  
 (15) A It was around 3 30 in the morning  
 (16) Q And while you were on the Exxon Valdez did you continue  
 (17) the take videos?  
 (18) A Periodically I would shoot some more video to document  
 what  
 (19) my observations were  
 (20) Q Now Mr Lawn you ve had an opportunity to review the  
 (21) video is that correct?  
 (22) A Yes  
 (23) Q And does the video portion that you have reviewed  
 (24) accurately describe or accurately reflect what you saw on the  
 (25) Exxon Valdez?

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- (1) A Yes  
 (2) MR FORTIER Your Honor we do have a stipulation  
 (3) with the portion of that video At this time I d move for its  
 (4) admission  
 (5) (Exhibit 268 offered)  
 (6) THE COURT Sure What s the number?  
 (7) MR FORTIER I believe it is 368 - I m sorry 268  
 (8) Your Honor  
 (9) THE COURT 268 is admitted by stipulation  
 (10) (Exhibit 268 received)  
 (11) THE COURT You want to play it now counsel?  
 (12) (Videotape Played)  
 (13) Glacier Island off the bow there Glacier Island light is  
 (14) about bearing 280 degrees which puts it about a point off the  
 (15) port bow In the background here zooming in on it now is the  
 (16) buoy number six right there which is about a mile mile and a  
 (17) half away Oil appears to be drifting to the buoy Up here on  
 (18) another vantage point That s Naked Island in the background  
 (19) Oil in the water  
 (20) See a small iceberg There is a little bit of ice out  
 (21) here See the chunks that you see in the oil slick are  
 (22) icebergs There s the buoy oil slick icebergs There s the  
 (23) buoy There s some ice Swinging back to the north here see  
 (24) ice That would be Glacier Island in the background entrance  
 (25) to Columbia Bay right over there Ice in the background See

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- (1) ice there s the Stons standing to and ice here And there s  
 (2) the vessel the Exxon Valdez hard aground and Reef Island  
 (3) right here up on it  
 (4) On the starboard side of the vessel looking at the oil in  
 (5) the water beside the vessel very thick here starboard side of  
 (6) the vessel There s the stern The Narrows in the background  
 (7) here zooming in on the Narrows Valdez Narrows Got a boat  
 (8) here 32 footer It s trying to survey the edge of the oil  
 (9) see where it - where it goes That iceberg there as far as  
 (10) size is concerned is the size of a large conference table  
 (11) Looks like most of the heavy oil is coming out on the starboard  
 (12) side which is also indicated by the ullage soundings in the  
 (13) tanks and looks like it s just drifting around the bow and the  
 (14) stern of the tanker moving on downwind  
 (15) You can see it leaking there by five five port You can  
 (16) see it leaking here five center It s leaking all along the  
 (17) starboard side of the vessel which is what s indicated by the  
 (18) Sound soundings  
 (19) There s the buoy where the oil is out past it You can see  
 (20) the oil still bubbling out here beside the ship That s about  
 (21) five or so four or five These are about five right here and  
 (22) this is four here where it s bubbling up and that s moving  
 (23) towards three Three is about amidships where these folks are  
 (24) standing Right about there is midships That s about three  
 (25) and you can see it bubbling other pilot boats

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- (1) (Videotape concluded)  
 (2) BY MR FORTIER  
 (3) Q Mr Lawn can you describe to the jury what the condition  
 (4) of the sea was as you approached the Exxon Valdez that  
 (5) evening - or that morning excuse me?  
 (6) A As we approached a little after 3 00 and it was pretty  
 (7) calm almost no breeze blowing  
 (8) Q And as you approached when did you start encountering  
 oil?  
 (9) A Well the oil as you could see in the video there the oil  
 (10) was fairly close to the ship because the current was moving  
 (11) out or to the south and we approached from the north So it  
 (12) was out away from the ship a few feet to maybe 50 feet or so  
 (13) on the north side of the ship  
 (14) Q And when you - did you go around the ship when you  
 (15) approached it?  
 (16) A Yes You re missing about the first three minutes of the  
 (17) videotape that shows the approach as well as some shots from  
 (18) the stern of the ship although they re very dark you could  
 (19) make - make out what was there We went around to the stern  
 (20) of the ship while we were waiting for them to move the boarding  
 (21) ladder  
 (22) Q And as you went around to the stern of the ship Mr Lawn  
 (23) did you encounter oil?  
 (24) A Oh yes Actually we were in the oil We changed from  
 (25) the small boat that we were on to a larger pilot boat that was

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- (1) sitting in the oil The idea was to keep the small boat out of  
 (2) the oil and so we were in the oil as we were around the stern  
 (3) of the ship and you could get a real presence of the oil there  
 (4) with smell and heavy fumes  
 (5) Q And as you went through the oil on the larger vessel were  
 (6) you able to make any determination as to the thickness of the  
 (7) oil?  
 (8) A Well it was really hard to determine My impression was  
 (9) that as we were close to the ship we were essentially floating  
 (10) in oil as opposed to the sea  
 (11) Q And when you left the vessel - when did you leave the  
 (12) vessel Mr Lawn?  
 (13) A In the late afternoon early evening  
 (14) Q And what did you use to leave the vessel boat?  
 (15) A I m sorry?  
 (16) Q Did you leave the vessel with a boat?  
 (17) A Yes I did  
 (18) Q And in which direction did you leave the vessel?  
 (19) A We went to the north back to Valdez  
 (20) Q And did you again go through oil?  
 (21) A Not to the north of the vessel no  
 (22) Q Now did you note as you were on the vessel that oil  
 (23) continued to leak from the vessel?  
 (24) A Yes My videotape is kind of a form of taking notes of my  
 (25) observations but oil continued to leak for several hours It

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- (1) was leaking very fast when I was first on the boat and you  
 (2) could see that as we climbed the ladder there was a rolling  
 (3) boil coming up along the side of the vessel And then as the  
 (4) day went on it - the leak slowed down And you can see in  
 (5) this video footage it was after daylight it was considerably  
 (6) slower I have that documented in my field notes  
 (7) Q And Mr Lawn did you make any other overflights of the  
 (8) Prince William Sound area between March 24th and April 30th  
 (9) of  
 (10) 1989?  
 (11) A Flew - flew about every day yes  
 (12) Q And in any of those overflights did you overfly the area  
 (13) known as Point Helen?  
 (14) A I did  
 (15) Q Can you describe to the jury where Point Helen is?  
 (16) A Well it s on the southern - I guess without a chart  
 (17) probably it s the southern tip of Knight Island  
 (18) Q And Mr Lawn during your fly fly overs can you tell us  
 (19) when you flew over the Point Helen area?  
 (20) A Well part of my duty was to go out in the Sound every day  
 (21) and so we flew it practically every day and went to a specific  
 (22) point and so I was flying past the southern tip of Knight  
 (23) Island almost every day  
 (24) Q And on any of your overflights over Knight Island over the  
 (25) Point Helen area did you ever notice a boom?  
 (26) A There was one piece of boom attached to the southern tip of

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- (1) Knight Island kind of hanging out to the east area or  
 (2) southeast  
 (3) Q That was - tell us what that boom was doing please  
 (4) MR CLOUGH Excuse me foundation Your Honor  
 (5) THE COURT I don t understand the objection  
 (6) counsel  
 (7) MR CLOUGH He asked what the boom was doing I have  
 (8) no objection to describing the boom but what the boom was  
 (9) doing He wasn t on the ground it was from an airplane  
 (10) THE COURT Rephrase your question please  
 (11) MR FORTIER I will Your Honor  
 (12) BY MR FORTIER  
 (13) Q Tell us what you observed the boom doing Mr Lawn?  
 (14) A Well from the helicopter we had we watched it  
 (15) periodically It was just hanging out there trapping oil as it  
 (16) was coming down the shoreline but there were no collection  
 (17) devices so the oil was going around the end of it or under it  
 (18) and really wasn t being tended so that as the tide went in and  
 (19) out sometimes the boom would be up off the water next to the  
 (20) shore and oil was going right past it respectfully not  
 (21) performing any significant function  
 (22) Q Mr Lawn while you were observing the boom were you able  
 (23) to determine its length?  
 (24) A It looked like it might be a section or two of boom so it  
 (25) could be 100 200 feet something in that neighborhood I

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- (1) wasn t - I didn t measure it precisely  
 (2) Q And approximately how many times did you observe that  
 (3) boom?  
 (4) A Well it would be several times I can t give you a  
 (5) specific number  
 (6) THE COURT Counsel we re about to take a break you  
 (7) can pick the time  
 (8) MR FORTIER Okay  
 (9) THE COURT Right now  
 (10) MR FORTIER I have - sure Your Honor this would  
 (11) be a great time to take one  
 (12) THE COURT Okay  
 (13) THE CLERK Please rise This court stands in  
 (14) recess  
 (15) (Jury out at 10 02 a m )  
 (16) (Recess from 10 02 a m to 10 22 a m )  
 (17) (Jury in at 10 22 a m )  
 (18) THE CLERK Please rise This court now resumes its  
 (19) session Please be seated  
 (20) MR FORTIER Your Honor Mr Lawn had to step out for  
 (21) just a couple seconds We apologize  
 (22) THE COURT That s all right  
 (23) MR PETUMENOS Perhaps Your Honor while we have a  
 (24) moment a few housekeeping matters?  
 (25) THE COURT Sure  
 (26) MR PETUMENOS I would like to move into evidence

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- (1) what I have marked as Exhibit 1122A That s the same number as
- (2) the videotape and it is the path of Mr Costello that was
- (3) recorded by him when he was testifying
- (4) (Exhibit 1122A offered)
- (5) THE COURT 1122A is admitted
- (6) (Exhibit 1122A received)
- (7) MR PETUMENOS And I think there is some confusion
- (8) about whether I moved into evidence yesterday the photograph of
- (9) the little animals that were circled by Dr Peterson yesterday
- (10) which I had marked as 251 4A which is a similar document
- (11) Judge which is the one he circled with the different kinds of
- (12) animals yesterday Since I know I passed it around to the
- (13) jury I think I moved it into evidence but the clerk doesn t
- (14) have any record of it In any event I move 251 - what did I
- (15) say?
- (16) THE COURT 4A
- (17) MR PETUMENOS 4A into evidence
- (18) (Exhibit 251 4A offered)
- (19) MR CLOUGH If I could have a moment to check with
- (20) Ms Smith - Mr Diamond just spoke we have no problem with
- (21) that
- (22) THE COURT 251 4A is admitted
- (23) (Exhibit 251 4A received)
- (24) MR CLOUGH As long as we are housekeeping if I
- (25) could get one more out of the way I had moved in as a

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- (1) printout 15704 I think for record purposes if we could make
- (2) that 15704A since it included an edit or mark on it by the
- (3) prior witness Mr Costello as 15704A
- (4) MR PETUMENOS Judge we can t have that
- (5) THE COURT 15704A is admitted
- (6) (Exhibit 15704A received)
- (7) MR PETUMENOS I m going to check on - oh there he
- (8) is I found him
- (9) THE COURT Went right past you
- (10) Go ahead counsel
- (11) MR FORTIER Thank you Your Honor
- (12) BY MR FORTIER
- (13) Q Mr Lawn do you recognize that area of Prince William
- (14) Sound that s being shown to you?
- (15) A I do
- (16) Q Let s see what I d like to have you do is point out to the
- (17) jury where Point Helen is
- (18) A Do I use the pen?
- (19) MR FORTIER If I could approach the witness
- (20) BY MR FORTIER
- (21) Q Yeah I think you can use the pen
- (22) A Here s the tip
- (23) Q What you might want to do Mr Lawn is to tap the screen
- (24) down where it says color area Okay now go ahead and
- (25) switch it over to him and Mr Lawn if you could then draw

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- (1) a - if you could a point or something at Point Helen area
- (2) A Right - right here at the tip of the pencil
- (3) Q Do you want to just draw a circle around there?
- (4) A (Witness complies)
- (5) Q Now if I could have it back to me what I d like to do is
- (6) blow this up a little bit
- (7) Okay Mr Lawn for the color part of this I ve turned on
- (8) the color again What I d like for you to do if you could is
- (9) to draw a - the line of the boom that you described just
- (10) before we took the break at Point Helen
- (11) A Well the problem we re going to have here is the length of
- (12) the boom that was there was so insignificant against the scale
- (13) of what s here I really can t draw anything that would be
- (14) meaningful but I could make a guess - well get it in the
- (15) right spot the lower red point that it s certainly not to
- (16) scale the boom here looks like it s much longer than actuality
- (17) it was
- (18) Q And Mr Lawn if you could then off to the - perhaps in
- (19) the middle of the ocean there middle of Prince William Sound
- (20) if you could just write the size of the boom that you observed?
- (21) A I m going to put a range I m going to call it 100 to 300
- (22) feet
- (23) Q Okay
- (24) A In that neighborhood
- (25) Q And Mr Lawn in your testimony you indicated that there

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- (1) was oil that went by the boom?
- (2) A Yes Can I point out without drawing a line on it? Oil
- (3) was coming down what would be the eastern southeastern
- (4) shore
- (5) of Knight Island as well as down this other direction And it
- (6) was kind of following from Herring Bay here kind of following
- (7) the shoreline down in this direction
- (8) Q Okay in the direction your pen moved would you mind
- (9) drawing the lines in for the oil that you observed?
- (10) A Okay
- (11) Q Okay And could you tell us what the name of the island is
- (12) or the area that you re pointing towards there?
- (13) A This is LaTouche Island I believe and Sleepy Bay there
- (14) as I recall
- (15) Q And Mr Lawn in what direction is Sawmill Bay?
- (16) A Well the closest Sawmill Bay the one at the village of
- (17) Chenega is over in this area right here There is another
- (18) Sawmill Bay that s up near the Narrows going into Valdez
- (19) Q Okay Now the Sawmill Bay that you ve just described with
- (20) the circle around it where the village of Chenega is located
- (21) did you in any of your overflights note oil going into that
- (22) area?
- (23) A Yes In fact the oil that came down through the Sound
- (24) from the north down to the southwest I guess was going on
- (25) this side of LaTouche Island as well as the other side of
- (26) LaTouche Island as well as both sides of Knight Island And

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- (1) so it was coming and trying to get into any bay that kind of  
 (2) pointed northward kind of like a catcher s mitt so there was  
 (3) oil that was attempting to get into Sawmill Bay  
 (4) Q And can you draw generally describe the path of the oil  
 (5) that you observed?  
 (6) A Well oil was going in this direction It was going in  
 (7) this direction It was going here as well as here  
 (8) Q Now Mr Lawn the boom that you ve depicted as 100 to 300  
 (9) feet off of - 100 to 300 foot length off of Point Helen Was  
 (10) that catching oil as if it was a catcher s mitt?  
 (11) A Well it would intercept oil The problem was I never  
 (12) observed anybody picking it up so it was going under the  
 boom  
 (13) around the boom The boom was not maintained well so when  
 the  
 (14) tide went out it would be sometimes elevated against some of  
 (15) the rocks near the shore so the oil was going underneath it  
 (16) I remarked many times that it would have been a very effective  
 (17) place to pick up oil had anybody been recovering it there  
 (18) Q And Mr Lawn do you know the approximate distance  
 between  
 (19) Point Helen and what you described as the north end of  
 LaTouche  
 (20) Island?  
 (21) A I don t recall Several miles  
 (22) Q And finally Mr Lawn with regard to the video that we  
 (23) observed today did that video - was that video in your  
 (24) opinion of a good quality?  
 (25) A Absolutely not It was - the colors were terrible it

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- (1) looked to me like it was a several generation copy of the  
 (2) footage that - the entire footage that I shot And the first  
 (3) part the first three or four minutes were missing  
 (4) Q What was the color of the oil that you observed while on  
 (5) the Exxon Valdez?  
 (6) A Well it - it was dark blackish brown in color and it  
 (7) was - even at night it was clear that you could distinguish  
 (8) between the edge of the oil and the water even though the  
 (9) water was kind of a dark bluish green color  
 (10) MR FORTIER I d like to have a copy of this  
 (11) I have no further questions of Mr Lawn at this time And  
 (12) I d like - oh excuse me Your Honor I d like to have the  
 (13) copy marked after that  
 (14) THE COURT Sure  
 (15) CROSS EXAMINATION OF DANIEL LAWN  
 (16) BY MR CLOUGH  
 (17) Q Hi Mr Lawn As I think you know I m John Clough Just  
 (18) literally two questions for you lawyer s two questions  
 (19) You saw Point Helen on several occasions?  
 (20) A I did  
 (21) Q It s fair to say it was very heavily oiled wasn t it?  
 (22) A Yes  
 (23) Q Did you also see - if I can use the screen here is this  
 (24) Sleepy Bay right down in there?  
 (25) A I think that s correct

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- (1) Q In your overflights did you observe Sleepy Bay on a number  
 (2) of occasions?  
 (3) A Yes I did  
 (4) Q It was very heavily oiled wasn t it?  
 (5) A Correct it was catching oil  
 (6) Q In fact it caught an awful lot of the oil that was swept  
 (7) down right in the line along your arrow didn t it?  
 (8) A Yes  
 (9) MR CLOUGH No further questions Your Honor  
 (10) THE COURT You may step down sir Thank you very  
 (11) much  
 (12) MR FORTIER Your Honor I d move admission of I  
 (13) believe it s PX1511  
 (14) THE COURT 1511?  
 (15) MR FORTIER Yes  
 (16) (Exhibit 1511 offered)  
 (17) THE COURT This is 1511 counsel  
 (18) MR CLOUGH No objection  
 (19) THE COURT 1511 is admitted  
 (20) MR FORTIER Your Honor if I could correct myself  
 (21) it s 1511A  
 (22) THE COURT 1511A okay  
 (23) (Exhibit 1511A received)  
 (24) MR PETUMENOS Your Honor the plaintiffs would next  
 (25) call Dr Richard Kocan

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- (1) MR CLOUGH Defense team will reshuffle their seats  
 (2) with the Court s permission  
 (3) THE COURT Sure  
 (4) THE CLERK Sir would you please step up into the  
 (5) jury box  
 (6) MR DIAMOND Your Honor before the witness takes the  
 (7) stand we have our resident herring expert Mr Karlberg conduct  
 (8) the examination if I could move his admission for that  
 (9) purpose  
 (10) THE COURT Certainly  
 (11) THE CLERK Sir would you clip the microphone onto  
 (12) your tie And would you raise your right hand  
 (13) (The Witness Is Sworn)  
 (14) THE CLERK Thank you you may be seated  
 (15) Sir for the record would you please state your full name  
 (16) THE WITNESS Richard Michael Kocan  
 (17) THE CLERK Would you spell your last name  
 (18) THE WITNESS K o c a n  
 (19) THE CLERK And what is your occupation?  
 (20) THE WITNESS I am professor in the School of  
 (21) Fisheries University of Washington  
 (22) THE CLERK Thank you  
 (23) DIRECT EXAMINATION OF RICHARD M KOCAN  
 (24) BY MR PETUMENOS  
 (25) Q Dr Kocan could you tell the jury a little bit about

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- (1) yourself how old you are where you live?  
 (2) A I m sorry the last part of the question?  
 (3) Q Where you live  
 (4) A Oh where I live Yeah I m 53 and I live in Snoquamish  
 (5) Washington which is on the west side of Puget Sound across  
 (6) from Seattle  
 (7) Q And where do you work?  
 (8) A I work at the University of Washington in the School of  
 (9) Fisheries  
 (10) Q Okay  
 (11) MR PETUMENOS Could we get a little more volume on  
 (12) the mike or perhaps - Judge is his mike there all right?  
 (13) Okay  
 (14) BY MR PETUMENOS  
 (15) Q And what do you teach at the University of Washington?  
 (16) A The course - the course material I teach is aquatic  
 (17) toxicology  
 (18) Q And in connection with aquatic toxicology do you deal with  
 (19) issues of genetic toxicology as well?  
 (20) A That s one of the components or one of the subdisciplines  
 (21) in the area of aquatic toxicology yes  
 (22) Q Do you deal with cell culture and virus identification?  
 (23) A Yes I deal with that actually not in the course that I  
 (24) teach but in lectures I give to other courses and in the past  
 (25) I ve been a virologist for the U S Fish & Wildlife Service

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- (1) Q In connection with the courses that you teach directly or  
 (2) other courses in which you teach in other people s disciplines  
 (3) do you deal with cell culture and virus identification as  
 (4) well?  
 (5) A Yes I do  
 (6) Q Do you deal with In vitro methods of virus identification?  
 (7) A Yes  
 (8) Q What is that?  
 (9) A In vitro means simply that the organisms that you re  
 (10) dealing with are grown in culture in glass as it were a test  
 (11) tube rather than in the living animals  
 (12) Q How about the effects of water pollutants on living things?  
 (13) A Yes that s the basic context of the entire aquatic  
 (14) toxicology course  
 (15) Q Have you taught seminars in fish cell cytogenetics?  
 (16) A Cytogenetics?  
 (17) Q Cytogenetics?  
 (18) A Yes Yes I have  
 (19) Q And what s that?  
 (20) A That s the identification of genetic damage that s visible  
 (21) under the microscope  
 (22) Q Do you lecture in the Department of Pathology in  
 (23) chromosomal injury?  
 (24) A Yes I have  
 (25) Q And what is that?

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- (1) A That s an area that deals with damage to chromosomes and  
 (2) genes in animal cells  
 (3) Q What is epidemiology?  
 (4) A Literally it means upon the people or upon animals and  
 (5) refers to the spread of disease throughout a population  
 (6) Q Does the word epidemic come from that root?  
 (7) A That s correct  
 (8) Q And do you teach principles of epidemiology?  
 (9) A Yes  
 (10) Q And have you taught seminars on the diseases of marine fish  
 (11) resulting from environmental contaminants?  
 (12) A Yes I have  
 (13) Q And have you taught seminars on the biological effects of  
 (14) contaminated sea surfaces?  
 (15) A Yes  
 (16) Q And have you done that with respect to developing herring  
 (17) and cod in the North Sea and in the Baltic Sea?  
 (18) A Yes in my study in northern Germany and developed  
 (19) techniques with two of the herring experts that live there  
 (20) Q Where did you get your Bachelor s degree?  
 (21) A My Bachelor s degree I received from Hiram College in  
 (22) Hiram Ohio in 1963  
 (23) Q What was your major?  
 (24) A Biology and general science  
 (25) Q And did you - do you have a Master s degree as well?

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- (1) A Yes I do  
 (2) Q In what field?  
 (3) A Microbiology and public health Michigan State University  
 (4) Q And did you go on to get a Ph D or doctorate?  
 (5) A Yes I continued on in the same department microbiology  
 (6) and public health and received my degree in 1967  
 (7) Q In order to get a Ph D one has to do a dissertation or  
 (8) scholarly work?  
 (9) A That s right Research independent research  
 (10) Q What did you do your dissertation on?  
 (11) A My dissertation research involved studying damaged  
 (12) immune  
 (13) system in animals following infections  
 (14) Q Have you done special course work since you got your  
 (15) doctorate?  
 (16) A Yes I have  
 (17) Q In what - in what field?  
 (18) A I did special course work in medical mycology that s  
 (19) infectious fungus with the U S Public Health Service I took  
 (20) special training with the U S Fish & Wildlife Service on fish  
 (21) and avian or bird viral diseases and I did a postdoctoral  
 (22) fellowship at the University of Washington Medical School on  
 (23) environmental pathology  
 (24) Q Besides the course work with the Public Health Service  
 (25) have you done other special course work after getting the  
 (26) Ph D ?

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- (1) A The – the two I just described that is the postdoctoral  
 (2) fellowship was two years of training under various  
 (3) investigators and several departments in the medical school  
 (4) Q Tell the jury what a postdoctoral fellowship is  
 (5) A Postdoctoral fellowship means following the – is a study  
 (6) period that one does following the receipt of their – their  
 (7) degree their Ph D and generally involves studying at a  
 (8) particular institution under several prominent investigators in  
 (9) a field that you re interested in becoming more proficient in  
 (10) Mine was in environmental pathology and I worked with several  
 (11) of the faculty members in the medical school at the University  
 (12) of Washington  
 (13) Q Are you familiar with the term genotoxic ?  
 (14) A Genotoxic  
 (15) Q I guess  
 (16) A Yes I m familiar with that term  
 (17) Q I m about to be too What does it mean?  
 (18) A Literally it means toxic to genetic components of a cell or  
 (19) of an organism That would be the genes or chromosomes the  
 (20) hereditary material of that organism  
 (21) Q And this has something to do with the postdoctoral  
 (22) fellowship that you were involved in?  
 (23) A Yes The research area that I was involved in during that  
 (24) fellowship involved the effect of environmental contaminants on  
 (25) chromosomes measuring specifically whether they were  
 damaged

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- (1) and determining what effects this damage had on the cell  
 (2) following the removal of the contaminant  
 (3) Q Do you have any special experience regarding herring as a  
 (4) species of fish?  
 (5) A Yes I have  
 (6) Q Tell the jury?  
 (7) A The sabbatical I did in Germany which was at the  
 (8) Biologische Anstalt Helgoland which is translated Biological  
 (9) Institute of Helgoland was – involved the study of herring in  
 (10) the North Sea and the Baltic Sea and specifically involved  
 (11) contaminated sea surface microlayer and its effect on  
 (12) developing herring embryos  
 (13) Q Have you since applied what you learned in that work in  
 (14) Germany with – in the herring field?  
 (15) A Yes Since that time I ve done work with herring in Puget  
 (16) Sound Clelland Bay – I mean Port Gamble Bay Cherry Point  
 (17) Fidalgo Bay and in Prince William Sound  
 (18) Q Did you publish articles and findings as a result of some  
 (19) of that work?  
 (20) A Yes I have Virtually all of it s been published  
 (21) Q And with respect to your experience in aquatic or water  
 (22) toxicology can you advise us whether or not you ve done any  
 (23) research in that area?  
 (24) A Yes For the past ten years that s been the major  
 (25) emphasis of my research

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- (1) Q Have you received grants in order to do that work?  
 (2) A Yes I have  
 (3) Q From where?  
 (4) A National Institute of Health the Environmental Protection  
 (5) Agency Washington Department of Fisheries  
 (6) Q Do you have – you made publications in the aquatic  
 (7) toxicology as well?  
 (8) A Yes This – this is all in the area of aquatic  
 (9) toxicology  
 (10) Q How about publications that deal with the effects of  
 (11) contaminants and specifically hydrocarbons on fish embryos  
 and  
 (12) fish chromosomes?  
 (13) A Yes I have several publications in that area also  
 (14) Q What is the sea surface microlayer?  
 (15) A The microlayer consists of a very very thin film if you  
 (16) would of chemicals that exist right on the surface of the sea  
 (17) – whether it be fresh water or saltwater – and it s just a  
 (18) few microns thick too small to see with the naked eye And  
 (19) this microlayer being rich in organic materials tends to  
 (20) concentrate contaminants that are in the sea and the  
 (21) contaminants measured in this microlayer are often a hundred  
 to  
 (22) a thousand times greater than what you find just an inch or two  
 (23) below the surface  
 (24) Q Have you done work on that whole topic?  
 (25) A Yes I have This involved exposure of developing – with

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- (1) developing fish embryos or eggs to this microlayer to determine  
 (2) its effect  
 (3) Q Have you done work in aquatic toxicology with issues  
 (4) involving the fate and transport in the marine environment of  
 (5) petroleum?  
 (6) A Yes  
 (7) Q And have you taught in that area?  
 (8) A Yes that s part of the course that I present in aquatic  
 (9) toxicology  
 (10) Q And does the course you teach include the principal process  
 (11) by which oil is integrated – oil is integrated into the marine  
 (12) ecosystem and how all that works?  
 (13) A Yes it s in the central part of the course  
 (14) Q Have you ever given testimony before in the federal courts  
 (15) in the area of aquatic toxicology?  
 (16) A I testified in federal court here in Anchorage several  
 (17) weeks ago in regard to this Exxon spill and I believe about  
 (18) five years ago I testified in Boise Idaho in federal district  
 (19) court there on an unrelated matter  
 (20) Q And after your work on toxic substances and genotoxicity  
 (21) did you do some work at the University of Washington Medical  
 (22) School as well?  
 (23) A Well the postdoctoral fellowship I did was at the medical  
 (24) school That was – that was prior to – that was the – my  
 (25) introduction to genotoxicity research and work which I

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- (1) subsequently transferred to the field of aquatic toxicology
- (2) MR PETUMENOS Your Honor at this time I would
- (3) tender Dr Kocan as an expert in the field of the biology of
- (4) herring aquatic toxicology and genotoxicity
- (5) THE COURT Any objection counsel?
- (6) MR KARLBERG No Your Honor
- (7) THE COURT He s qualified to give opinions in those
- (8) areas
- (9) BY MR PETUMENOS
- (10) Q Let s talk first about – let s go back again to the
- (11) sabbatical that you took in 1985 and go back to Germany if we
- (12) can
- (13) Could you describe basically the sorts of things that you
- (14) studied there as an introduction to what we re going to address
- (15) today before the jury?
- (16) A Yes Those studies involved going into the field into the
- (17) North Sea and the Baltic Sea and collecting live ripe spawning
- (18) herring bringing these back to the laboratory and spawning
- (19) them artificially in the laboratory and rearing the embryos
- (20) until they hatched and then studying the normal development
- (21) of
- (22) these embryos and the newly hatched larvae This was my first
- (23) introduction to how to do this artificial spawning and how to
- (24) rear these in the laboratory
- (25) And then we then went into the field in various locations
- (26) marinas urban areas areas that were agricultural or had no

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- (1) high populations around and collected this sea surface
- (2) microlayer and brought this back to the laboratory and exposed
- (3) the herring embryos to this microlayer to determine whether or
- (4) not it had an effect and we – chemically analyzing the
- (5) microlayer so that we could tell what was in it in the event
- (6) that it did have an effect on these embryos
- (7) Q In the study that you were conducting here was there a
- (8) concern with respect to a particular product that you were
- (9) looking at?
- (10) A Well in that particular study the concern was merely to
- (11) determine whether the microlayer had an effect at all on these
- (12) developing embryos because many fish embryos develop right
- (13) at
- (14) the sea surface They re neustonic they float and once the
- (15) larvae hatch they also feed right at the surface because this
- (16) is the richest area of the sea in microscopic plankton this is
- (17) where all the food is and our concern was to – was whether or
- (18) not this layer was contaminated and sufficiently so to cause
- (19) harm to these embryos and larvae And what we found was that
- (20) in most of the areas we studied that petroleum hydrocarbons
- (21) are the most common contaminant that we encountered
- (22) Q Okay Tell us please what the science of toxicity deals
- (23) with
- (24) A Toxicity or toxicology the area of toxicology deals with
- (25) adverse effects or pathological effects of chemical or physical
- (26) agents on living organisms plants animals or humans

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- (1) Q Could you describe for the jury what generally happens to
- (2) an animal when it is exposed to toxic things?
- (3) MR PETUMENOS And could we have Exhibit 465 up
- (4) please to help us do that?
- (5) A Yes there are a number of responses that could result from
- (6) exposure to toxic materials and toxicologists classically look
- (7) at a range of what they call endpoints or toxic responses
- (8) If we can have a our display Here we do we go
- (9) Okay These are just some of the more classic end points
- (10) and I ll point out here that this term acute – why am I not
- (11) writing? Yeah this term acute means it occurs very
- (12) quickly When an organism is exposed to toxic substance and
- (13) responds very quickly lethality that means it s exposed and
- (14) dies very quickly or it becomes irritable It s hurt or
- (15) uncomfortable and it responds behaving strangely Necrosis
- (16) refers to cell death If something is toxic to the cells and
- (17) kills them this is an immediate response
- (18) The subchronic response that we see here means that it
- (19) takes a bit longer for this end point to be seen or observed
- (20) Birth defects for instance would be observed following the
- (21) birth of the organism where it might be exposed in utero or
- (22) while it s in the developing egg Behavioral changes may occur
- (23) down the line when a particular type of behavior is entered
- (24) into For instance an animal s chromosomal balance may be
- (25) upset and later it may go to courtship level and it doesn t

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- (1) behave normally because of the hormonal imbalance
- (2) Q What do you mean by courtship ?
- (3) A Courtship?
- (4) Q Yes sir
- (5) A This would be when two animals meet prior to mating and go
- (6) through a behavior pattern to recognize each other recognize
- (7) each other as the same species as male and female and
- (8) interested in each other and they have to do all these things
- (9) in order to successfully reproduce
- (10) Q And toxicity can affect that process?
- (11) A Oh absolutely yeah And the last on that list is
- (12) reproductive loss and that would be if eggs or sperm are
- (13) damaged You wouldn t immediately see this unless you did
- (14) some
- (15) special test but if you were just to expose an organism and
- (16) not do anything special you wouldn t notice there was a
- (17) reproductive loss until after they reproduced You may find it
- (18) did not either reproduce or it aborted its fetus or the newborn
- (19) died This sort of thing could happen
- (20) And then here on the last set of conditions called chronic
- (21) you can have – these take a long time to show up but the top
- (22) on the list there is carcinogenesis or cancer The toxic
- (23) substance may be introduced to the organism in its infancy and
- (24) not show up until the organism reaches old age The length of
- (25) the life span may be reduced which is a long term effect and
- (26) tissue degeneration would be loss of function or structure in

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- (1) tissues as the animal ages and this would occur sometime long  
 (2) after exposure to the toxic substance so these are classical  
 (3) endpoints that you can measure expose an animal or a  
 (4) population to a suspect chemical or physical agent and then  
 (5) you observe it and you determine whether or not any of these  
 (6) occur how frequently they occur in that population and how  
 (7) severe each of them was  
 (8) Q Dr Kocan are there ways in which the toxic - a toxic  
 (9) substance can harm an animal without displaying these things  
 (10) that are on the chart here?  
 (11) A Yes there s a subarea of toxicology known as  
 (12) genotoxicology or genotoxicity and -  
 (13) MR PETUMENOS Could we have 466 please?  
 (14) A This is a form of toxicity that affects the genetic  
 (15) material the genes or hereditary material of an organism and  
 (16) classically it s defined as occurring at concentrations below  
 (17) which any of those other endpoints are observed that is  
 (18) nothing else is observed But this genetic damage can occur  
 (19) and its real damage because it can either go on to affect the  
 (20) individual or if it s in the germ line that is the egg or the  
 (21) sperm it can be passed on to the next generation  
 (22) And this - the screen here gives a brief description of  
 (23) genotoxicity that is toxicity directed towards the hereditary  
 (24) components of living species that which is passed on to the  
 (25) offspring

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- (1) Q How does that happen? How do toxic things affect the way  
 (2) genetic information is passed on?  
 (3) MR PETUMENOS And could we have 467 please?  
 (4) A Well the damage that occurs to the genetic material can  
 (5) result in a number of different endpoints I guess and this  
 (6) list describing what genotoxic agents do number one you see  
 (7) they alter - obviously alter the genetic components of a  
 (8) species - that is the genes and the DNA  
 (9) They as I just mentioned act at an apparently subtoxic  
 (10) concentration And they affect the hereditary characteristics  
 (11) of the offspring That is the adult may be exposed and if  
 (12) the germ line has been affected then the offspring is affected  
 (13) and you see this in terms of birth defects or unusually high  
 (14) numbers of abortions or miscarriages things like Mongolism or  
 (15) cleft palate Albinism all of these are result of mutations  
 (16) that have occurred or chromosome damage There s many  
 (17) many  
 (18) the list goes on forever and it s quite grotesque but these  
 (19) are the types of things that are hereditary and passed on to  
 (20) the next generation  
 (21) An interesting component here is - is number four and that  
 (22) is that the genotoxic agents are generally not present when the  
 (23) damage is finally detected An individual may be exposed to  
 (24) some gene damaging agent say as an infant or a teenager and  
 (25) then later in adult life of children and this is passed on to  
 the children and whatever they are exposed to is long gone  
 and

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- (1) forgotten You don t even know what it was but the damage is  
 (2) still there it remains  
 (3) And this leads to number five which says that mutations  
 (4) can accumulate in a population even after the genotoxic agent  
 (5) has been removed And by that I mean if it s a recessive  
 (6) mutation one that does not express itself unless both parents  
 (7) have donated it to the offspring it can be passed on from  
 (8) generation to generation many times with nothing happening  
 (9) until several individuals both carrying the same trait mate  
 (10) produce offspring that have both of those genes and the trait  
 (11) is observed And one sees this in Albinism for instance  
 (12) Albinos are - or Albinism or nonpigmented skin is hereditary  
 (13) and requires both parents passing a recessive Albino gene to  
 (14) the offspring  
 (15) The second example of that would be sickle-cell anemia An  
 (16) individual carrying one recessive - one gene of the sickle  
 (17) trait is normally unaffected but if it receives two of  
 (18) these genes one from each parent it suffers severe blood  
 (19) problems because they can t carry enough oxygen to survive  
 (20) These are examples in a human population I think that you can  
 (21) understand a little better than the fish of how number four  
 (22) and number five actually function  
 (23) MR PETUMENOS Could we see exhibit 468 please?  
 (24) BY MR PETUMENOS  
 (25) Q Now 468 discusses mutation a little bit further and does

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- (1) it tell us what some of the consequences of this mutation can  
 (2) be?  
 (3) A Yes This is just a quick review of something that I  
 (4) touched upon just a moment earlier Here we see under  
 somatic  
 (5) mutation neoplasia or cancer and terata or birth defects  
 (6) Now somatic cells or mutations in somatic cells involve  
 (7) cells that have nothing to do with reproduction This could be  
 (8) skin cells liver cells brain cells any cells in your body  
 (9) that have nothing to do with reproduction and if a mutation  
 (10) occurs there it could go on to develop into - if the cell  
 (11) doesn t die that is it can go on to develop cancer or if  
 (12) it s - it occurs in the fetus that s developing it s not  
 (13) inherited from its parent but the fetus itself is affected  
 (14) while it s developing then the birth defects can result  
 (15) Now germ cell mutations that are depicted here those are  
 (16) mutations that occur in those cells that produce eggs or sperm  
 (17) and those can go on and be passed to the next generation  
 And  
 (18) I just described to you a couple of recessive mutations  
 (19) Albinism being a good example and this is transmitted through  
 (20) multiple generations without affecting the individual unless  
 (21) it has two of the recessive traits And it can also be lethal  
 (22) and frequently what happens there as you see miscarriages or  
 (23) early deaths fetal deaths embryonic deaths Those are the  
 (24) two types somatic cell and germ cell mutations that s that  
 (25) one ceases

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- (1) Q So if I understand when you talk about that recessive  
 (2) phenomena what we can see is the children may be okay the  
 (3) grandchildren may be okay but then some pair goes through  
 this  
 (4) courtship process successfully and all of a sudden for the  
 (5) first time many generations down there s a problem is that  
 (6) right?  
 (7) A That s right This trait can be passed on for several  
 (8) generations and accumulate in a population because an  
 (9) individual - well if we re talking about humans recessive  
 (10) trait would be passed on to 25 percent statistically 25  
 (11) percent of the offspring Most people don t have an awful lot  
 (12) of children hardly more than four so every couple might  
 (13) produce one offspring that has the - carries this trait But  
 (14) if we re talking about something like herring they produce  
 (15) 20 000 eggs a year so 5 000 of those may be carrying a  
 (16) recessive trait  
 (17) Q All right Can the process of mutation that you ve just  
 (18) described be seen?  
 (19) A The mutation itself occurs at the biochemical level  
 (20) that s right at the molecular level of the chromosome but the  
 (21) effects of that damage can be seen in some cases  
 (22) MR PETUMENOS Could we see Exhibit 469 please?  
 (23) BY MR PETUMENOS  
 (24) Q Whoops Would you like to talk about this one?  
 (25) A Sure This chart describes two types of lesions that are

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- (1) mutations One here is the microlesion Micro meaning very  
 (2) small so small that you can t even see it with a microscope  
 (3) And the way one detects that is to actually grow up the  
 (4) organism or grow up the cells and measure or count the  
 number  
 (5) of mutant individuals that are produced That s very long  
 (6) very tedious very complicated but that is a real mutation  
 (7) that s detected in a real living organism or cell  
 (8) Macrolesions on the other hand are lesions that you can  
 (9) see You can look through the microscope at a dividing cell  
 (10) and actually see the damage to the chromosome and that way  
 you  
 (11) don t have to wait until it actually does something You know  
 (12) it s damaged You don t know what the outcome might be you  
 (13) just know that it s damaged These can be either numerical  
 (14) changes that is more or less chromosomes in a cell or they  
 (15) could be structural changes that is the chromosome may be  
 (16) broken or it may be damaged or may be rearranged or  
 something  
 (17) like that  
 (18) So these are the type that one can see They re visible  
 (19) and you can detect those immediately after exposure to the  
 (20) genotoxic agent  
 (21) Q Could we spend just a half a minute here and talk about the  
 (22) importance of chromosomes and what they do in an animal?  
 (23) A Certainly The chromosomes are chemical strands that carry  
 (24) the genes or the hereditary material that are passed on from  
 (25) one generation to the other Every cell in our body and every

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- (1) animal and every plant s body has an identical set of  
 (2) chromosomes or genes that every other cell in that particular  
 (3) organism for that species and these chromosomes carry all  
 (4) these genes that determine how that organism functions  
 whether  
 (5) it s going to make chlorophyll if it s a plant or whether it s  
 (6) going to grow brown hair if it s a moose or whether it s going  
 (7) to have blue eyes if it s a human or whether it s going to  
 (8) have colored scales if it s a fish All of these traits are  
 (9) carried on these chromosomes and they tell each cell what it s  
 (10) going to do how it s going to function and how long it s  
 (11) going to grow and these traits are also passed on in the egg  
 (12) and the sperm to the next generation That s why the offspring  
 (13) look like and function like their parents  
 (14) Q Could you show with respect to this part of the mutation  
 (15) system that you can see the information you give us on the  
 (16) right hand side of the chart could you show us that with a  
 (17) fish egg?  
 (18) A Yes I could show you with fish cells  
 (19) Q Let s take a look at Exhibit 492 then please What s  
 (20) depicted in 492?  
 (21) A What we have here is a fish cell looking through the  
 (22) microscope Obviously this is a very small cell but it s  
 (23) undergoing a process of mitosis or cell division This is a  
 (24) normal cell and what it s doing - just let me show you what  
 (25) the cell is This is the outline of the cell right here

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- (1) Okay and if I might these are two bundles of chromosomes  
 (2) right here Now this cell prior to this point has  
 (3) duplicated all of the chromosomes or all of the genetic  
 (4) material in it and made two identical sets and that s depicted  
 (5) by these two clusters of chromosomes you see in the blue  
 (6) circles And now what the cell is going to do it is going to  
 (7) divide into two cells And it s going to do that by laying  
 (8) down cell wall here And now we will have one cell here one  
 (9) cell here each of which is identical to the original cell  
 (10) genetically  
 (11) Now this is a very complex function All of this DNA has  
 (12) to be replicated exactly as it was originally It has to be  
 (13) segregated into two distinct bundles of chromosomes Cell  
 (14) division has to occur with two distinct cells being produced in  
 (15) order for an individual to result This is a single cell but  
 (16) every cell has to go through this process in our body or every  
 (17) other animals body  
 (18) Q Could you add to the top please Exhibit 493 What we  
 (19) have here Dr Kocan on the bottom is the exhibit that you  
 (20) just looked at?  
 (21) A Yes  
 (22) Q And what do we have on the top in Exhibit 493?  
 (23) A On the top again it s a different stain it s like a  
 (24) different magnification Again it s a fish cell same type of  
 (25) cell and it s undergoing the same cell division but it s been

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- (1) exposed to benzo(a)pyrene in this case which is one of the  
 (2) many components of crude oil or petroleum - and can I blow  
 (3) that up?  
 (4) Q I think you can but we need to dump the bottom please  
 (5) Okay Maybe it'll work There we go  
 (6) A Okay Just for orientation purposes here this is a cell  
 (7) with a cell nucleus that's not dividing okay? And this is  
 (8) another cell again that's not dividing The nucleus in the  
 (9) center the cell wall around it The cell that we're  
 (10) interested in is this cell right here  
 (11) I think I'd like to blow that up again if I might Can  
 (12) you see that all right?  
 (13) Now the two bundles - let me do the same thing I did with  
 (14) the last one so we're oriented properly Here's the outline of  
 (15) the cell and here are the two chromosome bundles we're going  
 -  
 (16) that are going to separate and become the genetic material for  
 (17) the two daughter cells If you'll notice here that after it's  
 (18) been treated with this chemical that there are bits and pieces  
 (19) of chromosome all strung out in places where they don't  
 (20) belong  
 (21) Now you might imagine that when this cell finally divides  
 (22) that when this new cell wall is formed that both of those  
 (23) cells are probably not going to get the same number of  
 (24) chromosomes or the same amount of DNA as the other The  
 one  
 (25) will get more and one will get less and we'll just depict that

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- (1) as saying minus here and plus here  
 (2) Remember I said one of the ways you can tell the difference  
 (3) is numerical changes in chromosomes Generally those that  
 get  
 (4) too few chromosomes die and those that get too many  
 chromosomes  
 (5) develop into some abnormal chemical or function - structural  
 (6) situation  
 - (7) So here you see that this abnormal cell that's been damaged  
 (8) by exposure to petroleum hydrocarbon component is going to  
 (9) result in two damaged daughter cells We don't know exactly  
 (10) what the damage is but we can measure immediately after it's  
 (11) been exposed  
 (12) Q Thank you Dr Kocan I think we can clear that screen  
 (13) I think what one of the things that might be helpful  
 (14) Dr Kocan is if you could show the jury in the case of herring  
 (15) what their developmental stages are and draw for us how that  
 (16) progresses  
 (17) MR PETUMENOS Mr Gross do we have a board that we  
 (18) could use?  
 (19) BY MR PETUMENOS  
 (20) Q Would you like to use -  
 (21) A Come down there  
 (22) Q Yes come on down and do some drawing for us Would you  
 (23) like to use an easel We have some witnesses that like to get  
 (24) on the floor  
 (25) A No I think I'll just stand

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- (1) MR PETUMENOS Do we have one of those big boards?  
 (2) Just a blank one would be great  
 (3) A I think they can see this paper all right  
 (4) BY MR PETUMENOS  
 (5) Q Big enough?  
 (6) A That should be all right  
 (7) Q Black?  
 (8) A Let's have a couple colors just to - that's it  
 (9) Q All right  
 (10) A I think during the course of this testimony you're going  
 (11) to hear a couple of terms that I think you ought to keep  
 (12) separate in your minds and one is going to be embryo and the  
 (13) other is going to be larva or larvae And embryo equals the  
 (14) developing egg the pre-hatched egg And the larva or larvae  
 (15) which is plural equals the little newly hatched fish  
 (16) Can you all read this all right?  
 (17) Now larval or embryonic development starts at the moment  
 (18) of fertilization - and we'll do this in a time sequence here  
 (19) So we'll start at this point and we'll move this way through  
 (20) time to about say 21 days And this will be zero days  
 (21) Okay And at this point we have fertilization And at  
 (22) fertilization there's an egg and inside the egg is a yolk and  
 (23) that yolk has a single cell on it and it's waiting to be  
 (24) fertilized And fertilization occurs obviously when a sperm  
 (25) enters the egg and joins with that one cell

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- (1) Now remember I was telling you before that the sperm and  
 (2) the egg needed to unite and then the cells begin to divide  
 (3) The cell division process that I just described on the screen  
 (4) is what goes on from this point on The cells keep doubling  
 (5) and what one sees we're going to look down on the top of this  
 (6) you would see the yolk there the shell membrane around it  
 (7) This one cell now would divide into two cells and then it  
 (8) would go on to divide into four cells and then it would go on  
 (9) to divide into eight cells And I'm not going to do this up to  
 (10) 250 billion cells but you get my point that they keep  
 (11) doubling and doubling and doubling And they go through that  
 (12) process I showed you a few moments ago until we reach a point  
 (13) about midway here when these - these cells which all look  
 (14) alike now they - you can't distinguish one from another they  
 (15) all look identical They're called undifferentiated cells  
 (16) At this point if you were to look at the embryo here  
 (17) would be the yolk and over the surface of it all you would  
 (18) see was this large mass of cells and that's the embryo It's  
 (19) made up of thousands of cells That up to this point it goes  
 (20) from one cell to here  
 (21) Now to get beyond this point the cells begin to  
 (22) differentiate and you begin to see eyes and fins and muscles  
 (23) and ears and all the parts of the animal begin to develop  
 (24) until you get to the very end just prior to hatching here and  
 (25) inside this egg is a bona fide little embryo and it's all

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- (1) curled up in here and you've got little fins and tail and  
 (2) muscles and ears and all sorts of things He's just waiting to  
 (3) hatch  
 (4) Okay so this is the embryo phase early embryo late  
 (5) embryo and when this hatches you'd have a larva and this  
 (6) larva is basically a little fish It has a big gob of yolk  
 (7) attached to it and that big gob of yolk is what it lives off of  
 (8) for about the next two to four weeks It doesn't eat until it  
 (9) gets to be about three weeks old  
 (10) And this little larva now different from the embryo lives  
 (11) - talking about herring - looking at the water this is the  
 (12) surface of the water this is the bottom of the water here  
 (13) Okay these little guys live for about ten days right at the  
 (14) surface here Okay and at about that time they begin to lose  
 (15) a lot of this yolk they're able to swim a bit better and you  
 (16) find that they become distributed more deeply And by the time  
 (17) they're about 45 days old they're distributed all the way from  
 (18) the top to the bottom and they pretty much can swim on their  
 (19) own These fellows can go only where the tides and the  
 (20) currents take them These can move up and down a little bit if  
 (21) they want and maybe catch different currents but they can't go  
 (22) anywhere intentionally just up and down and these fellows can  
 (23) actually swim against the current or away from the current  
 (24) So during the rest of our discussion remember that this  
 (25) embryo is the developing prehatched egg and the larva is the

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- (1) newly hatched little fish that's using up this yolk and growing  
 (2) up to become an adult  
 (3) MR PETUMENOS Your Honor if the Court pleases this  
 (4) would be a good time for a short recess We've been in session  
 (5) for an hour  
 (6) THE COURT Sure  
 (7) THE CLERK Please rise the Court stands in recess  
 (8) (Jury out at 11 18 a m )  
 (9) (Recess from 11 18 a m to 11 37 a m )  
 (10) (Jury in at 11 37 a m )  
 (11) THE CLERK Please rise This court now resumes its  
 (12) session Please be seated  
 (13) THE COURT Okay  
 (14) BY MR PETUMENOS  
 (15) Q Dr Kocan I have strategically before the break said we  
 (16) were through with the chart but then I remembered I had  
 (17) another question to ask about it so we have to go back one  
 (18) more time  
 (19) Could you describe for the jury - come right over here -  
 (20) and I wanted to get it out of the way so you could get back to  
 (21) the witness stand when we're done  
 (22) What can happen when we have the intrusions of hydrocarbon  
 (23) contaminants in any of these various stages of development  
 (24) with  
 (24) a brand new herring?  
 (25) A Okay As I mentioned to you a bit earlier in the

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- (1) presentation these developmental stages progress from a  
 single  
 (2) cell to a fully formed larva ready to hatch from the egg And  
 (3) just to keep this in context I'll draw these eggs real quick  
 (4) nuclei here and during this early phase of development  
 (5) through say the first two or three cell divisions if the  
 (6) embryo is exposed to toxic substance normally what happens  
 is  
 (7) that the whole system dies because there's just a few - few  
 (8) cells here that are capable of producing that entire embryo  
 (9) And if the cell is damaged or killed there isn't a sufficient  
 (10) amount of biomass to go on produce a whole embryo  
 (11) Now later as this progresses to where there's thousands  
 (12) and tens of thousands of cells and the egg looks something like  
 (13) that and it begins to be virtually solid cells in here and  
 (14) then progresses down to being a piece of tissue like that  
 (15) that's still undifferentiated From this stage on to where we  
 (16) first see organs forming if these cells are exposed to toxic  
 (17) substances what generally occurs during that phase is that the  
 (18) embryo is born deformed or has some birth defect Once you  
 see  
 (19) a - an embryo no matter how undeveloped it may be once it  
 (20) starts to become an embryo and you see developed organ  
 systems  
 (21) eyes or muscles or skin or whatever from that point on until  
 (22) it hatches usually toxic substance aren't - don't have much  
 (23) of an effect immediately The effect tends to be much longer  
 (24) term  
 (25) An example of that would be studies I've done and a number

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- (1) of other people have done if you expose these later stage  
 (2) embryos they live they hatch they look normal they grow  
 (3) up But a year later or so they may develop liver tumors or  
 (4) kidney tumors or some other kind of tumors So the message  
 (5) here is that the very earliest stages when there's a few  
 (6) cells the organism dies when it's exposed to a toxic  
 (7) substance During the intermediate developmental stages  
 prior  
 (8) to it becoming a developed embryo damage to the cells results  
 (9) in a deformed larva and later on there's generally no  
 (10) mortality no death but there are long term consequences like  
 (11) cancer  
 (12) Q You can resume the witness stand Dr Kocan And what I  
 (13) have had marked this chart here as 1512 thank you  
 (14) THE COURT Not admitted Pat? Not admitted You  
 (15) want it admitted?  
 (16) MR PETUMENOS What I thought I'd do is as we break  
 (17) up the examination we're keeping track and I would go ahead  
 (18) and move them in at the end  
 (19) THE COURT That's fine  
 (20) MR PETUMENOS That's acceptable?  
 (21) THE COURT Sure  
 (22) MR PETUMENOS All right Thank you Mr Karlberg  
 (23) BY MR PETUMENOS  
 (24) Q Did there come a time when you became involved or  
 received  
 (25) a call to assist in some study regarding the Exxon Valdez oil

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- (1) spill?
- (2) A Yes
- (3) Q When were you called?
- (4) A The first contact I recall was oh in late 1989 early
- (5) 1990
- (6) Q And who contacted you?
- (7) A I believe I was contacted at that time by Dr Robert Spies
- (8) who s the chief scientist for the Exxon Trustee Council
- (9) Q Okay And to remind the jury the Exxon Trustees are?
- (10) A The Exxon Trustees are a group of individuals who are the
- (11) head of I believe it s Department of Agriculture Department
- (12) of Interior Forestry Alaska Fish & Game Fish & Wildlife
- (13) Service
- (14) Q Good enough
- (15) A It s an environmental group or conservation agency
- (16) Q Now at the time that you were first hired was there
- (17) information coming in from the field data coming in from the
- (18) field in Prince William Sound already on herring?
- (19) A Yes When I was first contacted studies had already
- (20) begun They began almost immediately after the spill and data
- (21) had been coming in by the time or projects already had begun
- (22) and data was collected by the time I was asked to participate
- (23) Q What kind of data had come in and what was it showing?
- (24) A The earliest data - well my involvement at that time was
- (25) to review data from all of the different projects - or many of

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- (1) the different projects not all of them - and my involvement
- (2) was with the herring study the pink salmon study the rock
- (3) fish study and the clam and mussel studies
- (4) Q Were you doing peer review?
- (5) A That s what I was doing primarily That was my - excuse
- (6) me what I was requested to do was to review the data that was
- (7) coming in and make suggestions as to where these projects
- (8) might
- (9) change course or proceed or what best to do from that point in
- (10) order to get the best data from Prince William Sound
- (11) Q And with respect to the herring studies what was the goal
- (12) of the herring studies?
- (13) A Well Initially the herring study was to determine whether
- (14) or not the oil spill had had any effect on the - the adult and
- (15) juvenile herring that were present in the Sound and at the time
- (16) of the spill and whether or not the newly laid eggs and newly
- (17) hatched larvae were affected by the oil
- (18) Q Did there come a time when you were asked to do something
- (19) else besides conduct peer review?
- (20) A Yes In 1990 I was contacted by Alaska Department of Fish
- (21) and Game and asked if I would participate in actually doing a
- (22) part of the herring study in conjunction with the group that
- (23) had already been working since 1989
- (24) Q And what did they - what part of it did they want you to
- (25) do?
- (26) A Specifically they wanted me to do laboratory and fieldwork

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- (1) that would be used to - used to compare to the field data they
- (2) had collected in 1989 In other words they had data that was
- (3) collected in the field It was observational data and they
- (4) wanted experimental studies done to determine whether or not
- (5) what they were seeing in the field was actually related to
- (6) exposure to oil
- (7) Q And what was this data in the field showing?
- (8) A At that time they had found that there was tissue damage
- (9) to adult herring that had been collected at oiled sites
- (10) specifically liver damage They had found that there was an
- (11) increase in number of abnormal larvae hatching from eggs that
- (12) were incubated at oiled sites compared to unoiled sites They
- (13) were finding differences in hatching weight in the larvae that
- (14) hatched at the oiled sites lighter than those from the unoiled
- (15) sites and there was also genetic damage observed in the larvae
- (16) that had hatched from - or had incubated as embryos in the
- (17) oiled sites
- (18) Q So in order to take a look at this data and determine what
- (19) you thought it meant what did you do in the laboratory? What
- (20) was your approach?
- (21) A Okay specifically in order to - to make some sense of
- (22) the data that was coming out of the field because there s -
- (23) the field data is difficult to gain full control over that is
- (24) there are many variables that exist there and what you collect
- (25) with is what you have You don t have much control over where

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- (1) it came from and what it is You have to take what nature
- (2) gives you So the experiments I designed followed a three step
- (3) sequence
- (4) One the question was Does Exxon Valdez oil have any
- (5) effect on herring embryos or larvae? Because if it has no
- (6) effect under controlled laboratory conditions then there s no
- (7) sense looking any further
- (8) But if it does have an effect then the second question
- (9) was What do these effects look like effect or effects? In
- (10) other words describe what happens to the embryos and the
- (11) larvae after they ve been exposed to the oil
- (12) And once these effects have been described How do they
- (13) compare to what was observed in the field? That would be the
- (14) third step in the process
- (15) So one was to determine if anything happened two describe
- (16) what happened and three to compare what happened to what
- (17) was
- (18) observed in the field
- (19) Q And what conditions did you set up in the laboratory to
- (20) answer those questions? First did it have an effect and what
- (21) were they?
- (22) A The - there were several components to my study the first
- (23) year That was in 1991 One was a laboratory component and
- (24) one was a field component
- (25) The laboratory component consisted of mixing Exxon Valdez
- (26) crude oil with synthetic or artificial seawater and allowing it

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- (1) to separate To give you an idea how this works we mix the  
 (2) oil and water together in a vessel a glass container and  
 (3) shake it all up until it's all mixed like you would shake  
 (4) vinegar and oil salad dressing And you know how you get the  
 (5) emulsion in that shaken up bottle and then you let this stand  
 (6) undisturbed for a while and the oil floats to the top and the  
 (7) water is at the bottom We let this stand for about 18 hours  
 (8) overnight And at the end of that time we took the water off  
 (9) the bottom we left the oil remain inside and this water now  
 (10) is contaminated with whatever oil was able to get into the  
 (11) water and stay there  
 (12) This water was then diluted with clean seawater until we  
 (13) had dilutions down to one tenth of a percent And in these  
 (14) various dilutions from the hundred percent extract that I made  
 (15) down to a tenth of a percent I put newly fertilized herring  
 (16) embryos or eggs into each a series of these dilutions and  
 (17) these embryos were derived from Prince William Sound adult  
 (18) spawning herring that I collected here in the Sound in 1991  
 (19) These were allowed to incubate develop hatch And after  
 (20) they hatched and within the first 24 hours after hatching I  
 (21) removed the larvae and these larvae the little fellows that I  
 (22) drew on the board here that had the yolk sac on them these  
 (23) were then examined for physical defects for birth weight and  
 (24) for chromosome or genetic damage  
 (25) The second component of the study was to take these newly

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- (1) fertilized eggs put them into little chambers that I had  
 (2) developed and put them in the Prince William Sound at oiled  
 and  
 (3) unoiled sites allow them to incubate there until just before  
 (4) they hatched then bring them back into the laboratory and let  
 (5) them hatch in the laboratory and then compare the difference  
 (6) between those that were incubated in the field at oiled sites  
 (7) and those were incubated in the field at unoiled sites So  
 (8) this would be a natural exposure to oiled and unoiled sites in  
 (9) the field sometime  
 (10) Q What was your conclusion to the first question which is  
 (11) Does Exxon Valdez oil have an effect upon the growing herring?  
 (12) A The overall conclusion was Yes it does have an effect on  
 (13) the developing embryos and larvae  
 (14) Q So did that cause you to go on to the next step which was  
 (15) to try to determine in what ways it had an effect?  
 (16) A That's correct What I did was to look at a variety of  
 (17) different endpoints mortality time of hatching physical  
 (18) abnormalities birth weights genetic damage  
 (19) Q Showing you what has been marked for identification as  
 (20) Exhibit Number 475 what is depicted in 475?  
 (21) A Here we have my little marker - this is a photograph  
 (22) through a dissecting microscope These are magnified about  
 (23) oh I'd say a normal herring would be about that long so I  
 (24) think they're magnified quite a bit These are normal herring  
 (25) larvae right after hatching from the egg and you can see here

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- (1) the eye right there  
 (2) Q Excuse me Dr Kocan I'm sorry to interrupt you but you  
 (3) just said they're about that long but I think you were looking  
 (4) at a little smaller screen than what the jury's looking at  
 (5) Did we just have a problem there? On this screen they're  
 (6) about this big?  
 (7) A Well in relation to the whole larva you see the actual  
 (8) ones are that big so shrink him down to that size and they're  
 (9) there You can see them but they're very small You can see  
 (10) here's the eye these dark objects are the eyes right there  
 (11) and here's the yolk sac described to you earlier That's got  
 (12) the yolk material in it and obviously this is the head end  
 (13) here and this is the tail over here  
 (14) And you can't see all of the structures here but you can  
 (15) see through the microscope gills and what are comparable to  
 (16) ears in a fish and muscle bands and intestines and all that  
 (17) stuff These are perfectly normal The head is normal and the  
 (18) eyes are normal and these are normal in herring  
 (19) Q Showing you next superimposed over the top here will be  
 (20) Exhibit 486 and you have the - ability to blow that up in the  
 (21) top if you need to  
 (22) A Just as a brief explanation the top panel shows a group of  
 (23) herring larvae that were derived from the same parents as the  
 (24) bottom panel but had been exposed to petroleum  
 hydrocarbons  
 (25) during embryonic development while they were in the egg And I

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- (1) think without much description you can see they're not the  
 (2) same So there is an effect You see bent spines and deformed  
 (3) jaws and fin problems gill maldevelopments lot of things go  
 (4) on that are just visible with the naked eye  
 (5) Q Showing you next what has been marked as Exhibit Number  
 (6) 487 put the - I put Exhibit 475 on the bottom here the  
 (7) normal ones?  
 (8) A And the bottom panel is still that normal group The upper  
 (9) panel shows the larva that was alive when it hatched It has  
 (10) obviously a curved spine which is abnormal If you'll notice  
 (11) there are no eyes This thing was born without eyes and a  
 (12) curved spine but it was alive It had a heartbeat and it was  
 (13) wiggling around a bit but obviously it wasn't going to survive  
 (14) to become a herring And this was exposed to petroleum  
 (15) hydrocarbon I should say specifically this was exposed to  
 (16) Exxon Valdez Go ahead  
 (17) MR PETUMENOS Could I see Exhibit Number 485  
 (18) please?  
 (19) A This is another example of a deformed larva Again here  
 (20) you can see that the eyes are protruding from the side of the  
 (21) head That's very abnormal And again we have this severe  
 (22) curvature of the spine This animal is not able to straighten  
 (23) that out This is the position it remains in even if it's  
 (24) moving its fins and trying to swim it'll swim in little  
 (25) circles because the development of the muscles on both sides of

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- (1) the body are uneven  
 (2) MR PETUMENOS Exhibit 477 please  
 (3) A This one came out upside down but I think we can still  
 (4) show what you need to here This larva is upside down  
 (5) obviously The yolk sac is on the top instead of the bottom  
 (6) Here on the top of the head you can see a protuberance which  
 (7) is probably not an abnormal growth but it's just a  
 (8) malformation of the skull And if you look right here where  
 (9) there should be a lower jaw there is no lower jaw  
 (10) This animal was alive and - excuse me obviously here  
 (11) there's so much deformity in the head that if we look in this  
 (12) area here you see that the eyes don't even have any tissue on  
 (13) which to rest The animal was oriented normally There's  
 (14) nothing from this point down The eyes are protruding down  
 (15) into what would be the oral cavity  
 (16) Q Where's its mouth?  
 (17) A It's mouth is missing there's no jaw It's what I  
 (18) depicted here the lower jaw is missing The mouth should be  
 (19) here  
 (20) MR PETUMENOS Excuse me one second  
 (21) BY MR PETUMENOS  
 (22) Q Were the larvae from Prince William Sound then also  
 (23) examined?  
 (24) A Yes Larvae were collected in 1989 1990 from Prince  
 (25) William Sound - well let me back up a little bit Eggs

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- (1) developing eggs were collected in 1989 1990 and incubated in  
 (2) the laboratory and the newly hatched larvae were then  
 examined  
 (3) and these eggs were collected from oiled sites and unoiled  
 (4) sites in the Sound  
 (5) Later in the year starting in April or May another study  
 (6) actually collected free swimming larvae I caught in my net and  
 (7) examined them These larvae then they didn't know where  
 they  
 (8) had come from they just knew they were in the Sound and  
 where  
 (9) they had collected them  
 (10) Q Exhibit 503 does that exhibit portray two larvae from  
 (11) previously oiled sites and one from an unoiled site?  
 (12) A Correct That top individual the upper individual is a  
 (13) normal larva from Prince William Sound That's this - that's  
 (14) this fellow here and the two bottom individuals are abnormal  
 (15) larvae collected from oiled sites in Prince William Sound and  
 (16) these were collected in 1989  
 (17) Q Dr Kocan did you make a comparison between larvae  
 exposed  
 (18) to different concentrations or levels of Exxon Valdez crude in  
 (19) your laboratory tests?  
 (20) A That's correct The initial laboratory component of my  
 (21) study in 1991 involved exposure of the developing embryos in  
 (22) different concentrations of Exxon Valdez crude oil or soluble  
 (23) components of the crude oil not the whole oil  
 (24) Q Showing you what's been marked as - for identification as  
 (25) Exhibit 511 During a break I took a look at this from that

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- (1) seat up there in the corner it's hard to read so could we  
 (2) sort of go through it point by point and maybe blow up the X  
 (3) and Y axis a little bit with the pen? Or I can do it if you  
 (4) like so we can tell all the jurors what this graph depicts?  
 (5) A Sure I may even be able to write those numbers on here  
 (6) On the - okay the bottom axis or this lower set of  
 (7) numbers represents concentrations of soluble petroleum  
 (8) hydrocarbons That is what had dissolved into that lower water  
 (9) later I described to you a few minutes ago and the highest  
 (10) concentration is on this end - no I didn't want to do that  
 (11) Q I'm going to take it from you here just a minute Could I  
 (12) drive for a while?  
 (13) A Sure  
 (14) Q I just want to do one thing for the jurors that can't see  
 (15) so well The Y axis first of all shows what?  
 (16) A Normal larvae And when he says the Y axis he means this  
 (17) vertical axis This tells you the percent of normal larvae  
 (18) that hatched from the egg  
 (19) Q And then along the bottom we have -  
 (20) A These represent parts per million of - this should read  
 (21) soluble petroleum hydrocarbons  
 (22) Q What does that mean?  
 (23) A Those are the - the components of the oil that actually  
 (24) dissolved into the water phase of that mixture I explained  
 (25) Q So as we go from left to right across the graph is the

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- (1) concentration of oil increasing?  
 (2) A The concentration increases from zero you can see here to  
 (3) almost ten parts per million and the lowest concentration  
 (4) is .01 or 1/100th of a part per million  
 (5) Q Who's driving? Thanks you can give it back to the Doctor  
 (6) if you would  
 (7) A Okay  
 (8) Q So what did you find out about how concentrations of oil  
 (9) relate to this?  
 (10) A As an overall impression as you see the concentration  
 (11) increase from zero to a hundred you also see that the number  
 (12) of normal individuals the percent of normal individuals  
 (13) decreases Now this point on there were zero percent  
 (14) normal They all hatched They didn't die but they were all  
 (15) abnormal totally deformed  
 (16) Okay the first place that you see a significant decrease  
 (17) in number of normal individuals is here at this concentration  
 (18) which is .48 or less than one half of a part per million  
 (19) Q Now to remind the jury -  
 (20) A I'd like to just explain  
 (21) Q Go ahead  
 (22) A This next concentration .24 was not significantly  
 (23) different from no treatment That is there was a very  
 (24) significant loss in the number of normal individuals or an  
 (25) increase in the number of abnormal at .48 parts per million

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- (1) but at 24 there was no significant difference between no  
 (2) treatment at all  
 (3) Q Okay Now I d like to have you remind the jury we re  
 (4) talking here about larvae and you drew for us on the easel the  
 (5) different stages of development What stage of development  
 (6) does this graph depict the rate of normal larvae on - is it  
 (7) the beginning or the end?  
 (8) A These are the newly hatched larvae the day they hatch  
 (9) first 24 hours after they hatch They were from the beakers  
 (10) where they were growing or incubating and they were  
 observed  
 (11) or they were examined for all the various endpoints I was  
 (12) looking for So this represents the newly hatched larvae that  
 (13) had been exposed during the time they were eggs incubating  
 and  
 (14) developing in these embryos  
 (15) Q Next I have a short video clip to show you Dr Kocan  
 (16) Exhibit 247A and I wonder if you could look at it with us and  
 (17) comment upon what we re going to see  
 (18) MR PETUMENOS And Your Honor this videotape will  
 (19) actually be testified to for the entire tape by a subsequent  
 (20) witness  
 (21) (Videotape Played)  
 (22) BY MR PETUMENOS  
 (23) Q You ve had a chance to review the tape before?  
 (24) A I believe this is the Rick Rosenthal tape  
 (25) Q Correct

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- (1) A Taken in Prince William Sound  
 (2) Q Right And what do we see here?  
 (3) A Here we see a diver underwater and he s wiping the - the  
 (4) bottom the kelp that s on the bottom See this right here  
 (5) this is kelp growing on the bottom and he s wiping it with -  
 (6) or she I don t know is wiping it with these white towels and  
 (7) you can see on the white towels the black tarry substance  
 (8) which is petroleum or Exxon Valdez oil and this vegetation is  
 (9) vegetation on which the herring deposit their eggs  
 (10) MR KARLBERG Your Honor can we get clarification  
 (11) where this video was taken whether it s anywhere related to  
 (12) where a spawn occurred?  
 (13) THE COURT Can you do that counsel?  
 (14) MR PETUMENOS There will be a witness later to  
 (15) testify to the location of the videotape where the boat was  
 (16) and where they went on  
 (17) MR KARLBERG It s my understanding Dr Kocan does  
 (18) not know  
 (19) THE COURT Do you know where this tape was taken?  
 (20) THE WITNESS I don t know the exact location no  
 (21) THE COURT Do you know the general location?  
 (22) THE WITNESS Prince William Sound  
 (23) THE COURT That s it  
 (24) THE WITNESS Somewhere in the track of the oil plume  
 (25) THE COURT We know where that is

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- (1) BY MR PETUMENOS  
 (2) Q Now with concentrations like the amount of oil that where  
 (3) you get to the point where you can put it on a white cloth like  
 (4) this and see it the way we saw it on the film how does that  
 (5) compare to the concentrations we were seeing on your graph  
 just  
 (6) a moment ago? And perhaps we could have that back  
 (7) MR KARLBERG Objection Your Honor I don t know  
 (8) that there s been any foundation laid for the concent ation  
 (9) level of what was on that white cloth  
 (10) THE COURT The question described that where you  
 (11) could see it on a cloth  
 (12) MR PETUMENOS Right  
 (13) THE COURT Do you know what concentration that is?  
 (14) THE WITNESS That was pure oil Pure as it can be at  
 (15) that stage  
 (16) THE COURT You re going to have to ask some  
 (17) clarifying questions counsel  
 (18) MR PETUMENOS Could I get the graph back up and I  
 (19) can do that  
 (20) BY MR PETUMENOS  
 (21) Q When we re talking about the concentration here at  
 (22) say 48 has that got a concentration where you can show the  
 (23) oil by pulling it off of the place where the herring spawn on  
 (24) the kelp?  
 (25) A No none of these concentrations even at the hundred

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- (1) percent level - whoops even at the hundred percent level or  
 (2) almost ten parts per million was any oil visible This  
 (3) appeared to be in the water  
 (4) Q I m sorry?  
 (5) A It appeared to be clean seawater  
 (6) Q Now in those individuals that escaped the individual  
 (7) herring creatures that escaped the physical defects that we ve  
 (8) been able to see here were there other observed differences in  
 (9) the field with respect to the weight of the herring that were  
 (10) being created by their parents?  
 (11) A In the field?  
 (12) Q Yes Were there differences observed between oiled and  
 (13) unoiled areas in the field with respect to the weight of the  
 (14) herring?  
 (15) A There were differences observed - that s right Herring  
 (16) embryos that had hatched into larvae from oiled sites in the  
 (17) field weighed less They were smaller than embryos that  
 (18) hatched and had been developing in unoiled sites This is the  
 (19) same phenomenon I observed in my laboratory study that all of  
 (20) these embryos - all of the embryos that were exposed to any  
 (21) concentration of oil hatched at a lighter weight than did the  
 (22) embryos that were not exposed  
 (23) Q Could I have the light pen please just real quickly for  
 (24) the jurors in the back that are having trouble seeing  
 (25) On the vertical axis here the line going up we have the

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- (1) weight of the larvae going up?  
 (2) A That's correct. That tells you how much they weighed.  
 (3) Q And going across the bottom we have the fact that this was  
 (4) done in the laboratory, right?  
 (5) A That's right. This was a controlled laboratory exposure.  
 (6) Q Why do we care what a herring larva weighs?  
 (7) A It's been well established in a number of different species  
 (8) that smaller individuals compete less well. They're less able  
 (9) to escape predators. They're less able to compete for  
 (10) available food supplies. They're less able to obtain ideal  
 (11) habitat for protection. They're just, you know, it's the --  
 (12) the small guy on the beach kind of syndrome, they just don't  
 (13) have the survival potential as -- their survival potential is  
 (14) less than that of larger individuals because they can't compete  
 (15) as well, and I think this shows here that the oil exposed  
 (16) individuals were considerably lighter at birth than were the  
 (17) unexposed, the control individuals, these weighing 120  
 (18) micrograms and these way weighing approximately 80 or  
 (19) maybe  
 (20) 75.  
 (21) Q Now I'm going to show you another exhibit, Number 497 on  
 (22) top, please. And could I have the pen back?  
 (23) Does Exhibit 497, which is now on top, reflect what they  
 (24) observed in the field, itself?  
 (25) A Yes. The top panel represents weights of larvae that were  
 collected in the field. These were -- actually, these were

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- (1) parts of a study that I had done in 1991 that I just described  
 (2) a moment ago where I exposed herring larvae at oiled and  
 (3) unoiled sites until just before they hatched, and then I  
 (4) brought them into the laboratory and allowed them to hatch.  
 (5) And after they hatched, I weighed them and compared the  
 (6) weights  
 (7) of the two sites, or the larvae from the two sites.  
 (8) Q What is the significance that these two graphs look very  
 (9) similar to you, sir?  
 (10) A Well, both of the graphs, as you can see, showed that the  
 (11) left-hand bar that represents control, or in this case, control  
 (12) unexposed larvae, and here -- these are larvae that grew on an  
 (13) unoiled site -- were significantly heavier, weighed more than  
 (14) did larvae that were either exposed to a known amount of oil  
 (15) or exposed at an oiled site in Prince William Sound. So the  
 (16) relationship between weight, oiled and unoiled sites and oil  
 (17) exposed and unoiled, unexposed individuals is the same.  
 (18) MR PETUMENOS: We're done with those, Mr. Johnston.  
 (19) Thank you.  
 (20) BY MR PETUMENOS:  
 (21) Q What about -- we've now talked about the weight of larvae,  
 (22) we've been talking a lot about what happens to larvae. Back  
 (23) when we drew your chart on the easel, let's go back to a  
 (24) different stage of development and talk about differences  
 (25) between herring exposed to oil and those not exposed to oil  
 when it comes to the time it takes for eggs to hatch. Were

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- (1) there any differences noted between those two?  
 (2) A Yes. In general, what I observed is the higher  
 (3) concentration of oil to which I exposed the developing embryo  
 (4) the earlier they hatched, or, more understandable terms, I guess  
 (5) they were premature. They hatched prematurely.  
 (6) Q Could we see Exhibit 488, please? And when we use the  
 (7) word  
 (8) premature, that's essentially having premature offspring,  
 (9) premature births?  
 (10) A Yes, it's premature. They hatched before they were ready  
 (11) to hatch, before the development was as far along as it was  
 (12) supposed to have been.  
 (13) Q Could you tell the jury, please, what Exhibit 488 is, which  
 (14) is about to come up on the screen?  
 (15) A Certainly.  
 (16) Q And he can drive on this one.  
 (17) A Okay, this is a -- this is a -- these three panels  
 (18) represent three different concentrations or groups of  
 (19) concentrations of the oil, or the soluble oil that I exposed  
 (20) these embryos to. Let's just do the drill here.  
 (21) This is -- the bottom set of numbers represents days post  
 (22) fertilization. That is from the time they're fertilized until  
 (23) they hatched, okay.  
 (24) And this vertical axis here merely represents the number of  
 (25) eggs that hatched each day. And this number here is 12, and  
 this number is 24, so if you look at the top panel -- and I may

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- (1) as well, just go ahead and expand it up so we can read it  
 (2) clearly and use it as a reference from now on.  
 (3) This is two separate experiments with two groups of embryos  
 (4) that were exposed to nothing. They were just put in clean  
 (5) seawater at eight degrees centigrade, 24 parts per thousand  
 (6) normal seawater concentrations, and 12 hours of light and 12  
 (7) hours of dark, and they represent two different groups. And  
 (8) there's two sets of lines, and you see here that the greatest  
 (9) number of embryos hatched at about day 19, and by day 20  
 (10) virtually all of the embryos that were going to hatch had  
 (11) hatched. So day 19 is the peak hatching day for control  
 (12) normal, untreated herring embryos that were raised under these  
 (13) conditions.  
 (14) Now, in the next -- in the next panel you see -- I won't  
 (15) blow this one up right away -- you see here that there are  
 (16) three different concentrations. Maybe I better blow that up.  
 (17) These concentrations represent the very lowest to which the  
 (18) embryos were exposed. You see that their hatching day is  
 (19) essentially the same as occurred with the untreated, or in the  
 (20) untreated group.  
 (21) But if we move down to the bottom panel, where the  
 (22) concentrations start increasing and are higher, you see that  
 (23) the peak hatching day now moves over here, and this is now  
 (24) day  
 (25) 15. But it's also, you'll notice, a lot messier. You get a  
 lot of spreading of this. So what's happened here is that the

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- (1) days to hatching has decreased or they've hatched prematurely
- (2) relative to the untreated control fish and this happens not
- (3) only under controlled laboratory conditions but it also
- (4) happened in 1989 when the eggs were collected from the oiled
- (5) and unoiled sites. This was done by another investigator and
- (6) reported in the final report so premature hatching appears to
- (7) be related to oil exposure both in the field and in the
- (8) laboratory
- (9) Q All right. Could you tell us whether you observed how
- (10) chromosomal development took place in laboratory tests and
- (11) tests done at Prince William Sound?
- (12) A Yes. The newly hatched larvae that -- those that I showed
- (13) you that I took pictures of and were represented in the first
- (14) bar graph that we looked at that showed the decreasing
- (15) number
- (16) of normal individuals the concentration of oil increased
- (17) Those were subdivided into groups and part of them were
- (18) examined for chromosome damage the type of chromosome
- (19) damage I
- (20) showed you earlier with the two cells that were dividing here
- (21) and these individuals were examined for background levels of
- (22) chromosome damage. That is what one might expect to occur
- (23) normally in an untreated healthy individual and compared to
- (24) increasing concentrations of oil and oiled sites and unoiled
- (25) sites
- (1) Q Now just to make sure we understand when you drew us that
- (2) picture that had the different chromosomes and they had the

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- (1) other broken pieces around is that what we're talking about
- (2) here?
- (3) A That's correct. That's what we're talking about
- (4) Q All right. Could I have the Elmo please?
- (5) Dr. Kocan exhibit -- I show you Exhibit Number 499 for
- (6) identification. What is it?
- (7) A Yes okay. This represents three concentrations that I
- (8) chose for a particular reason -- concentrations of oil that
- (9) is that I chose for a particular reason. I'll get into it
- (10) here in a moment. And it shows that -- let me first show you
- (11) the concentrations
- (12) Q We're on a different --
- (13) A Oh can't do that
- (14) Q Can't do that?
- (15) A Okay I'll tell you what they are. This bar represents no
- (16) treatment at all
- (17) Q Which bar could you describe it for us?
- (18) A The bar is the left hand bar that's purple and it looks
- (19) like about 12 or 13 -- no it looks like about 7 or 8 percent
- (20) abnormal chromosomes. This is not unusual you find a small
- (21) number of abnormal chromosomes in all individuals
- (22) The second concentration is a tenth of a part per
- (23) million 1 and it shows about just under 20 percent abnormal
- (24) or cells of abnormal chromosomes. And at 24 parts per
- (25) million we see about 27 or 28 cells with abnormal percent

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- (1) abnormal chromosomes. So there's an increase in the number
- (2) of
- (3) abnormal chromosomes or damaged chromosomes as the
- (4) concentration increases and the significance of the numbers I
- (5) chose here if you recall back to a previous graph where I
- (6) showed you where you can first see the abnormal larvae
- (7) Q Could we have Exhibit 511 please?
- (8) A It was at I believe 48 parts per million. At 24 you
- (9) were unable to see any difference between normal -- or between
- (10) the untreated and the exposed individuals but in this graph I
- (11) showed you that at that concentration and lower there was a
- (12) significant increase in the number of damaged chromosomes or
- (13) cells with damaged chromosomes
- (14) Q Here's that graph back where we were talking about zero
- (15) defects in larvae and tell the jury again then at what point
- (16) this chromosome damage began to show?
- (17) A Okay. The three bars we just looked at a moment ago were
- (18) represented -- the bar on the left was represented by this
- (19) column zero no treatment and you remember it was the
- (20) smallest. The next one was represented by this column and it
- (21) was about almost 20 percent abnormal cells. And the next one
- (22) was this column and it was about 27 or so percent abnormal
- (23) You'll see here that we are not in a range of
- (24) concentrations as which you could see a defective larva. They
- (25) appeared all normal at these concentrations but their
- (1) chromosomes were damaged. It's a low concentration that
- (2) caused

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- (1) the genetic damage that is not apparent. You can't see it by
- (2) looking at these little fish
- (3) Q Now you talked about what you saw in the laboratory with
- (4) respect to chromosomal damage. Could I have the Elmo back
- (5) please? Showing you what's been marked for identification as
- (6) Exhibit 500?
- (7) A Okay. This represents larvae that were collected in the
- (8) field and the collection sites are represented here by the
- (9) three bars. The bar on the left the lowest one is purple and
- (10) it looks like about 10 or 11 percent abnormal cells with
- (11) chromosome damage. That is from an unoiled site no oil had
- (12) been in that site where these embryos were collected. They
- (13) were collected in 1989 right after the spill
- (14) The second bar came from Rocky Bay which is on the north
- (15) shore of Montague Island which is a -- considered an oiled
- (16) site and you see here we're dealing with about 35 percent
- (17) chromosome damage
- (18) And the far right hand light blue column is Naked Island
- (19) which was completely surrounded in 1989 by the oil slick
- (20) So we have the left hand column representing an unoiled
- (21) site. The two columns to the right representing oiled sites
- (22) different locations and you see the same pattern of increased
- (23) chromosome damage at oiled sites as you did when they were
- (24) exposed to oil in the laboratory
- (25) Q Once again so the jury can just quickly see it this is

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- (1) the field – this is a graph of the field data then?  
 (2) A This is field data and –  
 (3) Q And this is a graph of the laboratory data?  
 (4) A Laboratory data that's right  
 (5) Q Depicting a similar spread?  
 (6) A That's right  
 (7) Q Finally did you measure embryo mortality rates in oiled  
 (8) and unoiled areas of Prince William Sound?  
 (9) A Embryo mortality was measured in 1989 – not by myself but  
 (10) by other members of the herring study team – and this was  
 done  
 (11) by determining or observing a specific number of eggs at  
 (12) different locations in the Sound And the system was to look  
 (13) at about 500 billion eggs from each of four sites two oiled  
 (14) sites and two unoiled sites and then follow the development of  
 (15) these eggs until they hatched and the larvae were produced  
 and  
 (16) then follow them until the yolk sac was resorbed that is  
 (17) until they began feeding on their own and they were capable of  
 (18) going out and entering the population of fish And this  
 (19) particular graph shows the data obtained from that study and  
 (20) here – whoops change this This vertical column represents  
 (21) percent embryo mortality  
 (22) Q Percent that were killed?  
 (23) A That's right That's relative to the number of eggs about  
 (24) 500 billion compared to how many actual free swimming larvae  
 (25) were produced after the yolks were resorbed That's the

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- (1) measurement we're taking now And on the bottom column  
 here  
 (2) we have four sites the two on the left were oiled the two on  
 (3) the right were unoiled  
 (4) And as you can see the Montague Island site had  
 (5) approximately 65 percent loss of the eggs that had originally  
 (6) been there The Naked Island site which was also oiled had  
 (7) about a 35 percent loss and the north shore and northeast  
 (8) areas had less than 20 percent somewhere between 10 and 20  
 (9) percent  
 (10) So again there's a clear distinction between the oiled  
 (11) sites here and the unoiled sites represented here and you can  
 (12) see that difference quickly there  
 (13) So significantly more embryos were lost if they were  
 (14) incubating and reared at oiled sites than if they were  
 (15) incubated and reared in unoiled sites  
 (16) Q All right Could we get exhibit 494 and Exhibit 495 over  
 (17) that please?  
 (18) Dr Kocan in summary then with these next two exhibits  
 (19) I would like you to tell the jury what opinions and conclusions  
 (20) you reached in respect to the state of health of the herring  
 (21) population in Prince William Sound and its connection to the  
 (22) Exxon Valdez oil spill  
 (23) A Based on laboratory studies that I performed I found with  
 (24) certainty that there was premature hatching of embryos  
 exposed  
 (25) to oil That the larvae that hatched from embryos that had

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- (1) been exposed during development they were – they had  
 (2) significantly more abnormalities were significantly more  
 (3) abnormal The weights of oil exposed individuals were  
 (4) normal – were lower than that of the individuals that were not  
 (5) exposed to oil and there was an increase in cytogenetic or  
 (6) genetic damage in the oil exposed larvae  
 (7) Now in the field for 1989 we also found increases in  
 (8) embryo mortality if I might just mark these Okay this is  
 (9) red We also found increases in embryo mortality in the  
 (10) field We also found – I mean I'm sorry that's wrong –  
 (11) abnormalities okay We also found lower birth weights in the  
 (12) field indicated right here We also found an increase in  
 (13) cytogenetic damage indicated here  
 (14) And in 1991 and '92 we again found the same relationships  
 (15) of increased abnormalities and hatching rates And in  
 (16) addition in 1989 in the field we observed increased embryo  
 (17) mortality  
 (18) Now I should point out it's not on here but there was one  
 (19) other the premature hatching which we have here was  
 described  
 (20) by one of the investigators in the 1989 study as having  
 (21) occurred in the field or from field exposed embryos from oiled  
 (22) sites So everything that we found in the laboratory appeared  
 (23) again in the field in 1989 and in some subsequent years and it  
 (24) always seemed to be related to the oiled sites relative to the  
 (25) unoiled sites

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- (1) Q Dr Kocan we heard in this courtroom about a record  
 (2) harvest of herring in 1990 and 1991 bigger than its ever  
 (3) been Why would you expect following an event like an oil  
 (4) spill we might see record harvests in the years following?  
 (5) A In 1990 and '91 year classes were expected or predicted to  
 (6) be very high before there was any oil spill They were  
 (7) expected to be high just because of the normal nature and  
 (8) cycling – cyclical nature of the herring spawn population  
 (9) The year – in 1989 the year preceding the harvest the  
 (10) fishery the herring fishery was closed in Prince William  
 (11) Sound which essentially eliminated up to 20 percent of the  
 (12) harvest In other words there were 20 percent of the fish  
 (13) that would ordinarily have been harvested were not harvested  
 (14) so they remained in the population so they survived to return  
 (15) the following year So that accounted for part of the  
 (16) increase  
 (17) Another component is that the fish bird and mammalian  
 (18) predators that would normally feed on herring year-round were  
 (19) also killed in 1989 and these didn't take their toll or remove  
 (20) the number of herring that they ordinarily would So this  
 (21) group of herring hadn't been preyed upon or served as a food  
 (22) source and was also present in 1991 or subsequent years  
 (23) subsequent to the oil spill  
 (24) So this accounts for the increased number of individuals  
 (25) even beyond what was expected to return due to – based on

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- (1) ADF&G fish forecasts  
 (2) Q Now what are some of the adverse effects to the herring  
 (3) population as a whole if they become overpopulated?  
 (4) A In general overpopulation can cause a number of problems  
 (5) One that comes to mind immediately would be of course they  
 (6) might outstrip their food supply but that didn't appear to be  
 (7) the case in Prince William Sound because the food base was  
 (8) similar in Prince William Sound and in other areas where there  
 (9) were herring  
 (10) But a more critical event would be the more rapid  
 (11) transmission of disease organisms should they be introduced  
 (12) into the population when you have a denser population that is  
 (13) the closer animals are together or closer they are to one  
 (14) another the more rapid the disease may be transmitted  
 (15) between  
 (16) them You see this in livestock that the disease they get is  
 (17) transmitted much more slowly or less frequently if they keep  
 (18) them in a close corral or small area So this is the concept  
 (19) of what happened in this situation  
 (20) Q What happened to the herring run in 1993 in Prince William  
 (21) Sound?  
 (22) A The 1993 herring run was expected to come back at about 1  
 (23) believe 120 000 or 130 000 tons and it came back at around  
 (24) 24 000 tons There was a loss of around 100 000 tons of fish  
 (25) unexplained between 1992 and 1993  
 (26) Q What was observed within the population of those returning

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- (1) herring anything unusual?  
 (2) A Yes 1993 fishermen began to report hemorrhagic or  
 (3) bleeding lesions on the skin of herring they were harvesting  
 (4) from the Sound and this had not been reported by them in  
 (5) previous years or observed by them  
 (6) Q What can you tell us about what was causing those sorts of  
 (7) things and what was observed in those herring with respect to  
 (8) any diseases they carried?  
 (9) A Well I'd like to present that from what I know now as  
 (10) opposed to what I knew when it first was reported but the  
 (11) lesions have been shown to be a direct result of a virus known  
 (12) as VHS or viral hemorrhagic septicemia And this virus is -  
 (13) in 1989 was not even known to be present in North America but  
 (14) has subsequently been found in coho salmon and steelhead in the  
 (15) State of Washington and in I believe around 1990 or  
 (16) thereabouts it was discovered in Prince William Sound in some  
 (17) true cod And in 1993 the lesions that occurred in these  
 (18) herring that did come back in such small numbers were caused  
 (19) by a virus the same virus VHS virus and it's been named the  
 (20) North American strain of VHS  
 (21) There's a comparable strain that occurs in Europe and  
 (22) there it affects trout and it causes total mortality in the  
 (23) trout population so -  
 (24) Q Are there viruses that occur in the population normally  
 (25) that the population is able to handle?

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- (1) A Oh yes numerous viruses are present in almost all  
 (2) populations They frequently occur at what are described as  
 (3) latent that is they're present they reproduce at a very low  
 (4) rate or they don't reproduce at all or they cause no problems  
 (5) There's no disease associated with the infection  
 (6) An example might be herpes One gets cold sores when we're  
 (7) under stress and this is caused by herpes virus that many of us  
 (8) carry but rarely know that we have until the disease occurs and  
 (9) that is the little sore that goes on your lip and that's  
 (10) usually associated with some sort of a stress phenomenon  
 (11) Q Are you familiar with the herring population and the  
 (12) comparability of the herring population in the Southeast Alaska  
 (13) or Sitka area with that of Prince William Sound?  
 (14) A Yes Sitka sound has been used traditionally I believe  
 (15) for about the last 20 years as a comparison population to  
 (16) Prince William Sound and the two populations have a  
 (17) tendency - a very strong tendency to increase and decrease  
 (18) and  
 (19) behave similar to one another so what occurs in Sitka  
 (20) generally occurs in Prince William Sound and vice versa  
 (21) Q And how have the Sitka herring returned? Did they return  
 (22) with these lesions or bloody sores on the bodies of some of the  
 (23) herring?  
 (24) A No there's been no change in the Sitka sound herring  
 (25) They've not declined in numbers There's been no disease  
 (26) observed in them but they do carry the virus as do all other

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- (1) herring along the Pacific Coast  
 (2) Q Describe for the jury if a person were taking a fish out  
 (3) of the water with the intent of eating it what these fish with  
 (4) these bloody lesions look like?  
 (5) A Well the - the hemorrhages occur over - well it varies  
 (6) from very small little spots of red to massive large red rashes  
 (7) or areas of bleeding under the skin and in some cases they  
 (8) actually ulcerate and cause sores open sores on the outside  
 (9) of the herring and the fish is exposed and appears to be  
 (10) decomposing the body  
 (11) Q Do you have an opinion as to whether or not the  
 (12) phenomenon  
 (13) we're seeing in the return of the Prince William Sound herring  
 (14) in 1993 and you just described it is related to the Exxon  
 (15) Valdez oil spill?  
 (16) A I think there's a very high probability that the two are  
 (17) related that's right  
 (18) MR PETUMENOS Your Honor I have no further  
 (19) questions I would propose to move the exhibits in later so I  
 (20) don't interfere with counsel's time on cross examination  
 (21) THE COURT You want to take a break counsel  
 (22) MR KARLBERG Right now would be good  
 (23) THE COURT Sure  
 (24) THE CLERK Please rise This court stands in  
 (25) recess  
 (26) (Jury out at 12 38 p m )

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- (1) (Recess from 12 38 p m to 12 55 p m )  
 (2) (Jury in at 12 55 p m )  
 (3) THE CLERK Please rise This court now resumes its  
 (4) session Please be seated  
 (5) THE COURT Go ahead  
 (6) MR KARLBERG Dr Kocan my name s Ken Karlberg We  
 (7) haven t met yet I m sorry we meet under these circumstances  
 (8) but we have a job to do  
 (9) CROSS EXAMINATION OF RICHARD M KOCAN  
 (10) BY MR KARLBERG  
 (11) Q Let me see if I can put this herring issue in perspective  
 (12) in this land case Have you been out to the Kodiak lands that  
 (13) are an issue in this case?  
 (14) A I ve been in the - what the ADF&G considers their fishing  
 (15) areas north shore northeast southwest of the areas so I ve  
 (16) been to the areas that we described previously this morning in  
 (17) some of the testimony  
 (18) Q Do you know where these lands are relative to the  
 (19) historical spawning areas for Kodiak for Kodiak herring?  
 (20) A For the Kodiak herring?  
 (21) Q Yes sir  
 (22) A No I know the spawning areas are in Prince William Sound  
 (23) Q You re not here today to provide any opinion about the  
 (24) health of the Kodiak herring fishery since the spill?  
 (25) A No

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- (1) Q You re not providing any opinion is that correct?  
 (2) A Well I can say that Kodiak herring fishery has not  
 (3) responded or reacted the way the Prince William Sound fishery  
 (4) has I can make that statement  
 (5) Q But you provided no report or no opinion previous to today  
 (6) regarding the Kodiak herring fishery?  
 (7) A That s correct  
 (8) Q And with respect to - with respect to the Cook Inlet  
 (9) Kenai - I should say the Kenai Peninsula land that s at issue  
 (10) in this case have you been to those lands?  
 (11) MR PETUMENOS I m sorry to interrupt counsel I  
 (12) have to object The lands in question in this case were not in  
 (13) Cook Inlet  
 (14) MR KARLBERG I meant Kenai Peninsula and that s why  
 (15) I clarified  
 (16) MR PETUMENOS Kenai Fiords perhaps  
 (17) BY MR KARLBERG  
 (18) Q Have you been to those lands?  
 (19) A I m familiar - well I looked into the herring that part  
 (20) of the Prince William Sound population that do grow as  
 (21) juveniles or are juveniles along the Kenai Peninsula  
 (22) Q But you haven t been to those lands?  
 (23) A I haven t been to the lands  
 (24) Q We respect -  
 (25) A I have not been to the lands

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- (1) Q You re not providing -  
 (2) THE COURT Hold on a minute counsel  
 (3) Your voice is not being heard over here so if you could  
 (4) speak up a little bit more It s not just the mike The  
 (5) amplifier really doesn t work that great You have to project  
 (6) okay?  
 (7) THE WITNESS Okay  
 (8) BY MR KARLBERG  
 (9) Q You haven t been asked then - pardon me do you have -  
 (10) do you know where the lands on the Kenai Peninsula are with  
 (11) respect to the historical spawning areas for the Cook Inlet  
 (12) herring fishery?  
 (13) A Not all of them no  
 (14) Q So you re not here to provide an opinion as to the health  
 (15) of the Kenai - pardon me the Cook Inlet herring fishery as it  
 (16) may relate to land values in the Kenai Peninsula?  
 (17) A Only as it relates to the overall Prince William Sound  
 (18) fishery  
 (19) Q All right Now that we ve kind of cleared a little bit of  
 (20) the underbrush out of the way so I kind of understand where  
 (21) your testimony fits in here let me see if I - I might get to  
 (22) understand a little bit more about your opinions of how the  
 (23) failure occurred in 1993  
 (24) Now Mr Diamond suggested that I am the resident herring  
 (25) expert That s not true but I used to be a commercial

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- (1) fisherman and a herring fisherman and my brother still is and  
 (2) when I go home this summer I ve got to tell him what  
 happened  
 (3) and I don t think I have quite an understanding of it Let me  
 (4) see if I can put some things into perspective  
 (5) While we were on the break I took the liberty of just  
 (6) jotting a few things down here What I ve done - sometimes it  
 (7) helps to be left handed so I - what I have done is I ve just  
 (8) listed - this is for Prince William Sound - the fishery and  
 (9) the year in this column harvest column and a lesion column  
 (10) Now the spill occurred in 1989 during the sac roe fishery  
 (11) is that correct or right before the sac roe fishery?  
 (12) A Just prior to it yes  
 (13) Q And the sac roe fishery on an annual basis usually occurs  
 (14) in April?  
 (15) A That s correct  
 (16) Q There s also a bait or food and bait fishery is there  
 (17) not in Prince William Sound each year?  
 (18) A That s correct  
 (19) Q That would be in October or November?  
 (20) A It s in the fall I m not exactly sure  
 (21) Q Somewhere in there Now for 1989 the sac roe fishery  
 (22) there s no harvest because there was a closure correct?  
 (23) A That s correct  
 (24) Q All right I m going to put closure there And there s no  
 (25) reported lesions from this VHS disease in 1989 Is that

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- (1) correct?
- (2) A That s also correct
- (3) Q All right So I m going to put just no there Now the
- (4) bait fishery occurs later that year As far as you know the
- (5) bait fishery came off and was in healthy and abundant?
- (6) A I really don t know anything about the bait fishery that
- (7) year
- (8) Q You haven t looked into that?
- (9) A No
- (10) Q Let me see if I might - let me hand you the annual fin
- (11) fish report for Prince William Sound for the bait fishery Can
- (12) you confirm for me that the bait fishery for 1989 the harvest
- (13) was as expected and in relatively abundant numbers?
- (14) A For 1989 it looks like it was about 150 - 1500 countings
- (15) yeah
- (16) Q And relative to prior years that was what you expect?
- (17) A Yes it was yes
- (18) Q Just put as expected there To your knowledge no
- (19) lesions from the VHS disease were reported in 1989 Is that
- (20) correct?
- (21) A None that I m aware of
- (22) Q All right I m going to put no there
- (23) 1990 the first sac roe fishery following the spill and
- (24) that year you ve already testified there were record or near
- (25) record harvests is that correct?

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- (1) A That s what I understand yes
- (2) Q Fish were abundant so we ll put just good How about we
- (3) put very good ? No lesions reported in the sac roe fishery in
- (4) 1990 correct?
- (5) A Not in herring I think that was the first year they began
- (6) to see lesions in true cod in Prince William Sound but not in
- (7) herring
- (8) Q No no lesions in herring?
- (9) A Correct
- (10) Q Now the bait fishery in 1990 we refer to the 1992 fin
- (11) fish report there it was very good as well wasn t it?
- (12) A About half of what it was in 1989
- (13) Q Relative to prior years?
- (14) A Well relative to most of the prior years it was about
- (15) half
- (16) Q So can we call it -
- (17) A But -
- (18) Q No population effect that you can see that resulted from
- (19) the spill Is that correct?
- (20) A That s correct
- (21) Q Why don t we just put no spill effects no lesions reported
- (22) in the bait fishery for that year is that correct?
- (23) A Again none that I m aware of
- (24) Q Okay Move on to 91 Sac roe fishery again occurred in
- (25) April that was a record year for harvest wasn t it?

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- (1) A It was - it was fairly high yes sir
- (2) Q Why don t we put near record is that okay?
- (3) A That s fine
- (4) Q All right 1991 do we have any lesions yet?
- (5) A Again not in herring
- (6) Q No Okay
- (7) The bait fishery in 1991 that was - that was an awfully
- (8) good year was it not?
- (9) A It was yes It was much better than the previous two
- (10) Q Okay very good Any lesions any lesions reported in the
- (11) 1991 bait fishery?
- (12) A No
- (13) Q No okay
- (14) 92 sac roe fishery again came off in April Whoops I
- (15) can t spell April even though I was born in that month April
- (16) that was a record harvest that year correct?
- (17) A That appears to be the record harvest that s correct
- (18) Q Record We re now three years post spill we have a record
- (19) harvest Any lesions?
- (20) A In 92 no
- (21) Q 92 sac roe no lesions Bait fishery for 92?
- (22) A It was near record also
- (23) Q Near record as well I ll put near record Any lesions
- (24) reported in 92 bait fishery?
- (25) A Not reported no

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- (1) Q Okay Now we re to 1993 1993 I think you said in the
- (2) sac roe fishery about 24 000 tons about 100 000 tons less
- (3) than you had anticipated?
- (4) A As I recall that s pretty close There was a - there was
- (5) a fishery but it was right on the - on the line I think
- (6) they close it below 24 000 pounds
- (7) Q Okay I just rounded it off to 25 and you say about
- (8) 100 000 tons of fish didn t come back that year?
- (9) A Unaccounted for yes
- (10) Q Okay unaccounted for Lesions that year?
- (11) A Yes
- (12) Q That s a yes Bait fishery for 1993?
- (13) A 93 it had a very high bait fishery
- (14) Q Very good Any lesions reported in the bait fishery that
- (15) year?
- (16) A I don t know
- (17) Q Are you familiar with Dr Myers who s the chief
- (18) pathologist for the ADF&G?
- (19) A Yes
- (20) Q And are you aware that he s of the opinion that there were
- (21) no lesions for the bait fishery for 1993?
- (22) A I m not familiar with his report on the bait fishery at
- (23) all
- (24) Q Are you familiar with what his after the spill - pardon
- (25) me after 1993 as to the bait fishery and what might have

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- (1) happened?  
 (2) A I recall 1994 but I didn't specifically discuss the bait  
 (3) fishery no  
 (4) Q We'll put a question mark there and we'll clear that up  
 (5) when Dr. Myers testifies  
 (6) A Yes  
 (7) Q In '94 the most recent sac roe fishery what was the  
 (8) harvest?  
 (9) A There was no harvest. Let's back up a minute. Sac roe was  
 (10) not harvested of 25,000 tons. That was the return.  
 (11) Q Let's call that the biomass.  
 (12) A That's one percent of 25,000.  
 (13) Q I stand corrected. I don't mean harvest. I mean biomass.  
 (14) A About 20,000.  
 (15) Q About 20,000. Lesions in 1994?  
 (16) A Yes.  
 (17) MR PETUMENOS: I'm sorry, counsel, I've forgotten -  
 (18) are we talking about biomass, Judge, or harvest?  
 (19) MR KARLBERG: Biomass.  
 (20) MR PETUMENOS: For both figures?  
 (21) THE COURT: Hold on, hold on. Is that the proper term  
 (22) for both pages?  
 (23) MR KARLBERG: Yes, sir. And Your Honor, I'll  
 (24) correct it when I flip it over.  
 (25) THE COURT: Go ahead.

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- (1) BY MR KARLBERG  
 (2) Q And bait fishery has not occurred yet this year?  
 (3) A Not that I know of.  
 (4) Q We don't know what's going to happen there. What I've  
 (5) tried to do is just put a little perspective on what has  
 (6) happened. I got to change this to what has happened since the  
 (7) spill.  
 (8) Now would you agree with me, sir, that whatever happened  
 (9) - and we're going to discuss what you believe happened, but  
 (10) whatever happened happened sometime between 1992 bait  
 fishery  
 (11) when we had a near record harvest and no lesions, and the  
 (12) sac roe fishery in 1993 when we had the disappearance of  
 (13) approximately 100,000 tons of fish?  
 (14) A Would you restate what it is that I'm agreeing to, or that  
 (15) you want me to agree to?  
 (16) Q I'm trying to narrow down the window of what happened and  
 (17) hopefully provide the jury with an understanding of when it  
 (18) might have happened.  
 (19) A Okay.  
 (20) Q And would you agree with me that it's most plausible that  
 (21) whatever happened to these fish in 1993 occurred between the  
 (22) bait fishery in '92 when you had near record harvest and no  
 (23) lesions, and the spring sac roe fishery when you have an  
 (24) unexplained loss of 100,000 tons and the lesions show up?  
 (25) A I would say that that's the first time we observed any

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- (1) effect. I won't agree that nothing was going on prior to that  
 (2) time because I don't believe in things occurring  
 (3) spontaneously. Something had to lead up to this.  
 (4) Q But you have -  
 (5) A What I'm saying is we - what we see in 1993 is most  
 (6) probably the result of something that has been going on up  
 (7) until 1993 and that finally manifests itself in the massive  
 (8) loss or disappearance of these fish.  
 (9) Q We'll get into that in a minute.  
 (10) MR KARLBERG: Can we call up Exhibit 4946 A  
 (11) defendants?  
 (12) BY MR KARLBERG  
 (13) Q You've seen this chart before, Dr. Kocan?  
 (14) A Yes.  
 (15) Q It's a chart reflecting herring harvests in Prince William  
 (16) Sound over time?  
 (17) A Yes.  
 (18) Q All right. Would you agree that in '90, '91 and '92 that  
 (19) the spill had no perceptible population impact on the biomass  
 (20) as shown by the outstanding harvests in '90 and '91 and '92?  
 (21) A Yes. I'll agree that there were outstanding harvests in  
 (22) '90, '91 and '92.  
 (23) Q Now let's move. If we might to - you can go ahead and  
 (24) take that down - to your opinion of how this occurred, and I'm  
 (25) going to have to do a little housekeeping just for a second

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- (1) here, so bear with me.  
 (2) MR CLOUGH: Can I take this down? I don't know if  
 (3) you folks took notes or not. I'll take it out of the way for  
 (4) the time being. I can give you a hand with that.  
 (5) BY MR KARLBERG  
 (6) Q What I'd like to do is play just a little bit of Sherlock  
 (7) Holmes - that's what the first chart was for - so we might  
 (8) get a better idea when we start to see things.  
 (9) Are you going to be able to see that?  
 (10) A I think I can see it all right.  
 (11) Q My apologies (addressing counsel behind the chart).  
 (12) What I'd like to do now is walk through how you believe the  
 (13) spill translated into this population decline in 1993. In your  
 (14) direct testimony, all you provided was your opinion that it had  
 (15) happened. At this point in time we don't really know how you  
 (16) believe it happened.  
 (17) Now, have you provided ever a report to the defendants on  
 (18) just this issue of the VHS virus and how it translated into the  
 (19) population decline?  
 (20) A Have I given a written report, you mean?  
 (21) Q Yes, sir.  
 (22) A No, I haven't. My opinion on this has developed as I  
 (23) accumulated data, almost by the day, as a matter of fact, on  
 (24) what's been discovered about this virus since it was first seen  
 (25) in herring. So it's a developing process at this point, but I

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- (1) do - I still have the same opinion I had two weeks ago  
 (2) Q Okay I only bring that out because I want to explain so  
 (3) the jury will know why we're walking through this because we  
 (4) haven't got a report yet and this has been an evolving thing  
 (5) for you  
 (6) And now as I understand your testimony you've given thus  
 (7) far by deposition and your federal trial transcript it's your  
 (8) belief that the 1989 year class is kind of the catalyst year  
 (9) class that caused the transmission of this - this disease to  
 (10) the biomass just in general terms is that correct?  
 (11) A It's the - right it's the key pivotal year class that's  
 (12) involved in this disease complex that's right  
 (13) Q And it's your belief that because the 1989 year class was  
 (14) exposed to oil in 1989 while they were in the embryonic and  
 (15) larval stage that their immune systems were compromised is  
 (16) that correct?  
 (17) A That's correct  
 (18) Q All right Let me - let me just - I don't know if this  
 (19) is going to work here Okay so this is kind of the first  
 (20) stage of your opinion 1989 year class was exposed to oil?  
 (21) A Okay I can't read it very clearly but I'll -  
 (22) Q Okay And this exposure was in concentration levels  
 (23) sufficient to compromise their immune system?  
 (24) A Yes And that was in our 1992 report to the Trustees  
 (25) Q Okay Now I am assuming since there's a great deal of

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- (1) money at stake in this case that you've actually personally  
 (2) done tests to determine that the 1989 year class immune system  
 (3) was compromised is that -  
 (4) A No My conclusion is based on what's known about the VHS  
 (5) virus in fisheries and that is that the only time that it  
 (6) shows up in a disease state is when the immune system's been  
 (7) compromised by some environmental stress and that's based  
 (8) on  
 (9) historical work that's been done for many many years on the  
 (10) European strain of this virus  
 (11) Q My question was Have you done testing yourself to  
 (12) determine that the 1989 immune year was compromised?  
 (13) A No this virus was only identified a year ago less than a  
 (14) year There's no way to conduct tests in the literature  
 (15) Q I just want to confirm no tests have been done by you  
 (16) A No - yes but that's not really exactly the information  
 (17) you need to know  
 (18) Q This immune system was compromised in the year 1989?  
 (19) A I can't give you the specific date It was the result of  
 (20) exposure at some time  
 (21) Q In 1989?  
 (22) A Between the time they were embryos and the time they  
 (23) entered that spawning population that's right  
 (24) Q All right Let me - your opinion then is that - as I  
 (25) understand it their immune systems were compromised in some  
 fashion all the way up till approximately 1993 when they

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- (1) reentered the spawning biomass?  
 (2) A That's correct  
 (3) Q Okay Got to learn how to spell here Okay  
 (4) So there is approximately a four-year window where this  
 (5) 1989 year class has a compromised immune system leading up  
 to  
 (6) the 1993 sac roe fishery?  
 (7) A I would give it between - on the basis of my concept of  
 (8) what happened three to four years  
 (9) Q Okay Three four years  
 (10) A That's because the first reentry to the spawning population  
 (11) was at three year olds not as four year olds but their  
 (12) population was so low that it was very difficult to detect  
 (13) them  
 (14) Q All right We're just going to keep walking through this  
 (15) Now let me - let me stop just for a minute I don't have  
 (16) your herring biology background and I can't speak in the same  
 (17) terminology that you can speak in but let me do a reality  
 (18) check if I might at this point I like reality checks just  
 (19) because since I can't - can't figure out all the terminology  
 (20) a reality check that's kind of common sensical makes  
 sometimes  
 (21) a good communicator You earlier said there's a lot of other  
 (22) diseases and viruses and things that are out in the open waters  
 (23) that herring can be exposed to during their life cycle is that  
 (24) a fair statement?  
 (25) A Are you talking about my testimony today?

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- (1) Q Yes  
 (2) A I was talking about the general - everywhere in all  
 (3) species not specifically to -  
 (4) Q Would you agree that there are other diseases that herring  
 (5) can be - can come into contact with during their life cycle?  
 (6) A Yes  
 (7) Q And those would include the VEN disease?  
 (8) A That's possible yes  
 (9) Q And various fungus?  
 (10) A Fungus are generally secondary invaders that require some  
 (11) other primary damage before they can pick up the disease  
 (12) Q And blood borne parasites?  
 (13) A That's true  
 (14) Q If the 1989 year class had a compromised immune system  
 (15) from - for three to four years they would be increasingly  
 (16) susceptible to those types of diseases bacteria or viruses  
 (17) than they would otherwise be is that a fair statement?  
 (18) A That's true They would be susceptible to any infection  
 (19) Q Are you aware that Dr Myers of ADF&G is of the opinion  
 (20) that if the 1989 year class had a compromised immune system  
 for  
 (21) three to four years as you suggest he believes that those  
 (22) herring would have died well before 1993?  
 (23) A No he didn't indicate that to me three days ago He  
 (24) indicated that my concept was perfectly justified  
 (25) Q You had a conversation with him just a few days ago?

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- (1) A Yes I did  
 (2) Q We'll come back to that All right let's - let's move on  
 (3) to the next component  
 (4) As I understand it it's your belief the 1989 year class  
 (5) that has this compromised immune system is isolated from all  
 (6) the other fish in Prince William Sound until approximately  
 (7) 1993?  
 (8) A It's isolated from the spawning biomass the spawning  
 (9) population during the earliest three years or the early three  
 (10) years of its life that's right When I say isolated I  
 (11) don't mean different oceans I mean they don't necessarily  
 (12) congregate together at the same time  
 (13) Q But they're separate?  
 (14) A Yes  
 (15) Q Okay And the reason why the separateness this isolation  
 (16) is important to you is because the general spawning biomass  
 (17) does have VHS virus correct?  
 (18) A That's correct  
 (19) Q In its latent form?  
 (20) A That's correct some of them do  
 (21) Q Some of them do A portion of them do?  
 (22) A Right  
 (23) Q All right And if the 1989 year class should commingle in  
 (24) any fashion any significant way before 1993 you would have  
 (25) expected an outbreak of this virus and lesions much earlier

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- (1) than 1993?  
 (2) A Well I - once they began to mix with the population that  
 (3) was shedding the virus they would be exposed and the  
 (4) infection  
 (5) cycle or the transmission cycle would begin I don't want to  
 (6) give the impression that this is an instantaneous result This  
 (7) takes some time for a virus to spread through the susceptible  
 (8) portion of the population  
 (9) Q All right But again I just want to emphasize for the  
 (10) jury's point of - for the jury's benefit that the isolation  
 (11) this isolation mechanism or concept that you're describing is  
 (12) important to your theory because it keeps them apart so -  
 (13) keeps them apart so this VHS virus in its latent stage does  
 (14) not transmit to them until much later?  
 (15) A Well half right The separation is important for my  
 (16) description of what's going on but the latent virus isn't  
 (17) transmitted It's got to be active at some point to be  
 (18) transmitted  
 (19) Q We'll get to that I'm just trying to go one step at a  
 (20) time here  
 (21) Now let me stop - we did a - kind of a reality check  
 (22) here Let me talk about a reality check here Is it not true  
 (23) that portions some percentage of the 1989 year class came  
 (24) back  
 (25) for the 1991 sac roe fishery?  
 (26) A 91% yes there were some I was there at the time the  
 (27) test fishing in the fishery was going on and they were not

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- (1) nonexistent but they were pretty close to it  
 (2) Q And the 1991 bait fishery it's true is it not that the  
 (3) 1989 year class returned in some percentage?  
 (4) A I'm not familiar with those numbers so I can't make a  
 (5) statement on that  
 (6) Q And in the 1992 bait fishery the 1989 year class returned  
 (7) in some percentage did they not?  
 (8) A Like I said in the bait fishery I'm not familiar with the  
 (9) numbers or the age class distribution so I don't know  
 (10) Q You would agree I assume that the 1989 year class was not  
 (11) completely isolated from the biomass between the time they  
 (12) became larvae and became juveniles up to 1993 there was  
 (13) some  
 (14) commingling?  
 (15) A Well like I said yes they were all in Prince William,  
 (16) Sound and they were commingling to some degree but not to  
 (17) the  
 (18) degree they were during the spawning event  
 (19) Q Now this is where I kind of start to break down on your  
 (20) prior testimony because I'm not quite sure of it  
 (21) As I understand it it's your belief that the virus became  
 (22) active and caused this widespread mortality in 1993 primarily  
 (23) because that is the first year the 1989 year class came back in  
 (24) sufficient numbers for this transmission to occur is that a  
 (25) fair statement?  
 (26) A That's correct  
 (27) Q And can you explain just briefly what full recruitment ,

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- (1) means for the jury?  
 (2) A Full recruitment?  
 (3) Q What recruitment means just so that there's an  
 (4) appreciation for -  
 (5) A Recruitment refers to the percentage of a particular year  
 (6) class It's the number of fish that were born in '88 or '89 or  
 (7) '90 that return to spawn in a particular year Herring  
 (8) generally don't start to spawn until they're four years old  
 (9) and at four years old about 60 percent of the four-year-olds  
 (10) will enter the spawning population As five-year-olds about  
 (11) 80 percent will enter the spawning population and by the time  
 (12) they're six-year-olds everybody all of them 100 percent  
 (13) will be recruited into the spawning population so that  
 (14) everybody born in one particular year will be fully recruited  
 (15) or they'll all be actively spawning by the time they're six  
 (16) years old They start spawning at four years old and the  
 (17) numbers increase each year  
 (18) THE COURT Mr Karlberg there's only two minutes to  
 (19) the end of the trial day do you want to take a break now?  
 (20) MR KARLBERG That's - we're in the middle of the  
 (21) subject it doesn't make any difference We're not going to  
 (22) finish today obviously  
 (23) THE COURT I don't think so I'll let you go for the  
 (24) day Don't talk to anybody about this case Don't form or  
 (25) express any opinion about it until it's submitted to you for

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- (1) deliberation I ll see you tomorrow at 8 30
  - (2) (Jury out at 1 28 p m )
  - (3) THE COURT All right counsel the jury is not
  - (4) present Is there anything to take up on the record at this
  - (5) time?
  - (6) MR DIAMOND Your Honor you had suggested argument
  - (7) on an outstanding motion concerning - it s our motion
  - (8) concerning exclusion of some fish evidence this afternoon
  - (9) before the witnesses were slated to testify Ms Smith and
  - (10) Mr Stoll are going to argue that I don t know whether you ve
  - (11) read the papers but they re prepared to do it now rather than
  - (12) come back later in the day
  - (13) THE COURT I prefer to do it later in day I need a
  - (14) rest
  - (15) MR DIAMOND I think Mr Stoll and I would like a
  - (16) moment of your time in chambers
  - (17) THE COURT Suppose I set the argument at 3 00
  - (18) What s the title of the motion?
  - (19) MS SMITH It s the motion to exclude - hang on let
  - (20) me get it for you
  - (21) MR DIAMOND Part of that has been resolved by
  - (22) agreement
  - (23) THE COURT Which part?
  - (24) MS SMITH The motion to exclude the testimony of
  - (25) Kenneth Parker has been withdrawn because the plaintiffs
- agreed

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- (1) to limit the scope of his testimony
- (2) THE COURT So what s still pending?
- (3) MS SMITH Okay Your Honor it s defendant Exxon
- (4) Shipping Company and Exxon Corporation s motion to exclude
- (5) testimony regarding fish run failures on Kodiak Island And
- (6) it s - the expert is Phillip Mundy M u n d y
- (7) THE COURT I ve got that on my desk I ll see you at
- (8) 3 00
- (9) MS SMITH Okay
- (10) MR STOLL Your Honor with respect to this we filed
- (11) a corrected copy I don t know if the Court got a -
- (12) THE COURT I got it
- (13) MR STOLL Okay
- (14) THE COURT Is there anything else on the record?
- (15) MR STOLL No I guess not We can t do it before
- (16) 3 00?
- (17) THE COURT I can t Even judge s need to eat
- (18) counsel
- (19) All right I ll see you in chambers now
- (20) THE CLERK Please rise This court stands in
- (21) recess
- (22) (Recess at 1 30 p m )

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- (1) I N D E X
- (2) DIRECT EXAMINATION OF PAUL C COSTELLO  
1794
- (3) BY MR PETUMENOS 1794
- (5) CROSS EXAMINATION OF PAUL C COSTELLO  
1811
- (6) BY MR CLOUGH 1811
- (8) DIRECT EXAMINATION OF DANIEL LAWN 1824
- (9) BY MR FORTIER 1824
- (11) CROSS EXAMINATION OF DANIEL LAWN  
1841
- (12) BY MR CLOUGH 1841
- (14) DIRECT EXAMINATION OF RICHARD M KOCAN  
1843
- (15) BY MR PETUMENOS 1843
- (17) CROSS EXAMINATION OF RICHARD M KOCAN  
1904
- (18) BY MR KARLBERG 1904

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- (1) EXHIBITS
- (2) 1122 offered 1805
- (3) DX15704 offered 1823
- (4) 268 offered 1829
- (5) 1122A offered 1836
- (6) 251 4A offered 1836
- (7) 1511 offered 1842
- (9) 1122 received 1806
- (10) 15704 received 1824
- (11) 268 received 1829
- (12) 1122A received 1836
- (13) 251 4A received 1836
- (14) 15704A received 1837
- (15) 1511A received 1842

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- (1) STATE OF ALASKA )
- (2) Reporter s Certificate
- (3) DISTRICT OF ALASKA )
- (6) I Joy S Brauer RPR a Registered Professional
- (7) Reporter and Notary Public
- (8) DO HERBY CERTIFY
- (9) That the foregoing transcript contains a true and
- (10) accurate transcription of my shorthand notes of all requested
- (11) matters held in the foregoing captioned case
- (12) Further that the transcript was prepared by me
- (13) or under my direction
- (14) DATED this day
- (15) of 1994
- (21) JOY S BRAUER RPR
- Notary Public for Alaska
- (22) My Commission Expires 5 10 97

Look-See Concordance Report

UNIQUE WORDS 2,460
TOTAL OCCURRENCES 9,481
NOISE WORDS 385
TOTAL WORDS IN FILE 29,150

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CASE SENSITIVE

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NOISE NOI

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 24 1851 3 20 21 25 1864 5  
 1906 5 1916 19 1917 8  
 worked [6] 1795 3 5 17  
 1796 9 1802 14 1848 10  
 working [11] 1795 7 9  
 1796 16 1797 13 16 1812 8  
 1820 8 1823 4 1825 9 12

1873 22  
 works [2] 1851 12 1876 1  
 wouldn't [3] 1800 22  
 1855 13 15  
 wreck [2] 1804 6 9  
 write [3] 1820 21 1838 20  
 1882 5  
 writing [1] 1854 11  
 written [2] 1815 7, 1915 20  
 wrong [1] 1898 10  
 wrote [1] 1815 23

— Y —

Yeah [5] 1802 22, 1814 5  
 1837 21, 1844 4, 1854 11  
 yeah [2] 1855 11 1908 15  
 year [49] 1795 8, 1812 20  
 1860 15 1871 3, 1875 22  
 1881 5 1899 5 9 15 1907 9  
 17 1908 4 7 24 1909 5 22  
 25 1910 8 16 1911 8 10 15  
 1913 2 1916 8 11 13, 20  
 1917 2 11 12 13, 17, 1918 5,  
 1919 14 20 1920 4 23  
 1921 22  
 1922 3 6 10 21, 1923 5 7  
 14 17  
 year-round [1] 1899 18  
 years [26] 1795 15, 1810 17,  
 1823 18 1848 2 1849 24  
 1851 18 1898 23 1899 4 22  
 1901 5 1902 15, 1908 16,  
 1909 13, 14 1910 18 1917 8  
 1918 8 9 1919 15 21,  
 1920 9 10 1923 8 9 16  
 yesterday [3] 1836 8 9 12  
 yolk [13] 1866 22 23 1867 6  
 17 1868 6 7 15 1869 1  
 1876 22 1878 11 12 1880 5  
 1896 16  
 yolks [1] 1896 25  
 York [1] 1795 14  
 you d [1] 1868 5  
 You ll [1] 1894 22  
 you ll [4] 1817 10 1864 17  
 1879 10 1891 24  
 You ve [2] 1884 23, 1914 13  
 you ve [11] 1820 10 1828 20  
 1839 18 1840 8, 1849 22  
 1860 17 1868 1 1908 24  
 1916 6 1917 1, 1924 10  
 yourself [3] 1794 25 1844 1  
 1917 10  
 Yukon [1] 1797 9

— Z —

zero [6] 1866 20 1883 2 11  
 13 1894 13 18

## Vol 13 1929

(1) IN THE SUPERIOR COURT FOR THE STATE OF ALASKA  
 (2) THIRD JUDICIAL DISTRICT  
 (4) In re ) Case No JAN 89 2533 Civ11  
           ) Anchorage Alaska  
 (5) The EXXON VALDEZ ) Tuesday July 12 1994  
                       ) 8 37 a m  
 (6) )  
 (8) VOLUME 13 Pages 1929 through 2110  
 (10) TRANSCRIPT OF PROCEEDINGS (Continued)  
 (11) TRIAL BY JURY  
 (13) BEFORE THE HONORABLE BRIAN C SHORTELL  
           Superior Court Judge  
 (16) APPEARANCES  
 (17) FOR THE PLAINTIFF  
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## Vol 13 1930

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## Vol 13 1931

(1) PROCEEDINGS  
 (2) (Jury in at 8 37 a m )  
 (3) (Call to Order of the Court)  
 (4) THE COURT Good morning  
 (5) THE WITNESS Is it working today?  
 (6) THE COURT I think so just clip it on because we  
 (7) get a lot of static in here  
 (8) THE WITNESS Okay let me know if I m not coming  
 (9) through  
 (10) MR KARLBERG Good morning Your Honor Good morning  
 (11) folks Good morning Dr Kocan  
 (12) We re going to get you off the stand today rather quickly  
 (13) I hope I ve got one suit two shirts and two ties and I m  
 (14) at the end of my wardrobe so this is it  
 (15) CROSS EXAMINATION OF RICHARD M KOCAN (Resumed)  
 (16) BY MR KARLBERG  
 (17) Q Yesterday when we finished we were talking about your  
 (18) theory of what happened in 1993 I d like to return to that  
 (19) topic in a minute but first I d kind of like to see if I can  
 (20) get you to agree with some general principles The 1989 year  
 (21) class that we ve been talking about that s the class of fish  
 (22) that were born in 1989 correct?  
 (23) A That s correct  
 (24) Q And that class was predicted by ADF&G to be relatively  
 (25) small in 1989 and that had nothing to do with the spill is

## Vol 13 1932

(1) that correct?  
 (2) A Yes that s also correct  
 (3) Q And it s a fact that ADF&G which is charged with  
 (4) predicting the strength of year classes predicted prior to the  
 (5) spill that the 1989 year class would be about three to four  
 (6) percent of the biomass is that correct?  
 (7) A I don t recall the exact numbers but it was - that s  
 (8) correct  
 (9) Q Somewhere in that neighbor?  
 (10) A I suppose that s correct yeah  
 (11) Q And is it not also a fact that as of 1994 Fish & Game is  
 (12) now of the opinion that the 1989 year class does constitute  
 (13) about three to four percent of the biomass?  
 (14) A I think that s correct  
 (15) Q And that the 1989 year class is performing in Prince  
 (16) William Sound roughly the same as the Sitka 1989 year class  
 (17) which you said is the parallel to the Prince William Sound  
 (18) fish?  
 (19) A They re both extremely low levels that s correct  
 (20) Q But they re parallel they re roughly comparable  
 (21) A Roughly  
 (22) Q Would you also agree sir that the year classes which were  
 (23) hatched in 90 91 and 92 and the years after the spill  
 (24) that the visual the visuals you provided yesterday about those  
 (25) abnormalities and whatnot that the 90 91 and 92 year

Vol 13 1933

- (1) classes didn't suffer that type of impact is that a fair  
 (2) statement?  
 (3) A Well some of the data I generated in 1991-92 said that  
 (4) they did to some extent not all of the same - not at the  
 (5) same level and not as extensively but there was damage seen  
 at  
 (6) oiled sites in 1991-92  
 (7) Q Would you agree sir it was relatively minor in comparison  
 (8) to what you showed about the 1989 year class?  
 (9) A It was less yes  
 (10) Q Now something that I was a bit remiss in doing yesterday  
 (11) since I am familiar with herring I kind of assumed other  
 (12) people know a bit about herring as well and some things that  
 (13) we might not have covered that might be a little helpful  
 (14) Herring live what approximately ten years roughly?  
 (15) A Yes They've been known to go as long as 13 or 14 but I'd  
 (16) say nine or ten years is the average  
 (17) Q And during their life span they will spawn what six to  
 (18) seven years of their life cycle?  
 (19) A Correct They start at four years old and spawn until they  
 (20) die  
 (21) Q But even if - and this is an even if because we know  
 (22) the 1989 year class is performing as expected but even if the  
 (23) 1989 year class had been totally wiped out by the spill you  
 (24) would not have seen this collapse in '93 is that a fair  
 (25) statement?

Vol 13 1934

- (1) MR PETUMENOS Excuse me Judge I'm having a bit of  
 (2) a problem with the statements that are made by counsel before  
 (3) he asks a question I'm not sure that that's the proper form  
 (4) The 1989 year class is performing as expected for example  
 (5) then asking a question So my objection is to the form of the  
 (6) question If he could put a question rather than make a  
 (7) statement  
 (8) THE COURT I'd like the examination to flow but  
 (9) sometimes the question gets lost if it's at the tail end of a  
 (10) long statement So if you shorten up the preface probably the  
 (11) objection will go away  
 (12) MR KARLBERG Okay I'll just rephrase the question  
 (13) BY MR KARLBERG  
 (14) Q Dr Kocan if the 1989 year class had been totally wiped  
 (15) out by the spill that would not have translated into the  
 (16) collapse that you saw in 1993 is that correct?  
 (17) A No that's not necessarily so  
 (18) Q And if you took the entire 1989 years which was going to  
 (19) be roughly three to four percent of the biomass is that  
 (20) correct?  
 (21) A Right  
 (22) Q The biomass in 1993 was predicted to be about 134,000 -  
 (23) 130,000 tons?  
 (24) A That's correct  
 (25) Q And you do the math and that comes out about 5,000 tons?

Vol 13 1935

- (1) A That's correct  
 (2) Q All right And in 1993 the reports were 100,000 tons  
 (3) failed to show up is that correct?  
 (4) A That's correct  
 (5) Q All right So if the 1989 year class had been lost as a  
 (6) consequence of the spill that would only be approximately  
 (7) 5,000 tons of that 100,000 that failed to show up?  
 (8) A If you're just subtracting the biomass of 1989 from the '93  
 (9) spawning biomass but that was not what I had explained Their  
 (10) contribution was not that they had disappeared Their  
 (11) contribution was that they had caused disease to spread  
 through  
 (12) all of the age classes and that we lost the fish from all age  
 (13) classes and that's where they disappeared so their loss is  
 (14) inconsequential in that particular case  
 (15) Q That brings me to my next points If not for your  
 (16) immunosuppression theory that involves the 1989 year class  
 (17) just the fact that the 1989 year class might have disappeared  
 (18) which it did not but if it had that would not account for  
 (19) this large fall?  
 (20) A Not - not just the disappearance of that age class  
 (21) Q All right Now let me - that's a good segue to return to  
 (22) where we were yesterday Now I'm not sure when we were  
 (23) talking yesterday that I ever had you define the immune system  
 (24) and what's its function is Most of us are probably aware of  
 (25) that but would you provide us an explanation?

Vol 13 1936

- (1) A Certainly The immune system in general functions the  
 (2) same in all animals It consists of two components a humeral  
 (3) and cellular that is a liquid of gamma globulin component and  
 (4) a cellular component that are cells that actually destroy the  
 (5) invading organisms or the foreign objects  
 (6) Humeral immunity constitutes gamma globulin It's produced  
 (7) by cells that are permanently established in the body and when  
 (8) a foreign invader enters the body they produce a specific  
 (9) antibody to kill that particular invading organism The  
 (10) cellular component these are white blood cells T cells and B  
 (11) cells You hear a lot about this in HIV infections These are  
 (12) the cells that are responsible for actually seeking out and -  
 (13) well practical purposes eating the invading organisms  
 (14) consuming them And the combination of these two  
 components  
 (15) the cellular and humeral components are what's responsible  
 for  
 (16) eliminating invading organisms from the animal's body  
 (17) Q And if the immune system is compromised in some fashion  
 (18) that makes the organism more susceptible to these external  
 (19) forces that may work on them?  
 (20) A That's correct  
 (21) Q Yesterday I was also a bit remiss I didn't have you  
 (22) define the term biomass Would you do that please?  
 (23) A Biomass merely means the weight or the size of the  
 (24) population You can be talking about biomass of eggs  
 biomass  
 (25) of spawners or total biomass That's what it means

Vol 13 1937

- (1) Q And the spawning biomass is comprised of all ages of  
 (2) herring that are sexually mature and capable of reproducing?  
 (3) A That s spawning biomass that s correct  
 (4) Q So spawning biomass would be age four – some age three  
 (5) age four age five age six age seven age eight age nine and  
 (6) fish It s a kind of a composition of different age classes?  
 (7) A That s correct  
 (8) Q Now if – yesterday we were going through your theory on  
 (9) immunosuppression and it was your belief that for  
 (10) approximately three to four years the 1989 year class had a  
 (11) suppressed immune system which made them more  
 susceptible to  
 (12) these external forces?  
 (13) A Yes that s – that was what I proposed as being the – the  
 (14) initial response or one of the initial results of exposure to  
 (15) oil they had a compromised immune system  
 (16) Q And they had a compromised immune system in your  
 opinion  
 (17) during the 89 bait fishery correct – during the time period  
 (18) of the 1989 bait fishery?  
 (19) A Yes The – I might in terms of explanation the immune  
 (20) system was damaged in one way or another I don t know  
 exactly  
 (21) what mechanism at this time during that first year that they  
 (22) were exposed to The development of that immune system for  
 the  
 (23) remaining time in their life is critical in determining how is  
 (24) this going – or how susceptible they are to disease so this  
 (25) is an ongoing developmental process from the time they re

Vol 13 1938

- (1) exposed until the time some organism invades them  
 (2) So yes to some degree they were compromised in 1989 and  
 (3) continued to be up until today  
 (4) Q All right And their immune systems were compromised  
 (5) during the course of the timing of all these fisheries and  
 (6) somehow they managed to avoid falling prey to these natural  
 (7) external forces you were talking about?  
 (8) A No not necessarily They may have been infected dying  
 (9) all along There are so few of them that it was virtually  
 (10) impossible to find any  
 (11) In 1992 when we expected to see the first returns coming  
 (12) back into the spawning population my recollection is we – oh  
 (13) in four seine hauls and examining tons of fish from the sac roe  
 (14) fishery saw perhaps a few does at most three year old fish  
 (15) So no they were probably becoming affected and dying that  
 (16) whole time For whatever reason I don t know because  
 (17) anything could cause that  
 (18) Q Let me move this out of the way so I can – yesterday we  
 (19) didn t quite finish with the mechanism of how you contend the  
 (20) actual transmission of the disease occurred I d like to do  
 (21) that now but as I understand it there s a field of study that  
 (22) deals with immune systems and that s called  
 immunotoxicology  
 (23) is that correct?  
 (24) A Well immunotoxicology is one field Immunology is another  
 (25) field yes

Vol 13 1939

- (1) Q And you don t consider yourself an expert in that area as  
 (2) I understand it from your testimony?  
 (3) A Actually I did my Ph D thesis on the immune system  
 (4) Q But as I understand and I ll get your deposition  
 (5) transcript out if I have to but as I understand you don t  
 (6) consider yourself to be an expert in immunotoxicology is that  
 (7) a fair statement?  
 (8) A No I didn t say that I think I said that I did do  
 (9) toxicology that involved the immune system That is not my  
 (10) professional objective no  
 (11) Q Pardon me for just a second as I do a little digging  
 (12) Let me – excuse me your deposition was taken back on  
 (13) January 19th 94 is that correct?  
 (14) A Somewhere about that yes  
 (15) Q Let me hand you – refer to pages 563 and 564  
 (16) A All right  
 (17) Q The question is asked Do you consider yourself to be an  
 (18) immunotoxicologist? If I am saying that right see that  
 (19) question?  
 (20) A No  
 (21) Q On page 564 I m sorry  
 (22) A Okay I –  
 (23) Q See that question?  
 (24) A That s at the very top of the page?  
 (25) Q Yes sir

Vol 13 1940

- (1) A My response is no but I ve worked with the immune related  
 (2) diseases in animals and that s how I keep up with the  
 (3) literature  
 (4) Q And you say that s how I keep up a little bit on the  
 (5) literature?  
 (6) A Well –  
 (7) Q Is that correct did I read that correct?  
 (8) A Yes The little bit refers to that which applies to what  
 (9) I m working with not the entire field of immunotoxicology  
 (10) Q Now before we go to this mode of transmission of the VHS  
 (11) is it also true that you have done no personal tests or work  
 (12) yourself on the VHS disease?  
 (13) A No On the herring VHS?  
 (14) Q Correct  
 (15) A That s correct  
 (16) Q You ve done no lab studies or field studies?  
 (17) A That s correct  
 (18) Q That s all been done by ADF&G and Dr Myers as chief of  
 (19) pathology for –  
 (20) A No been done by a number of other people Done by Garth  
 (21) Traxler in British Columbia done by Jim Winton in Seattle  
 (22) done for years by Europeans and as a matter of fact it was  
 (23) one of the major studies we did for the Eastern Fish Disease  
 (24) Lab when I was with Fish and Wildlife Service  
 (25) Q My point is none of it has been done by you is that

Vol 13 1941

- (1) correct?  
 (2) A Not on herring  
 (3) Q Let s see if we can close the loop here As I understand  
 (4) it you ve got the 1989 year class coming back to the biomass  
 (5) in 1993 and since they have a compromised immune system  
 they  
 (6) catch this disease at that time from the adults is that  
 (7) correct?  
 (8) A That s correct That s the way I explained it  
 (9) Q Okay And then because their immune systems are  
 (10) suppressed they get this virus but it breaks out into a  
 (11) disease form and they - and they get lesions?  
 (12) A That s correct  
 (13) Q And they get lesions within days?  
 (14) A I m not sure exactly how long it takes but that s a  
 (15) reasonable amount of time considering the staging  
 (16) Q And in your opinion these lesions then put out these  
 (17) particles into the water and then they - in turn those  
 (18) particles are picked up by that portion of the biomass which  
 (19) previously had not been exposed to the VHS virus is that  
 (20) correct?  
 (21) A Correct except that it s not my opinion It s confirmed  
 (22) that s exactly how it s done  
 (23) Q You haven t done any testing on this particular population  
 (24) to tell that that s exactly what occurred?  
 (25) A I have been in contact with -

Vol 13 1942

- (1) Q In 1993?  
 (2) A - the people who have actually done this with this virus  
 (3) and yes that s what - isolated from this lesion and they  
 (4) affect other herring and they do die Yes this has been done  
 (5) and I ve been in direct contact with these people It s  
 (6) confirmed  
 (7) Q It s possible that s the way it occurred?  
 (8) A That s how it occurs  
 (9) Q All right Now and then as of the time it s retransmitted  
 (10) to the general population then you see this widespread  
 (11) mortality that resulted in the loss of the 100 000 fish?  
 (12) A Well it resulted in the loss of fish The total number I  
 (13) don t have an exact handle on  
 (14) Q Would you agree that it s somewhere in the neighborhood of  
 (15) 100 000 tons of fish?  
 (16) A Oh yes a loss of 100 000 tons of fish that s right  
 (17) Well it was 100 000 tons  
 (18) Q Let me -  
 (19) A That wouldn t be very many fish  
 (20) Q Finish - finish this here  
 (21) Okay in shorthand terms I ve just put the 1989 year class  
 (22) was infected during the spawn and retransmitted the VHS to the  
 (23) blomass is that just in general terms a fair  
 (24) characterization?  
 (25) A Yes that s pretty good

Vol 13 1943

- (1) Q Okay In - I ll stand in front of this just because I  
 (2) can t see it otherwise In 1993 like every year when the  
 (3) fish come back and spawn they spawn in the shallows correct?  
 (4) A That s correct  
 (5) Q And in the shallows these fish can actually be seen from  
 (6) the sky?  
 (7) A Oh yes  
 (8) Q In fact fishermen hire spotter planes so that they can  
 (9) know where the fish are so they can know where to set their  
 (10) nets?  
 (11) A That s right  
 (12) Q And Fish & Game likewise does aerial surveys just to see  
 (13) how many fish is on the spawning grounds?  
 (14) A That s right  
 (15) Q And in 1993 you re not aware of any reports of a mass fish #  
 (16) kill are you?  
 (17) A Other than that there were 100 000 fish missing  
 (18) Q Right  
 (19) A 100 000 tons of fish missing No there were no bodies  
 (20) recovered  
 (21) Q No reports by the fishermen or ADF&G of actual observations  
 (22) of dead fish?  
 (23) A No not of dead fish  
 (24) Q And if - if those fish died shortly after the spawn you  
 (25) would expect to have seen them in the shallows is that

Vol 13 1944

- (1) correct?  
 (2) A If that was the year they were infected that s true They  
 (3) were already carrying the virus or they were already carrying  
 (4) the virus and showed the disease at the time they began  
 (5) spawning which meant that the transmission occurred prior to  
 (6) the time they began spawning  
 (7) Q But for the first time anybody was aware of a massive loss  
 (8) of the biomass was in 1993 during the sac roe fishery?  
 (9) A That was the first time they recognized it that s  
 (10) correct  
 (11) Q Now is it fair to say that your theory of how the collapse  
 (12) occurred in 1993 rests on the accuracy of this  
 (13) immunosuppression theory?  
 (14) A To a large degree yes  
 (15) Q And if that is incorrect would your theory fail to explain  
 (16) the 1993 collapse?  
 (17) A If that s incorrect  
 (18) Q And your theory also rests on the proposition that their  
 (19) immune systems were compromised for three or four years at  
 (20) least up to 1993 93?  
 (21) A To one degree or another yes  
 (22) Q And if that is incorrect your theory would fail?  
 (23) A Yes  
 (24) Q And your theory also rests on the proposition that the 1989  
 (25) year class was somehow separated or isolated from the  
 biomass

Vol 13 1945

- (1) from the time of birth to - up to 1993?  
 (2) A No 1992 when they began reentering the population As I  
 (3) said 92 I was there and saw the initial reentering of the  
 (4) 89 88 89 year class  
 (5) Q So at least three years after the spill your theory rests  
 (6) on the theory that they were in isolation during that period of  
 (7) time?  
 (8) A Up to the third year yes  
 (9) Q If that s incorrect your theory would fail?  
 (10) A Depends on what you mean by isolation We ll have to get  
 (11) into that There s more to this than just single word and  
 (12) epidemiological terms this is significant what isolation  
 (13) means  
 (14) Q Isn t it a fact that you don t know where the 1989 year  
 (15) class was during this entire period of time?  
 (16) A Where every individual was?  
 (17) Q Correct  
 (18) A Yeah Based on historical records I have a pretty good  
 (19) idea of where these fish or some of them the majority of them  
 (20) were yeah  
 (21) Q But you don t - you couldn t sit here and tell the jury  
 (22) today that there wasn t commingling of the 1989 year class with  
 (23) the adult biomass in 91 or 92 or 93 you couldn t say for  
 (24) certain?  
 (25) A With the adult biomass or the spawning fish?

Vol 13 1946

- (1) Q Spawning fish  
 (2) A No spawning fish they did not not until they were three  
 (3) years old  
 (4) Q None?  
 (5) A No Prior to that time prior to the spawning event  
 (6) spring spawning event in 1992 the 1989 year class was not  
 (7) mixing with the spawning actively spawning fish They began  
 (8) in 1992 They may have commingled with them during  
 nonspawning  
 (9) periods of the year to some degree or other but there s a very  
 (10) important distinction to be made here between those two types  
 (11) of encounters  
 (12) Q If you re wrong that the 1989 year class was not mixed  
 (13) with the biomass during spawning then your theory would fail  
 (14) if they had actually mixed prior to 1992 and 1993?  
 (15) A Depends when on the extent Again we need to deal with  
 (16) specifics  
 (17) Q Now yesterday you testified that your theory is  
 (18) developing this has been kind of an ongoing process?  
 (19) A Right I d get data almost continually  
 (20) Q Would you agree with me that it s possible that your  
 (21) theory s wrong?  
 (22) A I would think that anything s possible but not very  
 (23) probable  
 (24) Q But it is possible?  
 (25) A Everything s possible to some degree

Vol 13 1947

- (1) Q Let me take this down if I may I m going to try to use  
 (2) some of the other stuff here  
 (3) Let s if we might go back briefly and take a look at some  
 (4) other things that were going on in Prince William Sound during  
 (5) the time period leading up to the spill  
 (6) MR KARLBERG Can we have DX5331 B please?  
 (7) BY MR KARLBERG  
 (8) Q Dr Kocan you re familiar with this chart?  
 (9) A Yes I ve seen this chart yeah  
 (10) Q This is a graph showing the rate of growth of herring  
 (11) between the fall bait fishery and the spring sac roe fishery  
 (12) from 1984 to 1994?  
 (13) A That s correct  
 (14) Q And normally from the fall bait fishery to the spring  
 (15) sac roe fishery these fish gain some weight?  
 (16) A Normally no not normally They - this is cyclical  
 (17) Over the years some years they gain and some years they  
 (18) don t  
 (19) and some years they lose  
 (20) Q Would you agree that since 1984 however during the winter  
 (21) months the general adult biomass in Prince William Sound has  
 (22) been gaining weight at a steadily decreasing rate?  
 (23) A Right That - that s correct And there s a graph that s  
 (24) virtually identical to this for Sitka Sound that shows the very  
 (25) same phenomenon  
 (26) Q And in 1992 from 1992 to 1993 for the first time in

Vol 13 1948

- (1) eight years these fish actually lost weight over the winter  
 (2) is that correct?  
 (3) A Yes  
 (4) MR KARLBERG Can we pull up DX8525?  
 (5) BY MR KARLBERG  
 (6) Q You re familiar with this chart sir?  
 (7) A Vaguely I m not really - I may have seen that but no  
 (8) it s not something I m -  
 (9) Q You re familiar with the fact that in Prince William Sound  
 (10) they have a number of salmon hatcheries there?  
 (11) A Yes  
 (12) Q You re also familiar are you not that over the years  
 (13) these hatcheries have gradually and in some case more  
 (14) substantially increased their production of salmon fry?  
 (15) A I ll have to take your word for it I really haven t  
 (16) followed the salmon hatchery production rate  
 (17) Q Let me represent to you this graph is intended to just  
 (18) reflect a trend of the production of herring - pardon me  
 (19) salmon fry starting back in 1976  
 (20) A Okay  
 (21) Q And I d like you to assume this is accurate and we ll have  
 (22) another witness come and testify to the accuracy  
 (23) A Fine  
 (24) Q Would you not agree sir that the trend that you see  
 (25) starting back in the early 80s is definitely increasing?

Vol 13 1953

- (1) Q Let me refer to defendant s Exhibit 15459  
 (2) Dr Kocan this is an article entitled relationship between  
 (3) diet and the immune response of fish Are you familiar with  
 (4) this article?  
 (5) A Yes  
 (6) Q And I m told that the author Marsha Landolt is your  
 (7) ex wife?  
 (8) A She s also my boss  
 (9) Q Okay We ll be careful here then  
 (10) A Does that compromise my testimony?  
 (11) Q Let me - that is a dangerous situation Let me refer you  
 (12) to the highlighted portion here I m assuming and this is  
 (13) maybe an assumption I shouldn t make since she s your  
 ex wife  
 (14) but I m assuming you respect her opinions as a scientist?  
 (15) A Oh yes we still work together  
 (16) Q You would consider this to be an authoritative text?  
 (17) A Yes  
 (18) Q Now the highlighted portion there says profound changes  
 (19) in the immune response are some of the earliest manifestations  
 (20) of malnutrition Do you agree with that statement?  
 (21) A If - if we can define malnutrition as more than just  
 (22) weight loss I pointed out loss of body fat is not  
 (23) malnutrition so we need to define that very carefully I know  
 (24) what she s talking about here and it s not loss of body fat  
 (25) Q Would you agree that loss of weight can indeed come from

Vol 13 1954

- (1) inability to get sufficient food in sufficient numbers to have  
 (2) proper amount of dietary supplements vitamins things of that  
 (3) sort?  
 (4) A It s possible to have too little food to be properly  
 (5) nourished that s correct  
 (6) Q I m going to go to DX8996  
 (7) MR PETUMENOS 8996? Can I confer with counsel just  
 (8) a minute?  
 (9) MR KARLBERG Oh you don t? It s a trick  
 (10) MR PETUMENOS It s working We re tricking you  
 (11) We have it Thank you Judge  
 (12) BY MR KARLBERG  
 (13) Q Dr Kocan did you look at temperatures in Prince William  
 (14) Sound as part of your investigation?  
 (15) A I m sorry repeat that question  
 (16) Q Did you look at sea surface temperatures in Prince William  
 (17) Sound as part of your investigation?  
 (18) A My investigations yes  
 (19) Q And you ve seen this chart before?  
 (20) A I don t recall this particular chart but I ve seen  
 (21) temperature data on Prince William Sound yes  
 (22) Q Let me represent to you what this is intended to be  
 (23) This - the lower line is Prince William Sound?  
 (24) A Yes  
 (25) Q Sea surface temperatures?

Vol 13 1955

- (1) A Okay  
 (2) Q During the winter months For instance in - I m  
 (3) interested in 92 to 93 the winter months are defined as  
 (4) December January and February okay?  
 (5) A Okay  
 (6) Q And these temperatures are taken in the Montague Island  
 (7) area all right? Now the Montague Island area is where a big  
 (8) bulk of these herring for Prince William Sound they winter in  
 (9) the Montague Trench is that correct?  
 (10) A That s the way I understand yes  
 (11) Q All right And the temperature that you see for 92 93  
 (12) during the winter in between that fall bait fishery when we  
 (13) had abundant numbers and the sac roe fishery in 93 when we  
 had  
 (14) that loss the temperature is the lowest since 1983 is that  
 (15) correct?  
 (16) A Yes It appears that s what the graph says right  
 (17) Q And finally Dr Kocan isn t it a fact that VHS tends to  
 (18) manifest itself and it s most common when water temperatures  
 (19) are at their lowest?  
 (20) A That s true for - for the European strain of salmonids  
 (21) I m not sure that data s been generated for this strain  
 (22) Q Would you agree generally that VHS outbreaks coincide with  
 (23) low water temperature and as a result breaks out chiefly  
 (24) during the colder months of the year?  
 (25) A In trout and salmon in Europe yes

Vol 13 1956

- (1) Q Now I understand that it s your contention that the spill  
 (2) was a substantial factor in causing this collapse in 1993  
 (3) A Yes that s correct  
 (4) Q Would you also at least give me that there could have been  
 (5) other natural causes at play that contributed to this decline?  
 (6) A Yeah I would say that the - the spill interacted with a  
 (7) number of other environmental situations that resulted - that  
 (8) interaction resulted in what we see today and what we ve been  
 (9) seeing since the time of the spill  
 (10) Q And a number of those other things you re talking about are  
 (11) some of the things we just went through is that correct?  
 (12) A They could be yes  
 (13) Q Would you agree with me that if your immunosuppression  
 (14) theory is wrong that these other factors these other  
 (15) naturally occurring factors that we ve gone through and any  
 (16) others that might be at play could by themselves explain the  
 (17) collapse in 1993?  
 (18) A I haven t seen any data yet that s - that s strong enough  
 (19) or that shows a strong enough impact on that population that I  
 (20) could attribute solely to this mortality that we ve witnessed  
 (21) Q Would you agree that it s possible that you re wrong on  
 (22) your immunosuppression theory?  
 (23) A Well now if I m wrong and nothing happened if there was  
 (24) no oil spill at all I contend that very probably nothing would  
 (25) have been different in Prince William Sound

Vol 13 1957

- (1) Q Are you saying it s impossible that these other factors –
- (2) A Not impossible
- (3) Q – could have caused this collapse by themselves?
- (4) A Impossible?
- (5) Q You re not saying that?
- (6) A Only some possibility
- (7) Q You re giving me that it s possible that these other
- (8) factors could have caused this collapse?
- (9) A Possible but very improbable
- (10) MR KARLBERG You want to go ahead and take this off
- (11) the screen? Thanks
- (12) BY MR KARLBERG
- (13) Q Are you aware of the amount of subsistence fishing by the
- (14) various municipalities that are involved in this and
- (15) corporations Native corporations in this lawsuit?
- (16) A No not at all
- (17) Q Let me – let me represent to you that for the Chenega
- (18) village that in 1992 they harvested approximately 237 pounds
- (19) of herring all right? You re not saying that in 1993 there
- (20) were insufficient herring to allow them in 1993 to recover 237
- (21) pounds of herring are you?
- (22) A No I mean I have no opinion on that sort of thing at
- (23) all I mean that – that s outside of anything I ve looked at
- (24) or been involved with
- (25) Q If I represent to you that Port Graham harvested 307 pounds

Vol 13 1958

- (1) in 1992 you re not saying in 1993 or 1994 that there wasn t
- (2) sufficient herring biomass for them to go out and recover that
- (3) poundage?
- (4) MR PETUMENOS I ll object as beyond the scope of
- (5) direct
- (6) THE COURT Oh beyond the scope objection s
- (7) overruled Go ahead
- (8) THE WITNESS I didn t catch all of that
- (9) MR KARLBERG The question still stands
- (10) THE COURT Yes do you remember the question?
- (11) MR KARLBERG The question do you remember the
- (12) question?
- (13) BY MR KARLBERG
- (14) Q The question I ll represent to you in 1992 Port Graham
- (15) harvested 307 pounds of subsistence herring and you re not –
- (16) you re not stating here that there weren t sufficient herring
- (17) in 93 and 94 for those folks to go out and harvest that same
- (18) amount in those two years?
- (19) A No I couldn t say that no
- (20) Q And if I walk through all the landowners in this case and
- (21) ask you that same question you wouldn t be able to give me a
- (22) response?
- (23) A Unless we were – unless you were giving me numbers that
- (24) exceeded the biomass no I couldn t give you an answer
- (25) That s right I just don t know

Vol 13 1959

- (1) Q Let s switch gears I m almost done here
- (2) Yesterday you spent some time talking about abnormalities
- (3) that you observed in the field and the lab with the 1989 year
- (4) class
- (5) A Yes
- (6) MR KARLBERG Can we go to PX511? This technology
- (7) gets me
- (8) MR PETUMENOS Gets me too
- (9) MR KARLBERG I like chalkboards and things
- (10) BY MR KARLBERG
- (11) Q You recognize this as your own exhibit is that correct?
- (12) A Yes
- (13) Q Let me just kind of refamiliarize everybody just a little
- (14) bit with this Yesterday you talked about at certain
- (15) concentration levels you saw increased abnormalities is that
- (16) correct?
- (17) A Yes physical abnormalities and –
- (18) Q Now if you look over here in the very left hand column of
- (19) your graph where it says zero down below –
- (20) A That s correct
- (21) Q – that means that population of larvae were not exposed to
- (22) any oil is that correct?
- (23) A That s correct
- (24) Q And that bar graph comes up to 55 percent?
- (25) A Approximately yes

Vol 13 1960

- (1) Q Doesn t that mean that even when there s zero exposure you
- (2) had 45 percent of abnormalities that occurred naturally?
- (3) A Oh yes this is standard for a population that produces
- (4) this large a number of offspring
- (5) Q And it s also true that it s been found in Pacific herring
- (6) that up to 68 percent of herring have underdeveloped jaws
- (7) naturally?
- (8) A There – no there s a – first it depends on at what
- (9) stage you re looking at these larvae If you re talking about
- (10) larvae – you said herring you should clarify
- (11) Q I meant larvae yes
- (12) A When I look at these and most people examine larvae that
- (13) they ve collected right after hatching or that they ve hatched
- (14) themselves they look at them right after they ve hatched and
- (15) there are – the newly hatched larvae fall into three stages
- (16) 1 A 1 B 1 C and interestingly enough the 1 A stage is
- (17) something of a precocious or an early hatched individual and
- (18) their jaw is still not fully developed Many of the organs in
- (19) a newly hatched herring larvae are not developed During the
- (20) period the yolk is resorbed the organs continue to grow and
- (21) develop and become normal And it s been customary to look
- (22) at
- (23) missing jaws as being an abnormality when in reality if the
- (24) investigators had waited until the yolk sac was partly
- (25) resorbed they would see that a portion of these that had

Vol 13 1961

- (1) So there - there is a problem in evaluating the missing  
 (2) lower jaws as a significant toxic response unless you consider  
 (3) that particular factor So yeah I agree you could have 68  
 (4) percent with abnormal or missing lower jaws but a week later  
 (5) you could have only 40 percent that are abnormal  
 (6) Q So we're in agreement there can be a fairly significant  
 (7) percentage of abnormalities that occur naturally and those  
 (8) abnormalities could include missing lower jaws curved spine  
 (9) things of that sort?  
 (10) A Oh yes they include everything  
 (11) Q So yesterday you didn't mean to convey by this chart that  
 (12) abnormalities only occur when there's been some toxic  
 exposure?  
 (13) A No what I - what this is demonstrating is differences  
 (14) between exposure - exposed and unexposed  
 (15) Q I see  
 (16) A Meaning control and experimental  
 (17) Q Now referring back to the lower axis down here where you  
 (18) have your concentration levels -  
 (19) A Yes  
 (20) Q - at what were the concentration - or let me state it  
 (21) differently What was the parts per million of exposure in the  
 (22) field in Prince William Sound in 1990 '91 and '92?  
 (23) A That's a very good question I'm not aware that anybody  
 (24) took any concentration measurements under the slick during the  
 (25) period it was there The measurements were taken alongside the

Vol 13 1962

- (1) slick measurements were taken after the oil had exited the  
 (2) Sound Measurements were taken in areas that had oil on the  
 (3) beach but none of these are comparable to each other None  
 of  
 (4) them are comparable to taking it under the slick so that's a  
 (5) very complex question and I don't believe anybody has that  
 (6) answer  
 (7) Q But maybe we're miscommunicating I wanted to know the  
 (8) exposure level in the water column in 1990 '91 and '92 not  
 (9) '89  
 (10) A Oh I don't know that anybody's taken that measurement I  
 (11) certainly didn't  
 (12) Q So you don't know whether or not the exposure was  
 (13) considered by all who looked at it to be below any threshold  
 (14) level not threshold level of harmful effect?  
 (15) A I don't know of anybody that looked at it in 1990  
 (16) MR KARLBERG Do you want to go ahead and take that  
 (17) down?  
 (18) BY MR KARLBERG  
 (19) Q Dr Kocan then in light of your last response is it fair  
 (20) to say that you have no evidence to suggest that in '90 '91 or  
 (21) '92 there was any continuing exposure of harmful levels?  
 (22) A I'm sorry I didn't catch the end of that  
 (23) Q Is it fair to say in light of your last statement that  
 (24) you have no evidence to suggest that in '90 and '91 and '92  
 (25) there were continuing exposure levels that would be harmful to

Vol 13 1963

- (1) herring eggs or the adult biomass?  
 (2) A Do I have evidence? Yeah my evidence says that they -  
 (3) they were harmed when they were at oiled sites I don't have  
 (4) measurements to say what the concentrations were  
 (5) Q So anything - any conclusions you've reached in '90 '91  
 (6) and '92 are without any knowledge of what the concentration  
 (7) levels were?  
 (8) A No this is based entirely on whether they were at oiled  
 (9) sites or unoiled sites I did not take oil measurements  
 (10) Q Now I told you yesterday I was going to return to your  
 (11) telephone conversation with Dr Myers  
 (12) A Yes  
 (13) Q And again he's the chief pathologist for Fish & Game  
 (14) that's responsible for investigating the VHS outbreak?  
 (15) A He's their fish pathologist that's correct  
 (16) Q You had this conversation with him by telephone three days  
 (17) ago?  
 (18) A Yes yes  
 (19) Q Isn't it true sir that when you spoke to him and asked  
 (20) him about your immunosuppression theory he said  
 (21) immunosuppression is stretching it Offhand it sounds  
 (22) reasonable but when you get down to the details and the data  
 (23) it doesn't hold up at all?  
 (24) A That could be what he said  
 (25) Q Isn't it true that he said - when you asked him about the

Vol 13 1964

- (1) possibility that this immunosuppression had occurred for three  
 (2) to four years and there was no adverse effects from other  
 (3) diseases he said where are the other pathogens vibrio VEN  
 (4) why didn't the fish succumb earlier why aren't they riddled  
 (5) with other diseases?  
 (6) A That was not a part of my conversation with him  
 (7) Q So you would disagree with that statement if he - if he  
 (8) did say that just as recently as yesterday?  
 (9) A I would disagree that there's - there was nothing  
 (10) happening to these fish during the previous three years  
 (11) That's right There's no evidence that they were not being  
 (12) affected and infected and dying  
 (13) Q When you spoke to him about your immunosuppression  
 (14) theory -  
 (15) A Yes  
 (16) Q - isn't it true sir that he said that's BS? You told  
 (17) him immunosuppression isn't the answer?  
 (18) A No That's not true He never said such a thing  
 (19) Q So if he's confirmed that statement as recently as  
 (20) yesterday you would disagree with that?  
 (21) A The only thing he said was that he had no evidence that  
 (22) could directly link the oil spill to the VHS outbreak He had  
 (23) no comment whatsoever on whether or not he thought - well he  
 (24) thought the immunosuppression theory was perfectly  
 legitimate  
 (25) His discussion with me was that what I had proposed was

Vol 13 1965

- (1) possible but that they had not collected evidence yet to  
 (2) support it  
 (3) MR KARLBERG I have no further questions at this  
 (4) time  
 (5) MR PETUMENOS Could we take our first morning recess  
 (6) at this time?  
 (7) THE COURT I'd kind of like to finish with the  
 (8) witness I'll give you a break if you really need it  
 (9) MR PETUMENOS Could I have a moment to get the easel  
 (10) back up then and do all that?  
 (11) THE COURT Sure  
 (12) MR PETUMENOS I want to get this easel back up  
 (13) MR GARGAN The one with the paper?  
 (14) MR PETUMENOS The one with the paper is good  
 (15) MR PETUMENOS How about so Dr Kocan can see it?  
 (16) Now you can't see it right? Let's try it back where it was  
 (17) Can you come on down and follow me over here Dr Kocan so  
 (18) we can all see it together?  
 (19) REDIRECT EXAMINATION OF RICHARD M KOCAN  
 (20) BY MR PETUMENOS  
 (21) Q Now Dr Kocan I have never caught a herring When I go  
 (22) fishing I generally catch my daughter's sweater or a lot of  
 (23) fucus that we've talked about here but I think I learned  
 (24) something about these fish They're a little more judicious  
 (25) than say the pink salmon because they don't spawn within  
 two

Vol 13 1966

- (1) years right?  
 (2) A That's correct  
 (3) Q They take longer to do that?  
 (4) A Become sexually mature yes  
 (5) Q And after the other way they're maybe a little more  
 (6) intelligent than salmon is after they spawn they don't die?  
 (7) A Oh no  
 (8) Q They keep living and they spawn again?  
 (9) A That's correct  
 (10) Q All right So for a 1989 generation that we've been  
 (11) talking about in 1989 when the bait catch is happening what  
 (12) did the 1989 herring - how old are they? What are they doing?  
 (13) A In 1989?  
 (14) Q Yeah  
 (15) A Well they're still larvae and juveniles swimming about in  
 (16) Prince William Sound  
 (17) Q So when the 1989 bait catch happens in October or  
 November  
 (18) are they out there catching the 1989 larvae?  
 (19) A Well by - by fall when the bait - by October November  
 (20) they may be an inch or two long I mean I don't think they're  
 (21) a significant portion of that catch  
 (22) Q So what does the bait catch of October or November of 1989  
 (23) have to do with the 1989 generation that's an inch or two long?  
 (24) A Very little that I'm aware of  
 (25) Q What about in 1990 when the sac roe fishery takes place

Vol 13 1967

- (1) what are the 1989 salmon that have just hatched - excuse me  
 (2) herring that have just hatched in 1989 where are they at now  
 (3) in their development?  
 (4) A They're in various growing areas grow out areas where  
 (5) they've established themselves following the '89 hatching in  
 (6) '89 and they're still in a growing phase at that time  
 (7) They're not participating in the spawning activity  
 (8) Q Okay And what about 1991 when we put up here in near  
 (9) record very good Where are these 1989 salmon in their  
 (10) development then - excuse me herring in their development  
 (11) then?  
 (12) A During which fishery?  
 (13) Q During the 1991  
 (14) A There's two fisheries there  
 (15) Q Either one take them one at a time  
 (16) A Well they're not involved in the sac roe fishery because  
 (17) they're still not sexually mature They're still juveniles and  
 (18) they're in their growing foraging phase in the bait fishery  
 (19) they've probably entered the bait fishery by that time and are  
 (20) large enough to be caught to some extent by the commercial  
 (21) fishermen  
 (22) Q Now as opposed to all the other fish that are out there  
 (23) being caught in the bait fishery what amount of the - call it  
 (24) biomass is in the 1989 portion likely to be?  
 (25) A Well its entire portion as we discussed a bit earlier is

Vol 13 1968

- (1) about three percent of the entire biomass  
 (2) Q What does the 1991 bait fishery tell us about the impact of  
 (3) the 1989 herring generation if anything?  
 (4) A Well there were a large number of fish available to be  
 (5) caught This is - this has been relabeled biomass and this is  
 (6) actually the catch rate and catch rate is based on something  
 (7) different than biomass Catch data is an indication of how  
 (8) many fishermen have fished for how long Biomass is how  
 many  
 (9) fish were actually in Prince William Sound so this is not  
 (10) really labeled correct We switched gears  
 (11) Q This column here this column here is it confusing or  
 (12) misleading the way it is right now discussing catches here and  
 (13) biomass here?  
 (14) A Initially when it was harvest it was correct but when it  
 (15) was switched to biomass it became irrelevant because it's  
 (16) entirely different information  
 (17) Q What does the harvest have to do with the biomass What  
 (18) other factors have to do with the amount of herring is caught  
 (19) in any given fish which - besides biomass?  
 (20) A Well the Department of Fish & Game determines how many  
 (21) fish are in the biomass and from that calculation they  
 (22) determine how many can be harvested safely without depleting  
 (23) the spawning population And then the actual catch is a  
 (24) function of how many fishermen fished for how long and how  
 (25) successful - how good they were as fishermen These catch

Vol 13 1969

- (1) records very good indicates there was a high permit level or  
 (2) high allotment and at the same time the fishermen were very  
 (3) efficient at catching the fish  
 (4) Q Now is the decision on how much herring to allow by the  
 (5) regulators often a political one? Are there politics involved  
 (6) in all that?  
 (7) A I hesitate to say no but I don't know  
 (8) Q And does the amount of fish that are caught depend on such  
 (9) things as weather?  
 (10) A Oh yes  
 (11) Q 1993 Dr Kocan what is happening to this 1989 group in  
 (12) 1993?  
 (13) A This is the first year that biologically they re expected  
 (14) to – now this is the first year they re expected biologically  
 (15) to begin spawning They re sexually mature at this time They  
 (16) entered to a small degree as observers in 1992 but they  
 (17) didn't participate in the spawning  
 (18) Q You can resume the stand Thank you very much  
 (19) Now this business of water temperature do you remember  
 (20) the questions that our colleague asked you about that?  
 (21) A Yes we looked at a graph of water temperatures between  
 (22) Sitka Sound – that compared Sitka and Prince William Sound  
 (23) over a period of years  
 (24) Q Did you compare the water temperatures between the  
 (25) unoiled areas that you studied and the oiled areas that you studied

Vol 13 1970

- (1) when you came up with the differences in all of the things that  
 (2) went wrong with the herring?  
 (3) A Yes temperatures were taken at the time these were –  
 (4) these samples were put in the field  
 (5) Q So you controlled for temperature both in the field and did  
 (6) you control it in the laboratory as well?  
 (7) A Yes it was constant in the laboratory and I have the  
 (8) records of what it was in the field  
 (9) Q So keeping the temperature the same for both – both  
 (10) groups what did you find with respect to the unoiled and oiled  
 (11) comparisons?  
 (12) A In virtually every case the oiled sites performed more  
 (13) poorly or they resulted in the production of more abnormal  
 (14) larvae either physically or genetically abnormal and there  
 (15) was no difference in temperature The differences recorded  
 (16) were about one tenth of one degree  
 (17) MR PETUMENOS Counsel could you put up Exhibit 2019  
 (18) for me please?  
 (19) MR KARLBERG Ready?  
 (20) MR PETUMENOS I'm ready  
 (21) MR KARLBERG You want that same quote we dealt with  
 (22) before or a different one?  
 (23) MR PETUMENOS You got it  
 (24) BY MR PETUMENOS  
 (25) Q Showing you Exhibit 2019 you indicated to the jury in your

Vol 13 1971

- (1) answer on cross examination that you would be interested in  
 (2) discussing this passage that you disagree with point by point  
 (3) A Yes I can do that  
 (4) Q Would you please?  
 (5) A I'm sorry?  
 (6) Q Would you please?  
 (7) A Okay Can you all read this? Okay  
 (8) The first sentence here that's highlighted there appears  
 (9) to be no relationship of VHSV isolation with the Exxon Valdez  
 (10) oil spill of 1989 since the virus has been isolated from areas  
 (11) other than Prince William Sound  
 (12) It's known that this virus occurs all the way from Bristol  
 (13) Bay down to San Francisco Bay in herring now It's probably  
 (14) been there for hundreds of years and the statement is true that  
 (15) the presence of the virus is not related to the Exxon Valdez  
 (16) spill But the disease has occurred in Prince William Sound  
 (17) following the oil spill And the only other time I'm aware of  
 (18) a natural – of this occurring naturally in free-ranging fish  
 (19) is in Prince Rupert British Columbia in 1993 I believe and  
 (20) that was in association with a diesel oil spill That's  
 (21) published in the American Fisheries Society Bulletin  
 (22) someplace  
 (23) The next sentence the virus may be an opportunistic  
 (24) pathogen causing periodic occurrences of external and internal  
 (25) lesions in herring following stress from various factors

Vol 13 1972

- (1) Let me stop it at that point I'm surprised very  
 (2) surprised that Dr Myers made the statement because viruses  
 (3) are  
 (4) not opportunistic invaders Viruses require healthy cells in  
 (5) order to function normally and to reproduce themselves These  
 (6) viruses cannot be opportunistic which means they look for an  
 (7) already compromised individual or sick individual before they  
 (8) can – they can invade it or produce – begin growing to  
 (9) produce the disease  
 (10) And then VEN infections I'm sure most of you have heard  
 (11) the term interferon Interferon is a chemical that viruses  
 (12) cause cells to produce that inhibit the invasion and growth of  
 (13) other viruses This gives them sole domain over the cells that  
 (14) they've invaded and that's why we like to use interferon to  
 (15) fight viral infection because we can use the chemical We can  
 (16) put it into cells or into an individual and keep other viruses  
 (17) from invading even though they're already infected  
 (18) So if there were VEN infections then they would inhibit  
 (19) the – I mean if they didn't find VEN infection it's because  
 (20) they were already infected with another virus and it was  
 (21) producing interferon or causing the cells to produce interferon  
 (22) to prevent invasion by a second or any other number of  
 (23) viruses  
 (24) Okay periodic occurrences of infections – stress okay  
 (25) We went through VEN infections that would be eliminated  
 (26) Spawning actually the – at the period of spawning that's the

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- (1) A I can t give specific details but I believe the oil plume  
 (2) proceeded out of Prince William Sound down toward Kodiak  
 and  
 (3) Afognak Island yes  
 (4) Q And in your direct testimony before the cross examination  
 (5) began what is your opinion regarding whether the effects of  
 (6) some of the contaminants that these herring underwent in 1989  
 (7) what is your opinion with regard to whether many of them are  
 (8) likely to have been manifesting themselves immediately or  
 (9) within - or as much as years later?  
 (10) A Could you rephrase that?  
 (11) Q What is your opinion with respect to whether the effects of  
 (12) the petroleum hydrocarbons on the herring are all going to be  
 (13) seen immediately or whether you expected that many of them  
 (14) would not appear until years later?  
 (15) A Oh I think classically you would see the effects spread  
 (16) out over a long period of time and very likely the type of  
 (17) effect will change with time also  
 (18) Q When you were looking at the deformities and defect of the  
 (19) herring larvae and looking for things like missing jaws and so  
 (20) forth were you aware of and did you account for the fact that  
 (21) you have to wait until this yolk sac development process  
 (22) finishes its - its work so that you didn t count deformities  
 (23) that might with furthered development resolve themselves?  
 (24) A Yes I was aware of this and I m actually presently  
 (25) working with Elaine Humphrey from British Columbia who

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- (1) initially developed this technique and we customarily do not  
 (2) count jaw deformities unless the jaw is either visible and  
 (3) deformed or if the yolk sac is consumed and there s still no  
 (4) jaw so those very earliest stages are not counted one way or  
 (5) the other  
 (6) Q And finally Dr Kocan do you know of any waters around  
 (7) the State of Alaska where the phenomenon that we have  
 described  
 (8) here the lesions and the virus and so forth has occurred  
 (9) where there was not a history of hydrocarbon spill?  
 (10) A Can you define more what you mean by history of  
 hydrocarbon  
 (11) spills?  
 (12) Q The diesel spill you described or the Exxon Valdez oil  
 (13) spill?  
 (14) A Well there s hydrocarbons spilled to some extent  
 (15) everywhere but there s been no large spills anywhere that I m  
 (16) aware of and there s been no VHS disease outbreaks anyplace  
 (17) other than Prince William Sound or in Prince Rupert that  
 (18) were - that occurred in free ranging herring  
 (19) Q And in Prince Rupert was there a spill?  
 (20) A There was a diesel oil spill yes about 50 000 gallons I  
 (21) believe  
 (22) MR PETUMENOS I have no further questions  
 (23) MR KARLBERG Two questions Your Honor if I might  
 (24) RE-CROSS EXAMINATION OF RICHARD M KOCAN  
 (25) BY MR KARLBERG

Vol 13 1979

- (1) Q Dr Kocan the first one has to do with the Prince Rupert  
 (2) spill  
 (3) A Yes  
 (4) Q Isn t it true that the lesions that formed there were  
 (5) within 10 to 11 days after the spill?  
 (6) A If I recall correctly the lesions occurred were observed  
 (7) fairly soon after the spill that s right  
 (8) Q Second point sir is Are you aware of any - any  
 (9) scientific studies that have been published in any scholarly  
 (10) journals that connect the VHS outbreak in Prince William Sound  
 (11) to the spill?  
 (12) A To the spill?  
 (13) Q Yes  
 (14) A No I m not aware of any that do that  
 (15) MR KARLBERG Thank you No further questions  
 (16) THE COURT You can step down sir Thank you very  
 (17) much  
 (18) We re going to take a morning break  
 (19) THE CLERK Please rise This court stands in  
 (20) recess  
 (21) (Jury out at 9 57 a m )  
 (22) (Recess from 9 57 a m to 10 20 a m )  
 (23) THE CLERK Please rise This court now resumes its  
 (24) session please be seated  
 (25) THE COURT Counsel you wanted to take up something

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- (1) out of the presence of the jury  
 (2) MR PETUMENOS I just want to move my exhibits in  
 (3) Judge and I didn t want to have the jury sit here while I did  
 (4) that  
 (5) THE COURT Fine  
 (6) MR PETUMENOS I move into evidence exhibits number  
 (7) 465 through 469  
 (8) THE COURT 465 through 469?  
 (9) MR PETUMENOS Through 469 yes inclusive  
 (10) (Exhibits 465 through 469 offered)  
 (11) MR KARLBERG No objection Your Honor  
 (12) THE COURT They re admitted  
 (13) (Exhibits 465 through 469 received)  
 (14) MR PETUMENOS Exhibit 475  
 (15) (Exhibit 475 offered)  
 (16) THE COURT 475 admitted  
 (17) (Exhibit 475 received)  
 (18) MR PETUMENOS Exhibit 477 and 477 A  
 (19) (Exhibits 477 and 477 A offered)  
 (20) MR KARLBERG No objection Your Honor  
 (21) THE COURT 477 and 477 A are admitted  
 (22) (Exhibits 477 and 477 A received)  
 (23) MR PETUMENOS 485 through 487 A  
 (24) (Exhibits 485 through 487 A offered)  
 (25) THE COURT Through - 485 through 487 A Any

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- (1) objection?
- (2) MR KARLBERG No objection
- (3) THE COURT Those are admitted
- (4) (Exhibits 485 through 487 A received)
- (5) MR PETUMENOS That includes 488 488 is -
- (6) THE COURT I m just going admit them counsel until I
- (7) hear an objection
- (8) MR PETUMENOS 492 through 500
- (9) (Exhibits 492 through 500 offered)
- (10) THE COURT 492 through 500
- (11) (Exhibits 492 through 500 received)
- (12) MR PETUMENOS 503
- (13) (Exhibit 503 offered)
- (14) THE COURT 503
- (15) (Exhibit 503 received)
- (16) MR PETUMENOS 511
- (17) (Exhibit 511 offered)
- (18) THE COURT 511 is admitted
- (19) (Exhibit 511 received)
- (20) MR PETUMENOS 513
- (21) (Exhibit 513 offered)
- (22) THE COURT 513
- (23) (Exhibit 513 received)
- (24) MR PETUMENOS Exhibit 1512 1512
- (25) (Exhibit 1512 offered)

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- (1) THE COURT 1512 admitted
- (2) (Exhibit 1512 received)
- (3) MR KARLBERG Your Honor if I could I d like to
- (4) have the handwritten chart marked and admitted into evidence
- (5) THE COURT Let me see that chart Counsel?
- (6) MR PETUMENOS No objection
- (7) MR KARLBERG And the flip chart
- (8) (Exhibits 15484 and 15485 offered)
- (9) THE COURT Any objection?
- (10) MR PETUMENOS No objection sir
- (11) THE COURT I ll admit them both You just have to
- (12) mark them and the clerk is instructed to admit them as marked
- (13) (Exhibits 15484 and 15485 received)
- (14) MR DIAMOND We ll do that in the next break
- (15) THE COURT Okay good
- (16) MR KARLBERG Thank you Your Honor
- (17) THE COURT Thank you
- (18) Can we have the next witness ready to go when the jury gets
- (19) down here?
- (20) MR STOLL We re ready
- (21) MR DIAMOND Your Honor in my continuing role of
- (22) master of ceremon es on the defense side with us at counsel
- (23) table is my partner Bart Cooper among other things is a
- (24) resident salmon expert I would move his admission
- (25) THE COURT Denied

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- (1) MR DIAMOND You don t know how happy you ve just
- (2) made Mr Cooper
- (3) THE COURT I m sure that s true
- (4) MR PETUMENOS I wanted to see Mr Diamond do the
- (5) cross examination off the cuff
- (6) THE COURT Is that it? If I refuse to admit somebody
- (7) you have to take up the -
- (8) MS SMITH No I do
- (9) MR PETUMENOS Never mind then
- (10) (Jury in at 10 24 a m )
- (11) THE COURT The jury is present counsel go ahead
- (12) MR STOLL We ll call Mr Ken Parker as our next
- (13) witness
- (14) THE CLERK Sir would you please step up into the
- (15) witness box There s a microphone laying there Would you #
- (16) clip that below the knot in your tie and remain standing for
- (17) the oath Would you raise your right hand?
- (18) (The Witness is Sworn)
- (19) THE CLERK Thank you You may be seated
- (20) Sir for the record would you please state your full name?
- (21) A Kenneth Paul Parker
- (22) THE CLERK Would you spell your last name?
- (23) A P a r k e r
- (24) THE CLERK And what is your occupation?
- (25) A Fisheries biologist small business owner

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- (1) THE CLERK Thank you
- (2) THE COURT Go ahead counsel
- (3) DIRECT EXAMINATION OF KENNETH P PARKER
- (4) BY MR STOLL
- (5) Q Mr Parker good morning
- (6) A Good morning
- (7) Q Until recently did you work for the State of Alaska?
- (8) A Yes I was a fishery biologist for the State of Alaska for
- (9) 18 years
- (10) Q All right And when did you resign with the State of
- (11) Alaska?
- (12) A I retired in October 31st 1990
- (13) Q And would you tell the jury please first of all what
- (14) your academic background is? You have a Bachelor s degree?
- (15) A Yes I have a Bachelor s in zoology and a Master s degree
- (16) in biology
- (17) Q And when did you obtain your Master s degree?
- (18) A Masters was obtained in 1973
- (19) Q When did you commence work with the State of Alaska?
- (20) A That same year
- (21) Q All right And what was your original position with the
- (22) State of Alaska?
- (23) A I started off as a temporary biologist working in Cook
- (24) Inlet for the Division of Commercial Fisheries
- (25) Q And what sort of functions did you perform then?

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- (1) A Oh I've worked in - on lake studies in the Upper Cook  
 (2) Inlet area of Alaska collected field data and did some  
 (3) analysis of that data  
 (4) Q And then how long did you stay in that position?  
 (5) A Well it was just a temporary position I was in there for  
 (6) about three months and then I was promoted  
 (7) Q And then what did you do?  
 (8) A I took on an assignment as the assist research project  
 (9) leader for Bristol Bay for the Division of Commercial  
 (10) Fisheries  
 (11) Q And what was that - what did that position entail?  
 (12) A I ran field programs in Bristol Bay to collect fishery  
 (13) information on sockeye salmon and did in season and  
 (14) post season  
 (15) data analysis to determine the size and composition of the  
 (16) annual salmon runs in Bristol Bay  
 (17) Q And were you involved in escapement data as far as Bristol  
 (18) Bay was concerned during that period of time?  
 (19) A Yes I was I was responsible for test fishing projects  
 (20) out in the districts and analyzing the run information and we  
 (21) also had escapement enumeration projects within the rivers that  
 (22) I was responsible for overseeing making sure the data was  
 (23) collected appropriately  
 (24) Q And what - what is escapement? Would you tell the jury  
 (25) please what escapement means?  
 (26) A Sure Escapement is the number of salmon that are actually

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- (1) allowed to enter the stream of origin and participate in the  
 (2) reproductive process And it's called escapement because the  
 (3) salmon have to run oftentimes a gauntlet - a gauntlet of  
 (4) fisheries so it's the ones that escape those fisheries that  
 (5) actually get to spawn and we call those escapement fish  
 (6) Q Excuse me Mr - I want to move this up here  
 (7) Is there a term called overescapement?  
 (8) A Yes It's generally applied to situations where the  
 (9) escapement exceeds the established objective for that river  
 (10) system We have a number of spawners that establish for each  
 (11) river system the data and biologists believe are optimum  
 (12) numbers If you have too many fish escaping into that river or  
 (13) not enough the production of salmon overall production of  
 (14) salmon can be hurt  
 (15) Q Why - why is that?  
 (16) A Because of in the case of underescapement not enough  
 (17) spawners to participate and fully utilize the gravel or the  
 (18) habit - spawning habitat in the streams Over for  
 (19) overescapement it would be the situation where either you have  
 (20) too much spawners for the amount of the spawning habitat that  
 (21) you have and you have - spawning activity will actually remove  
 (22) eggs that have been deposited in the stream from earlier  
 (23) spawning You can have competition both within the rearing  
 (24) stream and later on in the lake depending on the species of  
 (25) salmon that you're dealing with

Vol 13 1987

- (1) Q So overescapement you can lose some eggs from the  
 (2) spawning  
 (3) A That's correct  
 (4) Q And also with overescapement you can eat up a lot of  
 (5) the - the fish can eat up a lot of the food source and  
 (6) therefore diminish the size of the fish?  
 (7) A You can end up with increased competition between rearing  
 (8) salmon for a finite amount of food and as a result the  
 (9) overall size of the fish is going to be diminished and that can  
 (10) impact marine survival the amount of survival that the salmon  
 (11) experiences once they pass move into the marine environment  
 (12) into saltwater for the second portion of their life cycle  
 (13) Q So with overescapement that can affect generations of  
 (14) fish subsequent runs of fish?  
 (15) A It can yes  
 (16) Q And is that - is that why the Alaska Department of Fish  
 (17) and Game tries to control the escapement levels into the  
 (18) spawning streams?  
 (19) A Yes When we have that information available to us that  
 (20) indicates a certain optimum level of spawners for a system we  
 (21) try to manipulate the commercial fisheries and any fisheries  
 (22) be it subsistence sport so that we achieve that optimum  
 (23) number of spawners in the stream  
 (24) Q Okay Now I think you were - before we got into this  
 (25) business about escapement explain that to the jury you were

Vol 13 1988

- (1) saying that during the first six years I believe that you  
 (2) were with the ADF&G - you were involved in the Bristol Bay as  
 (3) a project leader is that correct?  
 (4) A That's correct  
 (5) Q And then after that six years that you were in Bristol Bay  
 (6) then what did you do?  
 (7) A I took a position in the headquarters of the Division of  
 (8) Commercial Fisheries as the deputy director for the division  
 (9) Q And what were your duties as deputy director of the  
 (10) division?  
 (11) A Well I was responsible for the in season management of  
 (12) our - of our fisheries program I had responsibilities  
 (13) relative to administrative details and day to day operations of  
 (14) the division and I supervised the regional supervisors who in  
 (15) turn supervised the area staffs So I had supervisory  
 (16) responsibilities just on personnel as well as on management  
 (17) activities of the division  
 (18) Q Is that for the whole State of Alaska?  
 (19) A Yes  
 (20) Q And did you have daily and weekly contact then with the  
 (21) area managers?  
 (22) A Yes I did  
 (23) Q And then how long did you - did you - incidentally  
 (24) during that period of time did you spend time in Prince  
 (25) William Sound and Cook Inlet and Kodiak?

Vol 13 1989

- (1) A Yes As well as the rest of the fisheries in the State  
 (2) Q Okay And did you do fieldwork as well as the area – in  
 (3) these areas as a biologist?  
 (4) A I did field – most of my fieldwork was confined to the  
 (5) Upper Cook Inlet area and Prince William Sound but as  
 (6) operational supervisor of the division I oversaw a lot of  
 (7) field activities throughout the State  
 (8) Q Okay And then how long did you – were you deputy  
 (9) director of the Division of Commercial Fisheries?  
 (10) A For six years  
 (11) Q All right And then – and then what did you do?  
 (12) A I was promoted to the director of the division  
 (13) Q All right What does the director of the Division of  
 (14) Commercial Fisheries for Alaska do?  
 (15) A Well you re the policy chief for the division and of  
 (16) course you – you re ultimately responsible for all of the  
 (17) actions of the division and involved in – in policy planning  
 (18) budget administration personnel issues as well as  
 (19) responsible – the ultimate responsible person for in season  
 (20) management of our fisheries  
 (21) Q And in that regard were you responsible for the regulatory  
 (22) management program in terms of setting overall planning and  
 (23) setting of escapement goals and so on?  
 (24) A Yes  
 (25) Q And again the escapement goals determine how many fish

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- (1) are going to be released or the goal is set as to how many  
 (2) fish will not be caught so that there s a sufficient spawners  
 (3) but not too many spawners in the fishing stream In the  
 (4) spawning streams?  
 (5) A That s correct Basically what we re doing is  
 (6) implementing the management plans that were established for  
 (7) each fishery and the management plans are partly developed  
 (8) by  
 (9) the Alaska Board of Fisheries That s a lay group appointed by  
 (10) the Governor  
 (11) Q Did you also serve as an alternate commissioner on the  
 (12) North Pacific Fisheries Council?  
 (13) A Yes I did  
 (14) Q Now in 1989 were you director of the Division of  
 (15) Commercial Fisheries for the State of Alaska?  
 (16) A Yes I was  
 (17) Q And were you involved in 1989 with the setting of policy on  
 (18) opening seasons and setting escapement goals for the State of  
 (19) Alaska?  
 (20) A Yes  
 (21) Q You were the – you were – the buck stopped with you so  
 (22) to speak?  
 (23) A Yes that s correct  
 (24) Q Okay  
 (25) MR STOLL And could we have Exhibit 282 please on  
 the monitor

Vol 13 1991

- (1) BY MR STOLL  
 (2) Q Now the State of Alaska is divided into fishing regions?  
 (3) A Yes  
 (4) Q And is this a map this Exhibit 2 – 282 does this reflect  
 (5) the different management areas for the State of Alaska?  
 (6) A Yes it does We had – let s see how do you make the  
 (7) arrow  
 (8) Q Whoops Let s go back to the –  
 (9) A There we go  
 (10) Q Do you want to put some red – do you want to do some red  
 (11) on there?  
 (12) A Well I was just going to move this pointer around  
 (13) Q All right  
 (14) A The State of Alaska Department of Fish and Game divided the  
 (15) State into administrative regions for the purpose of both  
 (16) administration and fisheries management and this just shows  
 (17) the four regions  
 (18) The first is the southeast region includes the  
 (19) southeastern Alaska panhandle and the Yakutat area  
 (20) The next region is called the central region That  
 (21) includes the fisheries of Prince William Sound Upper and  
 (22) Lower  
 (23) Cook Inlet as well as Bristol Bay  
 (24) The Kodiak or westward region includes the Kodiak area  
 (25) fisheries Chignik fisheries and the Alaska Peninsula Aleutian  
 Island fisheries as well as the crab and groundfish fisheries

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- (1) of the Bering Sea  
 (2) And then the region three is the Arctic Yukon Kuskokwim  
 (3) region Includes the fisheries of the Kuskokwim River and  
 (4) Delta the Norton Sound area and the Yukon Delta and River  
 (5) and the Kuskokwim – I mean the Kotzebue Sound fisheries  
 (6) Q Can we have exhibit 2303 please? Now what is this a  
 (7) picture of?  
 (8) A This depicts the Prince William Sound management area  
 (9) showing the commercial fishing districts within the – the  
 (10) management area There are 11 fishing districts beginning with  
 (11) the Copper Bering River area The Southeastern District  
 (12) Eastern District Northern District Coghill District  
 (13) Northwestern Eshamy and Montague Montague s here and  
 (14) the  
 (15) Southwestern District  
 (16) Q All right Now in 1989 when you were director you of  
 (17) course were there when the Exxon Valdez oil spill occurred?  
 (18) A Yes I was  
 (19) Q And was there a determination shortly after the spill to –  
 (20) the spill occurred on March 24th?  
 (21) A That s correct  
 (22) Q And that was before herring or the salmon seasons were to  
 (23) commence in Prince William Sound and Kodiak wasn t it?  
 (24) A The herring fishery usually occurred from early April  
 (25) through late April so we were right on the verge of facing the  
 beginning of our herring fishery when that spill occurred

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- (1) Q All right And as a result of the spill was a  
 (2) determination made as to whether or not to open the herring  
 (3) season in Prince William Sound?  
 (4) A Yes We of course were faced with that decision right  
 (5) off the bat and the decision was made to summarily close all  
 (6) of the herring fisheries for Prince William Sound for that  
 (7) year  
 (8) Q And so that would cover all these areas here?  
 (9) A Yes Well the - most of the herring fisheries occur  
 (10) within Prince William Sound proper  
 (11) Q Okay And was a determination also made subsequently to  
 (12) close areas within Prince William Sound to salmon fishing?  
 (13) A Yes it was  
 (14) Q And were you involved in both those decisions?  
 (15) A Yes I was  
 (16) Q And why did you close the herring season and why did you  
 (17) close the pink - or the salmon season?  
 (18) A Well the Department of Fish and Game is charged with the  
 (19) responsibility to manage the fishery resources of the State to  
 (20) protect maintain improve extend as well as to conduct  
 (21) orderly fisheries And in the face of the oil spill we were  
 (22) of course doubtful or didn't believe we could accomplish these  
 (23) objectives and that action was warranted and we in  
 (24) coordination with the Alaska Department of Environmental  
 (25) Conservation who's responsible for protecting the environment

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- (1) and the public health and welfare moved to react to the oil  
 (2) spill with - with a certain specific policy that was outlined  
 (3) in a memorandum of understanding between the two agencies  
 (4) and  
 (5) that pretty much dictated our actions on each individual  
 (6) closure  
 (7) Q And was that a - unusual? In your experience had the  
 (8) fishing season ever been closed the entire season for -  
 (9) because of a massive release of pollutants or hazardous waste?  
 (10) A Not the entire system We have faced fishery closures  
 (11) partial fisheries closures as a result of oil spills before  
 (12) Q But that was just one little area?  
 (13) A Yes  
 (14) Q One area of one place?  
 (15) A Yes  
 (16) Q And for a limited period of time?  
 (17) A Yes  
 (18) Q This was for the entire season?  
 (19) A For a number of the fisheries it was for the entire  
 (20) season  
 (21) Q For most of the fisheries in Prince William Sound?  
 (22) A Yes  
 (23) Q Kodiak and -  
 (24) A Yes  
 (25) Q Now could we have exhibit - I guess I have to put this on  
 the Elmo

Vol 13 1995

- (1) MS SMITH Could we get a number on that counsel?  
 (2) MR STOLL Yes this is 304 A  
 (3) BY MR STOLL  
 (4) Q Now what is this area?  
 (5) A This illustration shows the management areas the Lower  
 (6) Cook Inlet salmon management area and the fishing districts  
 (7) within that area  
 (8) MR STOLL You might want to zoom back away from it a  
 (9) little bit to pick up all of it Basically - just a minute  
 (10) here  
 (11) A The line that runs across Anchor Point the horizontal  
 (12) line is the separation between the Upper Cook Inlet  
 (13) BY MR STOLL  
 (14) Q This line in the middle here?  
 (15) A Yes  
 (16) Q The Upper Cook Inlet area management area from the  
 (17) Lower  
 (18) Cook Inlet management area and the Lower Cook Inlet  
 (19) management  
 (20) area you have the eastern outer southern districts the  
 (21) Kamishak District the Baron Island districts  
 (22) Q And in the southern district was fishing closed there as  
 (23) well?  
 (24) A In a number of the districts the fisheries were closed  
 (25) both salmon and shellfish fisheries as well as herring  
 Q Now I show you what has been marked 1162 This just  
 happens to show some property that some of the plaintiffs own

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- (1) some of the Native corporations and this map corresponds to  
 (2) the Exhibit 304 A that's on the screen there?  
 (3) A Yes It depicts some of the areas that are illustrated in  
 (4) the Lower Cook Inlet management area  
 (5) Q And the fishing areas that were closed you were just  
 (6) talking about are these areas around the Chugach Islands and  
 (7) around this Port Graham?  
 (8) A Yes  
 (9) Q And these other areas?  
 (10) A That's correct  
 (11) Q And then going back on up to Prince William Sound the  
 (12) fishing was closed in those areas as well?  
 (13) A Yes in the outer district outer and eastern districts  
 (14) Q Okay Now just so we could get this all straight -  
 (15) MR STOLL Sorry I didn't do this before but could  
 (16) we go back onto the screen with Exhibit 2303 please?  
 (17) BY MR STOLL  
 (18) Q And this is - 2303 is the map we were just looking at  
 (19) before and this - does this correspond also with  
 (20) Exhibit 1161? I mean it's the same area?  
 (21) A Yes it does  
 (22) Q And these areas that are here in green these are the  
 (23) properties that are owned by plaintiffs These areas were the  
 (24) areas that - where fishing was closed in 1989?  
 (25) A Yes in various fisheries they were

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- (1) Q And in herring and salmon?  
 (2) A Yes  
 (3) Q Okay  
 (4) MR STOLL Could we have 2305 please on the  
 (5) screen?  
 (6) BY MR STOLL  
 (7) Q Mr Parker what is 2305?  
 (8) A This depicts the Kodiak management area and illustrates the  
 (9) management districts within the management area  
 (10) Q And this is the map of the Alaska Department of Fish and  
 (11) Game?  
 (12) A Yes  
 (13) Q And this is another area - you re in charge of the whole  
 (14) state so this was one of the areas that you had control over  
 (15) as far as closures of fishing and so on?  
 (16) A Yeah that s correct  
 (17) Q And did you direct that there be closure of fishing season  
 (18) in this region also?  
 (19) A Yeah There were closures that were required in and around  
 (20) the Kodiak Island and on the mainland  
 (21) Q The mainland being the Alaska Peninsula?  
 (22) A Yes  
 (23) Q And was this also for health reasons?  
 (24) A It was in conformance with the memorandum of  
 understanding  
 (25) between the Department of Environmental Conservation and  
 Fish &

Vol 13 1998

- (1) Game  
 (2) Q All right Now I have another exhibit here that is  
 (3) 1354 A which is of Kodiak and shows some parcels that are  
 (4) owned by the municipality plaintiffs Does this depict the  
 (5) same area that is shown on 2305?  
 (6) A Yes Yes it does  
 (7) Q Where the closures occurred?  
 (8) A Right  
 (9) Q Now and was this a - was this an unusual event also in  
 (10) Kodiak to have closure of the fishing season?  
 (11) A Yes it certainly was  
 (12) Q Prince William Sound am I correct that Prince William  
 (13) Sound and Kodiak are two of the largest fisheries in the world?  
 (14) A I think that would be a fair statement yes  
 (15) Q So this was a fairly drastic action?  
 (16) A Yes it was  
 (17) Q And when you made this decision to close these fisheries  
 (18) did you consult with various people?  
 (19) A Yes We have area biologists that are actually located out  
 (20) in the management area that are responsible for the day to day  
 (21) management of their fisheries and they have to abide by  
 (22) management plans in their actions And on the more  
 (23) controversial closures they have to consult with their  
 (24) regional supervisor and then eventually with me prior to the  
 (25) closures

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- (1) Q Okay And did you - so you consulted with these various  
 (2) biologists in various areas of the State?  
 (3) A Yeah from time to time  
 (4) Q And the Exxon Corporation was involved in some of these  
 (5) discussions you consulted with them also did you not?  
 (6) A I believe so that there was some discussions primarily at  
 (7) the area level  
 (8) Q At the area level?  
 (9) A Yes  
 (10) Q That means with the local -  
 (11) A Our local -  
 (12) Q - area manager?  
 (13) A Our local representative yes  
 (14) Q And to your knowledge did Exxon ever object to the  
 (15) closures of these areas?  
 (16) A No  
 (17) Q And now the claims in this case that we re trying here  
 (18) involve the land claims of the - land damage claims of the  
 (19) plaintiffs and one of the claims was that there was some  
 (20) uncertainty in the marketplace which affected land values  
 (21) So what I d like to know from you is Was there  
 (22) uncertainty at the - in 1989 as to what was going to happen  
 (23) with these fisheries in Prince William Sound and Kodiak  
 (24) Island?  
 (25) MS SMITH Your Honor there was an objection during

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- (1) the last exam about long preambles before questions I now  
 (2) share that objection  
 (3) THE COURT I ve lost the question now counsel so  
 (4) rephrase it and try to make it shorter  
 (5) MR STOLL Sure I just wanted to give a context and  
 (6) get through this as quickly as possible  
 (7) THE COURT Reask the question  
 (8) BY MR STOLL  
 (9) Q In 1989 you talked to a lot of biologists in this area Is  
 (10) that -  
 (11) A Yes  
 (12) Q Is that correct?  
 (13) A Yes  
 (14) Q And you talked to a lot of people in state government Is  
 (15) that -  
 (16) A Yes  
 (17) Q And you talked to representatives of fishermen and people  
 (18) in the various areas is that a safe statement?  
 (19) A That s correct  
 (20) Q And this was a fairly drastic action that you took in  
 (21) closing these seasons?  
 (22) A Yeah there was a great amount of concern on the part of  
 (23) the fishermen and industry on what was going to happen for the  
 (24) 89 season in light of the spill We didn t know exactly what  
 (25) fisheries were going to be impacted and you know it was

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- (1) difficult to second guess so a lot of the management actions  
 (2) really were delayed until we saw that there was an eminent  
 (3) problem then we took action So for a number of fisheries  
 (4) people were kind of on hold during that time period if that s  
 (5) what you re -  
 (6) Q Was there also uncertainty in 1989 as to - strike that  
 (7) Was there uncertainty in 1989 as to what was going to  
 (8) happen to these fisheries in the future?  
 (9) A Oh yes yes  
 (10) Q And was some of this because of the concerns about  
 (11) overescapement?  
 (12) A That was certainly one of our - our concerns We - we  
 (13) foresaw that in certain situations the escapements would  
 (14) probably exceed our optimum goals and could pose problems  
 (15) in  
 (15) future years so that it definitely was a concern that we were  
 (16) looking at and debating within our own ranks on how to  
 (16) proceed  
 (17) Q Were there other concerns as well as far as these  
 (18) fisheries were concerned as a result of the oil?  
 (19) A If you re referring to being able to conduct orderly  
 (20) fisheries and harvest good quality products certainly there  
 (21) was a lot of concern about that  
 (22) Q And since you ve left the ADF&G in 1990 have you stayed  
 (23) interested and informed as to what s going on in these  
 (24) fisheries?  
 (25) A Yes

Vol 13 2002

- (1) Q And is there still uncertainty as to what s going to happen  
 (2) as a result of the Exxon Valdez oil spill?  
 (3) MS SMITH Objection Your Honor no foundation  
 (4) THE COURT Sustained  
 (5) BY MR STOLL  
 (6) Q Are you - are you familiar with - have you talked to  
 (7) biologists and other people in this area?  
 (8) A Yes I have  
 (9) Q And do you know what the concerns are of these people in  
 (10) these areas in Kodiak and Prince William Sound as far as -  
 (11) that they ve expressed?  
 (12) MS SMITH I m going to object on the grounds of  
 (13) hearsay  
 (14) MR STOLL I m not offering for the truth of it I m  
 (15) simply offering for the fact that the concerns were expressed  
 (16) Your Honor  
 (17) MS SMITH I think that s a hearsay objection  
 (18) THE COURT Well the question asked for hearsay but  
 (19) there may be some nonhearsay there Can you rephrase your  
 (20) question?  
 (21) MR STOLL Surely  
 (22) BY MR STOLL  
 (23) Q Have people expressed to you - strike that  
 (24) Are you aware of any concerns in the Kodiak and Prince  
 (25) William Sound areas as to the future of these fisheries as a

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- (1) result of the Exxon Valdez oil spill?  
 (2) A Yes I ve had conversations with a number of people that  
 (3) are still involved in the fishery and still working with the  
 (4) department and they ve expressed to me concerns and - about  
 (5) the -  
 (6) MS SMITH Your Honor this is hearsay  
 (7) THE COURT I don t think so counsel The  
 (8) objection s overruled Go ahead  
 (9) MR STOLL Go ahead and answer  
 (10) A About the future of their fisheries both in terms of  
 (11) viability of the stock and the - let me back up that they re  
 (12) concerned they have expressed concern about the viability or  
 (13) current health of the resources that were impacted and of  
 (14) course studies are continuing on that  
 (15) MR STOLL Your Honor we d offer exhibits 282 2303  
 (16) 304 A and 2305  
 (17) (Exhibits 282 2303 304 A and 2305 offered)  
 (18) THE COURT Any objection counsel?  
 (19) MS SMITH No objection  
 (20) THE COURT I don t have the list but do you -  
 (21) THE CLERK We got it  
 (22) THE COURT They re admitted  
 (23) (Exhibits 282 2303 304 A and 2305 received)  
 (24) MS SMITH Mr Parker hello I m Linda Smith and  
 (25) I m going to be cross examining you And I m going to give you

Vol 13 2004

- (1) a copy of your federal court testimony that s this one and  
 (2) your deposition testimony which is this one  
 (3) THE WITNESS A thesis  
 (4) MS SMITH Just so you ll feel comfortable surrounded  
 (5) by all your prior statements  
 (6) CROSS EXAMINATION OF KENNETH P PARKER  
 (7) BY MS SMITH  
 (8) Q Now you were the deputy director of the Division of  
 (9) Commercial Fisheries for six years isn t that what you told  
 (10) us?  
 (11) A Yes  
 (12) Q And that then you became the director of the Division of  
 (13) Commercial Fisheries for another six years?  
 (14) A Yes  
 (15) Q All right And you ve talked to us today about commercial  
 (16) fisheries management and about the closure of some of the  
 (17) commercial fisheries in 1989?  
 (18) A Yes  
 (19) Q Are you aware sir that this case is brought by certain  
 (20) Native corporations and municipalities?  
 (21) A I understand that  
 (22) Q Native corporations are not allowed to have permits to be  
 (23) commercial fishermen are they?  
 (24) A That s correct  
 (25) Q And municipalities aren t allowed to have permits to be

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- (1) commercial fishermen are they?
- (2) A That s correct
- (3) Q The plaintiffs in this case don t have a claim for lost
- (4) commercial harvests in 1989 do they?
- (5) A No
- (6) Q And in fact they don t have a claim in any year in this
- (7) case for lost commercial harvest to your knowledge?
- (8) A To my knowledge no
- (9) Q Let s talk about the zero tolerance policy in 1989 You
- (10) testified that Exxon was invited to participate in the
- (11) development of that policy is that correct?
- (12) A I believe at the area level in Cordova there was meetings
- (13) that Exxon was invited and I m not sure if they participated
- (14) or not
- (15) Q Did Exxon ever criticize the zero tolerance policy to you
- (16) as director of commercial fisheries?
- (17) A No
- (18) Q Under the 1989 zero tolerance policy one of the concerns
- (19) was that fishing gear would be fouled by oil is that right?
- (20) A Yes
- (21) Q And that fish would get oiled either by the fouled gear or
- (22) being pulled up through the oiled water?
- (23) A That s correct
- (24) Q Does the Division of Commercial Fisheries put out an annual
- (25) fin fish management report each year?

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- (1) A Yes
- (2) Q And I know there s more than this but there s at least
- (3) one - one annually for Prince William Sound for Lower Cook
- (4) Inlet and for Kodiak?
- (5) A That s correct
- (6) Q And those reports are thick they re 150 200 pages and
- (7) they summarize among other things the yearly harvests in
- (8) each of those locations?
- (9) A They re smaller than this
- (10) Q Yes they are Now even with the zero tolerance policy in
- (11) effect in 1989 was there still a commercial harvest in Prince
- (12) William Sound?
- (13) A Yes there was
- (14) Q And it was larger than the 1988 harvest by almost ten
- (15) million fish?
- (16) A I believe so
- (17) Q Did the southwestern - you showed us the different
- (18) districts did the southwestern fishing district suffer the
- (19) most extensive oil impacts of any area affected by the spill?
- (20) A I believe so
- (21) Q It was closed in 1989 under the zero tolerance policy?
- (22) A Right It was closed In addition to the Eshamy and
- (23) Montague district as well as the Northern District was closed
- (24) for ten days right through the peak of the pink salmon
- (25) fishery

Vol 13 2007

- (1) Q In 1989 in the southwestern fishing district are you
- (2) aware that over 3 7 million pink salmon were harvested inside
- (3) the boom at the AFK Hatchery in Solomon Bay?
- (4) A Yes
- (5) Q And the waters inside the booms at the AFK Hatchery were
- (6) maintained clean clean and free of oil through the course of
- (7) the oil spill?
- (8) A That was my understanding I did not observe that
- (9) directly
- (10) Q In 1989 were special use areas created for subsistence
- (11) fishermen in Prince William Sound?
- (12) A I m not clear if I understand your question Special use?
- (13) Q Let me show you something I m going to show you DX3812
- (14) which is the Alaska Department of Fish and Game Division of
- (15) Commercial Fisheries Prince William Sound Area Annual Fin #
- (16) Fish
- (17) Management Report 1989 and I m going to ask you to take a
- (18) look at page 28 of this report
- (19) All right And do you have page 28 sir?
- (20) A Yes I do
- (21) Q Let me play with this for one second
- (22) These reports are not - any chance you guys can read
- (23) this? Not well right? Well I ll read it to you okay
- (24) It says many areas traditionally utilize for subsistence
- (25) were heavily oiled and special use areas within protected and
- (26) boomed bays including Eshamy Jackpot and Sawmill Bays
- (27) were

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- (1) opened by emergency order by the Department to provide
- (2) alternatives
- (3) In that context does that refresh your recollection that
- (4) special use areas were created for subsistence fishing fishing
- (5) in 1989 in Prince William Sound?
- (6) A Yes that s correct
- (7) Q Okay And I gather that was done as it says there to
- (8) provide subsistence fishermen with an alternative to their
- (9) usual fishing areas?
- (10) A Yes
- (11) Q And the special use included Eshamy Jackpot and Sawmill
- (12) Bays?
- (13) A Right
- (14) Q And Chenega Bay Village is in Sawmill Bay isn t that
- (15) right?
- (16) A I believe so I d have to see a map to be certain about
- (17) that
- (18) Q And the special subsistence use areas were set up in bays
- (19) that had been boomed?
- (20) A Yes
- (21) Q I d like to show you DX15374
- (22) This is a subsistence fishing emergency order Alaska
- (23) Department of Fish and Game Issued June 6th 1989 at
- (24) Cordova
- (25) And that was issued by James Brady ADF&G Area
- (26) Management
- (27) Biologist for Prince William Sound is that right?

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- (1) A Yes
- (2) Q And what is a subsistence fishing emergency order?
- (3) A All of our fisheries in the state are opened and closed by
- (4) emergency orders and that's a delegation of authority that is
- (5) given from the commissioner down to - through me to my
- (6) regional supervisors and then on down to the area biologists
- (7) so the area biologist has the authority to open and close
- (8) fisheries including subsistence fisheries as need basis
- (9) Q So based on that Mr Brady would have checked with you
- (10) before this came out?
- (11) A Well I believe I recall some discussion on this particular
- (12) issue but as long as it abided by our memorandum of
- (13) understanding and didn't conflict I would not object to his
- (14) action
- (15) Q Okay let me show you Page 2 of the document you have in
- (16) front of you and see if we can do any better on the - just as
- (17) bad right? I'll read it to you
- (18) Page 2 says at the bottom the alternative areas open to
- (19) harvest namely Eshamy Lagoon Jackpot Bay Lagoon and
- (20) Sawmill
- (21) and Crab Bays have not been oiled and are safe for the taking
- (22) of salmon for subsistence use Because no commercial fishing
- (23) is anticipated in the southwest district a harvestable surplus
- (24) of fish will exist and the taking of some of these fish by the
- (25) subsistence fishery is not expected to compromise escapement

Vol 13 2010

- (1) Do you agree with that statement?
- (2) A Yes
- (3) Q And also back in 1989 weren't the Copper River Flats
- (4) commercial fishing area opened to Tattilek Village subsistence
- (5) users to provide an alternative to their usual fishing area?
- (6) A Yes that's correct
- (7) Q And that's in eastern Prince William Sound an area of the
- (8) Sound that wasn't oiled?
- (9) A Yeah it's not within Prince William Sound proper It's
- (10) out on the tidal flats of the Copper River Delta and Bering
- (11) River
- (12) Q In your area management regions is it outside the Sound
- (13) region is that what you're saying?
- (14) A No it's in the management area but it's in a different
- (15) management district than Prince William Sound proper
- (16) Q Are you aware Mr Parker that according to the 1989
- (17) annual management report for Prince William Sound as a result
- (18) of the special accommodations that were made for subsistence
- (19) fishermen in 1989 subsistence harvests of salmon for Tattilek
- (20) and southwestern subsistence fisheries actually increased from
- (21) 1988 to 1989?
- (22) A I haven't looked at that specific data
- (23) Q Would it surprise you?
- (24) A It wouldn't surprise me
- (25) Q Okay I'm going to show you DX - okay you already have

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- (1) in front of you DX3812 that's the 1989 annual fin fish Can
- (2) you take a look at Page 31? And my question to you is Didn't
- (3) your division conclude in 1989 that overall every one of those
- (4) use areas were greatly restricted and changed total catches
- (5) were not affected and subsistence resource use increased for
- (6) the two areas?
- (7) A Yes that's the impression that was presented by the area
- (8) manager responsible for managing this fishery
- (9) Q Let's talk about 1990 and the zero tolerance policy and I
- (10) want to show you a plaintiff's exhibit It's 274 And I think
- (11) the copy you get has all of my highlighting in it so you'll
- (12) see exactly where I'm going
- (13) Okay and if you start on the second page of this exhibit
- (14) it says Memorandum of Understanding 1990 Commercial
- (15) Fisheries
- (16) Season Alaska Department of Fish and Game and Alaska
- (17) Department of Environmental Conservation Could you tell the
- (18) jury what this document is?
- (19) A Now this is again an agreement between the two agencies
- (20) directly involved in - in monitoring the spill and managing
- (21) the fisheries that is the Department of Environmental
- (22) Conservation and the Department of Fish and Game And this
- (23) just provides the direction to the two agencies and identifies
- (24) what actions each agency is going to take what their
- (25) responsibilities are going to be relative to making decisions

Vol 13 2012

- (1) Q Okay And if you take a look at - it's Page 3 of the
- (2) document but Page 2 of the memorandum where I've got all
- (3) the
- (4) yellow There is a list it's Roman numeral two A through J
- (5) and if you could briefly look at these Are these measures
- (6) that are set forth in this agreement to make sure that the 1990
- (7) commercial fishing season is a safe one?
- (8) A That's the intent
- (9) Q All right And I'm going to just quickly show you this
- (10) This also has very - this is the best copy we could find but
- (11) it's not very easily readable Let me give it a try I'm not
- (12) going to read it all but it has fishery management
- (13) activities A prior to the commercial season for each species
- (14) or species group e.g. herring crab shrimp salmon ADF&G
- (15) will collect fish samples for analysis for ADEC Maybe you can
- (16) explain to the jury how ADF&G was working with ADEC on this?
- (17) A Well we would create commercial fisheries testing hoping
- (18) to obtain samples of the fishery and then provide that to the
- (19) Department of Environmental Conservation for their evaluation
- (20) Q Okay And then it says in B ADEC will evaluate these
- (21) samples - and I'll be surprised if I get this right -
- (22) organoleptic - organoleptically?
- (23) A That's pretty good
- (24) Q Okay Determine biolevels and present samples to the
- (25) Federal Food and Drug Administration and National Marine

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- (1) C a potential fishing area will remain closed if samples  
 (2) of fish taken from the area are found by ADEC to be adulterated  
 (3) by oil  
 (4) D prior to the initial openings or subsequent fishing  
 (5) periods ADF&G will survey areas for the presence of oil and  
 (6) document the results of the survey – and it goes on and on and  
 (7) on all the way down to J – to I Let s see if I can get I  
 (8) on the screen  
 (9) ADEC will implement regulations regarding inspections  
 (10) monitoring and recordkeeping for fishing vessels tender  
 (11) vessels and processors ADEC will establish a vessel  
 (12) inspection system for vessels that work on oil spill related  
 (13) activities  
 (14) And J ADEC will provide activity for quality control  
 (15) personnel in processing facilities  
 (16) My question to you sir There are ten measures there and  
 (17) I didn t read them all so if you want to go back and look at  
 (18) them please feel free but were these ten measures  
 (19) implemented?  
 (20) A This was a preseason plan and it was the intent of the two  
 (21) agencies to implement this plan I don t think I could tell  
 (22) you that it was exactly followed in all situations but it was  
 (23) our objective to follow this plan  
 (24) Q Okay And do you know whether ADF&G collected fish  
 samples  
 (25) for analysis by ADEC prior to the commercial season for each

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- (1) species?  
 (2) A I don t know that to be a fact I know that we attempted  
 (3) to do that  
 (4) Q After all of these measures went forward or at least as  
 (5) many of them as did go forward throughout the whole of Prince  
 (6) William Sound isn t it a fact that in 1990 the vast majority  
 (7) of the commercial fisheries were open?  
 (8) A Yeah There was some small closures in a couple of  
 (9) fisheries due to the presence of oil on beaches but for the  
 (10) most part the fisheries were conducted in a more normal  
 (11) fashion  
 (12) Q Okay And let me show you DX3810 It s the Prince William  
 (13) Sound management area 1990 Annual Fin Fish Management  
 Report  
 (14) Alaska Department of Fish and Game and ask you please if  
 you  
 (15) can turn to Page 2 Let me read this  
 (16) The Department of the Fish & Game conducted extensive  
 beach  
 (17) surveys and collected fish that were provided to DEC – that s  
 (18) the same thing as ADEC right?  
 (19) A Uh huh  
 (20) Q – for inspection prior to commercial openings in the  
 (21) affected areas of the Sound Some minor beach areas  
 continued  
 (22) to pose an appreciable likelihood for fouling of fish gear and  
 (23) adulterating of catch and were closed for the 1990 season Two  
 (24) small beaches in the Eshamy district 3 5 miles of shoreline on  
 (25) northern LaTouche Island and the shoreline of Eleanor Ingot

Vol 13 2015

- (1) and Knight Island north of 60 degrees 25 minutes – how do you  
 (2) know that – north latitude were closed These closures did  
 (3) not result in any reduction in the harvest of fish Besides  
 (4) this the lingering effects of the oil spill had little impact  
 (5) on the conduct of the 1990 salmon season  
 (6) Do you agree that those were the closures as the result of  
 (7) the 1990 zero tolerance policy in the Sound?  
 (8) A Yes I do  
 (9) Q All right And the statement the second to the last  
 (10) sentence these closures did not result in any reduction in the  
 (11) harvest of fish do you agree with that?  
 (12) A I don t think I d have any reason to disagree with the  
 (13) staff s opinion on that  
 (14) Q Okay And then the last sentence says besides this the  
 (15) lingering effects of the oil spill had little impact on the  
 (16) conduct of the 1990 salmon season do you agree with that?  
 (17) A In the context of this paragraph yes  
 (18) Q Now the zero tolerance policy ended in 1990 didn t it?  
 (19) A Yes it did  
 (20) Q And to your knowledge were there any commercial fisheries  
 (21) in Prince William Sound that were closed in 1991 as a result of  
 (22) zero tolerance policy?  
 (23) A No  
 (24) Q 1992?  
 (25) A No

Vol 13 2016

- (1) Q 1993?  
 (2) A No  
 (3) Q Today?  
 (4) A I don t know about today  
 (5) Q Okay let s turn to the Lower Cook Inlet Now there were  
 (6) commercial fisheries that closed in 1989 in the Lower Cook  
 (7) Inlet because of the zero tolerance policy is that correct?  
 (8) A Yes and you re – you re using zero tolerance policy as  
 (9) just a term to describe the memorandum of understanding It  
 (10) actually wasn t a zero tolerance policy?  
 (11) Q Yes sir I am  
 (12) A Okay  
 (13) Q Okay And if you d like to explain that please feel  
 (14) free  
 (15) A If you want the Court to understand that basically  
 (16) Q Yes I do  
 (17) A When we – right after the spill we had a lot of dialogue  
 (18) with the industry and both the fishermen and processors to  
 (19) determine how we re going to act in light of the spill and how  
 (20) we re going to manage our fisheries And in Cordova some of  
 (21) the initial draft language that the local people came up with  
 (22) being our biologists and local fishermen they coined the term  
 (23) zero tolerance policy that under no circumstances should  
 (24) there be a chance that oiled fish would get on the market  
 (25) Well that kind of evolved to a memorandum of understanding

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- (1) that incorporated the terminology appreciable likelihood of  
 (2) fish being fouled of gear – fishing gear being fouled with  
 (3) oil or fish adulterated by oil So it s a completely different  
 (4) concept that the MOU the Memorandum Of Understanding  
 was not  
 (5) a guarantee that fish would not – oiled fish would not end up  
 (6) on the market It was our best shot that it – given the  
 (7) resources that we had between the agencies to minimize the  
 (8) likelihood of that occurring  
 (9) Q All right And when we call it zero tolerance policy it  
 (10) sounds like zero fish and as you said All right in the  
 (11) Lower Cook Inlet not all the commercial fisheries were closed  
 (12) in 1989 correct?  
 (13) A That s correct  
 (14) Q And do you have a recollection – I can show you the fin  
 (15) fish report – that despite what closures there were the total  
 (16) 1989 Lower Cook Inlet salmon catch was about 1 5 million fish?  
 (17) A I wouldn t have any reason to disagree with you if you ve  
 (18) taken those facts out of the national – out of the annual  
 (19) management report  
 (20) Q Let me show it to you anyway I want to ask you something  
 (21) in the follow up  
 (22) This is DX5748 It s the 1989 Lower Cook Inlet Area Annual  
 (23) Fin Fish Management Report and I just have one page I need to  
 (24) ask you about And it s – there s a figure but let s pass on  
 (25) that but it s page 87

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- (1) This is Appendix A 14 Lower Cook Inlet Total Salmon Catch  
 (2) By District 1960 through 1989 And if you go all the way down  
 (3) to 1988 the 1988 total catch was 1 571 855 and the 1989 was  
 (4) 1 485 484 is that correct?  
 (5) A Yes  
 (6) Q So the 1989 catch total was about the same as 1988?  
 (7) A That s correct  
 (8) Q Now focusing on subsistence no subsistence fisheries were  
 (9) closed in the Lower Cook Inlet in 1989 as the result of the  
 (10) zero tolerance policy were they?  
 (11) A I m not sure  
 (12) Q Okay let me show you –  
 (13) A I don t recall  
 (14) Q Let me show you PX794 which is plaintiffs exhibit called  
 (15) Oil Spill Impacts Let me ask you to take a look at page 5  
 (16) MR STOLL This is from – I m sorry  
 (17) MS SMITH This is from PX plaintiffs exhibit –  
 (18) oh you re asking each other  
 (19) MR STOLL No I m asking you who is this from who  
 (20) prepared this?  
 (21) MS SMITH I don t know it s your exhibit I m  
 (22) going to ask him that  
 (23) BY MS SMITH  
 (24) Q Did you prepare this exhibit?  
 (25) A One of my staff did Herman Savikko in headquarters

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- (1) office  
 (2) Q Have you take a look at page five under Cook Inlet Kodiak  
 (3) and Chignik does it say there s been no subsistence fisheries  
 (4) closures because of oil?  
 (5) A That s correct  
 (6) Q Does that refresh your recollection that there weren t any  
 (7) closures of subsistence fisheries in the Lower Cook Inlet?  
 (8) A Yes As I recall we want to give subsistence fishermen an  
 (9) opportunity to sort out areas where they could harvest and fish  
 (10) for their subsistence needs and because you know the islands  
 (11) were – are so diverse these areas are so diverse that  
 (12) potentially they could do a better job of finding areas that  
 (13) were not impacted than we could dictate in a very complex  
 (14) emergency order  
 (15) Q Okay And at the risk of yet again subjecting myself to  
 (16) geographical ridicule is the Lower Cook Inlet part of the  
 (17) Kenai?  
 (18) A Kenai Peninsula?  
 (19) Q Yes  
 (20) A Yes  
 (21) Q Thank you  
 (22) The two Native corporations in the Lower Cook Inlet that  
 (23) are plaintiffs in this case are English Bay and Port Graham?  
 (24) A Okay  
 (25) Q Does that sound right to you?

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- (1) A I would assume so  
 (2) Q Okay Let s take a look at this subsistence harvest  
 (3) figures for Port Graham and English Bay I m going to give you  
 (4) a copy of DX3811 and that is the 1990 Lower Cook Inlet Area  
 (5) Annual Fin Fish Management Report Alaska Department of Fish  
 (6) and Game I ll give you a page in a minute sir  
 (7) Okay take a look at tables 28 and 29 It s page 104 and  
 (8) 105 I m going to turn to 104 first and this says at the top  
 (9) Subsistence Salmon Catch in Numbers of Fish by Species for  
 the  
 (10) Village of Port Graham Lower Cook Inlet 1981 to 1990 I m  
 (11) going to put this up here for a minute like this  
 (12) Taking a look at this it shows that the 1989 total salmon  
 (13) subsistence catch decreased from 1582 – 1 582 fish to 1 267  
 (14) fish right?  
 (15) A Yes  
 (16) Q But it didn t go to zero did it?  
 (17) A No  
 (18) Q And in fact even the 1989 catch was greater than the 1986  
 (19) catch is that right?  
 (20) A That s correct  
 (21) Q And if you take a look at 1990 the total subsistence  
 (22) salmon catch from Port Graham was 2 559 fish is that right?  
 (23) A Yes that s correct  
 (24) Q So one year after the spill Port Graham had the largest  
 (25) subsistence salmon harvest since 1981 true?

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- (1) A That s what this data indicates  
 (2) Q Okay let s look at the next page which is page 105 That  
 (3) says at the top Appendix Table 28 Subsistence Salmon Catch  
 (4) in Number of Fish by Species for the Village of Port Graham  
 (5) Lower Cook Inlet 1981 through 1990 and let s take a look at  
 (6) the relevant years Oh that s the same one? Sorry Thanks  
 (7) Tom  
 (8) Okay let s go to table 29 and change it to the Village of  
 (9) English Bay Subsistence Salmon Catch in Number of Fish by  
 (10) Species for the Village of English Bay Lower Cook Inlet 1981  
 (11) through 1990 And you see in 1988 it was 2 222 fish There  
 (12) was a decrease in 1989 right to 1 579 fish?  
 (13) A That s correct  
 (14) Q But it came back in 1990 to 3 107 fish?  
 (15) A Yes  
 (16) Q And that was English Bay s largest subsistence salmon  
 (17) harvest in the past eight years?  
 (18) A It looks like 1982 was larger  
 (19) Q Right since 1982?  
 (20) A 4 788  
 (21) Q Exactly since 1982?  
 (22) A Yes  
 (23) Q Isn t it true that in 1990 the zero tolerance policy  
 (24) required only minor adjustments to ADF&G s management  
 strategy  
 (25) for the outer district because the results of the test fishing

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- (1) all came back negative for oil contamination?  
 (2) A That s my recollection  
 (3) Q And you said earlier the zero tolerance policy was not  
 (4) renewed for 1991?  
 (5) A That s correct  
 (6) Q So no commercial fishing closures as the result of zero  
 (7) tolerance policy in 91?  
 (8) A No  
 (9) Q 92?  
 (10) A Yes  
 (11) Q Yes no? Yes no closures?  
 (12) A Well right  
 (13) Q 93 and today?  
 (14) A Yes  
 (15) Q Let s take a look at Kodiak Are you aware that the Native  
 (16) corporations who are the plaintiffs here don t have any  
 (17) parcels of land on Kodiak?  
 (18) A No I don t  
 (19) Q You don t know one way or the other?  
 (20) A No I don t  
 (21) Q And the municipalities don t have a claim for lost  
 (22) subsistence fishing on Kodiak do they?  
 (23) A I wouldn t think so  
 (24) Q You told us about 1989 commercial fishery closures on  
 (25) Kodiak?

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- (1) A Uh huh  
 (2) Q All right and I m going to show you DX5766 Why is it  
 (3) that the Kodiak report s fatter than all the others?  
 (4) A Wordy biologists  
 (5) Q This is the Kodiak Management Area Commercial Salmon  
 Annual  
 (6) Management Report 1992 And if you could turn to Page 15 -  
 (7) Table 15 on Page 41  
 (8) MR STOLL What is -  
 (9) MS SMITH We can t read it very well It s the best  
 (10) copy we can find I ll tell you what it says It says Table  
 (11) 15 Subsistence Salmon Fishery Harvest Summary by Species  
 by  
 (12) Year Kodiak Management Area in 1962 through 1992  
 (13) MR STOLL Your Honor there s nothing about  
 (14) subsistence on Kodiak that s involved in this case  
 (15) THE COURT So what is that objection?  
 (16) MR STOLL This objection?  
 (17) THE COURT Counsel what s the relevance?  
 (18) MR STOLL Maybe we should take this up -  
 (19) THE COURT Just give me a brief statement of what you  
 (20) think the relevance is  
 (21) MS SMITH We ve heard about the closure of  
 (22) commercial harvest on Kodiak I assume there s going to be a  
 (23) claim for lost subsistence  
 (24) THE COURT Apparently not counsel That s  
 (25) stipulated right?

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- (1) MR STOLL We re not making any kind of lost  
 (2) subsistence on Kodiak That s not a claim by - our claim is  
 (3) the land land claim Haven t heard any testimony about it  
 (4) MS SMITH I guess if the - if the plaintiffs are  
 (5) conceding that none of the Native corporations subsist on -  
 (6) conduct subsistence harvesting of fish on Kodiak then I will  
 (7) not ask these questions  
 (8) MR STOLL Your Honor we don t represent any Native  
 (9) corporations  
 (10) THE COURT We re going to do it out of the presence  
 (11) of the jury counsel You were right I should have sent the  
 (12) jury out  
 (13) If this room is vacant just go on into this room and I ll  
 (14) bring you right back in If that s an if I d like to -  
 (15) actually I hate to do this but you can stand out there for a  
 (16) minute This is not going to take long  
 (17) (Jury out at 11 31 a m )  
 (18) MS SMITH I guess we don t have to come up there  
 (19) right?  
 (20) THE COURT No you don t  
 (21) MS SMITH Your Honor at some point we heard  
 (22) testimony by one of the Natives I forget if it was a CEO of  
 (23) Chugach or Chenega saying that people were coming down to  
 (24) Kodiak to subsistence fish and which would be a far piece for  
 (25) some of these people In addition there s this fear and

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- (1) uncertainty theme –  
 (2) THE COURT That s the theme I thought it might be  
 (3) relevant on I mean isn t this the very same issue that the  
 (4) plaintiffs have been arguing for all the way through this case  
 (5) it s not just the commercial fishery it s also the subsistence  
 (6) fishery and all the uncertainty that lessens the land values  
 (7) MS SMITH Yes that s what I heard yesterday I  
 (8) mean it seems to me –  
 (9) THE COURT Yesterday and the yesterday before that  
 (10) and the yesterday before that I mean isn t it the same  
 (11) thing so isn t it relevant?  
 (12) MR STOLL Well I think Your Honor there s  
 (13) certainly – one of our themes is that there was uncertainty in  
 (14) the marketplace and the – in both Kodiak and Prince William  
 (15) Sound and Lower Cook Inlet as to what was going to happen to  
 (16) these fisheries  
 (17) THE COURT Right And isn t the subsistence part of  
 (18) the fishery even if it s a small part part of the great  
 (19) scenario of uncertainty you re talking about that s lessened  
 (20) the land values both in Kodiak and elsewhere on the plaintiffs  
 (21) land?  
 (22) MR STOLL I think you could argue that So  
 (23) withdrawn  
 (24) THE COURT So aren t you conceding that this is  
 (25) relevant?

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- (1) MR STOLL Yes Your Honor  
 (2) THE COURT All right the objection s overruled  
 (3) MR PETUMENOS Good argument counsel  
 (4) MS SMITH I think I won and lost at the same time  
 (5) but that s okay  
 (6) (Jury in at 11 33 a m )  
 (7) THE COURT You can be seated  
 (8) I d like the jury to recall that this is the first time  
 (9) I ve been right in my estimate of how much time something  
 would  
 (10) take I figure this is going to – this is the start of a  
 (11) trend  
 (12) BY MS SMITH  
 (13) Q All right we re talking about DX5766 which is that big  
 (14) fat Kodiak management report and this is Table 15 It s very  
 (15) unclear up here but it says Subsistence Salmon Fishery  
 (16) Harvest Summary by Species by Year Kodiak Management  
 Area  
 (17) 1962 through 1982 These numbers are really hard to read  
 But  
 (18) you ve got the original in front of you And doesn t it show  
 (19) that the salmon subsistence harvests on Kodiak increased from  
 (20) 1988 to 1989 from 15 964 – did we get my hair? How does it  
 (21) look okay? – to 17 605?  
 (22) A In total it does indicate that  
 (23) Q All right And the harvest increased again quite  
 (24) substantially in 1990 from 17 605 to 29 009 is that right?  
 (25) A That s what s indicated yes

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- (1) Q And in 91 it went up again to 32 423?  
 (2) A Yes  
 (3) Q And in 92 it went down slightly to 31 364 is that right?  
 (4) A Yes  
 (5) Q And isn t it a case if you take a look they have the –  
 (6) the average harvest see if I can – the ten year average and  
 (7) the 30 year average is right here 1962 to 1992 that the 1991  
 (8) salmon subsistence harvest was the highest reported  
 subsistence  
 (9) harvest on Kodiak in the last 30 years?  
 (10) A Yes  
 (11) Q Let s talk for a moment about how the pink salmon fared in  
 (12) the two years after the oil spill Pink salmon make up by far  
 (13) the majority of the Sound salmon harvest don t they?  
 (14) A Yes  
 (15) Q And they have a two year life cycle?  
 (16) A Yes  
 (17) Q And in the 1988 brood year salmon the juveniles that were  
 (18) growing and feeding in the Sound in 1989 came back to spawn  
 or  
 (19) be caught by fishermen in 1990 is that right?  
 (20) A The 88 brood year is an even year cycle so it would –  
 (21) those – the offspring from that spawning would come back in  
 (22) 90  
 (23) Q Okay And they came back in 1990 in record numbers right?  
 (24) A I believe so  
 (25) Q In fact the pink salmon return in 90 was the largest

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- (1) record catch in history?  
 (2) A Yes  
 (3) Q And the pinks that were larvae and fed as larvae in 1989  
 (4) they returned to be caught or to spawn in 1991 right?  
 (5) A That s correct  
 (6) Q And they were the second largest return in history?  
 (7) A Yeah that s correct  
 (8) Q Okay Now I want to talk to you just a little bit more  
 (9) about the commercial harvest versus the subsistence harvest  
 (10) The years of the bigger commercial harvests are not necessarily  
 (11) the same year – the same big years for subsistence are they?  
 (12) In other words you have a big commercial harvest do you  
 (13) necessarily have a big subsistence harvest and vice versa?  
 (14) A No The subsistence fishery is more dependent upon need  
 (15) and the number of participants in the fishery as well as  
 (16) availability of the salmon so there s a couple of factors that  
 (17) play into it and it s not always tied to – a record  
 (18) commercial catch is going to equate to a record subsistence  
 (19) catch because there are different controlling factors but  
 (20) certainly the availability of fish to be caught is important if  
 (21) you have a large run then the users are going to be more  
 (22) successful in acquiring the fish that they want for the – to  
 (23) meet the subsistence needs  
 (24) Q Okay I m going to take my first foray into this thing  
 (25) I m going to show you DX15456 That s so cool Okay

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- (1) And this is the commercial and subsistence harvest of
- (2) salmon for Kodiak 88 to 92 in both cases And if you look
- (3) at the commercial harvest this is by number of fish Say for
- (4) 1991 almost 24 million salmon were caught commercially in the
- (5) commercial harvest in 1991 you see that?
- (6) A Yes
- (7) Q And if you look over on the subsistence I mean the scale
- (8) is just a lot smaller It s - I think it eats 33 000 fish?
- (9) A Yes that s correct
- (10) Q And the trends also are different For example if you
- (11) look at 1989 it went down for commercial salmon harvests I
- (12) guess I can t point to that on there because it s not there
- (13) but I ll try it I ll try it once Highlight and then color
- (14) on
- (15) All right if you look at 1989 it went down for the
- (16) commercial harvest but if you look at 1989 for subsistence it
- (17) went up a little bit is that right?
- (18) A That s correct
- (19) Q And if you take a look at 1992 It went way down for
- (20) commercial but it was still very high for subsistence is that
- (21) right?
- (22) A That s correct
- (23) Q And I m going to show you DX15454 is that it? Oh this
- (24) doesn t have a bar code That s all right it ll work the
- (25) old fashioned way And this is the commercial and subsistence

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- (1) harvest of salmon for the Lower Cook Inlet
- (2) A That s what is indicated here
- (3) Q Okay and again the numbers are markedly different for the
- (4) commercial harvest In 1988 it s about 1 5 million fish and
- (5) for the subsistence harvest it looks like it s around maybe 33
- (6) 3500 fish?
- (7) A That s correct
- (8) Q And again the trends don t match either 1991 was a
- (9) down year for commercial harvest in Lower Cook Inlet but it
- (10) was a year that trended up for subsistence harvesting?
- (11) A That s what s indicated
- (12) Q Okay And let me show you the last one of these It s -
- (13) it s DX15455 and that is commercial and subsistence
- (14) and Tatitlek harvest of salmon And again we see the
- (15) comparison say of 1990 it s practically off the charts
- (16) commercially and it s at least 42 43 million You agree with
- (17) that?
- (18) A That s correct
- (19) Q And over on the subsistence side 90 is very low under -
- (20) well under 500 fish?
- (21) A That s correct
- (22) Q Okay But if you look at the trending 92 goes down
- (23) commercially and is still very very high for subsistence is
- (24) that right?
- (25) A In terms of total catch that s correct

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- (1) Q Yeah so even if the commercial catch is low one year that
- (2) doesn t mean that the subsistence fishermen won t be able to
- (3) catch their harvest is that right?
- (4) A Well this data indicates the total number of fish
- (5) harvested It doesn t address the issue of catch per unit of
- (6) what is the individual subsistence fisherman take but in terms
- (7) of totaled catch that s the - that s what s indicated
- (8) Q Okay The oil spill was not the first time the commercial
- (9) fisheries had ever been closed right?
- (10) A In what respect?
- (11) Q Well there had been closures of commercial fisheries
- (12) before the oil spill?
- (13) A Due to ?
- (14) Q Due to any reason
- (15) A Sure we open and close our fisheries normally through a
- (16) season to achieve our management objectives
- (17) Q Okay And the Department of Fish and Game closed
- (18) commercial fisheries at Prince William Sound in 1988 to purse
- (19) seining to make sure that enough pink salmon got up their
- (20) streams?
- (21) A In what fishery?
- (22) Q All I know is Prince William Sound
- (23) A There are - in a normal season we would have closures to
- (24) manipulate the harvest such that it would be balanced with our
- (25) escapement

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- (1) Q So you would be monitoring it and if - depending on what
- (2) was going on you could open or close?
- (3) A Yes that s correct
- (4) Q Now I d like to talk to you just for a minute about
- (5) escapement and overescapement And first I have sort of a
- (6) philosophical question for you Setting optimal escapements is
- (7) not an exact science is it?
- (8) A Its the best we have at this point in time There are
- (9) several techniques that are involved and the exactness is
- (10) really related to the exactness of the data
- (11) Q And do optimal escapement goals change based on
- (12) ADF&G s
- (13) experience?
- (14) A Yes
- (15) Q And based on prior years experience for example the
- (16) escapement goals for sockeye were raised three times in the
- (17) Kenai between the late 70s and the mid 80s?
- (18) A In the Kenai River that s correct
- (19) Q Were Ken Florey and Charles Meacham members of the
- (20) Commercial Fisheries Division in Anchorage?
- (21) A Yes
- (22) Q I d like to show you plaintiffs Exhibit 769 It s a
- (23) memorandum dated June 18 1989 from Ken Florey and
- (24) Charles
- (25) Meacham to yourself as well as Doug Eggers And if you take

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- (1) escapement for any system in Alaska? Being familiar with the  
 (2) sockeye data from Cook Inlet Prince William Sound and Bristol  
 (3) Bay we certainly do not have sufficient confidence in spawner  
 (4) recruit smolt euphotic volume -  
 (5) A Euphotic  
 (6) Q Thank you okay - and any other theoretical means of  
 (7) describing salmon production to the extent we would want to  
 (8) manipulate escapements beyond what can be accomplished  
 through  
 (9) management of a common property commercial fishery  
 (10) Do you recall receiving this?  
 (11) A Yes I do  
 (12) Q And what was your reaction to that comment?  
 (13) A Well let me go back This was a staff memorandum to me  
 (14) and the chief fisheries scientist Doug Eggers explaining some  
 (15) opinion about an overescapement policy that we were  
 discussing  
 (16) internally It s a policy that was never adopted by the  
 (17) department and they ve raised certain objections through the  
 (18) memo to us And in that particular paragraph that you just  
 (19) read into the record I think they re stating their personal  
 (20) feelings about that issue and I for one don t agree with  
 (21) what they re trying to say here I think it can be mis -  
 (22) misinterpreted from what they re saying as well  
 (23) Do you ever really know what the optimum or maximum  
 (24) escapement for any system in Alaska is? Well like I said  
 (25) before it depends on the quality of the data how close you re

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- (1) getting in on certain escapement objectives But in a lot of  
 (2) systems we know a lot about how they re performing and how  
 (3) they re functioning relative to the size of the escapements  
 (4) that go in In other systems we don t know much because we  
 (5) just don t have the data So I think this is an  
 (6) oversimplification of a very complex issue  
 (7) Q Okay If you go down two paragraphs it says we are  
 (8) concerned that we may be overreacting - meaning ADF&G I  
 (9) gather - there is no precedent for the Department to respond  
 (10) to overescapement We have had overescapement in many  
 (11) instances in the past and not responded in this manner  
 (12) Do you agree with that?  
 (13) A Well I m not sure what you mean What part am I  
 (14) agreeing - did you want me to agree with?  
 (15) Q That we have had overescapement in many instances in the  
 (16) past and not responded in this manner  
 (17) A Well we were - what they re relating to of course is  
 (18) the draft policy that would specify the Department step in and  
 (19) prevent an overescapement by conducting a fishery within the  
 (20) confines of a river as an example to harvest the surplus  
 (21) fish Well there s a lot of reasons not to do that both  
 (22) biologically and socially So I guess I m still not tracking  
 (23) your question  
 (24) Q Let me ask you this was it ultimately decided that the  
 (25) Department would not implement the draft overescapement  
 policy

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- (1) that is contemplated?  
 (2) A Oh that s correct yes  
 (3) Q And why was that?  
 (4) A Because what I just said that it conflicted with a lot of  
 (5) biological objectives set out for a particular river as well  
 (6) as allocated management plans established by the Board of  
 (7) Fisheries that decides who gets what share of the fish that are  
 (8) returning in those rivers There s a lot of factors and many  
 (9) of them were laid out in this memo  
 (10) Q But the ADF&G could have taken and considered taking  
 steps  
 (11) to deal with 1989 overescapement?  
 (12) A I don t believe so  
 (13) Q The draft policy wasn t a consideration of taking steps to  
 (14) deal with -  
 (15) A We had some in house discussion It was never approved by  
 (16) my office or the commissioner s office  
 (17) Q Was there ever a decision made not to take any steps to  
 (18) deal with 1989 overescapement?  
 (19) A In what respects? I guess -  
 (20) Q Let me ask - let me ask the positive of this question  
 (21) Did ADF&G do anything in 1989 to prevent overescapement?  
 (22) A We - we had the ability to manage our fisheries normally  
 (23) under the confines of the memorandum of understanding sure  
 (24) we d take actions to regulate the escapement relative to our  
 (25) objectives our stated objectives but in situations where we

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- (1) could not conduct a normal fishery the escapements occurred  
 (2) beyond our objectives  
 (3) Q And there wasn t any special catch or terminal terminal  
 (4) fishery to try to -  
 (5) A No I think in some situations we liberalized some  
 (6) in river fisheries like the personal use fishery in the Kenai  
 (7) and things like that if that s what you re getting at  
 (8) Q What about places that had weirs like Red Lake? Was there  
 (9) any discussion of closing the weir at Red Lake?  
 (10) A I m sure there was discussion but that is - that wasn t  
 (11) an option  
 (12) Q And can you tell the jury what a weir is?  
 (13) A Yeah A weir is a fence basically that s put in the  
 (14) mouth of a stream to allow the water to pass through it but  
 (15) the fish are obstructed from moving on upstream and they re  
 (16) kind of guided into a small gate area that can be opened and  
 (17) closed so that people on the weir can open that during certain  
 (18) times of the day or tide and count the salmon that are  
 (19) swimming through this narrow gate and get an accurate count  
 of  
 (20) the escapement  
 (21) Q Do you agree that there has been overescapement in many  
 (22) instances in Alaska in the past?  
 (23) A Escapements move our objectives yes  
 (24) Q And isn t it true that you weren t certain in 1989 that  
 (25) overescapement wasn t to the benefit of the fisheries?

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- (1) A I think you re going to have to narrow that down Relative  
 (2) to what fishery instance?  
 (3) Q Do you remember having your testimony taken in federal  
 (4) court on June 22nd of this year?  
 (5) A Not every word  
 (6) Q I can t believe it Okay you have your transcript up  
 (7) there Can you take a look at page 4553?  
 (8) MR STOLL That was page 4553  
 (9) MS SMITH Yes lines 19 through 22 And it says  
 (10) Question You also felt did you not that you weren t certain  
 (11) that it was not to the benefit of fishery - fishery in any  
 (12) case that you knew about to have the escapement occur?  
 (13) Answer that s correct  
 (14) Does that refresh your recollection on that point?  
 (15) A Well I d have to read back through the material and  
 (16) discern what - what system we were talking about or - but  
 (17) yeah I agree with myself  
 (18) Q Okay And isn t it the case that in some situations  
 (19) overescapement has led to an increase in escapement goals for  
 (20) future years?  
 (21) A That s correct  
 (22) MS SMITH Thank you I have nothing further  
 (23) THE COURT Mr Stoll?  
 (24) MR STOLL Yes I have some questions  
 (25) MS SMITH Your Honor before - I m sorry I ll do

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- (1) it now because otherwise I ll forget We wanted to move the  
 (2) admission of some of what we just saw here Why don t I do  
 (3) this slowly and we ll see what we have  
 (4) Page 28 of DX3812  
 (5) MR STOLL Could we do this later Your Honor? I  
 (6) think it is -  
 (7) MS SMITH That s fine  
 (8) THE COURT It might take some time counsel I ll do  
 (9) it when we take a break  
 (10) MS SMITH All right thank you  
 (11) REDIRECT EXAMINATION OF KENNETH P PARKER  
 (12) BY MR STOLL  
 (13) Q Mr Parker is it safe to say that the issue of escapement  
 (14) varies from stream to stream?  
 (15) A In terms of the -  
 (16) Q In other words whether there s overescapement you can t  
 (17) just say well we got an overescapement problem for the State  
 (18) of Alaska it varies with each region  
 (19) A Yes And to the degree -  
 (20) Q As to whether there s -  
 (21) A To the degree of the escapement that it exceeds an optimum  
 (22) level established optimum level  
 (23) Q And so it - for each - each area each stream or each  
 (24) stream system you have to study what the - whether there s  
 (25) overescapement or not?

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- (1) A That s correct  
 (2) Q You can t just have one general rule for the whole region  
 (3) or whole state for that matter?  
 (4) A Well obviously different systems have different  
 (5) objectives escapement objectives depending upon the habitat  
 (6) available and the rearing capacity of the lakes that are  
 (7) involved and so on  
 (8) Q By that you mean that some lakes will have a greater  
 (9) capacity to provide food for the fish in that season and in  
 (10) that - excuse me in that lake than another area?  
 (11) A Certainly  
 (12) Q And so the concern of an area manager in Anchorage as to  
 (13) not having an overescapement problem in his area may be  
 (14) completely different from an area manager in Kodiak or Prince  
 (15) William Sound?  
 (16) A That s correct  
 (17) MR STOLL And since counsel brought up Red Lake  
 (18) could we have Exhibit 333 please? Plaintiffs Exhibit 333  
 (19) BY MR STOLL  
 (20) Q Now the Red Lake area in Kodiak is one of the largest  
 (21) spawning areas or - well spawning areas for red salmon in  
 (22) Kodiak isn t that correct?  
 (23) A That s correct  
 (24) Q And it s one of the largest in all of Alaska for that  
 (25) matter isn t that right?

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- (1) A Yes  
 (2) Q Okay Now in 1989 the escapement goal was  
 (3) approximately  
 (4) 250 000 fish for Red Lake Does that sound about right to you?  
 (5) A That s correct yeah  
 (6) Q And in fact because of the closures of the fishing  
 (7) season a lot more fish got into the Red Lake tributaries is  
 (8) that correct?  
 (9) A That s correct  
 (10) Q And would it surprise you if the number was three times the  
 (11) escapement goal?  
 (12) A No it wouldn t  
 (13) Q So you said that it was - and that s depicted on this  
 (14) exhibit 333? Is that depicted on this exhibit?  
 (15) A Yeah that s what s indicated here You can see just by  
 (16) the height of the bars that the actual escapement is about  
 (17) three times the goal  
 (18) Q And so what - what can that - what does that do to the  
 (19) food in Red Lake?  
 (20) A Well I would assume that it would have pretty dramatic  
 (21) impacts on the competition between rearing fry sockeye in that  
 (22) lake as well as other things  
 (23) Q Now you said that it was not an option to ADF&G to close  
 (24) the weir on the tributaries to Red Lake Why is that?  
 (25) A Well that would essentially remove a component of the  
 spawning run from the stock and within a - within a stock of

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- (1) salmon You have early returning fish midtiming returning  
 (2) fish and late returning fish And if you just slam the door  
 (3) you re going to eliminate that last part of the genetic  
 (4) diversity of that stock from participating in spawning so you  
 (5) have a biological concern that by slamming that door shut the  
 (6) weir you re eliminating a valuable component of that genetic  
 (7) stock  
 (8) Q Now counsel mixed up pink salmon and red salmon and  
 then  
 (9) had some charts that showed all all number of fish caught Do  
 (10) you recall those? He just said salmon  
 (11) A Yeah we were talking in terms -  
 (12) Q She didn t specify which were red and which were pink and  
 (13) so on  
 (14) A No we weren t looking at by species we were looking at  
 (15) total fish  
 (16) Q That was the exhibits that she was showing you?  
 (17) A Yes  
 (18) Q And red salmon which are involved in Red Lake isn t -  
 (19) A That s correct sockeye  
 (20) Q Sockeye red salmon are the principal and sockeye salmon  
 (21) are the principal salmon in terms of the most valuable harvest  
 (22) in Kodiak isn t that correct?  
 (23) A That s correct  
 (24) Q And sockeye salmon have a much more complex life cycle  
 than  
 (25) do pink salmon am I correct there?

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- (1) A Yes that s correct  
 (2) Q And can you tell the jury why that is?  
 (3) A Well pink salmon have a two year life cycle As they  
 (4) mature they come into their home streams later deposit their  
 (5) eggs in late summer and those eggs emerge from the gravel  
 (6) during the winter and early spring and then the fry continue  
 (7) on out almost immediately into the - into the marine  
 (8) environment into the saltwater And then they develop as  
 (9) fingerlings and imminently move out into the ocean open  
 ocean  
 (10) for feeding for another winter before they return as adults  
 (11) Sockeye have a much more complex life cycle They can rear  
 (12) in fresh water from one to three years and then the smolt move  
 (13) out of the fresh water environment into the marine environment  
 (14) and they can be in the marine environment from one to four  
 (15) years So you have all kinds of different combinations of  
 (16) their life in fresh water and saltwater And what we term age  
 (17) class at maturity age of maturity so in any one return a  
 (18) year s return of sockeye could be composed of several different  
 (19) age classing from different spawnings Does that answer your  
 (20) question?  
 (21) Q I think so So does this explain some of the reasons why  
 (22) it was not practical to close the weir at Red Lake because you  
 (23) have these different years of fish going through the system at  
 (24) that time?  
 (25) A Yeah that s correct And without - I haven t looked at

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- (1) that data but I would - I would guess that - I don t want to  
 (2) guess but I would say that it s possible that certain age  
 (3) classes would dominate the later part of that run so  
 (4) potentially if you slam that door shut you could eliminate a  
 (5) certain age class from participating in the reproduction of  
 (6) that stock  
 (7) Q You had to leave the weir open at Red Lake?  
 (8) A Yeah  
 (9) Q And you said that the data varied from area to area in  
 (10) other words whether there was a lot of data or not a lot of  
 (11) data  
 (12) A That s correct  
 (13) Q And at the weir - that s where they count the number of  
 (14) fish that are going through and so on?  
 (15) A Yes the weir is used to enumerate the fish that have  
 (16) escaped the fishery that are moving into the stream for  
 (17) spawning  
 (18) Q Now in Red Lake and Kodiak there s a lot of data isn t  
 (19) that correct?  
 (20) A That s correct  
 (21) Q In fact the weir at Red Lake I think was constructed I  
 (22) think in the early 20s 1920s isn t that -  
 (23) A That s my recollection  
 (24) Q So in Kodiak you re able to have a lot of information a  
 (25) lot of knowledge about what - for setting escapement goals is

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- (1) that a fair statement?  
 (2) A Relative to many other systems it was a pretty good  
 (3) situation for determining optimum escapement levels and  
 success  
 (4) of various escapements  
 (5) Q And you ve - and you also have a lot of data and a lot of  
 (6) information for Prince William Sound isn t that correct?  
 (7) A For some of the sockeye systems in Prince Willam Sound  
 we  
 (8) do We have systems that are weired that have been weired for  
 (9) a number of years and it depends on the species and the  
 (10) systems that are involved  
 (11) Q Now counsel talked a lot about subsistence fishing and the  
 (12) catches the number of fish that were caught by subsistence  
 (13) fishermen was up in certain years and I was - I noted that in  
 (14) some of the areas that they talked about On the one hand you  
 (15) had run sizes that were in tens of millions of fish?  
 (16) A Yes  
 (17) Q And then you had subsistence fish and she made a big point  
 (18) of the fact that the count went from 1 000 to - it was 1 000  
 (19) or 1200 or 1400?  
 (20) A Yes  
 (21) Q It s not one million to 40 million or 50 million or 60  
 (22) million is it?  
 (23) A That s right That s why it s very dependent upon the  
 (24) number of people that are participating in those subsistence  
 (25) fisheries their success rate what the actual subsistence

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- (1) catch is going to turn out  
 (2) Q So this sort of mixing apples and oranges between the  
 (3) subsistence catch and the other I mean when you're talking  
 (4) about tens of millions versus hundreds of thousands or  
 (5) millions things like that?  
 (6) A You have a number of controlling factors in the commercial  
 (7) fishery as opposed to the subsistence fishery  
 (8) Q I want to talk to you a little bit ask you some questions  
 (9) about the concern of a lot of people in 1989 for the closing of  
 (10) these seasons and as I understand your testimony there was  
 (11) concern that the - that there would be oil that would actually  
 (12) get on the outside of the fish - one of the concerns was  
 (13) actually getting globules of oil or a sheen or whatever on the  
 (14) outside of fish because nets would be fouled and they would  
 (15) touch the fish was that a -  
 (16) THE COURT Don't answer  
 (17) MS SMITH I just object no foundation I think his  
 (18) testimony is what it is but I didn't hear that  
 (19) Also I worry about this concern on the part of the  
 (20) people That's hearsay I don't know what people we're  
 (21) talking about  
 (22) MR STOLL I'll rephrase the question  
 (23) THE COURT All right  
 (24) BY MR STOLL  
 (25) Q What was the concern with respect to oiled gear as it

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- (1) related to salmon or herring in Prince William Sound or Kodiak  
 (2) for that matter?  
 (3) A Well the concern is once a gillnet or purse seine web is  
 (4) fouled that if you continue fishing you can contaminate other  
 (5) catch that perhaps was taken in a totally clean area so you  
 (6) would kind of compound the problem by allowing gear that was  
 (7) fouled into other fishing areas to continue harvesting salmon  
 (8) because you could have a transmission of oil from the gear to  
 (9) the surface of the fish  
 (10) Q Now maybe the jury knows this but I'm just doing this for  
 (11) the record and that is that when they put out - commercial  
 (12) fishermen put out nets and they bring in the nets they bring  
 (13) in thousands of fish at a time don't they?  
 (14) A The very good fishermen bring in thousands When I did it  
 (15) I didn't catch that many  
 (16) Q The subsistence do the subsistence - are the subsistence  
 (17) fishermen - let me back up for a second Let's go back to  
 (18) bringing in thousands or hundreds of fish at a time When that  
 (19) happens and the commercial fisherman brings them in does  
 (20) he - does he have an opportunity to inspect each fish  
 (21) individually to see if it's oiled or if there's - if it's  
 (22) ingested oil?  
 (23) A No No The catches are - have to be dealt with very  
 (24) rapidly transported from say purse seine into the holds  
 (25) either the seine is just lifted up and the bag of salmon is

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- (1) dumped into the cargo hold or they have big bralers that they  
 (2) dip down into the purse to bring up loads of fish  
 (3) In a gillnet fishery the fish is coming through and you  
 (4) have a couple of people on the back picking the fish out of  
 (5) gill nets and usually they have to do that very rapidly to get  
 (6) the net clear so they can reset it so there's no individual  
 (7) inspection  
 (8) Q And secondly with the processing once the fish gets to  
 (9) the fish processor does the fish processor does it have an  
 (10) opportunities - fish processing plants have an opportunity to  
 (11) go through each fish and look inside each fish and see if there  
 (12) happens to be a globule of oil on that fish or not does it  
 (13) - is it too many fish going through to do that?  
 (14) A No They - in some situations they probably could inspect  
 (15) every fish but not to the extent of dissecting the fish That  
 (16) just isn't practical But for the most part in the operations  
 (17) during the oil impacted years the processors in the Alaska  
 (18) Department of Environmental Conservation subsampled the  
 (19) catch  
 (20) as it was brought into the canneries  
 (21) Q They can't check each fish?  
 (22) A Can't check each one was not feasible  
 (23) Q Let's compare that to the subsistence fisherman With the  
 (24) subsistence fisherman is he out there catching hundreds of  
 (25) fish at a time or thousands of fish at a time?  
 (26) A It would be very unusual for a subsistence fisherman to

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- (1) catch more than a few hundred at a time It's more in the  
 (2) fifties or tens  
 (3) Q An individual fish?  
 (4) A Yes  
 (5) Q Rod and a hook?  
 (6) A Well subsistence fishermen can use different types of  
 (7) gear fishing gear and some of them do use more efficient  
 (8) commercial fishing gear but they're not allowed to use very  
 (9) much of it so they'll have a gillnet that they can fish in the  
 (10) river but it will be a short gillnet so they are looking at  
 (11) each fish if that's what you're getting at  
 (12) Q That's what I'm getting at In other words they have the  
 (13) opportunity the subsistence fisherman has the opportunity to  
 (14) inspect each fish individually?  
 (15) A Yes and that's essentially what our direction was in many  
 (16) of the subsistence fisheries was that the fisherman has the  
 (17) ultimate responsibility to inspect his fish and make sure that  
 (18) it's - it's not contaminated  
 (19) Q And the fisherman can clean - he cleans each fish  
 (20) individually?  
 (21) A Yes  
 (22) Q So he can see inside each fish whether - the subsistence  
 (23) user can see whether there happens to be oil ingested in that  
 (24) particular fish?  
 (25) A That's correct

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- (1) Q So this because the individual subsistence fisherman had  
 (2) control overseeing whether or not his fish was oiled or whether  
 (3) it was ingested oil did that play any part in your  
 (4) determination to permit a subsistence fishing in 1989 even  
 (5) though you closed commercial fishing in 1989?  
 (6) A Yes that's correct  
 (7) Q Why was that?  
 (8) A Well they had the ability to individually inspect fish and  
 (9) make their own determination on what they would want to retain  
 (10) and what they wouldn't and it was - we wanted to allow the  
 (11) maximum opportunity for the subsistence fishermen to find the  
 (12) fish that they need for their families So rather than just  
 (13) have broad sweeping closures like we did in many of the  
 (14) commercial fisheries we left it up - we left the subsistence  
 (15) fisheries open so people could go out and sort out their own  
 (16) areas where they felt the fish would not be contaminated plus  
 (17) they were - many of our area biologists would assist  
 (18) subsistence users by describing areas that they felt were clean  
 (19) and they could obtain fish they needed  
 (20) Q In 1989 and later there was concerns though in all  
 (21) these areas for the safety in eating any of these fish those  
 (22) were expressed to you weren't they?  
 (23) A Yes they certainly were  
 (24) Q In the Copper - there was some reference to the Copper  
 (25) River area That's not really in the Prince William Sound

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- (1) management area is it?  
 (2) A It's in the Prince William Sound management area but it's  
 (3) outside Prince William Sound proper  
 (4) Q And for most of Prince William Sound most of the fishery  
 (5) all the herring fishery was closed isn't that correct?  
 (6) A Yes that's correct  
 (7) Q In 1989 - and most of the pink salmon fishery was closed  
 (8) in 1989 isn't that right?  
 (9) A The management program in Prince William Sound was  
 (10) dramatically altered as a result of the spill in 1989  
 (11) Q And the fact that there were open fisheries commercial  
 (12) fisheries in 1990 or 1991 or any subsequent year that was  
 (13) no - there was no determination made by the Department of  
 (14) Fish and Game that there wasn't genetic damage to any fish was  
 (15) there?  
 (16) MS SMITH Objection this exceeds the scope of his  
 (17) direct and has no foundation whatsoever Genetic damage?  
 (18) MR STOLL Well she's -  
 (19) MS SMITH There's been no testimony of that  
 (20) THE COURT I want to hear the question Give me the  
 (21) question again  
 (22) MR STOLL I'll rephrase it again Your Honor Well  
 (23) I'll just try to say it the same way I did  
 (24) BY MR STOLL  
 (25) Q The fact that they didn't close fisheries in 1990 or

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- (1) subsequent years was not a determination by the Department of  
 (2) Fish and Game that there was not genetic damage to the fish?  
 (3) THE COURT Well don't answer The objection's  
 (4) sustained You don't - don't answer the question and you're  
 (5) to disregard the question  
 (6) BY MR STOLL  
 (7) Q Was there a change in the regulations in 1988 - 1988 about  
 (8) whether fishermen could harvest subsistence or not?  
 (9) A In 1989?  
 (10) Q 1988  
 (11) A 88?  
 (12) Q Yes  
 (13) A No  
 (14) Q Does the - whether there's subsistence fishing or not  
 (15) when you have these types of numbers like we have in this  
 (16) board  
 (17) on Exhibit 333 is that a way of controlling escapement?  
 (18) A I'm sorry I don't think I understand your question  
 (19) Q Well with the numbers that we're talking about in the  
 (20) subsistence fishing is that a means of controlling  
 (21) escapement?  
 (22) A Generally  
 (23) Q You know for an area?  
 (24) A No there might be some small systems like in Southeast  
 (25) Alaska you have a small stream that is an important subsistence  
 stream and that subsistence harvest can be significant

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- (1) relative to the total production but usually it's not  
 (2) MR STOLL Could I just have a moment?  
 (3) MR STOLL That's all  
 (4) MS SMITH I just have a couple  
 (5) RE-CROSS EXAMINATION OF KENNETH P. PARKER  
 (6) BY MS SMITH  
 (7) Q We talked previously about one of the reasons for the zero  
 (8) tolerance policy in 1989 was concerns about food safety safety  
 (9) of the fish?  
 (10) A Yes  
 (11) Q And that the zero tolerance policy continued in 1990 but  
 (12) there were only minor closures?  
 (13) A That's correct  
 (14) Q And there weren't any any closures or any zero tolerance  
 (15) policy after that in any region?  
 (16) A That's correct  
 (17) Q I just have a couple more questions and they're on Red  
 (18) Lake Do you recall that at your deposition you couldn't  
 (19) remember the magnitude of the sockeye overescapement of  
 (20) Red  
 (21) Lake in 1989 or if there was any concern about it?  
 (22) A I'm not sure that - that I didn't have concern I don't  
 (23) recall what I said but I - I would imagine that I probably  
 (24) didn't recall the escapement particulars for Red Lake off the  
 (25) top of my head without seeing a document  
 Q Take a look in your depo it's Volume 3 Page 472 and

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- (1) it s -  
 (2) A What volume?  
 (3) Q Volume 3 page -  
 (4) MR STOLL Volume 3 or Volume 2?  
 (5) MS SMITH Well it says Volume 3 on the top Page  
 (6) 472 - 473 - 472 Okay and it s line 18 Question Do you  
 (7) recall the magnitude of the sockeye escapement on the Red  
 River  
 (8) in 1989?  
 (9) Answer No can t say that I do  
 (10) Question Do you recall that there was concern about the  
 (11) escapement in 1989 in the Red River system?  
 (12) I can t say that I specifically recall the concern directed  
 (13) at the Red River as opposed to some of the other systems  
 (14) Since that time have you refreshed your recollection about  
 (15) the Red Lake overescapement?  
 (16) A Well when I had this deposition I was - I couldn t  
 (17) recall whether it was specifically Red Lake that - that was  
 (18) what I was envisioning what I recalled but yeah since that  
 (19) deposition I recall that Red Lake in fact is the - a main  
 (20) issue here  
 (21) Q Now there was an escapement at Red Lake in 1980 that was  
 (22) higher than the 1989 escapement Is that right?  
 (23) A I don t know without looking at data  
 (24) Q Okay Let me show you DX4653 I got it Okay and this is  
 (25) the Ayakulik River sockeye escapement and as you can see in

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- (1) 1980 there was an escapement that looks like it s just under  
 (2) 800 000 fish do you see that?  
 (3) A Yes I see that  
 (4) Q And in 1989 there was an escapement that s pretty darn  
 (5) close but it looks like the 1980 is slightly above  
 (6) A Right  
 (7) Q Okay And the 1980 escapement was because of a  
 fisherman  
 (8) strike do you recall that?  
 (9) A No not specifically  
 (10) Q And the 1980 escapement the sockeye that go in five  
 (11) years - do you agree with that?  
 (12) A I don t know what the - the age class composition is of  
 (13) the Red Lake stock That could be four year old fish or  
 (14) five year old fish  
 (15) Q Okay Do you know whether that 1980 overescapement  
 (16) produced a crash at Red Lake?  
 (17) A Not specifically You d have to - that chart that we had  
 (18) showed what the escapement was but you d have to look at  
 total  
 (19) return  
 (20) Q Okay Let me show you DX4652 and if it s helpful to you  
 (21) I can put them - I can hand you one This is the Ayakulik  
 (22) River run size and this is the return from the high 1980  
 (23) escapement and as you ll see it s about - I would say around  
 (24) 9 000 Pretty healthy return would you say?  
 (25) MR STOLL Excuse me Your Honor I m going to

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- (1) object to this exhibit I don t know where - what the  
 (2) document is unless this witness knows the facts of this - of  
 (3) the document himself counsel s making some representations  
 -  
 (4) THE COURT Ask him if he recognizes it counsel  
 (5) MS SMITH I know he doesn t recognize the document  
 (6) but the source of the document is the 1992 Kodiak Annual Fin  
 (7) Fish Management Report for Salmon  
 (8) BY MS SMITH  
 (9) Q And you were the director during the time period - I guess  
 (10) you weren t you were the director during the time period  
 (11) through 1990 is that correct?  
 (12) A That s correct Ms Smith  
 (13) Q All right And as the director of the Division of  
 (14) Commercial Fisheries would you have had knowledge of the  
 run  
 (15) size for the Ayakulik River in 1985?  
 (16) A I would have been present yes  
 (17) MR STOLL Excuse me Your Honor the problem I m  
 (18) having is not the raw statistics that counsel has put on the  
 (19) graph It s the editorial about return from high 1980  
 (20) escapement There was a high escapement into the Frazer  
 Lake  
 (21) area in 1980 which was not Red Lake and the Aya - this is -  
 (22) this refers to the Ayakulik River run size  
 (23) THE COURT You can explore that with the witness  
 (24) I m assuming he has the knowledge to testify about all this  
 (25) But counsel we re not going to explore it much further

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- (1) either We ve been doing this for some time going back and  
 (2) forth so be judicious about the way you use your time because  
 (3) I m going to cut you off in a little while  
 (4) BY MS SMITH  
 (5) Q All right I guess the only question I have based on this  
 (6) exhibit is when the 1984 and the 1985 run sizes in the Ayakulik  
 (7) River would you say those were a crash?  
 (8) A Just looking at this illustration I would say no  
 (9) Q They look pretty healthy?  
 (10) A It looks like - looks like an average long term recent  
 (11) year average  
 (12) Q Okay Mr Parker you talked about slamming the door on  
 (13) the weir Is there any reason why ADF&G can t regulate the  
 (14) weir so that they could open it let in 250 000 300 000 fish  
 (15) and close it or open it let in 100 000 fish and then as you  
 (16) said if you re concerned that certain years don t come in  
 (17) toward the end of the run close it for a while then when you  
 (18) see those guys coming back reopen it again? Is there any  
 (19) reason why a weir can t be regulated?  
 (20) A Yeah because it wasn t adopted policy by the Department of  
 (21) Fish and Game  
 (22) Q But that - you re saying ADF&G did not choose to chose the  
 (23) weir?  
 (24) A That s correct  
 (25) MS SMITH Okay thank you

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- (1) THE COURT Counsel you can follow up on that one  
 (2) point  
 (3) MR STOLL I will  
 (4) FURTHER REDIRECT EXAMINATION OF KENNETH P  
 PARKER  
 (5) BY MR STOLL  
 (6) Q Is that because when you close the weir - I m going to do  
 (7) it with this first Your Honor - you ve got different ages of  
 (8) fish in the stream so you ve not necessarily closing it to the  
 (9) spawning fish as opposed to fry that are going into the lake to  
 (10) grow?  
 (11) A No fry would pass through the weir material usually  
 (12) They re small enough to do that  
 (13) Q Okay Now with respect to counsel s questions about these  
 (14) graphs that she prepared or had prepared by some artist these  
 (15) are not - these are not ADF&G graphs are they?  
 (16) A That s correct  
 (17) Q And could we have - first of all could we have Exhibit  
 (18) 20 - excuse me 4653 DX4653 up on the screen?  
 (19) MS SMITH Here s a copy  
 (20) MR STOLL No I ve got a copy counsel thank you  
 (21) BY MR STOLL  
 (22) Q Okay And with respect to this - first of all could I  
 (23) get this - so I can - this green line here is the - that s  
 (24) the escapement goal?  
 (25) A That s correct

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- (1) Q So this shows that in 1989 the escapement goal was  
 (2) exceeded by three fold?  
 (3) A That s correct  
 (4) Q And the Ayakulik River is a system that provides fish to  
 (5) Red Lake and other areas isn t that correct?  
 (6) A Yes that s correct  
 (7) Q And one of the lakes that it provides is Frazer Lake and  
 (8) this same area of Kodiak?  
 (9) A Same general area  
 (10) Q And so the figures for Ayakulik River you don t know  
 (11) what - whether this graph refers to Red Lake or some other  
 (12) area am I correct?  
 (13) A That s correct  
 (14) MR STOLL That s all I have That s all I have  
 (15) THE COURT All right you can step down sir Thank  
 (16) you  
 (17) I ll let you go for a ten minute break all right?  
 (18) (Jury out at 12 30 p m )  
 (19) THE COURT Counsel who s your next witness? Hang on  
 (20) just a minute The jury is not present now Who is your next  
 (21) witness?  
 (22) MR STOLL Phil Mundy  
 (23) THE COURT How long will he take?  
 (24) MR STOLL Take the rest of the day and go into  
 (25) tomorrow

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- (1) THE COURT For direct?  
 (2) MR STOLL He ll take - direct we may be able to  
 (3) finish today I don t know  
 (4) THE COURT Okay that s all I wanted to know  
 (5) THE CLERK Please rise this court stands in recess  
 (6) (Recess from 12 31 p m to 12 45 p m )  
 (7) (Jury in at 12 45 p m )  
 (8) THE CLERK This court now resumes its session  
 (9) Please be seated  
 (10) MR DIAMOND May we approach just on one ministerial  
 (11) matter?  
 (12) THE COURT Sure  
 (13) (Sidebar held out of the hearing of the jury )  
 (14) MR DIAMOND It s a pattern of precedent With  
 (15) respect to graphics derived from ADF&G reports obviously  
 these  
 (16) graphs don t appear as they re shown here in the ADF&G  
 reports  
 (17) these are based on numbers we pulled out of the tables  
 (18) THE COURT I see the source data there  
 (19) MR DIAMOND We don t want to have to go through the  
 (20) laborious process of getting a witness on the stand in front of  
 (21) the jury column by column number by number and  
 authenticating  
 (22) each bar and I don t know that the plaintiffs are -  
 (23) THE COURT I don t want to go through it  
 (24) MR STOLL What s that?  
 (25) THE COURT I don t want to go through it

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- (1) MR PETUMENOS That wasn t the point The point was  
 (2) if the witness says I made these graphs derived from ADF&G  
 but  
 (3) based on the testimony today with this witness I do  
 (4) THE COURT It maybe a legitimate objection and I  
 (5) know you have to live with a whole bunch of exhibits so  
 (6) sometimes they get confused but the fact is that the only  
 (7) issue would be somehow is this misleading because it s a  
 (8) translation of what s in the reports right?  
 (9) MR STOLL Right  
 (10) THE COURT To the extent - I mean I m going to  
 (11) assume good faith here and I m beginning to assume that that  
 (12) source data can be interpreted in this way If somehow you  
 (13) know that there s some doubtful proposition from the face of  
 (14) the document or from something you know you got to let me  
 (15) know because I m certainly not going to go through an  
 (16) individual deportation of -  
 (17) MR STOLL We re not asking for that  
 (18) THE COURT Yes I know You were asking for was  
 (19) somehow - some form of information that would have cast  
 doubt  
 (20) on counsel s examination and I didn t think that was  
 (21) appropriate  
 (22) MR STOLL Oh no I wasn t doing that either  
 (23) THE COURT Okay fine Good then I misunderstood  
 (24) MR PETUMENOS My objection is this that as the  
 (25) record stands now the exhibits are not admissible when their

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- (1) expert – could I finish – when their expert testifies and  
 (2) says that I derived these graphs and this is how I derived them  
 (3) from the ADF&G reports no problem That s where I m at  
 (4) THE COURT There s no problem with me right now If  
 (5) it s a problem for you you have to bring that problem to my  
 (6) attention Otherwise I m going to assume they re admissible  
 (7) MR PETUMENOS My view is the burden is on them to  
 (8) establish admissibility  
 (9) THE COURT It is counsel but I give you the same  
 (10) kind of leeway I give them  
 (11) MR PETUMENOS The connecting up is exactly what my  
 (12) position was I don t think we re in disagreement  
 (13) THE COURT We were but we re not now So could –  
 (14) MR STOLL I don t think we ever –  
 (15) THE COURT Let s continue the case  
 (16) MR STOLL We never disagreed  
 (17) THE COURT Let s continue with the case This is a  
 (18) nonproductive conference Let s start going  
 (19) MR PETUMENOS We didn t call –  
 (20) (Sidebar concluded )  
 (21) MR DIAMOND Would you prefer we handled these  
 (22) exhibits when we conclude with the jury?  
 (23) THE COURT I certainly would counsel I don t want  
 (24) to take the time  
 (25) MR STOLL Our next witness is Dr Phillip Mundy

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- (1) THE CLERK Sir would you please step up into the  
 (2) witness box? Would you clip the microphone onto your tie and  
 (3) remain standing for the oath  
 (4) Would you raise your right hand?  
 (5) (The Witness Is Sworn)  
 (6) THE CLERK Thank you you may be seated  
 (7) Sir for the record would you please state your full  
 (8) name?  
 (9) THE WITNESS My name is Phillip with two L s R  
 (10) Mundy M u n d y  
 (11) THE CLERK And what is your occupation?  
 (12) A I m a fisheries biologist  
 (13) THE CLERK Thank you  
 (14) DIRECT EXAMINATION OF PHILLIP R MUNDY  
 (15) BY MR STOLL  
 (16) Q Dr Mundy where do you reside?  
 (17) A I reside in Lake Oswego Oregon  
 (18) Q And would you tell the jury please a little bit about  
 (19) your academic background Where did you obtain a – you have  
 (20) a  
 (21) Bachelor of Science degree?  
 (22) A Yes I have a Bachelor of Science degree in zoology from  
 (23) the University of Maryland  
 (24) Q When did you obtain that?  
 (25) A I got that in 1970  
 Q Then do you have Master s degree also?

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- (1) A I have a Master s degree in biology from the University of  
 (2) Alabama I got that in 1973  
 (3) Q And then do you also have a Ph D or Doctorate degree?  
 (4) A Yes I have a Ph D in fisheries biology which I got from  
 (5) the University of Washington in 1979  
 (6) Q All right And when you were getting your doctorate  
 (7) degree what is that in?  
 (8) A That s in fisheries  
 (9) Q And what was the area that you studied in particular in  
 (10) doing your thesis or in your studies?  
 (11) A For doing my doctoral dissertation I worked on Alaskan  
 (12) salmon I worked on sockeye salmon in Bristol Bay and timing  
 (13) of sockeye salmon in Bristol Bay and also in designing fishing  
 (14) regulations for sockeye salmon in Bristol Bay  
 (15) Q And since that time have you served as a professor at  
 (16) various institutions?  
 (17) A Yes  
 (18) Q And where was the first place you were – served as a  
 (19) professor?  
 (20) A From 1979 to 1984 I was professor of biological  
 (21) oceanography at the Old Dominion University in Norfolk  
 (22) Virginia but even being in Virginia my research program was  
 (23) just in Alaska That s just the way the academic world works  
 (24) sometimes and I – while I was there I worked on a variety of  
 (25) marine ecology programs

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- (1) Q I m sorry marine what?  
 (2) A Marine ecology programs  
 (3) Q And what is marine ecology?  
 (4) A It s basically looking at the – from my perspective  
 (5) looking at the production of economically important species  
 (6) such as salmon in relation to other animals and plants in the  
 (7) environment  
 (8) Q And after you were at Old Dominion University in Virginia  
 (9) did you continue your teaching elsewhere?  
 (10) A Yes I – 1985 I was given the opportunity to work for the  
 (11) University of Alaska and I was a professor – associate  
 (12) professor at the University of Alaska in Juneau working on  
 (13) salmon problems  
 (14) Q And did you teach both graduate and undergraduate  
 (15) students  
 (16) there?  
 (17) A Yes  
 (18) Q And in what areas did you teach?  
 (19) A I – I taught fisheries mathematics fisheries regulation  
 (20) and generally fisheries management type courses  
 (21) Q And since 1988 to 1990 were you the chairman of the  
 (22) research work group for the Fish Passage Advisory Committee  
 (23) of  
 (24) the Columbia based Department of Fish and Wildlife in  
 (25) Portland?  
 (26) A Yes I left Alaska in 1987 and went to work for the  
 (27) Columbia River Intertribal Fish Commission and I ve been  
 (28) involved with a number of different salmon problems on the

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- (1) Columbia River in Idaho Oregon and Washington  
 (2) Q And were you during that same period of time in the late  
 (3) 1980s a member and later chairman of the scientific and  
 (4) statistical committee of the North Pacific Fisheries Management  
 (5) Council in Anchorage?  
 (6) A Yes During the time I was – part of the time I was  
 (7) actually in Alaska and living in Alaska I worked in Alaska  
 (8) every year since 1976 I still keep my research program up  
 (9) here I've lived in a lot of different places but I always  
 (10) spend part of the year in Alaska When I was here with the  
 (11) University of Alaska and with the Alaska Department of Fish and  
 (12) Game I was on the Scientific and Statistical Committee for the  
 (13) North Pacific Fisheries Management Council which manages  
 (14) fisheries of the North Pacific  
 (15) Q And speaking of your position with the Alaska Department of  
 (16) Fish and Game what was your position?  
 (17) A I was chief fisheries scientist for the Alaska Department  
 (18) of Fish and Game  
 (19) Q And during what period of time was that?  
 (20) A That was 1985 86 and 87  
 (21) Q And as chief fisheries scientist for the Alaska Department  
 (22) of Fish and Game what did you do?  
 (23) A Well chief fisheries scientist is the head research  
 (24) scientist for the State of Alaska in advising commercial  
 (25) fishing regulations and study of salmon populations For

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- (1) example estimating escapements counting catches and trying  
 to  
 (2) determine the – the appropriate number of salmon that should  
 (3) be permitted to spawn in each system and how to regulate the  
 (4) fisheries to reach those escapement goals for salmon  
 (5) Q Now the last witness Mr Parker testified as being the  
 (6) former director of fisheries for the state on escapement and  
 (7) overescapement You know those concepts a little bit and  
 (8) we'll get into that but those were some of the issues that you  
 (9) were working with as the chief fisheries scientist for the  
 (10) ADF&G?  
 (11) A Yes among others We also worked with all the different  
 (12) marine resources in the state with the crabs and the herring  
 (13) and the other resources but part of that time was spent  
 (14) working with salmon  
 (15) Q And going back to your research on Alaska fisheries going  
 (16) back to 1978 nearly 20 years now did you study escapement  
 (17) issues during that entire period of time?  
 (18) A Yes I – I had occasion to visit escapement issues for  
 (19) salmon on a number of occasions  
 (20) Q And since – when did you first become involved in the  
 (21) research or studying involving the effects of the Exxon Valdez  
 (22) oil spill?  
 (23) A I was retained to work on the Exxon Valdez oil spill  
 (24) investigations by the Department of Justice in September of  
 (25) 1989

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- (1) Q Then how long did you work for the Department of Justice  
 (2) with respect to the oil spill?  
 (3) A I worked for the Department of Justice until 1992 They  
 (4) didn't formally release me from the service until early in  
 (5) February of this year but I basically – most of what I did  
 (6) for them was 1989 through 1992  
 (7) Q All right And did there come a time when you became a  
 (8) scientist for the Trustee s Council?  
 (9) A Yes The experts who came to help with the research on the  
 (10) oil spill initially came to work for the – either the federal  
 (11) government or the state government I happened to be picked  
 up  
 (12) by the Justice Department to work in this area And so the  
 (13) Trustee Council reached out and asked the scientists who were  
 (14) working for both the state government and the federal  
 (15) government to advise it on how to design the research  
 programs  
 (16) and how to evaluate the research programs for salmon  
 (17) Q And so what has been your responsibility as far as the  
 (18) Trustee Council is concerned?  
 (19) A As a with the Trustee Council I'm a peer reviewer for what  
 (20) they call their fish studies their fish and shellfish studies  
 (21) and it's been my job to initially look over the design of a  
 (22) number of the different studies to measure impacts and give  
 (23) them comments to both Trustee Council and to the scientists  
 (24) involved on how they could improve the studies or strengthen  
 (25) the studies And then while the studies were in progress my

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- (1) job was to consult with the scientists and to review their work  
 (2) and to basically ask questions that could improve their work  
 (3) Q And then do you review – so you're involved in designing  
 (4) the actual type of study that is going to occur with respect  
 (5) to for instance the effects of the spill on salmon?  
 (6) A Well some of the studies not – not all of them And  
 (7) plus some of the studies were designed on the spot at the time  
 (8) of the spill We – Alaska Department of Fish and Game had  
 (9) biologists in the field in Prince William Sound among other  
 (10) places who were out there doing other things and when the oil  
 (11) spill happened and so some of the studies were designed right  
 (12) on the spot to answer questions and take advantage of the fact  
 (13) that we did have scientists in the field when the oil was  
 (14) spilled  
 (15) Later on in the fall of 1989 and after that we had a  
 (16) chance to take a breather and sort of figure out how to design  
 (17) other studies and how to improve the ones that we had  
 (18) Q So you were involved in the designing some of these other  
 (19) studies?  
 (20) A Yes  
 (21) Q And did you review the work that was done the work in 89  
 (22) and subsequent years that was done by the ADF&G and others  
 (23) that were then reported to the Trustee Council?  
 (24) A Yes At one time or another I reviewed all of the work  
 (25) that was done on fish and shellfish

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- (1) Q And incidentally have you also authored or coauthored a  
 (2) number of publications?  
 (3) A Yes I have  
 (4) Q And have a number of these been juried publications in  
 (5) other words reviewed by other people before they were  
 (6) published?  
 (7) A Yes In the scientific literature publications that are  
 (8) in national journals and international journals have to go  
 (9) through a jury process They have to be judged by other  
 (10) scientists before they get published and I have published some  
 (11) peer reviewed journals  
 (12) Q And what areas have you published in?  
 (13) A I have published on a lot of different kinds of fish and  
 (14) I've published on shrimp but most of my work since about  
 (15) 1979  
 (16) the publications have been concerned with salmon and salmon  
 (17) management  
 (18) Q And since 1979 at least have you - by salmon management  
 (19) what do you mean by salmon management?  
 (20) A Well how you - first of all how you design fishing  
 (21) regulations to get - to get the proper level of catch Once  
 (22) we know how many fish we want to put into an escapement  
 (23) how  
 (24) many fish we want to allow to go into a river that's just the  
 (25) beginning of the problem because then you have to figure out  
 (26) how to apply the fleet and you don't get to choose the gear  
 (27) because it's already there It's purse seine gear it's

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- (1) gillnet gear to figure out how to use that fishing gear to  
 (2) split the salmon run into two pieces the escapement that goes  
 (3) up the river to spawn and the catch and that's not usually a  
 (4) simple problem and I've devised methods for helping scientists  
 (5) decide how to do that  
 (6) Q And have you - you've written on this - these issues  
 (7) also?  
 (8) A On -  
 (9) Q On those issues that you were just describing?  
 (10) A Yes  
 (11) Q And have you - is some of this called harvest and  
 (12) management strategies in terms of this escapement and so on?  
 (13) A Yes  
 (14) Q And have you also written in the area of stock restoration  
 (15) in other words how to restore stock in certain areas?  
 (16) A Yes In the Columbia River Basin we have salmon  
 (17) populations that are not anywhere near as healthy as they are  
 (18) in Alaska A lot of these salmon populations are just barely  
 (19) hanging on and some of them are on the endangered and  
 (20) threatened species list and so the problems that I face in  
 (21) Columbia Basin are kind of the opposite of the problems that I  
 (22) dealt with for so many years in Alaska Salmon population  
 (23) restoration and salmon recovery are two of the areas that I've  
 (24) started doing a lot of research in the last five years  
 (25) Q And does this - the publications that you've written does

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- (1) this involve issues of spawning and the life cycles of the  
 (2) various species of salmon as well?  
 (3) A Oh yes All aspects of the biology of the salmon and also  
 (4) the habitat and the ecosystem within which the salmon live  
 (5) Q And I believe you've actually published over three dozen  
 (6) articles is that - is that correct?  
 (7) A I don't know exactly how many That sounds about right  
 (8) Q And are you a member of the graduate faculties of Montana  
 (9) State University University of Washington and Oregon State  
 (10) University?  
 (11) A Yes I am  
 (12) Q And since 1982 have you been a member of the American  
 (13) Institute of Fisheries Research Biologists?  
 (14) A Yes  
 (15) Q And since 1982 have you also been certified as a fisheries  
 (16) scientist with the American Fisheries Society?  
 (17) A Yes  
 (18) MR STOLL Your Honor we would offer Dr Mundy as an  
 (19) expert in fisheries fish population biology and fish  
 (20) population dynamics  
 (21) MR COOPER Your Honor I don't believe we have any  
 (22) objection to those particular categories I anticipate there  
 (23) may be some testimony that goes beyond those areas but as to  
 (24) those particular areas no  
 (25) THE COURT He's qualified to give opinion in those

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- (1) areas  
 (2) MR STOLL Thank you Your Honor  
 (3) BY MR STOLL  
 (4) Q Now first of all I'd like to talk about pink salmon  
 (5) That's a dominant species of salmon found in Prince William  
 (6) Sound Is that one of the major species in Prince William Sound  
 (7) and elsewhere?  
 (8) A Yes  
 (9) Q And would you tell the jury please what the life cycle of  
 (10) a pink salmon is?  
 (11) A Okay Pink salmon like all salmon start out their life  
 (12) in fresh water streams and rivers In Prince William Sound  
 (13) the pink salmon are different from the pink salmon you find  
 (14) anywhere else in the world because they spawn very close to  
 (15) the saltwater They spawn in what's called the intertidal zone  
 (16) for the most part Some of them a few of them do go upstream  
 (17) to spawn but generally the streams in Prince William Sound  
 (18) are kind of short They come right out of the mountains and go  
 (19) right into the sea and so the amount of habitat that's  
 (20) available upriver is usually very limited so the pink salmon  
 (21) in Prince William Sound have learned how to take advantage of  
 (22) what they've got and they spawn in the intertidal zone and  
 (23) take advantage of the fresh water as far down as it goes  
 (24) They're always pushing the envelope trying to - trying to  
 (25) get as much spawning habitat as they can The - after they

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- (1) deposit eggs in the fall of each year usually in the
- (2) intertidal zone the eggs will incubate during the fall and
- (3) winter and hatch out in the - usually in the winter whenever
- (4) they have accumulated enough temperature units to be able to
- (5) hatch out Then they stay in the gravel for a while because
- (6) when they hatch out they ve got a great big yolk sac hanging
- (7) off of their stomach that s almost as big as they are And
- (8) they live on that until they - they button up and that s
- (9) button up in the sense of belly button - until the yolk is
- (10) gone yolk sac is gone and they will drop usually without
- (11) feeding right out into the marine environment once that yolk
- (12) sac is gone
- (13) They swim up and they leave the stream drop right into the
- (14) marine environment feed in the nearshore marine environment
- (15) until they ve got enough energy stored up to - to make a move
- (16) and then they start - they start moving throughout Prince
- (17) William Sound and then offshore and into the Gulf of Alaska
- (18) when they ve grown sufficiently to do so
- (19) They would normally be heading out into the Gulf of Alaska
- (20) either in the fall of the year - of the year following when
- (21) they were deposited in the gravel So if they were deposited
- (22) in the gravel in 1989 they d be heading out into the Gulf of
- (23) Alaska in the fall of 1990
- (24) Then they spend one winter in the sea and come back to run
- (25) in the fall two years from the time they were deposited in the

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- (1) gravel so they d be running - the 1989 fish would be running
- (2) in the fall of 1991 deposit their eggs to continue the - the
- (3) life cycle It s called a two year life cycle which is - and
- (4) it s quite unusual in salmon The fish from the 1989 brood
- (5) line all come back as adults in 1991 and unlike the sockeye or
- (6) other species of salmon don t overlap So the fish from that
- (7) brood line never spawn or interbreed with the fish from the
- (8) even year brood lines so the 1990 fish They would never have
- (9) the chance So the pink salmon life cycle is very unusual and
- (10) very short They spawn as two year old adults and then they
- (11) all die and we ve only rarely ever seen any three year old
- (12) pink salmon and those are usually very special situations
- (13) Q All right Now first of all let s talk about - I want
- (14) to just mention last Friday Dr Charles Peterson testified
- (15) who I believe you know from the Trustee Council maybe
- (16) otherwise?
- (17) A Right
- (18) Q And Dr Peterson explained that intertidal zone that s the
- (19) area between the high tide and the low tide essentially in -
- (20) well that s where it is?
- (21) A Right
- (22) Q Okay
- (23) A Correct
- (24) Q And in Prince William Sound and the other areas of Alaska
- (25) are there - is there anything unusual about the size of the

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- (1) intertidal zone?
- (2) A Yes The intertidal zone in Prince William Sound is
- (3) relatively large I mean relative to other areas Other
- (4) areas of the world like south Florida they have tides of one
- (5) or two feet so if you told a biologist in South Florida that
- (6) the salmon were spawning in the intertidal zone they would
- (7) think that was a very small area but up here in Alaska we
- (8) have 20 foot tides so that intertidal zone can be very very
- (9) large So the intertidal zone is - in Alaska is pretty
- (10) extensive
- (11) Q By 20 foot tides you don t mean 20 feet horizontal you
- (12) mean 20 feet vertical?
- (13) A Right exactly
- (14) Q So that could go on for hundreds or maybe thousands of
- (15) feet?
- (16) A Generally several -
- (17) Q Or is that -
- (18) A Generally the stream involved would be several hundred
- (19) yards or more of spawning habitat
- (20) Q And could you - I d like to have you draw a picture if
- (21) you don t mind
- (22) A I have to ask what I do with the microphone
- (23) THE COURT Take it with you
- (24) THE WITNESS Keep waiting for something to crash
- (25) here

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- (1) THE COURT Lots of room
- (2) MR STOLL There you go I ll give you that
- (3) BY MR STOLL
- (4) Q Now I d like you to sort of draw a picture if you would
- (5) as to how this cycle works for the pink salmon?
- (6) A Well if we start out with the - with the adult so this
- (7) is - this is kind of the stage take the year for example
- (8) 19 - 1989 and then we look at how we got to this 1989 adult
- (9) here this life history stage and this would be where - this
- (10) 1989 adult was a 1987 egg and that was also in the stream
- (11) Okay it was a fry in the spring of 1988 also in the stream
- (12) I m going to use this term smolt and point it out to you
- (13) especially The term smolt is generally used to apply to
- (14) salmon at the time it makes its transition from the fresh water
- (15) life history stage into the marine environment There s a real
- (16) change to the animals when they get ready to make that
- (17) transition It s a bit of a shock to their system So the
- (18) life history stage the stage here of the smolt and this is -
- (19) the nearshore marine environment is where
- (20) So in the spring and summer of 1988 these fish that were
- (21) 1989 adults are in the nearshore marine environment and as
- (22) they grow - and growth is the key characteristic here because
- (23) if they don t grow sufficiently then they re not going to -
- (24) they re not going to survive because they re more likely to be
- (25) eaten as they grow and gain strength and size they move

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(1) offshore when they get big enough so that okay when is  
(2) the - the winter of 88 89 They are subadults at this  
(3) point in time and they re out in the - in the Gulf of Alaska  
(4) Okay the last - the last stage here is the 1989 spring  
(5) and summertime frame the subadults are making the transition  
(6) from the Gulf of Alaska into - into Prince William Sound then  
(7) they are coming into Prince William Sound in the summer and  
(8) fall of 1989 as adults  
(9) MR STOLL Your Honor I m going to call this exhibit  
(10) 1514 PX1514 And offer 1514  
(11) (Exhibit 1514 offered)  
(12) MR STOLL You can resume the stand  
(13) BY MR STOLL  
(14) Q So let me just ask you a question while you re down here  
(15) So the eggs the eggs are put in the stream in 1987?  
(16) A In the fall of the year  
(17) Q In the fall of the year In the spring of 1988 they  
(18) have - they hatch and at first have these yolks egg yolks on  
(19) them?  
(20) A Uh huh  
(21) Q And they re still in the stream at the mouth of the stream  
(22) and typically with the pinks?  
(23) A In the gravel  
(24) Q In the gravel And then they come out in the spring and  
(25) summer as smolt and they re in the nearshore environment is

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(1) that where they feed?  
(2) A Yes  
(3) Q After they lose their egg yolk?  
(4) A Yes  
(5) Q And then they winter then the following winter out in the  
(6) Gulf of Alaska and come back the spring or summer as  
subadults  
(7) and then go spawning again in the fall?  
(8) A Right  
(9) Q You can resume the stand  
(10) THE COURT Mr Stoll we re getting pretty close to  
(11) the end of the trial day I just wanted - you can pick a time  
(12) to take a break Just pick a logical time  
(13) MR STOLL Fine I think what I ll do now Your  
(14) Honor is have him explain - maybe actually now that you re  
(15) all seated and everything have you come back and draw the  
same  
(16) picture except for the - maybe explain it though first  
(17) BY MR STOLL  
(18) Q Would it be easiest for you Doctor either - I can t see  
(19) it too many boards here I d like to have you explain the  
(20) cycle now of the sockeye salmon Would it be easier - I d  
(21) like to have you draw a picture would it be easier for you to  
(22) explain it where you re seated and then draw or do it at the  
(23) same time?  
(24) A I think that s better than the pink salmon I d like to  
(25) just walk through it first then I ll diagram it for you

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(1) Q Fine  
(2) A Again the basic life cycle for all salmon is the same It  
(3) differs with respect to mainly where they grow up as young  
(4) salmon They all start out their lives in fresh water in the  
(5) case of the pink salmon here the intertidal zone but they all  
(6) need fresh water in order to develop In the case of the  
(7) sockeye salmon you have a very complex life cycle that usually  
(8) in the case of about 98 percent of all the populations we ve  
(9) studied involves a lake There are a few sockeye populations  
(10) are very small that don t utilize lakes but in general  
(11) wherever you have a big healthy sockeye salmon population  
(12) you ve got a lake And in general these lake systems are  
(13) used to name the runs for example the Red Lake system on  
(14) Kodiak the Red Lake run is how that s referred to So the  
(15) lake is really the dominant feature of sockeye Sockeye salmon  
(16) are lake salmon because they have - they usually use a lake to  
(17) complete their life cycle and what they use the lake for is  
(18) the same thing that the pink salmon use the nearshore marine  
(19) environment for and that is to get a start to get a - to get  
(20) their early growth when they re young so they can get big  
(21) enough to be able to move out and be successful in the marine  
(22) environment  
(23) So the sockeye salmon will start their lives typically in  
(24) streams Some of them are even adapted to spawn in gravel  
(25) beaches in the lakes but they get their start in streams The

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(1) young instead of dropping into the marine environment like the  
(2) pink salmon do they just drop into the lake and they use the  
(3) lake in the same way that the pink salmon use the nearshore  
(4) marine environment  
(5) Then as they - they grow and how fast they grow and  
(6) how - how good the food base is in the lake determines how  
(7) fast they grow and how well they survive They generally spend  
(8) a summer in the lake and then over winter in the lake feed  
(9) for a short period of time in the spring to get their strength  
(10) up and then they ll drop out of the system  
(11) Now if growing conditions in the lake are not very good  
(12) they may not be able to get big enough by the - before the  
(13) beginning of that second summer of their life to make it in the  
(14) marine environment and might just hold over for a second  
winter  
(15) In the lake system So we see this kind of variation in the  
(16) sockeye and that s why it s a complex life cycle Sometimes  
(17) they ll spend one year in the lake sometimes they ll spend  
(18) three Sometimes the young fish after they go out to sea  
(19) they ll spend rarely one winter but usually two but sometimes  
(20) three or four in the marine environment So sockeye when they  
(21) come back can be four five six seven even eight year olds  
(22) when they come back to spawn and plus the brood years can  
(23) spawn with one another The fish that are put in the gravel in  
(24) 1989 might come back in 1994 to spawn with fish that went in  
(25) the gravel in 1990 They spawn with younger fish that have

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- (1) matured earlier and come back and can spawn  
 (2) So sockeye salmon unlike pink salmon you take a look at  
 (3) pink salmon you count the number of pink salmon and you say  
 (4) I've got a thousand pink salmon here in 1991 and then you look  
 (5) back in 1989 and you see that you had a thousand pink salmon  
 in  
 (6) 1989 then you know that those thousand pink salmon pink  
 (7) salmon in 1991 were produced by those thousand pink salmon  
 in  
 (8) 1989 It's straightforward  
 (9) Sockeye is more complex you have to know how old the fish  
 (10) are You have to measure their age in order to know what kind  
 (11) of productivity they have what brood year they came out of  
 (12) and how productive they are So people have - scientists have  
 (13) spent their entire careers trying to figure out sockeye salmon  
 (14) and trying to figure out sockeye salmon life cycles and I've  
 (15) just given you the careers of a whole bunch of scientists here  
 (16) in about three minutes  
 (17) Q You've spent a lot of time studying this yourself haven't  
 (18) you -  
 (19) A Yes  
 (20) Q - over the last 20 years?  
 (21) A I've been working with sockeye since 1976  
 (22) Q Now I'd like you to - Mr Diamond pointed out to me that  
 (23) I just incorporated one of his boards for your last drawing  
 (24) because I went to the wrong stack of boards so I'll use my own  
 (25) board

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- (1) Now would you draw please the life cycle of a sockeye  
 (2) salmon?  
 (3) MR STOLL And I'll trade you a board  
 (4) MR DIAMOND It's a deal  
 (5) A Okay start off the with the same example Take in this  
 (6) case a 1994 adult and adult would be coming back to spawn  
 (7) this year sockeye runs in the state have already started  
 (8) They start the beginning of May and generally go to the end of  
 (9) July or maybe a little later in different parts of the State  
 (10) So the 19 - the fish that are coming back this year as  
 (11) adults to spawn in the - the streams and lakes would generally  
 (12) have started out in the year 1989 as eggs in streams and once  
 (13) in a while on the beaches of lakes  
 (14) Then these fish just as is the case with the pink salmon  
 (15) would move along and be in the 1990 they would be fry in the  
 (16) gravel of the streams In also in 1990 they would be  
 (17) fingerlings or - well actually fingerlings and fry call it  
 (18) fry for this part And I'll explain this in just a second -  
 (19) in the lakes  
 (20) All right So the fish from the 1989 spawning or eggs in  
 (21) the gravel in the fall of 1989 in streams and lakes in 1990  
 (22) in the - the winter they are fry in the streams Then they  
 (23) drop down into the lakes to - to start feeding and growing and  
 (24) they drop down They're called - they're called fry  
 (25) They also encounter fish which are there from - in this

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- (1) case this would be from the 1988 spawning fish that are  
 (2) actually a whole year older than they are that are also in the  
 (3) lakes trying to get a little food before they drop out to the  
 (4) sea so I'm introducing two different - two different life  
 (5) history stages here to point out the fact that these fry will  
 (6) be in the - in the lake system with last year's last year's  
 (7) fingerlings for some part of - for some period of time In  
 (8) the cases of the lakes where the fish are relatively slow  
 (9) growing sometimes they the fry and - of one year and the  
 (10) fingerlings of the preceding year can be in the lake the whole  
 (11) summer together because these fish just won't go out They  
 (12) don't get big enough to grow and leave  
 (13) So then the 1990 in the - again the fry I'll forget  
 (14) about the 1988 fish for a while - the fry go into the fall of  
 (15) the year and this is a very critical stage for them If  
 (16) they've eaten enough and they have enough fat reserves and  
 they  
 (17) go into the - the fall of the year then they'll usually make  
 (18) it through the winter They'll survive through the winter  
 (19) because during the winter they don't eat or they rarely eat  
 (20) There's not anything around for them to eat So they - if  
 (21) they have enough fat when they hit the - hit the fall of the  
 (22) year then they survive through the winter And if they don't  
 (23) then they'll die in large numbers So the amount of food  
 (24) that's in the lake for the fish is extremely critical in  
 (25) determining how many of them actually make it through the

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- (1) winter because it's in the fall and the winter when most of  
 (2) the of the deaths - we call it mortality biologists call it  
 (3) mortalities - when most of the deaths will occur is in the  
 (4) fall winter of their - their first full year of life And  
 (5) this is in the lakes  
 (6) Now in 1991 then the fish are by now fingerlings and  
 (7) they are in the - in the lake If they're big enough then  
 (8) they'll head on out to sea and they'll become smolts and they  
 (9) will be in the nearshore marine If they aren't big enough  
 (10) then they do not pass go they do not collect \$200 and they go  
 (11) back into the lake and have to go back through another  
 (12) feeding cycle in the lake in the winter and come back out  
 (13) Then from this time they're in the nearshore marine  
 (14) environment they gradually grow and the faster they grow the  
 (15) better And they move offshore into the the Gulf of Alaska or  
 (16) the Bering Sea and become subadults and they'll be out here  
 (17) from 1991 and in this case until the spring of 1994 as  
 (18) subadults where - in the Gulf of Alaska and the Bering Sea  
 (19) and the north Pacific  
 (20) Then in the - they move over and come in the fall of the  
 (21) year to be spawning adults in 1994 So that's where the 1994  
 (22) fish who are coming back to spawn this year came from  
 (23) Q Now we'll mark this plaintiff's exhibit 1515 Dr Mundy  
 (24) I think you indicated that in these different areas the fish  
 (25) can stay longer or shorter periods of time in other words in

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- (1) the – once they get into the lakes they could stay in the  
 (2) lakes a longer period of time they could stay in the ocean  
 (3) longer period of time is that – those are the two areas that  
 (4) they'd stay in longer?  
 (5) A A variable length of time a variable number of winters  
 (6) Q And normally you say it's a five year cycle for sockeye  
 (7) salmon?  
 (8) A Normally it's a five year cycle but four five and  
 (9) six year cycles are quite common  
 (10) Q And when the fish are – when the – let's say the 1989s  
 (11) are in the streams or lakes are they in there with fish of  
 (12) other years?  
 (13) A In the lake – in the lakes they can be in there with one  
 (14) other year class or rarely two other year classes They can be  
 (15) in there with fish that are one year older than they are or  
 (16) even two years older than they are  
 (17) Q And where do they get their – once they're in the stream  
 (18) they get their – they get their food from their yolk sac when  
 (19) they're eggs – excuse me when they're fry?  
 (20) A Yeah until – until the time that they actually button up  
 (21) that is they absorb their yolk sac and start – start to move  
 (22) that's the only food they have is their yolk sac After they  
 (23) button up they usually don't feed – they can feed  
 (24) immediately but usually they'll just jump up into the current  
 (25) they'll ride the current right wherever it takes them In the

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- (1) case of the pink salmon it takes them into the nearshore  
 (2) marine sockeye it takes them into the lake and that's where  
 (3) they eat  
 (4) Q So then they're dependent on the food if any in the lake?  
 (5) A Right  
 (6) Q And who else – are there other fish in that lake when they  
 (7) get there the sockeye salmon?  
 (8) A There are other sockeye and usually other kinds of fish  
 (9) Q And the other sockeye that are already there are those  
 (10) larger or smaller fish?  
 (11) A Those would be a year older than they are so they would be  
 (12) bigger fish  
 (13) Q And then they – then they go for the food that's in that  
 (14) lake?  
 (15) A That's right  
 (16) Q And then they come back out into the nearshore marine  
 (17) environment?  
 (18) A Correct  
 (19) MR STOLL I think this would be a good time to take  
 (20) a break Your Honor  
 (21) THE COURT This is the end of the trial day so I'll  
 (22) let you go Remember don't talk about this case with anyone  
 (23) including your fellow jurors Don't form or express any  
 (24) opinion on it until it's submitted to you for deliberation  
 (25) We'll see you tomorrow at 8:30 Thank you

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- (1) (Jury out at 1:32 p.m.)  
 (2) THE COURT All right counsel the jury's not  
 (3) present I want to resolve if I can the issue of the two  
 (4) jurors now Mr Stapleton and Mr Gerwin Can I?  
 (5) MR DIAMOND Yes do you want to talk about that on  
 (6) if record?  
 (7) THE COURT Yes If I'm going to excuse them I want  
 (8) it to be on the record  
 (9) MR STOLL Your Honor I just want to get  
 (10) clarification as to what – if there's – if we go below how  
 (11) this five-sixths works  
 (12) THE COURT Well if you go – you want – you want a  
 (13) vote of five-sixths of the existing jurors so if you go below  
 (14) 12 you have to do that calculation and if you can get the  
 (15) exact five-sixths proportion with the existing jurors then  
 (16) that's fine that would be the proposition  
 (17) On the other hand if you can't reach that number then  
 (18) what would happen is you don't get five-sixths of the jurors  
 (19) you have to go with a higher number So for instance if you  
 (20) have a 12 person jury 10 of them have to be in agreement on  
 (21) any verdict  
 (22) MR STOLL Correct  
 (23) THE COURT If you have an 11 person jury 10 of them  
 (24) would have to be in agreement on any verdict  
 (25) MR STOLL What I – here's my question If you have

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- (1) a – I don't think this will happen but I just want to cover  
 (2) this If you have an 8 person jury or let's say – let's say  
 (3) an 8 person jury how many would we have to have?  
 (4) THE COURT You got a calculator?  
 (5) MR STOLL I think that it would be – would it be 7  
 (6) or would it be 6?  
 (7) MR DIAMOND 7  
 (8) MR STOLL 7 and so it wouldn't – it would – after  
 (9) we lose one juror we would always have to have all but one  
 (10) juror unless –  
 (11) THE COURT Yes I think that's right I think that's  
 (12) right I'm not sure  
 (13) MR STOLL So that even if you went to – I  
 (14) understand okay  
 (15) THE COURT All right Given that discussion now  
 (16) counsel what are we going to do about these two jurors?  
 (17) MR DIAMOND Well I don't think this is – we were  
 (18) wondering if we got down to 7 but I don't know that's  
 (19) necessarily an issue I've discussed this with my client  
 (20) Particularly the request that the Court had that we stipulate  
 (21) in advance if the number gets down below 12 we agreed to  
 (22) submit this case to a jury composed of fewer than 12 jurors  
 (23) We are very reluctant to do that in the abstract We are  
 (24) representing the side of this litigation that does not have  
 (25) popular opinion on its side and numbers are our – are our ally

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- (1) to the extent that we excuse jurors we potentially excuse a  
 (2) juror who could be for us and could be a force in the jury room  
 (3) to express the sentiment that corporations including  
 (4) corporations that may not be very popular ought to be judged  
 (5) on  
 (6) the basis of facts  
 (7) On the other hand we re mindful of the constraints We  
 (8) don t want to have to do this twice So what we re prepared to  
 (9) say in advance is that if the jury falls below 12 we will  
 (10) either agree to five sixths of the remaining jurors or we will  
 (11) agree to submit the cause to the Court for decision so that we  
 (12) don t have to do this again But we are not prepared to say in  
 (13) the abstract not knowing what the composition of the jury will  
 (14) be that in all events we re willing to go below 12 And if  
 (15) that affects the Court s decision with respect to these two  
 (16) jurors I thought you ought to know what my client s views  
 (17) are  
 (18) THE COURT Well I know what your client s views  
 (19) are Let s see what the other side s views are Counsel?  
 (20) MR STOLL May I just have a moment Your Honor? I  
 (21) didn t know that this was -  
 (22) THE COURT Uh huh  
 (23) MR STOLL Your Honor we accept the Court s  
 (24) proposal You know we d like - we d like to have 10 of -  
 (25) you know have two - two that we don t have to have but we ll  
 agree to the five sixths so that we ll always - you know

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- (1) we ll have to get all but one to reach a verdict  
 (2) THE COURT Yes but that s not the question right now  
 (3) because there s now - the defense has thrown in another  
 (4) variable in the situation They want to have a choice between  
 (5) a jury and a nonjury trial if it falls below 12 right  
 (6) MR DIAMOND Correct  
 (7) MR STOLL Your Honor our clients are not willing to  
 (8) waive the trial by jury and the problem is is that we do not  
 (9) want to - we re concerned with the number of jurors that we  
 (10) have that we ve already lost two jurors We lose two more  
 (11) jurors that we - we get - get down what I would suggest  
 (12) perhaps is that the Court under these circumstances since  
 (13) they won t agree to the five sixths that we - the Court  
 (14) inquire of Mr Stapleton s - who is the immediate issue -  
 (15) THE COURT Well no he s not Mr Gerwin s the  
 (16) immediate issue  
 (17) MR STOLL Well Mr Ger - Mr Gerwin isn t a  
 (18) culprit and he s not - for purposes of number I don t have a  
 (19) mistrial if Mr Gerwin is on the jury and I am - at any rate  
 (20) right now I m unwilling to go - I m unwilling to excuse  
 (21) Mr Gerwin unless we have an agreement from Exxon that they  
 (22) will agree to five sixths jury because I - I want -  
 (23) THE COURT So you re going to leave it up to me  
 (24) counsel Both of you I m not just pointing to you You re  
 (25) going to make me make the decision knowing that you could  
 lose

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- (1) a jury I just want you to understand what your options are  
 (2) Right?  
 (3) MR STOLL Yeah I can - I m going to lose a juror  
 (4) with Mr Stapleton for sure and I guess -  
 (5) THE COURT No I don t think that s the situation  
 (6) here counsel The one juror that I m prepared to excuse right  
 (7) now in absence of an agreement between you is Gerwin  
 because  
 (8) he s the one that I see who clearly should be excused  
 (9) Stapleton I think I can ask him to go back and get more  
 (10) definite statement of what his hardship is and then I d  
 (11) consider excusing him later  
 (12) Gerwin is a different problem because Gerwin is exhausted  
 (13) You can see it and he s been exhausted throughout this whole  
 (14) trial He s not absorbing any of this that s my opinion and  
 (15) I ve been watching him for days and I m sure counsel have  
 been  
 (16) watching him too He s not going to help anybody in this  
 (17) case  
 (18) So the issue is do I excuse Gerwin now? If you re leaving  
 (19) that decision in my hands I ll make that decision now  
 (20) MR STOLL Your Honor obviously the decision is  
 (21) yours We re not asking for Mr Gerwin to be excused and we d  
 (22) object to him being excused  
 (23) THE COURT All right Are you asking to have  
 (24) Mr Gerwin excused counsel?  
 (25) MR DIAMOND We will leave that in the Court s

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- (1) hands We too can see he s not paying attention We don t  
 (2) want to have to do this again but on the other hand having a  
 (3) jury who is not able to fulfill his obligations doesn t serve  
 (4) either side  
 (5) THE COURT I m going to bring him in and talk to him  
 (6) then on the record  
 (7) THE CLERK Mr Gerwin?  
 (8) THE COURT Mr Gerwin yeah  
 (9) MR STOLL Your Honor we ll withdraw our objection  
 (10) THE COURT To him being excused?  
 (11) MR STOLL Yeah  
 (12) THE COURT Counsel?  
 (13) MR DIAMOND We have no objection to Mr Gerwin being  
 (14) excused  
 (15) THE COURT All right I ll excuse him Do you want  
 (16) me to excuse him here in the courtroom or are you satisfied  
 (17) that there s cause to excuse him both of you  
 (18) MR STOLL It s okay to excuse him  
 (19) THE COURT All right Now this is what I d like to  
 (20) do with Stapleton I don t necessarily have to talk to him on  
 (21) the record but what I do need to do is find out what his  
 (22) particular situation is So my proposition to you is that I  
 (23) simply say to him I know that this is a worry to you I want a  
 (24) statement from your employer what his - what the employer s  
 (25) plans are for you in the next four weeks so that we can

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- (1) evaluate whether or not you should be excused Is that  
 (2) acceptable to both of you?  
 (3) MR STOLL Yes Your Honor  
 (4) MR DIAMOND Yes Your Honor  
 (5) MR PETUMENOS Yes Your Honor I have another  
 (6) suggestion I don t know - maybe not yet but at an  
 (7) appropriate point perhaps the Court could talk to his  
 (8) employer as well  
 (9) THE COURT Well I told him I ve already told him  
 (10) that his employer might come in here and talk to me on the  
 (11) record to determine whether there really is a hardship or  
 (12) whether it s just speculation So if I can -  
 (13) MR STOLL Your Honor as far as I m personally  
 (14) concerned I think as plaintiffs are concerned we don t - I  
 (15) don t think it s necessary to bring his employer in here As  
 (16) far as we re concerned if the Court wants to talk to him  
 (17) in -  
 (18) THE COURT Just a second Counsel  
 (19) Mr Gerwin we can see that you ve had a lot of trouble  
 (20) just staying awake in th s case and it s because of all the  
 (21) reasons that you gave in jury selection I don t want you to  
 (22) think I m blaming you or anything like that but its s obvious  
 (23) that this trial is - you just can t do it because it seems to  
 (24) me you re exhausted every day when you re here  
 (25) JUROR GERWIN Yes

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- (1) THE COURT And you agree with me don t you?  
 (2) JUROR GERWIN Yeah because I work nights so -  
 (3) THE COURT And we have all those reasons because you  
 (4) gave us the statement in your jury examination and by means of  
 (5) your note so everybody has agreed that it s just not the  
 (6) appropriate time for you to serve as a juror so I m going to  
 (7) let you go now You re excused You don t have to come in  
 (8) tomorrow You won t have to come in for the rest of the case  
 (9) JUROR GERWIN Okay  
 (10) THE COURT I know you tried  
 (11) MR STOLL Your Honor could we have an admonition?  
 (12) THE COURT Yes  
 (13) The other thing is I d like you to know that the other  
 (14) jurors and in fact anybody who might ask you about this case  
 (15) I m concerned about any information that comes out of the  
 (16) jury So I don t want you talking to the other jurors about  
 (17) this case at all or reasons why you were excused  
 (18) I also don t want you talking to anybody involved in the  
 (19) case So if anybody comes and tries to talk to you about the  
 (20) case simply tell them the judge has said I m sorry but I  
 (21) can t talk to you about the case okay  
 (22) JUROR GERWIN Okay  
 (23) THE COURT Thanks very much  
 (24) JUROR GERWIN All right thank you  
 (25) MR STOLL Your Honor just saying that as far as

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- (1) Mr Stapleton is concerned as far as the plaintiffs are  
 (2) concerned it is satisfactory if you decided that it was -  
 (3) after you talked to Mr Stapleton that it was - that you  
 (4) wanted to talk to his employer I think it would be fine for  
 (5) you to talk to his employer outside of the courtroom without  
 (6) the - you know bringing him down here and having him to go  
 (7) through all that trouble and go on the record and all that I  
 (8) think that would be fine as far as we re concerned  
 (9) MR DIAMOND If the Court wants to do that we d have  
 (10) no objection  
 (11) THE COURT You have no objection now counsel but  
 (12) when I talked to him and give you the reasons why I thought  
 (13) that the employer was important in this whole mix of things you  
 (14) might then ask me questions and I m not prepared to do that  
 (15) kind of - in this environment where you can t agree on a  
 (16) fairly simple thing I m not going to do that If I choose to  
 (17) question the employer you re going to be there when I do it  
 (18) MR STOLL Fine We tried  
 (19) THE COURT Is there anything else to take up before  
 (20) we recess?  
 (21) MR DIAMOND We had admission of exhibits The two  
 (22) exhibits that were previously identified during the  
 (23) cross examination of Dr Kocan one was the board the other  
 (24) was the two pages of flip charts will be respectfully 15484  
 (25) and 15485

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- (1) THE COURT You want them in?  
 (2) MR DIAMOND I think they ve already been admitted  
 (3) but we did not have numbers on -  
 (4) THE COURT Oh yes I see Yeah they re the ones I  
 (5) admitted  
 (6) MS SMITH Your Honor we would ask the Court to  
 (7) admit the exhibits that we used during Parker and they are  
 (8) page 28 of DX3812 which is the 1989 Prince William Sound  
 (9) Annual Fin Fish Management Report  
 (10) (Exhibit DX3812 (page 28) offered)  
 (11) THE COURT Let s just talk about that one Do you  
 (12) want - Is there any objection to that?  
 (13) MR STOLL No Your Honor  
 (14) THE COURT Then that s admitted  
 (15) (Exhibit DX3412 (page 28) received)  
 (16) THE COURT Do you have a whole list of them  
 (17) MS SMITH Yes I do  
 (18) THE COURT Would you give - first show the list to  
 (19) counsel I m assuming there will be no objection To the  
 (20) extent that there is no objection you can give the list to the  
 (21) clerk she can mark the list as the Court s exhibit and I ll  
 (22) admit them  
 (23) MS SMITH All right Thank you Your Honor  
 (24) MR STOLL Your Honor the only ones we have an  
 (25) objection to why don t we just deal with that?

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(1) THE COURT Yes

(2) MR STOLL There are - I don't have the numbers

(3) which are the ones that -

(4) MS SMITH Those are the graphs These three are

(5) commercial subsistence harvest

(6) MR STOLL Let me just look at this - I mean

(7) there's one that has -

(8) Your Honor the first group of exhibits that she's going to

(9) identify to the clerk we have no objection to They all come

(10) from AD - they're all a page of an ADF&G report We have no

(11) objection to those with the exception - the only one I have

(12) an objection to is 769 which is a memorandum from a Ken

Florey

(13) to Mr Parker This is a fellow in Anchorage that was an area

(14) manager that was objecting to a possible policy that was under

(15) consideration by ADF&G for overescapement

(16) THE COURT The zero tolerance policy?

(17) MR STOLL No not the zero tolerance policy This

(18) was a policy on dealing with overescapement

(19) THE COURT Oh all right

(20) MR STOLL And the policy is not in evidence or the

(21) proposed policy is not in evidence The witness testified that

(22) the policy was never implemented or adopted and I think that

(23) this document is irrelevant and very confusing to the jury

(24) because it confuses I think the zero tolerance policy with

(25) the overescapement policy which was never adopted I mean

so

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(1) that's -

(2) THE COURT I understand

(3) MR STOLL There's objection only to 769 I just

(4) think it's confusing

(5) THE COURT Counsel?

(6) MS SMITH This is a document that's a plaintiff's

(7) exhibit that was designated for use with Parker and it is by

(8) as he identified them on the stand two individuals who are

(9) part of the Commercial Fisheries Division in Anchorage

(10) discussing overescapement policy and the reason we want to

use

(11) it is the context that we heard here They report to him they

(12) sent him the memo and they thought that the overescapement

was

(13) very difficult to figure out and that there was no precedent

(14) for the ADF&G stepping in in an overescapement situation

(15) So he knows the memo he received the memo they're his

(16) guys and the plaintiffs designated it as an exhibit in this

(17) case

(18) THE COURT Well I don't care if they designated it

(19) as an exhibit The real question is is it relevant What

(20) does it show to you? Tell me what your argument is based on

on

(21) that exhibit

(22) MS SMITH Well I think it - the argument as to why

(23) it's relevant is it goes to - the paragraphs we wanted were

(24) the ones about who knows what the maximum or optimum

escapement

(25) can be should be and really that no measures should be taken

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(1) by ADF&G to react to the overescapement particularly at Red

(2) Lake in 1989 which as you know now is a big issue because of

(3) the plaintiffs argument that this goes to stigma and fear and

(4) uncertainty

(5) Our argument is that the level of escapements are not a

(6) science and that they - that the decision by ADF&G not to do

(7) anything about this overescapement in 1989 not to implement

(8) the draft policy that Parker proposed meant that they either

(9) weren't that concerned worried or et cetera about it and

(10) we're going to make that argument they decided not to close

(11) the weir They decided not to do a number of things like

(12) that What ADF&G decided to do or not do about

overescapement

(13) in 1989 is relevant

(14) THE COURT Okay To cast doubt on the scientific

(15) proposition that the plaintiffs are espousing

(16) MS SMITH Yes Your Honor

(17) MR STOLL Your Honor first of all the things that

(18) Mr Parker - any proposal he didn't - he didn't make a

(19) proposal There was discussion about a methodology for

dealing

(20) with possible overescapement This memo was not necessarily

(21) proposal of Mr Parker It was just an idea What do you

(22) think about this idea?

(23) The things that this document that was quoted from in this

(24) document were questions Do we really know the optimum or

(25) maximum escapement for any system in Alaska? It's not

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(1) addressed to Red Lake It's addressed to the State of Alaska

(2) and it's asking a question That's the things they're quoting

(3) from This is very very confusing The Court can look at

(4) this

(5) THE COURT I'm sure it's confusing counsel I've

(6) seen your documents before they're all confusing

(7) MR STOLL But some of them are - they're a table

(8) where this is the number of fish or whatever

(9) THE COURT I understand This is - the - counsel

(10) do you want to respond?

(11) MS SMITH No just only to say that it - it was

(12) drafted by Parker he testified and it's a policy on

(13) overescapement so it's not just an idea it's a draft policy

(14) that he floated to his staff and this was their response

(15) THE COURT Okay and my answer to you on the exhibit

(16) question is this is a very small segment of a larger document

(17) and in fact quite a bit larger document You had an adequate

(18) examination of the witness The words are in the record You

(19) can argue from the words The document is not necessary to

(20) admit So the objection is sustained I won't admit the

(21) document

(22) MS SMITH All right That - that takes us through

(23) everything except the graphics

(24) MR STOLL Yeah On the graphics Your Honor -

(25) THE COURT I'm not going to - this is the - what we

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- (1) had the talk at the bench on  
 (2) MS SMITH Yes  
 (3) THE COURT I m not going to admit them now I  
 (4) suspect that I ll admit them when they re properly sponsored  
 (5) MR STOLL Thank you  
 (6) MS SMITH They re ADF&G guys coming in with ADF&G  
 (7) material  
 (8) THE COURT I believe you but I think I m going to  
 (9) wait and see them lay the proper foundation and once they do  
 (10) those graphs will come in  
 (11) MR STOLL Your Honor just let me explain my  
 (12) position If they have - if these are - just haven t had  
 (13) time to check - never mind  
 (14) MR DIAMOND Your Honor we d asked the plaintiffs  
 (15) not to let Mr Parker leave in anticipation of being required  
 (16) to lay this foundation with him If that s the appropriate  
 (17) witness  
 (18) THE COURT In anticipation of laying a foundation for  
 (19) the admission of these documents?  
 (20) MR DIAMOND Yeah because they re his data  
 (21) THE COURT Going through them piece by piece as you  
 (22) said  
 (23) MR DIAMOND We were hoping we would n t have to do  
 (24) that I suppose I m confused what foundation you want  
 (25) THE COURT Who prepared the graphs?

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- (1) MR DIAMOND Ultimately there s a chart maker who got  
 (2) the data extracted from a report and he laid the bars down on a  
 (3) computer  
 (4) THE COURT Who prepared the report that gave the  
 (5) statistics that were incorporated into the graph  
 (6) MS SMITH The Division of Commercial Fisheries  
 (7) ADF&G  
 (8) MR DIAMOND Mr Parker  
 (9) MS SMITH Mr Parker was the director at the time  
 (10) THE COURT I know he was the director but -  
 (11) MR DIAMOND We could have our expert testify that  
 (12) they do accurately depict the data that is in the ADF&G  
 (13) reports  
 (14) THE COURT At that point then - I ll give you a  
 (15) fair opportunity even if you make six mistakes to finally  
 (16) produce a witness who can authenticate this document and to  
 (17) get  
 (18) it admitted all right? At this point I can tell you  
 (19) counsel I m just about in the same mental status as a  
 (20) 23 month old pink salmon so I think we ought to recess and  
 (21) figure out something better to do with our time right now  
 (22) MR DIAMOND And on that note I think Mr Stoll and  
 (23) I would like to see you in chambers  
 (24) THE COURT I ll be happy to  
 (25) MR STOLL Your Honor hold it I have one more  
 (26) exhibit - two more exhibits though That s 1514 and 1515

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- (1) which we had Dr Mundy identify I d like to offer those  
 (2) (Exhibits 1514 and 1515 offered)  
 (3) MR STOLL I don t know who to deal with Your  
 (4) Honor  
 (5) MR COOPER Oh I don t have any objection to those  
 (6) charts Your Honor Those are fine  
 (7) THE COURT Are they marked or not?  
 (8) MR STOLL Yes they re marked  
 (9) THE COURT Whatever they re marked they re in  
 (10) (Exhibits 1514 and 1515 received)  
 (11) MR PETUMENOS Your Honor I have a matter not to  
 (12) take up now I understand the 23 month thing There is an  
 (13) exhibit that s coming up in the cross examination of not this  
 (14) witness but the next witness that I need to approach the Court  
 (15) on and since they re familiar with it schedule it sometime  
 (16) THE COURT How long do you think the discussion will  
 (17) take?  
 (18) MR PETUMENOS About ten minutes a side I would  
 (19) imagine or less And I have not - I will also say Judge  
 (20) that I have not discussed it with Exxon counsel yet It may be  
 (21) they will withdraw it maybe we should do that first  
 (22) THE COURT I have a 2 30 summary judgment It ll be  
 (23) over by 3 00 If you can t resolve it with counsel I want you  
 (24) back here at a quarter to 4 00 and you can - you can talk  
 (25) about it on the record then All right?

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- (1) MR DIAMOND And before you -  
 (2) THE COURT If you do resolve it call my office and  
 (3) say we don t need the hearing  
 (4) MR DIAMOND Before we all smolt away we had  
 (5) submitted a jury instruction on the pending class litigation  
 (6) THE COURT Yeah I have it  
 (7) MR DIAMOND In view of the fact this testimony is  
 (8) coming in about damage to commercial fisheries damage to  
 (9) commercial fish catch we would think this would be an  
 (10) opportune time to clear the decks and get that read I know  
 (11) Mr Petumenos wants to file a brief but every day he delays in  
 (12) filing a brief this becomes a little bit more confused  
 (13) MR PETUMENOS I believe it s filed I believe it  
 (14) was filed today  
 (15) THE COURT I should have the courtesy copy in  
 (16) chambers  
 (17) MR PETUMENOS I asked it be filed when I was in  
 (18) court I don t know that that courtesy copy got filed When I  
 (19) get back to the office I ll see that you get one  
 (20) THE COURT Does the brief contain your version?  
 (21) MR PETUMENOS Yes  
 (22) MR DIAMOND We will endeavor to respond to that by  
 (23) tomorrow afternoon okay?  
 (24) THE COURT You will?  
 (25) MR COOPER Endeavor was the key word there

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- (1) THE COURT Your time is my time counsel I can
- (2) wait
- (3) MR DIAMOND I can t
- (4) THE CLERK Please rise This court is in recess
- (5) (Recess at 1 57 p m )

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- (1) DIRECT EXAMINATION OF PHILLIP R MUNDY  
2062
- (2) BY MR STOLL 2062

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- (1) INDEX
- (2) CROSS EXAMINATION OF RICHARD M KOCAN  
(Resumed) 1931
- (3) BY MR KARLBERG 1931
- (5) REDIRECT EXAMINATION OF RICHARD M KOCAN  
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- (6) BY MR PETUMENOS 1965
- (8) RECROSS EXAMINATION OF RICHARD M KOCAN  
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- (9) BY MR KARLBERG 1978
- (11) DIRECT EXAMINATION OF KENNETH P PARKER  
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- (12) BY MR STOLL 1984
- (14) CROSS EXAMINATION OF KENNETH P PARKER  
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- (15) BY MS SMITH 2004
- (17) REDIRECT EXAMINATION OF KENNETH P PARKER  
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- (18) BY MR STOLL 2038
- (20) RECROSS EXAMINATION OF KENNETH P  
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- (21) BY MS SMITH 2052
- (23) FURTHER REDIRECT EXAMINATION OF KENNETH P  
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- (24) BY MR STOLL 2057

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- (1) EXHIBITS
- (2) 465 through 469 offered 1980
- (3) 475 offered 1980
- (4) 477 and 477 A offered 1980
- (5) 485 through 487 A offered 1980
- (6) 492 through 500 offered 1981
- (7) 503 offered 1981
- (8) 511 offered 1981
- (9) 513 offered 1981
- (10) 1512 offered 1981
- (11) 15484 and 15485 offered 1982
- (12) 282 2303 304 A and 2305 offered 2003
- (13) 1514 offered 2077
- (14) DX3812 (page 28) offered 2096
- (15) 1514 and 1515 offered 2103
- (17) 465 through 469 received 1980
- (18) 475 received 1980
- (19) 477 and 477 A received 1980
- (20) 485 through 487 A received 1981
- (21) 492 through 500 received 1981
- (22) 503 received 1981
- (23) 511 received 1981
- (24) 513 received 1981
- (25) 1512 received 1982

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- |                                      |      |
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| (2) 282 2303 304 A and 2305 received | 2003 |
| (3) DX3412 (page 28) received        | 2096 |
| (4) 1514 and 1515 received           | 2103 |

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- (1) STATE OF ALASKA )
- (2) Reporter s Certificate
- (3) DISTRICT OF ALASKA )
- (6) I Joy S Brauer RPR a Registered Professional
- (7) Reporter and Notary Public
- (8) DO HERBY CERTIFY
- (9) That the foregoing transcript contains a true and
- (10) accurate transcription of my shorthand notes of all requested
- (11) matters held in the foregoing captioned case
- (12) Further that the transcript was prepared by me
- (13) or under my direction
- (14) DATED this day
- (15) of 1994
- (21) JOY S BRAUER RPR
- Notary Public for Alaska
- (22) My Commission Expires 5 10 97

Look-See Concordance Report

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UNIQUE WORDS 2,729  
TOTAL OCCURRENCES 12,487  
NOISE WORDS 385  
TOTAL WORDS IN FILE 37,096

SINGLE FILE CONCORDANCE

CASE SENSITIVE

NOISE WORD LIST(S)  
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INCLUDES ALL TEXT OCCURRENCES

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) WITH SLP RIOR COURT GR TH ST-T Cr ALASKA  
 ) THE JUDICIAL DISTRICT  
 ( ) In r ) C s No 3-N 99 2533 Civil  
 ) Anchorage Alaska  
 ( ) Tr EXCH -LO Z ) on sd y July 13 1994  
 ) 40 a m  
 )  
 ( ) CLUM 1 Pages 2111 through 2275  
 ( ) RE-SCRIPT C PROC DINGS (Con Inu d)  
 ( ) TRIAL BY JURY  
 ( ) CR Tr HOMOR-2Lc eR1-4 C Sr-CRTELL  
 Sio rior Court Jdgs  
 ( ) APPEARANCE S  
 ( ) FOR THE PLA NTIFF  
 ) ROBERT STOLL  
 ( ) S 111 Stoll P rne & Locking  
 ) 29 South West Oak Street  
 ( ) Portland OR 97204  
 ) 503/227 15 9  
 ) TIMOTHY J P LEMOS  
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 ) 907/276 1503  
 ) SAMUEL J CARTER  
 ( ) orter & Hikko  
 ) 250 Denali Street Suite 604  
 ( ) Anchorage AK 99503  
 ) 907/277 772

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(1) PROCEEDINGS  
 (2) (Call to Order of the Court)  
 (3) THE COURT Good morning counsel  
 (4) Just before you speak I m going to admit certain exhibits  
 (5) that you ve told us about DX5748 DX3811 DX - are there two  
 (6) DX3811 s  
 (7) THE CLERK Different pages  
 (8) THE COURT Okay page 104 and 105 of DX3811 DX5766  
 (9) and as to 5748 it was page 87 I declined to admit PX769 I  
 (10) believe that s it  
 (11) (Exhibits DX5748 (p 87) DX3811 (pp 104 and 105) DX5766  
 (12) received)  
 (13) MR STOLL Your Honor I just thought to make this as  
 (14) orderly as possible if - I d like to get some - establish  
 (15) some rules on - on exhibits that we ve been served with a  
 (16) large number of documents that defendants have indicated  
 they  
 (17) may use in cross examination Some of these Dr Mundy may  
 be  
 (18) familiar with Some of them he s not  
 (19) To the degree that if he s not familiar with the document  
 (20) then I would like to not have any public - publication or  
 (21) examination of the witness because there s no foundation  
 even  
 (22) if it s a government record for that - for that table or line  
 (23) or whatever that is in there  
 (24) I just thought we d establish that now so we don t get into  
 (25) sidebars and jury coming in and going out They can ask him

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(1) FOR THE DEFENDANTS  
 ) C-PL S P DI-MOND  
 ) M PANDOLL OPP WELLM R  
 ) LINDA JAY SMITH  
 ) O M Ivany & y r  
 ) 400 South Hco Str t  
 ( ) 713/609 6099  
 ( ) JOY F COUGH LLI  
 ) Cough & Associates  
 ( ) 31 N Franklin S 1702  
 ) Anchorage Alaska 99501  
 ( ) 907/500 577  
 ( ) reported by  
 ) JOY S BRUNER PR  
 ) Registered Professional Reporter  
 ) Midnight Sun Court Reporters  
 ( ) 2550 Denali Street Suite 1505  
 ) Anchorage Alaska 99503  
 ( ) 907/258 7100

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(1) If he knows he s familiar with it fine He thinks it s  
 (2) reliable fine If there s a proper foundation but otherwise  
 (3) it s hearsay  
 (4) THE COURT Counsel?  
 (5) MR COOPER Your Honor I think I just interpret that  
 (6) as asking there be a foundation laid before the document is  
 (7) shown and I don t have a trouble with that I assume that  
 (8) rule would work both ways  
 (9) MR STOLL Absolutely  
 (10) THE COURT Absolutely Everything works both ways in  
 (11) this case  
 (12) MR STOLL Why should we start now? That s fine  
 (13) We re ready Your Honor  
 (14) THE COURT Okay let s get them in It s going to  
 (15) take some time They re on the other side of the building  
 (16) (Jury in at 8 49 a m)  
 (17) DIRECT EXAMINATION OF PHILLIP R MUNDY (Resumed)  
 (18) BY MR STOLL  
 (19) Q Dr Mundy I d like to now go from the - sort of your  
 (20) general discussion about the - how the life cycles of pink and  
 (21) red salmon operate and the various years that may be involved  
 (22) in that cycle and look at the specifics here And I d like to  
 (23) now refer to your - I guess you started 18 years ago studying  
 (24) salmon in Alaska is that correct?  
 (25) A Yes

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- (1) Q And then I'd like to focus in and during that 18 year
- (2) period you studied the salmon in Prince William Sound as well
- (3) as the red salmon in Kodiak as well as other areas is that
- (4) right?
- (5) A Yes I studied pink salmon in Prince William Sound in
- (6) 1980 81 82 83 over a four year period
- (7) Q Long before this litigation before anybody thought about
- (8) any -
- (9) A That's correct
- (10) Q - oil spill here And then I'd like to focus really on
- (11) the findings that you made and other scientists made when you
- (12) were first of all working for the U S Justice Department and
- (13) then subsequently as a scientist for the Trustee Council And
- (14) would you tell the jury please what - I'd like to - let me
- (15) back up one more thing here and that is to show the jury again
- (16) Prince William Sound
- (17) MR STOLL Could we have 2303 on the Barco please?
- (18) BY MR STOLL
- (19) Q Dr Mundy this is Prince William Sound correct?
- (20) A Looks familiar
- (21) Q And on this map here this is 1161 the green areas here
- (22) show the plaintiffs - Native corporations properties in
- (23) Prince William Sound?
- (24) A Yes
- (25) Q I'd like to ask you first of all in Prince William Sound

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- (1) the dominant salmon species is pink salmon?
- (2) A Yes the most abundant pink salmon species in Prince
- (3) William Sound is the pink salmon Of course that means that
- (4) it's also the most important commercial salmon species in
- (5) Prince William Sound
- (6) Q Now I'd like to ask you what effect if any did the Exxon
- (7) Valdez oil spill have on pink salmon in Prince William Sound?
- (8) A Well based on the results of the studies that the Trustee
- (9) Council put in the water in 1989 in the year of the spill and
- (10) subsequently has followed up every year since the spill we
- (11) know that the primary impacts of the oil spill on pink salmon
- (12) came in two ways The first impact was to kill eggs salmon
- (13) eggs in the gravel The second was to reduce growth of
- (14) juvenile fish in the marine environment
- (15) Now the impact of killing eggs in the gravel is a - it's
- (16) pretty straightforward We start off with fewer eggs than we
- (17) would have had in that generation and that means that no
- (18) matter what happens environmental variability or whatever
- (19) we're going to have fewer fish than we would have had except
- (20) for the effects of the oil spill
- (21) In the case of growth the - the effect is somewhat
- (22) indirect and that's because I indicated yesterday that fish
- (23) in the nearshore environment and this is where the effects of
- (24) oil on growth were measured The fish try to grow as fast as
- (25) they can is one way to put it so that they can - they can

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- (1) get big and get out of the areas where predators can take them
- (2) predators can eat them We say that fish grow to survive so
- (3) if a fish grows slowly if they have reduced growth or
- (4) inhibited growth this translates into increased mortality If
- (5) they grow slower that means more of them will die before they
- (6) can get out of the range of the predators
- (7) There are a lot of predators that can eat small fish
- (8) There are birds and lots of different kinds of fish as well as
- (9) marine mammals that can handle small fish and prefer small
- (10) fish but as they grow there are fewer and fewer predators
- (11) they have to contend with So the quicker they grow the
- (12) quicker they get up to size the fewer of them will die
- (13) So the studies measured those two primary effects The
- (14) impact of the oil on the survival of the salmon eggs the pink
- (15) salmon eggs in the gravel in the streams and also the impact,
- (16) of the exposure to oil on the growth of the salmon in the
- (17) nearshore marine environment
- (18) MR STOLL And what was the - could we put on
- (19) Exhibit 335 please?
- (20) BY MR STOLL
- (21) Q Is this a graph of embryo mortality?
- (22) A Yes
- (23) Q And is this it?
- (24) A That's it This is the pattern that we saw in 1989 with
- (25) respect to the - to the salmon embryo mortality If you look

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- (1) - okay I've got it - if you look on this side of the - this
- (2) side of the graph this gives you the embryo mortality Here
- (3) is ten percent mortality That is proportion point one of
- (4) them would die and 90 percent of them would live Up at this
- (5) level 20 percent of them would die and 80 percent of them
- (6) would live so this is - as you go from down here to up here
- (7) this is increasing rate of death for the - for the eggs and
- (8) down on this side here we've got the location from the stream
- (9) mouth It's called height above mean low water but basically
- (10) right in this area we've got the stream mouth and we're moving
- (11) up the stream away from the marine environment here
- (12) Okay the lower line down here the green line are the
- (13) streams that were in the vicinity that were judged not to have
- (14) received direct impacts from oil These were streams that were
- (15) judged not to be - not to be oiled and these are the green
- (16) green line
- (17) The streams that were judged to be oiled are represented by
- (18) the dark blue line in the upper portion You can see that the
- (19) pattern was the same whether we're looking down in the lower
- (20) portion of the stream where most of the salmon are spawning or
- (21) we look up farther up in the stream The embryo mortalities
- (22) as measured in 1989 for the oiled streams were quite a bit
- (23) higher than the embryo mortalities measured in the control
- (24) streams
- (25) This pattern was also seen in 1990 and again in 1991 and

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- (1) subsequently we went into the laboratory We went under  
 (2) control conditions at the National Marine Fisheries Service  
 (3) Laboratory oiled gravel and were able to reproduce these  
 (4) results in the laboratory to show that it was in fact the  
 (5) effect of the oiled gravel that we were measuring here  
 (6) Q So these tests were done in - in the field so to speak  
 (7) in 1989 They were done again in 1990 done again in 1991?  
 (8) A Correct  
 (9) Q And all those years you had this - this - you had a -  
 (10) you had a difference in the embryo mortality?  
 (11) A We had significantly higher embryo mortalities in all  
 (12) three all three years  
 (13) Q And then you also did the tests in the laboratory?  
 (14) A Yes Then subsequent to this - we initially expected that  
 (15) the effects of the - the oil would be short lived that's what  
 (16) the scientific literature told us to expect We read as much  
 (17) as we could at the beginning of this and we were told to  
 (18) expect that the effects of oil would quickly dissipate that  
 (19) they would go away and there wouldn't be much of a problem  
 (20) that would persist So we were very surprised when we went  
 (21) out  
 (22) in 1990 and measured the same problems that we saw in 1989  
 (23) in  
 (24) these streams  
 (25) Then again in 1991 and it was - it was very surprising  
 (26) This was not what the - what the scientists had told us to  
 (27) expect from other oil spills This situation was very

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- (1) different though from other oil spills because we were in a  
 (2) really good position to measure the fish In big marine oil  
 (3) spills you never get a chance to look at the fish because they  
 (4) die and they sink But in this case we've got salmon that come  
 (5) back to spawn every year so we get a very good look at the  
 (6) fish and I don't think they've ever had such a chance before  
 (7) in science to study the effects of an oil spill  
 (8) So we found - when we found that these effects were  
 (9) continuing we had questions about whether - whether this  
 (10) might be due to the oil spill or other factors so we wanted to  
 (11) go into the laboratory and see whether or not we could  
 (12) reproduce these results see whether or not we would get the  
 (13) same results in the laboratory and generally the laboratory  
 (14) results which - these experiments are still ongoing because  
 (15) with salmon you only get to test them once a year for the  
 (16) eggs They're only depositing their eggs once a year We see  
 (17) that the results are being confirmed with all the information  
 (18) that we're getting out of the laboratory studies  
 (19) Q Now when you did these tests in the field were these both  
 (20) with hatchery fish and wild stock where you saw these  
 (21) differences?  
 (22) A Well the - these embryos refer to wild stock fish Of  
 (23) course the fish inside the hatcheries did not receive any  
 (24) direct effects from the oiling as far as - as far as we  
 (25) know

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- (1) The growth studies however were for fish that were in the  
 (2) nearshore marine environment They were actually out  
 (3) collecting fish in the nearshore marine environment and  
 (4) measuring their growth And they had - they separated this  
 (5) into wild fish and hatchery fish and you can - a lot of the  
 (6) hatchery fish are tagged so - they cut a small fin off the  
 (7) back of the fish so they can identify it and then they put a  
 (8) sliver of stainless steel into its head which has a code on it  
 (9) and using a metal detector you can tell whether or not - even  
 (10) if you can't see the fin clip you can tell whether or not the  
 (11) fish has the stainless steel in its head They were able to  
 (12) collect fish in marine environment and tell whether they came  
 (13) out of a hatchery or not Not all the hatchery fish are  
 (14) tagged so they only judged the fish that were clipped and that  
 (15) had the stainless steel in their head to be hatchery fish  
 (16) So the growth studies the depression in growth was  
 (17) measured in 1989 These were the fish that were heading out  
 (18) through the Southwestern District all the fish most of the  
 (19) fish in Prince William Sound as juveniles when they migrate  
 (20) through the Gulf of Alaska go out through the Southwestern  
 (21) District out through the areas where the oil was deposited in  
 (22) Prince William Sound The growth depression was observed for  
 (23) both wild fish and for hatchery fish  
 (24) Q Let's just look at that for a minute If I may on  
 (25) Exhibit 1161 the - could I have that little pen that light

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- (1) pen? Well I don't think you can see it  
 (2) Southwest there's been a lot of testimony about the heavy  
 (3) oiling in these areas of Evans Island LaTouche Island and so  
 (4) on and then going on down here what did you say about the  
 (5) fish  
 (6) migrating? They migrated through - is this the area you call  
 (7) Southwest?  
 (8) A Yes that's the Southwestern District of Prince William  
 (9) Sound and generally you can see that the area there is sort  
 (10) of like a natural funnel for the - for the fish We know from  
 (11) tagging studies that were done by the federal government back  
 (12) in the 1920s and from oceanographic studies that the flow  
 (13) patterns in Prince William Sound generally allow the water to  
 (14) exit through the Southwestern District It'll come in it'll  
 (15) come in from the - from the direction of the south and from  
 (16) the direction of the east move up into the Sound and then  
 (17) drop out through the Southwestern District  
 (18) So generally that's the pattern that the juveniles  
 (19) follow They go out when they get big enough with the ocean  
 (20) currents which run out through the Southwestern District and  
 (21) when they return correspondingly as adults they will come  
 (22) back in on that cue come back in on that same signal following  
 (23) those currents right back in when they went out as they were  
 (24) young fish  
 (25) Q I put down below here 1161 which is sort of a  
 continuation It's not the same scale but it's sort of a

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- (1) continuation of the same area isn't that right?
- (2) A That's the - that's the southern end of the western margin
- (3) of Prince William Sound
- (4) Q I'm not going to stick my head in there. So even if there
- (5) were pink - even with the pink salmon up in the upper area up
- (6) here in Prince William Sound they're going to have to go when
- (7) they - when they go out to sea to the Gulf of Alaska they're
- (8) going to go through this this area here that is in the
- (9) Southwest?
- (10) A Yes they - in 1989 they - just about all of the
- (11) juveniles that went out of Prince William Sound hatchery and
- (12) wild went out through the areas that had been oiled and/or
- (13) steam cleaned sandblasted sort of in those areas
- (14) Q Now what did the - you mentioned this - the steam
- (15) cleaning What did the steam cleaning do as far as - it
- (16) cleaned the rocks up and so on What did that do if anything
- (17) to pink salmon in Prince William Sound?
- (18) A The - the effects of the of the cleanup itself have not
- (19) been directly measured However we can look at what the
- (20) cleanup did and that is that it removed the plants and the
- (21) animals from the nearshore environment and these are the
- (22) plants and animals that the pink salmon depend on to make
- (23) their
- (24) living
- (25) These are the areas that have their food So that if we
- (26) look at the depression in growth certainly having less food

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- (1) would - would have an impact on that So that in general
- (2) the nearshore environment was altered It was abnormal in
- (3) places as a result of both the oiling and the cleanup of the
- (4) oil
- (5) Q Now you mentioned this business about the - the findings
- (6) of the Trustee Council that the reduced - that there was
- (7) reduced growth in these salmon and what - what does that do
- (8) to the ability of the salmon to survive later on?
- (9) MR COOPER Your Honor I think we've just heard a
- (10) fair amount of detail on this already
- (11) THE COURT Yeah I thought we had
- (12) BY MR STOLL
- (13) Q Could we look at Exhibit 343 please? - Excuse me 339
- (14) yeah 339
- (15) Okay are you familiar with this chart Dr Mundy?
- (16) A Yes
- (17) Q What does this show?
- (18) A This graphic again taking a look at what's - what's
- (19) being shown here on this side of the - of the graphic we
- (20) have millions of pink salmon This is basically a five
- (21) million ten million 15 million level up here on the side and
- (22) then down here we have two different categories One is the
- (23) actual 1993 pink salmon returns to Prince William Sound This
- (24) blue area here is the hatchery portion of that and then up at
- (25) the top the brown portion is the natural production for that

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- (1) Over in the 1993 forecast that was made by Alaska
- (2) Department of Fish and Game we have the same two
- (3) categories
- (4) The blue is the - is the expected hatchery return and the
- (5) brown is what was expected to return from natural - natural
- (6) production
- (7) So I emphasize the fact that the small box over here is
- (8) a - is a number that's counted in terms of fish coming back
- (9) being caught or going into the escapement This number over
- (10) here this is a projection that's a statistical expectation of
- (11) what the pink salmon run size is going to be in terms of
- (12) hatchery and natural fish
- (13) Q Now when you were the chief scientist for the Alaska
- (14) Department of Fish and Game did you - were you involved with
- (15) these - this forecasting and reviewing forecasting and so on?
- (16) A Yes
- (17) Q And are these forecasts typically accurate?
- (18) A The forecasts are typically highly accurate However the
- (19) public's conception of accuracy I think is more like
- (20) precision The forecasts the forecasts are accurate in that
- (21) they are a good representation usually of the components that
- (22) go into making the salmon run We have counts of the - of how
- (23) many parents there were We have often counts of eggs and
- (24) the
- (25) numbers of smolts produced and those kinds of things but
- (26) because of environmental variability we have an error in our
- (27) forecast We get substantial amounts of error in these

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- (1) forecasts so the accuracy is - is how good a job you've done
- (2) of making the estimate where you put in the - all the best
- (3) data and all the right kinds of data but the precision is how
- (4) far you can be off and because of - we're subject to
- (5) variation of the weather just like farmers are and other people
- (6) who depend on natural resources so these errors are
- (7) sometimes
- (8) pretty imprecise
- (9) Q Okay Now do you attribute the difference between the
- (10) actual run size in 1993 that a substantial factor to that
- (11) difference between the actual run size and the 1993 forecast
- (12) was the Exxon Valdez oil spill
- (13) MR COOPER Objection Your Honor could we have some
- (14) additional foundation on this? We're simply looking at a
- (15) forecast and actual I don't know that there's been any
- (16) foundation that the witness has studied this problem that he
- (17) has any reasoning here for coming up with an opinion on this
- (18) THE COURT I'll let him answer the question
- (19) counsel You can go into detail later
- (20) BY MR STOLL
- (21) Q Do you think that the Exxon Valdez oil spill was a
- (22) substantial factor in the run size being a fraction of the
- (23) forecast in 1993?
- (24) A Yes
- (25) Q And would you explain to the jury the basis of your
- (26) conclusion?

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(1) A Okay I want to make it clear from the beginning that it s  
 (2) not my opinion that the - the oil spill caused this large  
 (3) negative deviation in the run size here The 1993 pink salmon  
 (4) run in Prince William Sound was substantially failure I mean  
 (5) it was - it was a real sharp decrease in the amount of salmon  
 (6) that should have come a very very sharp decrease in the  
 (7) survival rates And so in looking at the - at the forecast  
 (8) models and trying to make sure that we had the right pieces of  
 (9) information in those forecast models to do a good job to make  
 (10) an accurate estimate as accurate estimate as we possibly  
 (11) could the - all of the pieces at least all of the pieces we  
 (12) could afford to measure were there yet the error in the model  
 (13) was much much bigger than it should have been  
 (14) There were unaccounted for what we call statistics We  
 (15) call that unaccounted for sources of variability and this is  
 (16) what we watch for very very carefully because that means we  
 (17) don t have all of the important factors that go into making up  
 (18) the forecast actually in the model I mean it s a forecast  
 (19) We re missing something Something is not accounted for in  
 (20) the model  
 (21) So the fact that we - we had this - this also hurt in  
 (22) 1992 this was sort of a knife edged decrease We had  
 (23) excellent ones in 1990 and 1991 which gave us every  
 (24) expectation that this should be continued in 1992 and 1993 but  
 (25) it was as if someone had flipped a switch The productivity

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(1) just plummeted just plunged and immediately Managers  
 would  
 (2) get very nervous because that creates an awful lot of  
 (3) uncertainty about what we know about forecasting salmon runs  
 (4) when something turns around that fast and we re not - we re  
 (5) not predicting it We re not ahead of it then that means  
 (6) there s something we left out  
 (7) And I would say that because the oil spill in 1989 was such  
 (8) a serious insult to the environment such a serious shock to  
 (9) the environment that that s something that would have to be  
 (10) considered as a substantial factor something of concern  
 (11) particularly given the fact that we have the links to pink  
 (12) salmon egg mortality that have given us some indication that  
 (13) the effects of this oil spill didn t evaporate in 1989 but  
 (14) we re still having some impact on the survival of the pink  
 (15) salmon in Prince William Sound even - even to this day  
 (16) Q And if you had these big runs in 1990 and 1991 why - why  
 (17) can t you conclude from that that everything is - the effect  
 (18) of the oil spill is over? I mean isn t that inconsistent with  
 (19) this conclusion that you reached about the 1993 run?  
 (20) A Well I m hesitating a little bit because looking at a -  
 (21) at a big run of pink salmon in 1990 the year following the oil  
 (22) spill and saying oh look there weren t any problems created  
 (23) by the oil spill this is - in my mind statistically not a  
 (24) fair comparison The - it s as if a person has their house  
 (25) burned down and the insurance adjustor comes out and looks  
 at

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(1) the other houses in the neighborhood and finds that the other  
 (2) houses in the neighborhood are in good condition and then  
 they  
 (3) say well gee everybody else is doing fine I guess you don t  
 (4) need any money  
 (5) We had a very large production of pink salmon in 1989  
 (6) Some of those we know that some of those salmon were killed  
 by  
 (7) the effects of the oil spill but not all of them obviously  
 (8) only part of them were killed by the effects of the oil spill  
 (9) and so we got a big return We got a return - the return  
 (10) should have been bigger  
 (11) Parts of the Sound we found that the - one of the big  
 (12) impacts was in the spawning grounds and not all the spawning  
 (13) grounds were oiled in fact only a relatively small portion of  
 (14) the spawning grounds were oiled but by looking and pulling out  
 (15) big catch figures and thinking look we got big catches big  
 (16) catches of salmon there aren t any problems in the  
 environment  
 (17) where the fish are being produced is just not - just not  
 (18) appropriate in my opinion  
 (19) Q And what - what do you - do you have an opinion or have  
 (20) you reached a conclusion Dr Mundy as to what effect if any  
 (21) the oil spill will have as a factor in pink salmon in the  
 (22) future years for Prince William Sound?  
 (23) A Well again I - I can t - other than saying that I  
 (24) think that the oil spill - the oil spill effects are something  
 (25) that we need to continue to study that we need to continue to

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(1) watch very very carefully I can t say with any certainty what  
 (2) the impacts of the oil in the future will be except that we  
 (3) need to continue to monitor this and make sure that we don t  
 (4) let anything any effect of the oil spill that we may not  
 (5) understand or may not now fully be able to see get by us as  
 (6) managers and leave us in a situation where we won t be able to  
 (7) properly manage the resources for the State of Alaska in the  
 (8) future  
 (9) Q Now I d like to turn your attention to Kodiak and could  
 (10) we have exhibit 2305?  
 (11) MR COOPER Your Honor could I see that before we  
 (12) introduce that?  
 (13) THE COURT Sure  
 (14) MR STOLL Sure  
 (15) MR COOPER That s fine Your Honor it s a map  
 (16) BY MR STOLL  
 (17) Q Now you re familiar with the - with Kodiak as well?  
 (18) This is the management area map?  
 (19) A Yes I m generally familiar with it  
 (20) Q Okay And the - is it correct that the predominant most  
 (21) valuable salmon species there from a commercial standpoint at  
 (22) least is red salmon?  
 (23) A Yes that s correct  
 (24) Q And is it also correct and I ve got - let me put this  
 (25) thing in a little better map actually

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- (1) This area in here this is called Red Lake is that  
 (2) correct?  
 (3) A Yes that's right  
 (4) Q And then the river system that Red Lake where it gets  
 (5) its - where the salmon come from into Red Lake there's been  
 (6) some testimony yesterday about Red Lake that's called the  
 (7) Ayakulik River system?  
 (8) A Yes  
 (9) Q And that's in this area here?  
 (10) A Yes  
 (11) Q And is that a - could you tell the jury please how  
 (12) significant or insignificant that river system is to red salmon  
 (13) in Kodiak?  
 (14) A The Kodiak Island has a lot of lakes that produce sockeye  
 (15) salmon In fact it's - Kodiak is a textbook example that's  
 (16) used in all of the fisheries texts where fisheries scientists  
 (17) are trained and particularly Karluk Lake is the one that's  
 (18) very well known It's internationally famous for its sockeye  
 (19) production and there are four principal sockeye producing  
 (20) lakes on Kodiak four big lakes and lots of smaller lakes and  
 (21) Red Lake is considered to be one of the - one of the four big  
 (22) sockeye producing lakes on Kodiak Island  
 (23) Q And in 1989 none of the commercial fishermen were able to  
 (24) fish because of closures isn't that correct?  
 (25) A There were closures and there was no commercial harvest in

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- (1) overescapement situation we know that there's a risk - any  
 (2) overescapement situation - of damaging a lake system and we  
 (3) try to avoid that as best we can  
 (4) But in this case we wanted - we saw such a big escapement  
 (5) and we had the opportunity so we went and actually tried to  
 (6) study the effects and to measure the effects of the  
 (7) overescapement along this lake We found generally that the  
 (8) food availability declined in the lake because a very large  
 (9) number of fry were produced and there apparently was no  
 problem  
 (10) in producing fry There were plenty of places apparently for  
 (11) the fish to spawn lots of fry were produced and the  
 (12) measurements that were taken in Red Lake shows that the  
 amounts  
 (13) of food were reduced  
 (14) The growth and survival of the young fish from the 1989  
 (15) brood year was also reduced and subsequently the number of  
 (16) smolts - also something happened here that was - that does  
 (17) happen in sockeye lakes we've seen it before but up here  
 would  
 (18) also be an effect of the overescapement Instead of staying in  
 (19) the lake for one year and going out the fish didn't get big  
 (20) enough that first year they didn't pass go they didn't get to  
 (21) collect \$200 They had to go back and spend another winter in  
 (22) the lake and of course it's the winter when they die and -  
 (23) they don't have fat reserves so they start dying So most of  
 (24) the fish of the 1989 brood year stayed over an extra winter in  
 (25) the lake and went out as two year olds instead of

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- (1) that - that area  
 (2) Q And are you familiar with what happened with escapement  
 (3) into the Red Lake area?  
 (4) A Yes  
 (5) Q What was that?  
 (6) A The escapement goal in the Red Lake is about 250 000  
 (7) Generally managers manage on a range The range there is  
 (8) 200 000 to 300 000 that's what they would like to achieve and  
 (9) the escapement into Red Lake in 1989 was more than three  
 times  
 (10) the number that they wanted - it was about 760 000 sockeye  
 (11) salmon in 1989 - as a result of the management program not  
 (12) being able to use the fishery to reduce the escapement  
 (13) MR STOLL Could we have Exhibit 333 on the monitor  
 (14) please?  
 (15) BY MR STOLL  
 (16) Q Now is this - Dr Mundy is this what you were talking  
 (17) about with respect to the escapement in the Red Lake area?  
 (18) A Yes  
 (19) Q And as a consequence of that overescapement what - what  
 (20) was the consequence of that?  
 (21) A Well the - in the case of this overescapement studies  
 (22) were initiated to look at the amount of food and the types of  
 (23) food that were available in the - in the Red Lake for young  
 (24) sockeye and also studies were undertaken to measure the  
 number  
 (25) of smolts coming out of the lake When we have an

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- (1) one year olds  
 (2) But now this being 1994 we have the - the rest of the  
 (3) story We measure these effects in the lakes We saw the  
 (4) changes in the production of sockeye salmon in Red Lake from  
 (5) the 1989 escapement and now we have a chance to confirm  
 that  
 (6) because the - of the timing of the Red Lake run It's more  
 (7) than half over now and the escapement past the weir is about  
 (8) 211 000 The fishery hasn't fished at all  
 (9) They - in talking to the management biologists this week  
 (10) they would expect little or no fishing there this season so  
 (11) we've seen that it's not just a matter of making a scientific  
 (12) estimate or making an educated guess We had the  
 (13) overescapement event in 1989 we measured reductions in the  
 (14) food base in the lake we measured changes in the numbers of  
 (15) smolts that were produced and the ages of those smolts and  
 now  
 (16) the run has come back It's - a lot of the run has come  
 (17) back  
 (18) We won't know for another year what the full story is but  
 (19) the - generally the prediction was made on the basis of the  
 (20) 1989 escapement numbers have been realized for - for this  
 (21) year for 1994 and so I can say with a great deal of  
 (22) confidence that the impact of the overescapement in 1989 in  
 Red  
 (23) Lake was clearly negative  
 (24) Q Why do these - maybe you explained this but I didn't  
 (25) quite get it Why do these salmon the young fry why do they

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- (1) stay over a year in Red Lake?  
 (2) A Well one of the effects that they observed during 1990 was  
 (3) reduced growth They pushed - there were already fish of  
 (4) course in the lake from the 1988 escapement The young fish  
 (5) had to compete with bigger fish and there were an awful lot of  
 (6) young fish small fry in the lake that year So while they  
 (7) didn't die outright they didn't grow very well at all and  
 (8) when they don't get enough growth in the first year they re  
 (9) not big enough to go to sea so they stay in the lake an  
 (10) extra - an extra winter and feed again the next spring  
 (11) Q Is - so when there wasn't enough food that's when they  
 (12) died during the winter?  
 (13) A Well they - it's not the - there's generally not much  
 (14) food for them during the winter It's because they didn't get  
 (15) enough food in the summer so they didn't establish the proper  
 (16) fat reserves so they didn't make it  
 (17) Q I see And what is the - what is the run size typically  
 (18) in this - before there was an oil spill what's the run size  
 (19) in this - in the Red Lake system?  
 (20) A Oh generally they count on a run of about 750 000 sockeye  
 (21) salmon They've got an escapement goal of 250 000 so that  
 (22) means that the fleet gets to harvest an average of about  
 (23) 500 000 sockeye salmon a year  
 (24) Q Now you're saying being halfway through what would  
 (25) typically be the season there's been no opening because

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- (1) there's no fish?  
 (2) A That's correct There hadn't been sufficient fish to have  
 (3) both escapements and the harvest The top priority in  
 (4) fisheries salmon fisheries management in Alaska is to provide  
 (5) escapement to the streams I believe that that's the reason  
 (6) that Alaska has been so successful in managing its salmon  
 (7) fisheries when salmon fisheries in other states are really  
 (8) depressed and in bad shape  
 (9) But in Alaska by law the escapement has top priority and  
 (10) until the escapements are attained until they have reasonable  
 (11) certainty that they're going to get the right number of fish in  
 (12) the spawning ground they won't permit any commercial  
 (13) fishing  
 (14) So in this case they're still - they're at the bottom of the  
 (15) escapement goal range They would like to be somewhere in  
 (16) the  
 (17) middle of the escapement goal range before they allow any  
 (18) fishing at all  
 (19) Q So what is the conclusion as to whether there will be any  
 (20) fish this year other than those available for the  
 (21) overescapement?  
 (22) A The management biologist's opinion - and I share his  
 (23) opinion based on my own look at the data - is that the  
 (24) chances of a fishery are - are low Not saying there may not  
 (25) be any fishing but if there is any fishing there's certainly  
 (26) not going to be a catch of 500 000 which is their average  
 (27) catch So clearly this - this 1989 overescapement has done

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- (1) damage and also that damage is going to be propagated into  
 the  
 (2) future  
 (3) Q Why is that Doctor?  
 (4) A Well because you're - if you don't have the proper  
 (5) escapement goal if they don't make what they - they want to  
 (6) get in terms of their escapement then they won't have the  
 (7) production in the future And the - and consequently that's  
 (8) why we try to avoid overescapement situations is because it can  
 (9) be those damages can be sustained for fairly long periods  
 (10) of time  
 (11) Q So you see the effects of the oil spill on the red salmon  
 (12) in Kodiak as continuing in the future?  
 (13) A Yes  
 (14) Q Now in Kodiak in the early 1990s there were some record or  
 (15) near record red salmon harvests were there not?  
 (16) A Yes  
 (17) Q And why - why if that happened why isn't everything okay  
 (18) and this problem in 1994 and that you're - and that is  
 (19) forecasted for future years why isn't that inconsistent?  
 (20) A Well clearly not all of the - the lakes on Kodiak not  
 (21) all the sockeye salmon lakes on Kodiak received  
 overescapements  
 (22) in 1989 Red Lake and other lake Akalura Lake which is one  
 (23) of the smaller sockeye systems received overescapements and  
 (24) the other systems were apparently in pretty good shape  
 (25) apparently producing fairly well so it's not surprising to me

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- (1) that we've gotten some - some very good harvests in Kodiak in  
 (2) sockeye Sockeye in general in Alaska are doing very well  
 (3) now Conditions in the ocean seem to be really almost perfect  
 (4) for sockeye salmon and we're getting record runs and near  
 (5) record runs year after year and particularly in western Alaska  
 (6) and Kodiak area  
 (7) The damages that - that were done on Kodiak to sockeye  
 (8) were clearest in Red Lake one of the major sockeye producing  
 (9) systems and were clearest for that 1989 brood year We don't  
 (10) yet fully know what effects this 1989 brood year might have had  
 (11) on the 1990 escapement when the fish came into this lake  
 (12) system where the food's been reduced We have some  
 indication  
 (13) that it's recovering and we're optimistic that the lake is  
 (14) beginning to recover but there isn't any clear evidence that  
 (15) that's the case at this time  
 (16) Q So there may have been - the sockeye salmon have I think  
 (17) you said depending on how long they're in the lakes or how  
 (18) long they're at sea it could be four to six year cycle?  
 (19) A Yes In the catches in any given year are usually made up  
 (20) of four year old five year old and six year old fishes We  
 (21) say that - we make an approximation say well most of these  
 (22) fish are five years old but in most sockeye populations you  
 (23) know 50 percent or more of them could be four year olds or  
 (24) six year olds It's just the dominant age class or the most  
 (25) common fish in the catch would be five years old usually

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- (1) Q So if there was a very large run in 1992 for instance  
 (2) three years after the 89 oil spill that wouldn't  
 (3) necessarily - would that have any - would any of those red  
 (4) salmon come in '92 would they be from the '89 eggs?  
 (5) A Practically none of them Very rarely  
 (6) Q And relatively few of the '93?  
 (7) A Yes  
 (8) Q Now yesterday counsel showed a - a chart which is - and  
 (9) I'd like to have it put up on the board 4650 - DX4653  
 (10) MR DIAMOND Your Honor I believe Mr Stoll raised  
 (11) an objection to the admission of this document yesterday If  
 (12) he objects to its admission It ought not to be published to  
 (13) the jury  
 (14) MR STOLL I want to ask him a question about a  
 (15) factor on this though  
 (16) THE COURT You can ask him  
 (17) BY MR STOLL  
 (18) Q Dr Mundy if these statistics are correct that are shown  
 (19) on this why doesn't this indicate - if there was a large  
 (20) overescapement in 1980 why doesn't this indicate that  
 (21) everything should be fine for the future with respect to the  
 (22) overescapement problem that happened on Kodiak -  
 (23) A Okay  
 (24) Q - in 1989?  
 (25) A Yes In looking - this is not the - not the kind of data

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- (1) that fisheries scientist would use to evaluate whether an  
 (2) overescapement has had an impact The - you can look at  
 (3) this - you can look at the - at the 1980 overescapement  
 (4) which is right here and then you can move up here five years  
 (5) in the future and you can say okay this 1985 run was the  
 (6) result of this 1980 escapement and that's - but it's also the  
 (7) result of the 1979 escapement and the 1981 escapement and  
 (8) maybe  
 (9) even a little bit of the 1982 escapement  
 (10) So if we want to tell whether or not the 1980 run was -  
 (11) this overescapement impacted that productivity of that system  
 (12) we have to go to the 1985 catch and look at the age of the  
 (13) fish This is why salmon biologists run around plucking scales  
 (14) off the sides of fish And reading scales we read the scales  
 (15) like tree rings are read to determine the age of a tree and to  
 (16) try to figure out what brood year these fish came from So  
 (17) basically laying out catch data and trying to - trying to  
 (18) figure out whether you've had increased productivity  
 (19) decreased  
 (20) productivity or any effect at all is not - is not really  
 (21) appropriate scientifically The - so I'll leave it there  
 (22) Q So even if these figures - I don't know whether they're  
 (23) right or wrong but even if these figures on this bar chart are  
 (24) accurate in terms of what the escapement was you don't think  
 (25) this is relevant to your analysis for the '89 - the effects of  
 (26) the oil spill on the 1989 escapement and the subsequent years?  
 (27) A I - well first of all it's just the wrong kind of data

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- (1) If I were going to explain to you or try to tell you how an  
 (2) escapement had impacted productivity or had helped or  
 (3) damaged a  
 (4) system I wouldn't bring this kind of data to you I would  
 (5) bring brood year data or I'd show you how many fish the 1980  
 (6) escapement produced The other something is that as I  
 (7) previously indicated overescapement may or may not damage  
 (8) a  
 (9) system  
 (10) We believe that it's inappropriate in terms of managing  
 (11) the State of Alaska's resources to take a gamble on an  
 (12) overescapement We believe that usually what happens when  
 (13) you  
 (14) have an overescapement is lower productivity loss of future  
 (15) production therefore loss of income for the people who depend  
 (16) on this fishery so it's just the kind of risk that we don't  
 (17) take Sometimes gambles pay off Sometimes you take a risk  
 (18) and it - it pays off for you but when the odds are bad  
 (19) and you're managing other people's money you just don't take  
 (20) those kinds - those kinds of risks  
 (21) So while it may or may not be the case that the 1980  
 (22) overescapement produced well or didn't produce well I really  
 (23) didn't study - study that issue The issue at hand here is  
 (24) whether or not 1989 escapement produced poorly or produced  
 (25) well and we are virtually at this time certain that it  
 (26) produced poorly  
 (27) We don't have all the of the returns from the 1989 brood  
 (28) year yet Those won't be complete until next year however we

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- (1) have most of the returns from the 1989 brood year plus the  
 (2) studies in the lake that show that the food was reduced Plus  
 (3) the studies have showed that the number of smolt that came  
 (4) down  
 (5) the river as a result of that escapement was much lower than it  
 (6) should have been from that number of fish escaping  
 (7) So we have all those pieces of information put together at  
 (8) this time so we can say what 1989 overescapement did and it  
 (9) was what we would have expected it to be and that is it  
 (10) reduced the production It was not what - what the managers  
 (11) would have done with that system had they had all of their  
 (12) harvest tools available to them in the 1989 system  
 (13) Q So I'd like to review with you also another chart that  
 (14) counsel used yesterday and this pertains to Prince William  
 (15) Sound and that is Exhibit DX15455  
 (16) Can we have that?  
 (17) Now I don't know again whether these statistics are  
 (18) right or wrong but let's assume that they are right for the  
 (19) purpose of this question  
 (20) What's the significance if any Dr Mundy as to these  
 (21) figures for the commercial harvest and these figures for  
 (22) subsistence harvests?  
 (23) A The significance with respect to?  
 (24) Q To the oil spill I mean what about the significance the  
 (25) interrelationship of these two subsistence harvest statistics  
 (26) and commercial harvest statistics?

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- (1) A I don't believe that this has any significance  
 (2) Q Why is that? I mean it looks like commercial harvest is  
 (3) going up subsistence harvest is going down How - or vice  
 (4) versa  
 (5) A Well first of all these are two different kinds of data  
 (6) Fundamentally these - these data can't be compared because  
 (7) in the case of commercial harvest this is fish ticket  
 (8) information and the accuracy of this information is a matter  
 (9) of state law  
 (10) If the processors don't fill out their tickets and if  
 (11) their tickets on spot checks are found to be inaccurate they  
 (12) can be shut down They can be arrested and their workers can  
 (13) be put on the sidewalk so these - this commercial catch  
 (14) information is also used for tax purposes and is very - is as  
 (15) accurate as human recordkeeping can get to be  
 (16) Q Now let me - let's explain that a little bit how these  
 (17) statistics for the commercial harvest how that - how those  
 (18) are reported I don't think the jury's - may not be - they  
 (19) all may not be familiar with that  
 (20) A At the time the fish - the fish change hands paperwork  
 (21) has to be done by law  
 (22) Q You mean the fish changing hands from the fishermen to the  
 (23) processor?  
 (24) A That's correct The paperwork has to be done and the -  
 (25) and that has to be on record That has to be there if the -

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- (1) if the troopers come or any - any agent of the State comes it  
 (2) has to be there and it has to be presented These fish  
 (3) tickets or copies of them are regularly collected by the  
 (4) Alaska Fish & Game staff and they're tallied through the  
 (5) season to get an idea of what level of harvest is being taken  
 (6) so they can manage the escapement  
 (7) They're all - the fish tickets are entered on a computer  
 (8) Spot checks are run to make sure that - sometimes mistakes are  
 (9) made in reporting it We can by looking at average weight of  
 (10) the fish you know if we find a pink salmon landing that has  
 (11) an average of 300 pounds of fish we know that pink salmon are  
 (12) not that big and we can catch those kinds of clerical errors on  
 (13) the ticket Those kinds of commercial errors are legally  
 (14) checked and there are legal penalties stiff legal penalties  
 (15) for failing to comply with recordkeeping  
 (16) Q What about the - now you learned that in your clearance  
 (17) you were the chief scientist for the Alaska Department of Fish  
 (18) and Game?  
 (19) A Well my total association with the Department was 11  
 (20) years Before I was chief fisheries scientist I was a  
 (21) contractor for the - for the State of Alaska I worked as a  
 (22) biologist in a lot of different parts of the state on contract  
 (23) to Alaska Department of Fish and Game  
 (24) Q All right And what about the statistics that go - that  
 (25) the Department of Fish and Game collect on subsistence

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- (1) harvests? Could you tell the jury about -  
 (2) A Well  
 (3) Q - how those are collected?  
 (4) A Surely During my time with the Department I spent quite  
 (5) a bit of time in rural Alaska where subsistence harvest is very  
 (6) important to local communities and I had occasion to - to see  
 (7) how the subsistence data are collected and judge the quality of  
 (8) those data for myself  
 (9) Generally there are various methods involved in collecting  
 (10) subsistence data but mostly they rely on voluntary responses  
 (11) and recollections of the individuals involved and are not  
 (12) necessarily a representation of the actual number of fish taken  
 (13) by the people for subsistence use  
 (14) There are two primary methods of collecting subsistence  
 (15) data One is called a subsistence calendar That's when they  
 (16) give you - when you apply for a subsistence permit they give  
 (17) you a calendar You're supposed to write down on the calendar  
 (18) how many of each kind of fish you took It's a voluntary  
 (19) thing and people are supposed to write down what they took  
 (20) and  
 (21) sometimes they may forget to record the information In any  
 (22) event there's a survey method where the government mails you  
 (23) a  
 (24) postcard and you're supposed to write down on the postcard  
 (25) how  
 (26) many you caught and the survey comes back  
 (27) But in general the quality of subsistence data survey  
 (28) data is - just sort of gives a general indication of the level

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- (1) of use and if you look at subsistence data you can tell how  
 (2) important subsistence use is in different parts of the state  
 (3) and what species are really important because generally not  
 (4) all species of salmon are equally important to people in  
 (5) subsistence cultures Generally there'll be one species that  
 (6) they really rely upon and the other species are less important  
 (7) so it gives the State an idea of which resources are really  
 (8) important to subsistence economies and which are not  
 (9) But it's not used - it's not the same quality nor is it  
 (10) ever used for the same purposes laying a - putting a graph of  
 (11) subsistence harvest next to a graph of commercial harvest is  
 (12) again in my opinion just not a practice that's appropriate  
 (13) Q And what about the numbers here? I mean the numbers -  
 (14) this refers to number of fish in with commercial harvest over  
 (15) here we've got tens of millions of fish and on the  
 (16) subsistence side you've got hundreds I guess it gets up to  
 (17) 2 000 for the whole Southwest and Tatitlek area but -  
 (18) A Well yeah Well again I have not reviewed this I have  
 (19) not reviewed this particular - this particular data I - I  
 (20) just can't comment on it  
 (21) Q And is there also a problem with the reliability of the  
 (22) data in other areas of the state of Alaska as far as  
 (23) subsistence figures are concerned?  
 (24) A Yes The - the comments I gave you were generally to  
 (25) refer to statewide subsistence data collection These

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- (1) practices are - are used in various parts of the state They  
 (2) vary from locality to locality depending on the nature of the  
 (3) community and the nature of the resources that are harvested  
 (4) but generally they use subsistence calendars and they use  
 (5) survey methods to try to get a general idea of what kind of  
 (6) fish people are using  
 (7) Q And is there any question in your mind Dr Mundy that  
 (8) there was a - that the substantial factor for these problems  
 (9) with the red salmon that you ve described coming back in 1994  
 (10) in Kodiak or the problems with the pink salmon in 1993 in  
 (11) Prince William Sound was a substantial factor was the Exxon  
 (12) Valdez oil spill?  
 (13) A No  
 (14) MR STOLL That s all  
 (15) THE COURT Counsel it s been about an hour do you  
 (16) want to take a break before you cross examine?  
 (17) MR COOPER Whatever the Court prefers That s  
 (18) fine  
 (19) MR STOLL Oh Your Honor could I ask one more  
 (20) question on this?  
 (21) THE COURT You want to take a break before you ask  
 (22) the question?  
 (23) MR STOLL No I ll ask the question  
 (24) BY MR STOLL  
 (25) Q Was there also an effect of the oil spill on dolly varden

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- (1) probably identify myself as Bert Cooper one of the attorneys  
 (2) for Exxon Corporation  
 (3) How are you Dr Mundy?  
 (4) A Just fine Mr Cooper  
 (5) Q I d like to start off on a subject that you left - or that  
 (6) you dealt with at the end and that has to do with subsistence  
 (7) Now isn t it the case that these numbers concerning  
 (8) subsistence that are gathered by whatever means - I guess you  
 (9) described that means for us those numbers are utilized in -  
 (10) they re at least set forth in the official ADF&G Annual Fin  
 (11) Fish Management Reports are they nct?  
 (12) A Yes  
 (13) Q And these are the numbers that are collected the way that  
 (14) you have suggested?  
 (15) A Yes  
 (16) Q And they re not only presented in that report but the  
 (17) ADF&G draws conclusions based upon those numbers?  
 (18) A Yes  
 (19) Q And when the ADF&G does that the ADF&G in these official  
 (20) reports doesn t say or doesn t put a footnote there that says  
 (21) hey don t rely upon these numbers they don t mean anything?  
 (22) A Well they - they don t need to Mr Cooper  
 (23) Q Could you answer that question first? Do they or do they  
 (24) not put that kind of a footnote?  
 (25) A Have I seen a footnote?

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- (1) and cutthroat trout in Prince William Sound?  
 (2) A Yes  
 (3) MR COOPER Your Honor I d object to this I don t  
 (4) believe that this is contained in the expert witness report  
 (5) anywhere  
 (6) MR STOLL Yes it S  
 (7) MR COOPER I may be mistaken  
 (8) THE COURT You can consult  
 (9) MR COOPER But that s my recollection  
 (10) MR COOPER If we could take a break Your Honor we  
 (11) could resolve that problem on the break  
 (12) THE COURT I was about to suggest that  
 (13) THE CLERK Please rise This court stands in  
 (14) recess  
 (15) (Jury out at 9 48 a m )  
 (16) (Recess from 9 48 a m to 10 07 a m )  
 (17) (Jury in at 10 07 a m )  
 (18) THE CLERK Please rise This court now resumes its  
 (19) session  
 (20) Please be seated  
 (21) MR STOLL Your Honor we re completed  
 (22) CROSS EXAMINATION OF PHILLIP R MUNDY  
 (23) BY MR COOPER  
 (24) Q Dr Mundy I don t need to introduce myself to you but I  
 (25) don t believe I ve been introduced to the jury so I should

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- (1) Q Have you seen any kind of qualification in those Fin Fish  
 (2) Management Reports that says this information is reliable -  
 (3) unreliable?  
 (4) A No  
 (5) Q And in fact let me show you a piece of Exhibit DX3812  
 (6) MR COOPER Which I believe is already admitted into  
 (7) evidence Your Honor It s the Alaska Department of Fish and  
 (8) Game Division of Commercial Fisheries Annual Fin Fish  
 (9) Management Report for 1989 And that I believe is the cover  
 (10) page  
 (11) BY MR COOPER  
 (12) Q You recognize - you ve seen these documents a number of  
 (13) times have you not Dr Mundy?  
 (14) A Oh yes  
 (15) Q And area biologist James Brady is he the one that is  
 (16) basically responsible for pulling this information together?  
 (17) A James Brady  
 (18) Q Was?  
 (19) A Was the area management biologist He s no longer the area  
 (20) management biologist  
 (21) Q He was the competent individual?  
 (22) A Yes  
 (23) Q And if we go to page 30 of that document there s a section  
 (24) that deals with Prince William Sound subsistence fisheries Do  
 (25) you see that? I can zoom in on that a little bit

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- (1) A It's illegible from where I am I can't - I can't read  
 (2) that Okay now I can read it  
 (3) Q And in that section what follows is generally a discussion  
 (4) of the subsistence catch information isn't that right?  
 (5) A Yes  
 (6) THE COURT Counsel can I ask you a question here?  
 (7) DX3812 pages 28 and 31 are the only admitted pages of this  
 (8) document that's correct  
 (9) MR COOPER I'm sorry Your Honor  
 (10) THE COURT Pages 28 and 31 are the only admitted  
 (11) pages of this document  
 (12) MS SMITH That is correct Your Honor  
 (13) THE COURT Are we talking about 28 and 31?  
 (14) MR COOPER No Your Honor we are talking about 30  
 (15) and 31 I'm sorry I didn't realize they were not admitted  
 (16) MS SMITH 31 is admitted  
 (17) THE COURT And 28 is admitted  
 (18) MS SMITH And 28  
 (19) MR COOPER I would ask that 30 be admitted also  
 (20) Your Honor  
 (21) (Exhibit DX3812 (p 30) offered)  
 (22) THE COURT Any objection counsel?  
 (23) MR STOLL No Your Honor  
 (24) THE COURT Okay 30 is admitted also  
 (25) (Exhibit DX3812 (p 30) received)

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- (1) BY MR COOPER  
 (2) Q Now in this official ADF&G report they point out numbers  
 (3) of fish in the subsistence catch true? For instance 454 fish  
 (4) here 339 of which were reds you see that?  
 (5) A Yes  
 (6) Q And they go on with other information like that and then  
 (7) they say at the end of that section the overall even though  
 (8) these - or even though use areas were greatly restricted and  
 (9) changed total catches were not affected and subsistence  
 (10) resource use increased for the two areas Do you see that?  
 (11) A Well actually what it says is - it says total catches  
 (12) were not affected Okay that's the language they used  
 (13) Q And the second part of it the one that I guess I'm most  
 (14) interested in is and subsistence resource use increased for  
 (15) the two areas?  
 (16) A Yes  
 (17) Q So they are drawing a conclusion a conclusion there are  
 (18) they not from the subsistence catch information that they put  
 (19) in these reports?  
 (20) A Yes  
 (21) Q At least in this report?  
 (22) A Yes they are drawing a conclusion  
 (23) Q And Mr Brady is not a person who is so irresponsible as to  
 (24) rely upon information that he doesn't think has any meaning is  
 (25) he?

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- (1) A Mr Brady is an area management biologist and area  
 (2) management biologists typically deal in the realm of sort of  
 (3) business information They're not dealing in the statistical  
 (4) realm generally They rely - the Alaska Department of Fish &  
 (5) Game has a large staff of statisticians on call to people who  
 (6) work in the area management offices such as Mr Brady and so  
 (7) Mr Brady is not a statistician He - in the previous section  
 (8) back there on page 30 Mr Brady made it clear that he was  
 (9) talking about use of the resource and relative levels of use of  
 (10) the resource  
 (11) Then back here in this section he switches over and he  
 (12) starts talking about catch and I don't believe that generally  
 (13) statisticians would - would find it acceptable to compare  
 (14) levels of catch based on the kinds of data that - that  
 (15) Mr Brady is using But on the other hand practices and  
 (16) standards in statistics and in my part of fisheries science  
 (17) are different from those from - used by the area management  
 (18) biologists  
 (19) Q Well let me try again with the question Dr Mundy Do  
 (20) you believe that Mr Brady is a person who is so irresponsible  
 (21) that he would use data that he thought was clearly erroneous?  
 (22) A Use data for what?  
 (23) Q For the purposes that are set forth in this material that  
 (24) we just looked at  
 (25) A For those purposes?

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- (1) Q Yes including the amount of the subsistence catch and  
 (2) whether it increased over prior years If you're saying  
 (3) Mr Brady is that careless I'd like to get that out right  
 (4) here  
 (5) A It's not a matter of Mr Brady being careless It's a  
 (6) matter of how Mr Brady is using the data so your  
 (7) characterization of Mr Brady is careless is something that I  
 (8) wouldn't join  
 (9) Q You're saying then that the information that is in this  
 (10) official report that Mr Brady reports on is information that  
 (11) he should not rely on?  
 (12) A No what I'm saying is is that the information in that  
 (13) report should be looked at for the purposes intended which are  
 (14) generally to keep people informed about qualitative levels of  
 (15) changes in the utilization of subsistence resource and that's  
 (16) the way it's generally understood in the fisheries business  
 (17) Q So you do - you do concede that the information that is in  
 (18) these reports is appropriate for making qualitative - how did  
 (19) you phrase that?  
 (20) A Qualitative indicators yes  
 (21) Q As to whether or not subsistence use for instance has  
 (22) increased?  
 (23) A Qualitative comparisons yes would be valid Not  
 (24) quantitative comparisons  
 (25) Q Thank you

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- (1) Now Dr Mundy I'd like to turn to the subject of Red  
 (2) Lake Let me just try one thing here and see if I understand  
 (3) it correctly You offered some opinions on the effect of the  
 (4) spill on the production smolt production from Red Lake Do  
 (5) you recall that general subject matter?  
 (6) A Yes  
 (7) Q If I understood you directly Dr Mundy you indicated that  
 (8) we don't yet have all the returns we don't yet have  
 (9) information about what returns are coming in from - or what  
 (10) the total returns will be from Red Lake this year to Red Lake?  
 (11) A That's correct  
 (12) Q In fact we're not - are we even halfway through the  
 (13) season there where the fish are returning?  
 (14) A Yes I - I believe we are about halfway through  
 (15) Q At about the midpoint?  
 (16) A Right  
 (17) Q So we've got half of the run yet to come in?  
 (18) A Depending where you're talking about You're talking about  
 (19) a very large geographic reference frame If you're talking  
 (20) about the fishery and the escapement site okay and the -  
 (21) where they are in the run okay at various times points in  
 (22) time depends on what particular location you're referring to  
 (23) At I believe that in the reference frame of the weir where  
 (24) they count the escapement that they're about at the -  
 (25) Q About at the halfway mark?

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- (1) A Yes or beyond a little beyond  
 (2) Q And if I understood you correctly not only are we not  
 (3) complete with this season we still have half of this season to  
 (4) go but some of the fish from the 89 brood year if I can call  
 (5) it that or year class won't come back until next year  
 (6) A Oh that's right  
 (7) Q So we also don't have the data about how many fish are  
 (8) going to come back next year?  
 (9) A That's correct  
 (10) Q And even though we don't have that data and even though  
 (11) we're only halfway through the season this year you're willing  
 (12) to make predictions about what those numbers are going to  
 (13) show  
 (14) in terms of the effect of the spill on the lake?  
 (15) A In what - in what sense am I making predictions?  
 (16) Q Well is it the case - are you saying Dr Mundy that you  
 (17) really don't know to what extent the Red Lake run may have  
 (18) been  
 (19) impacted by the oil spill because we just don't have enough  
 (20) data in yet to know that?  
 (21) A No absolutely not I'm reasonably certain that the -  
 (22) that the 762 000 sockeye salmon that escaped into the lake in  
 (23) 1989 are not going to replace themselves and that is a  
 (24) circumstance that we like to avoid in fisheries because that  
 (25) means that we put fish that people could have caught and  
 (26) turned  
 (27) into money to make a living into the system to escape and they  
 (28) produce nothing in essence So we - we told people you can't

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- (1) fish you can't make money and then we took those fish and we  
 (2) wasted them and that is the situation in a fishery that's the  
 (3) thing that we try to avoid  
 (4) So I - I think that it's fairly clear that the - the  
 (5) returns for the 1989 brood year will - will not be two to one  
 (6) or three to one or four to one levels of return that we've seen  
 (7) in the past So what I am saying is that the fact of the  
 (8) overescapement in this instance in 1989 in Red Lake did result  
 (9) in a - a damage to the resource and a loss and a situation  
 (10) that we wanted to avoid  
 (11) Q But you cannot quantify what that's going to be?  
 (12) A I cannot completely as I - as I previously testified I  
 (13) won't know until the - until the end of the 1995 season  
 (14) exactly what the total - total loss was  
 (15) Q And in fact if you were to - if you were to try to  
 (16) quantify that and project what that loss may be whether it  
 (17) would be big or small or whatever you would be relying upon  
 (18) the same kind of incomplete data wouldn't you that you  
 (19) believe Mr Brady may have inappropriately relied upon in the  
 (20) subsistence area?  
 (21) A No that's not correct Those two kinds of data aren't  
 (22) comparable which is what I previously testified to  
 (23) Q Dr Mundy now let me go back here to another question on  
 (24) Red Lake There was a previous high escapement on Red  
 (25) Lake  
 (26) was there not?

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- (1) A Yes  
 (2) Q And in fact that's what was depicted on this chart that  
 (3) was shown to you?  
 (4) A Yes that's correct  
 (5) MR COOPER Could we have I believe it's  
 (6) Exhibit 4653 - 2 or 3 No the escapement  
 (7) BY MR COOPER  
 (8) Q This is the chart that you were shown and you discussed in  
 (9) your direct examination?  
 (10) A That's correct  
 (11) Q Now you indicated if I heard you correctly that before  
 (12) you drew any conclusions about the - about the potential  
 (13) effect or whether this high escapement in 1980 had an adverse  
 (14) impact you would want to see what the run sizes were that  
 (15) returned?  
 (16) A Yes  
 (17) Q And the years that you would be interested in would be 84  
 (18) 85 and 86?  
 (19) A Yes  
 (20) Q Because that's the three year period when these fish tend  
 (21) to return they return over a three year period?  
 (22) A Yes  
 (23) Q Now Mr Stoll didn't show you the companion chart that we  
 (24) provided to him that shows the run size  
 (25) A I'm sorry doesn't -

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- (1) Q Did he not show you a companion chart same chart here?  
 (2) MR STOLL Your Honor the companion chart was not  
 (3) admitted because there wasn't a proper foundation laid for the  
 (4) reliability of the figures  
 (5) MR COOPER That's not the question at this point  
 (6) Your Honor I'm just asking if the witness was shown that  
 (7) A I don't recall if Mr Stoll showed me the chart He may  
 (8) have I just don't recall  
 (9) BY MR COOPER  
 (10) Q Have you made any effort to look at that to look at the  
 (11) question of how the returns were in the three years?  
 (12) A In relation to this case  
 (13) MR STOLL Your Honor I'm going to --  
 (14) THE COURT Hold on There's two questions here One  
 (15) is Did he look at a document marked by the defense And now  
 (16) is Did he look at the run size Right?  
 (17) MR COOPER Now I'm just asking about the run size  
 (18) THE COURT You're asking about the run size?  
 (19) MR COOPER Yes  
 (20) A Have I looked at the run size data for the purposes of this  
 (21) case is that the question?  
 (22) BY MR COOPER  
 (23) Q Yes  
 (24) A No my role in this case has not been to quantify damages  
 (25) but merely to look at whether there's a more likely than not

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- (1) chance of damages whether these things that happened were  
 (2) likely to damage the environment I'm not -- I'm not putting  
 (3) numbers on damages I can't say how many how many fish will  
 (4) be lost I can only say that fish are lost  
 (5) Q Well Dr Mundy wholly apart from whether you tried to put  
 (6) a number on damages or not you testified on direct the issue  
 (7) would be whether this 1980 escapement produced a run return  
 (8) run size in appropriate numbers or good numbers correct?  
 (9) A That -- no that's not exactly correct  
 (10) Q Let me try it a different way In order to understand  
 (11) Dr Mundy whether or not this escapement in 1980 had a -- an  
 (12) adverse impact on the lake this escapement being essentially  
 (13) the same one that was experienced the same magnitude that  
 (14) was experienced in '89 you would need to look at the run size  
 (15) would you not for '84 '85 and '86?  
 (16) A Yes you would need to look at the run size for '84 and '85  
 (17) and '86 in order to determine that the 1980 overescapement  
 (18) had  
 (19) a negative impact Because you don't have any information on  
 (20) the food for the young salmon in the lakes and -- and on the  
 (21) juvenile outmigration so it wasn't measured  
 (22) Q And you need to look at that and what you're saying I guess  
 (23) is that you have not looked at that?  
 (24) A Obviously I haven't looked at the catches from 1995  
 (25) Q You haven't looked at the catches for '84 or the run size  
 (26) for '84 '85 and '86?

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- (1) A Oh well yes The information -- all I've looked at is  
 (2) the information on the age composition of the runs in those  
 (3) years that were presented by the biologists who did the  
 (4) overescapement study and their -- they felt that the age  
 (5) composition that is the four year old fish last year were  
 (6) consistent with damage from the 1989 --  
 (7) Q I guess Dr Mundy one of us isn't communicating I'm  
 (8) talking about 1980 overescapement?  
 (9) A 1980 overescapement?  
 (10) Q 1980  
 (11) A I'm sorry I misunderstood you  
 (12) Q I don't want to have to go back over all of that again but  
 (13) what I was asking you sir was whether in fact you had  
 (14) looked at the run sizes for these four years -- or these three  
 (15) years '84 '85 and '86 in order to try to make a judgment  
 (16) whether that 1980 overescapement damaged the ability of Red  
 (17) Lake to produce smolt  
 (18) A Now I understand I previously testified that --  
 (19) Q Can you just answer that?  
 (20) A Yes I previously testified that I don't know whether -- I  
 (21) didn't examine that information to tell whether '80 was -- had  
 (22) a negative impact or not  
 (23) Q So you really can't say whether or not this 1980 escapement  
 (24) produced any problem in the lake?  
 (25) A Oh no

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- (1) Q Have you ever heard of a Mr Pengilly?  
 (2) A I've seen the name but I'm not sure I can place it  
 (3) Q He's an ADF&G -- or at least was an ADF&G employee if he  
 (4) still is not  
 (5) A I used to deal with the state wide operation which is 22  
 (6) area offices I've met most of the people who work for Fish &  
 (7) Game but I'm sorry I just don't recall Mr Pengilly at the  
 (8) moment  
 (9) Q And Bruce Barret he's the --  
 (10) A I know Mr Barret quite well He's the area research  
 (11) biologist in charge of Kodiak  
 (12) Q What I'd like to do is show you Exhibit DX5802 DX5802  
 (13) I'm just going to show it to the witness  
 (14) This report should be a memorandum from Mr Pengilly to  
 (15) Mr Barret dated January 10 1989 and it's the -- the subject  
 (16) is Ricker Model Stock Recruit Analysis for Red River Sockeye  
 (17) 1965 1982 data  
 (18) Have you ever seen this before?  
 (19) A I think it was one of the documents that was designated for  
 (20) me and I -- I probably -- I probably glanced at it I wouldn't  
 (21) have spent much time with it  
 (22) Q If you look at -- well do you recognize this as generally  
 (23) a -- an analysis by Mr Pengilly provided apparently to  
 (24) Mr Barret discussing what the appropriate escapement level  
 (25) might be for Red Lake?

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- (1) A Yes  
 (2) Q And he was – he generally looked at data which he includes  
 (3) in some tables to the document you see that?  
 (4) A Yes I see that there are tables  
 (5) Q If you look at table 1 you see there s a reference to the  
 (6) 1980 year an escapement number there?  
 (7) A Yes  
 (8) Q And then there s a return I think you ll recognize if you  
 (9) look at that column and the other two columns that this would  
 (10) be the return from that escapement year  
 (11) A Yes  
 (12) MR STOLL Could I ask a question – excuse me  
 (13) counsel? Could I ask a question in aid of possible objection?  
 (14) THE COURT Can you what?  
 (15) MR STOLL Ask a question in aid of a possible  
 (16) objection Your Honor?  
 (17) THE COURT Yes  
 (18) VOIR DIRE EXAMINATION OF PHILLIP R MUNDY  
 (19) BY MR STOLL  
 (20) Q Dr Mundy do you know – are you familiar with this table  
 (21) that counsel s referring to?  
 (22) A No  
 (23) Q Do you know whether this in fact refers to the figures  
 (24) that counsel says it does?  
 (25) A No

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- (1) MR STOLL Your Honor I don t think it s appropriate  
 (2) to ask questions of this witness regarding –  
 (3) THE COURT Counsel can ask – counsel for the defense  
 (4) can ask the questions I ll determine whether or not at some  
 (5) point the examination on this issue stops  
 (6) CROSS EXAMINATION OF PHILLIP R MUNDY (Resumed)  
 (7) BY MR COOPER  
 (8) Q Dr Mundy this is the kind of a document that people in  
 (9) ADF&G as well as experts like yourself rely upon is it not?  
 (10) A These are the kind of – this table shows the kind of data  
 (11) that I would have if I had been asked to look at the return  
 (12) for spawn and to lay out the numbers this is the kind of data  
 (13) that I would have brought – brought to the Court  
 (14) Q And you don t have any reason to think that Mr Pengilly  
 (15) may have been falsifying any data here?  
 (16) A I just don t know who Mr Pengilly is quite frankly I  
 (17) don t know what his credentials are I have no reason to  
 (18) suspect this data  
 (19) Q And in fact you have never suggested to anybody that  
 (20) there s any errors in this document have you?  
 (21) A I – certainly not  
 (22) MR COOPER Your Honor –  
 (23) BY MR COOPER  
 (24) Q Well let me ask you this Dr Mundy  
 (25) The escapement in 1980 that escapement was – I don t have

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- (1) that chart up there That escapement was about how many  
 fish?  
 (2) A The escapement listed in this table is 774 328 sockeye for  
 (3) the brood year – I assume this is the brood year It s not  
 (4) labeled as such but –  
 (5) Q It makes sense from the –  
 (6) A I have to make the assumption that that s the brood year  
 (7) Q And that s just about the same size as the escapement was  
 (8) in 1989 that you re concerned about?  
 (9) A Oh yes Yes same order of magnitude yeah  
 (10) Q Now the returns according to Mr Pengilly s table the  
 (11) fish that came back from this 1980 escapement were how  
 many?  
 (12) MR STOLL Your Honor I object to the form of the  
 (13) question This – this statement doesn t say that That s the  
 (14) problem I m having  
 (15) THE COURT So you want him to use the language of  
 (16) the –  
 (17) MR STOLL He can say – he can say what the document  
 (18) says but this document does not say that the 1989 – excuse  
 (19) me the 1980 there was a return of 1980 brood fish of X  
 (20) number It doesn t say that  
 (21) THE COURT Just use the language in the document  
 (22) counsel We ll avoid the objection  
 (23) MR COOPER I shall Your Honor but that s the  
 (24) question I asked the witness twice and I thought I had an  
 (25) affirmative answer twice

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- (1) THE COURT Use the language in the document  
 (2) BY MR COOPER  
 (3) Q Isn t it true Doctor that the returns from the 1980  
 (4) escapement were a hundred – or 11 564 013 –  
 (5) A No sir  
 (6) Q I m not going to read it very well 1 156 413 fish?  
 (7) A So it says here  
 (8) Q And that s pretty good return isn t it for that system?  
 (9) A No I wouldn t characterize it as a pretty good return In  
 (10) fact the return for spawners from that – see we – and I  
 (11) don t really know what – what this has to do with this But  
 (12) in any event the return – the answer to your question is no  
 (13) the return for spawner was 1 49 I note that on a very large  
 (14) escapement and the median return for spawner down here in  
 the  
 (15) lower part of the table is represented to be 1 49 So this is  
 (16) at best an average escapement an average return on a very  
 (17) very large investment  
 (18) Q In terms of numbers it s pretty good just absolute  
 (19) numbers a million some odd?  
 (20) A A million return would be above – above the average for  
 (21) that system yes  
 (22) Q And in terms of the number that returned per spawner is  
 (23) just right about at the mean at the average isn t it?  
 (24) A At the median yes  
 (25) Q It s not a crash is it?

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- (1) A It s average  
 (2) Q And it s not a run failure and it s not a crash?  
 (3) A No no it s not  
 (4) Q Now if you go back to the last page of Mr Pengilly s  
 (5) document table 3?  
 (6) A I have it  
 (7) Q Now can you tell me in your own words what you  
 understand  
 (8) that third column there to refer to?  
 (9) A I can t tell from - from looking at this I don t have  
 (10) any - any methods to associate with this I don t care to  
 (11) speculate  
 (12) Q Well can you tell by looking at it? I mean these are the  
 (13) kinds of things that you saw frequently didn t you when you  
 (14) were with the -  
 (15) A This is not a standard format for a stock recruitment  
 (16) presentation no  
 (17) Q So despite all your years working with this kind of an  
 (18) issue and working with the ADF&G you re not able to tell us  
 (19) what this - what this table or what that column in that table  
 (20) apparently refers to?  
 (21) A Because of all my years in interpreting stock recruitment  
 (22) data I can tell you that this is not a standard format for  
 (23) presentation I might be able to guess at what that is but  
 (24) without looking at the method section I m certainly not going  
 (25) to speculate

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- (1) Q You can t tell by looking at that for instance that  
 (2) that s simply an indication of whether or not - or the  
 (3) probability of a harvest over a certain amount based upon  
 (4) certain escapement levels?  
 (5) A Actually that - if I were going to guess at it I  
 (6) wouldn t think that it had anything to do with harvest at all  
 (7) Q All you can do is guess I don t want you to -  
 (8) A It says escapement It doesn t say harvest it says  
 (9) escapement  
 (10) Q It says p r o b a b l e t return minus escapement?  
 (11) A Oh is that minus escapement?  
 (12) Q That s why I m asking you sir I thought you would know  
 (13) A This person is not trained as a mathematician the author  
 (14) of this and if I read this as a mathematician I would read  
 (15) that as probability of return given the escapement of 250 000  
 (16) and that - it s not actually even correctly stated that way  
 (17) so I m just telling you that the kind of - this - this person  
 (18) obviously did the best job they could with the tools that they  
 (19) had but this is not a standard format or presentation that I  
 (20) would expect to appear in - or an associate of mine to produce  
 (21) in analyzing any of the stock recruitment  
 (22) Q You re not prepared then to discuss that table because  
 (23) you don t understand it?  
 (24) A No that s not correct I - I will not speculate on  
 (25) something that I have not had any - any chance to study or

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- (1) look at and that doesn t contain any explanation of its  
 (2) methods  
 (3) Q Well you were certainly willing to discuss were you not  
 (4) this 1980 escapement without having seen the returns in 84  
 (5) 85 and 86?  
 (6) A Well no that s not correct What I was willing to point  
 (7) out and all I testified to was that you couldn t tell what the  
 (8) effect of that 1980 escapement was without looking at the right  
 (9) kind of data And now the right kind of data have been shown  
 (10) to me but they haven t been shown to anyone else because  
 this  
 (11) graph up here doesn t have anything really to do with return  
 (12) per spawner These are just escapements  
 (13) Q That s why we looked at Mr Pengilly s return for spawners?  
 (14) A Some of us looked at Mr Pengilly s  
 (15) Q I think we all did just now  
 (16) Now Dr Mundy let me ask you this question -  
 (17) MR STOLL Your Honor I m going to object to that  
 (18) statement by counsel It implies that the jury -  
 (19) THE COURT The object s sustained The jury is to  
 (20) disregard the comment of counsel  
 (21) MR STOLL Thank you Your Honor  
 (22) BY MR COOPER  
 (23) Q Dr Mundy let me ask you a question about the Ayakulik  
 (24) system There is in fact a weir on the Ayakulik system? I  
 (25) believe you mentioned that

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- (1) A Yes  
 (2) Q And the weir is a device that can be - it s like a gate  
 (3) that can be closed?  
 (4) A Yes The Canadians call a weir a fish fence and it is  
 (5) essentially a fence that s put across smaller rivers so that  
 (6) the salmon generally can be crowded into one part of the river  
 (7) so they can be counted easily  
 (8) Q And there is also a weir on some other systems in - in the  
 (9) Kodiak area?  
 (10) A Yes there is In fact there s another weir in this  
 (11) system and there are other weirs in the Kodiak area  
 (12) Q There s a weir on the Dog Salmon River?  
 (13) A I - I haven t reviewed the weir locations on Kodiak I  
 (14) can t - I don t recall at the moment  
 (15) Q Is the Dog Salmon the river system that the Frazer Lake is  
 (16) on?  
 (17) A It - it may be I - I tend to categorize sockeye  
 (18) population by lakes I don t often look at the name of the  
 (19) river  
 (20) Q Well are you - do you have any knowledge respecting the  
 (21) closure of that weir in 1991 as the result of a - well after  
 (22) the fishermen struck and the weir was then closed in order to  
 (23) stop overescapement?  
 (24) A I m sorry I - I don t - I don t recall ever having heard  
 (25) about that

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- (1) Q You've not heard that before?  
 (2) A No sir  
 (3) Q I'd like to - well have you looked at any of the AMRs  
 (4) recently for Kodiak the Area Management Reports for Kodiak?  
 (5) A Yes I've - I generally review certain portions of annual  
 (6) management reports and I've recently looked at Kodiak's  
 (7) Annual  
 (8) Management Report for 1989  
 (9) Q Did you look at - have you looked at the - any more  
 (10) recent ones than that?  
 (11) A I don't believe I've had occasion to look at any of the  
 (12) more recent management reports because the kinds of  
 (13) information  
 (14) I'm interested in are generally summarized and the reports are  
 (15) given to me by the research biologists I looked at 1989  
 (16) because I was interested to see what happened with the harvest  
 (17) management or what exactly happened to the regulations  
 (18) Q What I'd like to do is to show you Exhibit 5766 the Area  
 (19) Management Report for the Kodiak Management Area for the  
 (20) year  
 (21) 1992 This is an October 1993 document Page 6 This is a large  
 (22) document I'm only interested in some things that are on page  
 (23) 6  
 (24) A Okay Is that Roman numeral six or Arabic?  
 (25) Q Arabic six  
 (26) A I have it  
 (27) Q First let me ask you this sir is this - this document  
 (28) is basically compiled under the authorship or at least the

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- (1) supervision of it is Mr Barret?  
 (2) A Well actually I don't believe that that's the case  
 (3) Generally in Fish & Game offices there are two branches  
 (4) You've got the management and you've got the research and  
 (5) the  
 (6) research people are generally more involved in analyzing the  
 (7) data and the management staff has the job of taking the data  
 (8) and communicating to the public about what happened so that  
 (9) oftentimes harvesters and members of the public who deal with  
 (10) fisheries will pick up a copy of the Annual Management Report  
 (11) just so they can see what happened or help them judge how to  
 (12) manage their business  
 (13) So Mr Barret is a - is a research biologist and while he  
 (14) would contribute information to this document he would not be  
 (15) primarily responsible for putting this document together  
 (16) Q Now the - these are documents if I understood you  
 (17) correctly then that go out to the public and are relied upon  
 (18) by various sectors?  
 (19) A Yes to varying extent yes  
 (20) Q What I would like you to do is look at the second paragraph  
 (21) on that page  
 (22) A The one that starts these four major?  
 (23) Q Yes You see the last sentence there?  
 (24) A Yes  
 (25) Q Have you ever seen that comment before?  
 (26) A No not the - not that I recall I don't recall having -

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- (1) having looked at this specific management report  
 (2) Q Is that a comment that has appeared in several management  
 (3) reports?  
 (4) A It doesn't seem an unusual comment It seems a reasonable  
 (5) sort of comment  
 (6) MR COOPER Your Honor I'd like to show this if I  
 (7) may  
 (8) THE COURT Mr Stoll?  
 (9) MR STOLL I have no objections to him showing the  
 (10) comment  
 (11) THE COURT Show it on the machine you mean?  
 (12) MR COOPER Yes  
 (13) THE COURT Sure  
 (14) BY MR COOPER  
 (15) Q This is talking about the four - well the four river  
 (16) systems if you look there at the top the highlighted  
 (17) language that are the major river systems for sockeye in  
 (18) Prince - or in the Kodiak area -  
 (19) A Yes  
 (20) Q - including the Ayakulik system?  
 (21) A Yes  
 (22) Q Which is the one that Red Lake is on?  
 (23) A Yes  
 (24) Q And then in this document the ADF&G makes the comment  
 (25) that's highlighted on down below there that production from

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- (1) these systems should remain relatively stable providing  
 (2) existing fish weir programs those are simply programs for -  
 (3) for doing what?  
 (4) A For counting the adult escapements for telling how many  
 (5) fish went on to spawn  
 (6) Q And management strategies?  
 (7) A Yes  
 (8) Q Are not adversely affected and favorable environmental  
 (9) conditions exist?  
 (10) A Yes  
 (11) Q And the management strategies referring probably to  
 (12) funding?  
 (13) A These kinds of documents usually do  
 (14) Q That's the code word for saying if we get the money?  
 (15) A Yes  
 (16) Q So the - in 1993 October of '93 the ADF&G's view was  
 (17) production in the systems including Red Lake would remain  
 (18) fairly stable?  
 (19) A I - I would not characterize that as ADF&G's position  
 (20) For example Mr Barret told me the opposite only two months  
 (21) ago This is the - apparently the opinion of the person who  
 (22) authored this report  
 (23) Q Well I guess you've already indicated that was not  
 (24) Mr Barret so whoever - whoever authored this official report  
 (25) in October of '93 apparently would disagree with Mr Barret as

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- (1) you understand it?  
 (2) A No I would say that they didn't turn out to be all that  
 (3) accurate did they?  
 (4) Q Well I guess we won't know for sure the answer to that  
 (5) question until the other half of the runs get in this year and  
 (6) we see what comes in next year isn't that right?  
 (7) A We won't know the complete answer to that but it's quite  
 (8) clear that the - that their comment about the production  
 (9) remaining stable if I were fishing in the Ayakulik District I  
 (10) would certainly not - not join that statement  
 (11) Q Now let me ask you speaking of times here and dates the  
 (12) escapement occurred in 1989 I'm sure we can agree on that  
 (13) and -  
 (14) A The escapement into the Red Lake?  
 (15) Q The escapement that brings us here today the one that you  
 (16) were talking about that you think has affected the production  
 (17) of smolt  
 (18) A Okay  
 (19) Q The - were measurements or I guess measurements is the  
 (20) wrong word but did the ADF&G then do something to try to see  
 (21) how many smolt were coming out of that lake after that  
 (22) escapement?  
 (23) A Yes  
 (24) Q And it was information about the number of smolt that were  
 (25) coming out of that lake that ultimately led to the concern as

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- (1) you understand it that the production may go down starting  
 (2) this year?  
 (3) A Partially  
 (4) Q The other part being what just the -  
 (5) A The - the declines in the food availability in 1990 and  
 (6) 1991 I believe  
 (7) Q And that was - that decline was not known until those  
 (8) measurements were taken in 1990?  
 (9) A That's correct Those measurements were taken in 1990  
 (10) Q That was the summer of '90?  
 (11) A Yes  
 (12) Q And the - the number of smolt that were leaving the lake  
 (13) those measurements they were first counted when in 1990  
 (14) also  
 (15) or '91?  
 (16) A Would have been - would have been - no it was '91  
 (17) partially but since a lot of those fish held over for a second  
 (18) year it was also in 1992  
 (19) Q But the point I was trying to get at Dr Mundy is that  
 (20) the counts weren't really made until 1991  
 (21) A Again?  
 (22) Q The counts of the number of smolt that were departing were  
 (23) not made until 1991  
 (24) A For the 1989 brood year yes that's correct  
 (25) Q So the two things that gave rise to concern as you  
 expressed the food quantity of food in the lake that wasn't

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- (1) measured until 1990 And the other thing the number of smolt  
 (2) returning that wasn't measured until 1991?  
 (3) A That's correct  
 (4) Q In 1989 nobody had taken those measurements?  
 (5) A Obviously not  
 (6) Q Now are you aware sir that the plaintiffs in this  
 (7) litigation are seeking damages for stigma to their land but  
 (8) only for the year 1989 in Kodiak?  
 (9) A No sir I wasn't aware of the time frame on the -  
 (10) MR STOLL That's not exactly an accurate statement  
 (11) by counsel but I'll let it go  
 (12) MR COOPER Close enough I guess Your Honor  
 (13) MR STOLL No I'm not going to agree with that  
 (14) THE COURT There's no question pending counsel  
 (15) MR COOPER I'm about to pend one here Your Honor  
 (16) BY MR COOPER  
 (17) Q All right Dr Mundy let's switch gears switch  
 (18) subjects Let's go to Prince William Sound and pink salmon  
 (19) Oh incidentally before I do that did I understand  
 (20) correctly that the escapements escapement level for Red Lake  
 (21) has been reached this year?  
 (22) A Yes  
 (23) Q The escapement goal?  
 (24) A The lower - not the middle range not the 250,000 but  
 (25) they are below the - the number

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- (1) Q You mean they're above -  
 (2) A Excuse me they're above the lower end of the escapement  
 (3) range  
 (4) Q And generally the escapements - escapement goals have  
 (5) been met for that lake since 1989?  
 (6) A Oh yes  
 (7) Q All right With respect to Prince William Sound we're  
 (8) talking about 1989 the year of the spill if I can focus you  
 (9) on that  
 (10) A Okay  
 (11) Q There - you talked about embryo mortality and salmon eggs  
 (12) dying in the streams In fact most of the salmon that were -  
 (13) started their lives as eggs in 1989 or in 1988 were from  
 (14) hatcheries isn't that right?  
 (15) A Are we - we're talking about - I'm sorry I'm confused  
 (16) Are we talking about 1989 or 1988? Hatcheries streams?  
 (17) Q Let's stick with 1989  
 (18) A 1989  
 (19) Q The embryo mortality that you were concerned about were  
 (20) eggs from the 1989 year class is that correct?  
 (21) A Among others  
 (22) Q And then '90 and '91?  
 (23) A Correct  
 (24) Q And the eggs that you showed us that chart of embryo  
 (25) mortality in those three years remember that?

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- (1) A Yes  
 (2) Q Now the - I m just trying to get a picture of how many  
 (3) eggs or how many - what proportion of eggs we re talking  
 about  
 (4) here A number of the eggs that produced ultimately produced  
 (5) pink salmon eggs that were from 1989 year class those were  
 (6) eggs that were from hatchery fish isn t that true?  
 (7) A Yes In total of the salmon eggs that were laid in 1989  
 (8) apparently the vast majority of those were from hatchery fish  
 (9) were taken - I m hesitating - they weren t laid they were  
 (10) taken from fish in hatchery operations from fish returning to  
 (11) those hatcheries  
 (12) Q And in fact the numbers are right around 75 percent or  
 (13) so isn t it?  
 (14) A Yes The majority of the fish were hatchery fish yes  
 (15) Q So about 75 percent or so of the - of the total eggs in  
 (16) 89 were eggs that were never in an oiled stream?  
 (17) A Oh that s right  
 (18) Q And they weren t in an oiled stream because they were in  
 (19) hatcheries where they use a supply of fresh water that was  
 (20) never subject to oiling?  
 (21) A That s my understanding  
 (22) Q So the chart that you showed us is really only - we re  
 (23) only talking about at a maximum 25 percent of the - of the  
 (24) salmon eggs pink salmon eggs that year?  
 (25) A At a maximum yes

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- (1) Q And the reason it s at a maximum is because a number of the  
 (2) streams that those wild stock eggs were in were never - were  
 (3) never oiled?  
 (4) A That s true  
 (5) Q Indeed that was the basis of that chart we looked at It  
 (6) was comparing oiled and unoled streams?  
 (7) A That s correct  
 (8) Q So in addition to - if you wanted to know what percentage  
 (9) of the 1989 eggs were subject to this embryo mortality you were  
 (10) concerned about in addition to subtracting out the ones the  
 (11) 75 percent that went into the hatchery or that were raised in  
 (12) the hatchery you d also need to subtract out some number to  
 (13) reflect those that were in streams that were not oiled?  
 (14) A That s correct  
 (15) Q And you haven t tried to make that calculation?  
 (16) A No  
 (17) Q Now the eggs that you were talking about these 1989 eggs  
 (18) whatever that proportion is of wild stock eggs that were  
 (19) deposited in oiled streams when in fact the return - well  
 (20) when did those fish come back into the Sound as adults 89  
 (21) fish?  
 (22) A The fish that were eggs in 1989 returned to Prince William  
 (23) Sound as adult pink salmon in 1991  
 (24) Q And in fact overall that return was at a record level?  
 (25) A Yes

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- (1) Q That was a new at least modern day record for the number  
 (2) of adult fish that returned?  
 (3) A Yes  
 (4) Q And those were the fish that experienced this embryo  
 (5) mortality that you ve told us about?  
 (6) A No sir The fish experienced embryo mortality were dead  
 (7) they didn t come back in 1990  
 (8) Q But enough of them enough of them came back so many of  
 (9) them that they did set a record?  
 (10) A Again if the them we re talking about are fish from -  
 (11) that were laid in oiled streams in 1989 we are not talking  
 (12) about the same fish The records that were set were not set by  
 (13) oiled fish -  
 (14) Q Because you re saying they were set by hatchery fish?  
 (15) A Among others  
 (16) Q In fact there were - if you combine the hatchery and the  
 (17) wild stock run that s what produced the record run in - when  
 (18) the - those fish returned isn t that correct?  
 (19) A Yes I m hesitating because I don t believe that the wild  
 (20) stock - I m not sure that - I don t recall whether the wild  
 (21) stock run was in - in 1991 was a particular record The total  
 (22) return was clearly clearly a record return  
 (23) Q And the wild stock run was a pretty good - it was pretty  
 (24) good in the sense that it was greater than the number of  
 (25) parents that produced the wild stock adult run in 90?

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- (1) A I believe that it was I just don t recall that it was  
 (2) particularly good but I don t believe that it was bad either  
 (3) Q Now you also talked about the - I think the other thing  
 (4) that you mentioned besides the embryo mortality you talked  
 (5) about the lack of growth or the slower growth that you  
 (6) attributed to the oil  
 (7) A The slower growth for the juveniles  
 (8) Q And the - and the - that would be - the fish that were  
 (9) measured that were examined to see if they grew slower  
 because  
 (10) of the oiling those were fish that were born in 1988?  
 (11) A Yes  
 (12) Q What I guess you would call the 1988 brood year or year  
 (13) class?  
 (14) A That s correct  
 (15) Q And your concern was that these fish would experience some  
 (16) lower survival rate when they came back because of some  
 slower  
 (17) growth?  
 (18) A That the overall survival rate of that - that brood year  
 (19) was lower as a consequence of the slower growth yes  
 (20) Q All right Now that brood year returned in what year?  
 (21) A As 88 you add two years would have returned in 1990  
 (22) Q And when that brood year returned that was pretty close to  
 (23) a record if it wasn t a record by that - up to 1990 isn t  
 (24) that true?  
 (25) A Well it s not a - it s not true in the sense it s a valid

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- (1) comparison We re comparing total numbers of return to  
 (2) survival rates and the fact that you you got a lot of fish  
 (3) back in 1990 has nothing to do with the rate at which fish  
 (4) died And it just means - could mean and in fact it did  
 (5) mean - that an awful lot of fish were in fact produced  
 (6) That s solely what it means and the runs should have been  
 even  
 (7) bigger had it not been for the effects of the oil spill  
 (8) Q Even more of a record?  
 (9) A Yes  
 (10) Q Now do you - do you believe that a record pink salmon run  
 (11) somehow stigmatizes the land around that area where those  
 (12) record runs returned?  
 (13) A I m sorry I m not capable of - of drawing that  
 (14) conclusion  
 (15) Q Now the - the Trustee Council had a study did it not  
 (16) which tried to synthesize what the total losses of pink salmon  
 (17) due to the oil spill amounted to?  
 (18) A No I would n t agree with that characterization I believe  
 (19) I know the study to which you re referring but that is  
 (20) certainly not how I would characterize it  
 (21) Q How would you characterize it?  
 (22) A The Trustee Council commissioned a study to take the - the  
 (23) egg mortality information and the information of reduced  
 (24) growth and to try to figure out how much those two impacts  
 (25) which were measured which we could afford to measure in a  
 very

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- (1) small part of the Sound what kind of losses those two narrow  
 (2) impacts would have translated into  
 (3) These losses are not clearly the total losses that are  
 (4) attributable to the oil spill but just those that the Trustee  
 (5) Council could afford to measure Taking these measurements  
 is  
 (6) very expensive and the amount of money was limited so the  
 (7) Trustee Council simply commissions some statisticians  
 (8) mathematicians to take these data and translate them into  
 (9) losses resulting from the oiling of those areas that were  
 (10) studied and those fish that were studied  
 (11) Q Well they tried to - they tried to - they studied a  
 (12) number of things isn t that right?  
 (13) A They studied a number of things that s correct  
 (14) Q Yes And they noticed what they believed were some  
 impacts  
 (15) in some of those studies?  
 (16) A That s correct  
 (17) Q And then there was one study that set out to try to  
 (18) synthesize in terms of numbers how many fish were missing if  
 (19) I can use that phrase how many pinks were missing because of  
 (20) the oil spill based upon the studies that identified some kind  
 (21) of an impact?  
 (22) A That were missing in the areas that were studied yes  
 (23) Q And that s this Geiger Study?  
 (24) A The author s name was Hal Geiger  
 (25) Q And he - he concluded that for the 1990 year this is the

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- (1) year that we were talking about were the adults that returned  
 (2) in 19 - well what did he conclude with respect to the total  
 (3) number of fish that he believed were missing based upon this  
 (4) study that he did? What was the number?  
 (5) A He initially estimated that from the 1980 brood year as a  
 (6) result of the depression in growth that about 2 7 million pink  
 (7) salmon did not return to Prince William Sound that would have  
 (8) returned except for the effects of the oil This is based on  
 (9) the growth studies so this would have applied to the wild pink  
 (10) salmon and to the - and to the hatchery pink salmon as well  
 (11) So this study was relied on commercial catch data which  
 (12) increases as time goes by when more and more fish tickets are  
 (13) entered into the system and I believe his final estimate of  
 (14) the losses for the 1990 return - that is the 1988 brood year  
 (15) because of the growth problem - was 2 2 million pink salmon  
 (16) Q And do you remember approximately the total size of that  
 (17) return in 1990?  
 (18) A It was really really big Perhaps - I don t remember  
 (19) exactly what it was It was a huge huge salmon return  
 (20) Q More than 20 million?  
 (21) A Oh yes  
 (22) Q In fact it was almost up to 40 million some?  
 (23) A Yes  
 (24) Q So what the Trustees could identify given the studies that  
 (25) they did was that record breaking run of 40 some odd million

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- (1) fish might have had a couple more million fish in it more or  
 (2) less had there not been an oil spill?  
 (3) A That s correct  
 (4) Q Then he also looked to see did he not what the impact of  
 (5) the spill based upon the studies that had been done would  
 (6) have been in the year 1991?  
 (7) A Yes The number in 1991 the loss comparison had a  
 (8) different basis It was based only on the embryo mortalities  
 (9) that were observed in 1989 so the 1991 losses are based on  
 (10) just the - the dead eggs in the - in the oiled streams and  
 (11) the number that he estimated there was a loss of 70 000 wild  
 (12) pink salmon returning to those areas  
 (13) Q And the reason that they didn t use the growth basis to  
 (14) make an estimation of missing fish is because the growth  
 (15) studies that they did found that there was no effect in 1990 or  
 (16) 91 on growth - let me rephrase that because I know what  
 (17) you re going to say Dr Mundy The way you would prefer me  
 to  
 (18) phrase it is -  
 (19) THE COURT Counsel counsel back up  
 (20) MR COOPER I m sorry Your Honor  
 (21) THE COURT The way you would prefer me to phrase it  
 (22) is not an appropriate question That question is stricken  
 (23) The jury is to disregard it  
 (24) Now rephrase your question  
 (25) MR COOPER I m sorry Your Honor It was a

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- (1) reference to some colloquy we had had in his deposition  
 (2) THE COURT I understand counsel but just ask the  
 (3) question please  
 (4) BY MR COOPER  
 (5) Q Is the - the impact that the Trustees were able to  
 (6) measure Dr Mundy was what number for the return in 1991?  
 (7) A 1991 was 70 000 wild pink salmon  
 (8) Q And that again is out of a total return of about how  
 (9) many?  
 (10) A 1991 again was large I - I don't carry those numbers  
 (11) in the top of my head  
 (12) Q It was in that same range of 30 to 40 million return?  
 (13) A I just honestly don't recall It was a very big salmon  
 (14) return  
 (15) Q And then in 1992 Mr Geiger also made a calculation for  
 (16) the fish that returned then?  
 (17) A Yes that's correct  
 (18) Q And he - the number he came up with there was what?  
 (19) A 40 000 wild pink salmon  
 (20) Q Now Dr Mundy the Trustees Trustee Council has a chief  
 (21) scientist?  
 (22) A Yes  
 (23) Q And his name is?  
 (24) A Is Bob Spies  
 (25) Q And he is sort of the chief scientist for all of the

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- (1) science projects of the Trustee Council?  
 (2) A Yes his title is chief scientist  
 (3) Q And he has indicated and stated that as I think you know  
 (4) that the egg mortality for pink salmon in Prince William Sound  
 (5) might translate into a decline of as much as ten percent in the  
 (6) entire adult pink salmon in the Sound if all the other factors  
 (7) which contribute to salmon mortality are added together with  
 (8) the oil stream effect?  
 (9) A Yes I am familiar with that statement  
 (10) Q And you've never told Dr Spies that you disagree with that  
 (11) statement?  
 (12) A No  
 (13) Q Now you also talked Dr Mundy in your examination about  
 (14) the - in your direct examination about the shortfall between  
 (15) the forecast for pink salmon in '92 and '93 and what was  
 (16) actually - what the actual returns were  
 (17) A Yes that was - that was the '93 the difference between  
 (18) the '93 forecasted run and what actually showed up in 1993  
 (19) was - was part of the graphic was the subject of the graphics  
 (20) that we showed earlier  
 (21) Q Now is it right that you have never attempted any  
 (22) quantitative analysis of the extent to which the shortfall  
 (23) between the forecast and the actual in '92 and '93 was due to  
 (24) the spill?  
 (25) A Yes that's correct

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- (1) Q You made a reference Dr Mundy to the - I think you made  
 (2) a reference to the Auke Bay study by Mr Rice?  
 (3) A Yes that's - that's the Auke Bay laboratory of the  
 (4) National Marine Fisheries Service  
 (5) Q Could I have DX1998  
 (6) Well let me just ask you this Dr Mundy The experiment  
 (7) that was done in Auke Bay that involved oiling some sediments  
 (8) am I right so far?  
 (9) A Oiling spawning substrate which is basically gravel which  
 (10) is what the salmon put their eggs in  
 (11) Q And then flowing some - basically trying to recreate a  
 (12) stream environment in the laboratory?  
 (13) A That's correct  
 (14) Q And flowing some water over that sediment and trying -  
 (15) then raising some embryos there?  
 (16) A Yes that's correct  
 (17) Q And they used different dosages or different concentrations  
 (18) of oil in the sediments varying concentrations?  
 (19) A Yes  
 (20) Q And do you know whether or to what extent the  
 (21) concentrations of oil that they used in that experiment  
 (22) correlated how well that correlated with what the sediment  
 (23) measures that were actually taken out in the field in the  
 (24) streams in Prince William Sound?  
 (25) A No

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- (1) Q So if I were to ask you if - if the sediment  
 (2) concentrations in the experiment in that experiment were  
 (3) higher than what was actually measured in the field you  
 (4) wouldn't be able to tell me one way or the other whether that  
 (5) situation existed?  
 (6) A I'm sorry I just don't know  
 (7) Q Now let me - let me ask you this You may have mentioned  
 (8) it already but the fish that failed to come back in very large  
 (9) numbers in 1992 they were the fish that were present that were  
 (10) deposited as eggs or were in existence as eggs in 1990?  
 (11) A That's correct  
 (12) Q So they weren't even in the - they weren't even there I  
 (13) guess is the right word until a year after the oil spill?  
 (14) A That's correct  
 (15) Q And the fish that failed to come back in very big numbers  
 (16) in 1993 they were not deposited as eggs until 1991?  
 (17) A That's right  
 (18) Q Two years after the oil spill?  
 (19) A Yes  
 (20) Q Are you familiar with Ted Cooney?  
 (21) A Yes I know Dr Cooney  
 (22) Q Dr Cooney is - is he an oceanography?  
 (23) A Dr Cooney is a biological oceanography  
 (24) Q Which means?  
 (25) A Which means he studies plants and animals in the motion

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- (1) marine waters  
 (2) Q And you have heard him speak his views on why he thinks  
 (3) there may be - there may be these run failures in 1992 and  
 (4) 1993 in the Sound?  
 (5) A Yes  
 (6) Q Let me show you a document This is exhibit 1936 I d  
 (7) like to ask you if you ve ever seen this one before?  
 (8) A No I - I don t believe I ve ever seen this document  
 (9) Q Well let me ask you this If you look at page - whoops  
 (10) these pages aren t numbered Could I see your copy for a  
 (11) moment?  
 (12) A Sure  
 (13) Q Yeah if you look at the second page of that document -  
 (14) MR COOPER Your Honor may I show that document  
 (15) that page?  
 (16) MR STOLL I m sorry did you say he was or was not  
 (17) familiar with this document?  
 (18) THE COURT The question is whether he can show the  
 (19) document  
 (20) MR STOLL To the witness?  
 (21) THE COURT No I think on the screen  
 (22) MR COOPER On the Elmo  
 (23) MR STOLL If there s a proper foundation laid for  
 (24) it  
 (25) THE COURT Have you seen the document?

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- (1) MR STOLL I ve seen the document but I was unclear  
 (2) as to whether Dr Mundy was familiar with this document  
 (3) THE COURT Go ahead counsel ask him a question  
 (4) BY MR COOPER  
 (5) Q Are you familiar with this document have you seen it  
 (6) before?  
 (7) A No  
 (8) Q Did you attend the - did you attend the workshop that s  
 (9) referred to at the beginning there?  
 (10) A I - I don t believe that I did  
 (11) Q Let me ask you this On the second page Dr Mundy that  
 (12) paragraph that begins with the word based on the historical  
 (13) response?  
 (14) A I see it  
 (15) Q That s essentially - that paragraph presents essentially  
 (16) the views of Dr Cooney as you have heard him express those  
 (17) views?  
 (18) A If you ll give me a moment please  
 (19) Yes that s - that paragraph is generally consistent with  
 (20) the views that Dr Cooney s expressed to me in the past  
 (21) MR COOPER Your Honor may I show the exhibit?  
 (22) MR STOLL Well Your Honor I think it s hearsay  
 (23) Dr - If they want to produce Dr Cooney as a witness and we  
 (24) can cross examine him on what his views are that s fine but I  
 (25) don t think the fact that a person out of court has made a

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- (1) statement to Dr Mundy that then that is classic hearsay  
 (2) THE COURT Let s do it another way counsel If you  
 (3) can get the information out by asking direct questions go  
 (4) ahead and do it otherwise if you can t we ll take a break  
 (5) and I ll deal with this out of the presence of the jury  
 (6) MR COOPER Fine  
 (7) BY MR COOPER  
 (8) Q Dr Cooney - or Dr Mundy isn t it true that Dr Cooney  
 (9) Dr Cooney s view - well let me first establish who  
 (10) Dr Cooney is We ve talked about the fact that he s a - I  
 (11) think you said biologist and oceanographer and that s at the  
 (12) University of Alaska in Fairbanks?  
 (13) A Yes  
 (14) Q School of Fisheries and Ocean Sciences?  
 (15) A I don t know what his - what his affiliation is  
 (16) Q Now and his view is essentially based upon the historical  
 (17) response of pink salmon production cycles in ocean  
 (18) temperature  
 (19) there s a high probability that the next three to five years  
 (20) will see colder springtime conditions in the Sound variable  
 (21) zooplankton populations and reduced wild and hatchery  
 (22) production of pink salmon  
 (23) That s a view you ve heard him express?  
 (24) MR STOLL Your Honor I think the proper question is  
 (25) whether he did - he agrees with that statement He can t  
 say - this is the problem I m having

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- (1) THE COURT Frequently counsel counsel have a  
 (2) different idea of what the proper question is The proper  
 (3) question pending is the question the witness will answer  
 (4) A I m sorry sir what is the question?  
 (5) BY MR COOPER  
 (6) Q You have heard him - that s essentially the view that you  
 (7) have heard him express?  
 (8) A Yes  
 (9) Q And indeed that he was expressing it here in September of  
 (10) 1992?  
 (11) A That s the representation that s made on the cover page of  
 (12) the document  
 (13) Q And he goes on to state the view - looking at the  
 (14) highlighted portion on down there - it must be remembered that  
 (15) the hatchery program developed in Prince William Sound  
 (16) during  
 (17) the last warming period -  
 (18) A I m sorry counsel where are you? I don t have any  
 (19) highlighting  
 (20) Q You don t have it highlighted? I ll show you where it is  
 (21) It must be remembered that the hatchery program developed  
 (22) in Prince William Sound during the last warming period 1976  
 (23) through 1986 bringing with it the expectation that production  
 (24) levels would be high for all the years to come that  
 (25) expectation must now be tempered with the realization that  
 Mother Nature is changing the rules of the game for much of the

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- (1) remaining decade Under these new rules region wide  
 (2) production levels will almost certainly decline  
 (3) And again you ve heard him express that view?  
 (4) A Yes  
 (5) Q And you agree at least in part with those views do you  
 (6) not?  
 (7) A I do not completely agree with these views  
 (8) Q But you do agree do you not that there are certainly  
 (9) things that work out there other than the oil spill i e  
 (10) temperature related factors that are an important factor in  
 (11) whatever may be happening with the pink salmon?  
 (12) A Yes  
 (13) Q Could you just explain briefly what those other important  
 (14) factors are?  
 (15) A In addition to factors that are related to the - to the  
 (16) oil spill production of pink salmon in Prince William Sound  
 (17) depends quite a bit on other parts of the environment That  
 (18) seems like a pretty obvious statement but we have a very hard  
 (19) time measuring things like that  
 (20) Dr Cooney s model was one that I in fact referred to  
 (21) earlier when I talk about forecasting salmon upon this because  
 (22) one way we forecast pink salmon upon this is by using  
 (23) Dr Cooney s model That s the easiest way to explain what  
 (24) he s talking about here  
 (25) Dr Cooney measures the number of zooplankters which are

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- (1) the small animals in the marine environment that the young pink  
 (2) salmon eat and he measures the temperatures and Dr  
 Cooney s  
 (3) theory is that if you - if you have high levels of plankton  
 (4) and you have appropriate temperatures that you ll have good  
 (5) levels of production in the future  
 (6) So he ll go in the spring and for example of 1991  
 (7) measure the food and the temperature and then he ll make a  
 (8) prediction for the survival of those young salmon as adults the  
 (9) following year because the fish that are going out in the  
 (10) spring of the preceding year are the ones that come back as  
 (11) adults in the following year  
 (12) However Dr Cooney s model Dr Cooney s model makes it  
 (13) clear that these aren t all the factors that explain what s  
 (14) going on neither is any - anything related to the oil  
 (15) because our forecast models not Dr Cooney s not Fish &  
 (16) Game s are able to account for all the factors that determine  
 (17) how many adult salmon we re going to have in the future  
 (18) So that s the best I can do on that  
 (19) Q And Dr Cooney was basically predicting in 1992 that  
 (20) weather factors basically would cause a - a drastic decline  
 (21) in pink salmon production over the next several years?  
 (22) A Dr Cooney s model is based on weather factors could  
 (23) predict a higher return than actually occurred He shot high  
 (24) on that forecast  
 (25) Q He still - he did believe it was the weather that was

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- (1) going to cause a precipitous drop?  
 (2) A He believed that the weather should cause some kind of  
 (3) reduction however he did not forecast the precipitous drop or  
 (4) what I characterize as the precipitous drop He didn t  
 (5) characterize the production to be that sharp and that  
 (6) definitive  
 (7) Q He did say Mother Nature was changing the rules of the  
 (8) game  
 (9) A He forecast a reduction that s true  
 (10) MR COOPER If I could have just a moment Your  
 (11) Honor  
 (12) Your Honor have no further questions of Dr Mundy  
 (13) THE COURT Hold on I think you may have some more  
 (14) questions  
 (15) MR STOLL I have a few questions  
 (16) THE COURT Keep that microphone on  
 (17) MR STOLL I m not - this isn t all the questions  
 (18) I m just going to ask the question from a couple of pages that  
 (19) counsel took out of these stacks of reports and I just need to  
 (20) have this so I have the whole thing handy  
 (21) REDIRECT EXAMINATION OF PHILLIP R MUNDY  
 (22) BY MR STOLL  
 (23) Q Dr Mundy let s start at the end and go backwards if you  
 (24) don t mind  
 (25) If the fish that came out in 19 - that were returning in

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- (1) 92 and 93 weren t born yet they weren t even eggs at the  
 (2) time of the spill how do you account for your conclusion or  
 (3) the conclusion of the Trustee Council with all these  
 (4) scientists that there was an effect from the oil spill?  
 (5) A Well the - the conclusion that the oil spill is a  
 (6) substantial factor in the decline of the resources in Prince  
 (7) William Sound is based on the observations of continuing  
 (8) damages to the - to the pink salmon populations that we  
 (9) believe are related to the oil  
 (10) Given the fact that we - that the problems associated with  
 (11) the oil spill for the resource didn t evaporate in 1989 and  
 (12) given the fact that we - we see we re measuring continuing  
 (13) effects which were not predicted prior to the - to the oil  
 (14) spill we as management scientists we have to take a look at  
 (15) other factors that might be involved in the - the losses that  
 (16) were associated with the oil spill  
 (17) For example we know that sea birds eat a lot of the  
 (18) predators that eat young pink salmon when they come out of  
 the  
 (19) streams and start their early growth and we ve measured  
 losses  
 (20) of thousands and thousands of sea birds at the time of the 1989  
 (21) spill As a management scientist that s an observation that s  
 (22) of interest to me because that tells me the predator  
 (23) populations may be on the rise We do know that certain  
 (24) predator populations in fact are on the rise so this is  
 (25) generally what people refer to as an ecosystem level effect and

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- (1) that just means that we're looking at animals other than the  
 (2) pink salmon trying to figure out what their impact is on the  
 (3) pink salmon populations  
 (4) So that's generally the - the answer  
 (5) Q Well you mean that the - when you talked about these  
 (6) thousands and thousands of birds that were killed by the oil  
 (7) spill do you mean that they eat the predators of the salmon?  
 (8) A Right They - they eat the young of the predators of the  
 (9) salmon so that they - they control those populations and keep  
 (10) them down and if controls on those populations are lifted  
 (11) sometimes predator populations can get on top of the  
 (12) prepopulations and drive them down So that's certainly  
 (13) something that - that is a matter of concern to - to me  
 (14) Q Now Dr Peterson last week testified about this food web  
 (15) and how these - all these different things interrelate Is  
 (16) that what you're talking about when you talk about the - is  
 (17) that the same notion as you're talking about when you say that  
 (18) the thousands of birds are killed then they're not around to  
 (19) kill the predators of the salmon and therefore the predators  
 (20) get out of balance and there's more of them and so on?  
 (21) A Yes that's an example of a food web effect on a  
 (22) commercially important resource  
 (23) Q Does the effect speaking of that same effect when the  
 (24) herring if a herring population is wiped out does that have  
 (25) any effect also on salmon in Prince William Sound?

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- (1) MR COOPER Objection Your Honor I don't believe  
 (2) the witness is - has qualified as an expert on herring  
 (3) THE COURT Sustained  
 (4) MR STOLL I'm not asking for his expertise -  
 (5) THE COURT I understand counsel This hasn't been  
 (6) the subject of examination  
 (7) BY MR STOLL  
 (8) Q Now there was reference to a statement by Dr Spies  
 (9) There's a number of scientists on the Trustee Council is that  
 (10) correct?  
 (11) A Yes  
 (12) Q And Dr Spies is - he's certainly a qualified person  
 (13) He's not a salmon biologist however is that correct?  
 (14) A No Dr Spies is a senior scientist He's a physiologist  
 (15) and a toxicologist and he has quite a bit of experience in  
 (16) studying oil spills but he's not a salmon biologist In fact  
 (17) I am a salmon biologist I work for Dr Spies  
 (18) Q And a quotation was taken from what Dr Spies said in the  
 (19) five year report do you recall that by counsel?  
 (20) A Yes  
 (21) Q And that - was that from the five year report of the Exxon  
 (22) Valdez Trustee Council?  
 (23) A That was the result of a meeting of the Trustees that was  
 (24) held on the fifth anniversary of the oil spill this year?  
 (25) Q Do you happen to have the Exhibit 59B3 before you sir the

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- (1) five year report?  
 (2) A No I don't  
 (3) Q Now counsel has quoted from one page that talked about  
 (4) the  
 (5) egg mortality and you've testified - you've testified about  
 (6) the mortality that was caused by this shifting of the birds and  
 (7) so on in the food web another type of mortality That's  
 (8) another type of mortality other than egg mortality is that  
 (9) correct?  
 (10) A That's correct  
 (11) Q And then did - did Dr Spies say other things in that  
 (12) report as well about the effects of the oil spill on the  
 (13) salmon?  
 (14) A Yes  
 (15) Q And on page 13 did Dr Spies say that as the oil moved -  
 (16) moved through Prince William Sound and into the Gulf of  
 (17) Alaska  
 (18) the slicks were also swept into the mouths of streams where  
 (19) salmon breed and where the salmon fry were soon to emerge  
 (20) from  
 (21) the gravel and find their way to saltwater?  
 (22) A Yes  
 (23) Q And did he write at 75 percent of the wild pink salmon in  
 (24) the Sound spawned in the mouths of streams?  
 (25) A Yes  
 (26) MR COOPER Your Honor objection I think he's  
 (27) just - he's referring to a document that I never referred to  
 (28) albeit I did use a statement from Dr Spies out of there

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- (1) but -  
 (2) THE COURT I'm going to take this out of the presence  
 (3) of the jury counsel They need a break I'm sure  
 (4) (Jury out at 11 30 a m )  
 (5) THE COURT All right the jury is not present Just  
 (6) give me your objection in full counsel  
 (7) MR COOPER Your Honor the - what I did was ask  
 (8) about a particular subject stated basically a statement out of  
 (9) that document although I did not identify the document It  
 (10) appears to me that what's about to happen is that counsel is  
 (11) about to start dealing with a whole lot of other subjects out  
 (12) of that document  
 (13) I don't think that simply because I asked him that one  
 (14) question he's entitled to then go through there and read him  
 (15) everything out of there and say you agree with this you agree  
 (16) with that you agree with this do you agree with that  
 (17) especially as it gets more and more remote from the subject I  
 (18) asked him about  
 (19) THE COURT Forgive me if I don't remember exactly  
 (20) what you asked about but tell me what you asked about It's  
 (21) been an hour and a half counsel One isolated incident of  
 (22) transcript doesn't leap to my mind right now  
 (23) MR COOPER I'm sorry Your Honor The precise  
 (24) statement Dr Spies basically said I'll quote him this egg  
 (25) mortality - this is on the pink salmon - might translate into

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- (1) a decline of as much as ten percent in the entire adult pink  
 (2) salmon run in Prince William Sound if all the other factors  
 (3) which contribute to salmon mortality are added together with  
 (4) the oiled stream effect  
 (5) THE COURT Now Mr Stoll how many questions are you  
 (6) going to ask him and what are they?  
 (7) MR STOLL I m going to ask him - can I count the  
 (8) questions  
 (9) THE COURT Let you count the ways counsel Yes  
 (10) MR STOLL Four I think I have four questions on  
 (11) this He took this out of context and the questions I m going  
 (12) to ask him deal with egg mortality they are precisely on the  
 (13) subject that he asked this witness  
 (14) THE COURT Fine ask the questions  
 (15) BY MR STOLL  
 (16) Q Did he meaning Dr - Did Dr Spies also say that in the  
 (17) autumn of 1989 egg mortality of oiled streams averaged about  
 (18) 15 percent compared to about 9 percent in unoled streams?  
 (19) A Yes  
 (20) Q And did he say that since 1989 egg mortality in the oiled  
 (21) areas has generally increased?  
 (22) A Yes  
 (23) Q Did he say that in 91 and 92 approximately 40 to 50  
 (24) percent of the salmon eggs in oiled streams did not survive as  
 (25) to 80 percent mortality in unoled streams?

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- (1) A Yes  
 (2) Q Did he say in 1993 the rates of egg mortality had dropped  
 (3) to an average of less than 25 percent in oiled streams and less  
 (4) than 15 percent in unoled streams the difference has still  
 (5) persisted?  
 (6) A Yes  
 (7) MR STOLL I have a couple questions that are similar  
 (8) to that Your Honor but that s basically it I mean -  
 (9) THE COURT Mr Cooper?  
 (10) MR COOPER Your Honor I think that the general  
 (11) question is whether or not the witness had relied upon this -  
 (12) this material I think I m entitled to ask him if he had - if  
 (13) he took it into account I don t believe there was any  
 (14) testimony that the witness had relied upon this information  
 (15) Maybe there is but I haven t heard it yet  
 (16) MR DIAMOND Your Honor I d just say this is  
 (17) governed by 803(18) learned treatise exception which deals  
 (18) with materials called to the witness attention on  
 (19) cross examination and relied upon by him so that it is a  
 (20) foundational requirement that may or may not be established  
 (21) THE COURT Well counsel the cross examination took  
 (22) one passage out of a report right? Doesn t counsel have an -  
 (23) shouldn t counsel have an opportunity to ask questions about  
 (24) other passages that might suggest might suggest that that one  
 (25) passage is not the complete story?

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- (1) MR DIAMOND I would think that certainly in the  
 (2) abstract that s a correct proposition as it affects his  
 (3) judgment  
 (4) THE COURT Let s talk about the concrete If one  
 (5) statement is taken that statement that was taken and asked of  
 (6) the witness why shouldn t opposing counsel get an opportunity  
 (7) to try to show by virtue of other statements in the report  
 (8) that that the one passage is taken out of context  
 (9) MR COOPER Your Honor that s fair And I think  
 (10) that s correct And if I heard those questions right what  
 (11) we re talking about is embryo mortality which is what I was  
 (12) talking ability  
 (13) THE COURT Yes yes  
 (14) MR COOPER And not all the rest of the material  
 (15) that s in that document  
 (16) MR STOLL So I can -  
 (17) THE COURT We re on the same pages but I did hear  
 (18) you say and a couple other questions like that counsel  
 (19) MR STOLL Well Your Honor they re totally limited  
 (20) to egg mortality the egg mortality material  
 (21) THE COURT Reason I ask for offer of proof is so I  
 (22) don t get a whole lot of stuff in front of the jury with the  
 (23) lawyer s argument Your offer of proof is acceptable You can  
 (24) ask those questions  
 (25) What other questions are you going to ask?

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- (1) MR STOLL That as a result did he also say  
 (2) Dr Spies say it now appears there s an inheritable difference  
 (3) in egg mortality for fish from oiled versus unoled streams?  
 (4) A I m sorry I don t know where you are in the -  
 (5) MR STOLL I m sorry it s on page 13 I think it s  
 (6) further on down  
 (7) A Can you show me?  
 (8) THE COURT My machine is way back in the back in the  
 (9) past Can I get to this to the present?  
 (10) COURT REPORTER Push O for on line  
 (11) MR STOLL I m sorry Your Honor It was the  
 (12) sentence before the one that Mr Cooper read to the witness  
 (13) And that is it now appears there s an - an inheritable  
 (14) difference in egg mortality for fish from oiled versus unoled  
 (15) streams?  
 (16) A Yes  
 (17) MR COOPER Your Honor that raises a whole new  
 (18) subject  
 (19) THE COURT Sure does Tell me - tell me what other  
 (20) questions you re going to ask  
 (21) MR STOLL That s all  
 (22) THE COURT So let s not open up talk about that  
 (23) whole new subject Why shouldn t I allow that question?  
 (24) MR COOPER Your Honor that raises a whole new  
 (25) subject of genetics and inheritable differences which is a far

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- (1) away - a far piece from where I was in that document  
 (2) THE COURT I agree with you counsel  
 (3) MR STOLL Your Honor may I have this - may I show  
 (4) the Court the document It s the sentence before -  
 (5) THE COURT Doesn t make any difference to me  
 (6) counsel it looks to me like the subject is different Not  
 (7) only is it different but it s a very complex question  
 (8) One question just did the - did the person say the  
 (9) following things is not the full story and believe me I don t  
 (10) intend to explore the full story on redirect examination I  
 (11) mean you are going to ask that question and get that answer  
 (12) and if that s what you re going to do you can t do it  
 (13) MR STOLL Your Honor may we ask him a question as  
 (14) to whether or not in his - as a result of the report and the  
 (15) information that he had as part of the Trustee Council whether  
 (16) he believes that there is - that it now appears that there are  
 (17) inheritable differences in the egg mortality from fish from  
 (18) oiled versus unoiled streams?  
 (19) A Let s assume that he s going to answer the question yes  
 (20) What are the following questions? Are you going to ask  
 (21) different questions?  
 (22) MR STOLL No  
 (23) THE COURT Counsel it s such a vague statement and  
 (24) it conjures up the possibility of so many lengthy scientific  
 (25) examinations and definitions that that question and that answer

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- (1) and in the context of redirect examination seems to me to be  
 (2) inappropriate Because it s confusing it doesn t define it -  
 (3) the question is not fully defined and the jury can t imagine  
 (4) the jury s going to get helpful information from that question  
 (5) and that answer  
 (6) MR COOPER There s a - there would be a lot of  
 (7) material Your Honor I d have to go into if we start opening  
 (8) up that can of worms at this point in time  
 (9) THE COURT That s not a threat that s a promise  
 (10) counsel?  
 (11) MR COOPER Fact of litigation Your Honor  
 (12) MR STOLL May I have just a minute Your Honor?  
 (13) MR PETUMENOS Judge at the risk of turning into -  
 (14) turning you into a late run pink salmon I just wanted to make  
 (15) a record here with respect to my objections of the ruling I  
 (16) believe that it is related the relevant rules evidence rule  
 (17) 106 which is completeness and context and that when we re  
 (18) talking about egg mortality the fact that this scientist wrote  
 (19) about the genetic implications of the - of the egg mortality  
 (20) does not open the door to an extensive recross because we are  
 (21) talking about what this scientist wrote about in context with  
 (22) egg mortality and that to fail to permit Mr Stoll to ask  
 (23) about that aspect of egg mortality within this report is a  
 (24) violation of Evidence Rule 106 and that it should not open  
 (25) recross any farther than the document he s looking at and that

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- (1) would be my position with respect to it  
 (2) THE COURT Of course that s a step that I would  
 (3) have - have to take if in fact I allow the question and the  
 (4) answer which I m not going to do  
 (5) MR STOLL Your Honor I would respectfully suggest  
 (6) they also raised this issue when they got into this Auke Bay  
 (7) study this is what they asked him questions about the Auke Bay  
 (8) study and this is what relates also to this genetics  
 (9) THE COURT Hold on Well thank you counsel You  
 (10) made your record The objection s sustained  
 (11) MR COOPER Thank you Your Honor  
 (12) THE COURT I m going the take a break  
 (13) THE CLERK Please rise This court stands in  
 (14) recess  
 (15) MR STOLL I can ask him questions up to that point?  
 (16) THE COURT Yes that question and that answer you  
 (17) can  
 (18) (Recess from 11 42 a m to 12 03 p m )  
 (19) (Jury in at 12 03 p m )  
 (20) THE CLERK This court now resumes its session  
 (21) Please be seated  
 (22) THE COURT Counsel?  
 (23) MR STOLL Thank you  
 (24) BY MR STOLL  
 (25) Q Now we ll resume where we were Dr Mundy

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- (1) Did Dr Spies go on to say that since 1989 - in this  
 (2) five year report did he say that since 1989 egg mortality in  
 (3) the oiled areas has generally increased?  
 (4) A Yes  
 (5) Q Did he say that in 1991 and 1992 approximately 40 to 50  
 (6) percent of the salmon eggs in oiled streams did not survive as  
 (7) compared to an 18 to 30 percent mortality in unoiled streams?  
 (8) A Yes  
 (9) Q Did he go on to say that in 1993 though the rates of egg  
 (10) mortality had dropped to an average of less than 25 percent in  
 (11) oiled streams and less than 15 percent in unoiled streams the  
 (12) eggs still persisted?  
 (13) A Yes  
 (14) Q Did he also say that although the differences in salmon egg  
 (15) mortality in oiled and unoiled streams over the first two years  
 (16) were likely attributable to the effects of oil - of oil  
 (17) scientists did not expect these differences to persist as long  
 (18) as four years after the spill?  
 (19) A Yes  
 (20) Q And say that at first they thought oil was directly  
 (21) affecting survival of the pink salmon eggs but as the amount  
 (22) of oil in the shoreline decreased other explanations began to  
 (23) seem more plausible Perhaps there was a genetic effect which  
 (24) young -  
 (25) MR COOPER Your Honor?

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- (1) THE COURT Counsel that isn't part of the offer of  
 (2) proof  
 (3) MR STOLL I withdraw that statement then  
 (4) THE COURT The jury is to disregard that last  
 (5) statement  
 (6) BY MR STOLL  
 (7) Q Now there was - counsel asked you some questions about  
 (8) the Auke Bay study And did the Trustee Council find that  
 (9) there was egg mortality even though there was no measurable  
 (10) oil  
 (11) in the water or sediment?  
 (12) A In the Auke Bay study?  
 (13) Q Yes  
 (14) A Yes One of the studies that they did was to use oiled  
 (15) gravel which had been weathered They simply oiled gravel in  
 (16) one year and then didn't use it until the following year so it  
 (17) had been weathered for a year And in fact when they put it  
 (18) in the artificial stream and measured the - the content of the  
 (19) water that came out of that gravel they couldn't measure  
 (20) any - any oil in it There wasn't any - any toxic  
 (21) components It was - it was pure water  
 (22) And they tested embryo survival in that weathered oil  
 (23) gravel against embryo survival in gravel that was clean had  
 (24) never been oiled and they found that the oil weathered gravel  
 (25) suppressed survival of the eggs even though there were no  
 measurable hydrocarbons in the effluent

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- (1) Q Now Dr Mundy counsel asked you some questions from  
 (2) some  
 (3) government reports and there was one sentence I think that  
 (4) said  
 (5) escapement goals are going to be met Would you explain to  
 (6) the  
 (7) jury the difference between escapement goals the fact that  
 (8) their escapement goals are met does that mean that the run  
 (9) size is the same?  
 (10) A No No it doesn't mean that at all  
 (11) Q Could you explain to the jury maybe with this - the use  
 (12) of this board what happens with the run size - here I've got  
 (13) a pen here - run sizes versus escapement goals harvests?  
 (14) A This is the fundamental kind of arithmetic for harvest  
 (15) management We have a salmon run and that's the total  
 (16) number  
 (17) of salmon that are coming back to an area that we manage  
 (18) such  
 (19) as the - the area in which the fish bound for Red Lake are  
 (20) harvested This would be a marine harvest district We try to  
 (21) estimate the total number of fish to come back in the run and  
 (22) then we allow some catch and the difference between the run  
 (23) and  
 (24) the catch is the escapement  
 (25) So if you have a - in general if you have a run size  
 that's about 750 000 and you take a catch out of it that's  
 500 000 you get an escapement that's 250 000 But the way  
 that this actually - and that's pretty straightforward  
 arithmetic The way this actually works when you're managing  
 a  
 salmon fishery however is the other way around  
 You've got a salmon run you've got an escapement goal and

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- (1) you're looking to get that escapement goal Maybe not all in  
 (2) the - in the river but you need to have enough strength  
 (3) showing in the harvest districts to give you a reasonable  
 (4) expectation that you're going to - going to achieve that  
 (5) number before you allow any of the fish to be taken as harvest  
 (6) so the fact that a - that a - an escapement goal has been  
 (7) achieved is good for the managers because they've - they've  
 (8) done their job in that regard  
 (9) However meeting an escapement goal is not - is not the  
 (10) same as allowing the harvesters to have any catch So the fact  
 (11) that an escapement goal has been made that's good that's  
 (12) commendable and what we try to do when we manage runs  
 (13) the  
 (14) fact that you managed to attain your escapement goal doesn't  
 (15) mean you've allowed any catch at all These are the three  
 (16) major categories for management of data The run the catch  
 (17) and the escapement And it's the escapement number down  
 (18) here  
 (19) that drives everything and until the manager has a reasonable  
 (20) expectation that that number's going to be attained this catch  
 (21) is usually held to - held to zero  
 (22) Q So Dr Mundy when we talked about the situation over in  
 (23) Kodiak with the Red Lake if there are 200 - I think you said  
 (24) 211 000 and they hadn't opened the - the catch yet the  
 (25) season that's because they're trying to get - they're trying  
 to at least meet this this goal before there's anything left  
 for the fishermen to catch?

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- (1) A That's right  
 (2) Q So the fact that escapement goals may be - have been met  
 (3) in a particular area does not mean that the run size is the  
 (4) same I mean you could have - you could have 250 000 an  
 (5) escapement of 250 000 fish each year in a particular area it  
 (6) doesn't mean that there is a run of 750 000 fish in that year?  
 (7) A You can't generally tell what the - what the total size of  
 (8) the salmon run was just by - by looking at the escapement  
 (9) Obviously you have to have the catch to know what the total  
 (10) number was  
 (11) Q Now there was another document that counsel used and I  
 (12) only have one copy Unfortunately I can't give you one but  
 (13) it was the - maybe I could come over to -  
 (14) MR STOLL Could I show - stand next to the witness  
 (15) Your Honor?  
 (16) THE COURT Yes  
 (17) MR STOLL It's exhibit 3812  
 (18) BY MR STOLL  
 (19) Q And this is the Fin Fish Management Report for 1989  
 (20) This - counsel took some figures of - dealing with  
 (21) subsistence fishing Do you recall this - the questions at  
 (22) pages 30 and 31? Do you recall some questions about that?  
 (23) A Yes  
 (24) Q And the Fin Fish Management Report is different from the  
 (25) shellfish management this doesn't refer to that at all

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- (1) A That s correct This is for - for salmon and herring  
 (2) Q Okay And the area that they are talking about that  
 (3) counsel referred to as Prince William Sound area subsistence  
 (4) fisheries this includes the lower Copper River fisheries?  
 (5) A Yes  
 (6) Q And that area was not an area that was oiled is that  
 (7) right?  
 (8) A That s right  
 (9) Q And did this report find that the 19 - did it also include  
 (10) this statement - that counsel didn t read - the 1989 use  
 (11) dropped considerably from 1988?  
 (12) A Yes  
 (13) Q And the numbers in here are in the - they talk about  
 (14) hundreds or dozens of fish and things of that nature We re  
 (15) not talking about a sampling of thousands like - or millions  
 (16) like you re talking about?  
 (17) A Right it refers to hundreds of fish  
 (18) Q So that - that fishing is in - those are wild those are  
 (19) wild fish isn t that right?  
 (20) A Yes  
 (21) Q And so that s - the wild fish are the ones that had -  
 (22) were affected primarily by the oil spill isn t that - is that  
 (23) correct?  
 (24) A Yes  
 (25) MR STOLL Thank you

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- (1) RE-CROSS EXAMINATION OF PHILLIP R MUNDY  
 (2) BY MR COOPER  
 (3) Q Dr Mundy there have been no Trustee studies done have  
 (4) there to ascertain whether there has been an effect on pink  
 (5) salmon in Prince William Sound by virtue of diminished  
 (6) predation by birds?  
 (7) A There have been no studies that I recall that were  
 (8) specifically directed at that question However there have  
 (9) been studies that are relevant and provide information to the  
 (10) determination of that question  
 (11) Q Well there are bird studies that were done correct?  
 (12) A There are also inventories of animals that were killed and  
 (13) oiled and subsequently died during the - the event of the oil  
 (14) spill  
 (15) Q But no study has addressed the question as to whether or  
 (16) not pink salmon are somehow suffering because of decreased  
 (17) predation?  
 (18) A Well no that s not accurate either The Trustee Council  
 (19) last year funded a very ambitious effort called the Sound  
 (20) Ecosystem Assessment and this is an attempt to understand  
 (21) how  
 (22) all of the elements in Prince William Sound contribute to  
 (23) producing economically important species like pink salmon  
 (24) and  
 (25) herring  
 (26) So the Trustee Council has recognized that by virtue of  
 (27) the - the uncertainty introduced in the management by the

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- (1) Exxon Valdez oil spill that we need to have a much better  
 (2) understanding of the ecosystem in Prince William Sound in  
 (3) order  
 (4) to conduct fisheries management than we would have otherwise  
 (5) needed or that we d need in other parts of the state So the  
 (6) Trustee Council last year invested a very large amount of  
 (7) money  
 (8) in the Sound Ecosystem Assessment probably about as much  
 (9) as it  
 (10) cost to - to run the entire fisheries management operation in  
 (11) Prince William Sound in toto was put into that one - one  
 (12) study  
 (13) That study does contain elements that attempt to link  
 (14) predation by birds to predators and to understand the relation  
 (15) between the numbers of predators and the numbers of pink  
 (16) salmon  
 (17) and herring in Prince William Sound So yes the Trustees  
 (18) have done essentially a study and it is ongoing  
 (19) Q That study has not been completed Doctor?  
 (20) A No the study is ongoing  
 (21) Q It s just - it hasn t been - it s essentially just  
 (22) getting underway isn t it?  
 (23) A The study - the study was put in motion last - late last  
 (24) fall early last winter  
 (25) Q Now you talked also on redirect about some more  
 (26) discussion  
 (27) about salmon stream mortality Let me see if I can bring out  
 (28) something here Now Mr Bue s mortality studies for 89 90  
 (29) and 91 I guess it was  
 (30) A Yes

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- (1) Q He looked at salmon egg mortality in the rivers or in the  
 (2) streams in the fall of each of those years?  
 (3) A That s correct  
 (4) Q And he also then went back in the spring and looked to see  
 (5) of the eggs that had been deposited of a given number of eggs  
 (6) that had been deposited how many fry basically had emerged  
 (7) or had been produced by those eggs?  
 (8) A That s correct  
 (9) Q And when he did that he found that there was no difference  
 (10) between the oiled and the unoiled streams at least no  
 (11) detectable difference?  
 (12) A No detectable difference in what?  
 (13) Q In the - in the number of fry that had emerged had been  
 (14) produced successfully by a given number of eggs  
 (15) A No  
 (16) Q Did he not in fact conclude - well what is your  
 (17) understanding of what he was looking at in the spring  
 (18) Dr Mundy?  
 (19) A What he was looking - what you have there is you have two  
 (20) different - two different estimates The mortality estimate  
 (21) is basically just - just a ratio of two numbers It s the  
 (22) number that you start at - started out with in toto and then  
 (23) it s the - the number that wound up dead  
 (24) So you take the big number and you would divide it into the  
 (25) little number if you did it right And so if you had a

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- (1) hundred animals that you started out with in some part of the  
 (2) year and you wound up with ten of them dead later on that's a  
 (3) ten percent mortality so it's a pretty straightforward  
 (4) concept  
 (5) The - what - and what he was - he looked at the embryo  
 (6) mortality by digging eggs in the fall but he also had to  
 (7) dig - to dig those same areas later on in the year because in  
 (8) the fall he was just measuring the embryo mortality that  
 (9) occurred in that - that time frame that narrow time frame  
 (10) between the time the eggs went in the gravel and when he  
 could  
 (11) get out there to dig them which was usually at the end of  
 (12) September and beginning of October in that time frame  
 (13) But of course those were still eggs after he finished his  
 (14) work They were still eggs in the gravel and those eggs were  
 (15) still dying So later on in the year he needed to - he  
 (16) needed a measure of what additional eggs had died So when  
 (17) they went out in the spring to look at the fry and determine  
 (18) the number and condition of the fry he also added an estimate  
 (19) for the dead fry into these - these embryo studies to see  
 (20) whether or not there were appreciable mortalities after the  
 (21) time the egg - the egg digs were done  
 (22) When they looked at the fry mortalities in the spring they  
 (23) didn't find - they didn't find any significant differences  
 (24) because the mortality had occurred before the time of the egg  
 (25) dig There were a lot of dead eggs There were few dead fry

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- (1) so the - the number that was driving the mortality estimate  
 (2) was the number of dead eggs That was the big number The  
 (3) small number was the - was the fry number  
 (4) Now when they estimated the fry mortality which was found  
 (5) to be insignificant - that was a ratio again of only two  
 (6) numbers the number of dead fry on the top and the number of  
 (7) dead fry on the bottom - and he didn't find a significant  
 (8) difference among streams for the mortality of the fry but that  
 (9) number the number of dead fry on top and the number of - of  
 (10) total fry on the bottom that number is not the - the  
 (11) comparable to the egg mortality  
 (12) Q Dr Mundy there will be other witnesses that will address  
 (13) this but isn't it the case that he also calculated the number  
 (14) on the bottom the density the density of eggs for a given  
 (15) unit of area in the streambed with me so far?  
 (16) A The density?  
 (17) Q Yes the number of eggs in a particular - I believe it was  
 (18) a square meter but in a unit of area for the streambed do you  
 (19) recall that?  
 (20) A Yes  
 (21) Q And he also then used on the top - the numerator I  
 (22) guess it was - live fry  
 (23) A Yes  
 (24) Q And when he did that he found there was no difference He  
 (25) could detect no difference between the resulting number oiled

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- (1) stream versus unoled stream  
 (2) A No that's incorrect  
 (3) Q Now Dr Mundy you talked about the food web on recross -  
 (4) redirect do you recall that?  
 (5) A Yes  
 (6) Q And the food web you were referring to was the kind of  
 (7) nearshore area?  
 (8) A Food web is kind of a general concept in science talks  
 (9) about what eats what That's what a food web is It might be  
 (10) in the nearshore area might be offshore here could be  
 (11) anywhere  
 (12) Q In any event the fish that were feeding in this food web  
 (13) in 1989 the year of the spill the pink salmon that were in  
 (14) that food web those were the ones that came back in record  
 (15) numbers in 1990?  
 (16) A No Again as I've indicated to you sir the - the fish  
 (17) that were feeding in the food web some of them died and didn't  
 (18) come back and some of them did come back So are you - if  
 (19) you're asking me Were these animals in this food web did  
 (20) some of them come back did some of them live? Yes  
 (21) Q Enough of them came back Dr Mundy to set a record run  
 (22) size of harvest?  
 (23) A There was a record there was a record harvest in 1990  
 (24) Q And the same with respect to those that were feeding in  
 (25) this food web in 1990 they returned in 1991 the ones that

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- (1) survived in record numbers?  
 (2) A That's right  
 (3) Q You referred Dr Mundy to this experiment in Auke Bay  
 (4) Do you recall that subject?  
 (5) A It was an experiment not done in Auke Bay but it was an  
 (6) experiment done at the Auke Bay Laboratory of the National  
 (7) Marine Fisheries Service  
 (8) Q And you mentioned the fact that there were not detectable  
 (9) levels in the effluent from the water that was passing over the  
 (10) sediment do you recall that?  
 (11) A Yes  
 (12) Q In fact though the hydrocarbons were - there were  
 (13) hydrocarbons were there not in the sediment itself?  
 (14) A That's correct  
 (15) Q And you don't know how those - the quantities or the  
 (16) concentrations of those hydrocarbons as I think you've stated  
 (17) on cross earlier compared to the concentrations of  
 (18) hydrocarbons that were actually out in the field as a result of  
 (19) the spill?  
 (20) A That's correct I don't know exactly how much oil they  
 (21) used  
 (22) Q One final question Dr Mundy We've talked a lot about  
 (23) the Trustees the ADF&G Are you in fact being compensated  
 (24) by the plaintiffs for your testimony and your work in this  
 (25) case?

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- (1) A Yes by the plaintiffs and by Exxon as a matter of fact  
 (2) Q By Exxon in the context of?  
 (3) A Depositions  
 (4) Q You re referring to the practice that the parties each pay  
 (5) for the other expert s time?  
 (6) A That s correct  
 (7) Q Time on deposition But you re basically - you were  
 (8) engaged by the plaintiffs were you not?  
 (9) A Oh yes  
 (10) Q And you re being paid by them?  
 (11) A That s correct  
 (12) MR COOPER No further questions  
 (13) THE COURT You can step down sir  
 (14) MR STOLL I just have two questions Your Honor  
 (15) maybe three  
 (16) THE COURT I ll hold you to that Mr Stoll  
 (17) FURTHER REDIRECT EXAMINATION OF PHILLIP R MUNDY  
 (18) BY MR STOLL  
 (19) Q The plaintiffs are paying you for your time here but when  
 (20) you were on the Trustee Council and all these studies were  
 (21) done  
 (22) for the Trustee Council we weren t paying you for doing that  
 (23) were we?  
 (24) A No  
 (25) Q Or when you were working at the Justice - U S Justice  
 Department with respect to the Exxon Valdez oil spill we

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- (1) weren t paying you for that?  
 (2) A No  
 (3) Q And with respect to the Auke Bay Study we ll call it the  
 (4) Auke Bay Study the fact is that there were - even though  
 (5) there were not hydrocarbons measurable couldn t measure  
 them  
 (6) there was still a higher egg mortality is that correct?  
 (7) A There were no measurable hydrocarbons in the water and  
 (8) yes the embryo mortality in the - those oiled gravels was  
 (9) higher than that in the clean gravels  
 (10) MR STOLL Thank you  
 (11) THE COURT You may step down sir  
 (12) MR STOLL Three questions  
 (13) THE COURT I saw that yeah I thought you said  
 (14) two  
 (15) MR STOLL I was very careful  
 (16) MR PETUMENOS Plaintiffs call Mr Jim Bush  
 (17) Mr Stoll are you marking this as an exhibit?  
 (18) MR STOLL No I don t think we ll make that an  
 (19) exhibit  
 (20) THE CLERK Sir please attach the microphone to your  
 (21) tie and remain standing for the oath Sir please stand for  
 (22) the oath Raise your right hand  
 (23) (The Witness Is Sworn)  
 (24) THE CLERK Please be seated Sir for the record I  
 (25) need you to state your full name

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- (1) A James Gilbert Bush  
 (2) THE CLERK Spell your last name please  
 (3) A B u s h  
 (4) THE CLERK And your occupation?  
 (5) A I m a geologist with ICF Kaiser Engineers  
 (6) DIRECT EXAMINATION OF JAMES G BUSH  
 (7) BY MR PETUMENOS  
 (8) Q Mr Bush could you tell the jury a little bit about where  
 (9) you live and work and also your age because you don t look  
 old  
 (10) enough to be an expert witness  
 (11) A Thank you I live in Richland Washington West Richland  
 (12) specifically I m the senior scientist with ICF Kaiser  
 (13) Engineers I m 45 years old I guess 44 45 somewhere in  
 (14) that range I don t keep track of it  
 (15) Q And what is ICF Kaiser Engineers?  
 (16) A ICF Kaiser Engineers is an international consulting firm  
 (17) dealing principally with - with engineering and environmental  
 (18) management issues  
 (19) Q Are there groups within ICF?  
 (20) A Yes  
 (21) Q What group are you with?  
 (22) A I m with the environmental group  
 (23) Q What do they do?  
 (24) A We principally support government and industry in  
 (25) environmental management environmental issues dealing with  
 the

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- (1) environmental problems  
 (2) Q And do you have any technical specialties within ICF?  
 (3) A Yes I do I m ICF Northwest s senior scientist with  
 (4) technical specialties within stratigraphy and sedimentary  
 (5) geology  
 (6) Q With stratigrapher?  
 (7) A Yes  
 (8) Q What s that?  
 (9) A It s a specialty in geology where you investigate the  
 (10) layers of sedimentary rocks how they are formed and  
 (11) distribution and shape  
 (12) Q The second one was?  
 (13) A Sedimentary geology That s a broader science in the same  
 (14) general area  
 (15) Q And does your work ever take you to particular field sites  
 (16) go out into the world and investigate things?  
 (17) A Oh yes yes I ve investigated a number of areas -  
 (18) Q What is your educational background -  
 (19) A Excuse me  
 (20) Q I m sorry did I interrupt you?  
 (21) A I was going to - yes I ve worked in Tennessee Virginia  
 (22) Washington Oregon California and of course Alaska  
 (23) Q And what is your educational background please since high  
 (24) school?  
 (25) A Since high school I attended Ohio State University

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- (1) received my Bachelor s from there I was drafted served in  
 (2) the United States Navy then I went back to graduate school at  
 (3) South Dakota School of Mines and Technology Received my  
 (4) Master s of Science from South Dakota School of Mines  
 (5) After that I worked for Anaconda Company for approximately  
 (6) two years I left Anaconda to help form Aspen Exploration  
 (7) Corporation After that I worked for Arco Alaska Inc  
 (8) divisions within Arco and consulted on my own for a short  
 (9) time And after that started with ICF Kaiser  
 (10) Q Now could you define for the jury in very brief terms what  
 (11) we mean by the study of geology?  
 (12) A Well broadly speaking geology is the study of the science  
 (13) of the history of the earth As I mentioned earlier I focused  
 (14) in sedimentary rocks shoreline processes interaction of the  
 (15) ocean with marine sediments and that sort of thing  
 (16) Q Can you explain to the jurors what marine geology is?  
 (17) A Well marine geology is a narrow portion or a more narrow  
 (18) portion of geology and it focuses on primarily - primarily  
 (19) the interaction of the hard portions of the earth the  
 (20) sediments and rocks and so forth the sea floor with the  
 (21) dynamics or wave action and current action of the oceans  
 (22) Q You mentioned some work for Aspen Exploration Who are  
 (23) they? What work did you do for them?  
 (24) A Aspen was a small exploration firm based in Denver  
 (25) Colorado and while I worked for them I worked in various

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- (1) areas in Alaska the Panhandle and Cook Inlet primarily  
 (2) Q Exploring for what Mr Bush?  
 (3) A We were looking for precious metals mineral deposits in  
 (4) coastal - coastal shoreline accumulations for the most part  
 (5) Q You mentioned some work for Arco Alaska  
 (6) A Yes  
 (7) Q Can you tell the jury what type of work you did for them?  
 (8) A For Arco Alaska I was an explorationist looking for oil  
 (9) and gas primarily on the North Slope  
 (10) Q And did that involve some study of beaches within Alaska?  
 (11) A Yes it did To explore for oil and gas it s more than  
 (12) just drilling wells and looking at the ancient sediments deep  
 (13) in the subsurface  
 (14) Our principal objective was to examine a number of the very  
 (15) modern I guess recent shoreline deposits on the North Slope  
 (16) try to construct a model from those and determine the nature of  
 (17) the sediments deep in the subsurface and based on what we  
 (18) understood in the surface in the near time the young rocks  
 (19) try to understand where oil might occur in the older deep  
 (20) rocks  
 (21) Q And what techniques would you use to try and get that  
 (22) accomplished?  
 (23) A Well there are - there was a wide variety of ways to do  
 (24) that I think in a genera' sense what I ve explained is the  
 (25) main technique using the modern depositional environments  
 on

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- (1) the coast lines and the deeper sea floor to understand the  
 (2) types of rocks that occur deep in the ancient rocks in the  
 (3) subsurface  
 (4) Q What period of time did you do that work?  
 (5) A That was from approximately 1982 through 1985 86 in that  
 (6) vicinity  
 (7) Q Between the work you did for Arco and the exploration  
 (8) company and in this case have you become familiar with the  
 (9) kinds of geology that you can encounter in Alaska in the marine  
 (10) environment?  
 (11) A Well Alaska s a very large state and it has an incredible  
 (12) assemblage o ceologic provinces but I have become familiar  
 (13) with certain areas and certain portions of its geology  
 (14) MR PETUMENOS Could I have Exhibit 1143 please?  
 (15) BY MR PETUMENOS  
 (16) Q And when you say that you have had the opportunity to work  
 (17) in different parts of Alaska has that opportunity given you  
 (18) the variety the amount of variety and the differences of the  
 (19) kinds of beaches that exist even though there are a lot of  
 (20) them in Alaska?  
 (21) A Oh yes  
 (22) Q What is Exhibit 1143?  
 (23) A 1143 is a map of the state and on it are a number of blue  
 (24) dots which indicate various areas where I - where I ve worked  
 (25) with various firms and various projects

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- (1) Q So this - you looked at beaches in every area where  
 (2) there s a blue dot?  
 (3) A Well yes Yes we did All of the coastal areas on the  
 (4) North Slope You can see there are a number of them there as  
 (5) well as portions of the Seward Peninsula and the vicinity of  
 (6) Nome and Candle in the north In addition there are areas  
 (7) for example on number 9 and 12 nine is in the Cook Inlet  
 (8) vicinity near Anchorage 12 is a dot located approximately  
 (9) near Juneau but we worked a large number of shorelines in  
 (10) that  
 (11) area looking at the nearshore deeper water sediments  
 (11) Q Let s focus a little bit on your work with ICF Do you  
 (12) work for clients both in the public and the private sector?  
 (13) A Yes  
 (14) Q What kind of things do you do for clients in the public  
 (15) sector?  
 (16) A Well in the public sector I think our principal client  
 (17) has been the EPA at least the largest volume of our work has  
 (18) been with the EPA We ve also worked for the Department of  
 (19) Defense Department of Energy For example the Department of  
 (20) Defense U S Army United States Air Force each have their  
 (21) own special environmental divisions  
 (22) The Air Force for example has a division called the Air  
 (23) Force Center for Environmental Excellence AFCEE is the  
 (24) abbreviation for that In fact a lot of work on the North  
 (25) Slope was for AFCEE looking at contamination problems  
 related

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- (1) to dewline sites  
 (2) Q What about in the private sector what kind of work do you do there?  
 (3)  
 (4) A It's similar issues obviously it's environmental  
 (5) contamination For industry I would say the typical work  
 (6) involves responding to spills examining problems that are  
 (7) already in place We attempt to establish a relationship with  
 (8) an industry for example United Technologies large firms like  
 (9) these to where we can initially work with their permitting  
 (10) processes for certain activities that they undertake that  
 (11) involve hazardous materials make sure they stay in compliance  
 (12) with those respond to spills or any problems that they may  
 (13) have and help them respond to them hopefully prior to there  
 (14) having to be legal action taken against the firm or something  
 (15) like that  
 (16) Q When you work in the private sector like this is it normal  
 (17) for you to become involved at a period of time that might be  
 (18) well after the contaminating event took place?  
 (19) A Unfortunately that's more often the case than not  
 (20) Q That's not uncommon?  
 (21) A That's more often the case than not  
 (22) Q Who have been some of your clients with - I think I've  
 (23) covered that question  
 (24) Let's say that you've been asked to do an evaluation of an  
 (25) area or a site that has been contaminated by something in the

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- (1) concerned with the number of clients we probably had terms  
 of  
 (2) major clients several dozen in my experience that I've  
 (3) personally worked - not several dozen probably a dozen in  
 (4) terms of operable units that we've worked with which is a term  
 (5) of art that applies to a group of contamination problems  
 (6) probably on the order of 10 to 20 perhaps more  
 (7) In terms of individual sites which have had spill related  
 (8) incidents require sampling some sort of reporting activity or  
 (9) response for that specific event somewhere between 100 and  
 (10) 200  
 (11) Q What locations generally have you worked besides Alaska?  
 (12) A I mentioned earlier some of the states  
 (13) Q I mean specifically with respect to these sorts of problems  
 (14) with respect to petroleum  
 (15) A With respect to specifically coastal damages?  
 (16) Q Yes  
 (17) A All right Well there are a number of places for  
 (18) example on the coast of Alaska the North Slope coast we  
 (19) looked at a number of the military installations there many of  
 (20) which in fact practically every one had fuel related spills  
 (21) that were coasted spills The military has a number of  
 (22) landfills in those areas in which military wastes are being  
 (23) activity eroded by way wave interaction right into the  
 (24) intertidal zone Some of those are also inland and sound areas  
 (25) and protected areas

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- (1) environment Can you typically explain what kind of steps you  
 (2) would go through to attack the problem?  
 (3) A Yes Take for example a large tank leak petroleum spill  
 (4) or something similar to that Most sites usually have  
 (5) petroleum contaminants associated with them The first thing  
 (6) we do is determine - well it depends on the state of the  
 (7) situation We may have to take an expedited an emergency  
 (8) action for example to help contain it to stop ongoing  
 (9) contamination But aside from that we would first go in and  
 (10) assess the history of the site That means spending a sizable  
 (11) amount of time reviewing historic documents for the firm  
 (12) documents for exactly what happened with the spill - did it  
 (13) happen recently did it happen a long time ago - and determine  
 (14) exactly where the problems are  
 (15) Once you've done that then you go through a scientific  
 (16) approach to analyze the surface and the subsurface track the  
 (17) pathways of the spill where they move along the surface or  
 (18) down into the groundwater follow the groundwater and drill  
 (19) holes analyze it excerpt the samples Eventually we may  
 (20) exhume the problem area or fence it off in some area  
 (21) Q Have you been involved in site investigations of property  
 (22) which have been impacted by oil or other similar substances?  
 (23) A Yes I have  
 (24) Q Is that a common experience for you?  
 (25) A Yes I mean it depends on how you define site If you're

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- (1) There are a number of other examples I had a client in  
 (2) the Washington area along the coast of Puget Sound that had  
 an  
 (3) extremely contaminated groundwater problem which was  
 leaching  
 (4) directly into the intertidal zone with high concentrations of  
 (5) arsenic and dissolved silica and things like that  
 (6) Q Do you have experience in the investigation of impact of  
 (7) contaminants in the nearshore environments?  
 (8) A Yes In fact the projects that I just named were  
 (9) principally focused on shoreline contamination  
 (10) MR PETUMENOS Your Honor I ask that Mr Bush be  
 (11) recognized as an expert in the area of marine geology and  
 (12) specifically with respect to the fate and persistence of oil  
 (13) MR OPPENHEIMER Your Honor despite the apparent  
 (14) youthfulness we have no objection  
 (15) THE COURT He's qualified to give opinions in those  
 (16) areas  
 (17) BY MR PETUMENOS  
 (18) Q What are the main factors that you consider in confronting  
 (19) sites with spilled contaminants in the marine nearshore  
 (20) environment?  
 (21) A Well if we can find the nearshore environment to mean  
 (22) specifically the coastal areas and I think that's probably most  
 (23) appropriate in this case There are three main things we have  
 (24) to look at  
 (25) One of course is the nature of the coastal area itself

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- (1) Principally the makeup composition the geometry shape size  
 (2) and so forth of the coastal environment the intertidal zone  
 (3) most specifically  
 (4) Second we need to know the nature of the contaminating  
 (5) materials basic characteristics of that  
 (6) And thirdly of course how that material interacts with  
 (7) the coastal coastal environment  
 (8) Q Let s talk about the task that was presented to you as part  
 (9) of the Exxon Valdez oil spill  
 (10) When were you hired for the first time?  
 (11) A We were first retained in 1989 I don t recall the precise  
 (12) time I believe it was probably April or May June sometime  
 (13) along there  
 (14) Q Who hired you?  
 (15) A We were retained via a letter from Hill Bettes and Nash  
 (16) the firm in New York maritime firm in New York  
 (17) Q But who was their client that you were being retained by?  
 (18) A Authorizing us to work for the Chugach Regional Native  
 (19) Corporation  
 (20) Q And what were you asked to do initially?  
 (21) A We were asked to examine the shorelines that had been  
 (22) impacted by the oil and assess damage and provide a basis if  
 (23) possible from which future projections of damages or recovery  
 (24) could be made  
 (25) Q Did you put together a team for that purpose?

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- (1) A Yes we did  
 (2) Q And who was on it?  
 (3) A We put together a fairly diverse team Myself a fellow  
 (4) named Charles Miller who is a soils scientist Larry Thebeau  
 (5) is a oil spill biologist We retained certain specialists  
 (6) Timothy Kana is a coastal process specialist and beach  
 (7) reconstructionist specialist from Coastal Science Engineering  
 (8) We retained Dr Bakus who is a scientist from Southern  
 (9) California We also to a lesser extent retained or at least  
 (10) interfaced with Dr Vandermuehlin (ph) and I believe Don  
 (11) Westlake as well was another specialist  
 (12) Q And were you the fellow that was going to run all these  
 (13) people around and make sure they did it right?  
 (14) A Actually when we first started these projects we  
 (15) distributed the work loads among three people We divided up  
 (16) areas of responsibility As the project evolved however I  
 (17) assumed project management  
 (18) Q How did you understand that your work was going to be  
 (19) used  
 (20) when you were hired?  
 (21) A Well the first request that we had was to find out what  
 (22) was going on with the lands The Native corporations have vast  
 (23) land holdings and land management is an extremely important  
 (24) issue with them and we provided information regarding  
 (25) damaged shorelines and tried to present maps or information that could  
 be used to interpret maps of where oil impact occurred In

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- (1) addition to that we were all aware that this may lead to  
 (2) litigation and so we would be providing some litigation  
 (3) support as well  
 (4) Q What was the first thing you did then to begin - begin  
 (5) your work?  
 (6) A Well we assembled a team prepared some plan of attack  
 (7) plans actually of attack on the problem and after  
 (8) recruitment of course moved forward to the field program in  
 (9) Prince William Sound  
 (10) Q Are you familiar with the term fate and persistence of  
 (11) oil ?  
 (12) A Yes  
 (13) Q What does that mean?  
 (14) A Well in my business fate and persistence has become  
 (15) essentially a term of art meaning the fate of a contaminant or #  
 (16) what happens to it and persistence then refers to how long  
 (17) - or how much impact and how long the duration of the impact  
 (18) occurs between this contaminant and the environment It s not  
 (19) a - it s not a - a specific term  
 (20) In other words for example let me give you an example  
 (21) In certain sites contamination from say trichlorethylene  
 (22) It s a petroleum solvent To determine fate and persistence of  
 (23) that we track it as a contaminant But in time the  
 (24) chemistry the chemical itself changes It ages and  
 (25) deteriorates to another compound called trichloroethane TCE

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- (1) goes to TCA The fate of TCA is not over in our business We  
 (2) continue to track the subsequent chemical so as the materials  
 (3) weather and degrade the job s not over We can track them  
 (4) through the impact time or the time in which they affect an  
 (5) environment  
 (6) Q As we re talking about the fate and persistence of oil for  
 (7) your testimony as a geologist can you distinguish for the jury  
 (8) the extent to which you are talking about how long the material  
 (9) will be physically in the environment versus that presence s  
 (10) effect on the environment?  
 (11) A There s a significant difference Well egg for example  
 (12) Dr Mundy just testified about how certain oiled sediments  
 (13) without - containing no detectable hydrocarbons in the water  
 (14) in the leach of the water in the oiled stream still appeared to  
 (15) give damaging impact to salmon eggs This is a case where we  
 (16) have an interaction between material in the sediment that is at  
 (17) least apparently or visually or initially thought to be inert  
 (18) and still bringing about some sort of effect  
 (19) So if I m - I think I m losing the question but the point  
 (20) is that we continue to determine the impacts of a contaminant  
 (21) which may extend for some time after the contaminant has been  
 (22) removed from the environment In many sites we ve gone and  
 (23) done restoration work We ve dug out the contaminated soils  
 (24) hauled this off to a hazardous waste facility in Oregon but  
 (25) there s still lingering effects and it takes time for the

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- (1) biological ecosystem to recover from those effects  
 (2) MR OPPENHEIMER Your Honor I m sorry I just wanted  
 (3) to register an objection to the effect that the testimony  
 (4) begins to become biological as opposed to the witness  
 (5) expertise in this area  
 (6) BY MR PETUMENOS  
 (7) Q That s actually precisely my point Your testimony you re  
 (8) going to be talking about is not about the biological - the  
 (9) biological effects but in fact about how long this material is  
 (10) detectable and persist in the environment  
 (11) A Generally speaking that s correct  
 (12) Q 1989 what s the first thing you did the first thing you  
 (13) actually did in the field?  
 (14) A In 1989 - I believe we started in late July or early  
 (15) August I don t remember the precise day - we assembled our  
 (16) field equipment in Anchorage and mobilized to Homer boarded  
 (17) a  
 (18) vessel named the Tulchena - I beg your pardon I ve skipped a  
 (19) step  
 (20) Actually we left Anchorage first on a reconnaissance  
 (21) mission and spent about three days flying Prince William Sound  
 (22) to assess aerially the impacted areas and get a feel for the  
 (23) level of activity and the level of treatment activity that was  
 (24) going on at the time and help confirm or gain a better  
 (25) understanding the precision of some of the maps and initial  
 data that we had available to us

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- (1) Q And then after you got your reconnaissance or overview  
 (2) done did you get in the boat as you started to describe?  
 (3) A Yes yes We - we mobilized to Homer and departed Homer  
 (4) in a vessel 52 foot vessel the Tulchena I believe and first  
 (5) examined areas in the vicinity of the Kenai Fiords tip of the  
 (6) Kenai Peninsula actually and around the Kenai Fiords worked  
 (7) our way into Seward and gained more water and fuel and so  
 (8) forth and on to Prince William Sound  
 (9) Q And did you return after 1989 after you completed that  
 (10) investigation in subsequent years?  
 (11) A Yes we did  
 (12) Q Tell the jury  
 (13) A We returned in 1992 conducted another field program a bit  
 (14) more expansive than the first one and I returned for a short  
 (15) visit in 1993 and a small field program in 1994  
 (16) Q All right I have next to show you if you can come on -  
 (17) come on down what s been marked as Exhibit 1164 and tell  
 (18) you  
 (19) what I m going to get real close I don t mean to invade your  
 (20) space but I m going to get real close to you here so you can  
 (21) see what we ve got on this map  
 (22) Judge Shortell standard instruction he gives for the  
 (23) microphone for witnesses I think you ve got it down  
 (24) THE COURT I thought you passed it on counsel so I  
 (25) wasn t going to give it this time  
 THE WITNESS Please do

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- (1) THE COURT Be careful  
 (2) THE WITNESS Thank you I m being careful  
 (3) MR OPPENHEIMER I m sorry counsel which exhibit is  
 (4) that?  
 (5) MR PETUMENOS That is Number 1164 It is entitled  
 (6) Oil Impact and Sample Location  
 (7) BY MR PETUMENOS  
 (8) Q And Mr Bush could you give the jury a notion of what  
 (9) we ve got here?  
 (10) A Yes This map illustrates the - the Prince William Sound  
 (11) in the most part You can see Montague and Hinchinbrook  
 (12) Islands down here to the south and this would be the Gulf of  
 (13) Alaska and the northern portion of the Pacific Western Prince  
 (14) William Sound in this area various islands and properties that  
 (15) are owned by the Native corporations green designating the  
 (16) properties here and in north and eastern Prince William Sound  
 (17) In addition to that you can see a number of dark spots on  
 (18) here the labels refer to both places where we conducted some  
 (19) detailed studies referred as transects  
 (20) Q Let me stop you there because I ll bet they can t see  
 (21) that The dark spots are - describe it for the jury  
 (22) A Yeah there are two types here we have both sampling  
 (23) locations where we conducted one portion of our 93 program  
 (24) area wide sampling program which are these dots labeled with  
 (25) a series of numbers

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- (1) Q Let me stop you there  
 (2) MR PETUMENOS Members of the Jury - and it s really  
 (3) hard to see from the back - the black dot with a number on it  
 (4) is what he s describing as a sample location  
 (5) A You want to move it up closer? You can put it on this  
 (6) MR PETUMENOS Is that all right?  
 (7) MR OPPENHEIMER You want to move the easel too?  
 (8) MR PETUMENOS This will work  
 (9) BY MR PETUMENOS  
 (10) Q What are the squares?  
 (11) A The squares represent areas that - that well there are  
 (12) two squares there actually I believe The rectangular square  
 (13) symbols in black represent a site where we conducted - area  
 (14) where we conducted a special investigation and we focused on  
 (15) some shorelines at this location  
 (16) These rectangular ones represent our transects and the  
 (17) squares represent areas where we have done some - collected  
 (18) some - given a number of samples and had gone back That s  
 (19) comparison studies from 1989 more present  
 (20) Q Tell the jury what you mean by a transect?  
 (21) A Transect is a - an exercise one takes on a shoreline where  
 (22) one does detailed studies We measure the slope of the  
 (23) shoreline point by point sort of like measuring out the steps  
 (24) going out and down to follow the soil  
 (25) We collect samples along this given profile We later

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- (1) determine from measurements taken along the transect and we  
 (2) take biological sampling grids sediment samples and  
 (3) investigate how the contour of the shoreline changes with  
 (4) time You can make - along the same transect which is fixed  
 (5) you can measure profile from one year to profile to the next  
 (6) year and look at the differences in the shape and tells you how  
 (7) the sediments are moving along the shoreline  
 (8) Q We'll get into that a little bit more later Is this  
 (9) enough for this map? Can we go down to the area and show -  
 (10) A I'm finished with it  
 (11) Q I am too  
 (12) MR PETUMENOS Very quickly then Exhibit Number  
 (13) 1165 counsel  
 (14) MR OPPENHEIMER Thanks  
 (15) BY MR PETUMENOS  
 (16) Q And what we have here is just simply additional transects  
 (17) and sample sites for the Kenai Fiords area am I right?  
 (18) A That's correct I failed to mention before that this  
 (19) purple or magenta color represents oiling that's occurred on  
 (20) these shorelines all levels all intensities combined into one  
 (21) color  
 (22) MR OPPENHEIMER Your Honor I'm going to make a  
 (23) foundational objection at this time without explanation for how  
 (24) the oiling came on I believe the witness will testify to it  
 (25) later but at this point I'm raising a foundation objection

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- (1) MR PETUMENOS That's fine Judge we'll get back to  
 (2) that We'll put more evidence in later  
 (3) THE COURT Okay  
 (4) BY MR PETUMENOS  
 (5) Q That's all I wanted to show the jury was that you did other  
 (6) transects and other sample sites down the Kenai Fiords area  
 (7) A That's correct  
 (8) Q Would you grab that for me and put it on the other side  
 (9) there?  
 (10) A (Witness complies)  
 (11) Q And finally with respect to Exhibit 1354 A is that the  
 (12) transect - the transect map - sure isn't  
 (13) A It depicts essentially the same information sampling  
 (14) activities that occurred in our '93 program out on the - the  
 (15) extended the Alaska Peninsula and the Kodiak islands area  
 (16) Our last sampling site was hidden down here someplace It's in  
 (17) Chignik - it's right here It's a square located right  
 (18) there That's the farthest we sampled to the south  
 (19) Q Down here southwest?  
 (20) A Chignik Lagoon  
 (21) Q West of Kodiak Do you have any idea - I don't know if  
 (22) you do Do you have any idea how far from Kodiak that Chignik  
 (23) site is?  
 (24) A Estimate over 500 miles line miles I think it's probably  
 (25) close to 600 It would be a guess

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- (1) Q Okay Thanks  
 (2) A I'm sorry that was from the spill site  
 (3) Q Right Know what? Before you go away let's get the right  
 (4) map up It might help And look at 1166 without the A and  
 (5) what we have here then is the same key showing the sample  
 (6) sites and that's where you were dead right that's where it  
 (7) was down -  
 (8) A Yes  
 (9) Q Okay So actually Members of the Jury 1166 is the map  
 (10) that shows the sampling of the transect sites?  
 (11) A Do you want this one back?  
 (12) Q No I would like - I think to do now is to put you back  
 (13) on the witness stand Can we do that?  
 (14) The - that first map we talked about the special  
 (15) investigation which sounds ominous on LaTouche Island  
 (16) What  
 (17) was the special investigation that you did?  
 (18) A In 1993 our - we conducted three parts to our field  
 (19) program in 1993 The first part was to basically reproduce  
 (20) what we did in 1989 By and large we did that  
 (21) Another portion of it was the special investigation and  
 (22) that was a very focused investigation on approximately five  
 (23) small beaches on the northeast end of LaTouche Island with the  
 (24) intent of trying to compare similar shorelines that were oiled  
 (25) to similar degrees but had experienced different amounts of  
 treatment and we wanted to determine how the effects of the

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- (1) treatment and how well it - it - I guess how effective it was  
 (2) in those locations  
 (3) Q Now the jury certainly noticed that you went to Kodiak and  
 (4) beyond Why is that? Were you being asked to do that by the  
 (5) Native corporation?  
 (6) A Actually I'm not sure exactly why we did it The ultimate  
 (7) goal of our '93 investigation was to determine the extent of  
 (8) oil impact and there were reports of oiling all the way down  
 (9) the Alaska Peninsula  
 (10) Q Were you retained by the municipality plaintiffs at some  
 (11) point later in the - in the case?  
 (12) A Yes we were  
 (13) Q And then after your summer fieldwork in 1992 was ICF  
 (14) retained to do some work by the United States Department of  
 (15) the  
 (16) Interior?  
 (17) A Yes they were  
 (18) Q And what did the United States - United States Department  
 (19) of Interior ask you to do?  
 (20) A The Department of the Interior specifically the Bureau of  
 (21) Indian Affairs asked us to provide a compilation of the  
 (22) natural resource damage assessment studies data that were  
 (23) available at that time that applied specifically to subsistence  
 (24) resources impact on subsistence resources which we did  
 (25) Q Did you work on that report?  
 A Yes I did

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- (1) Q Who else did?  
 (2) A There were quite a number of people Principally the  
 (3) principal investigators or contributors to that report were  
 (4) myself Dr Peterson Dr Gerald Bakus staff from ICF s  
 (5) clement division which is an environmental risk assessment  
 (6) group specializes in doing environmental risk assessments  
 and  
 (7) Larry Thebeau contributed a small amount I believe offhand  
 (8) those are the principal contributors  
 (9) Q Did you prepare a report of your fields work in 1992?  
 (10) A I m sorry I didn t -  
 (11) Q Did you prepare a report of all this fieldwork in 1992?  
 (12) A Yes  
 (13) Q Did you return to the field in 1993 and 1994?  
 (14) A Yes  
 (15) Q And did you prepare - prepare subsequent reports?  
 (16) A Yes  
 (17) Q And in 1992 when you went - in 1993 when you went back  
 (18) out to the field what was the purpose of that visit 93?  
 (19) A Let s see In 1992 we completed the - the revisit of our  
 (20) 1989 transect sites and the area wide sampling program which  
 (21) collected samples all the way down to the Chlgnik area as  
 (22) indicated on that last exhibit and a special investigation  
 (23) In 93 we returned to the field for a brief visit to go to  
 (24) some of those sites with Dr Bill Mundy the intent being to  
 (25) give him an on site or essentially a hands on view of oiling

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- (1) conditions that we identified from the 92 program  
 (2) Q Who is Dr Bill Mundy?  
 (3) A Dr Mundy is the land assessment specialist that the  
 (4) plaintiffs had retained  
 (5) Q Now in 1994 this year you went back out there?  
 (6) A That s correct  
 (7) Q How long ago?  
 (8) A I think we started field activities on the 23rd of May  
 (9) Q Just about six weeks ago or so?  
 (10) A Very close to that  
 (11) Q Okay Who was with you and what were you doing?  
 (12) A Again similar field party members Larry Thebeau myself  
 (13) Charles Miller was no longer involved with the project In  
 (14) fact he was not involved in 1992 However Dr Gerald Bakus  
 (15) returned I believe it was Jeff Dawson was an assistant in the  
 (16) field and also we - not as a member on our team but we -  
 (17) other participants in the program included Lora Johnson for  
 (18) example an archaeologist who works for the Native operation  
 (19) corporations I believe  
 (20) Q You had an archaeologist with you -  
 (21) A Yes  
 (22) Q - on this trip? And was Dr Mundy with you for any  
 (23) portion of it?  
 (24) A Yes he was  
 (25) Q And -

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- (1) A Dr Bakus  
 (2) Q Dr Bakus And did you go to the same basic sites that you  
 (3) had gone to before at least some of them?  
 (4) A We went to some of the sites yes  
 (5) Q Did you go to some additional sites?  
 (6) A Yes we did  
 (7) Q What were those?  
 (8) A There were in fact a fair - perhaps even a larger  
 (9) proportion of the sites we went to in 94 were those that we  
 (10) were recommended to visit by other persons we d interviewed  
 and  
 (11) had discussions with Lora Johnson for example and other  
 (12) people that we interfaced with during and prior to the field  
 (13) program  
 (14) Q So did that include some archaeological sites that you  
 (15) visited?  
 (16) A Yes it did  
 (17) Q As part of your work have you also reviewed the work of  
 (18) others that have looked at the location fate and persistence  
 (19) of oil?  
 (20) A Yes I have  
 (21) Q And what have you studied?  
 (22) A I don t know that I could recall all of the studies that  
 (23) we ve examined at this time but certainly we looked at a large  
 (24) portion of the natural resource damage assessment work that  
 was  
 (25) done We ve looked at a large portion of the work that was

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- (1) completed by NOAA I know a number of the investigators  
 (2) Q Let me slow you down The national resource damage  
 (3) assessment work that was done by whom?  
 (4) A It s funded through the Trustees  
 (5) Q Okay The jury knows what that is You looked at some  
 (6) material from NOAA?  
 (7) A That s correct  
 (8) Q That s the National Oceanographic and Atmospheric  
 (9) Administration?  
 (10) A That s correct  
 (11) Q And you looked at some work that was done by Exxon?  
 (12) A Well yes We have looked at the work that was done by  
 (13) Exxon yes There are also a number of publications in the  
 (14) public literature oil spill conference proceedings There are  
 (15) a number of other sources of information as well  
 (16) Q Did you talk to private residents in the area and obtain  
 (17) information about oiling information from them?  
 (18) A Yes Not only private residents but we talked to persons  
 (19) that had worked on treatment crews clean up crews in the  
 (20) Kodiak and Alaska Peninsula areas as well  
 (21) Q What is Veco?  
 (22) A Veco is a firm a national firm as far as I know that was  
 (23) retained by Exxon to manage the clean up crews operating in  
 the  
 (24) Alaska Peninsula and Kodiak area  
 (25) Q Did you look at some records of Veco to determine where

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- (1) people were going to clean up oil?  
 (2) A Yes we did  
 (3) Q Did you look at records from the Alaska Department of Fish and Game?  
 (4) and Game?  
 (5) A Yes we did  
 (6) Q For what purpose?  
 (7) A We were referred to the Alaska Department of Fish and Game  
 (8) actually I don't recall exactly how we were referred to them at  
 (9) this moment but with respect to a number of occurrences of oil  
 (10) that were not even in the mapping data bases to which we had  
 (11) access Fish & Game had identified in the Kodiak area and the  
 (12) Alaska Peninsula area that we were unaware of so we  
 (13) contacted  
 (14) people with Fish & Game to get additional information on those  
 (15) occurrences  
 (16) Q Now before we get into your actual fieldwork I would like  
 (17) you to describe for the jury if you would in general what  
 (18) happens when crude oil is spilled on the water and hits  
 (19) beaches such as are found in Prince William Sound and the  
 (20) Gulf And I think in order to do that I have to ask you are  
 (21) beaches pretty much the same throughout this area or are they  
 (22) different?  
 (23) A No there's a tremendous amount of variability of the  
 (24) beaches in Prince William Sound in fact over the entire area  
 (25) of impact  
 (26) Q Okay What are the important kinds of differences between

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- (1) them and why did - why is that important?  
 (2) A Well there are a number of important differences I think  
 (3) as I mentioned earlier there are three things we have to look  
 (4) at when we look at how a contaminant effects nearshore  
 (5) environment The makeup of the nearshore environment the  
 (6) makeup of the contaminant and how the two interact these  
 (7) three things And so that's one of the major focuses is the  
 (8) makeup of the nearshore environment  
 (9) Well the shorelines the beaches we'll call them in  
 (10) Prince William Sound and the other areas can range from sheer  
 (11) cliff bedrock very impermeable massive structures to fine  
 (12) grain very low energy very quiescent environments and  
 (13) practically every range in between from sand and gravel to  
 (14) large boulder and cobble  
 (15) Q Quiescent meaning quiet?  
 (16) A Yes peaceful  
 (17) Q Peaceful In addition to the different kinds of beaches  
 (18) rock versus sand and so forth can you describe for the jury  
 (19) how the shorelines say of the southeastern part of Montague  
 (20) or Hinchinbrook might interact with the water differently than  
 (21) say the shoreline from the say northwestern side of Chenega  
 (22) Island over here - what would be the difference between a  
 (23) shoreline like this and a shoreline like that?  
 (24) A Yes When we consider the - the interaction of a  
 (25) contaminant with shorelines not only do we have to consider

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- (1) the makeup the composition of the shoreline bedrock  
 (2) boulders cobbles sand so forth but we have to consider how  
 (3) it's exposed to wave energy And if you look at that southern  
 (4) or southeastern portion of Prince William Sound on that map  
 (5) you'll see that the long islands of Montague and elongate  
 (6) portion of Hinchinbrook serve essentially as barriers or blocks  
 (7) to the high energy dominant storm waves that can be generated  
 (8) in the North Pacific and Gulf of Alaska Hence we had a sound  
 (9) a protected area in the back behind the ocean proper It's  
 (10) Prince William Sound therefore  
 (11) Furthermore inside the Sound you'll see that the more  
 (12) narrow channels and other areas bays and embayments along  
 (13) the  
 (14) shorelines of the islands themselves offer a further  
 (15) protection so we have a range of energy or environmental  
 (16) protection or environmental exposure for each of those  
 (17) coastlines in those environments and they'll respond  
 (18) differently in terms of preservation of contaminants  
 (19) variability of the shoreline and the material that makes it  
 (20) up  
 (21) Q So that might explain the difference a way of putting it  
 (22) is the fact that Montague Island is between Chenega Island and  
 (23) has Knight Island in front of it as well as has an impact on  
 (24) how the water hits the lands?  
 (25) A Has annual impact on how the water hits the land and how  
 (26) stable the beach itself is that's correct

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- (1) Q You talked about bays Would Kodiak be a good example of  
 (2) how inlets and bays interact with the water differently than  
 (3) open coastline?  
 (4) A Well yes Actually there are a number of - this  
 (5) particular area presents a number of ideas and I'll just -  
 (6) Q Exhibit 1354 A for the record is what we're looking at  
 (7) before the jury now  
 (8) A Obviously the shorelines here to the south and east  
 (9) portions of this exhibit are exposed to the full brunt of the  
 (10) Gulf of Alaska and the North Pacific storms tremendous storms  
 (11) impact these shorelines And to the extent that you have and  
 (12) there are fine grained shorelines in those areas those sandy  
 (13) shorelines are very turbulent They're - the sand is easily  
 (14) moved and it's moved extensively from storm event to storm  
 (15) event for example season to season Between Kodiak and the  
 (16) Alaska Peninsula along the Shelikof Strait area there is some  
 (17) buffer  
 (18) Q Excuse me Is the Shelikof Strait this body of water here  
 (19) for the jury who can't see?  
 (20) A Yes between - it's that body between Kodiak and the  
 (21) Peninsula  
 (22) Q So when we're looking at inlets and bays on Kodiak that  
 (23) extend in from the ocean what would be the situation there?  
 (24) A Well there's clearly more protection in those areas than  
 (25) there is in the areas that are exposed and the inlets and bays

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- (1) that occur on the Shelikof Strait side have more protection  
 (2) than those on the southeast side that are exposed to the brunt  
 (3) of the North Pacific  
 (4) As I started to say earlier not that Shelikof Strait would  
 (5) be characterized as a quiet body of water by any extent of the  
 (6) imagination it's certainly choppy as well and turbulent But  
 (7) there is a difference between the two areas  
 (8) Q Now we talked about different kinds of beaches as being  
 (9) the second factor that we wanted to make sure the jury  
 (10) understands  
 (11) MR PETUMENOS Could I have the Elmo please?  
 (12) BY MR PETUMENOS  
 (13) Q Showing you what has been admitted as 245 51 and get the  
 (14) right version of the -- I have to zoom out here What does  
 (15) this depict in the way of a beach that you might want to  
 (16) describe to the jury?  
 (17) A Well this beach is a bedrock dominated beach In other  
 (18) words the material that we see here is largely a -- a smooth  
 (19) relatively impermeable rock This is a fairly interesting  
 (20) example because in many cases the shorelines that were  
 (21) dominated by bedrock would be sheer cliffs and in this case  
 (22) we see we have a sloping body of rock It's not quite a  
 (23) platform or a flat portion of beach but it's a sloping body  
 (24) So it represents sort of a type of an in member of the  
 (25) shoreline types

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- (1) Q 245 34 as admitted?  
 (2) A This photograph I believe is along the Alaska Peninsula  
 (3) and obviously represents the other extreme of the shoreline  
 (4) types This is a sandy beach and we can see in the -- on the  
 (5) right hand -- in fact can I point with this?  
 (6) Q Go ahead  
 (7) A Is this working?  
 (8) Q It won't on the Elmo It won't be able to point I'm  
 (9) sorry You can point to the screen itself with your finger  
 (10) that still works Down here so they can see it  
 (11) A All right Well I could probably describe it You can  
 (12) see the area on the right hand side of the screen in front of  
 (13) the people that are on the beach with ripples and waves on it  
 (14) Well that's a sandy area and those waves are made fairly  
 (15) easily Upward from that or upbeachward the land you can  
 (16) see  
 (17) a more gravelly area may be a little more stable or less  
 (18) likely to be moved under different conditions Even though the  
 (19) differences are small across this beach it gives you some idea  
 (20) of some of the more subtle features One might suggest that if  
 (21) we move further to land where we can see the gravelly area the  
 (22) gravel may persist with a thin layer of sand on top of it  
 (23) It's not that The entire beach changes throughout its depth  
 (24) It's a layered system not a very deep system  
 (25) Q And will that become important to your analysis later in  
 our discussion?

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- (1) A Yes it will It is  
 (2) Q Showing you exhibit 245-44 which has been admitted what  
 (3) kind of beach do we have here?  
 (4) A Well this of course is a shoreline that's somewhere in  
 (5) between the two And I think this is a very good exhibit If  
 (6) you look carefully at the rocks in this intertidal zone you'll  
 (7) see that they're very angular There appears to be not much  
 (8) rounding or weathering They're not very active They're not  
 (9) churned much by waves because if they were these angular  
 (10) edges would be broken off of them and the rocks would be  
 more  
 (11) round  
 (12) Between the rocks we see a lot of sand and gravel smaller  
 (13) sized gravel material that is a matrix between the large  
 (14) grains A good concept to understand the matrix itself sort  
 (15) of provides in the way of binder or material to help hold the  
 (16) rocks in place At some point in time if the matrix moves  
 (17) around enough the rocks will -- will occur close enough to  
 (18) present an armor on this surface to kind of shield this finer  
 (19) grained sediment from wave activity  
 (20) MR OPPENHEIMER Your Honor before the next  
 (21) question I have no problem with what we're seeing but I'd  
 (22) like clarification of the stipulation with respect to  
 (23) admission?  
 (24) Counsel what are you referring to  
 (25) MR PETUMENOS I'm sorry Judge I don't understand

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- (1) the objection  
 (2) MR OPPENHEIMER I was unaware that these were  
 (3) admitted Your Honor these are fine for looking at but I'm  
 (4) not aware of the stipulation to which counsel's referring  
 (5) THE COURT Is this admitted? It is I tell you  
 (6) what counsel actually I was going to break in I'd like you  
 (7) to get through the preliminaries and we'll break no matter  
 (8) when it is even if we've got 15 minutes Pick a time to break  
 (9) before we get into the main body of the testimony I'll like  
 (10) to take the break so that we get it all in at one time All  
 (11) right?  
 (12) MR PETUMENOS That would be fine Judge I think  
 (13) I'm at a point where we're very close so --  
 (14) THE COURT Get to that point and then I'll let the  
 (15) jury go  
 (16) MR PETUMENOS Okay Watch this  
 (17) BY MR PETUMENOS  
 (18) Q And finally Mr Bush the exhibit before you here is --  
 (19) does that depict another kind of beach?  
 (20) A Yes And it reflects exactly what I was referring to  
 (21) earlier You can see this -- the rounded large rocks In  
 (22) fact the gentleman is just stepping off of one rock that's  
 (23) been smoothed the surface of that is polished and rounded  
 (24) It's not particularly true that the wave action itself does  
 (25) that it's the churning of the rounded cobbles and gravelly

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(1) material that you see around it that abrades that rock This  
(2) happens on all scales  
(3) In some places one can see a bedrock projection that sticks  
(4) up from the sea floor and the sand in a fairly low energy  
(5) environment watches around it creates a nice ring around the  
(6) base of the rock No lichens and of course no resistance  
(7) either so we have this range of shorelines even though it s  
(8) mixed sand and gravel or a sheltered rocky environment or  
(9) something like that with these different levels of veneer and  
(10) different exposures By veneer I mean the thin sand and  
(11) gravel that s on it and different exposures to wave energy that  
(12) allow these materials to be fixed in place or on the other  
(13) hand very mobile and scour the rocks clean  
(14) Q Okay Do beaches neatly fall within these various  
(15) categories or are they sometimes mixed up so that they have  
(16) components of all different ones?  
(17) A If I would say the late 70s NOAA formulated a scale of  
(18) classification for shorelines It has ten shoreline types In  
(19) practice and reality I mean it s a nice concept it s the  
(20) method we end up using to evaluate shorelines and how  
(21) vulnerable they are to oil spills but the fact is that in  
(22) reality they re mixed types NOAA - recent work in September  
(23) of 92 in fact some of their publications began to subdivide  
(24) further one of the categories that they have In many cases  
(25) we see a shoreline In fact I have an illustration later that

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(1) will demonstrate a shoreline that has very mixed types of  
(2) shorelines along the same length  
(3) Q Let me show you 245 20 Does this illustrate what you  
(4) mean?  
(5) A In part Obviously this is a large boulder beach the  
(6) gentlemen are working on Volkswagen size boulders shall we  
(7) say In this case maybe they re Cadillac size but we can  
(8) see in addition to that this fine grain of material that s  
(9) armoring the beach around the large rock and that material of  
(10) course would represent a mixed sand and gravel or gravel  
(11) beach So yes we have a mixture of shoreline types  
(12) Q So the beaches don t always cooperate with NOAA and  
(13) define themselves according to NOAA s categories that NOAA would  
(14) like  
(15) to describe?  
(16) A They don t cooperate with me either Yes  
(17) MR PETUMENOS Judge how s that?  
(18) THE COURT That s good  
(19) Okay I ll let you go now Don t talk about the case with  
(20) anyone and don t form or express any opinion on it until it s  
(21) submitted to you for deliberation See you back here at 8 30  
(22) tomorrow  
(23) (Jury out at 1 15 p m)  
(24) THE COURT You can step down Anything to take up  
(25) counsel?  
(26) MR PETUMENOS This afternoon we have the issue of -

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(1) can Mr Bush step down?  
(2) THE COURT I told him that  
(3) THE WITNESS I thought you said sit down I m sorry  
(4) THE COURT No I said step down  
(5) MR PETUMENOS We have the issue of the exhibit on  
(6) cross examination of Mr Bush that I raised yesterday with you  
(7) and I have not heard from counsel whether we have a hearing  
(8) on  
(9) that or not  
(10) THE COURT What - yeah we took that hearing off  
(11) right?  
(12) MR PETUMENOS We took it off because I knew that -  
(13) it became apparent to me that the exhibit wouldn t be reached  
(14) this morning and we were operating - I was waiting to hear  
(15) back from counsel He just was looking into his position and  
(16) hadn t had it yet and I just - rather than come to court half  
(17) prepared I thought we d wait  
(18) THE COURT Sure Do you have a position on it?  
(19) MR OPPENHEIMER Your Honor I wonder though if I  
(20) could ask again if the witness could be excused This does  
(21) have to do with the cross examination  
(22) THE COURT Sure sure  
(23) MR OPPENHEIMER Your Honor as I understand the  
(24) objection it is to an exhibit that was produced quite some  
(25) time ago I believe it s exhibit proposed for identification  
(26) 2733 if I have the number correctly which is a work proposal

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(1) from ICF which is Mr Bush s company to the plaintiffs And  
(2) it has been - it s certainly intended to be part of our  
(3) cross Has been for some time It was produced quite a while  
(4) ago and it s been a subject of deposition testimony at which  
(5) to my information there s no - no objection was raised to its  
(6) use  
(7) I believe but I don t want to characterize Mr Petumenos  
(8) position for him that the objection is that it is a draft  
(9) report and therefore it shouldn t be used but I don t  
(10) believe that objection s ever been made But I don t think it  
(11) would fall under that category anyway and I apologize but I  
(12) have not been able to locate an order to that effect  
(13) MR PETUMENOS Let me state that position and I ll  
(14) turn the podium over to Mr McCallion who s come prepared to  
(15) argue this But before he takes the podium the objection  
(16) certainly is preserved This is not the sort of objection that  
(17) has to be made at the deposition It wasn t to the form of the  
(18) question  
(19) The background to this is the fact that there was a  
(20) stipulation entered into between the parties relating to the  
(21) discoverability of letters between counsel and experts on draft  
(22) reports or other matters they didn t - we agreed not to  
(23) produce for example compensation materials and so forth  
(24) This stipulation was entered into after our due date for  
(25) the production of materials to Exxon In other words

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- (1) according to your pretrial order there was a date by which we  
 (2) had to produce back up materials for experts The stipulation  
 (3) I believe covers the exhibit that Exxon wishes to use The  
 (4) only reason they have it is because the DM 171 matter which  
 (5) was the Discovery Master s order that resulted from the  
 (6) stipulation had not been entered at the time that our discovery  
 (7) obligations were in Consequently none of the Exxon material  
 (8) of a similar nature was disclosed to us and they withheld it  
 (9) and matters far less clear than this were withheld from us  
 (10) before the discovery master  
 (11) Now it has appeared on a cross examination exhibit It is  
 (12) a letter between counsel and ICF discussing what different  
 (13) approaches might be made which was ultimately - and ideas  
 (14) that might be exchanged which ultimately didn t come to pass  
 (15) in some respects which Exxon is wishing to now cross-examine  
 (16) the witness with we believe in violation of the stipulation  
 (17) so Mr McCallion is prepared to address the Court with that I  
 (18) realize -  
 (19) THE COURT I d like to see the exhibit  
 (20) MR PETUMENOS He s got it  
 (21) MR McCALLION If I may Your Honor I ll hand up the  
 (22) exhibit which is mashed as DX2733 And along with it there  
 (23) are two Discovery Master orders There s 171 and  
 (24) supplemental  
 (25) DM 171  
 (26) THE COURT All right I ve read the letter I ve

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- (1) read the stipulation  
 (2) MR McCALLION Your Honor if I may put this into  
 (3) chronological context the document in question the exhibit in  
 (4) question dated March 15 1990 I m informed by my  
 (5) co counsel  
 (6) Mr Kende was produced to Exxon in approximately April of  
 (7) 1993 which was the due date for discovery production by  
 (8) plaintiffs in this matter The defendants production was not  
 (9) simultaneous but I believe it was ordered and produced in  
 (10) approximately June of 1993  
 (11) In the intervening time there had been ongoing discussions  
 (12) between the parties and then with the assistance of the  
 (13) Discovery Master DM 171 was entered into on May the 10th  
 (14) 1993 And as it states it would not require a party to  
 (15) produce either draft reports or more significantly in this  
 (16) case under subsection B any communications including notes  
 (17) or memoranda of oral communications between experts and  
 (18) counsel  
 (19) or their agents  
 (20) Subsequently on June 1993 June 21st the parties entered  
 (21) into a supplemental stipulation which went beyond the  
 (22) documentary discovery process and it was decided - or  
 (23) entered  
 (24) into a stipulation with the assistance of the Discovery Master  
 (25) that with regard to expert testimony no party or expert  
 (26) retained to testify in a matter should be required to testify  
 (27) concerning either draft expert reports or communications  
 (28) including notes or memoranda of oral communications  
 (29) between

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- (1) experts and their counsel  
 (2) Now clearly based on that supplemental order it would be  
 (3) our position that the communications in question between  
 (4) Mr Bush and plaintiffs counsel namely myself back in 1990  
 (5) could not be the subject of inquiry upon cross-examination  
 (6) The other issue relates to whether the document itself  
 (7) might be introduced as evidence And given all these  
 (8) circumstances here it s our position that the intent of the  
 (9) parties or certainly a fair interpretation of these events and  
 (10) series of events where in good faith the plaintiffs produced  
 (11) to the defendants documents which were subject to discussion  
 (12) and negotiation at that time but that in fact DM 171 hadn t  
 (13) formally been entered into that we had an obligation in April  
 (14) of 1993 to produce that document The defendants - of course  
 (15) we have no drafts or corresponding correspondence between  
 (16) them  
 (17) and their experts presumably this is due to the fact that  
 (18) their discovery was not due until - until June  
 (19) Given the fact that Mr Bush we feel cannot be questioned  
 (20) regarding the document we would think that given these  
 (21) circumstances that the document itself should not be the  
 (22) subject of an exhibit or brought before the jury It s clearly  
 (23) a communication between plaintiffs counsel and the expert  
 (24) which was directly the subject matter of the stipulation which  
 (25) was pending and discussions which were pending during this  
 (26) period of time leading up to the actual signing of the

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- (1) stipulation itself in May and June of 1993  
 (2) MR OPPENHEIMER Your Honor first I heard of this  
 (3) was yesterday and the reason that I couldn t find the  
 (4) stipulation and now I realize what they re talking about  
 (5) better is that I had the wrong number  
 (6) A couple of things As I understand the stipulations they  
 (7) are directed to the process of keeping out of testimony the  
 (8) draft report drafting process and they don t pertain to  
 (9) engagement and they don t pertain to exchanges of  
 (10) information  
 (11) I also understand that to apply to the stipulation which  
 (12) is dated I believe - it is May of 93 and consistent with  
 (13) all of that I think two observations The parties haven t  
 (14) been treating 2733 in any way as if it were subject to any of  
 (15) this during the entirety of the litigation I m not making a  
 (16) waiver argument It s just that no one none of us have  
 (17) thought of this document as subject to these things And the  
 (18) deposition of Mr Bush where it was the subject of  
 (19) interrogation was in July which postdates all of these  
 (20) events  
 (21) Counsel on both sides have been treating this document as  
 (22) if it s properly part of discovery and properly part of the  
 (23) case It obviously has substantive information of importance  
 (24) with reference to this witness I certainly intend to use it  
 (25) on cross examination I may well move for admission if the

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(1) proper foundation is laid and I think that the fact that this  
 (2) comes up just on the eve of his testimony you know it's been  
 (3) on the list for as long as it has and has been the subject of  
 (4) deposition testimony and has been produced for as long as it  
 (5) has says two things One this is not the right time to raise  
 (6) the argument but secondly no one until yesterday has treated  
 (7) this document this way  
 (8) I should add that we do not to the best of my knowledge  
 (9) have any draft reports I mean the parties have sort of known  
 (10) what they meant when they were referring to those types of  
 (11) materials I don't believe we're in possession of any of those  
 (12) materials in that category So as I say I don't believe this  
 (13) document fits in these categories I don't believe it was  
 (14) intended to Manifestly it has not been treated in that way  
 (15) It's an engagement document and it does have factual  
 (16) assumptions in it  
 (17) And lastly I can say I'm always hesitant to make a waiver  
 (18) argument but I do think that to the extent that everything  
 (19) else that's said to this point is invalid which I don't believe  
 (20) it is is very late in the game to be pulling one of my  
 (21) cross-examination exhibits  
 (22) Thank you  
 (23) THE COURT Mr McCallion?  
 (24) MR McCALLION Your Honor the issue of DM 171 and  
 (25) the scope of what it applies to has been the subject of

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(1) considerable correspondence on a number of exhibits As to  
 (2) whether it's covered by the scope I was not able to obtain any  
 (3) specific correspondence relating to this matter but there is  
 (4) numerous correspondence relating to similar matters  
 (5) I'm advised by the parties or at least counsel who was  
 (6) involved in some of these discussions at the time that the  
 (7) reason for the supplemental - and apparent from the  
 (8) supplemental DM 171 itself - that DM 171 was amended and  
 (9) supplemented for the specific purpose of requiring a party  
 (10) to - or an expert witness to testify regarding these kinds of  
 (11) communications with counsel And in fact the category -  
 (12) this category B which is nonexplicitly draft expert reports  
 (13) but communication including notes and memoranda between  
 (14) experts and counsel clearly applied to this - this particular  
 (15) document  
 (16) At the particular deposition in question where this -  
 (17) there was a brief inquiry relating to it and the exhibit was  
 (18) marked as an exhibit in I believe it's the fourth volume of  
 (19) Mr Bush's depositions which went up to eight or ten volumes  
 (20) During the fourth day or volume four of Mr Bush's deposition  
 (21) and these were - took place over a period of time Native  
 (22) corporations their counsel were not specifically present At  
 (23) the time a Mr Prongay who represented other parties was  
 (24) there but in any event counsel and Native Corporations never  
 (25) waived nor sought to amend or waive the provisions of DM 171

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(1) And as often happens matters are raised or discussed in a  
 (2) deposition and I believe I'm not the resident expert on the  
 (3) standing orders in the case but certainly objections most  
 (4) objections substantive and procedural are reserved by the  
 (5) parties It's clearly our case our position that there was no  
 (6) waiver that we produced these documents in good faith in April  
 (7) of 1993 given the absence of an ink signed order at that  
 (8) particular time  
 (9) THE COURT How long have you known this document was  
 (10) designated for cross examination of Mr Bush?  
 (11) MR McCALLION Yesterday Your Honor  
 (12) THE COURT You see what designation yesterday?  
 (13) MR STOLL There's a 24 hour rule you know  
 (14) THE COURT Right how  
 (15) MR STOLL It's not one we have -  
 (16) THE COURT Believe it or not I know You've brought that  
 (17) to my attention any a time counsel I just wanted to make  
 (18) sure that the record reflects that you got this designation  
 (19) yesterday  
 (20) Anything else counsel  
 (21) MR McCALLION No Your Honor  
 (22) THE COURT Okay this - yes  
 (23) MR OPPENHEIMER Well I didn't mean to create the  
 (24) basis that that was the basis I believe 2733 is one of  
 (25) the low numbers as opposed to the sequence that starts with

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(1) 15 000 2733 is a low exhibit number  
 (2) THE COURT Well that makes your record complete  
 (3) counsel  
 (4) MR OPPENHEIMER Thank you  
 (5) THE COURT Well that's the low number exception  
 (6) right  
 (7) This document which I've - which I've read not in detail  
 (8) but I've read it enough to know what the substance of it is  
 (9) and what the scope of it is clearly I think is a communication  
 (10) between the experts and counsel their agents concerning draft  
 (11) expert reports It doesn't refer specifically to a draft  
 (12) expert report but it's clearly part of the drafting process  
 (13) So it's within the terms of the stipulation  
 (14) I don't think - there's very few questions that I've have  
 (15) had to deal with in this case that seemed to me as clear as  
 (16) this one And under the circumstances especially with the  
 (17) designation and the 24 hour designation rule which I've had to  
 (18) fight with for this entire case it does not seem to me that  
 (19) waiver is an appropriate argument at all to the objection  
 (20) Now that having been said what should I do about it? The  
 (21) answer is well you can't - you have to abide by the  
 (22) stipulation You can't question about this particular  
 (23) document You can't mention it You can't show it It  
 (24) doesn't come to the attention of the jury in any way until you  
 (25) show me and I'm not saying you'll be able to do this You

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- (1) show me that there s some unfairness in this process that
- (2) should require you to inquire about a specific area of this
- (3) document
- (4) Now my - having read the document it seems clear to me
- (5) that - and in view of the exhaustive cross examination I ve
- (6) heard of everybody else in this case I got a feeling that
- (7) anything that you would cross examine on out of this document
- (8) is going to be done twice without the document So it ll
- (9) probably - by the time you try to show me that it ll be
- (10) cumulative So that ll be another reason for me not to let you
- (11) question from it but we ll see I m not shutting the door
- (12) completely I m giving you some hope counsel which I think
- (13) is my duty You understand the rule?
- (14) MR OPPENHEIMER I do Your Honor and I ll endeavor
- (15) to edit my cross
- (16) MR DIAMOND Your Honor there is one more matter
- (17) THE COURT Before we do that counsel I want to make
- (18) sure that these discussions are fully documented so the
- (19) defendants designation the document in question and the two
- (20) stipulations and the orders signing off on the stipulations
- (21) will be made the Court s next in order for the purposes of this
- (22) particular discussion What s the number? Court s 15? All
- (23) right it s Court s Exhibit 15
- (24) MR DIAMOND Well first I was going to thank you for
- (25) complimenting my trial staff for their thoroughness in their

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- (1) cross examinations but -
- (2) THE COURT That s exactly what I intended to do
- (3) MR DIAMOND I expected that We filed a - a brief
- (4) memorandum I believe yesterday concerning the headline and
- (5) news media evidence that plaintiffs intend to proffer through
- (6) Mr Mundy but counsel tells me he s not going to do that
- (7) tomorrow so we could probably argue - argue that tomorrow
- (8) MR PETUMENOS We d like to respond to the brief and
- (9) working on it should have something to you I don t know
- when
- (10) THE COURT Good
- (11) MR PETUMENOS We ll get that to you
- (12) THE COURT Is there anything else to take up this
- (13) afternoon on the record? All right Let s recess then
- (14) Counsel I d like to see Mr Stoll and Mr Diamond in
- (15) chambers
- (16) THE CLERK Off record
- (17) (Recess at 1 37 p m )

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- 1) STATE OF ALASKA )
- (2) Reporter s Certificate
- (3) DISTRICT OF ALASKA )
- (6) I Joy S Brauer RPR a Registered Professional
- (7) Reporter and Notary Public
- 8) DO HERBY CERTIFY
- '9) That the foregoing transcript contains a true and
- (10) accurate transcription of my shorthand notes of all requested
- (11) matters held in the foregoing captioned case
- (12) Further that the transcript was prepared by me
- (13) or under my direction
- (14) DATED this day
- (15) of 1994
- (21) JOY S BRAUER RPR  
Notary Public for Alaska
- (22) My Commission Expires 5 10 97

Look-See Concordance Report

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NOISE WORDS 385
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(1) IN THE SUPERIOR COURT FOR THE STATE OF ALASKA  
 (2) THIRD JUDICIAL DISTRICT  
 (4) In re ) Case No J-N 89 2533 Civil  
 ) Anchorage Alaska  
 (5) The EXXON VALDEZ ) Thursday July 14 1994  
 ) 8 40 a m  
 (6) )  
 (8) VOLUME 15 Pages 2276 through 2439  
 (10) TRANSCRIPT OF PROCEEDINGS (Continued)  
 (11) TRIAL BY JURY  
 (12) BEFORE THE HONORABLE BRIAN C. SHORTELL  
 Superior Court Judge

(5) APPEARANCES

(17) FOR THE PLAINTIFF

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(1) PROCEEDINGS  
 (2) (Jury in at 8 42 a m )  
 (3) (Call to Order of the Court)  
 (4) THE COURT Counsel the jury s all present Would  
 (5) you take the stand please?  
 (6) Good morning everybody  
 (7) MR. PETUMENOS Don t get too comfortable Mr. Bush  
 (8) we re going to come on down  
 (9) Ready to go Judge?  
 (10) THE COURT Yes  
 (11) DIRECT EXAMINATION OF JAMES G. BUSH (Resumed)  
 (12) BY MR. PETUMENOS  
 (13) Q Mr. Bush there s a word that I can t make you stop using  
 (14) so I d like you to come down here and define it for us Could  
 (15) you tell the jury what a clast is a clast? Just going to have  
 (16) you write it up here once so when you use it again -  
 (17) A Yes The term clast refers to the particles that make up  
 (18) sedimentary rocks It s - it s fairly important to understand  
 (19) a few things about sedimentary rocks in respect to this term -  
 (20) I ll take some liberty here Tim  
 (21) Q Tell us how the words sorting and framework relate to  
 (22) this  
 (23) A These are the grains that make up the sedimentary rocks on  
 (24) the beaches Now the way they occur in relationship to each  
 (25) other and their relative sizes is very important in terms of

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(1) how well the oil can penetrate into the beach when it hits the  
 (2) shoreline If the clasts are all the same size or shape or are  
 (3) disseminated evenly throughout the sediment we call it well  
 (4) sorted If they re mixed sizes then it s poorly sorted  
 (5) Porosity permeability is better if the sediment is well  
 (6) sorted If the sediment contains a small amount of matrix  
 (7) remember matrix is the fine grain stuff between the large  
 (8) grains and the sediments are a structure that is large grain  
 (9) upon large grain is called being a framework support Large  
 (10) clast beaches are often framework support  
 (11) The alternative to this is matrix support These rocks are  
 (12) all touching each other They could represent cobbles or  
 (13) pebbles or boulders on the beach and the spaces between the  
 (14) grains are open and as a result oil could penetrate through  
 (15) the sediment very easily If it s matrix support we have a  
 (16) similar relationship except that - I m sorry if it s - if  
 (17) it s well sorted it s like this If it s poorly sorted we ll  
 (18) have a relationship where we have fine grain material filling  
 (19) the pores between the grains and although there is still some  
 (20) permeability it s reduced If it s matrix support we have a  
 (21) fine grain rock with clast essentially floating out in the  
 (22) matrix Probably in most cases best permeability lesser  
 (23) permeability least permeability  
 (24) Q Thank you  
 (25) Now we ve talked about differences in the composition of

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- (1) the beach We've talked about the differences in exposure to  
 (2) the sea Are there other characteristics used to categorize  
 (3) beaches?  
 (4) A Well yes Some of the information we've just discussed  
 (5) in fact will help characterize beaches I think principally  
 (6) the - probably some of the more significant things relating to  
 (7) exposure and - and the vulnerability of the shoreline to  
 (8) contamination are things such as slope orientation with  
 (9) respect to high energy storm wind directions and that sort of  
 (10) thing  
 (11) Q How does slope affect the problem?  
 (12) A The principal way in which the sediments in a beach are  
 (13) freed of oil is through physical processes A beach that is  
 (14) fairly steep and short in its intertidal extent throughout the  
 (15) tidal range during a storm for example will have all of the  
 (16) energy of that storm focused over a small area of shoreline A  
 (17) beach that has a slow - a low slope or has a long intertidal  
 (18) extent has the same energy of a storm expanded over a large  
 (19) area So in terms of extent of reworking the sediments the  
 (20) slope has a significant implication on how that storm energy is  
 (21) distributed and how rapidly it's distributed across the beach  
 (22) face for each tidal cycle  
 (23) Q Does this help?  
 (24) A Can use it now but it would probably be better to work  
 (25) with three dimensional views when we look at profiles of the

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- (1) transects  
 (2) Q Okay you can have it back  
 (3) All right besides the differences in beach composition and  
 (4) exposure you've just described what about things such as  
 (5) tides glaciation salinity sedimentation?  
 (6) A Well these other factors affect the chemical environment  
 (7) and the biological environment as well If you look at - at  
 (8) beaches that are down current down current direction from  
 (9) glacial activity obviously is a fresh water component is  
 (10) introduced into the system so the biological system is tainted  
 (11) or tweaked in that direction  
 (12) MR OPPENHEIMER Your Honor I would raise the  
 (13) foundation objection we raised yesterday with regard to  
 (14) testimony relating to biologic testimony and subject matter  
 (15) MR PETUMENOS Your Honor this isn't biologic  
 (16) testimony this is the relationship of the geology to such  
 (17) issues  
 (18) THE COURT Well I'll hear it for a couple of  
 (19) questions counsel to determine whether or not your  
 (20) objection's well taken  
 (21) MR PETUMENOS Let me ask a few foundational  
 (22) questions  
 (23) BY MR PETUMENOS  
 (24) Q Is this something that you have studied in the course of  
 (25) your work the way the geology affects what lives where?

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- (1) A Yes  
 (2) Q And please proceed  
 (3) A Well that's basically all I had to say There's effect  
 (4) from the fresh water in that area In terms of - well that  
 (5) of course impacts the salinity and the salinity is the key  
 (6) factor that affects a major portion of marine ecosystem there  
 (7) Temperature of course is another affect near glacial areas  
 (8) near glacier area or ice bearing shorelines the temperatures  
 (9) are reduced on a local scale  
 (10) Q And in different parts of the Sound is that happening are  
 (11) there glacial runoffs? Is there sedimentation and things like  
 (12) that in the water that you're aware of within Prince William  
 (13) Sound?  
 (14) A Certainly I believe some earlier investigators  
 (15) characterized Prince William Sound adds being pristine and  
 (16) containing crystal clear water and those sorts of things In  
 (17) fact there's a substantial contribution of glacial flow along  
 (18) each of the glacial outwash areas The Sound includes  
 (19) substantial turbid plumes and variety of silt influx from the  
 (20) Alaska coast current As a result for example the impact of  
 (21) that or the significance of it is that an oil slick while  
 (22) usually floating can acquire the silt particles and eventually  
 (23) become heavier than water and sink  
 (24) Q Let's talk some more about oil You've studied the Exxon  
 (25) Valdez oil spill and you are familiar with its size and nature?

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- (1) A Generally speaking yes  
 (2) Q What are the factors that affect the oil once it leaves the  
 (3) vessel?  
 (4) A Well once the oil leaves there are a variety of things  
 (5) that affect it Once the oil leaves the vessel obviously we  
 (6) have a leak in a ship and we have an immediate outpouring of  
 (7) the oil so we have a buildup of oil right around the vessel  
 (8) Laterally to that as the oil spreads laterally it thins  
 (9) During this process we have things for example temperature  
 (10) changes as it interacts with the colder sea water Viscosity  
 (11) may change As it spreads out laterally we'll have volatiles  
 (12) that will evaporate from the oil At the same time soluble  
 (13) products in the oil slick will dissolve in the ocean or ocean  
 (14) water column  
 (15) MR OPPENHEIMER Your Honor if I may register  
 (16) another objection with respect to foundation We seem to be  
 (17) ranging quite far field from marine geology  
 (18) THE COURT I agree counsel I think that objection  
 (19) may very well be well taken You may be able to lay a  
 (20) foundation counsel but it does seem to be a different subject  
 (21) matter  
 (22) BY MR PETUMENOS  
 (23) Q Well have you studied - you have worked in areas relating  
 (24) to oil spills sea coast environments and used your discipline  
 (25) to study those things is that right?

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- (1) A Well that s correct I ve studied this spill for a number  
 (2) of years and the knowledge of the interaction of oil to water  
 (3) and spilled oil is at part of my business part of fate and  
 (4) persistence in the environmental industry  
 (5) Q Can you understand the fate and persistence of oil on  
 (6) beaches and in the nearshore environment without  
 understanding  
 (7) how the oil interacts physically with the water?  
 (8) A I don t believe you can  
 (9) Q And have you studied how the oil acts physically with the  
 (10) water?  
 (11) A Yes  
 (12) Q One it leaves something like a vessel?  
 (13) A Certainly  
 (14) MR OPPENHEIMER Your Honor I would continue my  
 (15) foundation objection and request an opportunity at least for  
 (16) some voir dire if we re going to go much farther down this  
 (17) line  
 (18) THE COURT That s the extent of the foundation?  
 (19) MR PETUMENOS Well -  
 (20) THE COURT Just say yes or no  
 (21) MR PETUMENOS I m puzzled more about how far I m  
 (22) going to be going with this to see if we re going to take up  
 (23) the Court s time  
 (24) THE COURT You won t be puzzled in a minute Just  
 (25) tell me whether you re done with the foundation

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- (1) MR PETUMENOS I believe so  
 (2) THE COURT The objection s overruled and I don t  
 (3) think voir dire is necessary  
 (4) MR PETUMENOS Good example of following the Court s  
 (5) instructions Let me recollect myself here  
 (6) BY MR PETUMENOS  
 (7) Q What difference does temperature make?  
 (8) A Well temperature affects the rate at which different  
 (9) components of the oil will move through the oil solution and  
 (10) evaporate It also affects the viscosity of the oil and how it  
 (11) will spread out across the water surface  
 (12) Q So a cold water oil spill is different than a warm water  
 (13) oil spill?  
 (14) A Clearly it also depends on the composition of the oil For  
 (15) example certain - certain materials very heavy crudes for  
 (16) example may actually form gelatinous like globs and not float  
 (17) out as a slick but actually wind up as globs floating in the  
 (18) water as opposed to a thin film over the water surface  
 (19) Q What happens when oil is exposed to wind from when it s on  
 (20) in the water?  
 (21) A Well if we can continue discussion with respect to the  
 (22) slick as we had before after it begins to spread out and  
 (23) thins then in the case of the Prince William Sound a few days  
 (24) after the spill where the seas were relatively calm This  
 (25) allowed the slick an opportunity to spread out and thin itself

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- (1) over a substantial area When the winds pick up you have a  
 (2) variety of currents that come into play surface currents in  
 (3) the water the wind affects the slick directly for example  
 (4) and the slick there are rules of thumb - and I don t know how  
 (5) accurate these are there s discussion about how well they work  
 (6) - but for example the slick may move about three and a half  
 (7) percent say of the wind velocity  
 (8) Water velocity may be different than that There may be  
 (9) actually differential movement between the water surface and  
 (10) the oil slick itself As the wind picks up and the surface of  
 (11) the water becomes turbulent with wave action Waves can  
 (12) actually break plunge down under the water and carry part of  
 (13) the oil into the water column beneath it So we wind up with  
 (14) diffusion of the two fluids together We can get emulsion of  
 (15) oil in water and some cases we develop very commonly we  
 (16) develop emulsion of water in the oil  
 (17) This latter one where oil is the dominant phase is referred  
 (18) to as mousse It looks like chocolate mousse has the  
 (19) consistency of mayonnaise Large rafts of mousse can move  
 (20) throughout the column and within the water column we can  
 (21) develop an oil to-water emulsion which is a light milky or  
 (22) lightish color substance which can move with currents as  
 (23) opposed to the wind So we have differing amounts of  
 movement  
 (24) different directions of movement within this large body of  
 (25) affected - affected water

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- (1) In addition to this we have the dissolved components part  
 (2) of the oil slick is soluble in water Dissolved components can  
 (3) follow currents and sediment  
 (4) Q Would it be fair to say then that there is oil in the  
 (5) water in places where you can t see it?  
 (6) A Yes  
 (7) Q I d like to show you some photographs so the jury can see  
 (8) how these principals might appear  
 (9) MR OPPENHEIMER Do you have an Exhibit Number?  
 (10) MR PETUMENOS Yes admitted Exhibit 245-13  
 (11) A Shall I come down here?  
 (12) BY MR PETUMENOS  
 (13) Q Please We can t - we can t use our pen or the other  
 (14) things when we use the projector  
 (15) A Well this is a shot that shows you a good example of  
 (16) turbulence on the surface and parts of the plume mixing have  
 (17) wind streams beginning to flow certain portions of the oil  
 (18) over others You see the wavy surface with the turbulence  
 (19) See the leading edge this particular portion of the plume of  
 (20) the slick that s moving out That s about what this shows  
 (21) Q Showing you next what has been marked as 228 4  
 (22) A Well this is in a different situation We have a calm  
 (23) water setting in this case We see the path of the boat  
 (24) through the oil slick you can see the waves bow waves  
 (25) generated by the boat moving down

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- (1) In this case the oil seems to have developed really a
- (2) heavy sheen in places I expect there s some color in this
- (3) photograph that you can t see here
- (4) Q In the slide You can see it better this way
- (5) A Looks like these areas are a rainbow sheen quality which
- (6) is really a very thin layer of oil on the water s surface when
- (7) it becomes approximately a millimeter of thickness something
- (8) in that range It acquires a brown or opaque more opaque than
- (9) what you see here
- (10) This gives you some idea of how the slick doesn t
- (11) necessarily move in a nice uniform shape rather breaks up
- (12) into areas of wind rows or streamers that come off of main
- (13) bodies
- (14) Q Showing you next 245-26 as admitted
- (15) A This is an indication of actually what can happen with a
- (16) slick after its impact with the shoreline
- (17) Q Press this little button a little red dot will appear
- (18) A Okay Actually this slide gives us a variety of
- (19) information here Obviously we can see the oil that s
- (20) impacting the shorelines It s moving out from the shoreline
- (21) streaming in the direction of the wind You can see the wind
- (22) waves generated on the water and it gives us a wind direction
- (23) generally as common sense would dictate this direction as the
- (24) oil moves off the beach
- (25) This also gives us some idea about the heterogenic the

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- (1) variability of the shoreline types we were talking about
- (2) earlier We can see in this area we have a lot of bedrock
- (3) exposure rocks extending above the water Over here over
- (4) here
- (5) and isolated occurrences over here These rocks are releasing
- (6) oil to the water surface which moves along the shoreline some
- (7) of which the rising tide for example moves right back into
- (8) this clastic beach sand and gravel mixed sand and gravel
- (9) perhaps I can t tell from the photograph in this area
- (10) So we have a case where oil released from here
- (11) reaccumulates over here You can also see that if we tried to
- (12) map this shoreline on a large scale that - that the true areas
- (13) that were removed from shorelines that are bedrock
- (14) documented
- (15) like this to ones that are clastic beaches or sedimentary in
- (16) makeup sand and gravel are actually pretty sharply defined in
- (17) places Other places we find that they re mixed Down in
- (18) these areas
- (19) Now what you re looking at is a snapshot in time of a
- (20) shoreline If the tide were high tide looks like it s going
- (21) to impact something Around here based on the little berms we
- (22) see developed on the shoreline the snow line and the high tide
- (23) debris or raft that s left on the shoreline maybe mid tide or
- (24) low tide If it were high tide the shoreline would look
- (25) substantially different
- (26) A lot of these rocks we see here might be underwater and
- (27) the shoreline types then just a snapshot view at high tide

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- (1) would be different The point being that as the tide moves up
- (2) and down a number of areas turn into things like protected -
- (3) this might be a protected rocky shore environment and this
- (4) area and in here relative to this wind direction this storm
- (5) The other side the same outcrop is exposed high tide it may
- (6) all be underwater
- (7) So we see we have oil moving from portions to portions
- (8) throughout the tidal range up and down this shoreline into and
- (9) from exposed and protected environments We ve done a lot of
- (10) work to analyze these shorelines and generalize them into ten
- (11) basic types What I m saying to you is that it s not perfect
- (12) There s a lot of variability and heterogenic along the
- (13) shorelines
- (14) Q Are you finished with that exhibit?
- (15) A Yes
- (16) Q Show you next what s been admitted as 245 27
- (17) A Well this is an example of the formation of the mousse
- (18) material we were talking about earlier I don t know how well
- (19) this shows up for you in this illustration but we have here
- (20) clearly a rocky shoreline with a small beach interspersed on
- (21) the scale this is mapped - this clastic beach probably doesn t
- (22) even show up on the scale most of the mapping in Prince
- (23) William Sound
- (24) This material it ranges from here - why don t you zoom
- (25) back down now for the larger view The lower portion of the

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- (1) photograph It s brownish in color Is mousse This represents
- (2) a mousse raft It s moving shoreward about to impact the
- (3) shoreline Again this is a thick substance much like
- (4) mayonnaise in consistency and here it s moving lateral to or
- (5) directly towards the shoreline
- (6) Q As the oil reaches the shore what happens to it?
- (7) A Well depends on the phase that the oil s in when it
- (8) reaches the shoreline The dissolved components can in fact
- (9) proceed and move along the shoreline fairly freely with the
- (10) water column Mousse material like this it s very sticky
- (11) adheres to materials has reduced permeability and some
- (12) permeability and will move into the sediments to some degree
- (13) If it s liquid form as the classic oil slick it has much
- (14) more freedom to move into the clastic rocks and crevices that
- (15) are available This type of shoreline these rocks cliffs not
- (16) much permeability Granted there s some cracks in some
- (17) places
- (18) for the oil to penetrate but compared to the spaces we have in
- (19) the sand and gravel beach which we talked about in the
- (20) illustration I drew earlier there s a lot more volume of oil
- (21) that can be contained in this kind of shore type as opposed to
- (22) this kind of shore type
- (23) Q All right Could I show you then what s been marked as
- (24) 1148 I ll put it up here for the jury And I think - I
- (25) think we ll have to come over to the exhibit here to do that
- (26) What is depicted on 1148?

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- (1) A This is an illustration that will -
- (2) Q Are we too far away for you? All right Okay
- (3) A This is an illustration that depicts sort of the chain of
- (4) events that might happen as oily material on the water surface
- (5) approaches a shoreline In fact it s very fortunate here
- (6) this illustration is very similar to what you see in the
- (7) shoreline This would be a raft It s mousse in this case
- (8) We can imagine it to be oiled liquid or whatever but it s a
- (9) raft like moving into the shoreline on this exhibit
- (10) Let s take a minute to discuss this beach and what it s
- (11) like We see again we have a mixture of things Here we have
- (12) a rocky headland essentially a large portion of bedrock
- (13) vertically in its orientation that moves from the upland area
- (14) where the trees and so forth are towards the waters to the
- (15) ocean It s bedrock exposed bedrock
- (16) Along it is a variety of debris some of which broken
- (17) pieces have caved out of the side of it that sort of thing
- (18) Adjacent to the bedrock in the upper portions are berms which
- (19) are developed by wave action Every high tide cycle you may
- (20) form a small ridge where the wave action pushes small pebbles
- (21) and debris like this near the surface Each one of these berms
- (22) may have associated floating debris with them
- (23) So we have an on wind - onshore wind Floating debris
- (24) will line up and form nice fairly uniform regular lines
- (25) across these berms During very high tides we can develop a

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- (1) higher berm This berm will be preserved for time because
- (2) there are no subsequent tides that reach high enough to
- (3) obstruct it and rework it so it s a marker on a shoreline
- (4) In the case of a storm we could have even higher formation
- (5) again onshore winds even higher formation accumulation of
- (6) larger debris Just because you see large debris there
- (7) doesn t necessarily mean it s been a violent storm action Big
- (8) logs float just as well as little ones do Onshore breeze can
- (9) produce a very substantial raft depending on what s in the
- (10) water to begin with
- (11) Adjacent to the bedrock we have a clastic beach
- (12) sedimentary rock fabric beach This particular one again as
- (13) we talked about earlier very briefly the formation of armors
- (14) It has a large number of cobbles and boulders on the surface
- (15) small bedrock protection here with mixed sand and gravel
- (16) scattered boulders deeper beneath
- (17) So as this oil slick moves forward into the shoreline it s
- (18) going to encounter a number of different environments The
- (19) bedrock surface small piece projecting here Sedimentary
- (20) environment if it gets high enough can actually move into the
- (21) storm berms
- (22) This illustration shows what happens after the oil has
- (23) moved closer to shoreline Here we see the waves are
- (24) breaking They form a swash zone That s where they wash up
- (25) onto the beach and they carry the oil with it They actually

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- (1) start impacting the shoreline about here See where the oil is
- (2) being driven down into the beach to some extent as the tide
- (3) rises as the tide moves in Splash zone occurs above this
- (4) As the tide continues to rise - move to the next one - we
- (5) can see that the oil continues to be moved landward higher in
- (6) the intertidal range The original oil that was deposited out
- (7) here now has the opportunity to float back up into the water
- (8) system and then be recycled and moved forward In cases
- (9) where
- (10) the waves intersect the beach at an angle you actually have
- (11) lateral movement down the shoreline a longshore drift it s
- (12) referred to So again as the tide rises and the waves work
- (13) inward the oil continues to be moved forward and higher on the
- (14) beach surface
- (15) This illustration shows the upper limit in this case
- (16) which we found between the - these two berms and the storm
- (17) berm
- (18) Now during the falling tide is when we have the greatest
- (19) opportunity for the oil to percolate into the sediments As
- (20) this tide moves the sedimentary body that makes up the beach
- (21) and that which has filled some of the cracks from other
- (22) reservoir areas inside the bedrock have drained the waves
- (23) continue to move forward with the swash action bringing the oil
- (24) onto the surface and allowing it to percolate into the
- (25) sediments As the tide lowers the waves drain away from the

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- (1) This little body right here looks like a little sand dune
- (2) Can you see this in the back? It s exactly what it is It s a
- (3) water based sand dune We call them swash bars and it would
- (4) be made up of fine grain material that is moved easily by this
- (5) size of wave But that wave is inadequate to move the large
- (6) rocks so that the small finer grain material moves across that
- (7) surface just like a sand dune does
- (8) Q The sand is moving on top of the rock?
- (9) A The finer grain sand body the little swash bar is mobile
- (10) and moves across this coarser grain cobble boulder surface
- (11) The effect of that is if you re out looking at the shoreline
- (12) and you come back a few days later after the oil spill hit the
- (13) bar is reworked and a bit cleaner At that point you may not
- (14) realize there s substantial oil beneath this little sandbar
- (15) You can walk over it not recognize the thing unless you re
- (16) doing a shoreline survey
- (17) Similarly if subsequent tidal action brings in additional
- (18) sediment from deeper or laterally longshore drift new cleaner
- (19) sediment often gets deposited over the oil that s percolated
- (20) into these sediments and buries the oil even more
- (21) Q All right We done with that one?
- (22) A Yeah I think so
- (23) Q Now is what you described a way that - does this
- (24) mechanism result in the oil some of the oil persisting on the
- (25) beaches?

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- (1) A Yes it does The stability of the beach surface as I
- (2) said earlier one of the major ways in which oil is removed
- (3) from shoreline is through physical action The stability of
- (4) the beach surface plays a big role in how well the oil is
- (5) preserved in it If we have a coarser more developed armor
- (6) that helps stabilize or stabilize and strengthen the surface
- (7) It enhances the preservation of the oil that's percolated into
- (8) it
- (9) Q Let's take a look at Exhibit No 1149 - can you get me
- (10) 1149? It will be just a minute because like in the grocery
- (11) store - may I have the light pen please?
- (12) Could you tell us what in general this exhibit is going
- (13) to describe and then we'll go through it point by point?
- (14) A Yes In general this exhibit will explain the mechanism
- (15) by which these armors that we've been talking about are
- (16) formed
- (17) Q Let's start shall we start with the first panel?
- (18) A Certainly If you want to bring the exhibit we have that's
- (19) on display you want to bring that one up and put it on the
- (20) easel as well?
- (21) Q Okay yes We'll have it -
- (22) A I don't know how clear this is
- (23) Q We're going to blow it up
- (24) A It's helpful to look at this both - both these
- (25) individually and then collectively too later I think we'll go

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- (1) you shift down a little bit It's exactly what happens to
- (2) these rocks but they're attempting to build a surface as time
- (3) proceeds
- (4) Let's go to the next
- (5) So here's the final product We've had a substantial
- (6) amount of material removed from the shoreline
- (7) MR SANDERS It's thinner than it was before and we
- (8) have a very high ratio of large clast to small clast right
- (9) along the surface So this is sort of an endproduct
- (10) Let's go on to the next one
- (11) Now we're back to our original shaped beach and this is
- (12) what we see in Prince William Sound today in many shorelines
- (13) We have a nice armor developed mixed sand and gravel
- (14) environment some cases just pure sand beneath them Fairly
- (15) stable surface that can resist normal wave energy and even
- (16) typical storm energies Clearly extremely violent storms
- (17) properly oriented with adequate energy can impact these
- (18) armors
- (19) and disrupt them and that happens
- (20) Some of the islands we have - Smith Island for example -
- (21) have a tremendous exposure for water up there It's isolated
- (22) has a thin armor on it thin depth to bedrock and a very high
- (23) energy storm can disrupt that sediment very uniformly and has
- (24) been documented to do so But in many cases along the
- (25) islands
- (26) and more protected areas or areas that are still exposed but
- (27) don't have the extent of fetch or the length of water the

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- (1) back and forth between the easel and the illustrations here
- (2) It's - geologically speaking it's kind of difficult to
- (3) get a starting point for a number of things that we see in
- (4) nature so what we're looking at now is a hypothetical starting
- (5) point for a shoreline we'll say in an imaginary way
- (6) This has just appeared We have a shoreline that consists
- (7) of mixed sand and gravel with larger boulders and smaller
- (8) cobbles fairly evenly distributed throughout the material
- (9) And then we have a wave shoreline environment which allows
- (10) this
- (11) material to be worked and reworked That's - go ahead and go
- (12) to the next
- (13) In time the wave action is adequate to remove some of the
- (14) finer grained sand and smaller particles between the cobbles
- (15) and boulders as well as some of the pebbles and we see that
- (16) we have a net volume reduction
- (17) This dashed line at the top is the old surface so after
- (18) the smaller material has been removed we have a change in
- (19) volume We lose some volume The smaller material is washed
- (20) down the beach someplace and we wind up with more cobbles
- (21) and
- (22) boulders on the surface Bear in mind that the wave energy is
- (23) not enough to move the boulders and cobbles but will remove
- (24) the finer grained material so the boulders and cobbles
- (25) essentially stay in place
- (26) Now they move a little bit Obviously if you're standing
- (27) on a shoreline and the water washes the sand beneath your
- (28) feet

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- (1) shorelines are more stable
- (2) Q Now let me stop you there When you talk about fetch was
- (3) that the phenomena where we looked at the map and saw
- (4) Montague
- (5) and Hinchinbrook islands with the whole ocean exposed to the
- (6) coastline?
- (7) A Yes
- (8) Q What kind of fetch would that place have?
- (9) A Well it has a tremendous fetch almost the entire Pacific
- (10) ocean I mean there's a limited amount of fetch I don't
- (11) want to overemphasize at this point but clearly there's a
- (12) difference between the islands that face the brunt of the North
- (13) Pacific as opposed to the embayed areas and the areas
- (14) between
- (15) the islands in western Prince William Sound
- (16) Q That point has been made with the jury but I was just
- (17) saying the word fetch as you used it relates to that
- (18) phenomena?
- (19) A Relates to the length of water that's available to generate
- (20) waves that impact the shoreline
- (21) Q All right And we talked about storms When you have a
- (22) well armored beach a well armored beach common well
- (23) armored
- (24) beach is common in the area we're talking about?
- (25) A Within large beaches that have large clast yes
- (26) Q If you have a beach like that what kind of storm does it
- (27) take to alter a well armored beach?
- (28) A Again it depends on the beach If the fetch is small a

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- (1) tremendous storm can't do it. I think there's a few points  
 (2) here we need to make in order to answer your question. This  
 (3) process goes on with fairly low energy wave conditions. It's  
 (4) easy for the waves to remove the finer grain material. They  
 (5) don't move the large grain material, so in early NOAA mapping  
 (6) for example, people were not aware of this process, were not  
 (7) incorporating it into their interpretations, and mapped some of  
 (8) these large cobble shorelines, small boulder, large cobble  
 (9) shorelines as high energy based on the texture or used that  
 (10) texture to determine the shorelines when in fact it had been  
 (11) produced by low energy processes.  
 (12) So in that kind of environment, this cobble armor is  
 (13) stable. It's very stable because it's a small fetch, low  
 (14) energy environment. You have what appears to be a high  
 (15) energy beach, very, very strong, structurally strengthened by this  
 (16) armor. We can form a similar armor - for example, parts of  
 (17) the Kenai Fiords that face the Pacific Ocean and those rocks  
 (18) are regularly reworked, reordered and sorted as though they  
 (19) were sand, so those environments are much more -  
 (20) Is this a perfect process? No. Does it go on everywhere?  
 (21) Yes.  
 (22) There are varying variations and varieties as to how much  
 (23) structural strength you get. It's a function of wave energy  
 (24) fetch, this sort of thing, wind, storm, wind velocity and grain  
 (25) size. It's not a general rule. It's the ratio between the

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- (1) wave strength or power and the grain size  
 (2) In this illustration, the last one on the - on the chart  
 (3) that you see, the point we're making - does mine work?  
 (4) In this area - we could probably get rid of that. Anyway  
 (5) at the end of that where you see the large wave on that  
 (6) illustration, that's - that's to give you some indication of a  
 (7) ratio of energy, it's not to indicate to you the size of the  
 (8) wave. It's the amount of energy that we have in the wave  
 (9) that's required to disrupt this beach. I don't want to be  
 (10) misleading and think that the waves have to be twice as tall  
 (11) to do that. They don't. It's the amount of energy that's  
 (12) incorporated into the wave.  
 (13) Q All right. Let's discuss the path of the oil - and could  
 (14) you bring up 1144, please - and discuss as the oil progressed  
 (15) how these principles would be applied in the Exxon Valdez oil  
 (16) spill. What is 1144?  
 (17) A 1144 is an illustration that - that displays the path of  
 (18) the oil slick from the spill point up here to the extent of -  
 (19) maximum extent of the samples that were collected that had  
 (20) been correlated to the Exxon Valdez spill. I  
 (21) want to make a comment about this illustration. This is  
 (22) not to depict the total size of the oil slick. Don't make that  
 (23) mistake in viewing this thing. The slick was not this large.  
 (24) This is 500, 600 miles, essentially, away from the spill  
 (25) point. What this is depicting in color here is the path of the

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- (1) oil slick for the most part. Nor does it depict that  
 (2) completely it's to give you a general idea the areas that were  
 (3) impacted by the spill as it moved from essentially the Bligh  
 (4) Island area down to Chignik and the Perryville area.  
 (5) Q And those that we see with the dates on them are what?  
 (6) A These represent the progress of the slick with time  
 (7) starting from after the winds blew it a bit from approximately  
 (8) March 27th, is the first start, individually varies, distances  
 (9) and points in time through the May 18th date, and final extent  
 (10) we have no date at which point it impacted that area.  
 (11) Q And therefore, what we're illustrating here is that there  
 (12) are very many different kinds of beaches that would have been  
 (13) touched by oil?  
 (14) A Not only are there very many kinds of beaches, but we have  
 (15) a change in the oil slick as it proceeds from Bligh Island area  
 (16) to approximately 600 line miles away. On the way, materials  
 (17) evaporated, dissolved, changed from liquid to mousse, all of  
 (18) these transitions we talked about before happened en route.  
 (19) That's where you have a different effect of the oil spill as  
 (20) you proceed to the southwest.  
 (21) Q Exhibit 1145, please.  
 (22) We have some exhibits coming up to describe to the jury  
 (23) some comparison so we understand the length and scope of the -  
 (24) or the length of the path of the oil as it might put some  
 (25) perspective with respect to other parts of the United States.

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- (1) Could you describe what we've got here?  
 (2) A Yes. In Exhibit Number 1145, the path of the slick that  
 (3) you saw on the earlier exhibit has been removed and then  
 (4) placed  
 (5) near the side of the eastern United States. We can see clearly  
 (6) it exceeds the distance from Boston, for example, to  
 (7) Washington, D.C.  
 (8) Q 1146.  
 (9) A We've done the same thing in this illustration. We've  
 (10) oriented the past path of the slick along the western coast of  
 (11) the United States, and you can see it extends - the length of  
 (12) the slick extends all the way from Washington to California.  
 (13) That is to say the path of the slick, not the length of the  
 (14) slick.  
 (15) Q All right. Now, when you were out in the field in 1994,  
 (16) did you - this last time, did you return to the sample sites  
 (17) and the transect sites that you had visited before?  
 (18) A Not entirely. Returned to a few of them. We didn't return  
 (19) to every one of them.  
 (20) Q Were you able to find oil in 1994 at the sites that you  
 (21) visited?  
 (22) A Yes.  
 (23) Q And you also returned to the sites in 1992?  
 (24) A That's correct.  
 (25) Q How many sites were there where you did the extensive  
 evaluations in Prince William Sound, Kenai Fiords, Kodiak area?

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- (1) A To sort of recap our field activity to clarify the sequence  
 (2) of events we were there in 1989 and we studied the Prince  
 (3) William Sound area the Cook Inlet area We returned in 1992  
 (4) and studied the same areas collected samples from those  
 same  
 (5) areas and with emphasis on the same transect sites we  
 (6) investigated in 1989  
 (7) In addition to 1992 we conducted the special investigation  
 (8) on that little portion of the north end of LaTouche Island and  
 (9) we did our area wide sampling program During that program  
 we  
 (10) returned all the way to the - to the Alaska Peninsula the  
 (11) Kodiak area and sampled areas across a broader expanse  
 (12) Did I answer your question I m not sure?  
 (13) Q I think you did  
 (14) Of the sites you had done these evaluations on could you  
 (15) give me how many you did them on and how many you found  
 oil in  
 (16) subsequent years?  
 (17) A In 1989 we established 17 transects I believe 16 we were  
 (18) able to do substantial work on and either 16 or 15 of them  
 (19) were revisited in 1992  
 (20) Q How many of the 16 sites for which you had done these  
 (21) evaluations previously how many were still oiled?  
 (22) A In 1992?  
 (23) Q Right  
 (24) A I believe we found some oil at all sites that were  
 (25) previously oiled in 89 in 1992

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- (1) Q And of the ones that you saw in 1994 did you find oil on  
 (2) those as well?  
 (3) A Well 1994 we didn't visit all of the transect sites  
 (4) again We visited approximately - depends how you define a  
 (5) site Some point you may walk along along the shoreline and  
 (6) some point you have to subdivide where you started where you  
 (7) finished but we visited approximately 40 to 45 sites and all  
 (8) of those were oiled We found oil at all of those sites except  
 (9) for four of them  
 (10) Q Now you mentioned the sampling process Could you  
 (11) describe for the jury what you do when you sample?  
 (12) A Well there are a variety of things I guess We could  
 (13) consider two general approaches to sampling One is to collect  
 (14) a sample that's representative of the material that's in the  
 (15) shoreline In other words we like to sample carefully to be  
 (16) sure it's representative quantitatively of the materials in  
 (17) the shoreline  
 (18) Obviously you can't put a boulder in a jar so if you're  
 (19) sampling the material between boulders the matrix that we've  
 (20) talked about before on the shoreline then you need to  
 (21) recognize this and document it in your notes when you try to  
 (22) calculate volume of oil in the sediment or something you must  
 (23) allow for the amount of material that's between boulders That  
 (24) is a representative sampling  
 (25) If you're taking a sample to investigate some other aspect

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- (1) for example particular questions about composition you may  
 (2) want to take a biased sample one where you definitely pick  
 (3) some very high concentration material something that's very  
 (4) moussey For example you may want to collect that to study  
 (5) specifically mousse or if you're interested for example  
 (6) water to oil ratios within mousse we'll specifically focus on  
 (7) sampling that material to answer that question The sample is  
 (8) collected to answer a specific question you're investigating at  
 (9) that time  
 (10) We collected samples in 16 ounce large mouth jars which  
 (11) Mr Petumenos is holding there And to the extent possible we  
 (12) filled them two thirds half three quarters full sent to -  
 (13) so that the laboratory would be able to homogenize the sample  
 (14) take a representative aliquot or sample from that jar to be  
 (15) analyzed  
 (16) MR PETUMENOS Judge what I -  
 (17) A I'd like to make one more comment about this the  
 (18) representativeness  
 (19) We've seen some pictures of shorelines and I think you  
 (20) understand now that NOAA has mapped these shorelines ten  
 (21) different types along their length We've seen how variable  
 (22) the shorelines are There's a lot of heterogeneity just in  
 (23) determining the shoreline type and the estimates have been  
 (24) made about the preservation and persistence of oil by shoreline  
 (25) type so you see there's variation there

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- (1) When you sample that shoreline you come up with some  
 (2) variation around the area you're sampling Your jar should  
 (3) represent that area as best you can It's not perfect That  
 (4) jar goes to the laboratory The laboratory takes a pinch out  
 (5) of that jar to analyze That pinch needs to be representative  
 (6) of the jar There's some error there as well Again it's not  
 (7) a perfect process  
 (8) MR PETUMENOS Judge we have a stipulation with  
 (9) counsel that we don't see the need to enter these into evidence  
 (10) and maybe have them break or get on somebody or get on your  
 (11) courtroom or something but what we would like to do is have  
 (12) the witness testify to them and show them to the jury  
 (13) THE COURT Sure  
 (14) MR PETUMENOS They can open it up and presumably -  
 (15) and look at it smell it whatever they'd like and then that  
 (16) will be what we do with it  
 (17) MR OPPENHEIMER We do indeed have that stipulation  
 (18) Your Honor I would like though if counsel could just read  
 (19) into the record the exhibit number and the corresponding  
 sample  
 (20) number  
 (21) MR PETUMENOS I had planned to do so  
 (22) BY MR PETUMENOS  
 (23) Q What have you got in front of you there Mr Bush and the  
 (24) lot numbers exhibit numbers things that identify it tell us  
 (25) where it's from and what you know about it

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- (1) A These are two samples One was collected in 1989 The  
 (2) second was collected in 1992 Both were collected from Beauty  
 (3) Bay  
 (4) Q And what kind of beaches are we talking about?  
 (5) A It s - Beauty Bay in our transect site was a mixed sand  
 (6) and gravel site  
 (7) MR PETUMENOS Do we have the map of Beauty Bay area  
 (8) that we could get up on the Trial Link? And the exhibit  
 (9) numbers please and the - some of the data for counsel so he  
 (10) can know which ones you re looking at?  
 (11) A To identify the samples lot number sample E 9047010 Was  
 (12) collected on 8 10 89 It s Beauty Bay II 1 - that s Roman  
 (13) numeral two - S 9  
 (14) Q Is that enough?  
 (15) MR OPPENHEIMER That was 89?  
 (16) THE WITNESS That s correct  
 (17) BY MR PETUMENOS  
 (18) Q And the other?  
 (19) A And the second sample is lot number E 9047010 It s  
 (20) collected on 7 1 92 It s sample number is BB S11 also from  
 (21) Beauty Bay  
 (22) MR OPPENHEIMER Could we have the corresponding  
 (23) exhibit number?  
 (24) MR PETUMENOS We have to get that from the exhibit  
 (25) list but I ll stipulate to it

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- (1) BY MR PETUMENOS  
 (2) Q Could you tell the jury where Beauty Bay is on the map  
 (3) that s in front of you? You should have the light pen You  
 (4) need a better map than that?  
 (5) A This scale is - I can give an approximate location This  
 (6) scale Beauty Bay is located approximately here I think  
 (7) Q In the Kenai Fiords?  
 (8) A Yes that s correct  
 (9) Q While the jury is looking at the samples you gave some  
 (10) fancy numbers and all of that when you were talking about  
 (11) these - the samples Is there paperwork that goes with these  
 (12) samples that - a process that you go through?  
 (13) A Yes there is  
 (14) Q And what is that called? What process is that called?  
 (15) A When we collect a sample or when we transmit rather a  
 (16) sample from place to place or person to person we have to  
 (17) have  
 (18) a transfer or chain of custody  
 (19) Q Why are you transmitting it from person to person? What s  
 (20) the process you re going through?  
 (21) A For example in 1989 one of the more difficult obstacles  
 (22) to maintain chain of custody we were operating from a vessel  
 (23) In Prince William Sound  
 (24) Q Excuse me Mr Bush you re not answering my question I  
 (25) want to make sure we re on the same wavelength  
 (26) Where were you taking the samples from the field? Where

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- (1) were you trying to get the samples to?  
 (2) A The laboratory  
 (3) Q The laboratory And what were you going to do at the  
 (4) laboratory? Why were you sending it to a laboratory?  
 (5) A To have them analyzed  
 (6) Q For what purpose?  
 (7) A Well determine oil content and composition of the oil  
 (8) Q And do you have an opinion as to whether the oil that is  
 (9) contained in these samples is from the Exxon Valdez?  
 (10) A I do  
 (11) Q And what is that opinion?  
 (12) A It is from the Exxon Valdez  
 (13) Q And how do you know that?  
 (14) A We know that based on - I think probably the strongest  
 (15) evidence is based on the time of occurrence and the nature of  
 (16) occurrence These samples came from tar mats or asphalt  
 (17) pavement accumulations in the sediments very high  
 (18) concentration and it s a typical occurrence for spilled oil  
 (19) that impacts a shoreline  
 (20) In addition to that the analytical results indicate that  
 (21) it s definitely a crude oil origin  
 (22) Q Now is there a way that when you examine the way the oil  
 (23) is on the shoreline does the way that it appears - the stain  
 (24) of it spatter of it things like that - provide you with  
 (25) information as to whether it s from the - from an oil spill?

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- (1) A Well yes Obviously we have differences because we have  
 (2) material that moves on the beach like a mousse form and liquid  
 (3) oil form as we discussed earlier but clearly we have sediments  
 (4) that have been saturated with pore space between those grains  
 (5) is filled with grain and water oil mixture  
 (6) It s been impacted by a high concentrate of material  
 (7) on the beach as opposed to lining staining or simple  
 (8) discoloration  
 (9) Q Now did you make all of this work with the laboratory and  
 (10) so forth part of your report?  
 (11) A Yes we did  
 (12) Q And you would turn those reports over to me and counsel for  
 (13) Exxon is that right?  
 (14) A That s correct  
 (15) Q Now are you familiar with a term called the joint survey  
 (16) teams the joint beach survey teams?  
 (17) A I am  
 (18) Q And what were the joint beach surveys?  
 (19) A Well the joint surveys were conducted with the  
 (20) participation of the Alaska Department of Environmental  
 (21) Conservation United States Coast Guard Exxon and where  
 (22) appropriate land - private landowners to investigate  
 (23) conditions of the shorelines for determining treatment  
 (24) cleanup  
 (25) Q Now was that the purpose of the joint surveys to determine

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- (1) where treatment should take place and what treatment would be appropriate?
- (2) appropriate?
- (3) A The - that's my understanding yes. The teams in fact were named for example SCAT would be Shoreline Cleanup Advisory Team that sort of thing. Their principal focus in the field was to determine what kind of response was needed for those shorelines.
- (4) Q Now if I were to say to you as a proposition that the joint beach survey teams were the most reliable way of determining persistence of oil on the beaches would you agree with that statement or would you disagree?
- (5) A I would disagree.
- (6) Q Why?
- (7) A Well it wasn't the purpose of the field program. They were out there to determine whether or not shorelines should be recommended for additional clean up activity and that's not the same thing as investigating or - for the purposes of its environmental recovery.
- (8) Q Do you have an opinion as to whether oil persisted after 1992?
- (9) A Yes.
- (10) Q What is that opinion?
- (11) A Well it has persisted.
- (12) Q Are you sure?
- (13) A Yes.

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- (1) Q And did you attempt to actually estimate how long the oil would persist as we defined the term in Prince William Sound and Kodiak?
- (2) A Yes we did.
- (3) Q And then were your estimates of this persistence turned over to Dr. Mundy who is the land damage appraiser?
- (4) A Yes they were.
- (5) Q In your opinion did your estimates as given to Dr. Mundy overestimate or underestimate the total impact of the oil spill?
- (6) A In my opinion our estimates did not take into account all of the impact from the oil spill and as a result we underestimated the total impact.
- (7) Q Why?
- (8) A Well there are a number of - number of answers to that. Specifically Dr. Mundy had certain criteria to which we were to adhere to make our projections. In addition the predictions were based principally on or were to be focused on the notion of land damages in that area and as a result for example we did not include some estimates of sixty years for recovery of the bird population or a longer time maybe for certain rock fish recoveries. We did not include population age class density and certain aspects like that which we felt based on his criteria would not have a - would not be a significant component to recovery to satisfy his criteria.

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- (1) Now there are some exceptions. For example clams in the shorelines obviously a landowner would be concerned about the clam makeup how many adults and large ones there are so some things we did include but by and large we did not include the long term biological effects.
- (2) Q In the information you turned over to Dr. Mundy?
- (3) A That's correct.
- (4) Q Now let's go back to some of the reasons why you believe that the beach surveys are not the most accurate determiner of persistence of oil for purposes of assessing damage. And to do that I'd like to show you again a photograph of a swash bar if I could.
- (5) MR. PETUMENOS See if this thing works. My career as a grocery clerk is about over. I'm sorry counsel I'm showing him Exhibit 1147 12.
- (6) MR. OPPENHEIMER Is this admitted?
- (7) MR. PETUMENOS I don't know if it is or not. This is an ICF photograph?
- (8) A Yes it is. I took this photograph.
- (9) MR. PETUMENOS Doesn't mean it's admitted yet though. Would you prefer that I -
- (10) MR. OPPENHEIMER No we have no objection to your showing this photograph.
- (11) BY MR. PETUMENOS
- (12) Q Showing you Exhibit 1147 which is a photograph that you

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- (1) took what does it depict?
- (2) A If you could shift it all the way to the left I think it would be a little more - get the entire edge. Okay that's as far as it goes. Could we refer back to the board exhibit that shows the oil slick moving on the shoreline?
- (3) Q Sure.
- (4) A You can leave the photograph up on the screen. I wanted to have both available at the same time.
- (5) Q Yeah I didn't ask -
- (6) A Okay. Remember the little sand dune that I drew on the shoreline that's a small sand body that's movable by waves at energies that are not enough to move the large coarse surface. When this photograph to give you some idea of the size and how realistic these things are. The individual in the photograph Chris Newbill was one of our team members in 1992.
- (7) His right foot is on a lower older surface which is stabilized by coarse rock. And although it's not easily seen in this illustration there is a very coarse surface and then his left foot the bent knee and the foot is on the top of a swash bar. The steep face faces upshore. The gradual slope back of this in this underwater sand dune extends seaward. Now that swash bar is shaped like a traditional sand dune and is made up though of pebble sized rocks ping pong ball and that sort of thing. So you see we have fairly coarse material being moved by wave action.

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- (1) This location we attempted to determine the amount of oil  
 (2) on the beach and obviously raise the notion that this sandbar  
 (3) could conceal oil and that was determined later by an  
 (4) investigation by NOAA that in fact there was oil beneath the  
 (5) sandbar pebble bar  
 (6) Q All right And how far does that swash bar extend across  
 (7) the beach?  
 (8) A I don't recall measuring at the time It's probably about  
 (9) 35 to 40 yards tip to tip and then landward and seaward  
 (10) direction perhaps 15 maybe 20 It's difficult to tell where  
 (11) the thin end of it thin edge the water edge actually  
 (12) terminates  
 (13) Q Showing you next what's been marked as 1147 13 what is  
 (14) 1147 137  
 (15) A This is a photograph of a similar feature in the vicinity  
 (16) of our transect on east Chenega Island There are a large  
 (17) number of things to - to see in this photograph I'll try not  
 (18) to spend too much time on it but obviously we can look at the  
 (19) yellow area in the center  
 (20) Q This is on the Elmo?  
 (21) A Maybe I should come down  
 (22) Q Do you have that - did I take that back from you? Here we  
 (23) go  
 (24) MR PETUMENOS I want the other photograph we had up  
 (25) before Thank you

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- (1) A This gray shape is a swash bar of fairly large extent The  
 (2) size of a helicopter would be about like that in this  
 (3) illustration This is a big guy We have a stream that  
 (4) drains and you're looking now at low tide At low tide the  
 (5) stream brings a significant amount of sediment down its course  
 (6) particularly after the storm when it's really ripped and  
 (7) deposits the sediment here at the water interface  
 (8) Now as the tide rises particularly in a day with storm  
 (9) action or waves substantial wind anyway the storms and wave  
 (10) action will mobilize this sediment and bring it back up along  
 (11) the face of this bar It's a gradually sloping feature from  
 (12) this end to here with a very steep face right here so material  
 (13) moves along the bar and is deposited down this face So the  
 (14) whole structure migrates landward and some extent down the  
 (15) shore depending on the extent the waves type and the waves  
 (16) are interacting with the shoreline  
 (17) Behind this bar and the face is about three feet in  
 (18) height We have a large bed of fucus This is a protected or  
 (19) sheltered environment in here based on the rest of the area  
 (20) that we see out here We have a smaller less well developed  
 (21) bar on this side as well this area  
 (22) Our transect was completed across this portion  
 (23) Q I think your angle on the point is so acute that we're not  
 (24) getting a good dot There it is?  
 (25) A Our transect was completed in this vicinity

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- (1) Q Can't see it?  
 (2) A Can't see it?  
 (3) Q Come over to this side Mr Bush  
 (4) MR STOLL He can put it not on the Elmo but on the  
 (5) screen and he could use the light pen  
 (6) MR PETUMENOS Oh you have this one on disk? All  
 (7) right let's bring it up on disk Oh yeah  
 (8) A Okay I think this will work  
 (9) BY MR PETUMENOS  
 (10) Q The color is the second one from the left on the bottom  
 (11) You knew this back at the office Jim  
 (12) A There we go That's the approximate location of our  
 (13) transect Then you can see in the same vicinity I just want  
 (14) to get back to the arrow I guess There's a bar right through  
 (15) here This bar that's shown up in red in the little green  
 (16) square is a much smaller feature that shows up on our transect  
 (17) and it's a small scale version of the very large bar that we  
 (18) see down here  
 (19) The red shading indicates - the dark red shading here  
 (20) this vicinity indicates the steep face of the swash bar The  
 (21) pink area of course is the fucus that is sheltered or lives  
 (22) in a separate environment behind that bar Every storm that  
 (23) moves this bar forward buries fucus that was in front of it so  
 (24) the ratio of fine grained material that's in these shorelines  
 (25) is significant The fact of how well it can preserve or

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- (1) disrupt these local sensitive niches where fucus and materials  
 (2) like that can survive This shoreline is mapped as continual  
 (3) single type of shoreline in NOAA documents but we see right  
 (4) along the same thing we have sheltered areas areas more  
 (5) exposed So again it's not a perfect process  
 (6) Q How does this then to summarize relate to the  
 (7) persistence of oil? What does it do to keep - what does it  
 (8) tell us about how oil persists in the - on the beaches in the  
 (9) nearshore environment?  
 (10) A The vicinity of our transect the - the oiling was - my  
 (11) recollection is vague I believe it was lightly to moderately  
 (12) oiled in that area but the oil did occur in front of that  
 (13) swash bar which is in the little window along our transect  
 (14) line which is red  
 (15) When we returned in 1992 that bar had migrated forward  
 (16) just enough to bury the oil that we were attempting to sample  
 (17) and we were unable to dig completely through the swash bar  
 (18) face  
 (19) to get down to the same oil horizon that we sampled in '89  
 (20) The key functional word here is to get to the same horizon the  
 (21) same level of sediment that was oiled in 1989 If one would  
 (22) take a series of samples in the lower half of transect you're  
 (23) sampling brand new material new surface not the same  
 (24) surface  
 (25) in 1989 and those results would not represent the persistence  
 of oil if you were able to sample the oil surface if the oil  
 was preserved underneath the swash bar

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- (1) Between 1989 three years went by it's possible the area  
 (2) was eroded scoured redeposited the swash bar built again on  
 (3) top of that so that the oil would be gone Problem is you  
 (4) can't tell the difference unless you go out there and dig some  
 (5) really deep pits and major excavation of the shoreline  
 (6) Q Now this swash bar then could - over time could it  
 (7) become removed again and expose the oil again?  
 (8) A Yes  
 (9) Q And then what would happen to the oil that was buried?  
 (10) A It would be exposed to the surface In that case the  
 (11) original 1989 surface is back on the present day surface the  
 (12) day of the investigation and it's exposed to the environment  
 (13) again  
 (14) Q Are we finished with this photograph?  
 (15) A Yes  
 (16) Q Could I have plaintiffs 1147 14 please? The location of  
 (17) this one again where the stream was  
 (18) A East shore of Chenega Island  
 (19) Q All right And what do we show in 1147 14?  
 (20) A This is another example See we have a pebble cobble  
 (21) surface with a finer grain material drape or apron of fine  
 (22) sediment over the top of it the fine sediment extending from  
 (23) the grassy area towards the plane the tip of the plane and  
 (24) back up So this is a fine layer a thin layer that's  
 (25) deposited on top of an otherwise fairly stable surface You

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- (1) can see that the cobbly area reoccurs down here in the distance  
 (2) in the view of the photograph  
 (3) Q What is the significance of a fine grain apron like this to  
 (4) the accuracy of beach surveys?  
 (5) A In the case of a rapid survey certainly the case of a  
 (6) helicopter survey or flyover something like that oil that's  
 (7) being mapped on the shoreline might well go missed because  
 (8) there's a thin layer of sediment which might only be two or  
 (9) three inches thick draped over this otherwise pebble cobble  
 (10) beach  
 (11) MR PETUMENOS Judge this would be a good time for a  
 (12) break  
 (13) THE COURT Okay  
 (14) THE CLERK Please rise this court stands in recess  
 (15) (Jury out at 9 50 a m )  
 (16) (Recess from 9 50 a m to 10 57 a m )  
 (17) (Jury in at 10 07 a m )  
 (18) THE CLERK Please rise This court now resumes its  
 (19) session  
 (20) Please be seated  
 (21) BY MR PETUMENOS  
 (22) Q Mr Bush I would like you to if you can go follow  
 (23) through with me the history of a place called Beauty Bay  
 (24) First of all we have Beauty Bay here on Exhibit 1165 and  
 (25) the little red square where you did your transect work on the

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- (1) map and if you would show on the map that's on the Barco  
 (2) screen where Beauty Bay is located  
 (3) A Yes Beauty Bay is -  
 (4) Q Put your color on first  
 (5) A Yeah It's this bay right there I've drawn through it  
 (6) but that's the location of the bay  
 (7) Q Judge and Members of the Jury will be able to find that  
 (8) square on this map as well and see where we were talking  
 (9) about  
 (10) And could you put on the screen please 1147 55  
 (11) And how often did you get over to Beauty Bay in the course  
 (12) of your work?  
 (13) A Well we studied Beauty Bay in 1989 and in 1992 I believe  
 (14) I visited again in 1993 I'm not positive of that but each of  
 (15) those years we went out there just one time Sometimes we  
 (16) were there two or three times In each of those years  
 (17) Q Now put your color on if you would and tell us what the  
 (18) jury is first seeing about the beach at Beauty Bay describe it  
 (19) for me  
 (20) A The Beauty Bay beach is a mixed sand and gravel beach  
 (21) and  
 (22) if we look closely - I've drawn - we can see kind of the  
 (23) swash bar  
 (24) MR OPPENHEIMER Your Honor if I could we have no  
 (25) objection to showing in this way without the normal rules  
 involved but could we get - could we have a protocol where

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- (1) we've got a date for the photograph?  
 (2) THE COURT Sure  
 (3) A This photograph was taken during our 1992 field season  
 (4) I've drawn the swash bars and the area between Again this is  
 (5) a pebbly to small cobble surface This is a finer grain than  
 (6) with the coarse sand surface on top The area between the red  
 (7) line and green line represents the slip face of the swash bar  
 (8) Q What do you mean by slip face?  
 (9) A Slip face is the direction the bar is migrating It's the  
 (10) direction - for example if we move - change the colors wave  
 (11) action is moving in this direction then we'll have small  
 (12) particles of sand move up the back of the swash bar and slip  
 (13) over the face on the front This portion from here to here is  
 (14) low slope nearly flat This portion here is much steeper  
 (15) Q All right  
 (16) A So we have again a surface of the beach that was oiled  
 (17) This boulder surface was oiled in 1989 Then we have some  
 (18) more  
 (19) recent features these swash bars which migrate across that  
 (20) surface intermittently depending on storm direction wave  
 (21) activity and that sort of thing  
 (22) Q And what's the significance of our - what was the  
 (23) significance to your investigation of what you saw here on the  
 (24) beach?  
 (25) A At this location we visited several times and identified  
 oil around the margins of these swash bars that was repeatedly

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- (1) being covered and exposed  
 (2) Q Showing you next what s been marked as 1147 56 which is a  
 (3) westbound photograph of Beauty Bay coming up again here in  
 a  
 (4) minute  
 (5) MR OPPENHEIMER Again could we have the date?  
 (6) MR PETUMENOS As soon as he sees it we ll have him  
 (7) tell us what the date is  
 (8) BY MR PETUMENOS  
 (9) Q Now when was this photograph taken?  
 (10) A 1992 as well This is the same vicinity shown again from  
 (11) a different direction The tape line that we see here  
 (12) represents a line that moves laterally off our transect as we  
 (13) sampled various areas marginal to our transect along its  
 (14) width The transects were up to ten meters wide and at each  
 (15) of these locations sample jars that are here here by each of  
 (16) these markers that we put on the shoreline we found oil all at  
 (17) the edge of the swash bars  
 (18) Q And how did you find it?  
 (19) A My recollection is that we found the material in the second  
 (20) or third visit to the site The site was visited prior to us  
 (21) actually conducting a transect or profile measurements by  
 (22) Dr Bakus and Larry Thebeau and on their visit they found no  
 (23) oil When we returned to do the transect and detailed study  
 (24) we found oil along this location these locations  
 (25) Q Showing you next what s been marked as 1147 57 was this

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- (1) taken at the same time?  
 (2) A Yes This is a closeup You may recognize the -- the red  
 (3) crate that was in the other photograph This is a good sample  
 (4) to show you how subtle some of the residual oil can be in the  
 (5) surface This is an example of a tar mat and I ll outline  
 (6) that Actually I m cutting part of it off but this is the  
 (7) obvious portion And the material on to the right as you re  
 (8) viewing it including this material that s in here and all the  
 (9) material you see out here is oil impregnated sediment not  
 (10) unlike what was in some of the jars  
 (11) These are not particularly highly concentrated samples but  
 (12) it s an example of how the sedimentary makeup the same stuff  
 (13) that we see out here and everyplace else gets incorporated in  
 (14) the surface of the oiled sediment rocks like this and these  
 (15) and then the sandy material itself we see here here and  
 (16) elsewhere that disguises or hides or conceals it so the  
 (17) sediment becomes armored in a sense I mean the oil rather  
 (18) becomes armored with sediment such that it looks like the  
 (19) sediment surface It s difficult to see At the same time  
 (20) it s also strengthened by a set of armor  
 (21) Q You say it s strengthened How is it strengthened?  
 (22) A If you look at the surface along the blue line actually  
 (23) there s a little bit of relief It stands up against the rest  
 (24) of the sedimentary area So the places where waves wash this  
 (25) frequently it ll actually wash the loose sediment which

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- (1) occurs in this area away and leaves you a small raised edge  
 (2) which an untrained eye might not pick up  
 (3) In this area we can see the edge -- doesn t show up as  
 (4) well it s partially obscured but here -- I ll stay with the  
 (5) same color -- but here it s fairly clear fairly well  
 (6) developed  
 (7) Q Now is the -- are the little grains and so forth are they  
 (8) being held together by oil?  
 (9) A Yes It works as an adhesive or it binds them together  
 (10) It s not Super Glue don t misunderstand me here but it does  
 (11) provide some strength to this and allows this mat or this  
 (12) impregnated sediment to stay in place relative to the other  
 (13) looser sediments that are around  
 (14) Q Now we understand something about how oil gets on  
 beaches  
 (15) and how it stays there I want to talk to you now about what  
 (16) you did to come up with your estimates of persistence  
 (17) beginning with your overall fieldwork  
 (18) We ve looked at the maps of the transects that you did  
 (19) Let s take for example 1164 which is -- shows it pretty  
 (20) well Each square being a transect that you owe created?  
 (21) A Actually -- pardon me some of the squares are sites other  
 (22) than transects as well  
 (23) Q Transects special investigation sites?  
 (24) A And other locations  
 (25) Q All right Describe to the jury what process you went by

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- (1) to estimate the persistence?  
 (2) A Well you know we ve done a large number of things I  
 (3) don t know that I can recount every step of the process here  
 (4) but basically we separated the area into three regions The  
 (5) Prince William Sound region region one region two being the  
 (6) Kenai Fiords the lower Kenai Peninsula around up the end of  
 (7) the Kenai Peninsula Homer area approximately Kachemak  
 Bay  
 (8) and region three then consists of the Kodiak area Kodiak  
 (9) Island Archipelago and the Shelikof Straits shorelines as well  
 (10) as lower along the Alaska Peninsula  
 (11) We asked those areas separately and in fact eventually  
 (12) changed our opinion on this combined but initially we looked  
 (13) at them individually assuming the oil would have different  
 (14) characteristics as it impacted those shorelines the  
 (15) persistences and accumulations would be different Obviously  
 (16) Prince William Sound would have more oil less as you move  
 (17) farther away  
 (18) In addition to that we examined some of the aspects of  
 (19) biological recovery Larry Thebeau is an oil spill biologist  
 (20) and worked on our team and he was primarily responsible for  
 (21) those activities  
 (22) As we did this we compared other oil spills and compared  
 (23) the results and recovery times of other oil spills eventually  
 (24) merging all this data and generating a set of curves for  
 (25) recovery of impacted shorelines

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- (1) Q All right Let s go next then to exhibit 1284 and describe  
 (2) in detail what we did what you did with respect to the  
 (3) transects Did that go?  
 (4) Now this is a complex looking thing here but I think we  
 (5) can blow it up so that we can break it down into parts Where  
 (6) was this exhibit 1284? What transect does it represent?  
 (7) A This is the Beauty Bay transect which is about halfway  
 (8) down the Kenai Fiords to the end of the Kenai Peninsula  
 (9) Q It s the same one we looked at just a moment ago  
 (10) A That s correct And the same location samples were  
 (11) collected  
 (12) Q All right Let s start if we can with what - in  
 (13) general what kind of a view we re getting of this transect  
 (14) A Well this transect represents two components of the work  
 (15) we did for those persistence estimates we were talking about  
 (16) It focuses largely on the sedimentary makeup and persistence of  
 (17) oil in the sedimentary residues and you re looking at a  
 (18) complex diagram here I think I m going to need - great  
 (19) let s use the three ring binder here to help illustrate this  
 (20) Q Now it s time  
 (21) A Do you have a marker? Could I use a marker for this as  
 (22) well? Thank you  
 (23) In the lower portion of this drawing - and we ll not blow  
 (24) it up now keep it altogether for you at this point - but  
 (25) we re going to go over it in more detail

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- (1) The lower portion of this illustration represents the two  
 (2) surfaces that we examined in 1989 and in 1992 And in 1989  
 (3) the surface follows the line that has the sand little round  
 (4) spots sand and gravel drawn along it When we returned in  
 (5) 1992 the surface follows a different line which you can see  
 (6) drapes beneath the old surface and extends beneath it in this  
 (7) direction Note that the tides were different during this  
 (8) time so our extent of coverage was great on this side in 92  
 (9) than it was in 89 and different on this side although closely  
 (10) the same as well  
 (11) So this portion of this drawing is a cross section or as  
 (12) though you were standing in a trench in the beach looking at  
 (13) the trench wall These portions above that represent plan  
 (14) views or an aerial view of the transect line  
 (15) Q Okay looking down on it In other words?  
 (16) A That s correct So the plan view here and here is the view  
 (17) you receive of the profile That s the line down the transect  
 (18) from a helicopter  
 (19) This view - I m going to switch colors - in this vicinity  
 (20) is the cross section view Now you ll notice that we have some  
 (21) dotted lines that run between these views This one in  
 (22) particular denotes the elevation of the mean high tide line at  
 (23) this site What we have is the ability to go from plan view to  
 (24) cross section view and project information back and forth  
 (25) between the two views

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- (1) I want to show you how we create a drawing that does that  
 (2) I m going to mark on your three ring binder here Let s assume  
 (3) that this drawing on the face - or the back rather of the  
 (4) three ring binder represents the lower portion of the  
 (5) illustration the cross section part If you re in a  
 (6) helicopter - you re standing in a trench you re in a trench  
 (7) now looking at the face of the trench If you re above this in  
 (8) a helicopter looking at the plan view all you could see is  
 (9) this line  
 (10) So if we take this line and the characteristics of this  
 (11) line and plot them - excuse me offset from the view and then  
 (12) fold the view up so you can see them together you have the  
 (13) illustration that you re looking at on the screen So we ve  
 (14) taken this aerial view of the cross section offset a little  
 (15) bit drawn it on a piece of paper and just folded it up so you  
 (16) can see them altogether  
 (17) Q So In other words this is the - the other two the  
 (18) surface as you would be looking down on it and as a geologist  
 (19) you figured out what it looks like underneath the grounds with  
 (20) the other view?  
 (21) A In the subsurface by drawing by constructing our profile  
 (22) through the transect  
 (23) Q So this is a -  
 (24) A I m not quite finished Any information we find on this  
 (25) part in the cross section view projects up to the surface

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- (1) point which we ve offset for the purposes of the drawing So  
 (2) if we saw oil in this vicinity of the transect we could project  
 (3) that up to here This lower line is the 92 plan view and the  
 (4) upper one is what we saw in 1989 and you can compare them  
 (5) all  
 (6) in the same illustration  
 (7) Q Now this was a very detailed examination of the beach am  
 (8) I right?  
 (9) A That is correct it was  
 (10) Q Let s if we can take a look at the legend I ll do that  
 (11) one more time The little circles that you ve drawn down on  
 (12) the plan view are they actually to scale?  
 (13) A Yes the - in the cross section view what we ve drawn in  
 (14) the cross section view  
 (15) Q I m sorry the cross sectional?  
 (16) A Yes they re drawn to scale In other words we estimate  
 (17) the sizes on an average basis across that profile and have  
 (18) transferred that information to this illustration You can see  
 (19) we ve separated into boulders cobbles pebbles and granules  
 (20) for this clastic or sedimentary type beach So the dots you  
 (21) see on that cross section not only represent the right size  
 (22) they also represent the right shape You see angularity along  
 (23) the bottom angularity here illustrated by the shape of the  
 (24) clasts size By this information and if they re massive rock  
 (25) if it s fractured we see that here and here  
 (26) Q So did you do this so that you can have a very thorough

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- (1) understanding of how this particular beach worked so that you  
 (2) could understand how oil would stay on it how water would  
 (3) change it how storms would change it so forth?  
 (4) A Yes As I said earlier these beaches don t always  
 (5) cooperate with me either but that was the objective of doing  
 (6) this detailed size analysis yes  
 (7) Q All right Now I wonder if you could take the plan view  
 (8) - I mean the cross section view of this thing and show the  
 (9) jury with a drawing of what your transect person would do what  
 (10) he would physically do to make - to determine what the  
 changes  
 (11) were to the beach over time?  
 (12) A To - to measure the profile and that s the shape of the  
 (13) surface again it s the cross section profile we would use -  
 (14) took a team took two people and basically we would measure  
 (15) the changes in elevation I ll draw a person here And a  
 (16) second person standing - whoops we ll have two legs two  
 (17) arms give him a head he ll hold a stake here a survey stake  
 (18) and this person will sight through what we ll call a transect  
 (19) sighting device and he will sight from one person to the other  
 (20) along the green line to determine the elevation at a subsequent  
 (21) point And by taking stepped measurements across the  
 surface  
 (22) we would record the changes in elevation and thereby record  
 the  
 (23) changes in the profile surface Again this gentleman is  
 (24) standing on the 1989 surface as is this fellow over here  
 (25) In 92 he would have been standing on this surface because

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- (1) it had eroded eroded in this area where we had deposition or  
 (2) new material deposited in this section  
 (3) Q Okay split the screen please and have photo 55  
 (4) plaintiffs 553 Okay And what are these Exhibits 553 and  
 (5) 554?  
 (6) A Good -  
 (7) Q Could you tell the jury what we see here?  
 (8) A Yes these are examples of exactly what I ve just described  
 (9) to you Can I get this - yeah I can  
 (10) Q I think you can I m not sure you can  
 (11) A Here s the individual Here s the individual He s making  
 (12) a sight It s not working too well Anyway you can see he s  
 (13) sighting across - there we go - to the gentleman holding the  
 (14) stake I - in fact this is a picture of me I m the one  
 (15) that s doing the sighting in this case  
 (16) This was a different location taken in 1992 and it s a  
 (17) survey of the beach surface I believe it s upper - upper  
 (18) portion of the transect at Point Helen In the upper diagram  
 (19) it s a sampling grid along a transect and within this meter  
 (20) square sampling subgrid subdivided as shown - meter square  
 (21) grid subdivided as shown we made recordation of biological  
 (22) observations and oil  
 (23) Q All right Could we have exhibit 1284 back then please?  
 (24) Now after you determine where the sediment moved and  
 where  
 (25) the oils - where the beach moved over the years did you then

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- (1) investigate the initial reports of oil in 1989 to determine if  
 (2) you looked down on the beach in the same place where the oil  
 (3) was found in 1989 whether you could still find it in later  
 (4) years?  
 (5) A Yes we did  
 (6) Q All right As soon as this transect comes back up  
 (7) we ll -  
 (8) MR PETUMENOS Are you getting 1284 for me?  
 (9) MR OPPENHEIMER Counsel 1284?  
 (10) MR PETUMENOS Right  
 (11) BY MR PETUMENOS  
 (12) Q We re going to take your transect now and bring it back up  
 (13) and I m going to ask you to show the jury -  
 (14) A As a point of clarification here the photograph 554 was in  
 (15) a 1989 photograph It s a different location Beauty Bay  
 (16) Q Those photographs are just to show the jury how the process  
 (17) works with the stake and the instruments and so forth?  
 (18) A That s correct  
 (19) Q Now using the 1989 plan view which is looking at the  
 (20) surface of the map you knew where oil was observed in 1989  
 and  
 (21) you mapped it on - you mapped it carefully am I right?  
 (22) A That s correct  
 (23) Q Better than he is on that one  
 (24) Okay so to -  
 (25) MR PETUMENOS You won t believe this Your Honor

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- (1) I ve dropped the light pen  
 (2) BY MR PETUMENOS  
 (3) Q Could you take the enlargement the blowup please with  
 (4) your pen from here say to here for the jury?  
 (5) A Show me again  
 (6) Q I want to go from the 1989 plan view through the bottom of  
 (7) the chart if we could  
 (8) A Sure  
 (9) Q Just lift it up  
 (10) A Okay  
 (11) Q Now was there a spot in the 1989 surface that you knew  
 (12) there was oil?  
 (13) A Yes there was If we look at the - and remember again  
 (14) these - the two upper portions here are just folded views of  
 (15) the top of the profile If you look at the line that refers to  
 (16) 1992 - that s this one- and we also look at 1989 - this one  
 (17) - we can see that there is a band across here a bar drawn  
 (18) across the top across the profile line that indicates surface  
 (19) oil scattered tar mat with certain numbers that relate to  
 (20) composition and concentration  
 (21) So we had an area across the transect that extended from  
 (22) here in a cross section view projecting down from the plan  
 (23) views to here that had scattered occurrences of this tar mat or  
 (24) asphalt pavement We specifically had some that were located  
 (25) along this point of the transect

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- (1) Now this small bump you see here - and in 1989 I believe
- (2) it was slightly lower down the beach in this vicinity - is
- (3) the location on the profile where we saw the swash bars that I
- (4) drew and outlined with you earlier with the crates along the
- (5) margins of them So this little bump very small in our
- (6) transect represents the thin covering of fine grain sediment
- (7) that occurred along this pebbly surface which I m going to
- (8) draw in green here
- (9) Now notice from 1989 to 92 how close the two lines fall
- (10) across that green area the pebble surface That represents -
- (11) we see it over here as well - that represents a more stable
- (12) surface on the beach with the fine grain material migrating
- (13) across the top
- (14) Q Let me stop you there So that I understand there is a
- (15) line underneath here that was 1989 and right above it another
- (16) line that was 1992?
- (17) A That s correct I m not sure where you are on the
- (18) cross section but both 1989 and 1992 surfaces are shown on
- (19) this cross section view
- (20) Q And they re different?
- (21) A And they are different that s correct One of the
- (22) differences represents this little red area right here where
- (23) the swash bar migrated across the pebble cobble surface and
- (24) that s approximately where we found the oil being concealed
- (25) and
- (25) revealed upon - with different visits

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- (1) Q Up on the 1989 plan view then could you show the jury
- (2) where the oil was in 89?
- (3) A Yes it s at the same location essentially
- (4) Q Go to - that s 92 go to 89 first
- (5) A Yes We have samples collected in both years because that
- (6) was part of the study but this entire band across here in 89
- (7) as well as in 92 contained scattered tar mat They were
- (8) substantially less in 92 with the area of coverage and the
- (9) approximate locations were the same
- (10) Q Now would a person walking across the beach in 1992 - say
- (11) right in this area where I m pointing now - would a person
- (12) walking across the beach right there would he be able to see
- (13) oil with his eyes?
- (14) A Unless he were trained probably not
- (15) Q Now you have broken down for us a transect in very careful
- (16) detail Based upon your experience in Prince William Sound
- (17) and
- (17) your experience as a geologist was this an atypical scenario
- (18) for that area or would this be happening all over the area?
- (19) A It is not a -
- (20) MR OPPENHEIMER Excuse me Your Honor foundational
- (21) objection to that question
- (22) MR PETUMENOS I m asking for the opinion on one of
- (23) the ultimate questions I think I m entitled
- (24) THE COURT Counsel is asking for the foundation of
- (25) the opinion

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- (1) BY MR PETUMENOS
- (2) Q Based upon all that you studied all the transects you
- (3) conducted all that you read your study of other oil spills
- (4) and your familiarity with Prince William Sound lower Kenai and
- (5) Kodiak areas is the sort of phenomenon that you are describing
- (6) with this transect is this an example of what is going on in
- (7) the area or is this a unique circumstance?
- (8) MR OPPENHEIMER Your Honor there - the area that s
- (9) just been described contains by almost everyone s
- (10) approximation 9 000 square miles of shoreline I don t think
- (11) this witness has any testified yet as to what part of that he s
- (12) looked at and this is asking - unless I misunderstand the
- (13) question in which case I would withdraw the objection - for
- (14) an extrapolation from this one transect to I believe that
- (15) entire area which I think there s no foundation for
- (16) THE COURT So you re asking for a foundation to show
- (17) what - the depth and breadth of the investigation he s done?
- (18) MR OPPENHEIMER Yes Your Honor
- (19) MR PETUMENOS I believe we have shown the transects
- (20) where they are the samples We ve mapped them
- (21) THE COURT The objection s overruled
- (22) BY MR PETUMENOS
- (23) Q Do you remember the question?
- (24) A I believe so I think I can answer it
- (25) This is a type of a type of beach a type of shoreline

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- (1) It s a sand and gravel beach At this kind of event it s very
- (2) common for that type of beach that type of shoreline - and
- (3) those types of shorelines occur throughout the impacted area -
- (4) so yes it s typical of the impacted area for this shoreline
- (5) type
- (6) Q So based upon your transect investigation for all of the
- (7) transects that you conducted what conclusions did you draw
- (8) based upon the transect sites?
- (9) A Based upon the transect studies themselves?
- (10) Q Yes
- (11) A I don t know that we had any conclusions that were confined
- (12) to only the transect studies but the transect studies did
- (13) reveal for us that for certain portions of time and certain
- (14) shoreline types after the oil spill it became more difficult
- (15) to locate oil and the oil was generally more concealed than
- (16) earlier on in 1989 the first year of the oil spill
- (17) Q Let s turn then to the special investigation that you
- (18) conducted that we described also on one of these maps and I
- (19) think we re finished with that simple exhibit there
- (20) The special investigation site in Prince William Sound
- (21) where was that located?
- (22) A On the northeast end of LaTouche Island that s correct
- (23) Q We ve heard of a place called Sleepy Bay Is this near
- (24) Sleepy Bay?
- (25) A It s not in Sleepy Bay It s a mile or so away from Sleepy

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- (1) Bay proper It s at the northern extent or tip of Sleepy Bay  
 (2) and around the outside of the island outside of the bay  
 (3) Q When did you conduct the special investigation?  
 (4) A In 1992 fall  
 (5) Q What was the purpose of it?  
 (6) A The purpose of that investigation was to try to get some  
 (7) feel for the effectiveness of treatment processes that had been  
 (8) conducted on the shorelines to what extent oil was removed  
 (9) from the surface and the subsurface  
 (10) Q Why would you want to do that?  
 (11) A Because many of the transect sites we studied were heavily  
 (12) treated They were treated after we studied them and some  
 (13) were treated before we studied them So we have a mixture of data  
 (14) going into our analysis of the oil spill and its persistence  
 (15) As a result we needed to have some more site specific  
 (16) information about treatment its effects how well it worked  
 (17) specifically on clastic beaches  
 (18) Q Now what did you understand were the kinds of treatment  
 (19) that had been conducted on beaches when you went out and  
 (20) conducted the special investigation?  
 (21) A There was a large variety of treatments that had been  
 (22) conducted We were principally interested in comparing similar  
 (23) beaches that had no treatment whatsoever mechanical  
 (24) treatment  
 (25) simple hot water or high pressure wash and manual wiping and  
 (26) swabbing There were other treatments but we focused

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- (1) principally on those  
 (2) Q Now when you talk about treatment with heavy equipment  
 (3) what kind of treatment are you describing?  
 (4) A The heavy mechanical disruption of the berms were using  
 (5) small equipment or moderate size equipment backhoes  
 (6) bobcats  
 (7) this type of stuff to rework the location and rework the  
 (8) sediments mechanically and treat them and rework across the  
 (9) beach surface  
 (10) Q How did you go about studying the distribution of oil  
 (11) throughout the beaches?  
 (12) A We compared five sites or five locations on the northern  
 (13) end of LaTouche Island We wanted similar beach types  
 (14) similar environments We wanted similar degrees of oiling similar  
 (15) degrees of exposure and similar makeup of composition of the  
 (16) beach You have to have all of these things be fairly  
 (17) similar to make a valid comparison between sites They  
 (18) weren t perfect They weren t perfectly similar but it was  
 (19) close We did have heavy oiling across the sites Fairly  
 (20) similar orientation fairly similar levels of exposure in oil  
 (21) and makeup  
 (22) Q Showing you next what s been marked as Exhibit 1155 did  
 (23) you prepare an exhibit to help describe what - what you  
 (24) learned from this investigation?  
 (25) A Yes  
 (26) Q And you ve named this simplified schematic illustrating the

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- (1) typical distribution of residual oil Let s go through what we  
 (2) have here  
 (3) A Well I think the title is pretty appropriate for this  
 (4) guy He s - it simplifies a lot of factors and makes a lot of  
 (5) generalizations but it conveys I think the general notion I  
 (6) think of what s going on in these situations The portion to  
 (7) the left - actually I ll just blow it up We ll look at the  
 (8) first one  
 (9) It represents a protected or unclean portion of the  
 (10) sedimentary or clastic beach You see that the oil has  
 (11) penetrated to some depth depending on permeability and  
 (12) nature  
 (13) and viscosity of the oil We have coarser grained material  
 (14) across the surface We have a variety of creatures that have  
 (15) been drawn here for basically informative but nothing specific  
 (16) and - and two different occurrences of the oil We have a  
 (17) subsurface occurrence which is shown in the lighter brown and  
 (18) we have surface fragments or highly impregnated or  
 (19) concentration zones that s occur across the surface  
 (20) Q What are these two little guys I m pointing to right here?  
 (21) A For certain types of beaches like this we can have clams  
 (22) that persist Obviously the very high energy ones the clams  
 (23) are not apparent - present rather but it depends on the  
 (24) environment and in these cases most of the biota are killed  
 (25) because of the high concentrations of oil  
 (26) Q All right Now what s the next phase of the exhibit that

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- (1) you can show us?  
 (2) A This one represents the condition where the shoreline has  
 (3) experienced moderate - is experiencing either moderate  
 (4) exposure washing or minor mechanical that is a shallow depth  
 (5) mechanical cleaning or a complete across the entire shoreline  
 (6) segment You can see we have some persistence of some of  
 (7) the  
 (8) buried oil because cleaning or wave working did not penetrate  
 (9) deeply enough Much of the pavement high concentrations  
 (10) material on the surface are gone Stuff beneath Immediately  
 (11) beneath the portions of the armor in patchy concentrations of  
 (12) distribution might still be present so it s beginning to take  
 (13) on what we call the patchy nature the discontinuous nature on  
 (14) the surface and subsurface as well  
 (15) Q Do beaches that receive this kind of treatment however  
 (16) sustain oiling in the subsurface?  
 (17) A Yes they do As illustrated in the diagram the -  
 (18) usually the deeper portions of oil not yet reworked either  
 (19) mechanically or naturally are still present  
 (20) Q And what are the drawbacks to this kind of treatment hot  
 (21) water wash and high pressure wash?  
 (22) MR OPPENHEIMER Your Honor I raise my foundation  
 (23) objection  
 (24) THE COURT Sustained  
 (25) BY MR PETUMENOS  
 (26) Q Let s go to the next level What does this section show

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- (1) the jury?
- (2) A Well this section illustrates high energy beach or one
- (3) that s been - that s highly exposed high energy and has
- (4) extensive mechanical cleaning Again we see a similar effect
- (5) virtually all of the surface material has been removed We ve
- (6) established new biota in the area because it was destroyed or
- (7) disrupted during the cleanup or because of the energy of the
- (8) environment and patchy but less oil remains in the
- (9) subsurface
- (10) Q When the Cat or bulldozer or whatever it is comes in to
- (11) conduct this kind of treatment what happens to the sediments
- (12) that are in the areas above where you show the brown patches?
- (13) A In the case of an armored beach for example major
- (14) disruption of the surface is - has taken place If we recall
- (15) the process and the way armoring is formed fine grained
- (16) sediments are removed from the surface and the big stuff
- (17) remains and you develop an armor Once you disrupt that
- (18) armor
- (19) it s a scar or tear in the surface In which case the beach
- (20) surface has been disrupted There s no - no shall we say
- (21) typical natural process certainly nothing that happens in
- (22) coastal processes that s ever going to put this fine grained
- (23) material back underneath the armor once you ve discarded
- (24) disrupted it you re going to change the beach profile change
- (25) that system essentially permanently
- (26) Now if the beach has for example a bay head beach or a

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- (1) pocket beach or one that s bracketed on the sides by bedrock
- (2) projected bedrock which we saw for example the little island
- (3) we saw earlier with the oil streaming off of it that
- (4) illustration If the surface is disrupted in those
- (5) environments the fine grain material is largely trapped
- (6) between these bedrock projections In time it can move away
- (7) But as long as it s trapped in that area it continues to
- (8) migrate around the surface reburying re exhuming the
- (9) surface That has impact on wildlife and biota that might
- (10) persist there as well as concealment and revealing of oil
- (11) material on the surface
- (12) Q Now the decision of what kind of treatment to conduct
- (13) depends upon the kind of beach that you re dealing with?
- (14) A Yes it does
- (15) MR OPPENHEIMER Your Honor the same objection I
- (16) don t believe there s a foundation for this witness to be a
- (17) clean up expert
- (18) MR PETUMENOS I think that we re talking about
- (19) geology here and whether as a matter of geology on certain
- (20) beaches certain techniques work to remove oil
- (21) THE COURT You ll have to lay a foundation counsel
- (22) BY MR PETUMENOS
- (23) Q If one - as a matter of geology and how oil persists on
- (24) the beaches if one were to want to put an effective method of
- (25) removing the oil from the beach does one have to consider the

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- (1) geology of the beach?
- (2) A Yes
- (3) Q And what is that consideration?
- (4) MR OPPENHEIMER Your Honor I think we ve gone
- (5) beyond whatever expertise he would have in that question
- (6) There s still no foundation that he has any experience in -
- (7) beach cleanup
- (8) THE COURT It s true counsel
- (9) MR PETUMENOS I m sorry I didn t hear you
- (10) THE COURT It s true counsel The objection s
- (11) sustained
- (12) MR PETUMENOS May I try to lay a foundation for the
- (13) Court?
- (14) THE COURT Yes
- (15) BY MR PETUMENOS
- (16) Q Did you read and study the methods of - of cleanup that
- (17) were the subject of your special investigation?
- (18) A Yes We investigated in fact actually visited the sites
- (19) with the land manager who operated the sites He was present
- (20) during the time of the clean up operations and he described to
- (21) us the specific activities that took place on the shorelines
- (22) Q And did you study the amounts of energy that were applied
- (23) and the - to each beach technique how it would impact
- (24) different kinds of beaches depending upon their
- (25) classification?

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- (1) A You ve asked me -
- (2) THE COURT Don t answer it Excuse me?
- (3) MR OPPENHEIMER Your Honor I was raising the same
- (4) objection
- (5) THE COURT I don t understand the question Counsel
- (6) maybe you can make it clearer I don t know what you re asking
- (7) for
- (8) BY MR PETUMENOS
- (9) Q Did you look at the relationship between the kind of beach
- (10) from a - from a geological standpoint and what would be
- (11) effective in terms of removing oil from the surface and the
- (12) sediment did you look at that?
- (13) A Yes
- (14) Q And is that in part a function of geology to determine
- (15) what physical or physics would be involved to remove oil from
- (16) the beaches from the beach types?
- (17) A Physics you mean the types of physical activities?
- (18) Q Yes
- (19) MR PETUMENOS I would proffer the opinion
- (20) MR OPPENHEIMER Your Honor I think the testimony is
- (21) he s received hearsay information about cleanup on one set of
- (22) special investigation sites on north LaTouche
- (23) THE COURT Do you want to ask him questions? You
- (24) want to voir dire?
- (25) MR OPPENHEIMER If that is possible I d like to

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- (1) yes  
 (2) THE COURT Yes you can  
 (3) MR OPPENHEIMER Thank you Your Honor  
 (4) VOIR DIRE EXAMINATION OF JAMES G BUSH  
 (5) BY MR OPPENHEIMER  
 (6) Q Do you know how many beaches have been mechanically cleaned  
 (7) in Prince William Sound?  
 (8) A Not specifically how many I guess you'd have to define  
 (9) beach or give me precisely -  
 (10) Q Well let's - for the moment let's use just the segments  
 (11) which appear in your GIS mapping system  
 (12) A Uh huh  
 (13) Q Of those segments - by the way I should back up You  
 (14) agree a GIS mapping system is a computer data base that's  
 (15) able  
 (16) to give you a map of the coastlines of Prince William Sound and  
 (17) the Kenai is that correct?  
 (18) A That's correct  
 (19) Q And do you have any idea how many of the segments  
 (20) reflected  
 (21) in the GIS system have been subjected to mechanical cleaning?  
 (22) A On a segment by segment basis I don't have that  
 (23) information  
 (24) Q Do you have any idea how many of the beaches have been  
 (25) bioremedially cleaned in any way?  
 (26) A I used to know the lengths of shoreline that were treated  
 (27) and the number 2 000 meters pops into mind for one treatment

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- (1) I can't recall specific statistics on how long or how much was  
 (2) treated by different techniques  
 (3) Q Fair enough Have you participated in planning any of the  
 (4) cleaning that actually took place in either Prince William  
 (5) Sound or the Kenai Peninsula area?  
 (6) A Not for the joint area program We did provide some verbal  
 (7) recommendations to village residents and private landowners in  
 (8) terms of what should be done to their properties  
 (9) Q I see And what point in time was that?  
 (10) A Probably about 19 - late 1989 early 1990 would be my  
 (11) estimate Again I don't believe it happened at a particular  
 (12) point in time There were several discussions about how to  
 (13) treat what to treat We made one estimate on beach clean up  
 (14) activity using - using grippers and burning equipment which  
 (15) was a higher wind - to answer your question I believe it was  
 (16) late 90 early 91  
 (17) Q It was prior to your studies on north LaTouche which you  
 (18) thought you needed to conduct to learn about the effectiveness  
 (19) of different cleaning methods?  
 (20) A No We conducted the special investigation in 1992 and the  
 (21) other work we did I'm referring to was done in 89 90 91  
 (22) Q Just so I'm clear that advice was given prior to your work  
 (23) on north LaTouche?  
 (24) A That's correct  
 (25) Q Before you conducted the study of effects of cleanup on

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- (1) residual oil?  
 (2) A Before we conducted the study of those sites that's  
 (3) correct  
 (4) Q Do you have any ability - you're not a chemist?  
 (5) A I am not a chemist  
 (6) Q Okay And you are - are you familiar with the different  
 (7) techniques for water washing?  
 (8) A In a general way I'm not precisely familiar with specific  
 (9) details but in a general sense I have the idea  
 (10) Q And did any of the recommendations which you gave to any  
 (11) of  
 (12) your clients prior to the time you did this study pertain to  
 (13) water washing?  
 (14) A I don't believe they did apply to water washing  
 (15) Q Okay And did any of them pertain to bioremediation?  
 (16) A We had some discussions about bioremediation that's  
 (17) correct  
 (18) Q And is Dr Bakus on your team who is the chemist is that  
 (19) correct?  
 (20) A He's an intertidal ecologist  
 (21) Q And your role - I'm sorry as biologist your role was at  
 (22) best peripheral in that regard?  
 (23) A In terms of intertidal ecology?  
 (24) Q Yes sir  
 (25) A Yes  
 (26) MR OPPENHEIMER Your Honor I continue my objection

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- (1) THE COURT The objection's sustained counsel  
 (2) MR PETUMENOS At a later time I'd like to make an  
 (3) offer of proof if I could  
 (4) THE COURT Sure sure  
 (5) DIRECT EXAMINATION OF JAMES G BUSH (Resumed)  
 (6) BY MR PETUMENOS  
 (7) Q All right based upon your special investigation at  
 (8) LaTouche what then did you conclude about the treatments  
 (9) that  
 (10) were conducted in the area that you studied?  
 (11) A We concluded based on our observations of the shorelines  
 (12) that oil in the subsurface persisted despite the range of  
 (13) clean up efforts that had been applied to those shorelines  
 (14) Q Let's now turn to the issue of the sample locations that  
 (15) we've shown the jury on the map When you looked at - did  
 (16) you  
 (17) look at shoreline summary reports to look at what was reported  
 (18) of oiling on beaches from the survey teams?  
 (19) A Yes we did  
 (20) Q And did you take a look at those shoreline surveys over  
 (21) time to see what they reported?  
 (22) A Yes we did  
 (23) Q And after you looked at those shoreline surveys - and what  
 (24) I understand is they took some in 1989 some later years?  
 (25) A That's correct  
 (26) Q And after you did that study did you develop some concerns  
 (27) about the results?

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- (1) A Yes we did  
 (2) Q And did that lead to some of the sampling programs that you  
 (3) did?  
 (4) A Yes it did  
 (5) Q Explain to the jury  
 (6) A In 1992 our field program consisted of three phases we  
 (7) discussed We revisited the transects we did in 1989 and we  
 (8) also did the special investigation but in addition to that we  
 (9) did what we called an area wide sampling program to help  
 (10) choose  
 (11) sites for that area wide sampling program We reviewed all of  
 (12) the results presented in the Alaska Department of  
 (13) Environmental  
 (14) Conservation s summary of shoreline oiling that was released  
 (15) in I think late 1991 Perhaps it was early 92  
 (16) These documents provide a segment by segment history of  
 (17) how  
 (18) the shoreline has been mapped by the joint surveys including  
 (19) the ADEC walk a thon or beach walk as it s also called  
 (20) Q When was that conducted?  
 (21) A In 89 1989  
 (22) Q And ADEC is the Alaska Department of Environmental  
 (23) Conservation?  
 (24) A That s correct Based on that examination we were able to  
 (25) identify several hundred shorelines which we considered to be  
 (26) questionable Some for example were mapped as being  
 (27) cleaned  
 (28) during the first survey or two and showed up as being  
 (29) moderately or heavily oiled later which we found to be

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- (1) suspect Some were examined as being heavily oiled early in  
 (2) the history maybe visited one more time a few months later and  
 (3) then either never again visited or were found to be clean after  
 (4) that  
 (5) There were a number of inconsistencies Some shorelines  
 (6) seemed to clean up fast relative to others So as a net  
 (7) result we selected and identified these ones that we found to  
 (8) be suspect pared down the number to a workable number  
 (9) which I  
 (10) think we finally arrived at approximately 75 candidate sites  
 (11) which gave us a good geographical spread as well and we  
 (12) investigated those in 1992  
 (13) Q And then when you - what did you do - you got samples  
 (14) from those sites?  
 (15) A The sampling team which was the team that did the  
 (16) area wide sampling program arrived at each site spent  
 (17) somewhere between 35 minutes 30 minutes and 45 minutes  
 (18) something like that and did a rapid assessment of the  
 (19) shoreline photographs grabbed samples and took off to the  
 (20) next site The program was conducted fast It was a rapid  
 (21) reconnaissance type of survey And many of the shorelines  
 (22) were  
 (23) not fully investigated nor were we able to investigate each  
 (24) shoreline during the range of tides from high tide to low  
 (25) tide  
 (26) Q And what were the results of the sampling program what  
 (27) conclusions did you draw?

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- (1) A Oiled areas of what we considered to be significant merit  
 (2) were found at approximately 50 or 55 out of 75 sites We  
 (3) concluded that oil was persistent  
 (4) Q Did that confirm or undermine your suspicions that the  
 (5) survey procedure contained information that was not accurate?  
 (6) A Well given that these sites were ones that we picked from  
 (7) the survey results that seemed to have some variance or some  
 (8) oddity to them we concluded that oil was persisting it would  
 (9) be indicated by the shoreline surveys alone  
 (10) Q Now again the shoreline surveys were not designed in the  
 (11) first place were they to determine persistence of oil?  
 (12) A That s correct  
 (13) Q I d like to show you now what s been marked as  
 (14) Exhibit 1156 If you d come down from the witness stand  
 (15) MR PETUMENOS And Judge if it s okay I m going to  
 (16) get fairly close to the jury because this will be hard to see  
 (17) THE COURT Yes that s all right  
 (18) BY MR PETUMENOS  
 (19) Q This map is entitled for the jury s benefit Oil Impact  
 (20) and Shoreline History Map and it s got boxes blown up out of  
 (21) various locations What do these boxes show the jury?  
 (22) A Well take one that s easy to reach here This is the one  
 (23) that s conducted at the northeast end of LaTouche Island  
 (24) Sleepy Bay is just around the bend here This particular  
 (25) window is an enlargement of the red square that we see over

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- (1) here at the end of the island It s an enlargement of the  
 (2) portion of it not the entire thing It enlarges from the edge  
 (3) of Sleepy Bay to the east  
 (4) So at this point we re curving down into Sleepy Bay This  
 (5) is the very head the easternmost head of Sleepy Bay The  
 (6) colors that you see are keyed over here We have two legends  
 (7) for this map The general legend and then the inset legend  
 (8) the window areas being the insets  
 (9) Purple represents heavy oiling magenta is medium this  
 (10) dark orange is light yellow is very light and this greenish  
 (11) turquoise I guess is no oiling claimed  
 (12) Now then a single narrow black line represents shoreline  
 (13) that was unsurveyed So within the window you can see the  
 (14) different levels or intensities of oils in these maps in the  
 (15) various joint survey programs Now you won t be able to read  
 (16) the labels but these finer print labels along each one of  
 (17) these identifies the particular shoreline survey program that  
 (18) map the shoreline  
 (19) So if we look at this portion of LaTouche Island for  
 (20) example during the first two shoreline programs which  
 (21) includes the ADEC survey that s six months plus from the spill  
 (22) time to the SSAT survey which is 13 months after the spill  
 (23) We can see that it s mapped as very light oil  
 (24) In the autumn survey program which is 19 months after the  
 (25) spill the area was not examined Then during MAYSAP it was

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- (1) reexamined 26 months after the spill We find these portions
- (2) of the shoreline to be medium and heavily oiled We
- (3) investigated this area during the - during the area wide
- (4) sampling program in 92 because of this relationship It s
- (5) very unlikely that you went from very light oiling to moderate
- (6) or heavy in 26 months so we figured it was an error in the
- (7) original mapping
- (8) Q So in other words the oiling was getting worse over time
- (9) not better over time according to the map?
- (10) MR OPPENHEIMER Your Honor that misstates the
- (11) testimony
- (12) THE COURT According to the map he said
- (13) MR PETUMENOS According to the map
- (14) A Mapping yeah if you took the mapping on its own merit it
- (15) would suggest that at some time between 13 months after the
- (16) spill and 26 months after the spill the shoreline was jumped
- (17) from light to heavy oiling
- (18) BY MR PETUMENOS
- (19) Q That didn t make any sense to you?
- (20) A That s correct
- (21) Q So is that an example of what you re talking about?
- (22) A Yes it s one example If you look at these you ll see
- (23) several examples of the variation things that go from being -
- (24) for example in this area this is - this is fairly good one
- (25) I don t see much change but in this area we see we go from

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- (1) medium to light and then back to medium over here There are
- (2) various examples all through this We conducted this study
- (3) because of the - we reviewed some of the original field
- (4) reports the field data from these programs and saw
- (5) discrepancies in descriptions of the beaches in the original
- (6) field data so we were concerned about the original field data
- (7) transposition from field notes to map notes transposition of
- (8) GIS data base and the GIS product The data we were
- (9) reviewing
- (10) was a GIS product and we re concerned about correctness of
- (11) transition from field observations to map
- (12) Q Thanks And just real quickly there s some testimony in
- (13) the record for purposes of admitting the maps Exhibit Number
- (14) 1157 is a shoreline oil impact and shoreline history map for
- (15) the lower Kenai and the Kenai Fiords?
- (16) A That s correct
- (17) Q And you prepared this map?
- (18) A Yes
- (19) Q And it is read the same way as the one we just showed the
- (20) jury only in a more detailed way?
- (21) A Yes
- (22) Q And we have another map - I m putting too many on the
- (23) easel here but I ll leave it up for a second - 1159 is the
- (24) same map showing oil impact and shoreline history for the
- (25) Kodiak area -
- (26) A That s correct

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- (1) Q - and the Shelikof Straits area?
- (2) A That s correct
- (3) Q And you prepared that map?
- (4) A Yes that s correct
- (5) Q Let s see Exhibit 1159 I have something to show - why
- (6) don t you come on down again for 1159 I m looking for it
- (7) Here we go Because I forgot to ask you something
- (8) We talked about the phenomenon of swash bars and data
- (9) difficulties and so forth resulting in oiling that according
- (10) to the data appeared to get worse rather than better which
- (11) you found questionable But did you also observe a
- (12) phenomena
- (13) where people stopped looking at beaches?
- (14) A Yes
- (15) Q Show the jury
- (16) A Well this is an example right here This is taken at the
- (17) Foul Bay location We have the orange line which is light
- (18) oiling and light oiling here here and it was not investigated
- (19) afterwards Similarly this went from medium to very light and
- (20) it was never investigated again So the black line being that
- (21) not examined - subsequently not examined Similarly here was
- (22) not examined initially and then it s light very light very
- (23) light but not examined not examined not examined
- (24) Q So did you go to sample locations at those places where you
- (25) saw that they stopped looking relatively soon on in the
- (26) process?

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- (1) A Yes we did
- (2) Q And what did you find?
- (3) A Well in particular for Puale Bay we found a number of
- (4) things First off based on the photographic evidence and
- (5) stuff we received from some of the clean up teams there didn t
- (6) appear that it was lightly oiled to begin with and we found
- (7) residues there in 92
- (8) MR PETUMENOS Judge how long have I been in
- (9) session?
- (10) THE COURT It s been about an hour You can take a
- (11) break anytime you choose
- (12) MR PETUMENOS That would be great Thank you
- (13) Judge
- (14) THE CLERK Please rise This court stands in
- (15) recess
- (16) (Jury out at 11 07 a m )
- (17) (From 11 07 a m to 11 25 a m )
- (18) (Jury In at 11 25 a m )
- (19) THE CLERK Please rise This court now resumes its
- (20) session
- (21) Please be seated
- (22) BY MR PETUMENOS
- (23) Q Mr Bush we were talking about the mapping of Puale Bay
- (24) and I d like to show you 1147 1 And as I recall what you told
- (25) the jury according to the mapping data that you came up with

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- (1) Puale Bay was originally designated as a lightly oiled beach?  
 (2) A We can refer to the map and see for sure on that I can't  
 (3) see it from here but I believe that's correct  
 (4) Q All right And for Members of the Jury Puale Bay was this  
 (5) guy right here  
 (6) A If you look at the inset you'll see parts of it were not  
 (7) mapped and then other parts of it I believe were never -  
 (8) never remapped  
 (9) Q What is the jury looking at in 1147 1?  
 (10) A This is a view downbeach in Puale Bay The glistening area  
 (11) you see in the foreground - can I -  
 (12) Q Yes you can This is on the system  
 (13) A It's on the system okay That I'll outline here in  
 (14) reddish this glistening area here is continuous continuous  
 (15) oil mat  
 (16) Q That was - that is what was meant by lightly oiling in  
 (17) this particular beach in 1989  
 (18) A Is that a question?  
 (19) Q Yes  
 (20) A I just think it was mismapped  
 (21) MR PETUMENOS Could I have 1147 2? Is there some  
 (22) incantation to the machine I can use to make it come up? I  
 (23) will admit defeat on 1147 2 Let's try 1147 4 Could I have  
 (24) the Elmo?  
 (25) BY MR PETUMENOS

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- (1) Q 1147 4 and the last photograph we saw was 1989 am I  
 (2) right?  
 (3) A That's correct  
 (4) Q And this one as well?  
 (5) A This is also 1989 I believe portions of the upper  
 (6) photograph are not being shown here  
 (7) Q Yeah that's right I'll widen it out  
 (8) MR OPPENHEIMER Excuse me Your Honor I'm confused  
 (9) about the exhibit number It was originally identified as  
 (10) 47 2 Is it 47 2  
 (11) MR PETUMENOS It's 47 4 I gave up on 47 2  
 (12) BY MR PETUMENOS  
 (13) Q This is 47 4 And now you can't write on it What do we  
 (14) see?  
 (15) A Well in this exhibit the dark portions are oil There's  
 (16) a log of course in the upper left It's an example of fine  
 (17) grain sand beach See how quickly - this is probably taken I  
 (18) believe estimates are weeks after the oil impacted the  
 (19) shoreline and you can see how quickly the yellowish colored  
 (20) sand is beginning to bury and obscure the oil This is -  
 (21) portions of this beach were heavily oiled and you can see very  
 (22) quickly it's being obscured by the sand cover  
 (23) MR PETUMENOS This is counsel 1147 2  
 (24) BY MR PETUMENOS  
 (25) Q Also Puale Bay in 1989?

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- (1) A That's correct This view is taken in the opposite  
 (2) direction from the first photograph that you saw that shows the  
 (3) extent of the oil on towards the helicopter in the background  
 (4) Again if we look - and I can't draw on this but you can  
 (5) see the streaks or ridges of sand that come extend from the  
 (6) upland area on the right down the beach to the left and  
 (7) they're beginning to bury oil in the oiled horizon  
 (8) Q That's good enough That's fine That's all we need  
 (9) I'd like to show you next some photographs of Puale Bay  
 (10) from 1992  
 (11) MR PETUMENOS 1147 counsel dash 11  
 (12) BY MR PETUMENOS  
 (13) Q Tell the jury in Puale Bay what was happening here  
 (14) A This is a - when I visited the site in 1992 the person in  
 (15) the photograph is Jeff Dawson one of our samplers and we're  
 (16) approximately the same location you saw in the previous  
 (17) photographs but it's three years later Those are some of the  
 (18) pitting and sample sites where we've collected tar mat residue  
 (19) oil tar mat  
 (20) Q And when you did your pitting and sampling - and I'm going  
 (21) to show you next 1147 10 - what did you find?  
 (22) A We found these isolated tar balls This is an example of  
 (23) one of them on the surface and although it's difficult to  
 (24) recognize it as an oil impregnated sediment that's because  
 (25) it's coated with sand They were collected and analyzed and

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- (1) found to be crude oil  
 (2) Q Does this support the conclusion that just because you  
 (3) don't see the oil on the surface doesn't mean that it isn't  
 (4) there?  
 (5) A That's correct This particular sample actually is from  
 (6) the surface However the - the bearing that we saw on the  
 (7) 1989 photographs supports that notion  
 (8) Q Now let's discuss some other maps that you prepared with  
 (9) respect to the estimation of oiling - we're done with the  
 (10) photo - by various survey teams  
 (11) I believe you'll hear later in the trial from some people  
 (12) that the SCAT2 survey was the most reliable oiling survey Do  
 (13) you know what SCAT2 is?  
 (14) A Yes  
 (15) Q What is it?  
 (16) A The SCAT2 is the recombination reinterpretation  
 (17) compilation reexamination of data collected during the initial  
 (18) SCAT program that was conducted principally by Exxon I  
 (19) believe in 1989  
 (20) Q In 19 when?  
 (21) A 89  
 (22) Q And was the data actually put together at a later point in  
 (23) time than 1989?  
 (24) A Yes It was recompiled and I believe they incorporated  
 (25) data from the other shoreline survey programs as well

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- (1) Q Starting with Prince William Sound I d like to show you
- (2) what s been marked as exhibit 1355 Could you come down from
- (3) the stand and tell the jury what 1355 shows?
- (4) A Exhibit 1355 is an illustration of oiling that is - has
- (5) been identified in the field via other shoreline survey
- (6) programs or our investigations that does not show up in the
- (7) SCAT2 data base we received from Exxon as a product of
- (8) discovery
- (9) So the magenta color - we used magenta so you could see it
- (10) - represents shorelines that were unsurveyed or claimed not
- (11) oiled by Exxon and mapped as oiled by other programs or
- (12) through our own investigations
- (13) Q Exhibit 1356?
- (14) A This exhibit is the same format as the previous exhibit
- (15) again showing oiling that s depicted by other programs or data
- (16) that we had that s shown as not being oiled in the SCAT2 data
- (17) base
- (18) Q And that is for what area?
- (19) A This is for the Kenai Fiords the lower Kenai Peninsula and
- (20) around the Kenai Peninsula through the Port Graham English
- (21) Bay
- (22) areas into Kachemak Bay and north of Homer on up to Anchor
- (23) Point
- (24) Q Now we ve been talking from time to time about the Kenai
- (25) Fiords and the lower Kenai What is this area here? Is this

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- (1) A Yes part of the Kenai Fiords part of the Kenai Fiords
- (2) National Park
- (3) Q As we get around here this is the lower Kenai?
- (4) A That s correct
- (5) Q Exhibit 1363?
- (6) A Same thing Basically we have - in magenta again -
- (7) shorelines that were oiled that are not depicted in the SCAT2
- (8) data base as having been oiled and sample locations and other
- (9) data is also depicted on the exhibits
- (10) Q Now while we re on this map there is a whole bunch of
- (11) other little black dots and triangles and so forth on there
- (12) Do you know what that is?
- (13) A Yes The triangles apex pointing down on these represent
- (14) approximate locations where oil was cleaned up by crews that
- (15) were managed by Veco
- (16) Q Let me stop you there because I think we have another map
- (17) that even does a better job This map is marked Members of
- (18) the Jury 1354 A and it is entitled Comparison of Oiling Data
- (19) colon Composite Oiling Versus ADF&G and Veco Data
- (20) And what does this map depict to us?
- (21) A Well this map is slightly different This map represents
- (22) the - what we refer to as composite oiling It s a separate
- (23) data base that we generated I actually have to step back a
- (24) step here
- (25) After doing the shoreline history maps which we looked at

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- (1) earlier and reviewing a lot of the field survey notes and so
- (2) forth and after having been exposed to this the clean up data
- (3) that was managed by Veco in the Kodiak area and additional
- (4) data
- (5) from the Alaska Department of Fish and Game we believed it
- (6) was
- (7) prudent to combine the various oiling data bases and to present
- (8) a map that showed all of the oil that had been identified by
- (9) all the programs rather than rely on any one data set We
- (10) merged them all So this program is what we call our composite
- (11) oiling and this is a map that s generated from that composite
- (12) oiling data base
- (13) Now that data base searches all of the other oiling data
- (14) bases and pulls out the level of oiling for each what we call
- (15) arc That s each little piece of shoreline segment that has
- (16) uniform characteristics same type same oiling that sort of
- (17) stuff and it compares each little arc along all the data bases
- (18) and collects the one that has the highest level of oiling
- (19) that s been mapped It assembles all of those into a data base
- (20) and plot it up In this case rather than plot that we ve
- (21) compared the composite oiling against Fish & Game data and
- (22) Veco
- (23) data that we received not too long ago
- (24) Q Let s talk about that Let s talk about the ADF&G data
- (25) What information did you receive from the Alaska Department of
- (26) Fish and Game that you found relevant to where the oil was?
- (27) A These were reports that were - that were released from the
- (28) Department of Fish and Game regarding the Lower Cook Inlet

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- (1) area as well as the Shelikof Strait Kodiak and Alaska
- (2) Peninsula area As part of zero tolerance policy they
- (3) monitored the shorelines and identified oil
- (4) Q And they would report oil when they saw it?
- (5) A That s correct
- (6) Q So you have marked on the map places where those folks
- (7) found or saw oil that was not reported on SCAT2?
- (8) A That s correct Well we ve marked all of it Some of it
- (9) was reported in various data bases You can see overlap
- (10) between colored lines and various data sets The round dots
- (11) being ADF&G the triangles being the Veco data
- (12) Q On the previous map though we have for Kodiak Exhibit
- (13) 1363 that does that for us doesn t it?
- (14) A Yes
- (15) Q It shows the differences between the SCAT2 mapping and
- (16) ADF&G?
- (17) A And Veco data
- (18) Q Now Veco data what do you mean by Veco data?
- (19) A That s a term that we generated Basically just refers to
- (20) all the data we received as a part of the discovery process
- (21) that relates to clean up crew field notes By and large it s
- (22) most of the clean up crew field notes that were collected or
- (23) that were taken by field crews that were out collecting oil
- (24) from the oiled shorelines primarily on Kodiak
- (25) Q So what we had then was notes indicating that they were

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- (1) teams dispatched by Exxon s contractor Veco to actually treat  
 (2) oil on beaches?  
 (3) A That s correct  
 (4) Q On locations?  
 (5) A That s correct They actually collected and bagged the  
 (6) material  
 (7) Q And those beaches which these - where these crews were  
 (8) working were not on the SCAT2 survey maps showing as oiled?  
 (9) A That s correct This - the magenta is what the SCAT2  
 (10) mapping did not show from - compared to other field programs  
 (11) and other mapping programs and the triangular data showed  
 much  
 (12) broader coverage Now some of this does overlap the SCAT2  
 (13) data but it shows a much broader coverage  
 (14) Q Thank you Mr Bush  
 (15) Now let s change the scene if we can a little bit and  
 (16) take Mr Bush from Prince William Sound and Kodiak and lower  
 (17) Kenai to his office  
 (18) What s your task now Mr Bush? With all this data that  
 (19) you have how are you going to estimate the actual persistence  
 (20) of the contaminant in the ecosystem?  
 (21) A We essentially compiled the data that we received and  
 (22) compared this to reports and studies that were done on other  
 (23) oil spills and made projections based on these data about the  
 (24) persistence of oil on various shoreline types throughout the  
 (25) impacted area

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- (1) Q And when you say estimates did you receive from Exxon at  
 (2) any point any kind of detailed records on where beach  
 treatment  
 (3) took place?  
 (4) A We did not  
 (5) Q To this day?  
 (6) A To this day  
 (7) Q How does one go about drawing parallels with other spills?  
 (8) A Well it s not easy in a sense to do that Every spill  
 (9) is essentially different There s a lot of variation just  
 (10) like the shoreline types They re not all the same They vary  
 (11) laterally Similarly oil spills vary from spill to spill  
 (12) They spill different materials have different characteristics  
 (13) temperatures are different different climates different  
 (14) shoreline configurations different ratios of shoreline types  
 (15) in spills  
 (16) Some spills are different For example the Metula spill  
 (17) similar climates similar shoreline sites but it wasn t  
 (18) studied very well so even though you might have two spills  
 (19) that would work nicely the people haven t studied them and the  
 (20) data isn t out there so it s difficult to do it  
 (21) But by and large one reviews the literature and one  
 (22) incorporates the opinions of experts that visit those spills  
 (23) and draws what conclusions can be drawn I don t believe it s  
 (24) possible to draw a direct parallel and comparison between  
 these  
 (25) two but one uses this information to understand the processes

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- (1) that go on on the shorelines Based on these processes you  
 (2) can gain an understanding of how the oil may persist in select  
 (3) environments  
 (4) Q I ve placed in front of you Exhibit Number 1150 Was this  
 (5) prepared by you?  
 (6) A Yes it was in a sense I mean it - this source material  
 (7) was not prepared by us this specific exhibit was prepared by  
 (8) us  
 (9) Q Explain to the jury  
 (10) A This exhibit is a slight modification of information that s  
 (11) presented in a briefing book Exxon prepared for their  
 (12) manager  
 (13) Q What is it - the data then was taken from the Exxon  
 (14) briefing book?  
 (15) A That s correct  
 (16) Q And what does it depict?  
 (17) A Well it depicts the estimated persistence of impact and  
 (18) I m not sure how that s defined in this context but it  
 (19) indicates that persistence for the various shoreline types  
 (20) which are identified by the sides  
 (21) Q And why don t you blow that up for us?  
 (22) A Sure I will  
 (23) Q What is meant by marine community -  
 (24) A The marine community -  
 (25) MR OPPENHEIMER Your Honor if I may we have no

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- (1) problem with what s been said so far by this witness about this  
 (2) exhibit and there may be a witness on the plaintiffs list who  
 (3) can talk further about it but again this is an ecological  
 (4) recovery chart There ll be a lot of testimony about that  
 (5) later but I don t believe this witness is qualified to speak  
 (6) to that issue  
 (7) THE COURT A what?  
 (8) MR OPPENHEIMER If we could back up to the - if you  
 (9) could zoom back out show the Judge You see Your Honor  
 time  
 (10) required for ecological roughly -  
 (11) THE COURT Oh yes uh huh  
 (12) MR PETUMENOS Perhaps I can ask a question  
 (13) THE COURT Well is the issue whether or not this is  
 (14) a persistence calculation or something more than that?  
 (15) MR OPPENHEIMER Your Honor this is a - this is -  
 (16) MR PETUMENOS Perhaps if counsel s going to speak a  
 (17) length we could have this out of the presence of the jury  
 (18) THE COURT I don t think it s necessary  
 (19) MR OPPENHEIMER It s based upon biological data  
 (20) Your Honor It s not geological information  
 (21) THE COURT Let s see what this witness did with this  
 (22) diagram  
 (23) MR PETUMENOS That s just what I wanted to do  
 (24) BY MR PETUMENOS  
 (25) Q Mr Bush how did you use this data from - first of all

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- (1) let me understand something When you worked on your  
 (2) persistence estimates was this an endeavor that was done by  
 (3) your entire team at ICF?  
 (4) A Yes  
 (5) Q And for the jury again who was on this team that you were  
 (6) the project manager of?  
 (7) A Well all of the field team personnel that were involved in  
 (8) our field studies played various roles I think the principal  
 (9) players were myself Larry Thebeau -  
 (10) Q What is his discipline?  
 (11) A Larry Thebeau is a biologist  
 (12) Q Please continue who else?  
 (13) A And of course Dr Bakus Dr Vandermuehlin to some  
 (14) extent  
 (15) Q Who are they and what are their disciplines?  
 (16) A Dr Bakus is an intertidal ecologist and Vandermuehlin is a  
 (17) biologist with the oil spill expertise and experience  
 (18) Q And putting together the model for the persistence  
 (19) estimates that the team came up with of which you were a  
 (20) project head did you consult with those scientists on your  
 (21) team?  
 (22) A Yes we did  
 (23) Q And did they peer review and quality control the work among  
 (24) each other?  
 (25) A Each played a separate role There was no single

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- (1) Individual that peer reviewed and quality controlled the entire  
 (2) thing each followed in his area of expertise  
 (3) Q And how was this particular data used in your estimates of  
 (4) persistence?  
 (5) A These data weren't used directly in our estimates of  
 (6) persistence - persistence other than for comparisons and a  
 (7) general guide to what was thought by other investigators  
 (8) prepared for Exxon's management  
 (9) Q And was this used as a check or a comparison data piece to  
 (10) determine whether your - how your estimates fit in with these  
 (11) estimates?  
 (12) A As a comparison piece that's its principal function yes  
 (13) MR PETUMENOS Your Honor I'm prepared to proceed  
 (14) MR OPPENHEIMER Your Honor my objection is only to  
 (15) this particular witness I don't know where the next question  
 (16) leads  
 (17) THE COURT Neither do I counsel Let's hear it  
 (18) MR OPPENHEIMER We'll see it  
 (19) BY MR PETUMENOS  
 (20) Q All right I just want you to explain what the chart shows  
 (21) and what at this point you - the material along the Y axis or  
 (22) the vertical axis refers to to your understanding  
 (23) A Well the Y axis differentiates different communities as  
 (24) it's indicated and the X axis or the horizontal axis at the  
 (25) bottom indicates years

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- (1) MR OPPENHEIMER Your Honor continue my objection  
 (2) THE COURT Yeah I understand  
 (3) MR OPPENHEIMER He's referring to the ecological  
 (4) ones  
 (5) THE COURT I understand the objection counsel and  
 (6) I'm considering it I just want to hear more so I can  
 (7) determine what place this got this particular diagram played  
 (8) in this witness analysis  
 (9) MR OPPENHEIMER Understood Your Honor fine  
 (10) BY MR PETUMENOS  
 (11) Q According to the Exxon briefing book what does the - or  
 (12) what do the bars represent?  
 (13) A A range of times for recovery  
 (14) Q And did you use these range of times of recovery as a check  
 (15) against the persistence that you ultimately estimated based  
 (16) upon all of your work?  
 (17) A Not in a precise way We used it as a comparative guide  
 (18) that's all Not really a guide but as a comparison  
 (19) THE COURT Do you equate the term recovery with the  
 (20) term persistence?  
 (21) A Not entirely Recovery in a general sense represents the  
 (22) termination of a fate and persistence issue we discussed  
 (23) earlier on Recovery is when things will have returned to  
 (24) pre-spill conditions or to conditions as though the spill would  
 (25) not have happened This is dealing more specifically with

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- (1) communities and ecological recovery So our persistence  
 (2) estimates combined a number of things within limited  
 guidelines  
 (3) that are put forth by the land management group the land  
 (4) management investigators  
 (5) So I think I've answered your question but this is one  
 (6) component of the work that we did  
 (7) THE COURT I see Okay The objection's overruled  
 (8) MR PETUMENOS And then let's if we can go to  
 (9) Exhibit 1154 - whoops I guess it's 1153 Is this Elmo?  
 (10) Could I have 1153 please? I'm sorry give me the Elmo  
 (11) please  
 (12) BY MR PETUMENOS  
 (13) Q Showing you what's been marked as 1153 - and we don't  
 have  
 (14) this where you can write okay - but can you tell me what 1153  
 (15) is?  
 (16) A Yes 1153 is a diagram graphical presentation of examples  
 (17) of particular accumulations of oil that persisted or were  
 (18) persistent in other oil spills  
 (19) Q And we have along the bottom axis here what term?  
 (20) A Time years after the initial spill event  
 (21) Q And I note that on some of these circles we have little  
 (22) arrows going off the scale What do they depict?  
 (23) A They represent that either that's the last time of the  
 (24) investigation or a particular study that was - that was  
 (25) reviewed for this - to acquire this particular data indicated

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- (1) that the persistence is waning or that in that investigators
- (2) mind it could continue for a particular period of time so
- (3) we re looking at sort of a trailing event
- (4) Q And what is going up the vertical - what s the information
- (5) on the vertical axis?
- (6) A That depicts concentration of the sample
- (7) Q What do you mean by concentration of the sample ?
- (8) A How much oil residue remained in the sediment sample the
- (9) rock sample or both Actually in some cases there are fish
- (10) samples and tissue samples and other things as well
- (11) Q And in a minute here we re going to match the numbers to
- (12) the little circles on the - on our graph What does
- (13) Exhibit 1154 depict?
- (14) A Exhibit 1154 is the key to this previous exhibit indicating
- (15) what the circles represent on the graph
- (16) Q All right Could you take one of these as a - for
- (17) example let s say you mentioned Metula or one of those are
- (18) they contained on this?
- (19) A Yes
- (20) Q Why don t you blow up Metula and explain how these charts
- (21) could be used by the jury to understand what you ve attempted
- (22) to depict
- (23) A The Metula spill was a spill that occurred on the tip of
- (24) South America the Straits of Magellan and the material that
- (25) was spilled In this case was Arabian crude and smaller amount

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- (1) semiplastic and essentially seals it off so that the mousse
- (2) material underneath is preserved for a longer period of time
- (3) It s protected in an envelope
- (4) 5C was a projected impact on marshes based on some
- (5) investigators and they indicated they thought that marsh had
- (6) not recovered for as much as a hundred years That s of
- (7) course full and complete recovery All the same specie types
- (8) age class abundance that sort of thing a very high quality
- (9) level of recovery
- (10) 5D is the observations that were made by Ed Owens 12 and
- (11) half years after the spill in which he saw very high
- (12) concentrations 50 000 parts per million that s milligrams p-
- (13) kilogram in the asphalt pavement with visually unaltered oil
- (14) In other words the mousse looked unaltered to him visually
- (15) without doing detailed laboratory analyses 12 and a half years #
- (16) after the spill
- (17) Q Now I think you mentioned a whole bunch of terms here
- (18) asphalt pavement skinned mousse backshore nearshore the
- (19) tidal and intertidal and subtidal effects of some of these
- (20) things Have you prepared a videotape that would show the
- (21) jury
- (22) how some of those same similar things that we saw in the
- (23) Metula spill appear in the Exxon Valdez spill area?
- (24) A Yes
- (25) Q Could I have 1368 put on the screen please? And we ll be
- (26) pausing this from time to time

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- (1) of Bunker C which is very heavy heavy oil occurred in 1974
- (2) One of the team members on our team Larry Thebeau In fact
- (3) investigated the spill six years after the event
- (4) In addition to that it was investigated 12 years after the
- (5) event 12 and a half by Ed Owens who is a contractor for
- (6) Exxon I have five points of data on the large graph previous
- (7) exhibit which correlate to numbers 5A 5B 5C and 5D which I
- (8) indicated here
- (9) Q Here s 5C 5A 5D and 5B?
- (10) A So each of those data points is described here in an
- (11) abbreviated manner 5A for example represents a very high
- (12) percentage of oil in the sample One to 45 percent was a
- (13) range most of them range from 2 to 7 percent and those
- (14) samples were collected
- (15) If you look at the other example the other exhibit rather
- (16) and follow down the X axis you ll see how many years after the
- (17) spill the samples were collected So at that time samples
- (18) that ranged from largely 2 to 7 percent and up to 45 percent of
- (19) oil could still be collected from that spill site
- (20) 5B is posted on there At the time they observed visually
- (21) or unaltered oil containing what we referred to as skinned
- (22) mousse You might recall some of the photographs of these
- (23) asphalt pavements or tarry areas where the segment becomes
- (24) incorporated in the oil Skinned mousse is a situation where
- (25) the upper surface of a mousse residue becomes tar like or

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- (1) (Videotape played)
- (2) A We re in the Kenai Flords area now zooming in on the Beauty
- (3) Bay site which we ve talked about several times
- (4) VOICE FROM VIDEO We re looking at here what we call the
- (5) tar mat tar mat comprised of oil mixed with sands
- (6) BY MR PETUMENOS
- (7) Q Now we ll let you talk instead of Mr Thebeau there
- (8) A That s Larry Thebeau He s the Texan here with us and
- (9) Larry s digging up a tar mat from 1989 in the Beauty Bay area
- (10) give you an example of the skinned surface
- (11) Q Would you freeze that?
- (12) A Can I draw with this now?
- (13) Q Not on the videotape
- (14) A Can I come down on there?
- (15) Q Go ahead
- (16) A Show what the image displays here This the shiny surface
- (17) is a weathered skin that s formed over a more - more moussey
- (18) interior and we ll see in a moment - go ahead and roll it for
- (19) a second - as he turns it over and if the color is visible on
- (20) this you ll see that the interior portions - I think they ll
- (21) zoom in - the brownish material is a more fresh or more fluid
- (22) mousse material mayonnaise consistency material This area
- (23) in
- (24) here Most of the broken material in this case consists of
- (25) less weathered more fluid material
- (26) This is the same site in 1992 was investigated very early

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- (1) on by Jerry Bakus and other persons - Dr Bakus Jerry Bakus  
 (2) took the film and at this point they concluded the beach  
 (3) surface was clean However when we returned a few weeks  
 (4) later remember the story about the swash bars Here are the  
 (5) swash bars again you ve seen in photographs earlier and these  
 (6) items mark the oil we saw off the leading edge of the swash  
 (7) bars along an arm of our transect  
 (8) And you ve seen this one the still photograph  
 (9) Now we ll move from the lower Kenai Kenai Fiords area  
 (10) Beauty Bay of that sample into Prince William Sound and we  
 zoom  
 (11) into Squirrel Island This is a pocket beach in Prince William  
 (12) Sound The surface is pebbly  
 (13) Let s go back Can you run it back for that? Just freeze  
 (14) it here This is fine  
 (15) Again this is a Mr Thebeau there s his biological grid  
 (16) where he took his measurements This was moderate to heavily  
 (17) oiled and it s largely a coarse grain sand beach with some  
 (18) mixed class particulars slightly coarser grained material as  
 (19) well Locally small pebble coverage in this vicinity We  
 (20) found heavily oiled berm and asphalt pavement near the  
 upland  
 (21) portion of this shoreline Strong contamination high  
 (22) concentrations of oil throughout this area and this dark line  
 (23) you see along the shoreline is the elevation that oil impacted  
 (24) the margin of the coastline of this island  
 (25) Go ahead sorry go forward please Freeze it again

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- (1) thank you  
 (2) This is a photograph of - taken at the same time in 1989  
 (3) where we moved - the tide was coming in when we did the  
 (4) survey I think that s correct In any event we re wiggling  
 (5) the shovel underneath the water in the sand and you can see  
 (6) these little silver dots that you see are droplets of oil  
 (7) rising up through the water They break on the surface so the  
 (8) oil was very fluid at this location and it sheened readily with  
 (9) each tidal - each change in tide Okay  
 (10) Okay stop this one too This is in 1992 and I mentioned  
 (11) the asphalt pavement that we saw in 1989 - well we returned  
 (12) to the same site These are the rocks off to the side that  
 (13) were darkly stained in 1989 They re now much less stained  
 (14) We can see here asphalt pavement this dark area shows up  
 (15) here is sand that is saturated with oil and - oil residue and  
 (16) it s approximately between 10 and 12 centimeters thick is my  
 (17) recollection The material around this - I don t know how  
 (18) well you can tell how visible that is - is loose and not bound  
 (19) together as the residue depicted  
 (20) Okay This is a closeup showing you the surface You can  
 (21) see again this is resistant It ll hold its shape in a  
 (22) vertical cliff here whereas the sediment around it will  
 (23) collapse and flow and create a normal angle for -  
 (24) This is a scale for thickness  
 (25) Q Could we go back there I had a question about that

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- (1) Freeze that if you would The question I had about it is what  
 (2) is holding that material together more firmly in than the  
 (3) surrounding area?  
 (4) A The oil residues that are inside in the pores of the  
 (5) sediments holding the grains together  
 (6) Q Go ahead You have anything more you want to say?  
 (7) A No nothing else to say  
 (8) Now 1992 three years later That s our plane pilot in  
 (9) fact scraping residue off As you can see this is residual  
 (10) stain on the rocks from the heavy coating that we saw in 89  
 (11) He s scraping it off Spruce needles or spruce leaves I  
 (12) guess more precisely are stuck to the surface More of the  
 (13) same  
 (14) This area was heavily coated  
 (15) Q Freeze that please?  
 (16) A Actually I would say roll it  
 (17) Q I ll let you drive  
 (18) A Let s go forward Now - okay freeze it here This area  
 (19) was heavily coated and again skinned over but as it warms in  
 (20) the sun the mousse will become fluid again and material  
 (21) beneath the skin will break loose and run drip down the  
 (22) sides In fact that s what happened here and it puddled in  
 (23) this area So in 1992 we still had material that would flow  
 (24) down as it warms in warm days and puddle on the rock and  
 (25) that s exactly what happened here

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- (1) This is Mr Thebeau again and he s standing in an area in  
 (2) 1992 discussing the fact that we found oil here the asphalt  
 (3) pavement where he s waving his arm and we ll just wait for him  
 (4) to quit talking  
 (5) And we ve pitted various areas across the - across the  
 (6) shore and he s indicating up where we found the tar mat in  
 (7) 92 and that was up in this beneath these berms up here -  
 (8) zoom in - to give you relative perspective on size and shape  
 (9) This is the area  
 (10) Then he s taking a sample again in 1992 Remember how the  
 (11) oil drops came up from the water in 89 this is essentially  
 (12) the same experiment at lower tide level You can see that the  
 (13) material three years later still readily sheens One small  
 (14) shovel full to give you a sheen like this It s easy to  
 (15) conclude that a large portion of the beach has the substantial  
 (16) to yield a large amount of oil in each tidal cycle Not that  
 (17) it does that because the oil doesn t bleed out as readily  
 (18) because it s in the subsurface and the permeability and  
 (19) porosity affects that And we do see sheens In fact we saw  
 (20) sheens here in 1994 as we ll see in a minute  
 (21) This is in 1994 Again the same asphaltic coating We  
 (22) can see picking up areas that are patchy now clean areas  
 (23) between the more continuous coat that we saw in 1992 Spruce  
 (24) leaves still stuck to the tar And the digging crew is on -  
 (25) on site

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(1) Let s freeze this in a minute right about here - right  
 (2) here Maybe this isn t the best place but I want to discuss  
 (3) This is a sample that we dug deeper than we expected to find  
 (4) oil We looked at it carefully and there s a lot of material  
 (5) in here that s very fine grain like silt or clay or  
 (6) something It s impacted There s a rock or pebble here but  
 (7) much of this material is fine grain There s not much grainy  
 (8) structure to it that you would see if it were sandy or granule  
 (9) like which is what much of this beach is made of  
 (10) Roll it forward Freeze right here In fact what I m  
 (11) pointing at with my finger here looked like a woody fragment  
 (12) was stuck here We determined in the field this might not be a  
 (13) typical asphalt pavement might be something else there was  
 so  
 (14) much material it would have to be a solid glob of oil with  
 (15) woody fragments We decided to submit it to the laboratory to  
 (16) see what it was It may be oil debris but it s organic with  
 (17) other sediments  
 (18) Roll the film This is the sandy bottom of it which is  
 (19) more granular Again compare the difference between them  
 (20) This then is exactly the same spot where we found the asphalt  
 (21) pavement In 92 slightly removed and you can see it s almost  
 (22) uniformly granular It s more like a sandy granular material  
 (23) that s glued or held together by the asphalt residues in the  
 (24) oil Much different texture and composition than the material  
 (25) we saw earlier Again you can see that it s held together

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(1) It s still quite oily comes off on your hands but it s I  
 (2) guess bound or glued in place and holds that angle compared  
 to  
 (3) this material which is loose That s much more resistant  
 (4) This is more loose  
 (5) Q Are these the pits that were dug?  
 (6) A Yes This is Mr Thebeau again discussing distribution of  
 (7) pits across the lower portion of the beach I think they re  
 (8) lower than the tidal in this particular photograph and another  
 (9) sheen test The sun angle is very low at this time It s very  
 (10) difficult to see it come to the surface but I think as the  
 (11) shadows move in you can see it with the wave action you can  
 (12) see the movement of the sheen in that area This sheen is also  
 (13) a more silver sheen or a thinner sheen not as strong or  
 (14) concentrated as the sheens you saw before but nonetheless  
 (15) here we are in 1994 and the material is still - still giving  
 (16) off oil  
 (17) Q You re all trying to get in the way of the sun there so the  
 (18) individual you can -  
 (19) A We were trying to use our shadow so you can see Well you  
 (20) can see - when it moves out of the shadow you can hardly see  
 (21) the material in the water It s quite clear there  
 (22) Now we re moving into another location this is the  
 (23) northeast end of LaTouche Island Some of the spots that we  
 (24) visited - please freeze That s good Our special  
 (25) investigation I think this is a good example of beach

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(1) morphology Tide is incoming at this time there s a gentle  
 (2) wind not a major storm You see the debris that s moving in  
 (3) in a nice uniform line across the shoreline The previous  
 (4) tide deposited material here the previous tide Perhaps this  
 (5) is a spring tide larger debris in the back which I doubt is  
 (6) recognizable would be during a storm tide especially if it  
 (7) was a spring tide and a storm in the same day  
 (8) MR OPPENHEIMER May we have a year please?  
 (9) A I beg your pardon?  
 (10) MR OPPENHEIMER I m sorry what year is this?  
 (11) A 1992 And the debris in the back is the shoreline as a  
 (12) result of the 64 earthquake so it doesn t relate to recent  
 (13) modern processes  
 (14) Okay This is a mussel bed This is 1992 same general  
 (15) location These sites are close together in that same area  
 (16) You can see here substantial oil beneath the mussels - shaking  
 (17) the camera sorry about that We re not professional  
 (18) photographers here Anyway we have a mussel cover byssal  
 (19) threads that attach to the mussel and sedimentary area beneath  
 (20) it  
 (21) Here s another pit nearby same thing You can begin to  
 (22) see the oil that works its way up Each of the black dots -  
 (23) go ahead and freeze the frame Each of the black dots that s  
 (24) on the water are actually droplets of oil residue that have  
 (25) come up through the sediment and are floating on the water

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(1) Q In your 1994 trip what did you observe about mussel beds  
 (2) that you saw?  
 (3) MR OPPENHEIMER Your Honor again if it can be  
 (4) limited I have no objection but to the extent it becomes a  
 (5) biological rhetoric My objection is foundation  
 (6) THE COURT Fair enough  
 (7) MR PETUMENOS Judge I m going to ask him what he  
 (8) saw  
 (9) THE COURT Exactly  
 (10) BY MR PETUMENOS  
 (11) Q What did you see when you looked at the mussel beds out  
 (12) there?  
 (13) A This photograph is 1992 1994 went back to the same  
 (14) location and the mussels that were - that were attached to the  
 (15) sediment substrate there were a lot of dead mussels there I  
 (16) would say estimate we visually estimated in a walk through  
 (17) without doing specific sampling on that but approximately 35  
 (18) to 40 percent of the mussels were open and dead including  
 some  
 (19) small clams as well  
 (20) Q What did you observe of the mussels that were not in the  
 (21) area where the oil was underneath them?  
 (22) A That description referred to the mussels that were attached  
 (23) to the sediment substrate Mussels seaward and higher on the  
 (24) hard rock surfaces if you recall some of the scenes we ve  
 (25) shown of this there are bedrock projections out in the open

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(1) water there were fewer killed or fewer dead mussels less  
 (2) mortality On the mussels that were on the outside of the  
 (3) rocks exposed to the open water perched more highly in the  
 (4) intertidal zones there were no dead ones observed there  
 (5) Q Were these mussels that you found live in 1992 when you  
 (6) observed them?  
 (7) A We observed practically no kill prior to 1994 no  
 (8) mortality  
 (9) Q All right go ahead  
 (10) A That's a little creature that swam out there and he's  
 (11) dwelling in this environment I have no idea what it was We  
 (12) could never catch him quick enough to do a good identity but  
 (13) in any event this area is still oiled There's oily material  
 (14) that persists beneath that mussel bed and this environment is  
 (15) being affected by that material This is a slightly deeper  
 (16) pit gives you some idea of the depth and extent and level of  
 (17) coating on the larger rocks that are found in the armor that's  
 (18) beneath the mussel bed These are all mussels  
 (19) Q Say it louder so we can hear you  
 (20) A These are all mussels underneath and this is all mussel  
 (21) type of surface Again the same thing with the sheen on the  
 (22) water and the oily material rising to the surface These are  
 (23) all different locations and different pits  
 (24) This is moving farther upland from that same mussel bed  
 (25) You can see we're getting into an armored vicinity with the

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(1) larger rocks  
 (2) Q That's what you mean by armor when you've got -  
 (3) A Yeah this layering of larger rocks here and the finer  
 (4) grain substrate beneath it This is Dr Kana with us in the  
 (5) field at the time And again the same issue with the oil  
 (6) material oil residue black dots floating up onto the water  
 (7) It's difficult to see from video photography but it's - these  
 (8) rocks are all well oiled  
 (9) And this is the sheen which in a moment you'll be able to  
 (10) see There's surge action It'll come in and you'll see it  
 (11) moving There  
 (12) This sheen was all released through natural processes We  
 (13) did not disturb the beach or cause this to be released at all  
 (14) Further up on the beach underneath some protected areas  
 (15) protective niches you'll see very high concentrations of  
 (16) residue saturated sediments or near saturation There's an  
 (17) example of - that's Peter Bachuella (ph) another one of our  
 (18) crew members - of oil stain on a rock These are all  
 (19) collected near the surface  
 (20) Stop let's go back to that and freeze the frame for a  
 (21) second Forward as it zooms away from the image There  
 (22) you can see the streaks When we came to this site a few  
 (23) of these rocks had already been collected by someone placed  
 (24) on  
 (25) top of this and as far as we could determine the streaks were  
 draining from the rocks that had been left there so as the

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(1) material warms in the sun again it's able to run and drain  
 (2) down across the surface of the boulder Okay go forward  
 (3) Now we're at the same mussel bed in 1949 Stop please  
 (4) This is the same mussel bed in 1994 These are some of the  
 (5) bedrock projections I was referring to earlier where the  
 (6) mussels were healthy as opposed to - no mortality was  
 observed  
 (7) there as opposed to the mussels in the substrate Continue to  
 (8) roll please More of the rocks Stop please This white  
 (9) material up on the rocks here and the fucus and barnacles  
 (10) MR OPPENHEIMER Your Honor I would impose my  
 (11) objection of foundation  
 (12) THE COURT The objections overruled Go ahead  
 (13) THE WITNESS That's very simple the white material  
 (14) that you see lower in the surface are open mussels That's  
 (15) all You can roll the film forward  
 (16) Similarly you can see the shapes there are different  
 (17) angles but open mussels barnacles in the lower portion on the  
 (18) rock  
 (19) This is a pit dug at the same time oil droplets again on  
 (20) the surface released from the sediment with tidal action  
 (21) floating to the surface and exposed  
 (22) Now we're in a different location in 1992 close to the  
 (23) same area but we've moved along Go back to the previous  
 (24) portion Okay what we're going to see in the next portion  
 (25) two things at this site we dug some pits in this lower area

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(1) but what you're going to see next is I'll walk along this berm  
 (2) in the background and see how much oil in our return was  
 (3) captured in that upper berm That's a pretty high storm berm  
 (4) up there and it's an indication of the movement of the oil  
 (5) after storm conditions and high tide conditions in 1989  
 (6) So I'm into that storm berm now You can see the scattered  
 (7) dots on the surface of the storm berm but if you dig into the  
 (8) berm - we move fast through here because we were in a race  
 (9) for time on this particular time period - the occurrence of oil  
 (10) becomes more common There's more of it on the rocks It's  
 (11) more prevalent You can see it in some of the other places  
 (12) Q Did that extend uniformly across the storm berm?  
 (13) A Relatively uniformly Again it's a heterogeneous system  
 (14) but this type of residue was found across the entire storm  
 (15) berm And this is another area You can see it's near the  
 (16) surface here perhaps some protection from the log other  
 (17) material Of course this is oil residue on the other side of  
 (18) the boulder  
 (19) Now we're looking at three pits that we dug in the surface  
 (20) just beneath - well a ways beneath this same berm which is up  
 (21) here so that photograph just oriented you with those three  
 (22) pits and you see we're beneath several tide lines definitely  
 (23) intertidal probably upper mid intertidal  
 (24) Let's go back I'm sorry Missed a point That's good  
 (25) that's good right here

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- (1) Same concept is in place now This is an exposed area on
- (2) the northeast end of LaTouche Island has excellent exposure
- (3) we have cobble armor in places boulder in size Beneath that
- (4) we have this fine grain layer of material so our process and
- (5) the notion of this arming effect with fine grain material
- (6) continues and the base of this pit we have another cobble
- (7) layer which we believe at this point - and I think we re
- (8) still pretty convinced of this - it represents the 1989
- (9) surface
- (10) Again roll forward Freeze
- (11) This cobble was exhumed from the base of the pit and it s
- (12) turned upside down It s heavily coated with mousse As far
- (13) as we could determine in these pits the armor the old armor
- (14) layer that s been stratigraphically or layered beneath it
- (15) representing an older surface Still contains mousse in all
- (16) the pores of the cobble
- (17) Forward I m just explaining it came from the bottom of
- (18) the pit and we see this in three locations Walk to the next
- (19) one now I have still photos of this which I believe are
- (20) exhibits I m not sure but this is all - back up just a
- (21) second - here s a still photo great
- (22) This is where I just had my hand and you can see the mousse
- (23) impregnation in this area Again cobbles on the service finer
- (24) grained materials beneath although you can t really
- (25) distinguish it These are large rocks buried and older

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- (1) probably 1989 surface
- (2) Okay forward And this is a rock again indicating clean
- (3) on one side impregnated with mousse on the other Let s
- (4) freeze the frame for a second here So the process that we ve
- (5) interpreted for this site we have an old 1989 surface fine
- (6) grain material on top of that and another coarse armor
- (7) During severe storms it s likely that the armor itself and
- (8) maybe the fine grain material itself are intermixed and
- (9) agitated This is the mechanism by which the old surface gets
- (10) cleaned on its upper portions We found very little oil on
- (11) this upper portion So we think it s either new sediment
- (12) deposit on top new armor formation and it may be responsible
- (13) for cleaning the upper parts of these guys Whereas this layer
- (14) underneath it still contained oil from 1989
- (15) Okay now go forward Clastic armor fine grain material
- (16) and larger older rocks at depth So this mechanism or process
- (17) now is - is an example of the process that we ve been talking
- (18) about all along The mousse is on the bottom started at the
- (19) other side of that If I turn it over here - I don t recall
- (20) if I do or not - it s cleaner and it came from the bottom of
- (21) the pit
- (22) Same thing again that s the intensity of mousse that we
- (23) find still preserved in these lower lower layers
- (24) Again 1992 at another site this indicates that oil
- (25) reached clear up into the storm berms up into the vegetated

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- (1) areas which is upland in the accumulation well above mean
- (2) high tide It can be squeezed out of the vegetation It
- (3) adheres to the oil
- (4) Q 1992 north LaTouche?
- (5) A Same time frame different stop again approximately a
- (6) hundred yards away It s a boulder we exhumed Again you
- (7) can
- (8) see the oil has drained off and dripped down into this pool
- (9) We intended at this time to visit this stop This is mousse
- (10) impregnation Again this is an occurrence on the surface
- (11) Stop the frame for a second
- (12) At this beach - there are a variety of types here - it s
- (13) a cobble pocket beach in one area and out to the margins you
- (14) get to rocky headlands As you approach the rocky headlands
- (15) you find more protected areas more protected areas and you
- (16) see less oil As you move lateral the oil moves at the
- (17) surface and at depth As you move from the surface that has
- (18) large rocks and protected environment The oil initially on
- (19) the surface is better preserved That s what we have here Go
- (20) ahead and roll it And there it is thicker than mayonnaise by
- (21) now
- (22) Now we ve going to move to the Kenai Fiords We hoped to
- (23) be able to come back and look at that rock after about a week
- (24) of tidal action but we were unable to do that but we were
- (25) able to do it in 1994 at a different site at Morning Cove

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- (1) of our transect sites
- (2) This is May 26th 1994 brown mousse in the bottom of rocks
- (3) similar occurrence to what we saw a little while ago on the
- (4) north end of LaTouche Island
- (5) This is June 2 same rock same place very little
- (6) difference in mousse that was on the rocks After about a week
- (7) or five or six days whatever time we saw the material in 1994
- (8) still persists on the bottom of that rock
- (9) This is one of our transect sites in Shelter Bay We re
- (10) back in Prince William Sound now
- (11) Q CC stands for Chenega Corporation?
- (12) A That s correct Chenega Corporation s property That s a
- (13) pan of the site This is a sample pit that was dug by another
- (14) team that investigated our transect These are rather large
- (15) sampling pits Usually we confine them to smaller areas if
- (16) possible Still get a representative sample but this place
- (17) continues to be sampled Pretty soon there s nothing left to
- (18) study
- (19) Q In other words someone came to your site and dug in it
- (20) that s what you re saying?
- (21) A That s correct Stop for a second What we re showing now
- (22) again is another example of asphalt pavement in 1994 again
- (23) It s difficult to see with the naked eye unless you re trained
- (24) for it This area falls between cobbles and boulders It s a
- (25) close up view and it continues up between these and that s all

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- (1) oil impregnated sediment that s glued together again by the oil  
 (2) residues Continue the tape  
 (3) There it is again you can see the - stop for a second  
 (4) Whoops okay You can see the relief on the face of the  
 (5) pavement where the mousse sediment s been washed away  
 from  
 (6) here This is a rock underneath it And here it is cemented  
 (7) again The cementing properties give it some strength  
 (8) Continue  
 (9) There it is again same spot For scale these are cobbles  
 (10) size about that big and this mat continues around them up  
 (11) through here It would be very easy for a person to walk over  
 (12) that and not see it This area - it s not easy to see but  
 (13) you see if we wiggle the rock here the whole surface moves  
 (14) out to here The whole surface is a pavement  
 (15) That s the sampling Freeze I m standing on  
 (16) approximately the center of our transect perhaps a little bit  
 (17) to the southwest of it and this individual is Mr Dawson at  
 (18) the location we ve just filmed Behind him is an individual  
 (19) called Claire Doyle (ph) and Mr Mundy is over here This  
 (20) asphalt occurs in a zone varying from about four to six meters  
 (21) wide We didn t measure it specifically different amounts of  
 (22) coverage but among all those people that much length across  
 (23) the transect in that direction  
 (24) We can see the large rocks here It s fairly fairly prone  
 (25) to have many protected niches or small areas where they d be

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- (1) protected from wave action That s Mr Mundy there He s also  
 (2) looking at tar mat  
 (3) Q Mr Mundy being the land damage appraiser?  
 (4) A I m sorry Dr Mundy Yes  
 (5) Q Dr Mundy?  
 (6) A In the other direction we found much less Probably as  
 (7) low as a percent cover This is a surface of the rock which we  
 (8) collected oiled moss in 1989 and same material persists here in  
 (9) 1994 The significance of it is the particular work here is  
 (10) how far up in the upper intertidal to upland zone it ll reach  
 (11) during that time freeze All of this is moss that still smells  
 (12) of petroleum in 1994  
 (13) This is Shelter Bay a fairly protected area It s still  
 (14) - at this time adequate wave energy was available to move oil  
 (15) as it came into that bay to the higher elevations above the  
 (16) supratidal or the spray zone into the upland area  
 (17) I think this is about it Go ahead and finish the tape  
 (18) This is the Bay of Isles site Probably everybody s heard  
 (19) about it It s Knight Island 136 Very little minor amount  
 (20) of treatment was done at this location There s some  
 (21) impregnated sediments around the margins pavements that  
 still  
 (22) persist oil in the sediments This gives an excellent example  
 (23) of the skinned mousse phenomena we were talking about  
 earlier  
 (24) Sheen released in the water You can see the sheen  
 (25) This is all skinned mousse right here and close up

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- (1) There s other debris incorporated into this of course but  
 (2) these fractures and cracks have open more fluid material  
 (3) beneath them with an asphaltic skin on the surface As you  
 (4) turn it over you can see it s more fluid underneath  
 (5) (Videotape concluded)  
 (6) MR PETUMENOS Judge we have with agreement of the  
 (7) Exxon lawyers asked to interrupt Mr Bush s testimony to put on  
 (8) a witness that we need to get on today because of scheduling  
 (9) problems  
 (10) THE COURT How long will the witness take?  
 (11) MR PETUMENOS Take 45 minutes I m told  
 (12) THE COURT Direct and cross?  
 (13) MR PETUMENOS Direct and cross?  
 (14) MR FORTIER I think we can end today Your Honor  
 (15) THE COURT Excuse me ?  
 (16) MR FORTIER I believe we can get the next witness on  
 (17) and off the stand by 12 30 (sic)  
 (18) THE COURT Should I give the jury a short break  
 (19) before that?  
 (20) I m going to give you a quick break I have to talk to the  
 (21) parties about the schedule so I ll let you out  
 (22) (Jury out at 12 29 p m )  
 (23) THE WITNESS I m down I guess  
 (24) THE COURT Yes I see that  
 (25) All right the jury s not present Counsel I need to talk

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- (1) to you about a couple of things and I wanted to do it - the  
 (2) question arises because of the new letter from Mr Stapleton  
 (3) what I m going to do with him so tell me What am I going to  
 (4) do with him?  
 (5) MR STOLL Your Honor as far as the plaintiffs are  
 (6) concerned we will - we think that we should release him I  
 (7) think his - pretty clear that he has a real hardship We re  
 (8) also concerned as far as being able to get - have a juror that  
 (9) is thinking - obviously with the extreme financial burden on  
 (10) him keeping focused on the case And perhaps - I don t know  
 (11) which way it cuts frankly resenting one or the other party  
 (12) for keeping you know causing him financial ruin So we think  
 (13) that - we propose the five sixths thing They were unwilling  
 (14) to agree to that Reluctantly we will agree that we still  
 (15) think that he should - he should be released though  
 (16) THE COURT Counsel?  
 (17) MR DIAMOND Your Honor we re - we re not  
 (18) unsympathetic to Mr Stapleton s problems What concerns us  
 (19) though is slippery slope He s not the only one with that  
 (20) problem I believe he s seated next to Mr Sheldon  
 (21) Mr Sheldon told us during voir dire that he has the same  
 (22) problem that this substantially affects his ability to earn  
 (23) enough money in his busy season to tide him over for the  
 (24) winter There are probably other individuals who have now  
 (25) forgotten who indicated similar problems

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- (1) Since we don't have agreement as to what's going to happen  
 (2) if we fall below 12 we're very reluctant to see anybody depart  
 (3) at this point particularly under circumstances in which one  
 (4) departure may well lead to another which may well lead to  
 (5) another  
 (6) I think the -- it's in your lap as to what you want to do  
 (7) but I don't know that we're prepared to stipulate to  
 (8) Mr Stapleton's departure  
 (9) THE COURT Okay I think I'm going to have to let  
 (10) him go I've been watching him through the trial His  
 (11) attention -- he was pretty good for a while He really stayed  
 (12) on it and that's -- as opposed to the juror I just let go  
 (13) Mr Gerwin His level of attention was -- was much different  
 (14) but he's changed in the last couple of days and I -- and I  
 (15) can't help but suspect that part of it is due to resentment  
 (16) He's been consistently trying to get off this jury ever since  
 (17) the beginning He's told you the basis of the hardship My  
 (18) problem was I couldn't really see objectively that -- that it  
 (19) was more than just what his supposition was about what would  
 (20) happen to him  
 (21) The letter from the employer which we received today  
 (22) indicates objectively that he's really going to -- that he's  
 (23) going to suffer hardship The employer will too but I'm not  
 (24) that concerned about the employer's hardship I think that  
 (25) this is going to have a bad effect on Mr Stapleton I think

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- (1) the longer he stays the more resentful he's going to get The  
 (2) way he's been watching this case is -- his attention has  
 (3) lapsed He's now starting to look up at the ceiling He  
 (4) doesn't really show me that he's involved in the case at all  
 (5) That may be because he expects to get off this jury It may  
 (6) also be because he's getting angry at me particularly about  
 (7) the entire process We've got two alternates left and the  
 (8) question ultimately becomes how much time can I expect this  
 (9) case to take so that I don't have to worry about this day in  
 (10) and day out from other jurors  
 (11) Have your estimates of the time that the case will take  
 (12) changed?  
 (13) MR DIAMOND The one significant development was we  
 (14) pursued to conclusion our discussions in chambers yesterday  
 (15) which means that the economic claims the nonland claims will  
 (16) go out  
 (17) THE COURT They will go out?  
 (18) MR DIAMOND Yes That shortens I suspect  
 (19) Mr Stoll's presentation It does not considerably shorten our  
 (20) presentation  
 (21) MR STOLL Your Honor we --  
 (22) THE COURT How many days?  
 (23) MR STOLL Your Honor we think that we will finish  
 (24) the plaintiffs case and we've I think had a generous  
 (25) estimate of their cross examination in -- in no more than nine

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- (1) more trial days  
 (2) THE COURT The plaintiffs case finishes in nine  
 (3) days?  
 (4) MR STOLL That's our present estimate Your Honor  
 (5) THE COURT That gets us to the 28th and we're going  
 (6) to take the 29th off right?  
 (7) MR STOLL We think we'll actually finish on the  
 (8) 27th But it doesn't -- you know in that time zone We --  
 (9) that's correct  
 (10) THE COURT What does Exxon estimate as its time for  
 (11) trial?  
 (12) MR DIAMOND With the caveat that I don't want to be  
 (13) held to this we've -- we plotted out highly probable witnesses  
 (14) and rough estimates of how much time -- and that's going to  
 (15) change depending on what happens in the next nine days --  
 but  
 (16) we're figuring at a minimum 18 trial days right now  
 (17) THE COURT Taking -- I'm not getting --  
 (18) MR DIAMOND Three and a half weeks we figured 17  
 (19) trial days  
 (20) THE COURT Three and a half weeks for your case?  
 (21) MR DIAMOND Yes  
 (22) THE COURT Which puts us where?  
 (23) MR DIAMOND I haven't calendared this because I  
 (24) didn't know what plaintiffs estimate was  
 (25) THE COURT That puts us at the end of August right?

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- (1) MR STOLL It's about the -- I would guess about the  
 (2) 20th of August Judge  
 (3) THE COURT Who is it on the jury that's left that has  
 (4) a problem with the end of August?  
 (5) MR DIAMOND You have -- I forgot her name the last  
 (6) alternate  
 (7) THE COURT Swangler  
 (8) MR DIAMOND Yes Has written you a letter about her  
 (9) departure plans  
 (10) THE COURT The 24th  
 (11) MR STOLL I think that's correct Your Honor I  
 (12) think it's the 24th  
 (13) THE COURT Anybody else?  
 (14) MR DIAMOND Your Honor none come to mind I'd have  
 (15) to go back and check my notes  
 (16) THE COURT Well then it's likely she's going to be  
 (17) gone right?  
 (18) MR DIAMOND If you excuse her it's likely she's  
 (19) going to be gone  
 (20) THE COURT I'm going to let her go on the 24th  
 (21) Well I don't think I've got any alternative but to let  
 (22) Mr Stapleton go huh?  
 (23) MR STOLL Your Honor we -- I think that the other  
 (24) jurors seem to be -- have already been here for three or four  
 (25) weeks now and they seem like they're very interested and

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(1) they - they all seem healthy I mean anything can happen  
 (2) THE COURT That s the next piece of information I  
 (3) have for you Mr Bennett s baby sitter has the chicken pox  
 (4) He s got a - he s got a three month old child and his wife  
 (5) called today and said get home And I said well he can t  
 (6) And he said - he then called and he s a very good humored  
 (7) person and he s trying to work it out and he promised me he d  
 (8) be here tomorrow but I guess the issue is does he get a  
 (9) baby sitter is it communicable at this stage and so it s as  
 (10) complex an issue as some of the issues you re trying I just  
 (11) want you to know that that s - that s the uncertainty factor  
 (12) we have here  
 (13) I m not - I mean I m not proposing to let him go but he  
 (14) may have some specific hardship that would - and some other  
 (15) jurors may have some specific hardship that might require them  
 (16) to take a couple days off I don t know and I ll certainly  
 (17) resist that possibility Okay? So that - that s all I know  
 (18) about it There could be things under the rocks that I haven t  
 (19) seen yet though  
 (20) MR STOLL Just like there s oil under rocks  
 (21) THE COURT Right according to you according to  
 (22) you  
 (23) MS SMITH We object to that statement  
 (24) THE COURT According to you counsel We ll find  
 (25) out

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(1) MR PETUMENOS Judge I just had a comment about  
 (2) something you said yesterday with respect to this jury thing  
 (3) Sometimes if you inform the Court that the fact finding process  
 (4) may be potentially returning to the Court three quarters of  
 (5) the way through the trial that s unfair to the Court I m  
 (6) assuming that - that suggestion made by Exxon yesterday I m  
 (7) assuming that that is an option for the parties if we have the  
 (8) disastrous situation of going below 12 that the Court is  
 (9) sufficiently in a position to take over the fact finding  
 (10) process if that became what the parties desired  
 (11) THE COURT Well I have no statement on that  
 (12) counsel I have to react to you  
 (13) MR PETUMENOS I understand I was just informing  
 (14) the Court of that so we weren t confusing yesterday s remarks  
 (15) of Mr Stoll that s an option we re considering if we lose the  
 (16) 12 jurors rather than retry the case So I didn t think it  
 (17) would be unfair to inform - I didn t want the Court to be  
 (18) under the misimpression that we wouldn t consider it  
 (19) THE COURT Let me tell you something counsel I  
 (20) know what will happen if that occurs if we go below 12 the  
 (21) strategic considerations change and there may not be a waiver  
 (22) I could see that and you can t require that on that basis  
 (23) All right so I think I know - I m going to let Stapleton  
 (24) go at the end of the trial day And I think I m going to get  
 (25) the jury in here and try to explain that the schedule for the

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(1) case has compressed a little bit and that I understand that  
 (2) they re undergoing a hardship too but I ve had to let these  
 (3) jurors go and - and endeavor to get this case to them  
 (4) efficiently Okay?  
 (5) Is there anything else?  
 (6) MR CLOUGH Your Honor if I can bring up one  
 (7) matter  
 (8) Mr Fortier and I were successful in resolving most of our  
 (9) potential objections regarding exhibits for the next witness  
 (10) testimony with the exception of one It regards some  
 (11) foundations that the research maps Sam and I talked about a  
 (12) couple times We haven t reached resolution It might be  
 (13) preferable if we re going to argue it either now or shortly  
 (14) after the break before the jury comes back so we get that  
 (15) resolved It s really only two types of exhibits for this  
 (16) witness A 17 minute video and these maps  
 (17) THE COURT Let s do it now Let s do it now What s  
 (18) the issue?  
 (19) MR CLOUGH Your Honor the nature of the objection  
 (20) is that Mr Rosenthal is an underwater photographer He s  
 (21) going to be presenting a 17 minute film He s going to narrate  
 (22) it like some of the other videos We resolved the issues  
 (23) regarding the film Listed as exhibits for him are four - I  
 (24) don t know the precise - four maps depicting resource areas  
 (25) Apparently prepared by NOAA N O - National Oceanographic

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(1) Atmospheric Administration There s not a date on them  
 (2) There s been no foundation offered by any prior witnesses as to  
 (3) how they re prepared what date they re prepared whether  
 (4) they re current whether they re accurate Apparently  
 (5) Mr Fortier wants to ask this witness some questions about  
 (6) those particular maps He s made some representations to me  
 (7) that what he wants to ask the witnesses is Do you in your  
 (8) work - the witness also has some training as a marine  
 (9) biologist although he doesn t have a Ph D and isn t listed as  
 (10) an expert - do you in your work as a marine biologist rely  
 (11) on these maps? Completely aside from the issue of the opinion  
 (12) testimony from the witness the maps have never had any  
 (13) foundation offered for them whatsoever There s not even a  
 (14) date on them So the objection to the maps is foundation  
 (15) THE COURT Tell me what part the maps play in your  
 (16) examination of this witness Mr Fortier  
 (17) MR FORTIER Well Your Honor the maps play the part  
 (18) that it sets the scene It - the maps illustrate to the jury  
 (19) the sorts of environmentally sensitive areas of Prince William  
 (20) Sound Mr Rosenthal the witness in fact has had some prior  
 (21) dealings with those maps  
 (22) We anticipate laying a sufficient foundation to show that  
 (23) he in fact wrote a report concerning the maps and what the  
 (24) environmental sensitivity of certain areas of Prince William  
 (25) Sound were We don t intend to do that as an expert We only

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- (1) intend to have him state what the facts are that he was out  
 (2) swimming around there that he recorded some things in 79  
 (3) We re going to show a little bit of a video from 92 and a  
 (4) little bit from 89  
 (5) MR STOLL Your Honor if I may just add these are  
 (6) National Oceanographic and Atmospheric Administration maps  
 (7) They re NOAA maps They re not - they re government maps I  
 (8) mean they re not - this is not some -  
 (9) THE COURT Sure but the -  
 (10) MR FORTIER Your Honor if I could there was a  
 (11) stipulation several weeks ago - I didn t bring a copy of it -  
 (12) but there was a letter that was exchanged between counsel that  
 (13) provided the maps that were prepared that were not prepared  
 (14) for  
 (15) litigation that were prepared by government sources were  
 (16) admissible  
 (17) MR CLOUGH Your Honor that wasn t across the board  
 (18) stipulation at least not my understanding  
 (19) THE COURT Wait a minute I don t know how much of an  
 (20) issue there is I only know the importance Is the issue  
 (21) Mr Clough that you don t really know how these maps are  
 (22) going  
 (23) to be used?  
 (24) MR CLOUGH I have no idea why this guy is going to  
 (25) be talking about maps from 79 if in fact that s when it s  
 (26) from There s not even a date on this  
 (27) THE COURT He s there to show - be a sponsoring

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- (1) witness for a videotape showing certain things?  
 (2) MR FORTIER That s correct Your Honor  
 (3) THE COURT Is he going to draw conclusions about the  
 (4) things that are shown on the videotape?  
 (5) MR FORTIER He will not  
 (6) THE COURT So what s he - why is the map showing  
 (7) supposed environmentally sensitive areas part of his  
 (8) testimony?  
 (9) MR FORTIER Well because part of his job Your  
 (10) Honor- not his opinion but part of his job is to go to places  
 (11) and take wildlife pictures He s a wildlife or underwater  
 (12) wildlife photographer These maps show the environmental  
 (13) sensitivity in certain areas of Prince William Sound that he  
 (14) goes  
 (15) THE COURT Objections sustained  
 (16) MR CLOUGH Thank you Your Honor  
 (17) THE COURT Let s get the Jury In I want to be  
 (18) finished with him if we can  
 (19) MR CLOUGH With that we can finish with that I  
 (20) need at least 120 seconds for a break  
 (21) THE COURT Take a deep breath It ll take 120  
 (22) minutes I m not leaving counsel I m enjoining myself  
 (23) MR DIAMOND Your Honor while we have - may we  
 (24) approach side bar and put our agreement on the record?  
 (25) THE COURT Can we do that at the end of the day?

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- (1) MR DIAMOND We certainly can I didn t want to do  
 (2) it in open court and thought I d use up the time  
 (3) THE COURT I just don t want you to be in the middle  
 (4) of it when they come back  
 (5) MR STOLL Clough s back so they can -  
 (6) MR DIAMOND Okay  
 (7) MR CLOUGH Thank you for your indulgence sir  
 (8) THE COURT Sure  
 (9) (Jury in at 12 47)  
 (10) THE COURT All right counsel the jury s present  
 (11) I d like to know something That the witness that has been  
 (12) testifying is not on the stand now and the reason is because  
 (13) for scheduling - because of scheduling difficulties I m going  
 (14) to allow the parties to call one witness out of order because  
 (15) it s a relatively brief witness and I think probably we ll be  
 (16) finished by 1 30 so don t think that that witness is done He  
 (17) will be back the previous witness Mr Bush  
 (18) All right counsel  
 (19) MR FORTIER Thank you Your Honor Plaintiffs call  
 (20) Mr Rick Rosenthal  
 (21) THE CLERK Sir could you attach the microphone and  
 (22) then remain standing for the oath Raise your right hand  
 (23) (The Witness Is Sworn)  
 (24) THE CLERK Please be seated  
 (25) Sir for the record I need you to state your full name?

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- (1) A Yes I m Richard Rosenthal from Langley Washington  
 (2) THE CLERK Can you spell your last name please  
 (3) A R o s e n t h a l  
 (4) THE CLERK And your occupation?  
 (5) A I m a marine biologist and a wildlife nature photographer  
 (6) THE COURT Go ahead  
 (7) MR FORTIER Thank you Your Honor  
 (8) DIRECT EXAMINATION OF RICHARD ROSENTHAL  
 (9) BY MR FORTIER  
 (10) Q Mr Rosenthal can you tell the jury a little bit about  
 (11) yourself how long you ve been a wildlife photographer and  
 (12) about your education?  
 (13) A Yes I m a - have a Bachelor s and a Master s degree in  
 (14) biology and marine biology and course work completed for a  
 (15) Doctorate in marine biology And about 20 years ago I first  
 (16) came to Alaska to - to work in marine biology with the state  
 (17) and the federal government and the university on a consulting  
 (18) basis and was a resident of Alaska for - for over a decade  
 (19) living in Cordova and Homer Sitka and Juneau And the past  
 (20) 12  
 (21) years I ve been doing film work for the BBC and PBS the  
 (22) nature series National Geographic on marine and water related  
 (23) stories for world television and specifically things that  
 (24) live around the water  
 (25) Q Mr Rosenthal are you familiar with Prince William Sound  
 (26) area?

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- (1) A Yes I am Beginning in 1973 74 I was a resident in  
 (2) Prince William Sound and lived in Cordova and had a research  
 (3) boat and a fishing boat and did a great deal of nature walking  
 (4) photography diving and research in Prince William Sound  
 (5) Q Mr Rosenthal what I d like to do is bring up a map on the  
 (6) screen of Prince William Sound and have you point out to the  
 (7) jury some of the places you ve gone over since your time in  
 (8) Prince William Sound in 1973  
 (9) MR FORTIER Could we have up defendants Exhibit  
 (10) 10214 B?  
 (11) BY MR FORTIER  
 (12) Q Mr Rosenthal do you recognize Prince William Sound area?  
 (13) A Yes I do  
 (14) Q Okay Could you show the jury some of the areas you have  
 (15) been?  
 (16) A Well areas that I have been and also that I ve spent a  
 (17) good deal of time in based in Cordova We would periodically  
 (18) on a seasonal basis whether it was research or in cruising  
 (19) Prince William Sound since 74 a great deal of time spent up  
 (20) in this area south of Valdez Arm all in this area and out  
 (21) into the Naked Island group Is that coming across? And the  
 (22) southern part of the Sound Hinchinbrook and Montague Island  
 (23) and down to the western end of the Sound So this area which  
 (24) is probably about half of Prince William Sound I ve spent  
 (25) hundreds and hundreds of days out there whether it s doing

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- (1) Q Mr Rosenthal when we show the video you understand we  
 (2) just want the facts?  
 (3) A Yes I do  
 (4) MR PETUMENOS Show the video and you can watch on  
 (5) your monitor Mr Rosenthal  
 (6) (Videotape Played)  
 (7) BY MR PETUMENOS  
 (8) Q Now were you in - is this a film that you took in Prince  
 (9) William Sound before the spill Mr Rosenthal?  
 (10) A Some of the material came from stock footage I had for a  
 (11) program I did for the State of Alaska the sea school series of  
 (12) high school kids in Alaska so in 1982 we produced that  
 (13) program  
 (14) and I did some shooting in Prince William Sound and a great  
 (15) deal in Southeast Alaska and this is from the air scenes up  
 (16) around Valdez Arm and Columbia Glacier  
 (17) THE COURT Counsel is this the best we can do?  
 (18) MR FORTIER We can see if we have a better film  
 (19) Your Honor  
 (20) THE WITNESS That s jumping all around Did you want  
 (21) me to continue?  
 (22) MR FORTIER Do we have a better one? I think this  
 (23) is what we ve got here today Your Honor  
 (24) MR CLOUGH I might have a copy Your Honor If I  
 (25) have a better one -  
 (26) THE COURT I tell you one thing I don t know about

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- (1) research or diving or taking pictures  
 (2) Q And as a result of that traveling Mr Rosenthal have you  
 (3) become generally familiar with areas of wildlife  
 (4) concentrations?  
 (5) A Most particularly marine animals on the shoreline in the  
 (6) marshes the estuaries and the rocky intertidal and shallow  
 (7) subtidal waters  
 (8) Q How much of your time over the past say 73 to 89 was  
 (9) spent diving in the Prince William Sound area?  
 (10) A Each year we would probably spend up - upwards of maybe  
 (11) a  
 (12) hundred days alone in the field diving and walking the  
 (13) shoreline and reoccupying sites that we were familiar with  
 (14) as - as research stations and wandering as sort of a curious  
 (15) naturalist to understand more about the - the rhythms and how  
 (16) the Sound ticked  
 (17) Q Now Mr Rosenthal did you bring a video with you today?  
 (18) A Yes I did  
 (19) Q What I d like to do with the Court s permission Is show  
 (20) the jury It s Exhibit 247A  
 (21) MR CLOUGH We have no objection Your Honor and we  
 (22) understand the witness would like - will be asked to narrate  
 (23) to it If he could be given the same instruction to please  
 (24) limit the narration to the description of date and location of  
 (25) what the film depicts so we don t get into a problem of -  
 (26) B MR FORTIER

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- (1) the jurors but I m going to get dizzy if I watch this  
 (2) MR CLOUGH Mr Fortier served me with a better copy  
 (3) than this I don t know if I brought it to the courtroom but  
 (4) if I did I d be happy to give it to him  
 (5) THE COURT While you re doing that counsel we re  
 (6) going to go ahead and go We can go on no longer so let s  
 (7) just keep the film rolling  
 (8) THE WITNESS So the northern sea lion the steller  
 (9) sea lion scenes were in an area called the Pinnacles Needle  
 (10) area Montague Strait This is some underwater footage up in  
 (11) the Naked Island group Again the seaweed canopies that  
 (12) overlay the bedrock in Prince William Sound miles and miles of  
 (13) seaweed And the herring in their annual ritual spawning  
 (14) ritual they stage and begin to aggregate in the large  
 (15) schools When they lay their eggs and deposit their eggs  
 (16) they re deposited like snow on the vegetation and the rocky sea  
 (17) bed  
 (18) From the air the white area along the shoreline is the  
 (19) milt and spawn that can run for hundreds of miles on normal  
 (20) spawning years and sea lions and diving birds aggregate  
 (21) around  
 (22) those spawning areas and that is Montague Island  
 (23) And sea otters are another resident of Prince William Sound  
 (24) that are also found in those same shoreline habitats The  
 (25) so called red snapper or yellow eye rock fish is a resident of  
 (26) Prince William Sound and is found as far up as Valdez and

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(1) these colorful bottom scenes are from a place called Danger  
 (2) Island off LaTouche Island in Montague Strait LaTouche  
 (3) Passage the southwest end of the Sound a very pristine high  
 (4) energy system  
 (5) Q Now were you also in the Valdez area following the oil  
 (6) spill Mr Rosenthal?  
 (7) A Yes four days after the grounding of the Exxon Valdez I  
 (8) flew up to Cordova and was working with NOVA the PBS series  
 (9) and with the BBC on a series called Trials of Life and with  
 (10) the State of Alaska So I had my camera systems with me and I  
 (11) was flying over the - the tanker aground on Bligh Reef And  
 (12) this was I believe on March 29th on a Wednesday afternoon  
 (13) I m afraid I can t see very much in that picture either But  
 (14) this is the position of the tanker and the vessels alongside of  
 (15) it  
 (16) Again from the air there s a small fishing boat to the  
 (17) right hand side of the boat the larger vessels There was a  
 (18) good deal of wind on that particular afternoon and there was a  
 (19) lot of streaking of - of the oil from the tanker and the slick  
 (20) was moving in - in a westerly southwesterly direction at that  
 (21) time of day  
 (22) This is the slick when the Exxon Valdez was moved over to  
 (23) Naked Island for repair work and we were working around the  
 (24) perimeter of the ship doing herring spawn and herring egg  
 (25) research and filming

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(1) Some of the sites that we revisited with the State of  
 (2) Alaska biologists and with our film crews were sites that we  
 (3) had occupied and had studied and had done some of our  
 (4) natural  
 (5) history work there like Little Smith Island here This cove  
 (6) was one of our research stations in 1974 through 79 And this  
 (7) is at Little Smith Island and for scale the rubber zodiac  
 (8) boat will show you the extent of chocolate mousse the oil  
 (9) along the shoreline Part of our film crew our research crew  
 (10) or some of the fishermen from Cordova and Homer that were  
 (11) helping us out in terms of vessel support And this chap is  
 (12) one of the commercial fishermen in the area Again this is  
 (13) Little Smith Island  
 (14) Q Approximately what date is this Mr Rosenthal?  
 (15) A That s in early May the first two weeks of May in 1989  
 (16) So we didn t have to stage anything on this particular beach  
 (17) line We just asked handy - the fishermen to walk in and I  
 (18) rolled the camera What you see is what was happening at that  
 (19) day and on that particular beach  
 (20) That s Seal Island which is nearby This is the shoreline  
 (21) as we found it in early May It s much more of a rocky  
 (22) cobblestone shoreline with bedrock and seaweeds and the tide  
 (23) is out here and the shoreline is exposed and so the brown  
 (24) areas are - are oiled areas and it s oiled over the seaweeds  
 (25) and the rocky shoreline  
 (26) Again this is Seal Island in early May of 1989 So I m

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(1) just panning then across the intertidal zone on the low  
 (2) tide You can see the light-colored area possibly up near the  
 (3) woods  
 (4) Booms were used to try to stop - an attempt to stop the  
 (5) oil from impinging on the shoreline And this boom is at  
 (6) Herring Bay on Knight Island and the underwater scenes are  
 (7) underneath the boom The diver is with the Department of Fish  
 (8) and Game and on this particular day and hour the oil was  
 (9) running over the booms and under the booms with the current  
 (10) pushing it under the boom skirts and we found as much oil on  
 (11) the back of the boom as we found in front of the boom And  
 (12) this is an example of the oil in back of the boom You can  
 (13) look up and you re looking up through the water and seeing the  
 (14) forest in the background  
 (15) Now the diver is 20 feet below the surface on this tide  
 (16) level This is high tide The diver is a Fish & Game diver  
 (17) with the asbestos - or with absorbent pads and wiping the  
 (18) seaweed vegetation and rocks and the oil is coming off on  
 (19) the - on the rags and all over our wet suits and dry suits and  
 (20) equipment on this particular day in early May in Herring Bay  
 (21) Again this is on high tide cycle and six hours later  
 (22) this area may be totally exposed to the - to the air as the  
 (23) scene showed it on Smith Island So with the tide going up and  
 (24) down six hours later It will be a different scene  
 (25) The oil off Green Island was entrapping many of the diving

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(1) birds and diving ducks and marine mammals and as we did our  
 (2) beach walks with our camera gear we were routinely finding  
 (3) carcasses in early May And even the red snapper that you saw  
 (4) in that earlier shot sea otters diving ducks diving sea  
 (5) birds  
 (6) MR CLOUGH Your Honor if the witness could from  
 (7) his recollection please endeavor to give us locations  
 (8) THE WITNESS Yes I ll give you a location It s  
 (9) between Green Island and Montague Island on a - on a small  
 (10) rocky island  
 (11) This shot is back on Seal Island in the intertidal zone and  
 (12) actually up into where the sea grasses and above that into the  
 (13) marshy areas  
 (14) Naked Island the - the clean up crew I landed here in a  
 (15) helicopter with Alaska Fish & Game biologists and this was in  
 (16) late April early May and we were viewing and I was filming  
 (17) with video and film gear the clean up effort in McPherson  
 (18) Passage on Naked Island  
 (19) This is in Herring Bay on Knight Island This - this  
 (20) clean up effort that was going on while I sat up on the rocks  
 (21) and as a - an observer and videoed the various efforts to  
 (22) clean the shoreline And at this particular time I was - I  
 (23) was just doing some investigative just - just shoreline walks  
 (24) and looking at clean up effort  
 (25) The same site that the diver was in this is a site at

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- (1) Herring Bay of the boom and the oil behind and in front of the
- (2) boom Now the herring when they spawn again during this
- (3) spring ritual -
- (4) MR CLOUGH Your Honor I think he s going beyond the
- (5) description of the scenes shown
- (6) THE COURT I d like you to confine it to just what
- (7) you saw If this is necessary for - to explain what is being
- (8) seen it s all right
- (9) A Sure all right
- (10) We re seeing the herring spawn deposition in the shallow
- (11) subtidal zone and research going on by the Alaska Department
- (12) of
- (13) Fish and Game biologists And they re inventorying they re
- (14) surveying the amount of egg deposition how much spawn is
- (15) being
- (16) deposited on the seaweeds and on the sea floor
- (17) When a storm or the tide or a disturbance takes place
- (18) underwater these eggs that aren t adhering can be suspended
- (19) in
- (20) the water column and actually wash up on the beaches so you
- (21) may get miles of beaches with spawn up along the shoreline
- (22) looking like a frosting And the biologists here at Montague
- (23) Island in Rocky Bay we were finding not only thousands of
- (24) shore birds that were feeding on those eggs and refueling at
- (25) that point from these eggs as well as resident gulls but
- (26) birds like the surf bird almost the entire northern population
- (27) of surf birds was in that intertidal site only for a two day
- (28) period and gone again This was a scene I was doing for the

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- (1) trials of life the BBC series
- (2) Q And approximately when was this taken?
- (3) A That was in late April of 1989 And I can t see that
- (4) either so - the fishery took place again in the following
- (5) year in 1990 The herring fishery in Prince William Sound
- (6) and I was filming for the State of Alaska a video on the
- (7) herring fishery and the herring ponding the methods and the
- (8) research that was taking place on the - on the herring fishery
- (9) and the herring biology
- (10) So the fishermen are seining for - and this is up in the
- (11) Galena Bay area northern Prince William Sound - they re
- (12) fishing for the herring They re catching them live and then
- (13) they introduce them into ponds and pens and hold them there
- (14) prior to the spawning and then put seaweeds and kelp into the
- (15) pond and hope that the herring will lay their eggs on those -
- (16) on those seaweed substrates So these herring are all destined
- (17) to be taken to a pond or a series of ponds where they re
- (18) enclosed in a netted area and then seaweeds are introduced
- (19) Now the fleet has to move around and this is from the air
- (20) looking into Port Gravina and they will do all the processing
- (21) and grading
- (22) MR CLOUGH If the witness could state what year this
- (23) was also
- (24) A This was 1990
- (25) MR CLOUGH Thank you

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- (1) A Spring of 1990 again with when the herring are
- (2) concentrated in these ponds and net areas where they can have
- (3) the - have the ability to spawn on these commercially valuable
- (4) seaweeds or kelps
- (5) Now the herring do move around a great deal and even
- (6) though we may want to - want them to spawn on a certain
- (7) substrate at times they will spawn in the nets on rocks or
- (8) other types of seaweeds So this is - we were filming the
- (9) various substrates that herring used for - for spawning for
- (10) egg deposition and it s a variety of seaweeds
- (11) Q And when was this Mr Rosenthal?
- (12) A This is 1990
- (13) Q Where is it please?
- (14) A This is up in the Galena area where the pond fleet was
- (15) stationed Port Gravina Galena
- (16) Q And where is that in relationship to the Bligh Island?
- (17) A That s - that s within a few miles of Bligh Island Bligh
- (18) Reef North and south of Tatitlek Narrows in those two
- (19) areas So the commercially valuable seaweeds the giant kelp
- (20) is brought up from Southeast Alaska and flown up or brought
- (21) by
- (22) ship and then hung on - on lines and put into the pens where
- (23) the herring are - are awaiting their spawning ritual They re
- (24) grading and looking at the roe prior to spawning to determine
- (25) the quality of the eggs and the roe and the condition of the -
- (26) of the herring themselves

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- (1) Again the miles of shoreline that from the air and the
- (2) divers involved in their research at this time in taking -
- (3) taking the eggs for research purposes And counting and
- (4) measuring and looking at the amount of - of shoreline that is
- (5) used by herring and quality of the seaweeds and the spawning
- (6) deposition
- (7) Q Now Mr - Mr Rosenthal were you also - did you return
- (8) to Prince William Sound does your film return to Prince
- (9) William Sound in 1989?
- (10) A I didn t hear that
- (11) Q Do you do a return in your film to 1989?
- (12) A Right Yes it does
- (13) Q And do you return to Naked Island?
- (14) A Yes That was one of the research sites that the Alaska
- (15) Department of Fish and Game had for their survey work in May
- (16) of
- (17) 1989
- (18) Q And what sort of survey work was that?
- (19) A That work was determined the amount of spawning
- (20) deposition the sites that the herring were spawning in site
- (21) specific locations the amount of egg coverage and then to
- (22) take those eggs samples subsamples from those seaweeds
- (23) and to
- (24) determine the health and viability of those eggs and to rear
- (25) those eggs to look at - at the success of the - or failure of
- (26) the brood stock and those larvae
- (27) Q Now when you took the pictures in 1990 what was your

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- (1) purpose in doing that as part of the spill?  
 (2) A The purpose was I was part of the research team for the  
 (3) State of Alaska to provide an overview of the techniques of  
 (4) the methodology of the scientific sampling of the fishery and  
 (5) so that not only the researchers and people that were trained  
 (6) to do this kind of work but the lay public could have a  
 (7) firsthand look at - at the fishery and the research in  
 (8) action  
 (9) MR FORTIER Your Honor with your permission what I  
 (10) would like to do is to move for the admission of Exhibit 247A  
 (11) the very bad video with the - with additional permission if  
 (12) you would Your Honor to replace it in the future  
 (13) THE COURT You got it  
 (14) MR FORTIER With my most humble apologies Your  
 (15) Honor  
 (16) MR CLOUGH No objection Provided as counsel knows  
 (17) we agreed on that the actual text of the one to be shown make  
 (18) sure that s the exact text  
 (19) THE COURT Same video better quality  
 (20) MR FORTIER Understood Your Honor much better  
 (21) quality Your Honor  
 (22) THE COURT Wouldn t be hard counsel  
 (23) MR FORTIER I hope not  
 (24) CROSS EXAMINATION OF RICHARD ROSENTHAL  
 (25) BY MR CLOUGH

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- (1) Q Hi Mr Rosenthal I m John Clough I m from down in  
 (2) Juneau one of your former Alaska haunts and I recognize sir  
 (3) that the problems with the machines that was not a quality of  
 (4) your photography whatsoever I ve seen the good version and  
 (5) you re a great photographer  
 (6) A If it is I m out of work  
 (7) Q I have just - partly given the hour and partly given the  
 (8) nature of your testimony - just a couple of points I wanted to  
 (9) go over with you if I could  
 (10) First of all you were explaining about the kelp the oiled  
 (11) kelp pictures that you took at high tide?  
 (12) A Right  
 (13) Q I just want to make sure we re absolutely clear here You  
 (14) had testified that that kelp was exposed to the air I guess  
 (15) whenever we go through the tidal cycle correct?  
 (16) A Exactly  
 (17) Q And it s also at that time exposed to the water surface of  
 (18) the water?  
 (19) A Yes  
 (20) Q And if there s oil on the surface of the water at the time  
 (21) the tide change then that oil on the surface of the water  
 (22) washes back and forth through the kelp every tide change  
 (23) doesn t it?  
 (24) A Yes  
 (25) Q So you weren t trying to imply with that video that all of

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- (1) that oil somehow dropped down from 20 feet above from the top  
 (2) of the sea were you?  
 (3) A No no we were not We were showing what was there  
 (4) Q You showed some - and I apologize some of my questions  
 (5) you probably needed to see the right tape for and I ll either  
 (6) delete them if they make no sense or whatever - you showed  
 (7) some pictures of some of the hot water washing operations you  
 (8) observed?  
 (9) A Yes  
 (10) Q I don t know if the jury was able to see but I want to  
 (11) clarify a couple of things about it The oil was - you know  
 (12) they used the omni booms I guess they call them to wash the  
 (13) oil down off the rocks towards the shore correct?  
 (14) A Towards the - towards the shore or toward -  
 (15) Q Towards the water?  
 (16) A Towards the water  
 (17) Q And didn t they also in fact - if we could have seen a  
 (18) good copy of your video wouldn t the Jury have been able to  
 (19) see pretty clearly that they ran booms around that portion of  
 (20) the shoreline where they were washing the oil down?  
 (21) A Yes  
 (22) Q And the purpose of those booms was to trap that oil as it  
 (23) was coming down off the beach so it doesn t get back all over  
 (24) the Sound again?  
 (25) MR FORTIER Objection Your Honor lack of

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- (1) foundation  
 (2) THE COURT Objections sustained on the same basis I  
 (3) sustained the other  
 (4) MR CLOUGH I withdraw the question Your Honor  
 (5) BY MR CLOUGH  
 (6) Q My other question for you though and in your video  
 (7) doesn t it also show skimmers in operation inside those booms  
 (8) picking up off the surface of the water the oil which the omni  
 (9) boom had washed back down?  
 (10) A I believe it does  
 (11) Q Are you aware sir from your observations out there that  
 (12) the overwhelming majority of shorelines in Prince William  
 (13) Sound 90 percent plus were never ever hot water washed?  
 (14) MR FORTIER Objection Your Honor lack of  
 (15) foundation  
 (16) A I can t address that  
 (17) THE COURT Sustained the objections sustained The  
 (18) jury is to disregard the question  
 (19) BY MR CLOUGH  
 (20) Q You said you spent a great deal of time in the areas of  
 (21) Prince William Sound How much time have you had -  
 (22) MR CLOUGH Can I approach to get a map Your Honor?  
 (23) Probably make this a little easier  
 (24) THE COURT A map?  
 (25) MR CLOUGH One of the many here just a billboard

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- (1) map  
 (2) THE COURT All right  
 (3) MR CLOUGH Which is the one with northeast Prince  
 (4) William Sound? All right Yeah this is it I m going to pop  
 (5) this around a little bit so you can see it as well as the  
 (6) jury - start with the jury okay? It may be easier  
 (7) Mr Rosenthal if you step down Your microphone will just sort  
 (8) of follow with you  
 (9) BY MR CLOUGH  
 (10) Q Now you had said you d been a resident of Cordova for a  
 (11) while  
 (12) A Yes  
 (13) Q And you re generally familiar with these portions here  
 (14) what s called here northeast Prince William Sound?  
 (15) A Correct  
 (16) Q And you had testified earlier that you had spent your time  
 (17) at least some of your time during the herring film in Galena  
 (18) Bay is that correct?  
 (19) A Galena and - and well I can - I ll have to come  
 (20) forward  
 (21) Q Could you show us on the map where that was?  
 (22) A Sure The bulk of the work during - during 1989 -  
 (23) particularly 1990 was in Port Fidalgo and in - and in Galena  
 (24) Bay and in Tatitlek Narrows here  
 (25) Q And in your other experiences in Prince William Sound have

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- (1) you been up into the Galena Bay area?  
 (2) A Oh yes  
 (3) Q And have you photographed up there?  
 (4) A Yes  
 (5) Q I ve taken the liberty of excerpting one scene from your  
 (6) video  
 (7) MR CLOUGH If we could have that put up Joel See  
 (8) if you could identify it We re going to put this up on the  
 (9) screen here  
 (10) MR GROSS Do you know what excerpt you d like?  
 (11) MR CLOUGH Yes Yes I do as a matter of fact  
 (12) It s the one that says mountain on it parts with mountain  
 (13) MR CLOUGH This is from that portion of your video  
 (14) that you had labeled Prince William Sound before the spill  
 (15) Oh we got lucky on the technology okay  
 (16) BY MR CLOUGH  
 (17) Q Can you identify for us where this is sir?  
 (18) A Yeah we re west of -  
 (19) MR CLOUGH I m sorry Joel can you put that back up  
 (20) and freeze it for him? Go ahead  
 (21) A Okay On this particular shot I believe we re looking  
 (22) into Galena Bay here  
 (23) BY MR CLOUGH  
 (24) Q And this would be Galena Bay right here on the map that s  
 (25) marked DX I think it s 15427 (sic 15457)?

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- (1) A Yeah  
 (2) Q And that mountain in the background is that Mount Denson  
 (3) do you know sir?  
 (4) A I can t tell you  
 (5) Q Would that mountain be essentially located somewhere  
 behind  
 (6) the back of Galena Bay?  
 (7) A The back yeah  
 (8) Q And could you pointing to the map here as best you could  
 (9) show us about where that mountain is?  
 (10) A Again this is just my recollection I d have to look at  
 (11) my field notes to determine exactly but I think the view here  
 (12) is we re looking into the bay here here s this narrow area  
 (13) right here The mountain range is somewhere back in here  
 (14) Q That would be somewhere in the gray area which is marked  
 on  
 (15) the map as Silver Lake parcel owned by Chugach Alaska  
 (16) Corporation?  
 (17) A I assume  
 (18) MR CLOUGH No further questions Your Honor  
 (19) THE COURT Mr Fortier did you have any questions?  
 (20) MR FORTIER I have no questions of Mr Rosenthal  
 (21) Your Honor  
 (22) THE COURT Mr Rosenthal you can step down Thank  
 (23) you very much  
 (24) I ll let the jury go for the day Remember don t talk  
 (25) about the case with anybody Including your fellow jurors /

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- (1) don t form of express any opinion on it until it s submitted to  
 (2) you for deliberation  
 (3) I d like you to do me a favor today would you wait in the  
 (4) jury room I need to talk to at least one of you once we  
 (5) recess I ll be right there All right?  
 (6) (Jury out at 1 25 p m )  
 (7) THE COURT Counsel if you have something to discuss  
 (8) on the record I ll be happy to do it with you but I m going  
 (9) to let Mr Stapleton go and I m also going to ask Ms Swangler  
 (10) - I just wanted to remember exactly what her situation is  
 (11) And I may just briefly talk to Mr Sheldon too to find out  
 (12) what his situation is before - so that I can let you know Is  
 (13) that all right if I do that off the record?  
 (14) MR DIAMOND That s fine  
 (15) MR STOLL That s fine  
 (16) THE COURT Do you want to discuss anything on the  
 (17) record?  
 (18) MR DIAMOND Just in terms of pending and unresolved  
 (19) matters there is a motion with respect to the headline  
 (20) exhibits  
 (21) THE COURT That s true  
 (22) MR DIAMOND For use in connection with Dr Mundy  
 (23) The plaintiffs filed a responsive brief We could argue that  
 (24) at any time I suspect  
 (25) THE COURT When does it have to be argued in order to

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- (1) get a ruling?  
 (2) MR PETUMENOS It is late in the direct of the  
 (3) witness that we are calling after Dr - after Mr Bush  
 (4) THE COURT Well Mr Bush is going to be on the stand  
 (5) forever isn't he?  
 (6) MR PETUMENOS Is that directed at me Judge?  
 (7) THE COURT Well no I was actually thinking take  
 (8) five days with a witness on direct they probably feel it's  
 (9) necessary to take five days on cross so it refers to  
 (10) everybody  
 (11) MR PETUMENOS I have about ten minutes of direct  
 (12) THE COURT Excuse me  
 (13) MR PETUMENOS I have about ten minutes left of  
 (14) Mr Bush's direct  
 (15) THE COURT I tell you what as to the matter you  
 (16) wanted to discuss at side bar I'll be happy to come into court  
 (17) and do that but I have to talk to these jurors first  
 (18) MR DIAMOND Okay  
 (19) THE CLERK Please rise this court stands in  
 (20) recess  
 (21) (Recess from 1 27 p m to 1 35 p m )  
 (22) THE CLERK Please rise this court now resumes its  
 (23) session Please be seated  
 (24) THE COURT We're on the record and the jury is not  
 (25) present

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- (1) Counsel I've let Mr Stapleton go I've also talked to  
 (2) Mr Sheldon and he says he has no significant problems So  
 (3) that's one concern that I think may be allayed a little bit  
 (4) Ms Swangler is going for a week long reunion as you know  
 (5) from the jury selection We get down to that end and she's the  
 (6) twelfth juror we're recessing for a week and then - I've  
 (7) already told her that that could happen and she said fine with  
 (8) her So I mean I'm going to - that's what happens in these  
 (9) cases At the end you just really hold them in and that's  
 (10) what I'm going to have to do  
 (11) MR STOLL Is her week the 24th Your Honor?  
 (12) THE COURT The 16th  
 (13) MR STOLL Oh the 16th  
 (14) THE COURT The 16th but it's the 16th through the  
 (15) 23rd then she starts school on the 29th and that would pose a  
 (16) whole new scheduling problem which I'm flexible enough to  
 (17) work around if I have to My suggestion to both of you is take  
 (18) these things into consideration and perhaps shorten your  
 (19) presentation a bit  
 (20) MR CLOUGH I tried to cut back on that last one  
 (21) Your Honor  
 (22) THE COURT I noticed that counsel  
 (23) All right so that's the situation that we have now with  
 (24) the jurors  
 (25) Was there anything else put on the record?

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- (1) MR DIAMOND We were going to - we were going to put  
 (2) our understanding on the record and we can do that in open  
 (3) court  
 (4) THE COURT All right  
 (5) MR DIAMOND The agreement that the defendants have  
 (6) reached with all of the municipalities is that in exchange for  
 (7) a payment of \$700,000 Exxon will receive - Exxon and Exxon  
 (8) Shipping will receive a general release from those defendants  
 (9) for all claims -  
 (10) MR STOLL Those plaintiffs  
 (11) MR DIAMOND I'll sorry those plaintiffs save and  
 (12) except those claims currently being litigated in this court  
 (13) namely the claims of the four villages in Kodiak Island  
 (14) Borough To the extent that an appeal is successfully  
 (15) prosecuted in this Court's summary judgment on diverted  
 (16) services and should that claim go to trial and result in a  
 (17) verdict in favor of the plaintiffs Exxon will receive a credit  
 (18) applied to any damage award before application of attorneys  
 (19) fees and statutory interests of \$175,000 and I believe those  
 (20) are the complete terms that we have agreed upon  
 (21) MR STOLL That's correct Your Honor  
 (22) THE COURT Counsel how many of your witnesses does  
 (23) that drop out of the case or how many - how many days of  
 (24) presentation I suppose  
 (25) MR STOLL I think it dropped out four days of - I

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- (1) mean four days We're still - we're still working with this  
 (2) Your Honor so when I said that we had nine more days we  
 (3) were  
 (4) hoping it'll be shorter  
 (5) THE COURT Yeah I am too I am too Your  
 (6) estimate that had already taken out the time that you would  
 (7) have taken to counter those claims  
 (8) MR DIAMOND As Mr Stoll has frequently reminded me  
 (9) I didn't have a lot of time budgeted to counter those claims  
 (10) We had one expert who was going to deal with the accounting  
 (11) claims and basically cross-examination of his witnesses so it  
 (12) does not reduce our trial estimate appreciably  
 (13) THE COURT Okay All right Is there anything  
 (14) else?  
 (15) MR DIAMOND The only other issue is resolution of  
 (16) the - the outstanding motion with respect to the headline  
 (17) documents and media evidence I think parties preference  
 (18) obviously subject to your ruling is to go along is to do  
 (19) that now if you've had an opportunity to read their papers  
 (20) which came in today  
 (21) THE COURT I haven't had an opportunity to skim it  
 (22) I'd like a little more time just to review it one more time I  
 (23) have a domestic case calendar call at 2:00 and another at  
 (24) 2:30 I'd be done with that at 3:00 I could be ready for you  
 (25) at 3:30 You can argue it at 3:30 Is that acceptable?  
 (26) MR McCALLION Yes judge

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- (1) MR DIAMOND Yes
- (2) THE COURT That s it for today
- (3) MR DIAMOND We were trying to work schedules around
- (4) for tomorrow There is a possibility that we will complete
- (5) Mr Mundy s direct examination shortly before 1 30 If that
- (6) happens I requested of Mr Petumenos that we postpone the
- (7) commencement of the cross examination until Monday morning
- (8) because of the way the straws got drawn last week
- (9) Mr Oppenheimer also has that cross examination and if he
- (10) cross examines Mr Bush for two to two and a half hours
- (11) tomorrow it - it probably is cruel and unusual punishment to
- (12) make him start again with another expert in the late morning
- (13) I think there s no objection from the plaintiffs if we do
- (14) that
- (15) MR PETUMENOS I have no objection if it s a short
- (16) period of time but -
- (17) THE COURT The general rule would be if it s after
- (18) 12 00 I ll probably let you do that If it s before 12 00 I
- (19) probably won t
- (20) MR PETUMENOS That was exactly my position
- (21) THE COURT I anticipated you counsel
- (22) MR PETUMENOS A lawyer for cross examination it
- (23) seems like
- (24) MR DIAMOND You don t want to encourage an overly
- (25) lengthy cross examination of Mr Bush just to make sure we get

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- (1) to 12 00
- (2) THE COURT No comment
- (3) MR DIAMOND We ll see you at 3 30
- (4) THE COURT Thanks
- (5) THE CLERK Please rise This court stands in
- (6) recess
- (7) (Recess at 1 42 p m)

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- (1) I N D E X
- (2) DIRECT EXAMINATION OF JAMES G BUSH  
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- (3) BY MR PETUMENOS 2278
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- (14) CROSS EXAMINATION OF RICHARD ROSENTHAL  
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- (1) STATE OF ALASKA )
- (2) Reporter s Certificate
- (3) DISTRICT OF ALASKA )
- (6) I Joy S Brauer RPR a Registered Professional
- (7) Reporter and Notary Public
- (8) DO HERBY CERTIFY
- (9) That the foregoing transcript contains a true and
- (10) accurate transcription of my shorthand notes of all requested
- (11) matters held in the foregoing captioned case
- (12) Further that the transcript was prepared by me
- (13) or under my direction
- (14) DATED this day
- (15) of 1994
- (21) JOY S BRAUER RPR  
Notary Public for Alaska
- (22) My Commission Expires 5 10 97

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JULY 15, 1994

Please find attached pages 43 & 44 of the Condensed State Trial Transcript for Thursday, 7/14/94. These pages were missing from the original copy provided last evening

Also, you will not find a "page 42" because it is blank.

Sorry for the inconvenience.

Sheila

A handwritten signature in black ink, consisting of several overlapping loops and a long vertical stroke extending downwards.

Look See Concordance Report

UNIQUE WORDS 3,005  
TOTAL OCCURRENCES 12,712  
NOISE WORDS 385  
TOTAL WORDS IN FILE 35 806

SINGLE FILE CONCORDANCE

CASE SENSITIVE

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INCLUDES ALL TEXT OCCURRENCES

IGNORES PURE NUMBERS

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(1) IN THE SUP RIOR COURT FOR THE STATE OF ALASKA  
 (2) THIRD JUDICIAL DISTRICT  
 (4) In re ) Cas No 3-N 89 2533 Civ11  
 ) Anchorage Alaska  
 ( ) The EXXON VALOZ ) Friday July 15 1994  
 ) 3-30 a.m.  
 ( )  
 (8) VOLUME 16 Pages 24-0 through 2609  
 (10) TRANSCRIPT OF PROCEEDINGS (Continued)  
 (11) TAKEN BY JUY  
 (13) BEFORE THE HONORABLE PRINCE S-CRTELL  
 Superior Court Judge

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(1) PROCEEDINGS  
 (2) (Call to Order of the Court)  
 (3) THE COURT Good morning the jury is not present not  
 (4) here counsel They are not upstairs yet so I figured I'd take  
 (5) the proceedings out of the presence of the jury and hope that  
 (6) they'll be here within a few minutes  
 (7) MR PETUMENOS All right Judge I'm only - I'm  
 (8) aware of the fact that the Court likes not to take matters if  
 (9) the jury is waiting but this matter that I want to take up  
 (10) relates to this witness which presumably will be off the stand  
 (11) mid morning  
 (12) I wanted the Court to be aware of what is missing from the  
 (13) testimony as a result of objections made We didn't have a  
 (14) chance to discuss it fully  
 (15) Could I have 1155 please up on the Judge's monitor?  
 (16) We have called witnesses in the form of Dr Peterson and  
 (17) others relating to the harm to the biota that that is caused  
 (18) by certain kinds of cleanup and that evidence is in the  
 (19) record This schematic which was before the jury when the  
 (20) objection was raised is a geologist's schematic attempting to  
 (21) show the jury what oil is left by what kinds of cleanup  
 (22) As the Court will recall there was some testimony about  
 (23) the cost benefit that goes into any clean up decision and the  
 (24) fact that it was - Dr Peterson described the worst of both  
 (25) worlds the two bad alternatives leaving it there or

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(1) intervening in a way that would - that could be harmful What  
 (2) the geologist's information provides is for the different kinds  
 (3) of cleanup what kind of oil is removed which is the physical  
 (4) process that results  
 (5) The first schematic discusses protected and uncleaned The  
 (6) second one discusses the different kinds of what he calls  
 (7) moderate exposure or different kinds of cleaning and what kind  
 (8) of oil that leaves in the environment And the last one is the  
 (9) very aggressive or the tilling of the soil the plowing under  
 (10) of the beach and so forth which takes the most oil out of the  
 (11) environment but also has the most disruption to the beaches  
 (12) That was the point that I have not got into evidence yet  
 (13) that I wanted to get from his - from his expertise which is  
 (14) that there is - there is a weighing between the folks that try  
 (15) and figure out what the biota consequences are versus how  
 (16) much  
 (17) oil is removed and his opinion that - and he has an opinion  
 (18) which I think he is qualified to give that such a substantial  
 (19) amount of oil remains in part two the middle frame there that  
 (20) it doesn't make sense to him to do those sorts of cleanup based  
 (21) upon the amount of oil that it leaves  
 (22) It's the other side of the cost benefit analysis That is  
 (23) testimony that a geologist or beach morphology which is what  
 (24) Mr Bush is He is the one that will testify how much oil  
 (25) remains behind when that technique is used (cannot the) I  
 think we've more than met the test under Wilson because as  
 the

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- (1) Court knows there's a very liberal test in the State of
- (2) Alaska more liberal than the federal court when a witness can
- (3) testify on a subject area and the expert can also rely upon his
- (4) team. And in this case the evidence is clear that there's a
- (5) whole - there's a whole project there's a whole unit from ICF
- (6) which is a think tank. It's interdisciplinary that on his
- (7) team when he did the advice to Chugach when he did his
- (8) special investigating indeed - which is what this relates to
- (9) a specific study to the effect of treatment on beaches - that
- (10) he consulted with these other disciplines in determining the
- (11) cost benefit analysis
- (12) I am mindful of the Court's admonition yesterday to try to
- (13) shorten our case and we could I suppose divide this up and
- (14) call - and they're on the witness list and call the biologist
- (15) that was on this team and say I worked with Mr. Bush and I
- (16) came to the conclusions that this form of treatment given the
- (17) amount of oil it leaves is a bad idea
- (18) I'm trying my best to remove from the witness list that
- (19) biologist and not call him if I can possibly get away with it
- (20) and I think under the Wilson test I've met it that he can
- (21) appreciably help the jury and knows more than the average
- (22) person about this topic. And I believe the record is such and
- (23) we can supplement it if you wish that in prior work as well
- (24) as in this case he has dealt with clean up problems on the
- (25) shoreline has advised clients about that and one of the

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- (1) components of any decision to be made upon how to intervene
- (2) on
- (3) a beach has to be how much oil will be removed and I think
- (4) that that portion of the testimony should be permitted and I'd
- (5) like to go back and pick it up
- (6) THE COURT Mr. Oppenheimer?
- (7) MR. OPPENHEIMER Your Honor procedural suggestion
- (8) There are certain arguments I would make about this that I
- (9) would just as soon not make in front of the witness prior to
- (10) cross. I'm not asking Mr. Bush leave. I do have a suggestion
- (11) which is I don't think it would take much more time if we
- (12) revisited this at the end of the cross and I think my comments
- (13) would perhaps make more sense. I think it might benefit the
- (14) Court to have some more factual information
- (15) THE COURT To have more factual?
- (16) MR. OPPENHEIMER To have a little bit more factual
- (17) information which I think may be developed
- (18) THE COURT I can't - I have to -
- (19) MR. OPPENHEIMER Let me address it on the basis of
- (20) this
- (21) THE COURT If you want me to exclude the witness I
- (22) will because I can't understand - I won't be able to
- (23) understand why you want to do that unless you tell me why all
- (24) right?
- (25) MR. OPPENHEIMER Your Honor this - this map

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- (1) at least through its title to suggest that that is oil which
- (2) typically remains after cleaning processes and the witness
- (3) doesn't have a foundation for that
- (4) And secondarily it is a - it amounts to an opinion
- (5) certainly when it's introduced as to the efficacy of various
- (6) cleaning methods and that is simply not something this witness
- (7) can speak to
- (8) I would also add that I don't believe this is going to
- (9) have - I don't think this goes to the merits but I don't
- (10) think this is going to have an effect on whether Dr. Bakus
- (11) testifies or not. He's still on the list. I think he will be
- (12) testifying. I don't think we're in a situation where - though
- (13) I'd be happy to discuss it with counsel - where we could
- (14) really sit down and shorten things up. I frankly would be
- (15) prepared to try to work something out maybe changing a few of
- (16) the title pieces of getting a stipulation for the basis of its
- (17) admissibility
- (18) If we could really shorten the trial by limiting a witness
- (19) - that's the first I've heard of that. On its face - in its
- (20) current format on the face it looks like a body of testimony
- (21) about this witness isn't competent to give about what oil
- (22) remains after various kinds of cleanup procedures and I just
- (23) don't believe he's in a position to give that kind of
- (24) testimony
- (25) THE COURT You know one of the problems I have here

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- (1) counsel is this was - the objections made some time ago
- (2) The words out of your mouth might be different than the words
- (3) out of the witness' mouth which always happens if you want to
- (4) make an offer of proof. It's going to have to be through him
- (5) You can put him on the stand and I'll listen to the testimony
- (6) and see whether or not in my view it's admissible
- (7) MR. OPPENHEIMER Your Honor I would request that
- (8) we - that we not do that. What I would - what I'd rather not
- (9) do frankly is start early with cross examination. I think
- (10) there are some questions that legitimately go to Mr. Bush's
- (11) experience in the field that I'd like to get into in due course
- (12) of cross examination and frankly I'd not do it through
- (13) repeated process of cumulative offer of proof
- (14) I'm going to be left in an uncomfortable situation of not
- (15) wanting to get in position of doing cross outside of the
- (16) presence of the jury. I renew my request. I realize it is
- (17) inconvenient but I think the Court would better understand
- (18) some of my comments after cross with respect to this issue
- (19) MR. PETUMENOS Judge I don't think that's proper
- (20) procedure. The proper procedure is for me to make an offer of
- (21) proof and if he can attack the offer of proof at the time that
- (22) I make it during my direct he needs to do so. And if he -
- (23) and at this point I believe the state of the record is - is that
- (24) he has not and in the absence of - of valid objection I
- (25) think the Wilson case controls. And my offer of proof is

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(1) adequate under Wilson and if he wishes to undercut the weight  
 (2) of the testimony that he believes it is - the opinion is  
 (3) entitled to that's one thing but we're not talking about  
 (4) admissibility We're not talking about whether the jury gets  
 (5) to hear it at all and under Wilson if the expert can  
 (6) appreciably help the jury and knows more than the average  
 (7) person on the subject areas - as this witness clearly does -  
 (8) it's entitled to be admitted and thereafter if he can reduce  
 (9) the weight of the testimony he's entitled to do so but I'm  
 (10) entitled to a direct that is complete that is organized and  
 (11) that redirect is supposed to be for rehabilitation on  
 (12) cross examination and nothing else  
 (13) MR OPPENHEIMER Your Honor as an attempt to  
 (14) compromise the situation I think Mr. Petumenos is right that  
 (15) he's probably allowed to have his cross proceed uninterrupted  
 (16) Would the Court entertain a motion to exclude the evidence if  
 (17) it's entered now if I can make a showing afterwards? And I  
 (18) would request though that the title be deleted because I  
 (19) think in talking about clean up procedures it's very  
 (20) misleading to talk about a typical description residual of  
 (21) oil It's making a different point  
 (22) THE COURT Well I'd consider that I think I'd have  
 (23) to listen to the testimony and figure out whether or not the  
 (24) exhibit had to be changed or whether it was simply - simply  
 (25) the witness version of what happened as opposed to yours  
 and

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(1) I'm sure your exhibits say things that they don't want in their  
 (2) titles  
 (3) MR OPPENHEIMER I hope so  
 (4) THE COURT Yeah Are you suggesting counsel that  
 (5) you'll simply bypass the objection for now?  
 (6) MR OPPENHEIMER If I have an opportunity if it's  
 (7) appropriate to raise - it may not be necessary after the cross  
 (8) to raise it after the cross  
 (9) THE COURT Yeah that's true  
 (10) MR OPPENHEIMER That would be a procedure acceptable  
 (11) to me  
 (12) THE COURT So the jury gets to hear it?  
 (13) MR OPPENHEIMER Well they've already seen this  
 (14) THE COURT Right I know that You know that's the  
 (15) problem I'm having problems remembering the specific  
 (16) objection because it was so -  
 (17) MR OPPENHEIMER It was a foundation objection Your  
 (18) Honor It went to his status as an expert  
 (19) THE COURT Right so -  
 (20) MR OPPENHEIMER I was quite proud of it It was one  
 (21) of few I had sustained so I cherished it  
 (22) MR STOLL They have a score card over there Your  
 (23) Honor  
 (24) MR PETUMENOS That's part of the story counsel It  
 (25) was sustained when we began talking about the content of the

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(1) exhibit The foundation objection was not made to the title -  
 (2) you'll see this in the transcript - until we were well into  
 (3) it  
 (4) THE COURT It was to a particular question right  
 (5) MR PETUMENOS Right So this business about the  
 (6) title not being right is I think a little late  
 (7) THE COURT Well it's -  
 (8) MR OPPENHEIMER It hasn't been moved into evidence  
 (9) THE COURT Just like you counsel there's been time  
 (10) to think in between  
 (11) MR PETUMENOS That usually - if I have time to  
 (12) think it usually -  
 (13) MR OPPENHEIMER Your Honor if that procedure is  
 (14) acceptable and if I have no motion to bring to the Court I  
 (15) won't after cross  
 (16) THE COURT That's fine Do we have a jury?  
 (17) MR DIAMOND Your Honor before you do that -  
 (18) MR PETUMENOS I have one more thing  
 (19) MR DIAMOND Before you do that Mr. Petumenos has  
 (20) one more thing  
 (21) MR PETUMENOS I have some other sample jars as I  
 (22) told the Court in federal court I was hopeful that by the  
 (23) time we got to the end of this testimony that perhaps I could  
 (24) have them but they are in the jury room in deliberations  
 (25) locked up I don't dare go to Judge Holland and ask him to

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(1) remove some jars of oil while the jury's locked up  
 (2) We're working with counsel If I have additional samples  
 (3) to bring in and show to the jury some of our best samples are  
 (4) there I hope not to have to bring back Mr. Bush to testify to  
 (5) their foundation and authenticity and simply be able to get  
 (6) them in to the jury in the same fashion that we have before  
 (7) The reason for that is these samples that we have left to  
 (8) us are not from some of the areas and from some of the times  
 (9) that are - that really show what the oil is like The ones we  
 (10) have left were later in time farther down the coast things  
 (11) like that and I have - I have some additional samples in  
 (12) other words I want for the jury to be able to see handle and  
 (13) so forth  
 (14) THE COURT So what do you want me to do?  
 (15) MR PETUMENOS I want to put on the record that it's  
 (16) not necessary for me to call Mr. Bush back to testify to the  
 (17) foundation and authenticity of those samples that I cannot  
 (18) bring into court physically because they're in the jury in  
 (19) federal court  
 (20) MR OPPENHEIMER We - we may have - we may have a  
 (21) misunderstanding because I was under the impression that we  
 (22) had spoke about those samples which have already been  
 (23) provided  
 (24) to the jury This may be obviated by colloquy with counsel  
 (25) THE COURT Talk about it That's fair enough  
 MR DIAMOND One final matter that has not been

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- (1) resolved by colloquy  
 (2) Earlier this week Mr Fortier amended his exhibit list  
 (3) designating a new exhibit which was labeled Sediment Samples  
 (4) We sent somebody - actually his partner was good enough to  
 (5) bring the samples over to us yesterday and it turned out It s  
 (6) not one sediment sample there are 35 samples that ostensibly  
 (7) were collected by a witness scheduled to testify today Gail  
 (8) Evanoff  
 (9) We reserve our right to object to the admission of those  
 (10) based on the timing of all of this but we have requested of  
 (11) Mr Fortier to produce those samples so that we can take  
 (12) specimens and have it analyzed He is agreeable to doing  
 (13) that  
 (14) Our difference of opinion concerns the work product  
 (15) privilege and Rule 34 We would like an agreement that - and  
 (16) an order from this Court that I need to share with him the  
 (17) results of the analysis that I perform whether or not I use  
 (18) them in court It s my view that that s my work product If  
 (19) we do use those tests with the witnesses obviously he s  
 (20) entitled to all the backup of the analyses but that decision  
 (21) hasn t been made yet and I need not to have to do that in  
 (22) advance At least that s my view I think we need a decision  
 (23) on that  
 (24) THE COURT I ll give you the decision The decision  
 (25) is that you don t - if you re not going to use the material

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- (1) you don t have to provide the results That s the decision for  
 (2) now But I think there s a secondary question and that is if  
 (3) they provided them to you and you don t use - and you do test  
 (4) them and you don t use the results do they get to say well  
 (5) we gave it to them and you don t see any contrary evidence  
 (6) MR DIAMOND I think that s a risk that a party  
 (7) always takes when it undertakes analysis  
 (8) THE COURT Just as long as you know it s a risk  
 (9) It s a serious risk too  
 (10) MR DIAMOND My eyes are open  
 (11) MR FORTIER Your Honor if I could just a couple  
 (12) other things about the exemplars themselves They re all in  
 (13) jars Each of these tests is in a small mason jar We would  
 (14) like some limitation on the amount of the oil they could take  
 (15) out of each jar I m informed that they just intend to take a  
 (16) little bit but you know I mean we want some in the jar left  
 (17) when we show it to the jury  
 (18) THE COURT You want non destructive testing  
 (19) MR FORTIER They can destroy whatever they take  
 (20) MR DIAMOND It clearly will be non destructive I am  
 (21) told Very small amounts now I didn t ask how many  
 (22) millimeters but the folks I talked to said we re talking about  
 (23) very small amounts of this  
 (24) THE COURT Fine  
 (25) MR DIAMOND And if I could have agreement that those

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- (1) would be produced today we will then be in a position to  
 (2) hopefully get the results back before the trial is over  
 (3) MR FORTIER There s no problem with that Your  
 (4) Honor I m advised though that there should be no more than  
 (5) four grams - 40 grams - no more than 40 grams You Honor  
 (6) taken from each jar  
 (7) THE COURT You can work that out  
 (8) MR DIAMOND We have an expert telling us and I m  
 (9) sure he s right  
 (10) THE COURT Let the lawyers take the samples so you  
 (11) can get your hands dirty  
 (12) MR FORTIER We did bring over Rubber gloves for  
 (13) them yesterday but they didn t want them  
 (14) THE COURT It s going to take some time to get the  
 (15) jury in here I m going to go down and get them okay?  
 (16) THE CLERK Please rise This court stands in  
 (17) recess  
 (18) (Recess time 8 52 a m )  
 (19) (Jury in at 9 12 a m )  
 (20) THE CLERK This court now resumes its session  
 (21) Please be seated  
 (22) THE COURT Good morning everybody  
 (23) DIRECT EXAMINATION OF JAMES G BUSH (Resumed)  
 (24) BY MR PETUMENOS  
 (25) Q Can I see Exhibit 1155 please?

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- (1) Mr Bush this jury has heard some testimony from other  
 (2) witnesses in the ecological biological area regarding the  
 (3) decisions being made about treatment and how it can affect the  
 (4) biota I don t want to ask you about that part of the  
 (5) question which is what can happen to the biota with certain  
 (6) kinds of treatment What I do want to ask you about is with  
 (7) respect to the hot water wash and some of those minor  
 (8) mechanical means of treatment  
 (9) What you can tell us as a geologist relating to how much  
 (10) oil is left behind in the subsurface when those treatments are  
 (11) applied? And if you could do that using Exhibit 1155 please  
 (12) A Yes Well Exhibit 1155 is a simplified illustration that  
 (13) provides general insight into the kinds of things that can  
 (14) happen after certain remedial actions that were taken on the  
 (15) shorelines and it generalizes and it s principally -  
 (16) principally applies to the gravel type or mixed sand and gravel  
 (17) type of shorelines  
 (18) Q Can you - let me see if I can get this middle one up here  
 (19) which is the one I wanted you to talk about in particular As  
 (20) I understand it - or what does this schematic intend to  
 (21) represent to the jury with respect to such cleaning mechanisms  
 (22) as washing and light mechanical work?  
 (23) A For example if the shoreline in this category was  
 (24) initially heavily oiled had minor tilling may have happened  
 (25) in certain areas by mechanical equipment backhoe perhaps or

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(1) small bobcat something along those lines or piece of  
 (2) equipment with rippers in the beach the margins or sites of  
 (3) most of the gravel beaches are usually transitional  
 (4) environments into bedrock for example or rocky headlands  
 In  
 (5) those areas certain portions of the equipment for example the  
 (6) rippers or backhoe blade are less effective than they are in  
 (7) areas of central portions of the beach for example where it s  
 (8) more deeply laden with sediment  
 (9) So if the area is fairly uniformly oiled to begin with as  
 (10) you see in the frame of this illustration to the left there ll  
 (11) be places where the equipment has intermittent effectiveness  
 (12) and it misses certain areas either due to the inability of the  
 (13) equipment to work in some areas because of bedrock and large  
 (14) rocks creating sort of a cleaning shadow instead of a wave  
 (15) shadow or it may be due to just the design of the equipment  
 (16) itself or the depth of penetration As a result you have  
 (17) partial removal of material or partial excavation and  
 (18) incomplete - incomplete effectiveness  
 (19) Q So you will have whatever the effects that the biologist  
 (20) will tell us happened when this kind of mechanism is used plus  
 (21) you will have a fair amount of oil in the subsurface remaining?  
 (22) THE COURT Don t answer  
 (23) MR OPPENHEIMER Your Honor objection on two  
 (24) grounds  
 (25) One he s not competent to tell us definitely there s no

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(1) are heterogeneous A piece of equipment generally is not And  
 (2) so as it encounters different environments along the  
 (3) shorelines it s going to be more or less effective in certain  
 (4) areas The amount of oil that s left depends upon the  
 (5) relationship of what the equipment does the nature of the  
 (6) shoreline type the depth of the oil to begin with For  
 (7) example this thing might be - might have depths in the order  
 (8) of penetration of 40 centimeters in some locations If  
 (9) clean up exercises excavate sediments to the depth of 20  
 (10) centimeters then they re partially effective What this is  
 (11) indicating is what we observed in certain areas So it depicts  
 (12) that and that can be extrapolated to other sites to the extent  
 (13) the sites are comparable  
 (14) Q So you actually observed sites that had been subject to  
 (15) this kind of treatment and you actually observed situations  
 (16) that had oil in the subsurface as depicted in this chart?  
 (17) A That s correct  
 (18) Q And when we talk about the treatment techniques they from  
 (19) a geological standpoint certain techniques work best with  
 (20) certain kinds of beaches Is that the point you ve been trying  
 (21) to make?  
 (22) A I think you have to define the word techniques again  
 (23) Generally speaking that s the idea Obviously certain types  
 (24) of equipment would be more effective in certain areas the  
 (25) treatment programs are designed that way

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(1) foundation for testimony about how a biologist will interpret  
 (2) this data with respect to species and I would make the  
 (3) objection as to the caption going to the same issue where it  
 (4) talks about the effect on the species  
 (5) And secondly this is - this I believe graph is not  
 (6) intended to depict the amount of oil which remains on some sort  
 (7) of typical basis I don t believe Mr Bush has testified to  
 (8) that so it misstates his -  
 (9) MR PETUMENOS I waive argument  
 (10) THE COURT The objection s overruled  
 (11) MR PETUMENOS You can answer the question  
 (12) Mr Bush  
 (13) THE WITNESS Please restate the question  
 (14) BY MR PETUMENOS  
 (15) Q The jury will understand from other testimony whatever  
 (16) effects these treatment techniques have on the biota or on the  
 (17) creatures but in addition to whatever effects they might have  
 (18) what does this schematic depict with respect to the amount of  
 (19) hydrocarbons it leaves in the system?  
 (20) A Again for - for shoreline that s oiled heavily oiled to  
 (21) begin with as it is indicated in the illustration to the left  
 (22) it s really the depth of penetration for the equipment is more  
 (23) the determining factor for example and the amenity of the  
 (24) shoreline type to that particular type of treatment  
 (25) I guess the point to be made here is that the shorelines

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(1) Q The beaches themselves let me just say they re  
 (2) heterogeneous  
 (3) A Heterogeneous  
 (4) Q Does that mean - does that mean they re not across a given  
 (5) stretch of beach you can t find the ideal beach for different  
 (6) kind of treatment very often?  
 (7) A No You may find ideal beach but across a section of  
 (8) beach there may be variations in and out of that range of  
 (9) uniformity  
 (10) Q Now we had some testimony about finding oil and the  
 (11) trained eye and all that yesterday Could you comment for the  
 (12) jury on whether in your investigations throughout Prince  
 (13) William Sound the lower Kenai and Kodiak whether there  
 (14) were - whether a - the oiling that you found and observed was  
 (15) obvious enough that an untrained person would know that the  
 (16) oil was on their property?  
 (17) A You re asking me can untrained people find oil on the  
 (18) shorelines?  
 (19) Q Yes or does it take someone like you to - with your  
 (20) degrees and expertise to find it on the property?  
 (21) A Well in fact we were directed towards the oil by other  
 (22) persons during the 94 field program so it does not require a  
 (23) degree or any special expertise to find the oil Obviously a  
 (24) little common sense is required but you don t have to be an  
 (25) expert

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- (1) Q What kind of people were directing you to the oil were any  
 (2) of them property owners?  
 (3) A Yes  
 (4) Q And the other thing I wanted you to comment on you were in  
 (5) the Windy Bay area in 1994?  
 (6) A Yes we were  
 (7) Q And did you – what did you find when you went to those  
 (8) areas in 1994 in the Kenai Fiords – and Windy Bay is in the  
 (9) Kenai Fiords?  
 (10) A Well southern end of the Kenai Fiords southwest in the  
 (11) lower Kenai or upper end of the peninsula depends how you  
 (12) look  
 (13) at it but yes my recollection is we stopped at two sites in  
 (14) the Windy Bay area and found oil residues in a rebel slope at  
 (15) one site and then along a small – I'd say relatively protected  
 (16) gravel beach in another area  
 (17) Q And then lastly have you had the opportunity to review  
 (18) time lapse photography of wave energy and – and the status of  
 (19) beaches over a long period of time on film?  
 (20) A I've reviewed some I haven't reviewed extensive amounts  
 (21) of those but I have seen some of the photography yes  
 (22) Q Could you comment for the jury on whether or not this –  
 (23) one of the things I wanted to ask you is you came back year  
 (24) after year and found the presence of oil despite the fact that  
 (25) there have been storms over time?  
 (26) A That's correct

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- (1) Q And could you comment upon how this time lapse  
 (2) photography  
 (3) whether or not it is – it depicts a necessarily accurate  
 (4) picture of how the beaches rework themselves with respect to  
 (5) the persistence of oil?  
 (6) A Well a photograph is a photograph Usually they're pretty  
 (7) accurate providing the camera hasn't been moved or  
 (8) something  
 (9) like that But – but in high speed films or in time lapse  
 (10) photography that's speeded up so you can see it it can be  
 (11) misleading and I think you need to look at it carefully And  
 (12) to interpret the results I think you need to have some  
 (13) understanding about the different environments in the shoreline  
 (14) to be able to distinguish berms and mobile portions of the  
 (15) beach that are expected to be mobile from those that are more  
 (16) more stable or less less mobile  
 (17) Q Are some of the things that you see moving around rapidly  
 (18) in a time lapse photography scenario thing that would  
 (19) necessarily affect the persistence of oil on a beach like a  
 (20) log or something like that?  
 (21) A Well obviously if you have an oiled storm berm and the  
 (22) storm berm is reworked excessively there's going to be a lot  
 (23) of oil removal and a lot of mechanical agitation Something's  
 (24) going to happen from that but the sediments beneath the storm  
 (25) berm or other vicinity of the beach more stable less reworked  
 (26) and upper surface of those can be reworked without changing the  
 (27) lower surface and oil will be retained in the lower surface

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- (1) That's exactly what we observed  
 (2) Well this previous exhibit for example also refers to  
 (3) sites that have various levels of agitation to shoreline those  
 (4) are – agitation or beach turnover doesn't happen deep enough  
 (5) the oil remains  
 (6) Q And finally before we turn to your final conclusion when  
 (7) oil remains in the subsurface is it out of sight out of mind  
 (8) something we don't have to worry about or does it become –  
 (9) does it come back into the environment over time? Could you  
 (10) explain to the jury how –  
 (11) A Well yes I think we – we examined some sites for  
 (12) example at Squirrel Island where sheen has been released  
 (13) There are other sites where oil is in the subsurface that with  
 (14) the tidal action we have 10 12 15 sometimes 18 foot tidal  
 (15) ranges With winds and storm activity the tidal range can be  
 (16) enhanced so to the extent that you have that kind of hydraulic  
 (17) head flushing up and down a shoreline even though the oil is  
 (18) at depth small amounts of sheening small amounts of material  
 (19) are released through these processes During the storms  
 (20) during beach turnover each time it scours it more deeply and  
 (21) begins to affect and remove the oil that's at depth it's  
 (22) brought back into the environment  
 (23) Q All right Now in making your conclusions about  
 (24) persistence let me make sure I understand what it is that you  
 (25) have considered Did you consider the composition of the beach

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- (1) involved?  
 (2) A Yes we did  
 (3) Q Did you consider the exposure to the ocean that the beach  
 (4) had?  
 (5) A Yes  
 (6) Q And did you consider the degree of oiling that is how  
 (7) much oil was present on the beach?  
 (8) A As presented in – in available data bases mapping data  
 (9) bases that's correct we did  
 (10) Q All right Could we see Exhibit Number 1280 please?  
 (11) Now exhibit 1280 in the first column talks about what  
 (12) factor that we're talking about where it says marshes  
 (13) A I'm sorry it talks about the beach factor yes It talks  
 (14) about the beach type  
 (15) Q And then you have here three different kinds of exposure to  
 (16) oil?  
 (17) A That's correct  
 (18) Q All right And could you explain then – we'll take  
 (19) moderate oiling here We're at moderate oiling in a marsh  
 (20) What you have done with this little graphic that we see for  
 (21) your final conclusions on the persistence of oil?  
 (22) A Yes this – this graph is an indication of a term we'll  
 (23) call recovery You can see that – that it takes for example  
 (24) in this particular graph we've – we've achieved a – well  
 (25) I'm sorry these graphs have been changed I'm used to  
 (26) looking

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- (1) at these in terms of recovery These graphs indicate the Y  
 (2) axis the percentages  
 (3) Q The Y axis meaning the vertical one?  
 (4) A Yes The percentages indicate impact residual impact from  
 (5) the contamination So at the top of the Y axis the vertical  
 (6) axis we have a hundred percent which indicates right  
 (7) immediately after the spill and at 75 percent some recovery  
 (8) 25 percent recovery in that sense 50 percent is at five  
 (9) years  
 (10) We have a dashed line there indicating that we put a break  
 (11) in slope there where we believe that the final stages of  
 (12) recover require a longer period of time I think the point to  
 (13) make on this is that the initial few years of recovery from an  
 (14) oil spill are rapid There s a tremendous amount of oil on the  
 (15) shorelines The percentage of removal of that material is  
 (16) rapid and the onset of recovery is rapid from the immediate  
 (17) mortality effect  
 (18) The final stages however taper off on these long tails  
 (19) and that refers to removing oil through wave shadows the oil  
 (20) that is still buried at depth and the recovery of species that  
 (21) take several years to rebound  
 (22) Q All right And in the case of marshes have we selected in  
 (23) marshes the kind of beach environment that has the longest  
 (24) persistence according to your conclusions as opposed to  
 (25) other beach types?

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- (1) have here in exhibit 1275?  
 (2) A These are sheltered rocky shores Again this refers to  
 (3) the classification that was devised by NOAA some time ago I  
 (4) might point out that Larry Thebeau is one of the field mapping  
 (5) team members for NOAA when they mapped the Shelikof  
 Straits  
 (6) Alaska Peninsula coastlines and at that time there were  
 (7) certain aspects of sheltered rocky shores and gravel beaches  
 (8) that weren t recognized  
 (9) More recently the same firm that works for NOAA who  
 (10) devised this process has recommended subdivided sheltered  
 (11) rocky shores into more or less two sensitive - a more  
 (12) sensitive category and a less sensitive category That s still  
 (13) in the process of investigation  
 (14) Q Now could we split the screen please and put up exhibit  
 (15) 1276?  
 (16) 1276 that we see is called exposed tidal flats?  
 (17) A That s correct  
 (18) Q Now the term exposed and tidal flats the first word  
 (19) that we have there is that - and sometimes you use the word  
 (20) as we ll see here in a minute sheltered Does the - I  
 (21) didn t do that did I? Does the term sheltered versus  
 (22) exposed take into account one of the factors that you are -  
 (23) that you were considering for your persistence conclusions?  
 (24) A That s correct The notion of exposure to a large water  
 (25) wave generation area is incorporated in these shoreline types

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- (1) A That s correct We should - we should be clear that the  
 (2) beach types that we used here are the 10 NOAA beach types  
 (3) that  
 (4) have been devised through consultants that have worked for  
 NOAA  
 (5) approximately 15 years ago And this is one of those ten  
 (6) types We have then ten of them that we ll be working with  
 (7) so that s correct It is the most sensitive or the highest  
 (8) ranking on the vulnerability index  
 (9) Q What we re going to do in the subsequent exhibits is go  
 (10) through the different kinds of beach types and the persistence  
 (11) estimates or persistence conclusions that you ve made  
 (12) Could I see exhibit 1279 please?  
 (13) What is 1279?  
 (14) A 1279 is the next sensitive shoreline type It s referred  
 (15) to as sheltered tidal flats  
 (16) Q Did you go through the same process in reaching your  
 (17) conclusions?  
 (18) A Yes we did  
 (19) Q Could I see Exhibit 1275 please? And for the jury we  
 (20) have endeavored to go through and place in order in terms of  
 (21) the most sensitive or the longest persistence conclusions to  
 (22) the - the beaches that recovered the most quickly  
 (23) A That s correct  
 (24) Q So we re putting them in those order aren t we?  
 (25) A So far  
 (26) Q So far okay Stop me if I make a mistake What do we

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- (1) Q So that we don t just - we don t just consider what kind  
 (2) of beach like a tidal flat or a rocky shore we also consider  
 (3) wave energy?  
 (4) A That s correct yes  
 (5) Q Could we go to the next exhibit please 12 -  
 (6) A Actually before we go to that one we should point out  
 (7) that another modification to the scheme included two types of  
 (8) exposed tidal flats and two estimations of sensitivity in  
 (9) different areas  
 (10) To simplify this whole process we ve left them at this  
 (11) particular location in the vulnerability scheme but also there  
 (12) are other types of tidal flats low biomass types of tidal  
 (13) flats for example or ones that are considered to be - have a  
 (14) different sensitivity different locations and they re  
 (15) positioned differently in the scheme We ve left it here as a  
 (16) matter of convenience  
 (17) Q You ve made even finer distinctions than that is that what  
 (18) you re saying?  
 (19) A We have not made finer distinctions others have  
 (20) Q The next exhibit please 1277  
 (21) What is 1277?  
 (22) A Gravel beaches  
 (23) Q Same story This is a different -  
 (24) A I beg your pardon?  
 (25) Q Same story This is a different kind of beach

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- (1) A Major shoreline type primarily cobble boulder beaches  
 (2) very common in Prince William Sound and other impacted areas  
 (3) and generally low in matrix low in sand in comparison to the  
 (4) next category  
 (5) Q Okay Exhibit 1278?  
 (6) A Mixed sand and gravel beaches which of course includes  
 (7) the matrix material as we talked earlier about that that is  
 (8) the difference in permeability or the potential difference in  
 (9) permeability  
 (10) Q Exhibit 1274?  
 (11) A Coarse grain sand beaches  
 (12) Q 1273?  
 (13) A Fine grain sand beaches  
 (14) Q Is that one of the beaches we saw for example down in the  
 (15) Shelikof Straits when we were looking at those photographs?  
 (16) A That s - that is correct  
 (17) Q Exhibit 1272 what is an exposed wave cut platform?  
 (18) A Well that s a - that s another beach type that consists  
 (19) of either bedrock or resistant sediment dominated surface  
 (20) that s been planed off or generally planed off and carved to a  
 (21) gentle slope by wave action and tidal action currents and so  
 (22) forth on which we have typically a veneer of sediment a  
 (23) veneer of sand and gravel  
 (24) Q Exhibit 1271?  
 (25) A These are exposed rocky shores

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- (1) Q And the exposed rocky shores are the beaches that are most  
 (2) likely to recover the quickest is that correct?  
 (3) A That s correct  
 (4) Q Now could we add on top please exhibit 1280?  
 (5) If we then were to take exposed rocky shores and light  
 (6) oiling on the bottom and marshes and heavy oiling on the top  
 (7) would the jury then have the two extremes in the conclusion  
 (8) that you ve made for persistence of oil in the nearshore  
 (9) environment?  
 (10) A Yes they would  
 (11) Q Now this information then is this the information then  
 (12) that was turned over to Dr Mundy the land damages appraiser  
 (13) for his use in his calculation of the monetary damages that the  
 (14) jury will hear later in the trial?  
 (15) A Yes this is the information  
 (16) Q Now you ve also prepared some maps called property oiling  
 (17) maps am I right?  
 (18) A That is correct  
 (19) Q Showing the jury 1161 a property oiling map for the  
 (20) entirety of Prince William Sound we ll just let you sit there  
 (21) - and I realize the jury can t see the legend here but we  
 (22) can describe it for them so that they can understand it when  
 (23) they deliberate - but these property oiling maps give the jury  
 (24) a - a picture of the heavy medium and light oiling that we ve  
 (25) seen in your - your persistence conclusions and you ve mapped

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- (1) them in each area am I right?  
 (2) A I believe so I can t see the key from here but I believe  
 (3) you ve characterized that correctly  
 (4) Q Do you want to come down and make sure then? Let s be  
 (5) precise  
 (6) A This does it demonstrate the different categories or does  
 (7) it -  
 (8) Q It says heavy oiling medium oiling very light oiling and  
 (9) unsurveyed  
 (10) A You re correct  
 (11) Q It s called property oiling Prince William Sound Alaska?  
 (12) A That s right  
 (13) Q And then we have in exhibit 1306 the same map essentially  
 (14) as Exhibit 1161 but with the western Prince William Sound  
 (15) section blown up Is that what we have for the property  
 (16) oiling?  
 (17) A That is correct That allows the western or what we call  
 (18) the target area of the Sound properties to be more easily  
 (19) seen  
 (20) Q I ll bring it closer just one time to show the jury  
 (21) There s the key and there s the different colors on the borders  
 (22) of the map and how you can use it  
 (23) As I go through the final two maps for this purpose -  
 (24) whoops going the wrong direction here- tell the jury for all  
 (25) of these maps what the source of the data was that you used to

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- (1) come up with these estimates of the various kinds of oiling?  
 (2) A These maps plot oiling as depicted in our - I should say  
 (3) better as recorded in our composite oiling data base and that  
 (4) has screened all of the major joint survey programs including  
 (5) ADEC s walk a thon or beach walk data set and the SCAT2 data  
 (6) set from Exxon and has compiled all those as I described to  
 (7) you earlier and plotted them in the appropriate shoreline  
 (8) segments  
 (9) Q Did it also include other data that you were able to come  
 (10) up independently with?  
 (11) A In addition to those - yes In addition to those GIS data  
 (12) sources we have interviewed a number of property residents  
 (13) and  
 (14) personnel who ve worked on various clean up crews and were  
 (15) able  
 (16) to include data that we could present in line format By that  
 (17) I mean the data you can see that s shown in colors along the  
 (18) shoreline for various parts of the Alaska Peninsula and some  
 (19) other areas in Prince William Sound vicinity based on their  
 (20) descriptions and discussions affidavits photographs and so  
 (21) forth  
 (22) Q Exhibit 1163 - excuse me Exhibit 1162 is the same  
 (23) property oiling map for the Lower Kenai and Kenal Fiords?  
 (24) A That s correct yes And I think it extends up into  
 (25) Kachemak Bay  
 (26) Q Now with respect to the Kodiak area you have - rather  
 (27) than when you were working with the damage appraiser there it

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- (1) was a different person did you simply map oiled and - oiled  
 (2) shoreline as opposed to the degrees of oiling for Kodiak?  
 (3) A No In the Kodiak vicinity we - we did do that but in  
 (4) addition to that we - we were able to obtain additional data  
 (5) from the Alaska Department of Fish and Game which is plotted  
 (6) on a dot basis and then data that relates to the clean up  
 (7) activity was undertaken by the Veco crews Veco being a  
 (8) subcontractor who managed those and plotted that data on a  
 more  
 (9) or less site specific basis along the shorelines  
 (10) MR PETUMENOS I m not sure Judge I have that map  
 (11) in the courtroom but perhaps with counsel we can work out a  
 (12) stipulation with respect to that  
 (13) THE WITNESS I didn t follow that  
 (14) MR PETUMENOS I was talking to the Judge The  
 (15) Judge probably didn t follow it either but -  
 (16) A The data that are plotted there as triangles and as dots  
 (17) are approximately located because the information we were  
 given  
 (18) through these other field efforts were not very - or were not  
 (19) precisely location specific so those are approximate  
 (20) locations  
 (21) BY MR PETUMENOS  
 (22) Q Yeah Explain that to the jury the kind of data that you  
 (23) got that resulted in the triangles Tell the jury more about  
 (24) what that data was and why you used triangles instead of  
 (25) lengths of shoreline with colors on them

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- (1) A Well we - the reason we used triangles and dots we  
 (2) wanted to be able to to distinguish between the data that was  
 (3) provided from the Veco efforts versus the data that was  
 (4) obtained through Fish & Game references The data that we  
 (5) received for example from the Veco efforts were field  
 (6) clean up crew reports that were submitted to management or to  
 (7) crew leaders and they reference a specific segment or  
 (8) shoreline area or use local nomenclature for certain beaches  
 (9) which makes it difficult to precisely locate them We were as  
 (10) critical as we could be with the data but still there was a  
 (11) limit as to how well you can work with it and so our locations  
 (12) are sometimes within 50 yards sometimes maybe a quarter of  
 a  
 (13) mile  
 (14) MR PETUMENOS Judge Shortell I have no further  
 (15) questions  
 (16) THE COURT Counsel do you want a break or do you  
 (17) want to go ahead?  
 (18) MR OPPENHEIMER We do have a have a few maps to set  
 (19) up so perhaps a break Your Honor  
 (20) THE COURT Okay we ll take a break  
 (21) THE CLERK Please rise this court stands in  
 (22) recess  
 (23) (Jury out at 9 31 a m )  
 (24) (Recess at 9 31 a m to 9 47 a m )  
 (25) (Jury in at 9 47 a m )

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- (1) THE CLERK Please rise This court now resumes its  
 (2) session  
 (3) Please be seated  
 (4) MR OPPENHEIMER Mr Bush good morning  
 (5) CROSS EXAMINATION OF JAMES G BUSH  
 (6) BY MR OPPENHEIMER  
 (7) Q My name is Randy Oppenheimer I m going to be asking you  
 (8) some questions this morning in connection with Exxon s case  
 (9) You ve heard this a lot but I m going to ask you not to get  
 (10) too comfortable yet I have a few maps I d like you to point  
 (11) out some locations on I ll come out from behind one  
 (12) A You want me to come down?  
 (13) Q Would you please?  
 (14) A (Witness leaves the stand )  
 (15) Q Thanks Now I d like to get a better sense of where some  
 (16) of your investigations took place And one of the first things  
 (17) I want to ask you you came south in some of your trips down  
 (18) onto the Alaska Peninsula is that correct?  
 (19) A That is correct  
 (20) Q Is that where Puale Bay is?  
 (21) A Yes  
 (22) Q Now Puale Bay to your knowledge is not a land parcel in  
 (23) this case is that right?  
 (24) A That s correct  
 (25) Q That s correct And a number of your sites in fact many

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- (1) of them were not on land parcels is that correct?  
 (2) A That is correct  
 (3) Q Okay You also conducted some site work in the Kenai  
 (4) Fiords That s this area here?  
 (5) A That s correct  
 (6) Q And you conducted area work at the end of the Kenai  
 (7) Peninsula or is that wrong?  
 (8) A That s correct  
 (9) Q Did you go up into Kachemak Bay?  
 (10) A No we did not  
 (11) Q Okay Where -  
 (12) A We didn t do a transect study there We departed from  
 (13) Homer this direction to do our work  
 (14) Q You were in a helicopter some sort of flying machine?  
 (15) A We were in a boat  
 (16) Q You were in a boat?  
 (17) A In 1989 yes  
 (18) Q Did you do any either transect work or area wide site work  
 (19) or special investigation work in this area at the tip of the  
 (20) Kenai here?  
 (21) A Yes we did a transect in Port Chatham which -  
 (22) Q It s right here is it not?  
 (23) A Yes And boat reconnaissance large scale around the tip  
 (24) of the peninsula in 1989  
 (25) Q Okay very good Now the Port Chatham transect site you

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- (1) pointed to - which we'll come back to in a bit - that was the  
 (2) uncontaminated control site for the transects you did in 1989?  
 (3) A It was the control site that's correct  
 (4) Q What do you mean by control site?  
 (5) A Well at the beginning of the study we were concerned with  
 (6) comparison particularly biological recovery between oiled and  
 (7) unoiled sites so we - we established that site based on a  
 (8) storm haven area and we took it as a site of opportunity We  
 (9) observed no oiling in the immediate vicinity of the transect  
 (10) site so we set up a control site there  
 (11) Q So in other words the storm drove you into Port Chatham  
 (12) that gave you an opportunity to get an uncontaminated site?  
 (13) A That's exactly what happened  
 (14) Q This water can get quite rough you've had that experience?  
 (15) A That's right  
 (16) Q You had occasion to bypass a number of your sites number  
 (17) of your transect points because of the weather in this area?  
 (18) A A number of sites I don't know what you mean by that  
 (19) Q Some sites?  
 (20) A Some sites yes  
 (21) Q Fair enough I'm - before you sit down we're going to  
 (22) put up one more chart?  
 (23) MR OPPENHEIMER If I could ask you to give me a  
 (24) hand I call these charts but they're maps See if we can  
 (25) get both of these on You all see that?

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- (1) BY MR OPPENHEIMER  
 (2) Q Mr Bush this is generally referred to as the Sound is  
 (3) that correct?  
 (4) A That's correct Prince William Sound yes  
 (5) Q Now in your work you were interested in looking at the  
 (6) fate and persistence of oil is that correct?  
 (7) A It was - it was one of the topics  
 (8) Q One of the major purposes?  
 (9) A One of the major thrusts was to - to determine the extent  
 (10) of oiling on properties and potential for long term studies  
 (11) that's correct To establish a baseline in a sense from  
 (12) which work could be continued yes  
 (13) Q What you're interested in doing is finding locations that  
 (14) have oil that you can study productively is that correct?  
 (15) A Generally speaking yes  
 (16) Q Okay Now I want you to exclude for my next question  
 (17) Bligh Island which is up here and the space between say  
 (18) Tattilek and north of Tattilek because I - I don't want to  
 (19) mislead anyone I think you have some views about oil there  
 (20) but you did not conduct any systematic scientific inquiry of  
 (21) any of this area in eastern Prince William Sound or up here in  
 (22) these areas is that correct?  
 (23) A That is correct  
 (24) Q Okay And the reason for that is that there's no reason to  
 (25) believe there's any oil up there?

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- (1) A I don't believe that's necessarily the reason for it Oil  
 (2) has been observed possibly on Hinchinbrook and the northern  
 (3) areas here and claims have been raised about oil farther  
 (4) east Clearly though the document impact of the spill and  
 (5) the wind blew westward so that was the prime target area  
 (6) Q Fair enough I want to explore that area a little bit  
 (7) more You say claims have been made with respect to Bligh  
 (8) Island and what across the Tattilek Narrows?  
 (9) A That's correct  
 (10) Q And Busby Island?  
 (11) A That's correct  
 (12) Q And I believe this is Bligh Reef We don't have it marked  
 (13) but that's Bligh Reef?  
 (14) A Bligh Island  
 (15) Q Pardon me excuse me Excuse me But in this area  
 (16) Now you've conducted I assume your work with as much  
 (17) information as you could on where oil hit the shorelines in  
 (18) Prince William Sound and the Kenai is that correct?  
 (19) A Whatever was available we could get we got it  
 (20) Q Best you could get you got it?  
 (21) A That's right  
 (22) Q And as best you could tell from all the available  
 (23) information to you this was an area not worth studying for  
 (24) oil is that correct?  
 (25) A For oiled shorelines yes that's correct

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- (1) Q Because there's no reason to believe there's oil on those  
 (2) shorelines?  
 (3) A Well I think that's stretching it a bit but generally  
 (4) speaking the dominant movement was westward yes  
 (5) Q Let me ask you this You're aware are you not that Eyak  
 (6) which owns a number of these parcels Eyak Lake Eyak Glacier  
 (7) River and this whole area is dominated by Eyak property In  
 (8) this litigation they have given discovery that says no oil  
 (9) touched the land Are you aware of that?  
 (10) A Yes  
 (11) Q Okay In any event you conducted no systematic studies in  
 (12) this area?  
 (13) A Yes  
 (14) Q Your efforts were focused where the isle moved which is  
 (15) down this direction and down the Kenai?  
 (16) A That's correct  
 (17) Q Okay good Let's talk just a little bit then about  
 (18) Bligh Island and Tattilek What I'd like to do is put -  
 (19) MR PETUMENOS Let me warn you I've tried to put  
 (20) three maps on that easel and it doesn't work  
 (21) MR OPPENHEIMER I appreciate the warning Perhaps  
 (22) we'll make us all safer if we take one off  
 (23) BY MR OPPENHEIMER  
 (24) Q All right Now this was demonstrated earlier in your  
 (25) testimony This is a smaller map Let me hold this up so

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- (1) everybody can see it a little bit better if I could This is  
 (2) a map of the same area that - well it s this area up here is  
 (3) that correct?  
 (4) A Yes  
 (5) Q Okay And this is a map which has lines which show the  
 (6) areas of the shoreline where you found - the data you were  
 (7) able to collect indicated to you that there was oiling on the  
 (8) shorelines and the degree of that oiling is that correct?  
 (9) A That is correct  
 (10) Q Okay Now you mentioned earlier that there were claims of  
 (11) oiling at Bligh Island and Busby and those are marked on your  
 (12) map is that correct?  
 (13) A That is correct  
 (14) Q Now you ve never observed oil up there is that right?  
 (15) A Well -  
 (16) Q By up there I mean Bligh Island and Busby Island  
 (17) A At those specific locations?  
 (18) Q Correct  
 (19) A Yes that s correct  
 (20) Q Okay Have you observed oil anywhere in this area?  
 (21) A Yes  
 (22) Q Okay Where is that?  
 (23) A Right inside this little peninsular arm just inside the -  
 (24) right there  
 (25) Q That s just north of Tattilek?

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- (1) A That s correct  
 (2) Q You believe that to have been Exxon oil?  
 (3) A Yes I do  
 (4) Q We ll get back to that in a minute then  
 (5) Now you or field people with whom you work actually went  
 (6) back to Bligh Island twice looking for oil is that correct  
 (7) once in 89?  
 (8) A Two years that s correct  
 (9) Q On neither visit could you find oil?  
 (10) A That is correct  
 (11) Q Okay Let s put up - you know you re witnessing  
 (12) something my family s only been able to see folding and  
 (13) unfolding maps on a car trip okay But what I m about to show  
 (14) you is another one of the maps you talked about earlier This  
 (15) of the Kenai Peninsula and that s this area right?  
 (16) A That is correct  
 (17) Q Now you mentioned earlier that in connection with your  
 (18) transect site work you had a transect site placed in Port  
 (19) Chatham and that was a control site which you believe to be  
 (20) uncontaminated It was going to be the benchmark so it would  
 (21) help you study other transects is that correct?  
 (22) A Yes  
 (23) Q Other transects would have been oiled ?  
 (24) A That s correct  
 (25) Q This one would have been uncontaminated?

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- (1) A At that time yes  
 (2) Q And it s the only one of the transects you had that would  
 (3) be uncontaminated?  
 (4) A That s correct  
 (5) Q What does it show on your map?  
 (6) A Shows it as being oiled I believe  
 (7) Q Right over here?  
 (8) A Yes  
 (9) Q Right over here  
 (10) Thank you you can take your seat I appreciate it  
 (11) MR OPPENHEIMER Your Honor I have this up if it s  
 (12) okay maybe I could keep standing if that would be  
 (13) appropriate  
 (14) THE COURT Sure  
 (15) MR OPPENHEIMER Thank you  
 (16) BY MR OPPENHEIMER  
 (17) Q Your own map shows your uncontaminated control site as -  
 (18) as contaminated?  
 (19) A That is correct  
 (20) Q But that s not really a mystery is it? I mean there are  
 (21) lots of things that could explain why your crew wouldn t happen  
 (22) to see - and this is by the way light oiling If you like I  
 (23) can show you  
 (24) A Yes light or very light yes  
 (25) Q It was light or very light is that correct?

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- (1) A Yes  
 (2) Q So this this map shows different degrees of oiling and  
 (3) this particular case where your clean transect was It shows  
 (4) light oiling or very light oiling?  
 (5) A That s correct  
 (6) Q Now very light oiling is something that can come and go  
 (7) is that correct? It can wash on and off the beach even?  
 (8) A Yes  
 (9) Q Okay So somebody perfectly well intentioned going out to  
 (10) find oil see oil whether they re trained or not might  
 (11) observe oil there one day and not the next and it would be  
 (12) gone that second day?  
 (13) A Well from the standpoint of having a - a large  
 (14) accumulation asphalt pavement or large mousse patty or you  
 (15) know area that s impacted like that Sometimes yes if it s  
 (16) very premature just arrived on the beach But once it s  
 (17) implanted in the beach it doesn t move around that much But  
 (18) very light oiling has a lot of variability along its lengths so  
 (19) one can investigate a sizable chunk - 25 30 yards perhaps -  
 (20) see nothing there whereas there may be oiling on either side  
 (21) of that  
 (22) Q In fact you had an entire field crew on the ground at Port  
 (23) Chatham and for whatever reason either because it had been  
 (24) cleaned up or because it hadn t gotten there yet or because it  
 (25) had come and gone you didn t see the oil?

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- (1) A To say we had an entire field crew might be exaggerating a  
 (2) little bit Three of us were there under fairly stormy  
 (3) conditions  
 (4) Q Fair enough fair enough  
 (5) MR OPPENHEIMER I m sorry Tom would you just grab  
 (6) for me the Prince William Sound board and just hold it up? Is  
 (7) this completely blocked? Let s put up here Two I can put  
 (8) two on without knocking it over  
 (9) BY MR OPPENHEIMER  
 (10) Q Now we ve established that in your work in the Prince  
 (11) William Sound area - can you see this at all?  
 (12) A Not really but we can - if I need to get down yeah  
 (13) Q I prefer to let you - allow you to keep seated if  
 (14) possible  
 (15) We ve established that you have not done systematic  
 (16) scientific investigation of the shorelines here and that  
 (17) means I take - well have you visited any of these parcels on  
 (18) this side of Prince William Sound?  
 (19) A I have not  
 (20) Q You re aware that there are claims being made for all of  
 (21) these parcels in this lawsuit is that correct?  
 (22) A I am aware of that  
 (23) Q And as a matter of application of your work everything  
 (24) you ve told us in court about the persistence of oil on  
 (25) shorelines as a matter of common sense that is not something

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- (1) that describes any of this area at all is that correct?  
 (2) A That s my understanding yes  
 (3) Q And that would also be true for the area from Growler  
 (4) Island up through Sawmill Bay just south of Valdez?  
 (5) A Sawmill Bay  
 (6) Q There are two Sawmill Bays I know there s another one  
 (7) There s another one down here on Chenega I m referring to the  
 (8) one in the north  
 (9) A Yes  
 (10) Q So we should bear in mind In thinking about the curves and  
 (11) the data that you ve been talking about that those are - those  
 (12) are about the area from - and I m talking about the parcels  
 (13) from the area of Eshamy Bay and Knight Island southwest down  
 (14) through the Kenai and Kodiak?  
 (15) A With - with restriction to the parcels  
 (16) Q Correct I m only interested in damage parcels  
 (17) A That s right  
 (18) Q That s correct You haven t within that area- I m  
 (19) talking about now from this part of the Sound on down - you ve  
 (20) not been to all of the parcels that are involved in this  
 (21) lawsuit is that correct?  
 (22) A That is correct No  
 (23) Q You have a mapping system that we talked about briefly the  
 (24) other day when I was asking you questions before the - before  
 (25) your examination concluded called a GIS system?

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- (1) A That is correct  
 (2) Q Would you explain briefly tell the jury what is a GIS  
 (3) system  
 (4) A Geographic Information System It s a system whereby one  
 (5) can - via computer processes - relate data data sets to -  
 (6) especially to areas that can be posted on a map For example  
 (7) the parcels we just referred to have been mapped with the  
 NOAA  
 (8) vulnerability index and so we relied on that mapping to  
 (9) determine the characteristics of those shorelines and one  
 (10) can - with the GIS system one can simply select an area of  
 (11) shoreline from a map that s posted on the screen of the  
 (12) computer and automatically be able to plot the data that  
 (13) describes that shoreline and gives the information about oiling  
 (14) characteristics shorelines so on  
 (15) Q If you re familiar with the system it s relatively easy to  
 (16) call up information out of it In fact this map showed us  
 (17) earlier produced by your GIS system the computer has  
 (18) information in it and it draws the lines and those lines  
 (19) correspond to what you called arcs along the coastline is that  
 (20) correct?  
 (21) A That is correct  
 (22) Q Okay Now even without looking at your GIS data I assume  
 (23) you would agree with me that somewhere between - and I ll be  
 (24) very conservative here and say 75 to 80 percent in that range  
 (25) - of this entire area was unoiled talking about the Prince

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- (1) William Sound?  
 (2) A Of this entire area what -  
 (3) Q The Prince William Sound area  
 (4) A Of the total Prince William Sound?  
 (5) Q Correct  
 (6) A That s probably about right  
 (7) Q So most of this?  
 (8) A We would have to check the shoreline lengths and so forth  
 (9) Q But as a general -  
 (10) A When you say 75 percent of the area I assume you mean 75  
 (11) percent of the shoreline lengths?  
 (12) Q Good point I m not asking you to include anything because  
 (13) if it s off the shoreline it s not going to have been oiled  
 (14) MR PETUMENOS I ll object to the comment and ask  
 (15) that it be stricken  
 (16) MR OPPENHEIMER Withdraw it  
 (17) THE COURT You withdraw it?  
 (18) MR OPPENHEIMER I withdraw it Your Honor  
 (19) THE COURT The jury can disregard it then  
 (20) BY MR OPPENHEIMER  
 (21) Q Your GIS system has it in the shoreline types that you were  
 (22) talking about earlier is that right?  
 (23) A That is correct  
 (24) Q Which means that those ten NOAA shoreline types that you  
 (25) were telling us about and that you have a graph for persistence

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- (1) for each one on you've actually got that in your computer  
 (2) system?  
 (3) A That's correct That is correct yes  
 (4) Q And you also have in your computer system the information  
 (5) about each part of the shoreline and how heavily lightly or  
 (6) moderately it's oiled is that right?  
 (7) A Yes  
 (8) Q Now have you had occasion to make a comparison of the  
 data  
 (9) on your GIS system which talks about or contains the  
 (10) information about the degree of oiling heavy moderate and  
 (11) light on the - on the parcels involved in this case to  
 (12) compare it against the data that you got from Exxon in its  
 (13) oiling information?  
 (14) A Yes we did  
 (15) Q Okay And do you have any conclusions about how they  
 (16) compare?  
 (17) A In what regard? I mean you know we have generated maps  
 (18) that show the comparisons between what was shown on some  
 data  
 (19) sets and other data sets  
 (20) Q I'm going to disappear behind this for just a second  
 (21) A Certainly  
 (22) Q When you wander you tend to lose things  
 (23) Do you have a - an understanding based on a comparison of  
 (24) the degree of oiling data in your GIS system and the degree of  
 (25) oiling data that you got from Exxon how they compare with

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- (1) respect to how much of the lands were heavily moderately and  
 (2) lightly oiled that are on parcels that were oiled in the Prince  
 (3) William Sound area and the Kenai?  
 (4) A I have a general understanding I don't keep the specific  
 (5) numbers in my head because it's a complicated issue and  
 there's  
 (6) a lot of heterogeneity of the shorelines but I have a general  
 (7) notion  
 (8) Q Absolutely we'll get to that in a minute Your point  
 (9) about heterogeneity in the shorelines is there are a lot of  
 (10) different shorelines out there is that correct?  
 (11) A That is correct  
 (12) Q And your curves and any other information are subject to  
 (13) the fact that they can only approximate what's actually out  
 (14) there is that right?  
 (15) A That is correct  
 (16) Q Sure okay Would it sound right to you if I told you that  
 (17) your GIS system shows that in the Prince William Sound area  
 and  
 (18) the Kenai area - that's this area here and this area on the  
 (19) parcels - that your system shows that 16 percent of the  
 (20) parcels shorelines were heavily oiled and Exxon's data shows  
 (21) that 15 percent were heavily oiled Does that sound about  
 (22) right?  
 (23) A I should check the numbers to be sure but since they are  
 (24) so comparable -  
 (25) Q Sounds right?

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- (1) A It sounds right  
 (2) Q All right And that your numbers show on those same  
 (3) properties that about 14 percent of the shoreline was  
 (4) moderately oiled and Exxon's numbers showed that about 12  
 (5) percent were moderately oiled Does that sound about right?  
 (6) A Well two percent's a little bit strong for a difference  
 (7) Is there a rounding error there?  
 (8) Q Well these are to the best of my knowledge not Let me  
 (9) ask you just about yours 14 percent moderately oiled sound  
 (10) about right?  
 (11) A I would want to check the system to be sure on that I do  
 (12) have some numbers with me we could look at that might be  
 (13) helpful on this  
 (14) Q Before we do that just based on your recollection does  
 (15) that sound about right 14 percent? You can go -  
 (16) A Sure shoreline types combined  
 (17) Q Correct  
 (18) A Which shoreline are we using  
 (19) Q Talking about the parcels in Prince William Sound and on  
 (20) the Kenai Peninsula?  
 (21) A My question is Which shoreline are we using?  
 (22) Q We're using your shoreline data  
 (23) A Which shoreline is Exxon using?  
 (24) Q I'm not asking for a comparison Just to simplify my  
 (25) question - I myself got a little tongue tied - I'm just

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- (1) asking you now does it sound about right that your GIS system  
 (2) shows that about 14 percent of your clients' property in Prince  
 (3) William Sound in the Kenai was moderately oiled?  
 (4) A I'll accept that for now  
 (5) Q Okay Now does it also strike you as about right that on  
 (6) both your system and Exxon's system 70 percent 70 to 73  
 (7) percent of your clients' land in Prince William Sound and Kenai  
 (8) was lightly or very lightly oiled?  
 (9) A The numbers do add up  
 (10) Q Now that's of the stuff that was oiled?  
 (11) A Yes  
 (12) Q Got it Some of it wasn't oiled at all?  
 (13) A That is correct  
 (14) Q We've already established that Eyak has said it didn't have  
 (15) any oil touch its property  
 (16) A That's correct  
 (17) Q Now have you - are you familiar with the mainland piece  
 (18) of property?  
 (19) A In what context?  
 (20) Q Have you ever been there?  
 (21) A No  
 (22) Q I don't know if you can see this it's a little bit - can  
 (23) you see me pointing to the mainland property?  
 (24) A Yes  
 (25) Q You have not been to that piece of property Are you aware

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- (1) that there s a claim for damages on that property of over seven  
 (2) million dollars?  
 (3) A I m not aware of the values involved in the claims no I  
 (4) have no association with that  
 (5) Q Fair enough You re focused on the fate and persistence of  
 (6) oil?  
 (7) A Yes  
 (8) Q Understood This property has a huge amount of shoreline  
 (9) judging from the map does it not?  
 (10) A Judging from the map yes  
 (11) Q Judging from the map correct And based on what you ve  
 (12) told us so far that shoreline is going to be highly varied is  
 (13) that right?  
 (14) A That is correct  
 (15) Q Sitting here today you couldn t possibly tell me what type  
 (16) of shoreline that is is that right?  
 (17) A Well we could make some estimates based on the shape  
 (18) There s some information we can derive just from the shape of  
 (19) shorelines Accuracy is probably not its best point but yeah  
 (20) it s much easier to review the shorelines from the index  
 (21) mapping  
 (22) Q Before we do that let me ask you Because you are a  
 (23) geologist and you have some familiarity with the area what do  
 (24) you think is the predominant shoreline on the mainland parcel  
 (25) mainland?

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- (1) A Can I come down and look at it?  
 (2) Q Absolutely  
 (3) A Well judging from a quick glance I would say there s  
 (4) probably a substantial amount of - of sheltered rocky and  
 (5) lesser amount of exposed rocky and then in most of the  
 (6) internal embayment areas little inlets the embayments  
 (7) they ll be gravel cobble beaches  
 (8) Q Okay  
 (9) A Sandy gravel and cobble  
 (10) Q I m sorry you said sandy gravel and cobble?  
 (11) A Mixed sand and gravel and cobble  
 (12) Q Most of it rocky shoreline?  
 (13) A Yes basically  
 (14) Q Is rocky shoreline a predominant feature in the shoreline  
 (15) both in Prince William Sound and the peninsula?  
 (16) A Not particularly dominant  
 (17) Q Majority of the shoreline type?  
 (18) A It s interesting that you ask this There have been a lot  
 (19) of numbers bandied around about it being very high but I don t  
 (20) believe that those aren t without some combinations of  
 (21) shoreline types I don t think that s particularly accurate  
 (22) Q Why don t you go ahead and take your seat  
 (23) A (Witness resumes the stand )  
 (24) Q But for the storm that drove you into Port Chatham and the  
 (25) uncontaminated control site you would or would not have been

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- (1) looking for a control site for your study for a clean place to  
 (2) include among your transect sites?  
 (3) A You mean would we have not looked for a control site there  
 (4) or would we have not looked for one at all?  
 (5) Q Let me try to phrase my question in better English I  
 (6) apologize  
 (7) When you set out to put your transects up - this is in  
 (8) 1989 this is your first -  
 (9) A Yes  
 (10) Q - exercise out there you wanted to set up some transect  
 (11) sites which is as you described it a place on a beach where  
 (12) you put a line down and then you put some grids out from that  
 (13) line and you carefully examine that part of the beach to see  
 (14) what kind of oil s there and hopefully what s going to happen,  
 (15) to it over time is that right?  
 (16) A That is correct  
 (17) Q And when you chose your sites initially did you have in  
 (18) mind that one of them would be unoiled?  
 (19) A Yes we d intended to find an unoiled site use one  
 (20) Q Why is that? Why is that?  
 (21) A As I mentioned earlier to look at biological -  
 (22) principally ecological and biological recovery over time to  
 (23) compare the oiled sites  
 (24) Q If you re going to study the effects of something over  
 (25) time you d like to have something as a benchmark something

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- (1) that s unaffected that you can compare it to is that right?  
 (2) A It s appropriately right There are actually ten shoreline  
 (3) types out there including ice when you go 11 and variation of  
 (4) exposed tidal flats we could probably add another on a  
 (5) separate problem To do a complete study like that with  
 (6) statistical variation or viability one would be perhaps ten  
 (7) maybe 20 or 30 control sites suddenly this becomes  
 (8) overwhelming  
 (9) Q The fact of the matter is you can t really do a full flood  
 (10) of scientific analysis of fate and persistence of oil in these  
 (11) areas with the number of transect sites you ve got is that  
 (12) right?  
 (13) A In what context? We can do a completed study which we  
 (14) did which provides good information about particular  
 (15) processes  
 (16) that operate that is extrapolatable to particular shoreline  
 (17) types which is the approach we took In terms of doing what  
 (18) we ll call a full blown statistical analysis or numerical  
 (19) analysis of those areas  
 (20) Q Can t do that right?  
 (21) A Very difficult In fact I don t think many of the studies  
 (22) out there can be successful of that  
 (23) Q Okay And in fact didn t you tell us yesterday that  
 (24) those curves that we saw the fate and persistence curves that  
 (25) help you explain to us how long you think the oil will be on  
 the beaches and how long it will take to recover that those

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- (1) curves are not the result of your work just with those  
 (2) transect sites is that correct?  
 (3) A That is correct  
 (4) Q Right And they re not a result in fact just of your  
 (5) fieldwork In other words just the fieldwork wouldn t really  
 (6) enable you to give us those curves today is that right? You  
 (7) need something more don t you?  
 (8) A We may be confusing a few issues here In terms of  
 (9) generating the persistence curves they re one thing The  
 (10) application of interpretation of persistence of oil is  
 (11) another To generate the curves we use one set of data To  
 (12) extrapolate that to shorelines we have to use the NOAA  
 (13) mapping the graph data  
 (14) Q Just focusing on the curves for a moment To generate  
 (15) those curves which you showed us you need to look at  
 something  
 (16) in addition to the fieldwork you ve done The fieldwork alone  
 (17) won t do it is that right?  
 (18) A That is correct  
 (19) Q You need to look at other spills?  
 (20) A Yes  
 (21) Q And you did that?  
 (22) A Yes  
 (23) Q And one of the spills that you looked at that you found  
 (24) highly analogous and very useful in your work was a spill of  
 (25) the Metula is that correct?

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- (1) A That is correct  
 (2) Q That s a spill that occurred in 1974?  
 (3) A I believe that date s correct  
 (4) Q And indeed Mr -- is it Thebeau or Thebeau (clarifying  
 (5) pronunciation)?  
 (6) A Thebeau  
 (7) Q Mr Thebeau in your -- your company even went and looked  
 (8) at that spill about six years after it happened isn t that  
 (9) right?  
 (10) A Six and a half years that is correct  
 (11) Q And that was a spill of a little different kind of  
 (12) substance than we re dealing with here isn t it?  
 (13) A That s correct If memory serves me correct it s Arabian  
 (14) like and small amount of Bunker C  
 (15) Q And Bunker C is much heavier than Alaskan crude?  
 (16) A That s correct  
 (17) Q Different viscosity characteristics?  
 (18) A That is correct  
 (19) Q Different stuff?  
 (20) A To some extent It s a product that s produced from the  
 (21) refining process of crude oil so it represents a selective  
 (22) group of components of crude  
 (23) Q It s a refined product?  
 (24) A Yes or a product of the refining process  
 (25) Q Refining process stand corrected Isn t the area that the

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- (1) Metula spilled into partly marshy?  
 (2) A I beg your pardon? Partly marshy?  
 (3) Q Partly marshy as marsh  
 (4) A Yes  
 (5) Q And marshes are the most vulnerable the most susceptible  
 (6) to the impacts of oil spills?  
 (7) A Yes  
 (8) Q And indeed the very longest period of persistence on any  
 (9) of your tables that you showed us this morning the very first  
 (10) one we saw is for marshes?  
 (11) A That s correct  
 (12) Q So the Metula spilled into a marsh into marshes?  
 (13) A As well as other shoreline types  
 (14) Q As well as other shorelines but the longest estimates of  
 (15) persistent oil at the Metula site are for the marsh areas?  
 (16) isn t that correct?  
 (17) A That is correct  
 (18) Q That s what the literature shows?  
 (19) A Yes  
 (20) Q And there s another distinguishing characteristic between  
 (21) the Metula and this spill isn t there? A big one?  
 (22) A Distinguishing characteristic?  
 (23) Q Was there any cleanup at the Metula site?  
 (24) A Oh I m sorry not about the spill about the process  
 (25) afterwards?

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- (1) Q Yes sir  
 (2) A Actually there are two distinguishing characteristics  
 (3) There was no cleanup and also hasn t been studied in the  
 (4) depth as the Exxon Valdez spill has  
 (5) Q I want to get back to your process for a second In 89  
 (6) you went out and you conducted studies at transect sites You  
 (7) went back out in 92 and you revisited the transect sites and  
 (8) you went to what you called the area wide sites?  
 (9) A That is correct  
 (10) Q I m a little confused about numbers I ve heard references  
 (11) or seen references in your work to -- I believe to 54  
 (12) area wide sites Do I have that number incorrect because I  
 (13) thought I heard you testify yesterday to over 70?  
 (14) A 55 is the number that comes to my mind We selected 70 to  
 (15) 75 for prime investigation target sites What we were able to  
 (16) get to during the field program was approximately 55  
 (17) Q I see okay So you started with 75 and you winnowed that  
 (18) down to the mid fifties 54 55?  
 (19) A No no We started with several hundred areas of concern  
 (20) We reduced that too by making the criteria more strict  
 (21) Eventually we chiseled down the target sites to 70 to 75  
 (22) wanting a good area of coverage et cetera We were able to  
 (23) reach in the field 55 of those  
 (24) Q So 75 was a good area of coverage and you could get to  
 (25) about 55 When you say a good area of coverage you mean it

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- (1) had oil?  
 (2) A No I mean it had good geographic extent from Prince  
 (3) William Sound down through the Alaska Peninsula  
 (4) Q One of the criteria was that it had good oil coverage and  
 (5) similar oiling characteristics?  
 (6) A You ve asked two questions there  
 (7) Q Did - let me start with oil Did you prefer they had oil  
 (8) on them when you studied them?  
 (9) A Let me think about that Not precisely although I think  
 (10) indirectly it did happen We investigated the shoreline oiling  
 (11) summary reports that were produced by ADEC and looked at  
 (12) the  
 (13) results of recovery or comparison between various areas Now  
 (14) some of those sites initially were mapped as oiled and later  
 (15) cleaned or something like that So generally speaking yeah  
 (16) most of the places we went to were oiled but I think in fact  
 (17) some of them may have been clean and were either adjacent to  
 (18) or  
 (19) maybe later shown to be oiled so we have a mixed answer with  
 (20) respect to time  
 (21) Q Let me see if I can clarify my question Your intention is  
 (22) what I m interested in  
 (23) A The intention was these sites were questionable in some  
 (24) regard from the day that we saw We wanted to investigate  
 (25) what  
 (26) was going on because they seemed to be questionable Most  
 (27) of  
 (28) the time that involved oil on the site that s correct  
 (29) Q And at about 13 of those sites you couldn t find oil Does

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- (1) that strike you as right from your report?  
 (2) A I don t recall I think you re right I think 40  
 (3) something out of 55 or something like that That s right  
 (4) Q And then in 93 you made a quick trip right? I believe  
 (5) you referred to it as a cursory trip a short look see?  
 (6) A Yes  
 (7) Q How long was that?  
 (8) A Few days just a few days  
 (9) Q Few days And that s when you had Mr Mundy with you  
 (10) that  
 (11) is the appraiser?  
 (12) A That s correct  
 (13) Q By that I mean the plaintiffs appraiser  
 (14) A Yes Dr Mundy yes  
 (15) Q During that trip did you all go anywhere here in the  
 (16) eastern part of the Sound?  
 (17) A In 93 with Mr Mundy I don t believe we did go to the  
 (18) eastern - eastern Sound  
 (19) Q Then in just this year you ve gone back out to the field  
 (20) again?  
 (21) A Yes  
 (22) Q How was the weather?  
 (23) A Much better  
 (24) Q So you got to see some more places?  
 (25) A Yes  
 (26) Q And there s no doubt this time when you were headed back

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- (1) out you were looking for oil?  
 (2) A That is correct  
 (3) Q That was your prime consideration go out find the oil  
 (4) study the oil?  
 (5) A I wouldn t say it was to find the oil We were out looking  
 (6) at oil that others had already observed or claimed to be  
 (7) present or that we knew was there yeah  
 (8) Q You had discussions with people before you went out to  
 (9) make  
 (10) sure you could identify places You wanted the places that had  
 (11) the most oil and highest concentrations of oil is that  
 (12) correct?  
 (13) A I don t know about the most and highest concentrations  
 (14) Most of the people we talked to were not particularly  
 (15) quantitative about the oil but having oil there was a - was  
 (16) you know a prime consideration I think the people were  
 (17) always able to say quantitatively how much was there We also  
 (18) talked to people that were in the field  
 (19) Q Getting back to the trip planning though and what you  
 (20) were looking for your intent in talking to people was it not  
 (21) was to find as high a concentration of oil that people knew of  
 (22) in the Prince William Sound and the Kenai?  
 (23) A I guess I don t recall it being a specific objective to say  
 (24) it was the highest concentration We wanted to know where  
 (25) people had found oil and observed it but - I guess that s not  
 (26) my recollection

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- (1) Q I ll get you something that may help Well this will be  
 (2) my first experiment with this  
 (3) MR PETUMENOS Your Honor could I have a -  
 (4) MR OPPENHEIMER I - pardon me counsel  
 (5) absolutely Page 1448 of Mr Bush s June 7 deposition  
 (6) MR PETUMENOS June 7 94  
 (7) MR OPPENHEIMER 94 lines 16 through 21  
 (8) MR PETUMENOS I m sorry  
 (9) MR OPPENHEIMER Lines 16 through 24  
 (10) MR PETUMENOS I got that part I missed the date  
 (11) MR OPPENHEIMER June 28 Mr Bush I m going to -  
 (12) MR PETUMENOS Just a minute counsel  
 (13) MR OPPENHEIMER I m going to give you - with the  
 (14) Court s permission may I approach the witness  
 (15) THE COURT Yes  
 (16) MR OPPENHEIMER I m going to give you a stack of  
 (17) materials which may be useful as we go forward Let me briefly  
 (18) explain what they are  
 (19) First I will give you a copy - I will go back and get you  
 (20) a copy of your deposition I m going to give you your field  
 (21) notes going to give you a summary of one of your reports -  
 (22) pardon me one of your reports Your testimony in the federal  
 (23) case for the moment That s it But let me get you what you  
 (24) really need which is a copy of your deposition We ll have  
 (25) somebody point out just exactly what part that is

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- (1) Tim?  
 (2) BY MR OPPENHEIMER  
 (3) Q You recall being deposed in June?  
 (4) A Yes  
 (5) Q And you were asked what discussions you had with respect to  
 (6) your site visits in '94 and you said We simply requested to  
 (7) go to as many sites that contained visible oil a significant  
 (8) concentration or as high a concentration as people knew of  
 (9) And we'd also like to return to our transects and that was the  
 (10) extent of it  
 (11) A I agree with that It's not that people could always give  
 (12) you highest concentrations of oil the information we tried to  
 (13) glean was that  
 (14) Q You wanted to know that information I understand  
 (15) A Yeah  
 (16) Q In fact you're quite right are you not that a number of  
 (17) people with whom you spoke could not tell you where the oil  
 (18) was Claire Doing (sic) is that a name you're familiar with?  
 (19) A Yes  
 (20) Q Doing that's a man?  
 (21) A Yes  
 (22) Q Mr Doing (sic)?  
 (23) A Yes  
 (24) Q Mr Doing (sic) was a representative of the Tattilek  
 (25) Corporation?

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- (1) A It's Doing Doing  
 (2) Q Pardon me Doing and he's a representative of the Tattilek  
 (3) Corporation?  
 (4) A Yes He's either a representative or employee that's  
 (5) correct  
 (6) Q You understood yourself to be talking to someone who knew  
 (7) about Tattilek lands when you talked to him?  
 (8) A As a land manager yes  
 (9) Q And one of the reasons you were talking to him was to find  
 (10) out if he could tell you where there was oil?  
 (11) A Actually indirectly correct Part yes and part no I  
 (12) think he came along on the trip principally to meet with  
 (13) Dr Mundy and have discussions with him  
 (14) Q In any event Mr Doing was unable to tell you about any oil  
 (15) on Tattilek property?  
 (16) A In any event Mr Doing had little to no knowledge about  
 (17) oiling at all  
 (18) Q And in fact did anybody tell you for the trip in '94 -  
 (19) well let me stop for a second  
 (20) In addition to Mr Doing you spoke also with Pat Norm is  
 (21) that correct?  
 (22) A Yes  
 (23) Q Again trying to find places with oil and the highest  
 (24) concentrations of oil?  
 (25) A That he was aware of

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- (1) Q That he was aware of?  
 (2) A Yes  
 (3) Q And he's a representative for Port Graham operation and  
 (4) English Bay?  
 (5) A That's correct  
 (6) Q Talked to Gail Evanoff is that right? Is that correct?  
 (7) A Yes  
 (8) Q And she is - she was speaking on behalf of Chenega  
 (9) Corporation?  
 (10) A Yes  
 (11) Q You talked to Larry Gilman?  
 (12) A Oh yes I'm sorry First name threw me  
 (13) Q The vessel Good Times first mate on the vessel Good  
 Times?  
 (14) A That's correct  
 (15) Q Knowledgeable fellow He had worked on some cleanup  
 crews  
 (16) is that correct?  
 (17) A Yes  
 (18) Q What else did you do to try to find oil for your '94 trip?  
 (19) A We talked to Lora Johnson  
 (20) Q Would you tell us who Ms Johnson is?  
 (21) A Lora Johnson is an archaeologist working -  
 (22) Q On this case?  
 (23) A - on this case? Exactly  
 (24) Q For the plaintiffs  
 (25) A (Indicating)

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- (1) Q Did you talk to a Jack Lobdel?  
 (2) A Yes Not directly I think by telephone He may have  
 (3) visited us at the dinner table That's about it  
 (4) Q So when you were back out in the field in '94 looking for  
 (5) oil and what you reported to us about that trip was based on  
 (6) as extensive a process as you could engage in to find out where  
 (7) the best places were to go to find the most oil?  
 (8) A I should point out that the discussions with Mr Lobdel I  
 (9) don't believe involved looking for oil  
 (10) Q Those were archaeological sites?  
 (11) A No we weren't - I don't think we discussed looking for  
 (12) oil with Mr -  
 (13) Q Did - they had to do with neither I won't ask about  
 (14) them  
 (15) A Thank you But in terms of going out to the sites and  
 (16) trying to understand the nature and extent of residual oil  
 (17) yes that's what we did  
 (18) Q Now in all of this work up through this period of time  
 (19) did you ever go back to Port Chatham to see how the  
 (20) uncontaminated site was doing?  
 (21) A In 1994 we were in the general vicinity but didn't -  
 (22) excuse me but did not get back on the transect proper  
 (23) Q Didn't see any need to go back to the control site?  
 (24) A I'm sorry?  
 (25) Q Didn't see a need to go back to the control site?

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- (1) A I wouldn't go that far but we did not go back to it  
 (2) MR OPPENHEIMER Your Honor I've lost track of how  
 (3) long we've been running We're about to go to another set of  
 (4) exhibits If this would be a good time for a break we could  
 (5) set up another exhibit  
 (6) THE COURT Actually you can take breaks at reasonable  
 (7) times about an hour hour and a half okay?  
 (8) MR OPPENHEIMER Sounds right  
 (9) THE CLERK Please rise This court stands in  
 (10) recess  
 (11) (Jury out at 10 30 a m )  
 (12) (Recess from 10 30 a m to 10 53 a m )  
 (13) (Jury in at 10 53 a m )  
 (14) THE CLERK This court now resumes in session Please  
 (15) be seated  
 (16) BY MR OPPENHEIMER  
 (17) Q Before the break we were talking about transect sites  
 (18) And again these are the sites that you went to in '89 and  
 (19) then revisited in '92 and revisited some of if I understand it  
 (20) correctly in '94 These are your basic test sites is that  
 (21) correct?  
 (22) A That is correct  
 (23) Q Are those basic scientific test sites representative of  
 (24) your client's land?  
 (25) A You have to explain by what you mean by representative

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- (1) Q Let's focus on the degree of oiling Are they  
 (2) representative of the degree of oiling on your client's land?  
 (3) A In some capacities yes and others no To answer it  
 (4) fully I think we have to separate the transect and the  
 (5) properties into respective shoreline types and look at the  
 (6) degree of oiling from shoreline to shoreline type Clearly I  
 (7) think we may have a bias towards moderate or heavily oiling  
 (8) but I'm not positive I haven't compared that -  
 (9) Q Well it -  
 (10) A - to strictly the proper parcels  
 (11) Q Let's explore that for just a second In the Prince  
 (12) William Sound area you have ten transect sites is that  
 (13) correct?  
 (14) A I believe that's right yes  
 (15) Q Six of those are placed on sites that were heavily oiled?  
 (16) A Yes  
 (17) Q Sixty percent of the transect sites the study sites in  
 (18) Prince William Sound were in that capacity but we've already  
 (19) discussed that by either your data or Exxon's data less than  
 (20) 20 percent of your client's land was heavily oiled is that  
 (21) correct?  
 (22) A That's correct  
 (23) Q And would it be your recollection that about four out of  
 (24) your 15 transect sites were on medium oiled lands?  
 (25) A I think that's correct

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- (1) Q Right And that's - give or take and that's about as a  
 (2) percentage twice the percentage of the median oiled land as  
 (3) compared to what your client's land is actually oiled In  
 (4) other words it's about 30 percent of your transect sites but  
 (5) only about 15 percent of your client's land was heavily oiled?  
 (6) A That's correct  
 (7) Q And about four of your scientific transect sites were on  
 (8) light or very lightly oiled lands does that sound about right?  
 (9) A Uh huh  
 (10) Q So 15 percent of your transect sites were on light or very  
 (11) light but at least 70 percent of all the oiling that occurred  
 (12) to your client's land was on light or very light?  
 (13) A Yes  
 (14) Q Okay So in that sense would you conclude that your  
 (15) transect sites that the distribution of oiling that - the  
 (16) distribution of oiling along the beaches which you found in the  
 (17) transects was unrepresentative of the distribution of oiling  
 (18) levels among your client's land generally?  
 (19) A Well I think we're missing the point Perhaps if we keep  
 (20) this directly within the - or explicitly within the context of  
 (21) your statement it's true However what needs to be done in  
 (22) our analysis is to understand movement of oil within the  
 (23) particular shoreline types so we've got to view these  
 (24) different shoreline types and look at oiling in them It's  
 (25) impossible to sample every variety out there with any usual or

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- (1) typical budget one can handle within a month or so  
 (2) Q Sure understood You're referring however now to  
 (3) varieties of shoreline in other words the types of shore  
 (4) You were talking about earlier the cobble or -  
 (5) A That's correct  
 (6) Q That's correct? Just focusing on the type of oiling  
 (7) heavy medium light your transects are not representative of  
 (8) your client's land is that right?  
 (9) A Well within that very narrow context  
 (10) Q I'm just talking about -  
 (11) A Yes  
 (12) Q - whether they were -  
 (13) A Yes  
 (14) Q They're biased in favor of heavily oiled sites?  
 (15) A Within that narrow context that's correct  
 (16) Q In fact you went out again in '94 Did you form an  
 (17) opinion as to whether the sites you visited could be  
 (18) extrapolated to every location that was oiled in the Prince  
 (19) William Sound and the Kenai?  
 (20) A Repeat the question About -  
 (21) Q The sites you went out to see -  
 (22) A To be extrapolated to -  
 (23) Q - could they be extrapolated to every oiled site in Prince  
 (24) William Sound and Kenai?  
 (25) A The sites we visited in '94 could they with be -

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- (1) Q In 94?
- (2) A Well of course not There are differences all across the
- (3) areas That is it s very heterogeneous
- (4) Q Let s go back if we may to testimony yesterday You -
- (5) you gave us a description of one of your transect sites on east
- (6) Chenega Do you remember that?
- (7) A Yes
- (8) Q And I believe what you were helping explain to us was the
- (9) notion of swash bars moving across the beach and occasionally
- (10) covering up oil that was one of the things you were talking to
- (11) us about?
- (12) A That s one of the notions The notion is the mobile
- (13) sediments that move freely across the surface is the general
- (14) notion There are different types yes
- (15) Q Do you recognize this as a photograph of your east Chenega
- (16) transect?
- (17) A I think it s an excellent photograph of the area
- (18) Q Thank you
- (19) MR OPPENHEIMER Your Honor I d like to publish this
- (20) to the jury
- (21) THE COURT Sure
- (22) BY MR OPPENHEIMER
- (23) Q Could I ask you to come down one more time? I m going to
- (24) give you a little piece of tape and I m going to ask you to put
- (25) it on the part of the transect - I m sorry on the part of the

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- (1) photograph that corresponds with your transect
- (2) We are currently looking at an exhibit that has been marked
- (3) for identification DX13258 You re probably more used to doing
- (4) this kind of stuff sample work but I m going to start it for
- (5) you Could you tear off a piece - and I realize this is not
- (6) going to be the right scale but give us all an understanding
- (7) of where your transect was
- (8) A It was approximately something like this Pretty tough
- (9) tape I see why you took the first job
- (10) Q Like cutting pieces of pie
- (11) Okay now I m going to try to turn this
- (12) You can go back and sit down again I ll try to turn this
- (13) so you can see it Can you all see that?
- (14) So this is the study site - oh I m sorry Got that?
- (15) A Yes
- (16) Q Okay Can you see this Mr Bush?
- (17) A Sure
- (18) Q This is the study site you re referring to as your
- (19) transect is that correct?
- (20) A That is correct
- (21) Q Now you were referring to a phenomena where a - some
- (22) earth swash bar was moving inland -
- (23) A That s correct
- (24) Q - is that right? Okay
- (25) A Or lateral to the shoreline as well

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- (1) Q Or lateral which means in this direction?
- (2) A Parallel roughly right
- (3) Q And sometimes that can cover up oil?
- (4) A That is correct
- (5) Q Okay Now not every coastline has this characteristic is
- (6) that right?
- (7) A When you say characteristic you mean?
- (8) Q Of swash bars
- (9) A You mean are swash bars everywhere
- (10) Q Correct Are there swash bars everywhere?
- (11) A No
- (12) Q Okay Now this particular beach actually has some unusual
- (13) characteristics for the Kenai Prince William Sound area does
- (14) it not?
- (15) A Unusual in the sense that they re not widespread across all
- (16) the shorelines but streams and rivers do commonly come out
- (17) into the Sound and take features yes
- (18) Q As a geologist you would consider this a - this material
- (19) as at least in part having been brought down from some
- (20) source
- (21) on land pushed out and then brought back in to some degree
- (22) by
- (23) the water?
- (24) A Well that s the - that portion of that material is
- (25) transported by the stream or introduced into the environment by
- (26) the stream It s a bit more complicated than that but you
- (27) have the general sense of that part of the system

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- (1) Q Quite often This is from a glacier or can carry material
- (2) in it whenever it is pushing new material out which is in some
- (3) way getting pushed back?
- (4) A Or a long ways whatever s upstream is contributing to it
- (5) that s correct
- (6) Q And where for example you have a beach like this up here
- (7) - can you see that?
- (8) A Uh huh
- (9) Q You don t have new material coming down to be pushed
- (10) back
- (11) up is that correct?
- (12) A Well in the same capacity same volume yes
- (13) Q You don t have the same volume which means you don t
- (14) have
- (15) as much?
- (16) A Right There s a low tide delta up there obviously
- (17) Q This is a delta correct?
- (18) A Yes
- (19) Q Low tide delta?
- (20) A Low tide delta
- (21) Q Where you have an area like this you have much less
- (22) material coming off the ocean coming up to the beach is that
- (23) correct?
- (24) A Much less material what do you mean?
- (25) Q This area you see protruding out into the ocean is because
- (26) there s material coming down off the land and coming back to
- (27) the shore Isn t that correct?

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- (1) A Yes
- (2) Q You don't see that in other parts of the beach because that
- (3) phenomenon is not occurring?
- (4) A That's correct
- (5) Q Where that phenomenon doesn't occur you don't get the
- (6) kind
- (7) of swash bar you talked about yesterday you get a different
- (8) phenomenon but you don't get the kind you talked about
- (9) yesterday?
- (10) A That's not correct We talked about a range of swash
- (11) bars It occurs in some areas to a much less degree than
- (12) others You don't get giant ones here
- (13) Q My point exactly This is a giant swash bar?
- (14) A It's a whopper
- (15) Q It's a whopper all right It's a big one and that is not
- (16) a common occurrence in Prince William Sound and the Kenai?
- (17) A That is correct
- (18) Q How fast do these swash bars move? I mean is this a case
- (19) where scientists flee to the uplands like those old movies as
- (20) the swash bar approaches or is it slower?
- (21) A It is slower
- (22) Q Okay it is slower And can you describe for us how - how
- (23) fast or slow it is?
- (24) A Well it can vary from centimeters a storm event or even a
- (25) meter a storm event to meters in a year depending on the
- (26) frequency of storms ratio between the storm activity and

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- (1) grain size and all those sorts of things
- (2) Q You described before that this was biota here this is
- (3) living stuff?
- (4) A Fucus
- (5) Q Fucus Fucus is what?
- (6) A It's green algae yes Intertidal
- (7) Q Okay And as I understand what you were telling us
- (8) yesterday this fucus is kind of growing on the surface that
- (9) more closely proximates the surface in '89 when the oil hit
- (10) than this surface we see here which is on top of the swash
- (11) bar is that right?
- (12) A That's correct
- (13) Q And there's stuff growing all over?
- (14) A In the sheltered pocket behind the - the steep face of the
- (15) swash bar that's correct
- (16) Q And I assume as best we know you have no reason to
- (17) believe otherwise that until the swash bar covered it up it
- (18) was growing in front of that too? You have no reason to
- (19) believe it was otherwise?
- (20) A Yeah We don't know what happened before we got there
- (21) Q By the way you're not a biologist but let me ask you one
- (22) question This is sometimes referred to as an estuarine
- (23) environment is that right?
- (24) A That's a little extreme to call that an estuary but there
- (25) certainly is fresh water input there

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- (1) Q There's fresh water and that has implications when you
- (2) measure biology when you measure what's living?
- (3) A That's correct
- (4) Q As a general matter -
- (5) A In a marine system you're referring to?
- (6) Q In a marine system You've got seawater you've got fresh
- (7) water and in that balanced area the biota tends to be less
- (8) biomass of - the biota tends to be less than in areas where
- (9) you don't have that fresh water/seawater interaction?
- (10) A Total biomass?
- (11) Q Yes
- (12) A Well the point is for the species that are affected by
- (13) the fresh water that's correct Yeah
- (14) Q Correct Do you recall how badly oiled east Chenega was
- (15) initially original oiling?
- (16) A I think - yeah in 1989 moderate to light light to
- (17) moderate is my recollection
- (18) Q Moderate?
- (19) A Yes
- (20) Q And has it improved?
- (21) A Yes
- (22) Q So all the way down to light?
- (23) A As of 1992?
- (24) Q As - right as early as '92 it was down to light?
- (25) A I don't - I think that's correct I believe that is

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- (1) correct yes
- (2) MR OPPENHEIMER Counsel with your permission I'm
- (3) just going to put this on the screen This is a page from the
- (4) February '93 report
- (5) MR PETUMENOS No problem
- (6) BY MR OPPENHEIMER
- (7) Q Mr Bush I draw your attention to page 24 of your
- (8) February '93 report Yes sir that's correct That's Exhibit
- (9) DX2769 DX2769
- (10) Seems a little fuzzy Well I think we can make do here
- (11) Now I draw your attention to a line in this report This
- (12) is - by the way you recognize this do you not as a page -
- (13) a table of your transect sites from your February '93 report?
- (14) This is on the trips you made in '92
- (15) A Yes I do actually
- (16) Q It's a table 23?
- (17) A Yes I was questioning - font size seems to be different
- (18) but I think it's the right table
- (19) Q And you see the entry for east shore Chenega Island?
- (20) A Yes
- (21) Q Started as moderate and went to very light by 1992?
- (22) A That's correct
- (23) Q Okay You testified yesterday about the - the oil that
- (24) was being buried here I don't think though that you told us
- (25) about your most recent trip to the east Chenega transect site

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- (1) You were there just this summer weren't you?  
 (2) A I don't recall if we got there or not in '94. Let's see  
 (3) we went to about 40 sites East Chenega? I could look back  
 (4) through my field notes  
 (5) Q I'd be happy to - in fact please do  
 (6) A If you have a page  
 (7) Q Well I have the date. They're dated at the top 5 - I  
 (8) believe it's May 29 1994  
 (9) A And you're referring to the return to the Chenega Village  
 (10) the Chenega Island or this Chenega transect site?  
 (11) Q On the right hand side of the note back I believe -  
 (12) correct me if I'm wrong - you have notes with respect to your  
 (13) village you have notes with respect to your return to the  
 (14) transect site  
 (15) A Well certainly you're right but -  
 (16) Q It's a page back  
 (17) A 5 29 - 5 28 Oh very good thank you Yes  
 (18) Q Okay Now yesterday you were telling us that there could  
 (19) be oil under that swash bar or you weren't telling us that?  
 (20) A I don't believe so  
 (21) Q But you were using this to describe -  
 (22) A Talking about this - the same site same swash bar  
 (23) Q Correct You were using this to describe a situation where  
 (24) a swash bar could cover up oil and then the swash bar could  
 (25) be removed and the oil would be exposed again?

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- (1) A That's correct  
 (2) Q Were you intending to imply that there was oil here?  
 (3) A On the - under the giant swash bar?  
 (4) Q Under the giant swash bar  
 (5) A No it brings up the uncertainty of the issue but -  
 (6) Q You don't know whether there's oil there?  
 (7) A That's correct  
 (8) Q When we say giant swash bar how deep is it where it's  
 (9) covering up your old transect level?  
 (10) A Which it - are you - I think we have a miscommunication  
 (11) Q We may and undoubtedly my fault Let me see if I can  
 (12) explain  
 (13) The swash bar as I understand it changed the look of the  
 (14) land over your transect site so it - there's earth over where  
 (15) there had been in '89?  
 (16) A That's correct  
 (17) Q Okay And my question to you is Did you make a  
 (18) calculation or do you have an understanding of how much new  
 (19) earth there is because of the swash bar over your old transect  
 (20) site?  
 (21) A The - I think you have some confusion here The swash bar  
 (22) that covered our transect site is the one that's located up  
 (23) farther on where the bright orange line is on the  
 (24) illustration We've also been talking about this giant one  
 (25) farther down to the mouth of the stream and shoulder of that

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- (1) so the two are different sizes magnitude  
 (2) Q You're talking about the swash bar that's up in this area?  
 (3) A That's correct  
 (4) Q Excuse me I think you're right to correct me That swash  
 (5) bar covered up part of your transect site?  
 (6) A Uh huh  
 (7) Q How deep is that swash bar over your old transect site  
 (8) level?  
 (9) A Well it's - I'd have to refer back to the transects to  
 (10) give you an accurate number It's approximately a foot and a  
 (11) half two feet something like that knee high or a little  
 (12) less And it migrated landward between the two transect  
 (13) measurements which of course there's intervening years so  
 (14) it may have gone farther up and come back in the meantime  
 (15) But  
 (16) the difference between the two transect measurements was  
 (17) three  
 (18) meters or something like that if I remember correctly  
 (19) Q So in order for you to get back to your old transect to  
 (20) take a look for oil you have to dig through a foot and a half  
 (21) of dirt?  
 (22) A Additional foot and a half yes  
 (23) Q Did you do that?  
 (24) A We dug through the face of it in '92 as best we could the  
 (25) problem being of course until you complete your transect  
 (26) profile and plot the measurements you don't know exactly  
 (27) where  
 (28) you have to be to dig deeper

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- (1) Q This is in '92 now?  
 (2) A That's correct And unfortunately we dug deeper right up  
 (3) to the edge of the oiling the previous year so we didn't  
 (4) actually test the subsurface at the right location  
 (5) Q You stopped just before the place where you found oil  
 (6) before?  
 (7) A Yes  
 (8) Q And you didn't dig another pit to find out whether there  
 (9) was still oil there?  
 (10) A Well at the time we hadn't completed the profile  
 (11) restoration so we didn't know we had to go farther seaward  
 (12) Q So it was accidental?  
 (13) A Yes  
 (14) Q You went back in '94 and you dug again?  
 (15) A That's right  
 (16) Q Find any oil that you could see?  
 (17) A We did not  
 (18) Q Did you get down to your original '89 level?  
 (19) A I think we did  
 (20) Q Your notes suggest that you did isn't that right?  
 (21) A Uh huh I think so  
 (22) Q And you couldn't smell any oil?  
 (23) A No  
 (24) Q Okay So nothing that you could - you could perceive  
 (25) there in the field as indicated that there was oil in it?

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- (1) A That s correct I believe that - I think that site is a  
 (2) good example of one where the effectual wave energy on the  
 (3) shoreline and the grain size on the beach are adequate to bring  
 (4) about a lot of reworking  
 (5) Q Oh good so this beach has been cleaned up?  
 (6) A I think there s been substantial recovery there  
 (7) Q Even though it s got a big swash bar and even though it s  
 (8) got a delta like situation the best we know it s clean?  
 (9) A To the best of our knowledge yes  
 (10) Q By the way you don t know when that occurred as between  
 (11) your visit in 94 and your visit in 92 the cleanup is that  
 (12) correct?  
 (13) A I don t know when what occurred  
 (14) Q When the final cleaning occurred as between 92 and 94?  
 (15) A I do not  
 (16) Q I wanted to go back to one other issue that we talked about  
 (17) yesterday You went to one study site just this last summer  
 (18) where you believe you saw some problem with the mussels is  
 (19) that right? There seemed to be - they seemed to be dying?  
 (20) A We saw an increased mortality yes  
 (21) Q Increased mortality Do you remember which transect site  
 (22) that was at?  
 (23) A It was not a transect site It was ones of our special  
 (24) investigation sites  
 (25) Q I misspoke So that would have been northeast LaTouche?

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- (1) A Yes  
 (2) Q You visited - if I m correct you did not visit northeast  
 (3) LaTouche in 1989?  
 (4) A That s correct  
 (5) Q You did visit -  
 (6) A Actually  
 (7) Q Pardon me?  
 (8) A Let me correct that We may have cruised that area in the  
 (9) skiff and done some light reconnaissance It s vague in my  
 (10) recollection  
 (11) Q You did however go there in 92?  
 (12) A Yes we did  
 (13) Q Right You did not go there in 93?  
 (14) A At this particular mussel bed site?  
 (15) Q Correct  
 (16) A I m not positive about that We may have gone  
 (17) Q Can t remember having been there in 93?  
 (18) A Fast three days or four days yes  
 (19) Q You were there again in 94?  
 (20) A Yes  
 (21) Q Until 94 according to your testimony yesterday you had  
 (22) not seen the mortality the mussels dying that you saw that  
 (23) you believe you saw in 94 In other words before that visit  
 (24) this summer you hadn t seen evidence of that kind of mortality  
 (25) in the mussels?

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- (1) A That is correct  
 (2) Q All right Are you aware of any unusual events that might  
 (3) have produced the result in those mussels that you saw in  
 (4) 1993 - I m not saying you saw in 93 but are you aware of  
 (5) anything that happened in 1993 that might have produced what  
 (6) you saw among those mussels you saw in 1994?  
 (7) A We don t know the cause of the mortality I have  
 (8) speculated We know the relationship we see between the  
 (9) residual oil and the mussels but we don t have a cause and  
 (10) effect for the mortality 93 -  
 (11) Q Just so we re clear then you were not trying to tell us  
 (12) yesterday that you have any sort of opinion that anybody  
 (13) should  
 (14) rely upon in calculating money damages or anything else that  
 (15) those mussels were in the state you saw them in 94 because of  
 (16) the oil?  
 (17) A Well there s a correlation but cause and effect is  
 (18) difficult to determine and we ve taken no samples and  
 (19) undertaken no analyses to make that determination  
 (20) Q Fair enough You don t have a scientific opinion?  
 (21) A You do have a correlation which is suspect but it s  
 (22) certainly not been confirmed through any kind of analytical or  
 (23) toxicological investigation  
 (24) Q As a scientist you don t know?  
 (25) A That s right  
 (26) Q Now let me get back to 93 Did something else happen in

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- (1) 93 that might have affected these mussels?  
 (2) A Other than other investigators going to the site I m not  
 (3) aware of anything If I might elaborate here a little bit  
 (4) You know we noticed things in 94 that may have had some  
 (5) impact For example there s -  
 (6) Q No I m just talking about 93  
 (7) A Yes No  
 (8) Q Are you aware that 93 was one of the hottest summers on  
 (9) record in the Sound?  
 (10) A I m aware of this hypothesis yes  
 (11) Q The intertidal zones you saw these in the intertidal  
 (12) zones?  
 (13) A Yes  
 (14) Q That s a delicate environment in the ecological system  
 (15) isn t it?  
 (16) A To some extent yes  
 (17) Q There are critters in there Sometimes in water they re  
 (18) sometimes out of water correct?  
 (19) A Yes and stressed accordingly  
 (20) Q And stressed accordingly They don t like being out of  
 (21) water for very long We heard Mr Peterson talk about that  
 (22) A That s correct  
 (23) Q The particular mussel bed you saw was high up on the  
 (24) intertidal zone is that right?  
 (25) A That is correct

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- (1) Q You bet and actually mussels?
- (2) A Actually let me rephrase that You got northeast going -
- (3) quickly here I don't know exactly how high that mussel bed is
- (4) in the intertidal zone I don't know if that's true or not
- (5) Q You don't know if the -
- (6) A When you say mussel bed now you're referring to the
- (7) mussels that are on the sedimentary substrate where we had
- (8) the
- (9) mortality?
- (10) Q Correct
- (11) A We observed mussels at a higher elevation than that so
- (12) obviously they're not the top of the - you know the surviving
- (13) realm in the intertidal zone
- (14) Q I didn't mean to imply they were all the way out there in
- (15) the supratidal zone?
- (16) A Right Nor are they at the highest point in the intertidal
- (17) zone where they can't survive
- (18) Q Understood And I did not mean to suggest they were But
- (19) you don't know you just don't know whether those '93 summer
- (20) temperatures caused the mortality you saw Could have?
- (21) A Well we have some idea about that because mussels that
- (22) were in the same vicinity - in fact even at a higher
- (23) elevation that were exposed to the same summer - did not
- (24) exhibit the same mortality
- (25) Q You have no knowledge about what percentage of the
- (26) mussel
- (27) population would be responsive would die as a result of an

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- (1) unusually hot summer do you? You're not a biologist?
- (2) A Do I have knowledge of what percentage of a mussel bed -
- (3) you mean would some mussels be more responsive or more
- (4) susceptible to warm exposure than other mussels in the same
- (5) bed?
- (6) Q Right
- (7) A No I have no knowledge of that
- (8) Q All right I'd like to show you now two photographs and
- (9) have you identify them for me if you would I believe - and
- (10) I hope you like them as well - that they are photographs of
- (11) your Bay of Isles transect site opening photograph of the area
- (12) and a photograph of the site itself is that correct?
- (13) A Yes
- (14) Q Okay I hope I'm okay here For the record this is
- (15) exhibit 8942
- (16) Now Mr Bush tell us if you can see - I apologize if
- (17) the angle's not right - can you describe for the jury what is
- (18) this a photograph of?
- (19) A Well it's a photograph of the Bay of Isles You can see
- (20) the isles standing out there and from this angle I can't tell
- (21) whether we're looking down the south arm or east or west or
- (22) where we're at but it's the Bay of Isles
- (23) Q The land we see here this is your client's land is that
- (24) correct?
- (25) A Yes

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- (1) Q That whole coastline there
- (2) MR OPPENHEIMER Tom could you help me?
- (3) A The entire coastline? I would have to check back to the
- (4) maps I think some of the northern coastline may not in fact
- (5) be on their property but you should check with the land
- (6) manager for positions
- (7) Q Fair enough You did the mapping for the land managers -
- (8) A We -
- (9) Q - for this case?
- (10) A We prepared the - that's not entirely correct We
- (11) translated some AutoCad maps and files into the GIS system
- (12) and
- (13) produced the maps but the mapping was done by someone
- (14) else
- (15) Q For our purposes now based on your understanding having
- (16) been a field investigator out there looking at your clients
- (17) lands this depicts - most of what we see here is your clients
- (18) shoreline?
- (19) A Yes I believe so
- (20) Q How many marshes are you aware of in this - by the way
- (21) would you agree with me if I told you having looked at your
- (22) GIS system that we're looking at about 29 miles of coastline
- (23) here?
- (24) A I've never measured it
- (25) Q Never measured okay
- (26) A That sounds reasonable
- (27) Q Okay How many marshes are there in this area?

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- (1) A In what context? There's a -
- (2) Q As a context of what do you know?
- (3) A In the GIS system as a shoreline type?
- (4) Q Sure
- (5) A I think the only area that's mapped that is this small
- (6) area in the GIS system that you're referring to the transect
- (7) site that was on this other illustration
- (8) Q If I could bother you to come down one more time
- (9) Now it's correct is it not that in all of this area you
- (10) chose to place your transect site - well where did you choose
- (11) to place your transects?
- (12) A I believe the location is right in here judging from
- (13) several miles away
- (14) Q Right in there? Right in there?
- (15) A That's it
- (16) Q Okay Let me have you stand there for one second Sorry
- (17) You previously identified this as the site of your transect
- (18) site I'm going to zoom in as it were to marsh in the Bay of
- (19) Isles Now is that where you put your transect site?
- (20) A Yes
- (21) Q Red tape I've got that Could I ask you to do the same
- (22) thing you did before to show us?
- (23) MR PETUMENOS Your Honor I also thought there was
- (24) red tape in this litigation now I know
- (25) THE COURT You anticipated me counsel

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- (1) MR DIAMOND Don t steel the Judge s lines  
 (2) MR PETUMENOS Sorry  
 (3) THE COURT Yeah that could get you in a lot of  
 (4) trouble  
 (5) A We ll just generalize this It goes behind the trees here  
 (6) okay That s approximately correct It s a little bit high  
 (7) MR OPPENHEIMER Give this to me I ll put it in my  
 (8) pocket It ll be there at the cleaners For the record we ve  
 (9) just put the transect marker on DX8943  
 (10) BY MR OPPENHEIMER  
 (11) Q Out of all that coastline how big is this marshy tidal  
 (12) area here that we re talking about?  
 (13) A Out of all that coastline?  
 (14) Q Well we ve been talking about the coastline We had seen  
 (15) as a photograph coming in here  
 (16) A 29 miles versus - versus this eighth or tenth of a mile  
 (17) section  
 (18) Q This is some of the most sensitive lands you can have if  
 (19) you have an oil spill is that right?  
 (20) A That s correct  
 (21) Q Lasts the longest?  
 (22) A The impact persistence yes  
 (23) Q Right  
 (24) A Okay  
 (25) Q Less than one percent of the Prince William Sound in the

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- (1) Kenai is made up of that kind of material?  
 (2) A As mapped that s correct  
 (3) Q As mapped?  
 (4) A Yes as mapped  
 (5) Q You can sit down again please  
 (6) A (Witness resumes the stand )  
 (7) Q When you were working on your persistence curves you  
 were  
 (8) concerned were you not that you did not have adequate  
 (9) information on clean up activities?  
 (10) A That is correct  
 (11) Q Did you have any concern about whether you had adequate  
 (12) information on the clean up activities here at the marsh of the  
 (13) Bay of Isles?  
 (14) A It was a generic concern  
 (15) Q And by generic you mean it was a concern as to every -  
 (16) concern you had every place you looked at?  
 (17) A Sure  
 (18) Q Because obviously - well excuse me persistence is one of  
 (19) the - it s getting late and I apologize Cleanup is one of  
 (20) the factors that effects persistence how long the oil will  
 (21) stay on a place?  
 (22) A When you refer to residence time of petroleum residues in  
 (23) the subsurface that s correct  
 (24) Q So the answer is yes it does?  
 (25) A You re saying persistence and I m not sure if we re

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- (1) talking about just the residue or overall recovery ecological  
 (2) and everything else included  
 (3) Q Let me rephrase my question How much oil stays on a  
 (4) shoreline is partly a question of how much cleanup is done?  
 (5) A The treatment process yes that s correct  
 (6) Q And in fact you - you went to your special investigation  
 (7) sites on northeast LaTouche to find out about the effects of  
 (8) cleanup on the - on the recovery process?  
 (9) A For those beaches that - those conditions that s correct  
 (10) Q Sure and you - and ideally you would have that  
 (11) information for all of the beaches that you studied because  
 (12) it s a factor right?  
 (13) A It is a factor that s correct  
 (14) Q Now what actually happened is that you went to beaches  
 and  
 (15) in some cases you didn t know whether you were going to a  
 beach  
 (16) that had even been cleaned before you got there is that  
 (17) correct?  
 (18) A That s correct yes  
 (19) Q And in some cases you d gone to beaches and studied  
 (20) beaches and you haven t gone back to and you don t know if  
 they  
 (21) have been cleaned?  
 (22) A Well we know some knowledge about cleaning on some of  
 the  
 (23) beaches but I m not sure of an exact example of the one you  
 (24) described exists but yes there s uncertainty about clean up  
 (25) activities between your transects before our transects I

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- (1) don t think there is much afterwards I could be wrong on  
 (2) that  
 (3) Q Do you have any uncertainty at all about the type of  
 (4) cleanup that was done at Bay of Isles?  
 (5) A My understanding is that - that it was essentially likely  
 (6) to be not treated There may have been some manual activity  
 (7) which - I know there was some booming and manual cleanup  
 on  
 (8) the site but I have no information about the clean up  
 (9) activities that occurred to that in a formal sense  
 (10) Q Now even in this very sensitive environment you saw  
 (11) improvement did you not?  
 (12) A Oh yes  
 (13) Q In fact even in this most sensitive of all environments  
 (14) it went from moderate in 89 to light in 92?  
 (15) A I don t believe that s correct I believe you skipped a  
 (16) line  
 (17) Q Perhaps I did Pardon me Pardon me Excuse me I did  
 (18) A We still classified it as heavy  
 (19) Q Right  
 (20) A But you did see improvement  
 (21) Q You still classified that as heavy but you saw  
 (22) improvement?  
 (23) A Yes  
 (24) Q Why would there be improvement?  
 (25) A I guess I don t follow the question

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- (1) Q Well -  
 (2) A Two years passed and -  
 (3) Q We don't know what sort of cleanup has gone on if any  
 (4) it's a protected environment. Would you agree structurally  
 (5) now as a geologist - we're back on your home turf here - this  
 (6) is clearly a protected environment is it not?  
 (7) A Yes it is  
 (8) Q So what gets in there is going to be protected against the  
 (9) elements that might clean it up right?  
 (10) A Well I can - I can discuss this here for a second  
 (11) The - in '89 there were a number of booms and Sorbent  
 (12) material pompoms and related material on site that may have  
 (13) been removed in '92. There may have been some manual  
 (14) wiping  
 (15) taking place at the same time frame. We're not sure of that  
 (16) But I know the debris oiled debris that was there a  
 (17) substantial amount of material so people had been on the  
 (18) site. Also there are two streams that enter into the site and  
 (19) do have some impact on the site. So portions of the site  
 (20) reflect the - the marsh environment and other portions are  
 (21) less precise than the marsh environment  
 (22) Q Now you make a good point. There's another fresh water  
 (23) stream in this environment?  
 (24) A Yes  
 (25) Q So it's another place where saltwater and fresh water are  
 (26) mixing?

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- (1) A That's correct  
 (2) Q I wanted to be clear about a point. You discussed  
 (3) yesterday mechanical action on the beach that could contribute  
 (4) to cleaning the beach up is that right?  
 (5) A That's correct  
 (6) Q Rocks move that's one thing that can clean the beach up  
 (7) is that right?  
 (8) A Yes  
 (9) Q Sediments can be pulled back and forth across the beach  
 (10) that can help clean things up?  
 (11) A That's correct  
 (12) Q In some cases the cleanup can actually occur on the beach  
 (13) but not because of the ocean but things coming off the land  
 (14) for example you can have fresh water streams that percolate  
 (15) through cobble and that sort of thing out to the water that  
 (16) helps clean things up?  
 (17) A I don't know that there's a tremendous contribution in that  
 (18) regard until the stream migrates laterally for example and  
 (19) actually moves the sediment or distributes sediment to the wave  
 (20) action but I'm sure there's some contribution from the  
 (21) groundwater outflow yes  
 (22) Q Well there's something else that's also important about  
 (23) oxygenated water getting into the ground percolating into the  
 (24) ground isn't there?  
 (25) A That's correct

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- (1) Q What's that?  
 (2) A Oxidation itself  
 (3) Q Oxidation. There's little bugs - and there are little  
 (4) bugs eating the underground oil is that right?  
 (5) A That is correct  
 (6) Q So the fact that oil is under the ground doesn't mean it  
 (7) isn't going away?  
 (8) A Certainly doesn't mean it's in preservation in perpetuity  
 (9) Q It's going away right?  
 (10) A Yes  
 (11) Q And not only is it going away but something else is  
 (12) happening. It's going away in a specific sort of way what  
 (13) they call the higher fractions are constantly disappearing  
 (14) It's getting down to what is known as inert material?  
 (15) A Some extent it is depending what hydrocarbon fraction but  
 (16) generally it's true  
 (17) Q But as a general proposition the longer the oil is under  
 (18) the ground the less toxic it becomes?  
 (19) A That's a horse of a different color  
 (20) Q Before we get to the horse of a different color let me  
 (21) just ask you about the sheer volume. The oil just the amount  
 (22) of it is decreasing right?  
 (23) A That's correct Yes  
 (24) Q Okay I want to ask you. There are a couple of places  
 (25) where you say you saw sheen just as the result of the normal

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- (1) tidal action on the beach?  
 (2) A Uh huh  
 (3) Q That's right that's what you told us yesterday?  
 (4) A That is correct yes  
 (5) Q As opposed to where you would take a shovel of dirt and  
 (6) move it in the water and get a sheen coming off of that?  
 (7) A That's correct yes  
 (8) Q How often did you see these sheens without there being  
 (9) some  
 (10) agitation by a scientist?  
 (11) A In 1994 it was more common than we actually would have  
 (12) guessed  
 (13) Q But how often did you see it?  
 (14) A I would say common. I haven't counted them so I don't  
 (15) know precisely  
 (16) Q At the beaches that you went to that you looked for that  
 (17) had the oil on them?  
 (18) A Yes  
 (19) Q Now do you have any familiarity with how much oil it takes  
 (20) to create a sheen?  
 (21) A Roughly yes  
 (22) Q Not very much right?  
 (23) A Very small amount yes  
 (24) Q And studies have shown that you can take a couple of drops  
 (25) and put a sheen over a hundred square meters isn't that  
 (26) right?

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- (1) A Might be stretching it for a couple of drops but you're in  
 (2) the ballpark  
 (3) Q Five drops I'm in the ballpark go up or down a hundred  
 (4) percent?  
 (5) A Sheens have range from five thousandths of a millimeter  
 (6) yes  
 (7) Q Very small amount?  
 (8) A Small amount of oil yes  
 (9) Q You're not a biologist but what we're talking about is a  
 (10) sheen that could be reflecting a very little bit of oil getting  
 (11) out away from the shore is that right?  
 (12) A That is correct yes  
 (13) Q By the way other things cause sheens too decaying  
 (14) vegetable materials right?  
 (15) A Yes  
 (16) Q So for example this marsh is not like Potter's Marsh on  
 (17) the edge of town here this is a different kind of marsh?  
 (18) A That's correct  
 (19) Q If you go out to Potter's Marsh and walk down that walkway  
 (20) you can see what looks like oil sheen can't you?  
 (21) A I believe you can  
 (22) Q It's not oil?  
 (23) A It's not petroleum derived oil yes  
 (24) Q Has some of the same things in it doesn't it?  
 (25) A That's correct

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- (1) Q That's what gives it the sheen?  
 (2) A That may not be the only thing that gives it the sheen  
 (3) but -  
 (4) Q May may not?  
 (5) A Yes  
 (6) Q You talked to us yesterday about Beauty Bay I believe Do  
 (7) you remember that?  
 (8) A Yes The question is do I remember yesterday  
 (9) Q I apologize How many visits had to be made to Beauty Bay  
 (10) before anybody could find oil?  
 (11) A In 1989?  
 (12) Q Pardon me in 1994  
 (13) A In 1994 Just one  
 (14) Q Okay And how many in 1992?  
 (15) A For the transect team one For - I believe it was two -  
 (16) the two biologists they visited first before we were there and  
 (17) found no oil  
 (18) Q I'm sorry We have two trips or three trips to find the  
 (19) oil?  
 (20) A Two trips in '92 I think that's correct yes  
 (21) Q Oh thank you I'm sorry  
 (22) Do you recognize this as a picture of the - I think they  
 (23) call it an oblique of the Beauty Bay area  
 (24) A I believe that's correct yes Yeah yeah  
 (25) Q For the record this is exhibit 15480?

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- (1) MR PETUMENOS I'm sorry counsel I didn't hear  
 (2) you  
 (3) MR OPPENHEIMER 15480  
 (4) BY MR OPPENHEIMER  
 (5) Q Some more of your client's land?  
 (6) A Yes  
 (7) Q Including these glaciated peaks?  
 (8) A I would imagine so I don't know for certain I don't  
 (9) know where the property boundary goes upland  
 (10) Q Okay Your focus is the shore because that's where the oil  
 (11) is?  
 (12) A Primarily yes  
 (13) Q Can you see this well enough so that if I point -  
 (14) A I think so  
 (15) Q This is the - it's in this area that your transect site is  
 (16) located is that correct?  
 (17) A That's correct  
 (18) Q The part of your field team who initially went did you say  
 (19) they did not find oil until the second trip?  
 (20) A That's correct In 1992?  
 (21) Q Yes  
 (22) A Yes  
 (23) Q Dr Bakus was the person on the field the first time  
 (24) looking for oil?  
 (25) A And Larry Thebeau

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- (1) Q And Larry Thebeau yes Couldn't find any?  
 (2) A That's correct  
 (3) Q Do you recognize these two photographs as pictures of the  
 (4) delta area at the end of - of the bay there?  
 (5) A Yes  
 (6) Q Okay For the record these are exhibits 15482 and 15481  
 (7) With Your Honor's permission we'll just lean these up in front  
 (8) here I'm afraid I will have to ask you to come down I was  
 (9) hoping not to have to do that to you again but I failed  
 (10) A You want me on this side now?  
 (11) Q Sure that would be great I'm not suggesting that these  
 (12) you know fit together but it's a wide area  
 (13) By the way these trees here to my untrained eye look  
 (14) dead You understand them to be dead?  
 (15) A Pretty nearly so yes  
 (16) Q But not the oil spill right?  
 (17) A That's right  
 (18) Q That's a result of the 1964 earthquake?  
 (19) A That's the most recent interpretation yes  
 (20) Q Fair to describe this as another delta - I'm sorry can -  
 (21) we'll hold it up - another delta?  
 (22) A Yes we're not going to be real precise about it It's a  
 (23) tidal flat as well It's very flat and very planar except for  
 (24) the channels but leave it as a delta  
 (25) Q Once again we have a situation probably heavily influenced

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- (1) by just the fantastic amount of material that s melting and  
 (2) coming down on these peaks where a lot of new material is  
 (3) getting put down onto that area is that right?  
 (4) A Well historically that would be the case Whether it s  
 (5) true for the current recent five years depends on the  
 (6) climactic variations and those types of things and  
 (7) precipitation yes  
 (8) Q Once again this is like our east Chenega site This is  
 (9) one of those places where you could as you described get a  
 (10) kind of swash bar situation because you have new material  
 (11) coming down onto the beach from upland?  
 (12) A Not necessarily That s because we have new material  
 (13) coming down It s because of the wave environment and the  
 (14) availability of fine grain material coupled with a more  
 (15) strengthened armor surface The idea you have two  
 (16) stratigraphic entities that can interact yes  
 (17) Q You would not describe this as a typical shoreline for the  
 (18) Prince William Sound and Kenai?  
 (19) A It is one of the types  
 (20) Q But it s not typical?  
 (21) A It s typical of those types It s not a widespread type  
 (22) Q Right understood Thank you  
 (23) A Although many of the Kenai Fiord heads are similar to this  
 (24) the bay heads are very similar to this  
 (25) Q Again this is Beauty Bay

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- (1) voice I believe it to be Dr Bakus looking at Beauty Bay on  
 (2) one of those trips  
 (3) (Videotape Played)  
 (4) VOICE ON VIDEOTAPE This is Beauty Bay and as you  
 (5) can see it s heavily covered with brown algae and this other  
 (6) algae which may be halosaccion Here you see some marsh  
 (7) grasses and there s enteromorpha quite a bit of it in the  
 (8) intertidal It s the upper intertidal and the bay We re  
 (9) testing for oil in the sediments but we haven t found any I  
 (10) think it s a clean beach  
 (11) (Videotape Turned Off)  
 (12) Q Dr Bakus talking?  
 (13) A Yes it is  
 (14) Q With a trained field crew on Beauty Bay?  
 (15) A Trained field crew partly true  
 (16) Q Best we got?  
 (17) A Yes  
 (18) MR OPPENHEIMER Your Honor would this be an  
 (19) appropriate time for a break?  
 (20) THE COURT Sure  
 (21) THE CLERK Please rise this court stands in recess  
 (22) (Jury out at 11 45 a m )  
 (23) (Recess at 11 45 a m to 12 08 p m )  
 (24) (Jury In at 12 08 p m )  
 (25) THE CLERK This court now resumes its session

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- (1) A Yes  
 (2) Can I sit down now?  
 (3) Q Oh yes excuse me  
 (4) MR OPPENHEIMER Your Honor with the Court s  
 (5) permission and counsel we d like to play a part of a  
 (6) videotape okay that is a portion of the video that was played  
 (7) yesterday plaintiffs 1368 We would like to play it with the  
 (8) sound on The sound was turned off yesterday  
 (9) THE COURT I didn t do it  
 (10) MR PETUMENOS Is this Mr -  
 (11) MR OPPENHEIMER This is Mr Bakus  
 (12) MR PETUMENOS - Bakus?  
 (13) MR OPPENHEIMER Yes that s correct  
 (14) MR PETUMENOS I probably don t have an objection  
 (15) Judge but if I could probably confer with counsel  
 (16) MR PETUMENOS Shall we go behind -  
 (17) MR OPPENHEIMER Yes behind We don t want any  
 (18) inferences drawn  
 (19) MR STOLL I ll give you a blow by blow  
 (20) MR PETUMENOS Okay Judge  
 (21) MR OPPENHEIMER Nothing more suspicious than two  
 (22) lawyers going behind a board  
 (23) One second before you run it I m going to ask the  
 (24) witness and the jury to listen carefully to the sound track  
 (25) and I m going to ask you afterwards just to identify the

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- (1) Please be seated  
 (2) BY MR OPPENHEIMER  
 (3) Q Mr Bush you mentioned that you also had a transect in  
 (4) Windy Bay is that correct?  
 (5) A That is correct  
 (6) Q Do you recognize this as a photograph of Windy Bay here?  
 (7) A If you d move it back a little  
 (8) Q Sure  
 (9) A Yes I do  
 (10) Q For the record this is exhibit 13227  
 (11) Mr Bush this - once again this is your clients land?  
 (12) A Yes  
 (13) Q And I ll tell you what in order to see if I can keep from  
 (14) making you come up and down I will point to the area where I  
 (15) think your transect is and if I can locate it perhaps I ll  
 (16) put on the tape for you Is your transect somewhere in this  
 (17) area?  
 (18) A That s close  
 (19) Q About where the tree is here?  
 (20) A I think so if I remember right  
 (21) Q Okay Well here we go Which direction does it run down  
 (22) the beach to the shoreline?  
 (23) A Perpendicular to the shoreline yes  
 (24) Q Perpendicular to the shoreline How did you do this?  
 (25) A Yes secrets we have

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- (1) Q I ve made this too big so I m going to fold it Now I  
 (2) realize why I let you do this  
 (3) MR PETUMENOS I object to Mr Oppenheimer doing the  
 (4) red tape  
 (5) MR OPPENHEIMER With good cause Your Honor It  
 (6) won t happen again  
 (7) BY MR OPPENHEIMER  
 (8) Q This will be the first transect you ever set but it s  
 (9) going right there We ll change it We ll fix it later  
 (10) Mr Bush you ve been out to this area?  
 (11) A Yes  
 (12) Q Thank you My colleague will give me a device  
 (13) You have been out to this area when most recently?  
 (14) A Actually we didn t get back to the transect site in 94 my  
 (15) mistake there so it was in 92  
 (16) Q You went back to this area but you didn t go back to the  
 (17) transect site?  
 (18) A That s correct  
 (19) Q Where - I m sorry I guess I do have to ask you to come  
 (20) down Well describe for me which side of the bay did you go  
 (21) into left or right?  
 (22) A I m sorry I misspoke In 94 we did go to the general  
 (23) location of the transect but we didn t study the transect  
 (24) Q You went back to the general location but you didn t study  
 (25) it?

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- (1) A Yes  
 (2) Q Why was that?  
 (3) A Because in 1992 we found very little oil there  
 (4) Q Right okay With where did you go when you moved away  
 (5) from the transect site?  
 (6) A We walked the area to the north up behind the trees  
 (7) Q You ll have to help me The north is this direction?  
 (8) A I m sorry up in - the illustration is not north actually  
 (9) it s west but up in that we walked in the area looking for  
 (10) some team party members failed to find them returned to the  
 (11) shoreline and walked to your right - to your left that s  
 (12) correct  
 (13) Q This direction?  
 (14) A Perhaps I should come down  
 (15) Q There s no doubt about it There s no doubt about it  
 (16) Okay Now in more competent hands why don t you show  
 (17) me?  
 (17) A I don t know if they re more competent but at least the  
 (18) errors will be confined to one source  
 (19) Up this way along this way and I believe we walked to  
 (20) about here crossed over inspected this portion of the  
 (21) shoreline  
 (22) Q What did you find?  
 (23) A Scattered patchy residue  
 (24) Q Now do we have a protected area here?  
 (25) A Yes we do

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- (1) Q Okay What is this that we see?  
 (2) A Land  
 (3) Q Clear cutting?  
 (4) A Specifically -  
 (5) Q Clear cut logging?  
 (6) A Yes logging yes  
 (7) Q Is there - is there a loading dock to your knowledge  
 (8) somewhere in this area for logs?  
 (9) A Here  
 (10) Q Down here pardon me down here Do you have any  
 (11) knowledge by the way about whether at any time during the oil  
 (12) spill activities the logging activities in this area were  
 (13) affected at all?  
 (14) A In what context?  
 (15) Q Well do you have any information as to whether they were  
 (16) interrupted in any way?  
 (17) A We haven t studied the logging activities no  
 (18) Q Do you have any information that would suggest that any of  
 (19) the work you have done would lead you to conclude that  
 logging  
 (20) interruptions would be affected in this area?  
 (21) MR PETUMENOS I ll object that s beyond the scope  
 (22) MR OPPENHEIMER I ll withdraw the question Your  
 (23) Honor  
 (24) THE COURT All right  
 (25) BY MR OPPENHEIMER

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- (1) Q Do you notice any oil cans when you were walking up around  
 (2) this area?  
 (3) A During the visit when we were just there?  
 (4) Q Right right  
 (5) A There was storm raft flotsam/jetsam material there I  
 (6) don t recall specifically what the contents were but I don t  
 (7) think of it as being oil cans at this site  
 (8) Q You noticed oil cans at other sites?  
 (9) A Yes  
 (10) Q What other sites?  
 (11) A Good question  
 (12) Q Why don t you take your seat and I m going to give you a  
 (13) chance to sit down  
 (14) A I believe we observed oil can at Badger Cove  
 (15) Q By the way if there had never been an Exxon Valdez oil  
 (16) spill would there have been oil in the Prince William Sound  
 (17) area?  
 (18) A In what context? Natural oils or quantities that happened  
 (19) from the spill or -  
 (20) Q Let s start with natural oil Would there have been  
 (21) natural oil in the Prince William Sound?  
 (22) A Natural hydrocarbon compounds yes  
 (23) Q Yes right You re familiar with the Katalla area?  
 (24) A Yes I am  
 (25) Q Let s bring out a map Is this a good one?

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- (1) MR CLOUGH The one against the podium I think  
 (2) MR OPPENHEIMER Good  
 (3) BY MR OPPENHEIMER  
 (4) Q This is the Copper River Delta is that right?  
 (5) A Yes it is  
 (6) Q Can you tell the jury - well are you aware that there are  
 (7) natural oil seeps - for the moment I'll call it proximate to  
 (8) - near the Prince William Sound area?  
 (9) A Proximate meaning 40 miles 50 miles  
 (10) Q What area - can you tell us on this map where those oil  
 (11) seeps are?  
 (12) A Maybe not on that map I've seen the location  
 (13) Q It's about here?  
 (14) A Yes  
 (15) Q And -  
 (16) A I think they range from 50 to 100 miles away  
 (17) Q And the water that goes by those oil streams where oil is  
 (18) coming naturally out of the earth that same water goes through  
 (19) this area and down is that correct?  
 (20) A That is - well not that - not all of it  
 (21) Q Not all of it but - well eventually all of it?  
 (22) A A portion of the water goes in through the Hinchinbrook  
 (23) Entrance and comes out through Montague Straits  
 (24) Q Could I have the Kenai - I'll do it with a different map  
 (25) borrow one

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- (1) A Unfortunately yes  
 (2) Q Has a fair number of names with the word oil in it?  
 (3) A Yes  
 (4) Q And in the case of Oil Creek for example it explains that  
 (5) that's because for over sixty years people have known there  
 (6) was oil in that creek?  
 (7) A I don't know about the time frame on that  
 (8) Q But in any event you are familiar with Oil Creek?  
 (9) A Yes roughly yes  
 (10) Q Now we were talking about oil in the area even if it  
 (11) hadn't been - even if there had not been a spill and talked  
 (12) about a couple of natural sources This might be a mixed  
 (13) source but there's another event that caused oil to go into  
 (14) the - the atmosphere as well isn't that right?  
 (15) A I'm sorry?  
 (16) Q The '64 quake?  
 (17) A You said into the atmosphere  
 (18) Q Into the water into the water column?  
 (19) A Yes  
 (20) Q And that caused some oil tanks to break in Valdez isn't  
 (21) that right?  
 (22) A That is correct  
 (23) Q And those contained asphalt?  
 (24) A Yes  
 (25) Q And asphalt is different from what was on the Exxon Valdez

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- (1) And that oil that we're talking about it comes out of  
 (2) cracks in the earth is that right? It's a naturally occurring  
 (3) event?  
 (4) A Right It's an oil seep Cracks might not be the best  
 (5) characterization but yes  
 (6) Q Now this is one of your oiling maps This is - this is  
 (7) - how many miles away from the oil spill did you say this  
 (8) area was?  
 (9) A Oh 500 plus or minus depending on where you are  
 (10) Q And this is the Shelikof Strait here?  
 (11) A Yes that's correct  
 (12) Q And there's another area where you get oil naturally  
 (13) occurring in the water environment in this area is that right?  
 (14) A In the water environment?  
 (15) Q Somewhere along here there is - you can identify for me I  
 (16) take it a place where we have other oil seeps natural oil  
 (17) seeps?  
 (18) A Yes yes Bachelors Creek  
 (19) Q Oil Creek do you recall Oil Creek?  
 (20) A Yes where - right  
 (21) Q By the way as a geologist did you have occasion to use a  
 (22) book that describes how Alaskan rivers and whatnot get their  
 (23) names?  
 (24) A The Alaska Dictionary of Place Names you mean?  
 (25) Q Exactly And it has a fair number of names?

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- (1) is that right?  
 (2) A Yes  
 (3) Q And that asphalt has been found in the Prince William Sound  
 (4) area and on the Kenai ever since then?  
 (5) A To the extent it's been found in the Kenai I'm not sure  
 (6) It's been identified in Prince William Sound yes  
 (7) Q A number of the transect sites that you studied were in  
 (8) protected areas is that right?  
 (9) A That's correct  
 (10) Q Those are areas that are going to be harder to clean out  
 (11) among other things clean more slowly?  
 (12) A Generally speaking yes  
 (13) Q Don't let me cut your hand off there  
 (14) Do you recognize this as a photograph of your transect site  
 (15) area Eshamy Bay?  
 (16) A Yes  
 (17) Q For the record this is defendant's Exhibit DX8944 I've  
 (18) learned my lesson If I could ask you to come down and if we  
 (19) could do our standard operating procedure here if you would  
 (20) put the tape where your transect site is - was?  
 (21) A Well this is a skewed view here It's a little more  
 (22) difficult to say with certainty but it's approximately in this  
 (23) area  
 (24) Q Did you have occasion to go back there in '94?  
 (25) A Yes

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- (1) Q What did you find in '94?  
 (2) A We found a discontinuous asphaltic asphalt pavement  
 (3) beneath and around the cobble armor  
 (4) Q Discontinuous means it's not one piece?  
 (5) A That's correct  
 (6) Q Where did you find it?  
 (7) A Well we found it across the transect in this vicinity  
 (8) and then for some distance on in this direction  
 (9) Q How - how deep is the cobble armor up there?  
 (10) A It's fairly shallow When you say up there you're  
 (11) referring to -  
 (12) Q Where you found the mat?  
 (13) A It's fairly shallow from one to two cobbles mostly one in  
 (14) most places  
 (15) Q Do you have any information about how the life that lives  
 (16) in the intertidal area is affected as you move up the  
 (17) intertidal zone toward the supratidal zone - you're not a  
 (18) biologist I won't ask that question  
 (19) A But I mean generally speaking yes I guess if you can be  
 (20) more specific I'll try to stay within my knowledge realm  
 (21) Q Rather than induce you not to let me reword it  
 (22) How did you know there was a tar mat up there?  
 (23) A We investigated the site in 1989 and we returned in '92  
 (24) found residue of oil and returned in '94 and found residue  
 (25) then as well

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- (1) Q And from the residue that you were able to see you  
 (2) concluded that you had a mat running along the top here like  
 (3) this?  
 (4) A Roughly that location yes  
 (5) Q Let's - for this particular one would you put a piece of  
 (6) tape where you found that mat?  
 (7) A Well again this will be fairly approximate  
 (8) Q Sure  
 (9) A And this is the limit I think that we walked it while we  
 (10) were in the field Something like about that Might be a  
 (11) little over I think that's close to right  
 (12) Q Okay let me have you stand for one second I'm going to  
 (13) show you three photographs -  
 (14) MR OPPENHEIMER Counsel this is defendant's  
 (15) exhibits 15475 15476 15477  
 (16) Just to be on the safe side I can't remember whether I  
 (17) read into the record the Eshamy Bay photograph so while  
 (18) counsel's looking at that I'll read it again DX8944  
 (19) BY MR OPPENHEIMER  
 (20) Q Mr Bush if you would take a look at the three exhibits  
 (21) I'd like to have you tell me if they are in fact photographs  
 (22) that you took of Eshamy Bay around your transect area and as  
 (23) you were exploring this mat?  
 (24) A Okay Yes they are Not that we were truly exploring the  
 (25) mat but - yes Those are the photographs

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- (1) Q It is on the basis of work shown in these photographs that  
 (2) you concluded and just told the jury that there is a mat up  
 (3) here?  
 (4) A Yes  
 (5) Q No doubt in your mind?  
 (6) A There is a band with discontinuous asphaltic residue yes  
 (7) Q No doubt in your mind about that?  
 (8) A There's no doubt  
 (9) Q Tell us what we see here if you would  
 (10) A Well we see Dr Bakus He's looking at a sample in his  
 (11) hand standing by a boulder that's been turned up In the  
 (12) distance we see Jeffrey Dawson making field notes with a  
 (13) flag by his feet showing where he traced - the extent to which  
 (14) he traced the residue  
 (15) Q Now is this a - is this a -  
 (16) MR OPPENHEIMER Thank you I didn't think I was  
 (17) walking that fast  
 (18) BY MR OPPENHEIMER  
 (19) Q Is this a pit Mr Bush? I don't know can you see where  
 (20) I'm pointing?  
 (21) A I believe to the left of the red handle of the shovel  
 (22) Q Might have to bring you down  
 (23) A Where the rock's been moved out of the beach surface  
 (24) Q Right here where this rock has been moved out of here?  
 (25) A Yes That's not a pit it's a place where we moved a rock

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- (1) from the surface  
 (2) Q I understand Is that the rock?  
 (3) A Yes sir  
 (4) Q And so what you're telling me is you - you dug down here  
 (5) and you found a part of this mat that you say runs along here?  
 (6) A Yes  
 (7) Q No doubt about it?  
 (8) A Well it's impregnated sediment If you want to argue  
 (9) about the definition of a mat we can discuss that but there's  
 (10) material there  
 (11) Q Okay now this is a pit This is also a part of the  
 (12) process you used to determine that there was a mat at the top  
 (13) of the beach?  
 (14) A Also a process that you what - you were walking away  
 (15) Q This is part of the process you were going places and  
 (16) finding parts of the mat?  
 (17) A Yes  
 (18) Q Is this the pit that that rock just came out of in other  
 (19) words there's a pit here and a pit here?  
 (20) A The one that's beside the rock here the lower portion of  
 (21) the photograph  
 (22) Q Yes?  
 (23) A Yes that's the pit where the rock came out  
 (24) Q How many pits did you dig?  
 (25) A I don't recall precisely I would imagine - I think just

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- (1) the - just the turned over rock and the one pit that you see  
 (2) there is all I recall  
 (3) Q They re about that far apart from each other?  
 (4) A I think they re a little farther than that  
 (5) Q That far apart from each other?  
 (6) A Maybe a little more than that but you re in the ballpark  
 (7) MR OPPENHEIMER I move the admission Your Honor of  
 (8) defendants exhibits 15475 15476 15477  
 (9) (Exhibit DX15475 DX15476 DX15477 offered)  
 (10) THE COURT They re admitted  
 (11) (Exhibit DX15475 DX15476 DX15477 received)  
 (12) MR OPPENHEIMER Sorry I just poked myself with a  
 (13) pen  
 (14) BY MR OPPENHEIMER  
 (15) Q Taroca Arm Mr Bush another transect site?  
 (16) A Yes  
 (17) Q You needn t been terrified I m not going to go through  
 (18) all of them  
 (19) This is another protected site is it not?  
 (20) A Yes it is  
 (21) Q And this is a highly protected site isn t it?  
 (22) A I m not sure what you mean by highly but it s one of the  
 (23) more protected sites of the ones that were on our transects  
 (24) that s correct  
 (25) Q I m sorry excuse me do you recognize this as a photograph

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- (1) A Close enough right  
 (2) Q Now this transect site you ve described in your report  
 (3) have you not as protected by this piece of land this spit  
 (4) here?  
 (5) A That s correct  
 (6) Q Right As a natural phenomena this spit s not unlike the  
 (7) Homer Spit the way it s being built out?  
 (8) A That s correct  
 (9) Q Smaller example of that Did you have an opportunity to go  
 (10) back to Taroca in 95 (sic)?  
 (11) A Yes  
 (12) Q What did you find?  
 (13) A Did you say in 94 or just go back?  
 (14) Q I did say 95 and I did not mean to I meant to say 94?  
 (15) A We went back in - we went back in - I don t think we did  
 (16) get there in 94  
 (17) Yes we did I remember  
 (18) Q You do remember being back there in 94?  
 (19) A Yes  
 (20) Q And do you remember what you found?  
 (21) A Yes  
 (22) Q What did you find?  
 (23) A Scattered patchy patches of asphalt pavement  
 (24) Q And how did you identify the asphalt pavement?  
 (25) A I guess I don t follow the question You know we go to

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- (1) of the transect site location of your transect at Taroca?  
 (2) A Yes I do  
 (3) Q Am I correct that your transect was in this area?  
 (4) A Very close yes  
 (5) Q Do you recognize this as a photograph of your transect  
 (6) area?  
 (7) A Yes  
 (8) Q I think I can actually do this one this time Am I in the  
 (9) neighborhood of your transect area?  
 (10) A I believe it s farther towards me  
 (11) Q Here?  
 (12) A Past the tree I think  
 (13) Q Past this?  
 (14) A I think we re past the tree  
 (15) Q Do you think you re over here?  
 (16) A The oblique angle makes it difficult  
 (17) Q Here?  
 (18) A Right in there yes I believe that s about it  
 (19) MR OPPENHEIMER Mr Diamond could you hold my pen  
 (20) here for just a second? Thank you Here we go yeah thanks  
 (21) BY MR OPPENHEIMER  
 (22) Q Right about there?  
 (23) A I think so From this angle may have gone too far but  
 (24) it s close  
 (25) Q Close enough?

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- (1) the rocks and found places where they were bound together by  
 (2) oil residue and identified them  
 (3) Q Did you conclude it was another mat?  
 (4) A Another mat?  
 (5) Q Yes Well that there was a mat there  
 (6) A Or the portions of a mat that was there previously that was  
 (7) left  
 (8) Q The mat was deteriorating?  
 (9) A Yes  
 (10) Q From your last visit?  
 (11) A Yes  
 (12) Q Was the mat perpendicular or - excuse me parallel to the  
 (13) water did it run off?  
 (14) A Parallel to the shoreline?  
 (15) Q Parallel to the shoreline  
 (16) A Yes  
 (17) Q I d like to identify for the record that the closeup of the  
 (18) transect with the transect marker is exhibit 13240 and the  
 (19) broader view is exhibit 13239  
 (20) We talked about the transect sites I want to come back  
 (21) briefly to the maps you showed us earlier  
 (22) You recognize this as you testified before as an oiling  
 (23) map?  
 (24) A That is correct  
 (25) Q I want to be absolutely clear about something with respect

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- (1) to these exhibits These do not show the oil today?  
 (2) A That is correct  
 (3) Q They do not show the oil in 93?  
 (4) A That is correct  
 (5) Q They do not show the oil in 92?  
 (6) A That s correct  
 (7) Q They do not show the oil in 91?  
 (8) A That is correct  
 (9) Q Or 90?  
 (10) A That s correct  
 (11) Q Okay And this is information that you collected from  
 (12) every source that you could find with respect to where oil  
 (13) would be that you found in any way shape or form to be  
 (14) reliable?  
 (15) A It consists of observations made in 1989 That s - does  
 (16) that answer the question?  
 (17) Q Well I m being a little more specific What I want to  
 (18) know is where you got the information that went on - let me be  
 (19) even more specific Does this include what s known as  
 (20) anecdotal information?  
 (21) A Yes it does  
 (22) Q And is anecdotal information people who you may not know  
 (23) making a report to someone that eventually gets to you and it  
 (24) gets into the computer system?  
 (25) A That s correct

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- (1) Q You weren t able to do a reliability check on all of this  
 (2) information were you?  
 (3) A No we were not  
 (4) Q You did the best you could but you for example got some  
 (5) information from DNR which is the Department of Natural  
 (6) Resources do I have that right?  
 (7) A That s correct  
 (8) Q Do you have any idea what s in their data base?  
 (9) A Well we have it  
 (10) Q You have it I know you have it and I know it s reflected  
 (11) in the maps is it not?  
 (12) A Yes  
 (13) Q But do you know what s in it?  
 (14) A We re looking at what s in it I don t follow the  
 (15) question  
 (16) Q I understand we re looking at where that data base when  
 (17) you print it on the computer tells you where there s oil?  
 (18) A Yes  
 (19) Q Question is What s in the computer data base?  
 (20) A It was the data that was submitted to us by the Department  
 (21) of Natural Resources which had been acquired from the Alaska  
 (22) Department of Environmental Conservation and gone through  
 (23) the  
 (24) appropriate screening and production control processes  
 (25) Q Is it your understanding that the data that you got from  
 the Department of Natural Resources was only from ADEC?

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- (1) A Not only not only from ADEC  
 (2) Q Came from other sources too?  
 (3) A The largest proportion I believe was  
 (4) Q It came from other sources too?  
 (5) A I believe that s correct  
 (6) Q It came from reports of people?  
 (7) A Not the information from the Department of Natural  
 (8) Resources I don t believe that came from the reports of other  
 (9) people  
 (10) Q You don t think there s any -  
 (11) A We had a separate anecdotal file which we set up for  
 (12) anecdotal data we received  
 (13) Q You don t think there s any anecdotal data in the DNR disk?  
 (14) A I can t say There may not be  
 (15) Q You don t know?  
 (16) A I don t know  
 (17) Q You do know that you have a file that has nothing but  
 (18) anecdotal data in it?  
 (19) A Yes  
 (20) Q Those are statements people make about where they think  
 (21) they ve seen oil right?  
 (22) A That s correct  
 (23) Q You can mistake things for oil that aren t oil can t you?  
 (24) A Yes you can  
 (25) Q We talked a little bit earlier about the fact you can

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- (1) mistake decaying animal - pardon me decaying vegetable  
 matter  
 (2) for oil isn t that right?  
 (3) A I don t know if we talked about it or not  
 (4) Q The sheen?  
 (5) A Oh referring to the sheens  
 (6) Q Yes  
 (7) A There can be sheens produced by natural biologic things  
 (8) yes  
 (9) Q Which the untrained observer would think was oil?  
 (10) A Yes  
 (11) Q There could be lichen that the untrained observer would  
 (12) think was oil?  
 (13) A Yes  
 (14) Q Indeed isn t there something called tar spot lichen?  
 (15) A Yes I m not precisely familiar with that name but there  
 (16) are spotty lichens that do appear to be tar yes  
 (17) Q One of the things you had to do when you were doing your  
 (18) field work is that you weren t mistaking lichen for oil?  
 (19) A That s correct  
 (20) Q And there are boats that travel around in the water?  
 (21) A Yes there are  
 (22) Q They give off oil gasoline?  
 (23) A On some occasions yes  
 (24) Q Some occasions not that an owner would admit to but it  
 (25) happens We talked earlier about there are natural oil seeps?

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- (1) A Yes  
 (2) Q We talked earlier about the fact that the 1964 earthquake  
 (3) caused an asphalt event that was not so insignificant  
 (4) A Ruptured tanks in Valdez and spilled asphaltic material  
 (5) that s correct  
 (6) Q And in fact there can be local pockets of things which  
 (7) put oil and - and asphalt type material into this environment  
 (8) which an untrained observer could conclude was oil?  
 (9) A Depending on the nature of the occurrence they re  
 (10) describing yes  
 (11) Q You never saw oil at Bligh Island neither you nor any of  
 (12) your colleagues in two visits to Bligh Island?  
 (13) A That is correct  
 (14) Q But it s - it s on the map as oiled?  
 (15) A That is correct  
 (16) Q And were you here when Mr Costello testified in our - in  
 (17) our courtroom here about the oil he saw?  
 (18) A I was not  
 (19) Q Would you be surprised to learn that he indicated that he  
 (20) could only be definitive about oil on about one eighth of a  
 (21) mile of the shoreline?  
 (22) A Not particularly surprised no  
 (23) Q Okay Can you tell - and let me bring this closer to you  
 (24) - I assume you know your system well enough that you can but  
 (25) tell me if you can t that what you have marked as oiled on

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- (1) Bligh Island is substantially more than an eighth of a mile?  
 (2) A Yes that s correct  
 (3) Q It is okay Now earlier on you indicated to me that you  
 (4) had found some oil in - in this area you thought personally?  
 (5) A That s correct  
 (6) Q And was that in 94?  
 (7) A Yes it was  
 (8) Q This year you made a trip to north of the Tattilek Village?  
 (9) A Yes  
 (10) Q That was by float plane?  
 (11) A Yes  
 (12) Q And you found something there on a beach?  
 (13) A Yes  
 (14) Q You think it was Exxon oil?  
 (15) A The analyses indicate that it s Exxon oil The occurrence  
 (16) and nature of it were more speculative more questionable to  
 (17) my  
 (18) eye  
 (19) Q I ll show you two photographs and ask you to identify  
 (20) them They re marked for identification as defendants exhibit  
 (21) 15473 and 15474 I wonder if you could tell us what those two  
 (22) photographs are  
 (23) MR PETUMENOS Could I -  
 (24) MR OPPENHEIMER I m sorry pardon me  
 (25) MR PETUMENOS Sorry to interrupt  
 (26) MR OPPENHEIMER Let me show counsel first I m

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- (1) sorry  
 (2) MR PETUMENOS Thanks  
 (3) Thank you counsel I have them now  
 (4) BY MR OPPENHEIMER  
 (5) Q Mr Bush?  
 (6) A Thank you This doesn t represent all the photographs that  
 (7) we took but they re a couple of them yes  
 (8) Q By the way is that - there seem to be two post its or  
 (9) markers at the bottom of the photograph Is that your  
 (10) handwriting?  
 (11) A Yes  
 (12) Q When I say that I mean one each on 15474 and 15473  
 (13) A Yes  
 (14) Q And are these in fact photographs of the oil you found at  
 (15) Tattilek?  
 (16) A Some of the oil we found that s correct  
 (17) MR OPPENHEIMER Your Honor these do not come across  
 (18) too good on the Elmo May I move for their admission and  
 (19) circulate them briefly among the jury?  
 (20) MR PETUMENOS No objection  
 (21) (Exhibit DX15473 and DX15474 offered)  
 (22) THE COURT Yes Just tell me one more time what they  
 (23) are  
 (24) MR OPPENHEIMER Yes Your Honor they re -  
 (25) THE COURT What are the numbers?

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- (1) MR OPPENHEIMER The numbers are 15474 15473  
 (2) THE COURT All right those - they are admitted  
 (3) (Exhibit DX15473 and DX15474 received)  
 (4) BY MR OPPENHEIMER  
 (5) Q How long were you at Tattilek?  
 (6) A How long you mean specifically investigating the  
 (7) shoreline?  
 (8) Q Yes  
 (9) A On the Tattilek area actually we hadn t planned on  
 (10) investigating the shoreline at all We simply arrived on the  
 (11) float plane got off and were on our way to meet Claire Doig  
 (12) I believe  
 (13) Q Claire Doig?  
 (14) A Yes And at the plane site we stumbled onto some tar  
 (15) patches on the cobble armor  
 (16) Q Is one of the things that you ve been asked to do to help  
 (17) the plaintiffs map their land that is to say to put it on  
 (18) maps their parcels?  
 (19) A I don t follow the question excuse me  
 (20) Q Did you play a role in creating maps that show their  
 (21) parcels that show -  
 (22) A Yes  
 (23) Q The legal boundaries?  
 (24) A Yes  
 (25) Q That you were told were the legal boundaries of their land?

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- (1) A Yes  
 (2) Q And do you have an understanding as to the point at which  
 (3) the legal boundary ends as you get toward the water?  
 (4) A No  
 (5) Q When you originally began to investigate oil in 89 did  
 (6) you not write that you wanted to be careful because the Native  
 (7) lands did not begin until the mean high tide line?  
 (8) A I wouldn't say that - that we knew that at that time We  
 (9) questioned the issue It became unresolved and we had to  
 (10) move  
 (11) to the field so we assumed that that was the case and  
 (12) collected data as carefully as possible in order to delineate  
 (13) the mean high tide boundary should that be the case  
 (14) Q I'd like to change subjects now to the curves the  
 (15) persistence curves We have as I understand it ten  
 (16) persistence curves corresponding to ten NOAA beach types?  
 (17) A That's correct  
 (18) Q NOAA mapped the beaches of Prince William Sound and the  
 (19) Kenai back what in the 70s?  
 (20) A I believe so I believe that's correct yes It was the  
 (21) early 70s for the Kenai - or the Shelikof Straits area  
 (22) Q Let's put one of these up  
 (23) MR PETUMENOS Mr Oppenheimer are you going to need  
 (24) this map on the easel?  
 (25) MR OPPENHEIMER I'm sorry?  
 (26) MR PETUMENOS I can move it if you don't need it no

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- (1) plaintiffs property is that right?  
 (2) A That - that would actually be applicable to a single piece  
 (3) of plaintiffs property is that what you're saying?  
 (4) Q Yes  
 (5) A I think that's probably incorrect The curves average out  
 (6) a lot of - a lot of issues a lot of processes to achieve one  
 (7) result and I would imagine that there are isolated sites that  
 (8) fall right on the curves Some may persist or have persistence  
 (9) longer than is indicated by the curves and some have less  
 (10) The idea being that they average out that the situation will  
 (11) average out  
 (12) Q This doesn't tell you though what any particular beach is  
 (13) going to do though does it?  
 (14) A Any single isolated parcel  
 (15) Q Correct  
 (16) A Correct way to phrase that is we can't find a single piece  
 (17) with certainty that would fit precisely the curves  
 (18) Q That would fit these curves okay  
 (19) Now this is really very hard to read but I'd like to look  
 (20) a little more carefully at this This curve comes down and  
 (21) then it goes out again is that right?  
 (22) A That is correct  
 (23) Q That's called a slope?  
 (24) A Yes  
 (25) Q And you've got 100 percent up here and you have zero down

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- (1) problem  
 (2) MR OPPENHEIMER Sure give me a hand Thank you  
 (3) BY MR OPPENHEIMER  
 (4) Q This is a little hard to read Mr Bush but it comes up on  
 (5) your monitor There's a footnote to this graph of the  
 (6) persistence curves Would you read that for us?  
 (7) A Number one or number two  
 (8) Q Number 2 please Pardon me  
 (9) A Does not fully incorporate effects of beach treatment  
 (10) Q It's part of the problem that you just don't have adequate  
 (11) site specific data on beach cleanup?  
 (12) A On what?  
 (13) Q On beach cleanup  
 (14) A That's correct  
 (15) Q Don't know what's been cleaned what's not been cleaned  
 (16) and cleaning is important to any specific beach whether it has  
 (17) recovered whether it has been or hasn't been whether it's  
 (18) been done well or bad?  
 (19) A On a site specific basis We have general information on  
 (20) it but nothing that is work site specific  
 (21) Q We're dealing with very specific sites here We're dealing  
 (22) with property that people are making claims about?  
 (23) A That is correct  
 (24) Q Okay There isn't any curve that we've seen today that  
 (25) would actually be directly applicable to a single piece of the

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- (1) here right?  
 (2) A That's correct  
 (3) Q Okay And as you go down the beach is improving right?  
 (4) A That is correct  
 (5) Q So where you have a steep curve it's improving fast?  
 (6) A That's correct  
 (7) Q And where you have what's called a shallow curve a little  
 (8) less fast?  
 (9) A That's correct  
 (10) Q You have a little - we didn't talk about this earlier but  
 (11) you have a little - there's another little mark there  
 (12) MR OPPENHEIMER Your Honor would it be permissible  
 (13) to pass some of these out among the jury?  
 (14) MR PETUMENOS Counsel they'll blow up on the -  
 (15) MR OPPENHEIMER Okay They will? I'll use the  
 (16) machine  
 (17) MR PETUMENOS I was doing that  
 (18) MR OPPENHEIMER In fact we have one on the  
 (19) machine Can you just put it up on the - it's - here I'll  
 (20) give you this one it's 1273  
 (21) Well that's a little better Can you folks see that?  
 (22) BY MR OPPENHEIMER  
 (23) Q Okay These numbers go from 100 percent down to zero  
 (24) but  
 (25) there's this little line here right  
 (26) Now this tells us does it not that at - after - well

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- (1) in this case a year this might be a little clearer because  
 (2) it's bolder in a - oh this is wonderful Okay There we  
 (3) go There they are  
 (4) In one year this particular beach will be - I'm guessing  
 (5) here- I'll give you the benefit of the doubt but better than  
 (6) 85 percent recovered?  
 (7) A Yes  
 (8) Q Okay Let's talk about this point out here and here's a  
 (9) moderate oiling beach and according to this in four years  
 (10) that beach will be completely recovered right?  
 (11) A That's correct  
 (12) Q Now what those charts are telling you is what Mr Mundy  
 (13) the plaintiffs appraiser told you would be what he wanted as  
 (14) the point in time for recovery In other words he defined  
 (15) recovery for you is that right?  
 (16) A You'll have to rephrase that I think you indicated that  
 (17) he defined the amount of time  
 (18) Q No no he told you what the condition was that he wanted  
 (19) you to treat as quote unquote recovered?  
 (20) A Well generally speaking that's correct We discussed a  
 (21) number of issues regarding this on several occasions and  
 (22) reached collectively probably mostly through - through his  
 (23) input and his associates a number of criteria which were  
 (24) given to us and we attempted to construct curves to meet those  
 (25) criteria that's correct

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- (1) Q And I think you testified yesterday this doesn't have  
 (2) anything to do with - with long term biologic recovery  
 (3) necessarily?  
 (4) A Well there are some aspects of biological recovery It is  
 (5) a component of this work but we haven't incorporated some of  
 (6) the more far reaching or some of the more exotic aspects of  
 (7) that recovery There are certain aspects of it such as  
 (8) population dynamics returning to the same age group class for  
 (9) a certain species recovery of the birds for example in some  
 (10) areas which has been projected to be for example 60 years  
 (11) certain species of fish which we have not included in these  
 (12) curves  
 (13) Q So for example all of those things that you've just  
 (14) mentioned for purposes of this lawsuit and Mr Mundy's  
 (15) opinion  
 (16) in connection with this particular curve would be 80 to 85  
 (17) percent cured within a year and in three years completely  
 (18) cured?  
 (19) A No all of the things except what I mentioned  
 (20) Q Oh so all the things you mentioned have nothing to do with  
 (21) where those curves stop where recovery occurs for purposes of  
 (22) Mr Mundy's opinion  
 (23) A We've excluded -  
 (24) Q Excluded all that?  
 (25) A - those more long term and isolated cases  
 (26) Q Long term for example any - anything beyond three years

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- (1) in this particular slope?  
 (2) A Well in this particular case  
 (3) Q Okay  
 (4) A I - I think you're mischaracterizing a little bit what I'm  
 (5) saying here  
 (6) Q I don't want to do that so tell me  
 (7) A There are certain biological recovery - components of  
 (8) biological recovery that are not included in these curves I  
 (9) guess a simple way to put it  
 (10) Q Can you tell us what they are?  
 (11) A I can't name all of them We didn't research all of them  
 (12) I've given you some of them  
 (13) Q Actually this might be easier Can you tell me only the  
 (14) ones that are included?  
 (15) A Well I couldn't - I couldn't name all of these either  
 (16) can give you an example Whoops  
 (17) Q You can't tell me - are you all right?  
 (18) A I'm fine  
 (19) Q You can't tell me all of the things that are included?  
 (20) A I can give you some of them  
 (21) Q Give me one example  
 (22) A We included the sensitivity of crabs to oil We included  
 (23) clams recovery of clams pretty much to the age class density  
 (24) Q How about pink salmon?  
 (25) A No

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- (1) Q How about red salmon?  
 (2) A No  
 (3) Q How about herring?  
 (4) A There was some discussion about herring We did not  
 (5) include them specifically but that condition similar thinking  
 (6) or opinions on this  
 (7) Q Condition your thinking how did you condition your  
 (8) thinking?  
 (9) A We incorporated the notion that that did - in fact  
 (10) because people like some of these lands - did have the value  
 (11) aspects for the land  
 (12) Q People like some of what?  
 (13) A People liked the aspect about land in other words  
 (14) property in areas that allowed them to access herring or  
 (15) herring fisheries or something was a consideration  
 (16) Q That's a consideration that you took into account?  
 (17) A Yes  
 (18) Q You're a marine geologist?  
 (19) A No you meaning the crew and the team and the  
 (20) organization that worked on the curves  
 (21) Q Okay But I'm just asking about these curves that you  
 (22) worked on  
 (23) MR PETUMENOS Objection that's misleading the  
 (24) curves were a product of the entire team  
 (25) MR OPPENHEIMER I'll withdraw the question Your

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- (1) Honor I'll withdraw the question  
 (2) THE COURT All right  
 (3) BY MR OPPENHEIMER  
 (4) Q You took into account did you say crabs?  
 (5) A Yes  
 (6) Q And clams?  
 (7) A Yes  
 (8) Q And are that - are those because those are things that you  
 (9) felt were closely associated with the land that people would  
 (10) use?  
 (11) A Yes  
 (12) Q You are not an appraiser?  
 (13) A That's correct  
 (14) Q You have no skills in appraisal?  
 (15) A That is correct  
 (16) Q And in fact you do not have an opinion do you about  
 (17) whether or not the value of land is proportional to the amount  
 (18) of oil on it?  
 (19) A I do not  
 (20) Q Do you know if Mr Mundy does?  
 (21) A I should - I should perhaps back up a little bit on that  
 (22) I have been involved in projects with ICF that - where we do  
 (23) what we call acquisition liability assessment and we do find  
 (24) that the content of hazardous materials on properties do affect  
 (25) their value do affect their marketability do affect their

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- (1) liquidity in the market And we have done projects to protect  
 (2) both buyer and seller in that regard So I do have some  
 (3) opinion on that  
 (4) Q Let me ask you this Mr Bush That work - you have an  
 (5) economist at ICF?  
 (6) A I'm sorry?  
 (7) Q In your firm do you have economists?  
 (8) A Yes we do  
 (9) Q Did any of the economists work on this project?  
 (10) A On the project as a whole yes For the curves -  
 (11) Q For the curves no?  
 (12) A - no  
 (13) Q You referred to - did you say acquisition standards?  
 (14) A Acquisition liability yes  
 (15) Q Do you commonly use in - in your assessment of  
 (16) acquisition liability some standards promulgated by Long and  
 (17) Morgan of the NOAA?  
 (18) A Typically most of the work we've done have been standards  
 (19) that were put forth by other agencies in other capacities So  
 (20) the answer is no  
 (21) Q The answer's no Did you use Long and Morgan in any  
 (22) respect in determining when recovery should be found on these  
 (23) curves?  
 (24) A We used them from the standpoint of understanding what  
 (25) would constitute background conditions and what  
 concentrations

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- (1) of materials would constitute possible harm to certain  
 (2) species  
 (3) Q NOAA National Oceanographic and Atmospheric  
 (4) Administration?  
 (5) A Administration  
 (6) Q And they are folks who among other things deal with  
 (7) standards of safety for contaminants in the environment  
 (8) they're one agency that does that?  
 (9) A That is correct  
 (10) Q And they were the science advisor were they not to the  
 (11) federal on scene coordinator in connection with this spill?  
 (12) A Yes They were an alternate I believe to the Coast Guard  
 (13) to participate with the SCAT teams  
 (14) Q Your own - your own Mr Thebeau has worked with NOAA  
 has  
 (15) he not?  
 (16) A He has yes  
 (17) Q And he and Mr Bakus believe do they not that NOAA is a  
 (18) reliable - produces reliable scientific information?  
 (19) A In general yes It doesn't mean we agree on every point  
 (20) Q In doing your work on shoreline recovery and deciding for  
 (21) example the particular shoreline would be 85 percent clean in  
 (22) a year and completely clean in three years Did you take into  
 (23) account any of the shoreline assessments made by NOAA in  
 (24) connection with this oil spill?  
 (25) A I'm sorry you were walking away I didn't catch all the

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- (1) words  
 (2) Q I apologize  
 (3) A Did we take into account -  
 (4) Q Did - in doing your work on these curves and deciding  
 (5) where they would stop and where you would find recovery did  
 (6) you take into account any of the shoreline assessments that had  
 (7) been made on this spill by the on scene coordinator science  
 (8) advisor NOAA NOAA?  
 (9) A In the capacity that we examined the results of some of the  
 (10) joint survey programs but that's - we did not rely on any  
 (11) policy level descriptions or conclusions that were reached  
 (12) about the environmental conditions  
 (13) MR OPPENHEIMER Counsel it's my intention to ask  
 (14) the witness if he is familiar with and to read from a NOAA  
 (15) report to Rear Admiral Ciancaglini Exhibit DX2761  
 (16) MR PETUMENOS Give us just a moment counsel  
 (17) MR OPPENHEIMER Absolutely and what I'm referring  
 (18) to is Page 4  
 (19) MR OPPENHEIMER I will read portions of the  
 (20) paragraphs under the heading Toxicology - sorry Your Honor  
 (21) we apparently had one mixup in the exhibits  
 (22) MR PETUMENOS May I have just a moment Your Honor?  
 (23) I'm sorry  
 (24) Thank you Judge  
 (25) MR OPPENHEIMER No objection counsel

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- (1) MR PETUMENOS No I d like to have the witness  
 (2) informed as to the - what the document is and the author and  
 (3) all that and then I have no objection  
 (4) MR OPPENHEIMER No problem  
 (5) BY MR OPPENHEIMER  
 (6) Q Mr Bush I m going to ask you if you ve taken into account  
 (7) some conclusions reached by NOAA in their review of the status  
 (8) of Prince William Sound shorelines provided to Rear Admiral  
 (9) Ciancaglino on March 15 1991?  
 (10) A On March 15?  
 (11) Q March 15 1991  
 (12) A I do not believe we took those into account  
 (13) Q Let me let me double check that with you Let me read  
 (14) some of the -  
 (15) MR PETUMENOS Excuse me I m a little confused  
 (16) counsel Sorry to belabor this I can t tell from this  
 (17) exhibit who the author was or who the - who the scientist was  
 (18) or - looks like it s an excerpt and I don t think we can get  
 (19) to what - whether this was -  
 (20) MR OPPENHEIMER Few more questions Your Honor see  
 (21) if we can clarify this  
 (22) BY MR OPPENHEIMER  
 (23) Q I m going to give you my copy of Exhibit 2761 Mr Bush  
 (24) and ask if you ve ever seen that before Actually let me give  
 (25) you a clean copy that way you don t have to look at my stick

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- (1) drawings  
 (2) A Are they offensive counsel?  
 (3) Q No  
 (4) A I believe this document was produced - oh wait a minute  
 (5) maybe not I thought this was one that was produced during  
 (6) my  
 (7) deposition  
 (8) It looks less familiar as I page through it  
 (9) MR PETUMENOS Judge I believe that there s - under  
 (10) the learned treatise exception which is what I thought we were  
 (11) going here - there s no problem with reading such a document  
 (12) and if he disagrees first we have to know what the learned  
 (13) treatise is and learned fellow is and we can t tell from that  
 (14) document  
 (15) MR OPPENHEIMER Your Honor this is under provision  
 (16) 803 This is a government report and it has been identified  
 (17) It s from NOAA to Rear Admiral Ciancaglino and it s a 1991  
 (18) shoreline survey report  
 (19) MR PETUMENOS Let s just do it and we can take it  
 (20) up later  
 (21) THE COURT Very good choice counsel  
 (22) BY MR OPPENHEIMER  
 (23) Q As of 1991 Mr Bush - and let me draw your attention to  
 (24) this portion right here - do you agree with NOAA s conclusion  
 (25) in March of 91 that the bulk composition of the remaining oil  
 (26) is comprised primarily of the residual or asphaltine fractions

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- (1) which have negligible water solubility and little demonstrated  
 (2) toxicity and thus pose little environmental risk to intertidal  
 (3) and water column organisms even if there were routine  
 (4) releases?  
 (5) A I guess I don t agree with that  
 (6) Q Did you take it into account in doing your curves?  
 (7) A The sentence sounds familiar whether I took it from this  
 (8) document or not but I do believe I ve heard that  
 (9) Q Okay the second page Did you take into account the  
 (10) following additional conclusion of NOAA in March of 91 the  
 (11) oil that remains buried after two winter storm seasons is not  
 (12) mobile and the likelihood of a release is small This oil  
 (13) therefore does not present a significant hazard to terrestrial  
 (14) or aquatic organisms as it is not readily available to them  
 (15) Future releases of this buried oil would only occur during a  
 (16) major storm event and the mechanical washing due to high  
 (17) energy wave action during such an event would rapidly  
 (18) disburse  
 (19) any oil that was released  
 (20) A I don t agree with all of that Portions of it yes parts  
 (21) of it no  
 (22) Q And did you take it into account in doing your curves?  
 (23) A This sentence?  
 (24) Q That conclusion  
 (25) A No we did not agree with it  
 (26) Q When you gave Mr Mundy the results of your work did you

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- (1) just give him these curves?  
 (2) A Well we did give him the curves I don t recall all of  
 (3) the things we gave him I think we generated some maps and  
 (4) other items and we made some calculations for him in the GIS  
 (5) system  
 (6) Q Made some calculations for him?  
 (7) A Yes  
 (8) Q You combined these curves for him didn t you?  
 (9) A I don t believe so No I -  
 (10) Q Did you produce - and I may be mistaken and if so please  
 (11) tell me - did you produce you or ICF a single persistence  
 (12) number for each parcel that the plaintiffs are claiming in this  
 (13) case?  
 (14) A Oh yes yes We did a weighted damage persistence  
 (15) calculation on a parcel basis that s correct  
 (16) Q Weighted average?  
 (17) A That s correct  
 (18) Q Problem is isn t it that the parcels have different types  
 (19) of shoreline in the same parcel?  
 (20) A Yes  
 (21) Q So you have to do something about that?  
 (22) A We elected to do something about it  
 (23) Q Fair enough  
 (24) MR OPPENHEIMER Can we blow this back out again?  
 (25) BY MR OPPENHEIMER

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- (1) Q So if you had a - if you had a beach that had some fine  
 (2) grained sand but it also had one of the other types of beach  
 (3) types you had you have to find a way to combine those things  
 (4) right?  
 (5) A That s correct  
 (6) Q And they might also have different types of oiling on  
 (7) different types of beach?  
 (8) A We combine the effect of the different types We don t  
 (9) actually combine them  
 (10) Q So what would happen is if you had a shoreline that was  
 (11) say half cobble and half fine grain and the fine grain was  
 (12) moderately oiled and the cobble was heavily oiled you d go to  
 (13) your - you d go to these curves you d find the curve for one  
 (14) half the beach that corresponded to the type of beach and the  
 (15) type of oiling and you d get a number three years and you d  
 (16) go to another type you d go to another one of the examples  
 (17) where it corresponded to the other part of the - of the  
 (18) property and you would - you would go to that part of the  
 (19) table that combined the shoreline type with the oiling type and  
 (20) you d take that number right?  
 (21) A That s correct  
 (22) Q And now you ve got two numbers and you have to somehow  
 (23) put  
 (24) them together right?  
 (25) A Yes  
 (26) Q Okay You said you did a weighted average?

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- (1) A That s correct  
 (2) Q What is - how does that work? How does a weighted  
 (3) average  
 (4) work?  
 (5) A Well we took the length of oiled shoreline and divided  
 (6) that into the length of oiling per category of shoreline type  
 (7) the product of all those and reached a weighted average  
 (8) Q This is dangerous but I m going to try to draw something  
 (9) here  
 (10) Can you see this Mr Bush?  
 (11) A Yes  
 (12) Q Can you see this?  
 (13) I m going to represent a beach with a line Okay that s  
 (14) our hypothetical beach  
 (15) MR PETUMENOS Excuse me  
 (16) MR OPPENHEIMER No problem  
 (17) BY MR OPPENHEIMER  
 (18) Q And just for a simple example I m going to say that it s  
 (19) 1 000 feet and 500 feet is here and with - divide it right in  
 (20) the middle 500 here And this one is say light and it s  
 (21) fine grain and this one is heavy and it s cobble okay Now  
 (22) let s say this is three years and let s just for lack - well  
 (23) let s say this is five years for the moment and let s say this  
 (24) is ten years okay?  
 (25) This is a pretty easy one using it for an example  
 (26) A Thank you

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- (1) Q You have to combine those two I still give you credit I  
 (2) couldn t do it in my head but what is the number that this  
 (3) beach is going to get?  
 (4) A Well it s five times 500 plus ten times 500 divided by  
 (5) 1 000  
 (6) Q 7 5 roughly?  
 (7) A I would imagine yes  
 (8) Q Now we start with curves that use beach types that you  
 (9) agree were very suspect because we have a wide variety of  
 (10) different kinds of beaches out there and the NOAA data are -  
 (11) are old right?  
 (12) A That is correct  
 (13) Q And then you re a little concerned about the oiling data  
 (14) because that s not all that reliable either in your view?  
 (15) A That is correct  
 (16) Q Okay And then we take two of those numbers that are  
 (17) generated including that oiling liability and we combine  
 (18) them right?  
 (19) A That s correct  
 (20) Q Do you think this 7 5 has anything to do with how long it  
 (21) will really take this hypothetical beach to recover?  
 (22) A Yes Actually the variation that you ve described works  
 (23) on - in both directions In places that are - are moderately  
 (24) oiled For example as we talked about earlier you re going  
 (25) to have these sheltered protected spots that are going to

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- (1) preserve oil longer on the other hand there are also going to  
 (2) be parts of them that clean up faster  
 (3) Q But the -  
 (4) A The notion is all of it will average out and that this  
 (5) method eliminates extreme bias on the heavy side by diluting it  
 (6) with the lightly oiled and at the same time reduces the bias  
 (7) on the light side by diluting it with the heavily oiled and we  
 (8) do it on a shoreline length basis to prorate that impact across  
 (9) the parcel across the oiled shoreline of the parcel  
 (10) Q It s an average?  
 (11) A Yes  
 (12) Q It doesn t tell you what any specific beach is going to do?  
 (13) A That is -  
 (14) Q Correct?  
 (15) A Correct yes Any specific parcel  
 (16) Q Any specific parcel?  
 (17) A Yes  
 (18) Q The longest persistence period - go back to Bay of Isles  
 (19) Remember Bay of Isles? That s a significant contributor to the  
 (20) longest persistence period in your graphs marsh is the  
 (21) longest?  
 (22) A In terms of the sensitivity in terms of the graphs yes  
 (23) Q Therefore your longest absolutely longest ballpark average  
 (24) is 24 years do you recall that?  
 (25) A Yes

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- (1) Q For a piece of property that's less than one percent of the  
 (2) shorelines of the entire Prince William Sound?  
 (3) A It's prorated by its length, yes.  
 (4) Q I understand 20 to 24 years. Can't get any longer than  
 (5) that, right?  
 (6) A Not in our system.  
 (7) Q Let's see, I'm looking for - yes, thank you very much.  
 (8) Pardon me just one second.  
 (9) Can you see that?  
 (10) East Chugach Island?  
 (11) A Yes.  
 (12) Q Pretty good fetch?  
 (13) A Yes.  
 (14) Q Darn good, right? Darn good fetch. Water hitting that  
 (15) island probably pretty hard?  
 (16) A Yes.  
 (17) Q You know what kind of coastline it's got?  
 (18) A I believe there's an embayment on the north end with  
 (19) gravel, and the rest of it is largely rocky, I believe.  
 (20) Q Okay. Do you know what persistence period it was assigned  
 (21) by Mr. Mundy based on your work?  
 (22) A I don't recall all the persistences, weighted average  
 (23) persistences assigned to each parcel. The system we cranked  
 (24) them out.  
 (25) Q Would it surprise you to learn that East Chugach Island was

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- (1) Q Based on that information, I'll represent to you that about  
 (2) 10 percent of this shoreline was heavy, okay? And less than  
 (3) one percent was light, and about 30 percent was very light.  
 (4) The rest was totally unoiled - I can't spell - the rest was  
 (5) totally unoiled.  
 (6) Now, do I have it right that when you did your weighted  
 (7) persistence average to come up with one number per parcel for  
 (8) Mr. Mundy, that what you did was to kick out the very light?  
 (9) A That is correct.  
 (10) Q And you weighted light and heavy?  
 (11) A That is correct.  
 (12) Q You didn't want - why did you do that?  
 (13) A Because the very light was too difficult for us to get  
 (14) adequate data on to make any kind of projections on. It's  
 (15) difficult enough within the light, moderate and heavy.  
 (16) Definitions change between programs, probably between field  
 (17) teams.  
 (18) Q Now, heavy here, I'll represent to you, was - obviously  
 (19) had to be - if my facts are right so far, this had to be a  
 (20) long curve, right? If in fact the curve, the percentage  
 (21) period given to this island was this, which I'll represent to  
 (22) you it was, you're not surprised to learn that the heavy was 24  
 (23) years, ten percent had a long persistence period?  
 (24) A That is correct.  
 (25) Q And this little, tiny bit of light got very little

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- (1) assigned a persistence period of 23.45 years?  
 (2) A I'm not surprised or unsurprised.  
 (3) Q Let me ask you something else about how your weighted  
 (4) averages work. And I lose track easily here, so if I get off  
 (5) - I'm trying to keep this as simple as I can, so I can follow  
 (6) it.  
 (7) When you do a weighted average for a beach, you don't  
 (8) include light or very light, do you?  
 (9) A That is - very light. We include light, we don't include  
 (10) very light.  
 (11) Q You don't include very light.  
 (12) MR OPPENHEIMER: We may be able to counsel, move  
 (13) this a little faster if I don't have to go back and confirm  
 (14) each number, so if I can try a hypothetical related to this.  
 (15) If you object, I'll stop.  
 (16) MR PETUMENOS: I'll try not to object.  
 (17) MR OPPENHEIMER: I know you will.  
 (18) BY MR OPPENHEIMER:  
 (19) Q East Chugach Island has a shoreline that's about 68,000  
 (20) feet, okay?  
 (21) A Okay.  
 (22) Q And according to - well, you'll recall that your company  
 (23) recently redid a lot of these persistence curves and provided  
 (24) those to Mr. Mundy, do you recall that?  
 (25) A That is correct.

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- (1) When you did the persistence number for Mr. Mundy, in  
 (2) effect, what you were giving him was a persistence figure for  
 (3) this part of that hypothetical beach, right?  
 (4) A That is correct.  
 (5) Q If Mr. Mundy had applied that number to this, in other  
 (6) words, if he had included or applied the 23.45 to a very light  
 (7) beach, he would have been misusing your data, wouldn't he?  
 (8) A If he applied it to a very lightly oiled beach?  
 (9) Q Yes, correct.  
 (10) MR PETUMENOS: I'll object to the form of the  
 (11) question as misleading.  
 (12) THE COURT: I'm not sure I understand the question.  
 (13) BY MR OPPENHEIMER:  
 (14) Q If you gave Mr. Mundy the figure of 23.45 East Chugach  
 (15) Island, and about 10 or 11 percent of it was heavy or light  
 (16) and about 30 percent of it was very light, and he took that  
 (17) number and said that 40 percent of the beach should have a  
 (18) persistence of 23.45 years, would he have been misusing your  
 (19) data?  
 (20) A Well, I - I don't think that's what happened. He didn't  
 (21) apply it to the shoreline -  
 (22) Q Let me ask you -  
 (23) A - applied to the parcel.  
 (24) Q If he had done that, would he have been misusing your  
 (25) data?

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- (1) MR PETUMENOS Same objection I think the  
 (2) question s misleading I don t understand  
 (3) THE COURT You can answer the question If you have  
 (4) to explain he ll allow you that  
 (5) A Thank you We don t apply this result to a shoreline or  
 (6) we don t - we don t incorporate a portion of the shoreline or  
 (7) not incorporate a portion of the shoreline The weighted  
 (8) average persistence numbers apply to the parcel and he uses  
 a  
 (9) separate factor an impairment factor to account for the fact  
 (10) that only part of the shoreline or part of the parcel is or is  
 (11) not impacted  
 (12) Q Absolutely Do you know if his factor includes the very  
 (13) light?  
 (14) A I don t know how he applies it or how he applies the  
 (15) process  
 (16) Q You haven t seen it?  
 (17) A That s part of his process  
 (18) Q If I were to tell you that the impairment factor he applied  
 (19) to this parcel included very light would that surprise you?  
 (20) A I don t know what you mean by included how you re saying  
 (21) it but -  
 (22) Q Let s assume for present purposes here that what Mr Mundy  
 (23) is going to do as you understand it - correct me if I m wrong  
 (24) - on this 68 000 feet of - this property that has 68 000  
 (25) feet of shoreline you re going to give him a figure of 23 45

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- (1) years based upon your analysis of - your averaging of heavy  
 (2) and light right?  
 (3) A Yes  
 (4) Q And then he is going to apply this to some part of the  
 (5) shoreline you understand that?  
 (6) A That is correct  
 (7) Q And is it your understanding that he is going to apply it  
 (8) not to all the shoreline he s not going to apply it to the  
 (9) unoiled part right?  
 (10) A That s correct  
 (11) Q He s not going to say in any way shape or form that the  
 (12) unoiled shoreline is going to take 23 45 years to recover  
 (13) right? My question is as to very light do you know whether he  
 (14) applies it to very light? You know he doesn t - you just said  
 (15) to unoiled Do you know if he does to very light?  
 (16) A I don t know how he applies the impairment factor  
 (17) Q Okay  
 (18) A It s whether or not he applies it to an unoiled shoreline  
 (19) I just -  
 (20) Q Okay Do you recall when you generated your first set of  
 (21) these curves?  
 (22) A I don t remember the first day I know we ve gone through  
 (23) several revisions  
 (24) Q Do you remember in March of 90 communicating with  
 (25) Mr Thebeau who was in Washington D C about these curves

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- (1) and getting his input of these curves?  
 (2) A Yes  
 (3) MR PETUMENOS Can I - these were in my chair You  
 (4) were using my chair  
 (5) MR OPPENHEIMER Oh yes sure  
 (6) BY MR OPPENHEIMER  
 (7) Q I d like to show the witness what s been marked as  
 (8) defendants 2734 and ask him if he has seen these documents  
 (9) before  
 (10) A Yes  
 (11) Q And are they in fact - well you tell me what they are  
 (12) if you would  
 (13) A Well they re notes passed back and forth between myself  
 (14) and Larry and the first couple of pages appear to be some  
 (15) calculations of acreage per parcel  
 (16) The second page -  
 (17) Q Maybe just to speed things -  
 (18) A I m not sure I m familiar with the second page  
 (19) Q The third page you recognize as being drafts of these  
 (20) curves which you and your colleague Mr Thebeau were  
 (21) communicating about when you were trying to come up with  
 them?  
 (22) A Yes  
 (23) MR OPPENHEIMER Your Honor I would move for the  
 (24) admission of defendants exhibit 2734  
 (25) (Exhibit 2734 offered)

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- (1) MR PETUMENOS May I reserve on that?  
 (2) THE COURT Yes  
 (3) MR OPPENHEIMER May I publish it to the jury Your  
 (4) Honor?  
 (5) THE COURT Can t reserve it for very long then  
 (6) MR PETUMENOS Can t reserve for too long Well may  
 (7) I have a short conference with counsel?  
 (8) THE COURT Yes  
 (9) MR PETUMENOS I have no objection  
 (10) THE COURT Yes You mean by show them on the  
 (11) screen?  
 (12) MR OPPENHEIMER I have a blowup Your Honor  
 (13) BY MR OPPENHEIMER  
 (14) Q Do you recognize this as being one of the pages from  
 (15) your -  
 (16) A It looks like it yes  
 (17) Q So on April of 1990 you did some - started working  
 (18) these - now we should tell the Ladies and Gentlemen of the  
 (19) Jury that the form of the graph has changed Right now  
 (20) recovery s on the bottom Here recovery was on the top But  
 (21) they re the same graphs?  
 (22) A No I - I think there have been changes  
 (23) Q There have been changes but -  
 (24) A But this is an early draft based on early concepts and  
 (25) early data yes

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- (1) Q And with two exceptions since this point in time in March  
 (2) of 1990 the only thing that s changed in the curves is that  
 (3) the slopes have changed a little bit and with two exceptions  
 (4) they ve all got shorter right?  
 (5) A With two exceptions they ve all got shorter  
 (6) Q Shorter?  
 (7) A I believe that s correct yes  
 (8) Q So you sent a copy of this to Mr Thebeau is that  
 (9) correct?  
 (10) A Yes  
 (11) Q You wanted - you needed input this is serious business  
 (12) correct?  
 (13) A I beg your pardon?  
 (14) Q You wanted input this is serious business?  
 (15) A Well yes  
 (16) Q Okay Now I m going to ask you next about what you ve  
 (17) testified was the cover letter that went with these curves  
 (18) First of all you recognize this as the cover letter that went  
 (19) with these curves?  
 (20) A Yes  
 (21) Q Okay So this is being sent along with these curves to  
 (22) Mr Thebeau your fellow scientist for his opinion?  
 (23) A That s correct  
 (24) Q Talks about the recovery curves Larry is Larry Thebeau  
 (25) right?

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- (1) A That s correct  
 (2) Q And you talk about these are the recovery curves and you  
 (3) say note this is at best SWAG scientific wild ass guess?  
 (4) A That s correct  
 (5) Q Your handwriting?  
 (6) A Yes  
 (7) Q No question And then you identify problems with this  
 (8) approach?  
 (9) A That s correct  
 (10) Q Different for different species and site specific  
 (11) conditions correct?  
 (12) A That s correct  
 (13) Q What we were talking about earlier depending on how  
 (14) viscous the oil was?  
 (15) A That s correct  
 (16) Q You testified earlier as that oil came down the straits as  
 (17) it left the Sound went out past the Kenai Fiords and went down  
 (18) past Kodiak it got more - it changed did it become more  
 (19) viscous?  
 (20) A That s correct  
 (21) Q It did indeed?  
 (22) A Not all of it precisely  
 (23) Q Not all A single 100 year storm could shorten any  
 (24) estimate correct?  
 (25) A That s correct

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- (1) Q Okay No clear definition for what constitutes recovery?  
 (2) A That s correct  
 (3) Q Is it also correct but eventually you were given a  
 (4) definition not by a geologist or a biologist but by  
 (5) Mr Mundy correct?  
 (6) A Essentially correct yes  
 (7) Q Last certainly no clear relationship between ecosystem  
 (8) recovery and dollars for suit?  
 (9) A That s correct  
 (10) Q It was not clear to you how these graphs would relate to  
 (11) recovery on a particular parcel?  
 (12) A These were issues that we had to resolve that s correct  
 (13) Q Okay Then at the bottom you say - correct me if I read  
 (14) it incorrectly - this is fun to think about but dam difficult  
 (15) to decide where to put the line on the graph?  
 (16) A That s absolutely correct  
 (17) MR OPPENHEIMER Your Honor no further questions  
 (18) THE COURT You have four minutes counsel  
 (19) MR PETUMENOS Judge please may I have a little  
 (20) more than that? Could I begin the redirect tomorrow?  
 (21) THE COURT Yes - no not tomorrow  
 (22) MR PETUMENOS Not tomorrow Please it sounded like  
 (23) such a wonderful day to hold court  
 (24) MR OPPENHEIMER Your Honor I m sorry we could do  
 (25) this by counsel but we did not move into evidence the

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- (1) photographs  
 (2) MR PETUMENOS Judge I have -  
 (3) THE COURT We can do that later or we can do it at  
 (4) the beginning of the next trial day  
 (5) MR OPPENHEIMER If that s -  
 (6) MR PETUMENOS I was going to say I don t want to  
 (7) keep the jury in here either  
 (8) THE COURT I can let the jury go for the day Don t  
 (9) talk about the case with anybody and don t form or express any  
 (10) opinion on it until it s submitted to you for your  
 (11) deliberation Don t come in tomorrow We ll see you here  
 (12) Monday day at 8 30  
 (13) (Jury out at 1 27 p m)  
 (14) THE COURT I ask this question with great  
 (15) trepidation Is there anything to take up on the record?  
 (16) MR DIAMOND Regrettably  
 (17) MR STOLL Hope springs eternal  
 (18) MR DIAMOND The issue of the jury instruction - the  
 (19) issues of the jury instruction and another issue raised by  
 (20) plaintiffs memorandum the degree to which we can impeach  
 (21) by  
 (22) bias showing financial interest on the part of Native witnesses  
 (23) is now fully briefed and ready for argument if you wanted to  
 (24) hear it in decision In terms of timing I assume we will not  
 (25) get a federal verdict today in the fish case so we could take  
 that issue up on Monday at a break if you would want to

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- (1) In terms of the next witness who is likely to be
- (2) cross examined on the basis of ownership interest and in the
- (3) Chenega Corporation that probably will not happen until late
- (4) in the day on Monday at the earliest
- (5) MR PETUMENOS I have an issue relating to
- (6) cross examination exhibits Judge and it s the same DM 171
- (7) issue that we addressed the exhibit of this witness the
- (8) letter from counsel to - to the expert but my understanding
- (9) is lawyers for Exxon are reviewing that material to determine
- (10) if they are going to voluntarily withdraw them so it might be
- (11) premature to hold a hearing this afternoon on the other hand
- (12) THE COURT I have to hold a hearing anyway why don t
- (13) you come back here at 3 00 and talk about anything that needs
- (14) to be talked about
- (15) MR DIAMOND Those two issues I mentioned are fully
- (16) briefed
- (17) THE COURT The instruction?
- (18) MR DIAMOND The instruction and the bias question
- (19) MR PETUMENOS The bias question is a jury
- (20) instruction issue at this point
- (21) MR DIAMOND Yes I guess that s true
- (22) THE COURT Good
- (23) MR STOLL Your Honor there s one other thing
- (24) THE COURT Hold on let me ask you a question Were
- (25) separate briefs filed on them? Are they all incorporated in

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- (1) the same briefing?
- (2) MR PETUMENOS Will have been two briefs filed We
- (3) filed our brief that covered both the instruction relating to
- (4) the federal court parallel proceedings
- (5) THE COURT I have that brief
- (6) MR PETUMENOS And the second part of that brief
- (7) discusses this issue the one about the number of people who
- (8) own property and they filed - and -
- (9) MR DIAMOND This morning we filed a single brief
- (10) dealing with both issues too
- (11) THE COURT I haven t seen your brief So I ll see it
- (12) by 3 00 Anything else?
- (13) MR STOLL Yes Your Honor I have one other matter
- (14) As long as we re - the - I sort of forgot about this motion
- (15) It was brought to my attention late yesterday afternoon that
- (16) is is that there was a motion filed by the municipalities for
- (17) reconsideration of Order 77 This is a very minor matter and
- (18) I think that as a matter of defacto you have reconsidered it
- (19) because there s been things that have been taken up on an
- (20) issue by issue basis on there and what happened in Order 77
- (21) was that sort of - we hadn t finished briefing if you ll
- (22) recall
- (23) THE COURT Yes I know I remember
- (24) MR STOLL I d just like to get that straightened out
- (25) so we don t have order 77 hanging out there

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- (1) THE COURT I bypassed it It seemed self evident to
- (2) me I didn t think it was necessary I thought the trial
- (3) would take care of the issue Does anybody disagree?
- (4) MR STOLL That s fine Your Honor I just wanted
- (5) to -
- (6) MR DIAMOND I don t think anybody at this counsel
- (7) table can remember what the issue is
- (8) THE COURT Good that s good That means Mr Stoll
- (9) wins
- (10) MR DIAMOND I will take it up with Mr Stoll if
- (11) there is an issue
- (12) MR STOLL I m happy I m going to leave now
- (13) THE COURT Now I ve told the jury that - I didn t
- (14) give them the reason but I told them that they won t be in
- (15) session on the 29th We all agreed that the 29th is the day
- (16) Even though somebody s birthday is on the 29th and
- (17) somebody s
- (18) on the 1st and the person on the 1st gets the short stick
- (19) right?
- (20) MR DIAMOND Actually two birthdays Mr Petumenos
- (21) and Ms Smith on the 1st but more importantly Mr Stoll s
- (22) wife s on the 29th
- (23) THE COURT So it s the 29th that we take off
- (24) MR STOLL Thank you Your Honor
- (25) THE CLERK Please rise this court stands in recess
- (26) (Recess at 1 31 p m )

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- (1) STATE OF ALASKA )  
 (2) Reporter s Certificate  
 (3) DISTRICT OF ALASKA )  
 (6) I Joy S Brauer RPR a Registered Professional  
 (7) Reporter and Notary Public  
 (8) DO HERBY CERTIFY  
 (9) That the foregoing transcript contains a true and  
 (10) accurate transcription of my shorthand notes of all requested  
 (11) matters held in the foregoing captioned case  
 (12) Further that the transcript was prepared by me  
 (13) or under my direction  
 (14) DATED this day  
 (15) of 1994  
 (21) JOY S BRAUER RPR  
       Notary Public for Alaska  
 (22) My Commission Expires 5 10 97

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## SINGLE FILE CONCORDANCE

## CASE SENSITIVE

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(1) IN THE SUPERIOR COURT FOR THE STATE OF ALASKA  
 (2) THIRD JUDICIAL DISTRICT  
 (4) In re ) Case No 34W 89 2533 (Civil)  
 ) Anchorage Alaska  
 (5) The EXXON VALDEZ ) Monday July 18 1994  
 ) 8 52 a m  
 (6) )  
 (8) VOLUME 17 Pages 2610 through 2767  
 (10) TRANSCRIPT OF PROCEEDINGS (Continued)  
 (11) TRIAL BY JURY  
 (13) BEFORE THE HONORABLE BRIAN C SHORTELL  
 Superior Court Judge  
 (16) APPEARANCES  
 (17) FOR THE PLAINTIFF  
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(1) PROCEEDINGS  
 (2) (Jury in at 8 52 a m )  
 (3) (Call to Order of the Court)  
 (4) THE COURT Go ahead counsel  
 (5) MR PETUMENOS Thank you Judge  
 (6) REDIRECT EXAMINATION OF JAMES G BUSH  
 (7) BY MR PETUMENOS  
 (8) Q Good morning Mr Bush  
 (9) A Good morning  
 (10) Q Bligh Island we talked a little bit on cross-examination  
 (11) about the mapping you did of oil on Bligh Island Could you  
 (12) tell the jury why you mapped the oil that you did in the Bligh  
 (13) Island area and the area around Tatitlek?  
 (14) A Yes We observed videotape and read a report and saw  
 some  
 (15) other information of Paul Costello and that depicted sheen and  
 (16) similar materials around Tatitlek Narrows going through  
 (17) Tatitlek Narrows And we observed mousse being held out  
 from  
 (18) the island by boom and some that had breached the boom and  
 was  
 (19) moving towards the island Excuse me And he also displayed  
 (20) in his video mousse on the island proper  
 (21) Q Now looking at the sheen the way you did and evaluating  
 (22) what it looked like - let me start with a different question  
 (23) before I ask that one  
 (24) When was the first time you were able to arrive  
 (25) physically in that area for your visit and inspections

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(1) yourself?  
 (2) A It was in August of - I believe it was late August of  
 (3) 1989  
 (4) Q So given the fact of the kind of sheen that you saw and the  
 (5) kind of oil in the water that you saw would you have expected  
 (6) to see the oil remaining physically with the naked eye on the  
 (7) beach by that time?  
 (8) A By the time we visited the island and of the that we  
 (9) visited no we did not  
 (10) Q Now is there such a thing as a dissolved plume of oil?  
 (11) A Yes there is  
 (12) Q What is that?  
 (13) A Once the oil touches the water there s certain components  
 (14) that are more soluble than others as I think we discussed  
 (15) earlier and those components can move away from the slick  
 and  
 (16) in response to currents as opposed to the slick itself which  
 (17) follows wind direction  
 (18) Q Does the dissolved plume then exist and you can't see it  
 (19) with the naked eye?  
 (20) A That is correct  
 (21) Q And can it strike beaches?  
 (22) A Yes it can  
 (23) Q Let's talk about those questions they asked you about Port  
 (24) Chatham do you remember those questions?  
 (25) A Well I remember discussing Port Chatham

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- (1) Q Well a few of them Port Chatham was a control site for  
 (2) you the place you put in in a storm?  
 (3) A Yes that s the reason we established was for control  
 (4) purposes  
 (5) Q And later you discovered that some of the surveys had had  
 (6) Port Chatham as oiled?  
 (7) A That s correct  
 (8) Q What effect did that have on your control site? Was your  
 (9) control site the transect site that you picked was that part  
 (10) oiled?  
 (11) A No it was not  
 (12) Q Explain to the jury what the situation was at Port  
 (13) Chatham  
 (14) A Well It was light oiling which can be discontinuous along  
 (15) the shorelines While we were there the weather conditions  
 (16) were less than favorable storm quite rainy We established  
 (17) the site inspected the area saw no oiling on either side of  
 (18) it or in that general vicinity and established our transect  
 (19) there  
 (20) Q In talking about the transects remember those questions in  
 (21) cross examination where they talked about 60 percent of your  
 (22) transects had medium or heavy oiling but less - fewer beaches  
 (23) than that were heavily or medium oiled in fact do you  
 (24) remember those questions?  
 (25) A Yes I do

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- (1) Q All right Now explain to the jury what the purpose of  
 (2) the transect study was and why it was that you wouldn t have  
 (3) the percentages of transects mirror that of the - of the beach  
 (4) oiling itself  
 (5) A Well Ideally in a transect study such as ours we would  
 (6) have been able to sample every shoreline type that was present  
 (7) in the Sound We attempted that and even more Ideally you d  
 (8) sample every shoreline type with every level of oiling Of  
 (9) course we were unable to do that as well because there was  
 (10) inadequate types and distribution of beaches and shorelines  
 (11) and access and for many other reasons  
 (12) The purpose is to determine the effects behavior and  
 (13) impact fate and persistence of oil on the shorelines It was  
 (14) appropriate to go to shorelines that had been oiled  
 (15) Q Was the purpose of the transect portion of the study to  
 (16) look at how quantities of oil get dissipated or don t get  
 (17) dissipated on beaches?  
 (18) A Exactly It was - the purpose was to determine how it  
 (19) interacts with the shorelines We would have to go to heavily  
 (20) oiled sites in order to do that  
 (21) Q Could I have 1154 please?  
 (22) We discussed something about the other oil spills that you  
 (23) had studied as part of your work and we talked about the  
 (24) Metula oil spill Counsel in his questioning asked you about  
 (25) some of the differences between the Metula oil spill and the

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- (1) Exxon Valdez oil spill Are there other oil spills that are on  
 (2) this chart that have certain similarities as well as  
 (3) differences to the Exxon Valdez oil spill that you could have  
 (4) also discussed?  
 (5) A Yes there are  
 (6) Q All right For example he made a point about the Amoco -  
 (7) excuse me about the fact that in the Metula spill there was  
 (8) no cleanup do you remember that?  
 (9) A That s correct  
 (10) Q In the Amoco Cadiz spill was there a cleanup?  
 (11) A Yes there was  
 (12) Q So what you have done with this chart here is to give the  
 (13) jury a whole variety or different number of oil spills and  
 (14) discuss for them the years after the spill that certain things  
 (15) persisted is that what this chart does?  
 (16) A Yes We ve taken a wide sampling of spills with varying  
 (17) degrees of ability or comparability to the Exxon Valdez as I  
 (18) mentioned before in testimony Many spills have not been  
 (19) studied for the entire length of time to do detailed analysis  
 (20) and every spill is different They all have their unique  
 (21) characteristics but there are aspects of them which are  
 (22) informative and which can be used to help understand and  
 (23) make  
 (24) predictions about what s going to happen with the Exxon  
 (25) Valdez  
 (24) spill  
 (25) Q And some of those spills that you have on there show

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- (1) persistence for a fairly lengthy period of time do they not?  
 (2) A That Is correct  
 (3) Q And we heard some questions from counsel about some  
 (4) confusion about some asphalt tanks that broke in the 1965  
 (5) earthquake and the fact that remnants of those can still be  
 (6) found Do you remember those questions?  
 (7) A I think the earthquake was in 1964 yes  
 (8) Q 64 And so we were talking about remnants of something  
 (9) that happened 30 years ago?  
 (10) A That s correct The tanks ruptured in the Valdez area and  
 (11) materials from that spill have persisted in the Sound for  
 (12) approximately 30 years  
 (13) Q Now there are also some questions about swash bars and  
 (14) how  
 (15) oil persists because swash bars move and cover things up  
 (16) move  
 (17) back and the oil becomes uncovered again  
 (18) A Yes  
 (19) Q Are swash bars common or uncommon in Prince William  
 (20) Sound  
 (21) the lower Kenai Kodiak?  
 (22) A It depends on the situation Obviously from sand and  
 (23) gravel beaches they re relatively common as are the berms  
 (24) and  
 (25) other sedimentary features that you have on the bars After  
 (26) certain activities where the surface of the beach has been  
 (27) disrupted and fine grain sediments have been released -  
 (28) certain treatment you activities do there for example - their  
 (29) commonness varies because fine grain sand which was not

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- (1) available has been made available for movement into swash bars
- (2) and berms
- (3) Q Now we spent a lot of time showing the jury swash bars and
- (4) what they look like and how they move around Are swash bars
- (5) the only way that oil gets buried and remobilized or are there
- (6) other ways?
- (7) A There are other ways
- (8) Q Explain to the jury?
- (9) A One of the photographs we looked at was thin sediment
- (10) veneer over part of the beach which although you can't tell
- (11) precisely in the photograph may not have been related to swash
- (12) bars The berms themselves get built up because of high tide
- (13) Activity during other storms may be washed back down because of
- (14) various reasons and again provide fine grained material to be
- (15) moved around on the shorelines
- (16) Q And part of that - part of that questioning was on
- (17) those - that photograph we showed the jury of the salmon
- (18) stream coming out with the large swash bars on both sides at
- (19) East Chenega Island remember that?
- (20) A That is correct uh huh
- (21) Q And by the way when you - when you testified earlier and
- (22) said that you had been retained by the Chugach Alaska
- (23) Corporation you had also been retained by the Chenega
- (24) Corporation the Port Graham Corporation English Bay Tatitlek
- (25) and Eyak right?

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- (1) A Yes We were retained by the regional corporations and the
- (2) Village Corporations as well
- (3) Q Later you were retained by the Kodiak and municipalities?
- (4) A That is correct
- (5) Q On that East Chenega Island location a couple of points
- (6) Is it your opinion that oil is still present at places on East
- (7) Chenega Island?
- (8) A Our transect was at a location where wave energy and grain
- (9) size was such that materials moved promptly and it cleaned up
- (10) quickly It's difficult for us to derive any conclusions about
- (11) how rapidly the rest of the shoreline cleaned up just from that
- (12) particular location As far as we can tell there may or may
- (13) not be oil still in the rest of that shoreline Our transect
- (14) specifically at that site does not give precise information
- (15) about the other portions of the shoreline
- (16) Q Other part of that East Chenega location you heard some
- (17) questions about the biomass being lower because there's fresh
- (18) water coming out into the area but the fact that the biomass
- (19) or the number of different kinds of creatures that might live
- (20) there might be lower because of a lack of fresh water does
- (21) that mean that it's not a significant or sensitive place?
- (22) A No I think that comment was referring to the marine
- (23) community in general the intertidal community or the diversity
- (24) or species abundance in the marine ecosystem If it's an
- (25) anadromous stream the salmon go up and spawn in the stream so

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- (1) It's equally sensitive It's just as important
- (2) Q Let's talk a bit about the persistence curves for just a
- (3) bit As I understand the persistence curves if we wanted to
- (4) could we go to a given beach at a given time and find a beach
- (5) that if you studied it specifically would - you would
- (6) conclude that the oil is going to be there longer than your
- (7) persistence curve would predict for a given specific beach?
- (8) A I guess I don't follow the question If we went to a
- (9) beach would we find that that oil persisted longer or are you
- (10) asking me -
- (11) Q Yes Could you find - the way your persistence curves
- (12) work is it possible to find a beach where if we went out there
- (13) the year after what you predicted the oil would persist at
- (14) would we be able to find a beach that would have oil there
- (15) beyond that period of time?
- (16) A We've actually done that yes
- (17) Q And conversely could we find a beach where you would
- (18) have
- (19) expected oil to be there longer and discover that it had
- (20) cleaned up earlier than you predicted?
- (21) A It's possible
- (22) Q So explain to the jury how the persistence curves were
- (23) intended to work over these miles and miles and miles of
- (24) shoreline
- (25) A Well they're averages For example at Beauty Bay I believe our predictions show that oil will - will be gone and

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- (1) the area will have been recovered in four years It's a mixed
- (2) light oiling and a mixed sand and gravel shoreline And we
- (3) found oil residues there in 1994
- (4) Similarly for some other sites Taroka Arm would be an
- (5) example actually I can't call them off my head but we have
- (6) gone back to some sites and found residues there longer than
- (7) we
- (8) had predicted in our persistence curves We of course can't
- (9) test all of them because enough time hasn't gone by yet
- (10) Q And then the oiling maps you remember those questions
- (11) where we talked - where Mr Oppenheimer talked about the fact
- (12) that the maps show 1989 oiling not 1992 not 1991 not -
- (13) remember those questions?
- (14) A Yes that's - that's not precisely what was said but
- (15) approximately what was said
- (16) Q You made your persistence curves one of the factors that
- (17) you took into account was how heavily oiled the beach was
- (18) initially?
- (19) A That's correct
- (20) Q And so that's important for the jury to know to understand
- (21) how you derived your persistence curves?
- (22) A That is correct
- (23) Q And these maps that you prepared for the jury will assist
- (24) the jury in knowing where that light medium heavy oil was
- (25) initially in 1989 Was that the purpose for the map?
- (26) A Yes They'll depict the conditions as mapped in 1989 The

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- (1) area same areas haven't been mapped the same in subsequent  
 (2) years That's not to say the oil residues in 1989 didn't  
 (3) persist there through time  
 (4) Q And you recall those questions where you were asked  
 whether  
 (5) your persistence curves take into account harm to salmon and  
 (6) other species and herring and things like that and you said  
 (7) no Could you explain to the jury a little bit more about  
 (8) that?  
 (9) A Well other experts have examined other aspects of recovery  
 (10) of impact on the ecosystem of Prince William Sound and have  
 (11) determined that other portions of that are going to take you  
 (12) know lengthy times for recovery Our persistence curves are  
 (13) focused to set a criteria that relate to the land damage  
 (14) analysis and we did not include things - rock fish we didn't  
 (15) even include chitons Very little information was out on  
 (16) chitons and octopi and perhaps we should have included that  
 (17) sort of thing  
 (18) Q The series only address the gross contamination and not  
 (19) other things that may continue into the future?  
 (20) A That's correct  
 (21) Q What about the potential for - have you seen studies -  
 (22) A Perhaps we could correct what you said You said gross  
 (23) contamination It's the elements of recovery that's included  
 (24) That's one of the things that's included about them but yes  
 (25) Q And you have seen studies from other experts that discuss

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- (1) the potential for permanent or indefinite harm in the area but  
 (2) your persistence curves don't include - don't include that  
 (3) information is that right?  
 (4) A That is correct  
 (5) MR OPPENHEIMER Your Honor it assumes a fact not in  
 (6) evidence I don't know that there are such studies that deal  
 (7) with what has just been described  
 (8) MR PETUMENOS I believe the jury's heard what I'm  
 (9) talking about  
 (10) THE COURT Objection's overruled  
 (11) BY MR PETUMENOS  
 (12) Q Mussels you saw some mussels in a rather poor condition in  
 (13) 1994 right?  
 (14) A That is correct  
 (15) Q And we heard some questions on cross examination about  
 how  
 (16) they may have been - have gotten sunburns or something Did  
 (17) you see mussels that were in a position to receive more sun  
 (18) than the ones that you saw on the beach that were dead?  
 (19) A Well I don't know that they received more - more but  
 (20) approximately the same amount yes They were in the same  
 (21) general vicinity  
 (22) Q And were those mussels alive?  
 (23) A Yes  
 (24) Q And were those mussels on top of oil?  
 (25) A No they were not

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- (1) Q We heard some questions about the Katalla oil field?  
 (2) A Yes  
 (3) Q Could we have the defendant's map exhibit up please?  
 (4) What I'd like you to do is give me a clearer picture of the  
 (5) Katalla oil field Katalla - I won't call it oil field -  
 (6) let's not confuse here - it's not an operating field with  
 (7) people drilling it?  
 (8) A That's correct it is not  
 (9) Q It's just a place where people geologists know that there  
 (10) is some oil deposits there?  
 (11) A I believe there was drilling and exploration work done in  
 (12) the area but it's a recognized oil seep  
 (13) Q For the jury could you give us some idea of what happens  
 (14) at the Katalla oil field where it is first of all? Is it  
 (15) even on this map?  
 (16) A I believe it's off this map Colors are pretty light here  
 (17) but I think it's farther to the southeast  
 (18) Q What happens to the seeps at the Katalla - let me ask you  
 (19) this Does the Katalla oil field in your opinion have  
 (20) anything whatsoever to do with the oil impacts in Prince  
 (21) William Sound from the Exxon Valdez oil spill?  
 (22) A Factually no We're dealing with intertidal impacts and  
 (23) shoreline impacts for the purpose of this examination and  
 (24) investigation and the Katalla information refers to a very  
 (25) small amount of oil that drifts in on silt particles into

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- (1) Prince William Sound and settles quietly in the deep basins of  
 (2) the Sound and -  
 (3) Q Show the jury where that happens?  
 (4) A Well it's right where Prince William Sound is written  
 (5) Q You have a light pen there you can -  
 (6) A Okay Generally speaking these materials move in and  
 come  
 (7) in through here and around through here and more or less  
 settle  
 (8) in this area There's some distribution in local areas and  
 (9) then the bulk of the current flow continues out in this  
 (10) direction  
 (11) Q And in what amounts compared to the 11 million gallons  
 (12) spilled by the Exxon Valdez does the Katalla oil field  
 (13) contribute to the system?  
 (14) A Very small amounts The concentrations in the sediments  
 (15) are on the order of parts per billion - million I'm sorry  
 (16) Q Parts per million?  
 (17) A That's correct  
 (18) Q Potter's March and biogenic sheens What effect on what  
 (19) we're discussing here on the damages to the land do biogenic  
 (20) sheens have on the environment in your view?  
 (21) A What damages do they bring about?  
 (22) Q Yes  
 (23) A Well essentially none  
 (24) Q Why?  
 (25) A Well they're a natural product of the environment

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- (1) They re released from generally decaying organic matter and  
 (2) they re released at low rates in small quantities and are –  
 (3) are insignificant compared to the materials and the grade of  
 (4) release one sees from you know moderate oiling or heavy  
 (5) oiling on a shoreline  
 (6) Q In your opinion do they have anything to do with this  
 (7) lawsuit?  
 (8) A Not particularly  
 (9) Q There was some discussions about the little midpoint that  
 (10) you put up for us and your persistence curves and the square  
 (11) we ll see in all of your persistence curves?  
 (12) A Yes  
 (13) Q Would you tell the jury the importance of understanding  
 (14) where you started from when – when considering the  
 importance  
 (15) of that midpoint in the curves in other words how large the  
 (16) contaminating event was in the first instance as it would  
 (17) relate to how they should view the midpoint on your curves?  
 (18) A Well this midpoint is an inflexion point That s the  
 (19) point where the curve change slope It s a slope change  
 (20) point I think the curves have two interaction points the  
 (21) point being there s a large amount of contaminated shoreline to  
 (22) begin with Because of the large volume a large volume is  
 (23) often removed very quickly but the question is what about the  
 (24) lost portion That s where the curves change slope taper off  
 (25) and it s more difficult takes much more time to get out the

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- (1) last portion of the residues They reflect this notion This  
 (2) portion of the curves reflects the notion that materials –  
 (3) this one has two inflexion points that the materials are  
 (4) preserved and selected wave shadows and places like that in  
 (5) the shorelines and in the subsurface and it takes a greater  
 (6) length of time for those materials to be removed Quickly the  
 (7) shoreline reaches the point of preserving materials in the  
 (8) parts where it s hard to remove and that s essentially as we  
 (9) typically talk about where the curve flattens off  
 (10) Q All right And so the midpoint of a large spill versus a  
 (11) small spill of oil would be different depending upon where you  
 (12) started out Isn t that a point you made?  
 (13) A If I understand your question correctly yes Yes It  
 (14) falls fast but it s the last portion of the fall that counts  
 (15) in terms of overall persistence  
 (16) Q We heard an audio portion of a videotape of someone else  
 (17) other than you talking on the videotape and that person was  
 (18) who?  
 (19) A Dr Jerry Bakus  
 (20) Q All right And we didn t play that portion of the  
 (21) videotape because you re here in court and he s not and  
 (22) you re the one that has to testify is that right?  
 (23) A Actually I didn t play the volume because I was told it  
 (24) was hearsay and it wasn t supposed to be introduced but yes  
 (25) Q Let s discuss what it was that we did play The team that

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- (1) went out to the beach on that occasion who was part of that  
 (2) team?  
 (3) A Well it was Dr Bakus of course and I think Larry  
 (4) Thebeau was with him and I believe Jeff Dawson a sampler in  
 (5) our team may have been with him as well  
 (6) Q What do they do for the team what are the expertise –  
 (7) what s their discipline?  
 (8) A They re biologists  
 (9) Q Now you talked about the fact that various teams  
 (10) government teams so forth can go to a beach and can miss  
 (11) finding the oil?  
 (12) A That is correct  
 (13) Q And that includes your own team?  
 (14) A That s correct  
 (15) Q And what happened was you went back to the beach later  
 you  
 (16) went back and what did you find?  
 (17) A We found the oil that they had missed  
 (18) Q Now there s been some discussion about whether or not you  
 (19) have to be a person like Jim Bush or an Exxon scientist or a  
 (20) geologist or a government geologist to find oil And there s  
 (21) been some discussion about whether or not a person who owns the  
 (22) property who just is there can find oil on the beach and I d  
 (23) like you to comment to the jury on those two points as to  
 (24) whether or not just somebody walking down the beach can find  
 it  
 (25) or whether you have to be someone trained to find it Which is

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- (1) true or both?  
 (2) A Well there are a number of disciplines that are – In  
 (3) terms of being trained there are a number of different  
 (4) disciplines that work on oil spill teams Typically we have  
 (5) chemists biologists and geologists Geologists aren t good  
 (6) biologists Biologists aren t good chemists biologists aren t  
 (7) good geologists Chemists aren t good geologists nor are they  
 (8) good biologists They all have to talk to each other so the  
 (9) geologist has to know some chemistry A chemist needs to  
 know  
 (10) a little bit of – they have sampling programs and work  
 (11) together The same is true for the biologist Neither is the  
 (12) specialist in the other s discipline but both are reasonably  
 (13) knowledgeable so they can communicate  
 (14) You can get a final work product that s viable and  
 (15) effective In 1992 and 89 we work principally with  
 (16) specialists on our team In 93 and 94 we had included others  
 (17) that were not technical specialists I would estimate and I  
 (18) could count this if I went back through my notes but I would  
 (19) estimate that in 94 half or more than half of the sites we  
 (20) went to were referred to us by nonspecialists people who  
 (21) didn t have special skills in finding oil In beaches  
 (22) Q Like who?  
 (23) A Like the first mate of the ship We were on the Good  
 (24) Times the vessel we went out in Prince William Sound He had  
 (25) the oil spill cleanup experience but was not a specialist on

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- (1) what he worked on now opposed to what he worked on in the past
- (2) Q What about property owners?
- (3) A You took the words out of my mouth
- (4) Q So I'll put them back
- (5) A Yes Gail Evanoff referred us to locations and others on
- (6) teams who were not specialists referred us to locations as
- (7) well
- (8) Q And so when we heard the term that you put anecdotal
- (9) evidence on your map is there anything wrong with that?
- (10) A No
- (11) Q Why not?
- (12) A I don't understand why there would be anything wrong with
- (13) it
- (14) Q Well let me ask you this With respect to the beach
- (15) surveys that were done what were they doing when they went
- (16) walking around?
- (17) A Well I guess I'll go back to the question about the
- (18) anecdotal data A lot of the anecdotal data we used for
- (19) example were field notes from clean up crews and it was a
- (20) simple exercise for us to distinguish when they were describing
- (21) mousse wet damp fluid shiny runny oil this sort of thing
- (22) from strictly tar balls which might have been confused with
- (23) block tar Or natural bitumen which we recovered and saw
- (24) that
- (25) It's pretty clear to distinguish that line of anecdotal

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- (1) evidence Mousse is clearly obvious and clearly related to the
- (2) Exxon Valdez oil spill in most cases and certainly liquid oil
- (3) is as opposed to these other materials Field teams that were
- (4) put out in the field similarly went through a similar exercise
- (5) and were soon able to distinguish oil from other materials
- (6) MR PETUMENOS I wonder if Your Honor counsel for
- (7) Exxon could assist me with his exhibit of the Eshamy Bay with
- (8) the little red tape on it
- (9) MR OPPENHEIMER Sure You'll notice we were ready
- (10) Sorry we were not
- (11) MR OPPENHEIMER Do you recall the exhibit number?
- (12) MR PETUMENOS No I was hoping you were ready
- (13) MR OPPENHEIMER Just want it up here
- (14) MR PETUMENOS Over here next to the podium will be
- (15) fine Mr Oppenheimer Thank you very much
- (16) Mr Bush can you come on down?
- (17) BY MR PETUMENOS
- (18) Q Mr Bush I want to make sure you don't get trapped here
- (19) There is a red line going from one side to the other where you
- (20) said you saw the asphaltine - what did you call it?
- (21) A Well it's a - residues of an asphalt pavement what's
- (22) left of the asphalt pavement
- (23) Q You kept on using the word in your testimony - I checked
- (24) it - discontinuous -
- (25) A Yes that's correct

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- (1) Q - asphalt residues but this red tape is not
- (2) discontinuous is it?
- (3) A No I guess we should make this clear I don't want to
- (4) leave the impression that there's a solid band - actually as I
- (5) look at this this little thing should probably be moved
- (6) MR PETUMENOS Don't write on it yet until we have
- (7) his permission
- (8) MR OPPENHEIMER So stipulated by all means
- (9) A I imagine that direction should be moved around here
- (10) Maybe it's a little bit long Probably got a little aggressive
- (11) how long it is
- (12) BY MR PETUMENOS
- (13) Q I can't remember whether you did the tape or he did the
- (14) tape on this one but anyway let's make sure it's right
- (15) A That's the approximate location and yes there is an
- (16) asphalt residue along that area It's discontinuous under - I
- (17) better make some drawings
- (18) What we've got - what we've got is an area like this the
- (19) tape so to speak And through here somewhere runs a path that
- (20) might look like this that's got asphalt pavement Sometimes
- (21) it'll be totally asphalt pavement sometimes it's pieces
- (22) There might even be some pieces out here And maybe some odd
- (23) shapes and things like this that's - that runs along that
- (24) general trend so it varies in width and shape and so forth
- (25) Excuse me

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- (1) Q Is it covered by anything?
- (2) A Generally speaking it's covered by cobble armor There's
- (3) a layer of rocks in that size range yes
- (4) Q And when you went and - went to this beach and you were
- (5) looking at it were you looking at it through the cobble?
- (6) A Yes
- (7) Q And did you do - did you uncover the cobble and do any?
- (8) A Locally uh huh
- (9) Q What do you mean by locally?
- (10) A Well you follow - you can see it between the rocks in
- (11) many places and then you walk along move up some move up
- (12) ahead and observe some It's not a precisely mapped thing In
- (13) 1994 we were in the field doing largely reconnaissance work
- (14) we
- (15) were not out there doing detailed transects we did in 1992 I
- (16) don't want to leave people with the impression that this is a
- (17) precise band of accumulated material
- (18) Q Like the red tape would indicate?
- (19) A Like the red tape would indicate
- (20) Q When you said the band continued there's a photograph of
- (21) a
- (22) bunch of people on the beach that Mr Oppenheimer used on
- (23) down I'll show it to you of course
- (24) A Yes
- (25) Q Do you mean that that asphalt pavement was like a road
- (26) between you and them?
- (27) A No it was not

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- (1) Q How long do you think this stuff will persist having  
 (2) looked at it?  
 (3) A Well depends on conditions as we've said It's possible  
 (4) for incredibly unique storm event the correct energy and  
 (5) orientation to impact the shoreline and change everything but  
 (6) it requires those precise events to do that Otherwise it can  
 (7) persist for a very long time tens of years that meaning  
 (8) decades  
 (9) Q Thank you Exhibit 2761 defense exhibit 2761 was a - an  
 (10) exhibit from NOAA relating to the - I think it was anyway I  
 (11) think it was relating to the policy statement by NOAA as to  
 (12) whether to continue with cleanup or not and some things were  
 (13) read to you from that do you remember those questions?  
 (14) A Yes yes yes  
 (15) Q And I think you stated that you did not rely upon that  
 (16) document in doing your work or those statements by NOAA in  
 (17) doing your work Can you tell the jury?  
 (18) A Well yes Within that document there are sentences that  
 (19) are were either inconsistent or a little bit contradictory and  
 (20) I think that document was oriented more at the policy level or  
 (21) a management level whereas we had access to other NOAA  
 (22) documents that were researchers products and we would  
 prefer  
 (23) and did to some extent rely on those We certainly made use of  
 (24) the information that was in them  
 (25) Q Can you tell the jury the information that you relied upon

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- (1) some of the studies you relied upon from NOAA that you did  
 rely  
 (2) upon and some of the statements from them that were  
 pertinent  
 (3) you felt to the work that you did?  
 (4) A Yes I can  
 (5) Q Please do so  
 (6) A I brought them with me The document that I was questioned  
 (7) on yesterday is DX2761 and there are a number of different  
 (8) topics that I've selected out of it and a companion document  
 (9) similar document that was prepared The exhibit was in 1991  
 (10) The companion document was 1992 a similar thing And then I  
 (11) have backup data reports from NOAA that were some of the  
 (12) original or earlier research or contemporaneous research that  
 (13) went into the - to lead to the conclusions that we heard in  
 (14) these documents  
 (15) The exhibit was compiled - I guess would be the proper  
 (16) word - three years after the spill and with reference to  
 (17) asphalt pavements it has the statement in it that they can  
 (18) impact habitats if only by physically changing it referring  
 (19) to changing a specific habitat type  
 (20) With respect to the same the same item asphalt pavement  
 (21) the subsequent document for the next year states that with  
 (22) respect to asphalt pavement again that other observations  
 (23) from other spills and I quote indicate that these pavements  
 (24) weather very slowly and are likely to persist for many years  
 (25) parenthesis greater than 20 years in the case of the Arrow

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- (1) spill  
 (2) In a September 1992 document there was a report released  
 (3) for NOAA That report is entitled Summary of Results  
 (4) geomorphological shoreline monitoring survey of the Exxon  
 (5) Valdez spill site Prince William Sound Alaska September 1989  
 (6) through August 1992 regarding the same issue asphalt  
 (7) pavement  
 (8) The investigators state and I read the degree of  
 (9) weathering varies greatly depending on the amount of oil  
 (10) saturation Unweathered mousse can fill some crevices  
 whereas  
 (11) adjacent ones have weathered into a semi hard black pavement  
 -  
 (12) correction weathered into semi hard black pavement These  
 oil  
 (13) deposits are likely to persist for long periods up to  
 (14) decades  
 (15) Back to the original exhibit with respect to toxicity  
 (16) these - the summary documents indicate that virtually all of  
 (17) the toxic components are gone or absent yet elsewhere in the  
 (18) same document it indicates that - that the PAHs that do remain  
 (19) in the oil are the sources of nearly all of the acute and  
 (20) chronic toxicity associated with oil However other documents  
 (21) and other information our laboratory has told us that in fact  
 (22) that statement should be confined to what has been well  
 (23) studied The toxic components of the other toxic components  
 of  
 (24) oil simply have not been as well studied so this statement is  
 (25) confined to what's known as opposed to what's not known

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- (1) That's further emphasized by a subsequent statement which  
 (2) represents that the asphaltine fractions quote which have  
 (3) negligible water solubility and little demonstrated toxicity  
 (4) Under chemistry and toxicology the same document reads  
 (5) the more toxic and more soluble fractions of the oil are no  
 (6) longer present even in the freshest appearing oil found  
 (7) existing in the subsurface pockets And the next paragraph  
 (8) refers to the mussel studies which show the results - showed  
 (9) some accumulation of PAHs and these two sentences kind of  
 (10) contradict each other If all of the toxic components are  
 (11) absent what's being accumulated in the mussels? Companion  
 (12) document 1992  
 (13) Q When you say companion document what do you mean?  
 (14) A It's a similar document produced by NOAA for the United  
 (15) States Coast Guard but it's constructed a year later In this  
 (16) document under oil chemistry it states a year later only the  
 (17) more persistent aromatic hydrocarbons are still present Those  
 (18) are toxic components  
 (19) Similarly we have under chemistry and toxicology just as  
 (20) in the previous year's document we have the same paradox  
 (21) between soluble and toxic fractions being absent and then with  
 (22) respect to the mussel study -  
 (23) Q Slow down slow down I didn't understand I don't think  
 (24) I understood any part of that  
 (25) A Dissimilar statements the toxins of the oil are no longer

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- (1) present even if the freshest oil found in some persistence and  
 (2) subsurface pockets and then some persistence of PAH  
 (3) Q What is PAH?  
 (4) A Poly aromatic hydrocarbons some of the toxins in the oil  
 (5) With respect to environmental concerns subheading is pooled  
 (6) oil high oil residue medium oil residue beaches Under  
 (7) treatment recommendations they state reworking the beach  
 (8) sediments either manually or mechanically may increase the  
 (9) availability and therefore the toxicity of the oil to the  
 (10) surrounding biological community thereby reduced the benefit  
 of  
 (11) treatment When we reviewed these documents at this level  
 had  
 (12) to make predictions and decisions about persistence of oil in  
 (13) the environment we have to be very clear about whether  
 (14) materials of toxic components still remain Toxicity in these  
 (15) compounds has been investigated in depth for only a few of  
 (16) crude oil s components and not with respect to cotoxin the  
 (17) effects of one component of crude oil in the presence of  
 (18) another They ve been looked at primarily Individually  
 (19) Q All right Anything further on the NOAA stuff?  
 (20) A Actually I had eight points I could go through on this  
 (21) but I think - I think perhaps one of the final ones is with  
 (22) respect to recovery of beaches that have been heavily treated  
 (23) have been tilled or have undergone mechanical disruption The  
 (24) results from NOAA in September of 1992 indicate with respect  
 (25) to for example one of the shorelines this beach may never

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- (1) return to its original configuration as far as grain size  
 (2) distribution is concerned  
 (3) Nonetheless the resilience shown by this beach to recover  
 (4) to its original topography after such extreme modifications is  
 (5) remarkable What that means is that there are isolated cases  
 (6) that are never going to recover in their estimation at this  
 (7) point in time to the original profiles They expect some of  
 (8) them to eventually recover and it s workable that some don t  
 (9) but nonetheless some don t With respect to bioremediation -  
 (10) Q What is bioremediation please again?  
 (11) A It s one of the projects that we re undertaking - some of  
 (12) the treatment projects that were undertaken in the Sound to  
 (13) help the bugs the microbes and bacteria consume oil in the  
 (14) subsurface  
 (15) MR OPPENHEIMER Your Honor this has been going on  
 (16) quite some time I haven t made an objection yet but I think  
 (17) we re way past this witness expertise in geology  
 (18) MR PETUMENOS I believe the door was opened with the  
 (19) issue that he raised with respect to the NOAA study and all of  
 (20) its conclusions relating to these subjects And the fact that  
 (21) he didn t consider - as the cross attempted to bring out -  
 (22) issues of treatment when in fact he did and he covered these  
 (23) studies makes this redirect entirely proper  
 (24) MR OPPENHEIMER Your Honor I don t think we opened  
 (25) the door to -

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- (1) THE COURT I don t think you did either counsel  
 (2) MR OPPENHEIMER As far as expertise  
 (3) THE COURT You re sustained  
 (4) MR PETUMENOS Let me ask you finally on the NOAA  
 (5) studies that you ve been reading to the jury assist the jury  
 (6) for us if you can how is it that one lawyer for Exxon stands  
 (7) up and says I want to read you a NOAA study and then it s my  
 (8) turn and I stand up and I say can you read us some other  
 NOAA  
 (9) studies and every part seems to be favorable to one side or  
 (10) the other Why are these contradictions within the NOAA study  
 (11) itself?  
 (12) A In my experience in large corporations and I haven t  
 (13) worked for NOAA but in other contexts certain documents ,  
 come  
 (14) out on a scheduled basis and a timely basis and they re  
 (15) decision making documents They re either policy level or  
 (16) management level documents and they re based on the  
 research  
 (17) and information that s provided by the research teams There s  
 (18) a time lag between what goes on in the research and what goes  
 (19) on in the management realm Decisions have to be made so  
 they  
 (20) take the information that s available at the time  
 (21) It s clear that in some cases here they there are  
 (22) inconsistencies within the documents and lack of parallelism in ,  
 (23) some cases But I think more important the idea is that they  
 (24) need to make the decision at that time They get the best  
 (25) information that s available at the time There is a lag

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- (1) between studies being completed in research framework and  
 when  
 (2) those results are available and how much time it takes to get  
 (3) those results to make a management decision In the  
 meantime  
 (4) for example management may publish a document such as this  
 (5) which does not have the opportunity to include some final  
 (6) results of research  
 (7) Q And when management makes a decision do they try to  
 (8) justify the decision in the management document?  
 (9) A Well of course they try but there s a limited amount -  
 (10) you can only communicate so much information through these  
 (11) chains and compile so much information  
 (12) Q Now the studies that you ve been reading from here and  
 (13) your examination that you relied upon instead of the  
 (14) management studies were those management studies or  
 scientific  
 (15) studies you were reading from?  
 (16) A The first two were management studies or management  
 (17) compilations and the latter three were research reports  
 (18) Q And were some of the research reports completed after the  
 (19) management decision to stop beach treatment was made?  
 (20) A Yes  
 (21) Q And then lastly I want to - do you have - counsel do  
 (22) you have the blowup of those notes the SWAG on it  
 somewhere?  
 (23) I really want to talk about this one Mr Bush What we  
 (24) have before you Exxon has taken the trouble to blow up some  
 (25) notes that you wrote on a pad Is that what happened here?

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- (1) A That s correct  
 (2) Q And could you tell the jury when you are - was this a  
 (3) complex problem with lots to think about as you - as you  
 (4) approached it in the beginning?  
 (5) A It was a very complex problem with a lot of - very many  
 (6) things to think about  
 (7) Q And when scientists are trying to figure out how to address  
 (8) a problem do they communicate with one another openly in  
 (9) attempt to come up with hypothesize for how to approach the  
 (10) problem?  
 (11) A They certainly should yes  
 (12) Q Now this - these notes of yours that have now been blown  
 (13) up into bigger than life here when were they created by you?  
 (14) A I believe - well it was in 1990 I think it was April of  
 (15) 1990  
 (16) Q And what were you - had you - what stage of your inquiry  
 (17) were you at in 1990 when you were thinking about what - what  
 (18) approach to take to these problems?  
 (19) A These were the very beginning days Larry Thebeau and I  
 (20) had undertaken this project and had begun to contact other  
 (21) people discuss the issues back and forth probably several  
 (22) days of discussion and consideration discussion and  
 (23) consideration and it was time for somebody to put pen to paper  
 (24) and begin to do something about this There are a couple of  
 (25) purposes for that

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- (1) One identify the principal problems and objectives that we  
 (2) had to go with establish sort of a base line what we might  
 (3) call working hypothesis and also to communicate that in a very  
 (4) open way to encourage good exchange and unencumbered  
 (5) exchange  
 (6) of information back and forth  
 (7) Q So at the time when you were writing these notes this  
 (8) was - this was the idea that you had for creating persistence  
 (9) curves?  
 (10) A Yes Well actually at this time the project was in  
 (11) enough of its infancy where actually we didn t even know if we  
 (12) were going the complete this This is an attempt to begin this  
 (13) work to see about feasibility and possibility There s a  
 (14) tremendous amount of data out there but we believe this is one  
 (15) of the first times maybe the first time it had been compiled  
 (16) and brought together in this kind of a format And there are  
 (17) specific problems with it not the least of which is trying to  
 (18) define what recovery really means to people and when we  
 (19) began  
 (20) we had all of these tasks on our side of the fence and it was a  
 (21) very intimidating beginning  
 (22) Q Now you pointed out that it was going to take a lot of  
 (23) work you state and this is - apparently Mr Oppenheimer  
 (24) wanted to highlight this This is fun to think about but damn  
 (25) difficult to decide on where to put the line on the graph It  
 (26) was going to be a difficult project requiring a lot of work  
 (27) right?

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- (1) A At - in fact I believe that s written with the notion  
 (2) that is this even really possible I mean this is a tough  
 (3) thing to do and we need to consider clearly is this the way to  
 (4) proceed with this problem And you know we had had some  
 (5) discussions beforehand and came up with some ideas but  
 (6) neither  
 (7) of us were eager to be the first one to start drafting this  
 (8) material out So as project manager I took the lead threw  
 (9) the first shot at it and based on our discussions of course  
 (10) we sort of knew what was coming  
 (11) Q And then you went to work on it for years?  
 (12) A On and off for several years that s correct  
 (13) Q Now tell the jury do you believe that what your  
 (14) endproduct was after you came up with this idea do you  
 (15) believe  
 (16) that this is a scientific wild ass guess anymore?  
 (17) A Oh of course not Of course not  
 (18) MR PETUMENOS I have no further redirect Do you  
 (19) need these any further?  
 (20) MR OPPENHEIMER No What I would like to do is get  
 (21) the Eshamy  
 (22) MR OPPENHEIMER Good morning Mr Bush  
 (23) RE CROSS EXAMINATION OF JAMES G BUSH  
 (24) BY MR OPPENHEIMER  
 (25) Q Mr Bush thank you for your comments about how difficult a  
 (26) task all of this was In fact prior to your attempt to do ,  
 (27) this no one had ever attempted to do this isn t that correct?

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- (1) A No it s not  
 (2) Q To do a matrix for all of the beach types and all of the  
 (3) oiling types in one place?  
 (4) A No one had compiled it in one format but individual  
 (5) estimates had been made for various conditions offer oiling and  
 (6) varlous beach types and varlous occurrences  
 (7) Q And for specific spills?  
 (8) A Yes  
 (9) Q But no one had attempted to do this wide ranging matrix  
 (10) which you ve got here today?  
 (11) A To my knowledge no  
 (12) Q And to your knowledge isn t it the case that no one has  
 (13) tried but you to this date no one else has done this?  
 (14) A I m not sure about that I mean we -  
 (15) Q Do you know of anybody who has?  
 (16) A No one is published on it that I m aware of It might be  
 (17) in progress somewhere at this time  
 (18) Q It may be in progress but it hasn t been published as far  
 (19) as you re aware?  
 (20) A That s correct  
 (21) Q This is a one of a time approach?  
 (22) A Not approach One of a time compilation  
 (23) Q Prior to investigating the Exxon Valdez oil spill what  
 (24) experience had you had in producing this kind of matrix in -  
 (25) in earlier context?

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- (1) A None in producing this kind of matrix  
 (2) Q What types of spills had you investigated prior to the time  
 (3) you investigated the Exxon Valdez oil spill?  
 (4) A Primarily industrial related oil spills those that relate  
 (5) to the industrial environmental clients that we had with  
 (6) respect to our work for the EPA and other agencies  
 (7) Q How many transect - intertidal transect surveys had you  
 (8) done prior to your work on this case?  
 (9) MR PETUMENOS I m a little confused I m sorry to  
 (10) interrupt counsel but I m confused whether the question is  
 (11) referring to his team his company or him  
 (12) MR OPPENHEIMER Fair enough Your Honor  
 (13) BY MR OPPENHEIMER  
 (14) Q Mr Bush just you how many intertidal transect surveys  
 (15) had you done prior to this case?  
 (16) A A few not very many  
 (17) Q And in what areas?  
 (18) A In South Carolina Let s see where else? Offhand that s  
 (19) all I recall  
 (20) Q South Carolina which is a quite different environmental  
 (21) than the intertidal zones you studied here in Alaska  
 (22) A That s correct substantially different  
 (23) Q If I may I d like to go back to - perhaps just because  
 (24) they re so pretty we keep bringing them out - but you  
 (25) indicated that the tar mat which you were describing in your

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- (1) direct testimony at Eshamy Bay and that we talked about on  
 (2) cross examination doesn t cover this whole area How much of  
 (3) the area does it cover?  
 (4) A Well we had approximately 20 minutes to examine that  
 (5) particular aspect of things when we were on the shoreline We  
 (6) didn t follow out it s entire extent I know it continues to  
 (7) the northward direction up into the rocky area the direction  
 (8) of the arrow there and I think when I placed the tape I  
 (9) placed it perhaps a little bit too far to the south  
 (10) Q You re saying it continues into this area toward this -  
 (11) if -  
 (12) A If I have your finger point correct yes  
 (13) Q What about in the other direction how far does it go?  
 (14) A I don t think we tracked it extensively in that direction  
 (15) There are patches that occur on out in that direction I don t  
 (16) know how continuous or how specifically well they can be  
 (17) related to this specific tar mat because of changes potential  
 (18) changes in elevation  
 (19) Q How far did you actually track it though?  
 (20) A We split into two teams and one team went to the south and  
 (21) one team went to the north and offhand I can t give you  
 (22) precise distance numbers  
 (23) Q Okay How wide is it?  
 (24) A Ranges it s very irregular sort of like I drew it in  
 (25) there anywhere from probably - probably a few feet to maybe

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- (1) as much as six eight feet or more than that in some places  
 (2) Depends on how you talk about it and how you define the area  
 (3) the band versus a contiguous spot of tar for example  
 (4) Q You indicated that what you saw there was what was left of  
 (5) the tar mat The tar mat s going away isn t it?  
 (6) A Yes it is  
 (7) Q And whatever you think is under there and however big it  
 (8) turns out to be or however small it turns out to be there s no  
 (9) doubt in your mind as it s there it s continuing to  
 (10) biodegrade?  
 (11) A Biodegrade to the extent it biodegrades Now it s  
 (12) probably - there s not much biodegradation that is going on at  
 (13) this point It continues to weather and change to some extent  
 (14) as to all things  
 (15) Q It s becoming inert?  
 (16) A Inert s a big word Obviously it affects the habitat It  
 (17) affects the availability of sediment in that area It is in  
 (18) the upper intertidal zone  
 (19) Q When you say that you mean it s physically there?  
 (20) A That s correct  
 (21) Q There is something could be the size of a quarter or more  
 (22) we don t know but it s physically there but I m now talking  
 (23) about its chemistry Is there any doubt in your mind that it s  
 (24) inert that which is not biodegrading is inert it s not going  
 (25) to do anything?

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- (1) A I would disagree with that I don t think it s chemically  
 (2) inert  
 (3) Q Yet?  
 (4) A Yeah  
 (5) Q Any doubt in your mind that it will become so?  
 (6) A If you can precisely define inert we could probably get  
 (7) into some details on this  
 (8) Q You - let me change subjects You mentioned that in  
 (9) addition to looking at the Metula as a comparable spill you  
 (10) looked at some other spills is that right?  
 (11) A That s right  
 (12) Q And you gave - by the way you have held the opinion in  
 (13) the past that the Metula was the most analogous spill Is that  
 (14) correct?  
 (15) A It s one of the best analogies for all components of the  
 (16) spill Yes that s correct  
 (17) Q And you mentioned the Amoco Cadiz?  
 (18) A That s right  
 (19) Q It s your view isn t it that the amount of oil that  
 (20) spilled affects the persistence period of oil is that right?  
 (21) A Not so much the amount of oil that s spilled It s the  
 (22) amount of oil that impacts the shoreline Heavier oil line  
 (23) concentrations - excuse me yes I guess is the general  
 (24) answer but it s not the spill it s what hits the shoreline  
 (25) yes

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- (1) Q And that's a point we'll get back to the oil that goes  
 (2) past the shoreline in that slick that doesn't impact the  
 (3) shoreline you're not addressing that in the curves is that  
 (4) right? You're only addressing the oil that gets to the  
 (5) shoreline?  
 (6) A That's correct  
 (7) Q Back to the Amoco Cadiz That was a much larger spill than  
 (8) this spill was at this time?  
 (9) A Approximately four times larger four to five times larger  
 (10) yes that's correct  
 (11) Q Four to five times?  
 (12) A Uh huh  
 (13) Q You mentioned wave shadows A wave shadow is a space  
 (14) behind a rock or outcropping that protects the space on the  
 (15) shore behind it from waves and other tidal action is that  
 (16) right?  
 (17) A That's one example of a wave shadow yes  
 (18) Q That's a place where you can - you can find in your  
 (19) experience some oil you can find it in those protected  
 (20) places?  
 (21) A That's correct  
 (22) Q And in fact a great many of the places that you looked at  
 (23) to find oil were in protected places isn't that true?  
 (24) A I would say that a great many occurrences of oil occur in  
 (25) those places yes

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- (1) Q Right And a number of your transects were in wave  
 (2) shadows is that correct?  
 (3) A I wouldn't say directly it was a wave shadow They were  
 (4) protected areas One of the conditions are shoreline types  
 (5) for example sheltered rocky shores yes  
 (6) Q You have some of your transects are located in these areas  
 (7) behind rock outcroppings protected from the tidal actions?  
 (8) A The portion of them go through there yes that's correct  
 (9) There are a wide number of what we call protected niches  
 (10) excuse me and wave shadows are one grouping of those  
 (11) MR OPPENHEIMER May I borrow back from you your  
 (12) map?  
 (13) MR PETUMENOS Which one?  
 (14) MR OPPENHEIMER The one that shows Bligh Island  
 (15) MR PETUMENOS Sure  
 (16) BY MR OPPENHEIMER  
 (17) Q While Mr Petumenos is getting that just a quick question  
 (18) on mussels You mentioned that you had seen some mussels  
 (19) that  
 (20) seemed also to be getting some sun that weren't - weren't  
 (21) dead is that right?  
 (22) A That's correct  
 (23) Q Do you know - do you know how old those mussels were?  
 (24) A Specifically how old they were?  
 (25) Q Uh huh yes  
 (26) A No I don't

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- (1) Q Do you know what season they were in relative to the other  
 (2) mussels?  
 (3) A No I don't  
 (4) Q Okay  
 (5) A Well actually I haven't answered your question completely  
 (6) correctly We observed a range in sizes of mussels in other  
 (7) areas so apparently I saw the spectrum It's not to say that  
 (8) we don't have some inclination or some idea about their age  
 (9) Q But you're not telling the jury that you made some sort of  
 (10) analysis of which mussels were surviving and which were not by  
 (11) age?  
 (12) A No no no  
 (13) Q Bligh Island you indicated you're still comfortable with  
 (14) the oiling that is shown on it is that correct?  
 (15) A Actually we have - we have reduced the categories of  
 (16) oiling on the Bligh Island map  
 (17) Q You reduced it from moderate down to light?  
 (18) A That's correct light and very light  
 (19) Q And you reduced it from moderate down to light because in  
 (20) fact you did have some misgivings about the anecdotal  
 (21) information after you went back and for a second time  
 (22) couldn't find oil on Bligh Island isn't that right?  
 (23) A No The reason we reduced the oiling in that area is  
 (24) because we visited the site more thoroughly in 1994 and were  
 (25) able to better assess the makeup of the shorelines

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- (1) Q But you originally took Mr Costello's information and  
 (2) decided that the map should depict the oiling as moderate but  
 (3) after going back in '94 you decided that your assessment of  
 (4) what Mr Costello had said ought to be changed down to light?  
 (5) A That's correct  
 (6) Q By the way why would you conclude that Mr Costello was  
 (7) wrong and the oiling was originally light as opposed to  
 (8) moderate rather than concluding that the moderate oil had  
 (9) cleaned up faster than you expected?  
 (10) A We did this based on our ability to view the videotape  
 (11) images and actually go to the location that we saw there and  
 (12) compare what was on the image more clearly with what we saw  
 (13) on  
 (14) the site and what he said in his text and to examine the type  
 (15) of rocks The rocks that are there are very impermeable and  
 (16) well polished and will allow for easy removal of the oil So  
 (17) unless substantial concentrations do in fact hit the area  
 (18) the persistence would be reduced To accommodate that we  
 (19) lowered the levels of oil  
 (20) Q You - you mentioned that there was asphalt as we  
 (21) discussed the other day that had gone into the atmosphere  
 (22) from the 1964 quake into the water atmosphere and some  
 (23) residue  
 (24) could still be found You're not suggesting to this jury that  
 (25) that asphalt which you're aware of is the same thing as Exxon  
 (26) Valdez crude in terms of its persistence are you?  
 (27) A That it's the same thing as Exxon Valdez crude

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- (1) Q That asphalt is a product that is destined to exist far  
 (2) far longer than anything on the Exxon Valdez is that correct?  
 (3) A Depending how you define asphalt and look at Exxon Valdez  
 (4) crude Portions of it are equivalent similar to the  
 (5) asphaltic anywhere from 10 to 30 percent depending on  
 (6) definitions and those materials have the potential of being as  
 (7) persistent as what was spilled there  
 (8) Q Nothing aboard the Exxon Valdez that was refined right?  
 (9) A In a cargo hold the material other than additives from the  
 (10) pipeline and lubricity and things like that generally  
 (11) speaking no  
 (12) Q Nothing refined that you re aware of that would have  
 (13) spilled out into the water?  
 (14) A Unless they pumped bilge in the efforts to move it off the  
 (15) beach  
 (16) Q You re not aware that they did that are you?  
 (17) A No I m not  
 (18) Q With respect to Katalla you indicated that the amount of  
 (19) oil getting into the water column from Katalla was very slight  
 (20) and that it was measurable in parts per million Did I hear  
 (21) that correctly?  
 (22) A I believe you did that s correct  
 (23) Q Some of your tests measured Exxon Valdez oil in parts per  
 (24) billion In some of your tests Isn t that correct?  
 (25) A I don t believe very many of them did

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- (1) Q But some do don t they?  
 (2) A There may be a few Parts per billion is - perhaps you re  
 (3) referring to components  
 (4) Q I m simply referring to the reports of the tests in your  
 (5) report  
 (6) A Not many  
 (7) Q But some?  
 (8) A (Nods head up and down)  
 (9) Q There was another beach where you found or thought you d  
 (10) found a tar mat Do you remember that from your 94 trip?  
 (11) A Yes  
 (12) Q It was Taroca arm?  
 (13) A Yes  
 (14) Q Would you -  
 (15) A I don t believe we characterize that as a tar mat  
 (16) Q Okay  
 (17) A We found isolated patches of asphaltic pavement residue  
 (18) Q And with respect to both that beach and Eshamy it s still  
 (19) your testimony is it not that they re both improving  
 (20) continuing to improve?  
 (21) A Yes it is  
 (22) Q Lastly you mentioned that in connection with the 94 trip  
 (23) you took out to the Sound that you were - you were informed  
 (24) about the location of oil from people like Gail Evanoff and  
 (25) others You didn t sit down with a group of people and ask

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- (1) them to take you to a representative sample of the beaches on  
 (2) the their property did you?  
 (3) A To take me to a representative sample -  
 (4) Q Representative in the sense of having oil and not I mean  
 (5) you asked them to tell you where the oil was?  
 (6) A If they d observed oil on the beaches we wanted to know  
 (7) where it was Our purpose was to investigate the mechanisms  
 (8) and nature of retained oil on the shorelines that s correct  
 (9) Q You didn t go out in 94 to find out how the beaches were  
 (10) in terms of what was clean what was cleaning you were going  
 (11) after the oil sites?  
 (12) A We actually crossed a number of areas and did view a  
 (13) number  
 (14) of shoreline types and different conditions but we were  
 (15) focusing on looking at residual oil that s correct  
 (16) Q You were going to where the oil was?  
 (17) A Yes  
 (18) MR OPPENHEIMER Thank you no further questions  
 (19) THE COURT Counsel do you want to take a break?  
 (20) MR PETUMENOS Please  
 (21) THE CLERK Please rise this court stands in recess  
 (22) (Jury out at 9 56 a m )  
 (23) (Recess from 9 58 a m to 10 13 a m )  
 (24) THE CLERK This court now resumes its session  
 (25) Please be seated  
 MR PETUMENOS I have some exhibits to move into

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- (1) evidence Judge and I think we can do this rather simply  
 (2) because after conferring with counsel there are only two  
 (3) objections So what I will do first is read the objections -  
 (4) I mean the exhibits into the record for which there are no  
 (5) objections How s that?  
 (6) Exhibit 553 Exhibit 554 Exhibits 1143 through 1146  
 (7) 1141 1 (sic) 1141 2 (sic) 1141 4 (sic) and 1141 10 through  
 (8) 14 (sic)  
 (9) 1147 55 through 1147 57 and 1147 57 A  
 (10) 1148 and 1149 1153 through 1154 1156 and 1157 1159  
 (11) 1161 1162 1164 through 1166 1271 through 1280 1284 1306  
 (12) 1354 A 1355 1356 1363 and 1368 All admitted without  
 (13) objection  
 (14) (Exhibits 553 554 1143 through 1146 1147 1 1147 2  
 (15) 1147 4 1147 10 through 14 1147 55 through 1147 57  
 1147 57A  
 (16) 1148 1149 1153 1154 1156 1157 1159 1161 1162 1164  
 (17) through 1166 1271 through 1280 1284 1306 1354 A 1355  
 (18) 1356 1368 1363 offered)  
 (19) THE COURT What were the last two counsel?  
 (20) MR PETUMENOS Last three you said?  
 (21) THE COURT Two  
 (22) MR PETUMENOS Is 163 - excuse me 1363 and 1368  
 (23) I also move into evidence Exhibit 1150 and Exhibit 1155  
 (24) for which there is an objection and I ll approach the Court  
 (25) (Exhibits 1150 and 1155 offered)

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- (1) THE COURT Okay Thanks Go ahead  
 (2) MR OPPENHEIMER Your Honor I m sorry can I grab a  
 (3) quick glance at those in the titanic shift between witnesses I  
 (4) packed up the wrong papers  
 (5) THE COURT I m going to admit the uncontested  
 (6) exhibits and I ll give the clerk a copy of the list that I ve  
 (7) made  
 (8) (Exhibit 553 554 1143 through 1146 1147 1 1147 2  
 (9) 114704 1147019 through 14 1147 55 through 1147 57  
 1147 57A  
 (10) 1148 1149 1153 1154 1156 1157 1159 1161 1162 1164  
 (11) through 1166 1271 through 1280 1284 1306 1354 A 1355  
 (12) 1356 1368 1363 received)  
 (13) MR OPPENHEIMER Your Honor the Exhibit 1155 is that  
 (14) clean up exhibit which we discussed previously and which we  
 (15) continue to voice an objection to especially with respect to  
 (16) the captioning and again with respect to all of the captions  
 (17) pertaining to biology  
 (18) I think it s clear from the witness testimony that he -  
 (19) he s not in a position to make those observations I  
 (20) understand that there may be testimony later with respect to  
 (21) biology and I m not sure I think there is And it seems to  
 (22) me there s currently not a foundation for that to go in and I  
 (23) also think it s misleading especially to the extent that it  
 (24) talks about typicality  
 (25) I also believe that he does not have a basis for rendering

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- (1) a graphic depiction of oil beneath the surface as he has done  
 (2) there because what - it does more than just convey a  
 (3) technique It suggests that there s some particular volume of  
 (4) oil and in all of his testimony - and I think it s been quite  
 (5) clear - he s not able to tell us how much oil is under the  
 (6) surface  
 (7) THE COURT I d like to ask you a question counsel  
 (8) Is there going to be subsequent testimony about this exhibit?  
 (9) MR PETUMENOS We have a biologist that we were going  
 (10) to call that is from the ICF team and if the Court requires  
 (11) additional testimony to admit this document then we ll  
 (12) certainly call him He was on our list of people to  
 (13) potentially exclude from testimony to shorten our - shorten  
 (14) our presentation I disagree with - with the statement that  
 (15) this witness doesn t have the ability to provide the foundation  
 (16) for that exhibit  
 (17) MR OPPENHEIMER Your Honor if -  
 (18) MR PETUMENOS If you re not done counsel I ll -  
 (19) MR OPPENHEIMER I m sorry I stepped on you What I  
 (20) would say perhaps - Mr Petumenos and I have had  
 (21) conferences  
 (22) we skipped one we could have probably had here if the only  
 (23) reason Mr Bakus would be back here is to get that in for the  
 (24) biology portion I would withdraw my objection as to that  
 (25) My other objections stand and they don t have anything to  
 do with Mr Bakus In other words I withdraw the objection as

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- (1) to the biology components of the caption if in fact it s  
 (2) going to eliminate the witness The other material I don t  
 (3) think Dr Bakus could testify to so I continue my foundation  
 (4) objection as to it  
 (5) MR PETUMENOS Judge I think he has the ability to  
 (6) create illustrative exhibits for the jury -  
 (7) THE COURT You mean this witness?  
 (8) MR PETUMENOS This witness to show the jury how  
 (9) different treatment methods do and don t remove oil from the  
 (10) system He gave his opinion which he s entitled to do as a  
 (11) geologist this is what remains in the various types of  
 (12) intervention on the beaches Conducted a special investigation  
 (13) in the northeast LaTouche Island area for just this purpose to  
 (14) learn how these interventions affect oil beneath the subsurface  
 (15) and to give the jury some insight into the statement that  
 (16) Dr Peterson made that you have a lose lose proposition with  
 (17) respect to some of these treatment methods The treatment  
 (18) methods have a certain cost on the environment to the  
 (19) shoreline and the oil remaining has a certain cost  
 (20) What this exhibit does show the jury that even with the  
 (21) treatment methods applied some of the oil remains in the  
 (22) subsurface so it s not completely effective That s an  
 (23) important matter for us in our case and it is a geological  
 (24) function in our case because it tells how much oil remains in  
 (25) the subsurface And he is the project manager of a team that

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- (1) went out there and included a whole host of shoreline related  
 (2) expertise and I think this is the right way to put the exhibit  
 (3) on with - the right witness is the project manager and the  
 (4) thrust of the exhibit as I think the foundation has been laid  
 (5) THE COURT Are you saying that this witness since  
 (6) he s the project manager has the capability not only to deal  
 (7) with geological issues but to testify to and provide the  
 (8) foundation for an exhibit that has a lot of biological  
 (9) conclusions in it?  
 (10) MR PETUMENOS Yes because he can rely upon - the  
 (11) significance of what oil is in the subsurface is important for  
 (12) a - for a geologist and a geologist does know the sorts of  
 (13) things that grow there For example he s put in little clam  
 (14) shells to show the jury where clam shells might be found and  
 (15) that s perfectly appropriate for a geologist to understand and  
 (16) know And I think that from his testimony he regularly does  
 (17) consider the local biota in determining what - advising  
 (18) clients what measures they should take what measures they  
 (19) shouldn t take and that s something that he in fact did in  
 (20) the Exxon Valdez oil spill He testified that he consulted  
 (21) with the Native corporations on these issues  
 (22) And so Mr Oppenheimer s concerns with this exhibit seems  
 (23) to me clearly to go to the weight and if he wants to prepare  
 (24) a - an exhibit that he thinks more clearly shows what it is  
 (25) that he thinks it ought to show he s entitled to do that but

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(1) he s not entitled to keep our version out of the sight of the  
 (2) jury  
 (3) MR OPPENHEIMER Your Honor just one clarification  
 (4) I am prepared to forego the objection to the biological  
 (5) statements if their statements that he has said somebody on his  
 (6) team has given him if in fact it s going to result in our  
 (7) being able to shorten the trial and do away with a testifying  
 (8) witness And so this discussion may be a little off the mark  
 (9) because if that s in fact what s being proposed I think that  
 (10) would be acceptable to us It s the remainder that I continue  
 (11) my objection to because I think as to those things that are -  
 (12) that are not biology I clearly think that without a  
 (13) stipulation of biology s inadmissible by this witness but as  
 (14) to those things where he has an area of expertise to speak to  
 (15) I think what his testimony has shown is that A he can t  
 (16) really graph for us a typical underground oil situation He  
 (17) doesn t - he doesn t know And he has only seen clean up  
 (18) operations on northeast LaTouche at five sites and the graph  
 (19) depicts a typical clean up method or effect throughout you  
 (20) know this large area that we re talking about and I think in  
 (21) that sense it s misleading and does not - it does not convey  
 (22) his testimony  
 (23) THE COURT That objection is overruled Now with  
 (24) that objection having been overruled do the rest of your  
 (25) objections go away?

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(1) MR OPPENHEIMER Let me take one second  
 (2) Your Honor we re of one mind here if in fact we can  
 (3) shorten things by not calling Dr Bakus -  
 (4) THE COURT I think that s the decision All right  
 (5) I ll admit 1155  
 (6) (Exhibit 1155 received)  
 (7) THE COURT What about 1150?  
 (8) MR OPPENHEIMER Your Honor - oh 1150 is a - an  
 (9) altered version of the data that appears in an Exxon briefing  
 (10) book or at least that s the caption There s no testimony  
 (11) whatsoever regarding how that chart was derived It is not  
 (12) pulled directly out of the briefing book It is also - well  
 (13) I guess the point -  
 (14) THE COURT How does it change the material in the  
 (15) Exxon briefing book?  
 (16) MR OPPENHEIMER One thing I noticed immediately is  
 (17) that the scales are different The scale on the bottom for  
 (18) example I think on Your Honor s copy if I recall it from  
 (19) memory goes to 15 years something like that The scale in the  
 (20) Exxon book as I recall goes to the hundred years The bars  
 (21) look a little different  
 (22) The other point about it which is very important is there s  
 (23) been no statement that would establish anything about the -  
 (24) the basis of the data or the timing of the data That s all -  
 (25) all very early data that s based on material that this witness

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(1) has not been exposed to from other researchers and there s  
 (2) just been no testimony about the - the underlying data  
 (3) THE COURT Counsel?  
 (4) MR PETUMENOS As I understand the objection it s  
 (5) two fold One is that there has been a - somehow a  
 (6) reconfiguration or representation of the data from the briefing  
 (7) book which is unfair but we heard no cross examination  
 (8) despite the fact that this exhibit has been served on the  
 (9) defendants for some period of time and the briefing book  
 (10) itself is available to Exxon They didn t bring the briefing  
 (11) book out to show how it s somehow unfair or misleading and  
 (12) that being - if that cross-examination doesn t exist or  
 (13) there s no evidence in the record to suggest that it s in  
 (14) fact misleading  
 (15) Then the next objection appears to be that he s relying  
 (16) upon something that - data that was early data that  
 (17) accumulates or synthesizes other data that he didn t have  
 (18) access to But this is the Exxon briefing book and is an  
 (19) admission under 801(d) and what the witness said he used it  
 (20) for was to determine and compare what his own findings were  
 (21) coming up with with respect to other data other material that  
 (22) was around in the literature And he found it particularly  
 (23) instructive that in Exxon s own management information tool  
 (24) 801(d) admission the periods of persistence were reasonable  
 (25) in comparison to what he had come up with

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(1) So it would clearly be proper for him to put before the  
 (2) jury something that he looked at to determine the  
 (3) reasonableness of his own calculations which is in fact an  
 (4) admission under the Evidence Code and had they been able to  
 (5) come up with something to show that the evidence - that the  
 (6) illustrative presentation here was somehow unfairly  
 (7) characterizing the briefing book They might have something to  
 (8) say but that cross examination never happened So the  
 (9) exhibit s admissible  
 (10) MR OPPENHEIMER Your Honor I don t - I don t think  
 (11) it s our burden to lay the foundation I don t think there is  
 (12) any testimony in the record that establishes the procedure by  
 (13) which that document was produced off the briefing book and  
 (14) it s not the same document as exists in the briefing book We  
 (15) had - I think we had a similar experience where we were on the  
 (16) other side of this where we had some fish tables that were  
 (17) based on ADF&G data and it wasn t a question of  
 (18) cross examining a prima facie foundation to show it wasn t  
 (19) adequate I believe the Court concluded although I was not  
 (20) here that day that there was simply not an adequate foundation  
 (21) for the material That s an objection we can raise at the  
 (22) close of the evidence on the exhibit as we are - we re not  
 (23) obligated to cross-examine in the absence of the foundation  
 (24) having been laid We did - we did I m positive raise the  
 (25) objection at the time it was offered

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- (1) THE COURT Hang on just a minute  
 (2) MR OPPENHEIMER Also Your Honor one other point  
 (3) though I don t think it s controlling but it contributes to  
 (4) the analysis is that I don t think this is an admission The  
 (5) scale that we re dealing with I believe says one to ten or  
 (6) some such thing The other thing is - and I apologize but I  
 (7) - also from memory - believe that it relates to a biological  
 (8) time frame I don t think it has anything to do with beach  
 (9) time or oiling time if I m not mistaken  
 (10) THE COURT That appears to be true  
 (11) MR PETUMENOS I can - since I was in court I think  
 (12) the differences between the foundation exhibit on the fishing  
 (13) charts and this one are night and day because those  
 (14) objections were raised with respect to an expert witness who  
 (15) had never seen the report and didn t rely upon it By  
 (16) contrast this witness states that his team did rely upon the  
 (17) Exxon briefing book did look at it and in fact created an  
 (18) understandable illustration of what he relied upon and is  
 (19) familiar with and could have been cross examined had they  
 (20) chose  
 (21) at length as to the accuracy of the illustrative rendition  
 (22) To the extent that we have the same biological objection as  
 (23) before my position would be the same and that is that I think  
 (24) he can rely upon reasonably under these circumstances when  
 (25) studying persistence the input of his team and to the extent  
 (26) that we require foundation from Dr Bakus why we ll put it

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- (1) In  
 (2) THE COURT The objection s sustained counsel  
 (3) It s - the admission argument is troublesome but I don t know  
 (4) that - that I can take a book that s been prepared by one  
 (5) party adapted by another party and then the other party  
 (6) testifies to it and it s different in some particulars I  
 (7) don t know that I can - I can take that categorically as an  
 (8) admission of the other party I d have to hear more about it  
 (9) to determine whether or not I should let it in  
 (10) I suppose the ultimate issue is admissibility rather than  
 (11) simply whether it might come under a particular category of the  
 (12) rules I think it s a well taken objection and based on what I  
 (13) heard and what I see in the exhibit  
 (14) MR OPPENHEIMER Your Honor I d like to put in a  
 (15) number of exhibits and as well offer them at this time  
 (16) THE COURT Fine okay  
 (17) MR OPPENHEIMER They are as follows Exhibit 8942  
 (18) 8943 15480 15481 15482 13258 8944 13239 13240 13227  
 (19) 2769 2761 2734  
 (20) (Exhibits 8942 8943 25480 25481 25482 13258 8944  
 (21) 13239 13240 13227 2769 2761 and 2734 offered)  
 (22) MR PETUMENOS Mr Oppenheimer did not go through the  
 (23) process that we went through showing the exhibits and  
 (24) determine  
 (25) if there are any objections I ve written down all of them if  
 (26) I could reserve

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- (1) MR OPPENHEIMER Your Honor we can do that at a  
 (2) break Mr Petumenos is right about that  
 (3) THE COURT Okay fine I ll leave it the way it is  
 (4) and we can talk about it later  
 (5) THE COURT Have you got those the exhibits that I  
 (6) did admit right and the one that I didn t?  
 (7) THE CLERK Uh huh  
 (8) THE COURT Who s keeping these? Would you come and  
 (9) get your exhibits so I don t lose them?  
 (10) MR PETUMENOS Sure  
 (11) THE COURT Let s get the jury in  
 (12) MR PETUMENOS May Dr Mundy take the stand?  
 (13) THE COURT Yes  
 (14) (Jury in at 10 32 a m )  
 (15) THE CLERK Sir could you remain standing and raise  
 (16) your right hand  
 (17) (The Witness Is Sworn)  
 (18) THE CLERK Please be seated  
 (19) Sir for the record I need you to state your full name  
 (20) A My full name is Wilbur Henry Mundy M u n d y I go by the  
 (21) nickname of Bill  
 (22) THE CLERK And your occupation?  
 (23) A I m a real estate appraiser  
 (24) THE CLERK Thank you  
 (25) MR PETUMENOS

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- (1) Q Before I begin Judge I neglected to tell you but so the  
 (2) jury knows as well Dr Mundy has got some fused disks in his  
 (3) back and he may have trouble sitting for a long period of  
 (4) time If he gets uncomfortable I m going to ask you  
 (5) Dr Mundy to tell us so we can take a break if we need to if  
 (6) that s all right Judge?  
 (7) THE COURT Sure  
 (8) DIRECT EXAMINATION OF WILMER H MUNDY  
 (9) BY MR PETUMENOS  
 (10) Q Dr Mundy could you tell the jury a little bit about  
 (11) yourself and where you grew up and some of that?  
 (12) A Yes I grew up in a small town of Ellensburg Washington  
 (13) which is located in the center of the State of Washington I  
 (14) was raised partially in town one of four boys and when my  
 (15) parents finally decided that four boys in town was too much we  
 (16) moved to the country And I grew up in the country on a farm  
 (17) in Ellensburg  
 (18) Attended Ellensburg High School graduated from Ellensburg  
 (19) High School and went into the Navy Served in the Navy then  
 (20) went back to Ellensburg and began my college education I  
 (21) went  
 (22) through - attended classes at Central Washington University in  
 (23) Ellensburg and also at Washington State University at Pullman  
 (24) Washington I majored in a number of different areas started  
 (25) out in accounting and then went into the hotel and restaurant  
 (26) administration finally got a degree in agriculture

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- (1) Q Let me stop you there What is your profession right now?
- (2) A Right now I m a real estate analyst
- (3) Q And what is a real estate analyst?
- (4) A Well a real estate analyst is a person that analyzes real
- (5) estate A person that deals with various factors that
- (6) influence the real estate market the amount of demand for real
- (7) estate how real estate is priced the value of real estate
- (8) such things as that
- (9) Q And how is that different from a real estate appraiser a
- (10) real estate analyst?
- (11) A A real estate appraiser is one that focuses pretty much on
- (12) real estate valuation issues An analyst is one that deals
- (13) with a broader realm of real estate issues They get involved
- (14) in real estate economics in real estate market research and
- (15) market analysis analyzing the demand and supply for different
- (16) kinds of products conducting surveys of people to determine
- (17) what their attitudes are about a product For example
- (18) assisting a home builder in designing housing
- (19) Q Okay Do you work with a company?
- (20) A Yes I do
- (21) Q And what is the name of the company?
- (22) A The company is Mundy - actually the formal name is Mundy
- (23) Jarvis and Associates Inc We go by the name of Mundy and
- (24) Associates
- (25) Q And that s because your name is Mundy?

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- (1) A That s correct
- (2) Q And how many people are employed generally in your firm
- (3) and what kinds of expertise do they have?
- (4) A There are 11 people in the firm There s myself and three
- (5) other senior analysts- actually four other senior analysts
- (6) and I classify myself as an analyst too Then we have three
- (7) field research people that assist the senior analysts in doing
- (8) various types of research There is my partner Jean Hager
- (9) She handles what I call the front office the administrative
- (10) matters personnel matters and then we have a word
- (11) processing
- (11) group
- (12) Q What are some of the qualifications of these people that
- (13) you have working for you? What have they studied and what
- (14) kind
- (14) of degrees do they have?
- (15) A They actually have a fairly broad scope to the - their
- (16) background We have - all of the senior analysts have to have
- (17) at least a Master s degree and they have backgrounds in
- (18) geography urban geography business Master s in business
- (19) administration We have one lady who has a Master s in
- (20) business and Master s in urban planning and another that has
- (21) a
- (21) Master s degree in economics
- (22) Q Why is it necessary to have people with those kinds of
- (23) qualifications working in your firm to do the kind of work that
- (24) you do?
- (25) A There s a lot of quantitative analysis that we do so that

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- (1) it s important to have a good ability to work with numbers
- (2) There s a lot of depth and discipline that one receives as a
- (3) part of graduate studies and I think that that s important
- (4) adding depth to the analyst s ability
- (5) Also the area of real estate analysis is one that is quite
- (6) specialized and therefore we can obtain these specialties by
- (7) hiring people who have the advanced degrees
- (8) Q So your firm tends to deal in complex real estate problems
- (9) would you say?
- (10) A Yes
- (11) Q Apart from the Exxon Valdez work that you ve done for this
- (12) case can you give the jury some examples of what you mean
- (13) by
- (13) that when you say that there are complex real estate
- (13) assessment
- (14) problems that you get involved in give us some examples
- (15) A Well there s a couple of examples One of the things
- (16) that of course we re dealing with here is contamination A
- (17) contamination study that we just finished was one that involved
- (18) around 25 000 acres in Mississippi This is a tract of land
- (19) that was owned by a timber company or that still is owned by a
- (20) timber company or the majority of it where back in 1960 a
- (21) part of the site was leased by the Atomic Energy Commission
- (22) and in 1964 and 1966 two nuclear warheads were exploded
- (23) under
- (23) the earth in salt caverns and things did not go quite as
- (24) planned and there has resulted a lot of contamination surface
- (25) contamination as well as groundwater contamination and we

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- (1) were one member of a team that worked on the analysis of what
- (2) the effects of that incident had been and are today and we
- (3) concentrated in the value area
- (4) Another example is property that we analyzed that deals
- (5) with what we call natural land It s a very unique type of
- (6) property It s located in central Oregon and I m sure that
- (7) you have heard of the spotted owl and the spotted owl
- (8) controversy Well this property is the Opal Creek property
- (9) and it is where the spotted owl controversy began And it s an
- (10) ancient forest old growth natural forest and we appraised
- (11) that for the property owner who donated the property to a
- (12) conservancy organization
- (13) Q All right let s talk about your background a little
- (14) Dr Mundy Could you tell us about your education since high
- (15) school?
- (16) A Yes I mentioned part of it I have a Bachelor of Science
- (17) degree from Washington State University in agriculture And
- (18) then I have a Master s degree in urban economics from the
- (19) University of Washington and I have a Doctor of Philosophy
- (20) degree which is an interdisciplinary degree It s also from
- (21) the University of Washington and I specialize in geography and
- (22) a part of business which dealt with consumer behavior and
- (23) market research
- (24) Q Dr Mundy because I think some of your qualifications
- (25) require us to understand what you were doing at the time you

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- (1) were obtaining these degrees I would like to have you describe  
 (2) for the jury some of your work experience as you went through  
 (3) and got - got these - this formal education Why did you get  
 (4) an archeolog - an agricultural degree? What was your  
 (5) interest there?  
 (6) A Well as I mentioned I was raised on a farm and I still  
 (7) am in the agricultural business It's one of these things  
 (8) that I guess kind of grows on you I had a herd of purebred  
 (9) livestock that put me through college and it's - I guess a  
 (10) part of me  
 (11) Q Did you manage any farms?  
 (12) A Yes After I graduated from Washington State University  
 (13) with the agricultural degree I went back to the Midwest and  
 (14) was hired by a firm out of St Louis Missouri and managed  
 (15) farms in the Midwest for two years and actually that's when I  
 (16) started doing appraisal work  
 (17) Q Okay And what was this first appraisal work that you ever  
 (18) did back in the midwest what did that involve?  
 (19) A Well the first appraisal work that I did in the Midwest  
 (20) involved the valuation of farms agricultural property which  
 (21) was an adjunct to the farm management work that I did and  
 (22) after that I relocated to Seattle and sort of getting out of  
 (23) the weather conditions of the Midwest especially St Louis  
 (24) where I had moved to by then  
 (25) And I was hired by a appraisal firm in Seattle who had just

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- (1) received a contract from the U S Department of Justice to  
 (2) appraise the Flathead Indian Reservation in Montana and that  
 (3) was principally agricultural land and I was one of the people  
 (4) who was responsible for that valuation effort  
 (5) Q So your first contact with appraising land that involved  
 (6) Native Americans was in what year?  
 (7) A The year that I worked on that appraisal would have been in  
 (8) 1968 The valuation date that is the date that we had to  
 (9) figure out what the value of the reservation was and I'm not  
 (10) clear about the question so I'll provide that to you was  
 (11) 1912 I had to figure out what the value of the reservation  
 (12) was in 1912  
 (13) Q All right Then you obtained your Master's in urban land  
 (14) economics Did you receive any academic awards in  
 (15) connection  
 (16) with that degree?  
 (17) A I received a scholarship as a part of that work from the  
 (18) American Institute of Real Estate Appraisers There's also a  
 (19) business honorary Beta Gamma Sigma which I was admitted to  
 (20) Q After you got your Masters and you were working on your  
 (21) Ph D did you go to work on land issues with any company?  
 (22) A Yes  
 (23) Q Who was that?  
 (24) A That was Weyerhaeuser Company  
 (25) Q They are the Weyerhaeuser lumber - timber company?  
 (26) A That's correct

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- (1) Q That caused you to become involved managing or dealing  
 with  
 (2) forest lands?  
 (3) A That's correct  
 (4) Q Briefly what did you do in that regard?  
 (5) A There were two major responsibilities that I had at  
 (6) Weyerhaeuser Company I had the title of land economist and  
 (7) one of the two responsibilities involved assisting Weyerhaeuser  
 (8) in determining the highest and best use or most profitable use  
 (9) to which they could put their lands to They classify land  
 (10) into a number of categories and one of those categories is  
 (11) called high yield forestry and they invest a lot of money in  
 (12) lands that they principally grow trees on Well there are a  
 (13) lot of lands that Weyerhaeuser has They own eight and a half  
 (14) million acres that are located near urban areas and so the  
 (15) question frequently came up on those lands near urban areas  
 (16) And there are also lands that are located not in urban areas  
 (17) but that had spectacular scenic attributes recreational  
 (18) attributes The question comes up should those lands be used  
 (19) for high yield forestry or should they be converted to some  
 (20) other use that would be a more profitable use for the company  
 (21) and one of my responsibilities was doing the analysis and  
 (22) making the determination regarding how those lands should be  
 (23) classified  
 (24) Q And that was done in the early 1970s if I'm right?  
 (25) A That's correct

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- (1) Q Now you said you got a degree in geography and what I  
 (2) think of when I think of geography is having to memorize the  
 (3) capitals of all the countries and states but that's not what  
 (4) you did?  
 (5) A That's correct  
 (6) Q What does a Ph D or a doctorate in geography do for the  
 (7) role?  
 (8) A The area that I concentrated on - and there are a lot of  
 (9) different areas in geography that you can concentrate on -  
 (10) physical geography that Mr Petumenos was talking about I  
 (11) concentrated on urban geography and human geography and  
 it's  
 (12) the relationship between people and places and how people  
 (13) happen to locate in one place versus another one and how the  
 (14) urban land form tends to evolve because of where people  
 (15) locate It deals with where might the best location for a  
 (16) shopping center be or the best location for a service station  
 (17) and deals with the transportation issues things like that  
 (18) Q After you obtained your doctorate did you then do post  
 (19) doctorate studies anywhere?  
 (20) A Yes I did  
 (21) Q And where was that?  
 (22) A That was at the Weimer School of Advanced Studies in Real  
 (23) Estate and Land Economics  
 (24) Q Is the Weimer School the leading school for advanced  
 (25) studies of real estate?

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- (1) A Yes it is  
 (2) Q And did you receive any scholarships or awards in  
 (3) connection with your postdoctoral studies?  
 (4) A There were - well there s a scholarship that I received  
 (5) as a part of my doctoral studies Again it was an Appraisal  
 (6) Institute scholarship and then as a part of the Weimer  
 (7) School work and research that I did as a part of that I  
 (8) received another honor from the Appraisal Institute the Arthur  
 (9) May Award  
 (10) Q Let me take you to the work you do now at Mundy and  
 (11) Associates You mentioned you did some work on  
 (12) contamination  
 (13) Do you specialize in part on the issue of contamination and  
 (14) real property at your firm?  
 (15) A That s one of the specialties that we have yes  
 (16) Q All right And have you done research and writing in that  
 (17) area?  
 (18) A Yes I have  
 (19) Q And have you appraised contaminated properties before  
 (20) you d  
 (21) ever gotten involved in this case?  
 (22) A Yes  
 (23) Q Have you done so on behalf of the oil industry before?  
 (24) A Yes  
 (25) Q Do you also specialize in wilderness remote properties or  
 (26) natural lands at your firm?  
 (27) A Yes we do

- (1) Q Now I see - the jury will be aware from many of the  
 (2) arrows a lot of these properties are in remote or wilderness  
 (3) areas?  
 (4) A That s correct  
 (5) Q Now does a real estate appraiser have to be licensed in  
 (6) the state of Alaska?  
 (7) A You don t have to be licensed but it s a good idea to be  
 (8) licensed  
 (9) Q Okay And explain that to the jury I mean is that - is  
 (10) that a license like any other professional license that might  
 (11) exist?  
 (12) A I presume it is There - in the State of Alaska an  
 (13) individual can appraise property without having a license but  
 (14) there are a lot of different types of clients that require a  
 (15) license before one can provide services for them  
 (16) Q Do you hold such a license in the state of Alaska?  
 (17) A I do  
 (18) Q And do you hold licenses in other states as well?  
 (19) A Yes I do  
 (20) MR PETUMENOS Your Honor I would tender Dr Mundy  
 (21) as an expert in the fields of real estate valuation of  
 (22) contaminated remote properties  
 (23) MR OPPENHEIMER No objection  
 (24) THE COURT He s qualified to give opinion in that  
 (25) area

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- (1) Q And have you done appraisals in that area?  
 (2) A Yes  
 (3) Q All right You say you have your offices in the Seattle  
 (4) Washington area Have you had much experience in Alaska?  
 (5) A Yes I have  
 (6) Q All right And when did that experience with Alaska real  
 (7) estate and our state begin?  
 (8) A It began before I had completed my doctoral work and there  
 (9) was an appraiser in Fairbanks Alaska that had been asked to  
 (10) do a market study and didn t fully understand how to do a  
 (11) market study and asked me if I would collaborate with him on  
 (12) the work And so I went to Fairbanks and worked with this  
 (13) appraiser -  
 (14) Q What year was that?  
 (15) A That was in 1974 I believe is the year  
 (16) Q Now we have prepared an exhibit haven t we to show the  
 (17) jury on the locations and on how many occasions you ve had  
 (18) the  
 (19) opportunity to work in Alaska lands  
 (20) Could we have that up next the number please Showing  
 (21) you what s been marked as Exhibit 1160 - 68 thank you 1168  
 (22) is a map of the state and it has a bunch of red arrows on it?  
 (23) A Yes  
 (24) Q What are those?  
 (25) A Those are locations where I have valued property or  
 (26) performed some form of real estate analysis on a property

- (1) BY MR PETUMENOS  
 (2) Q Dr Mundy did you become retained by the Native  
 (3) corporations in this case specifically Chugach Chenega Port  
 (4) Graham English Bay Tattilek and Eyak?  
 (5) A Yes I did  
 (6) Q And what were you asked to do on their behalf?  
 (7) A The main request was to determine to what extent their  
 (8) lands had been damaged because of the oiling that resulted  
 (9) from  
 (10) the Exxon Valdez spill  
 (11) Q And how did you go about arriving at an approach to this  
 (12) problem as it was presented to you?  
 (13) A There s a rather specific yet general process that  
 (14) appraisers generally go through in valuing property and it  
 (15) begins with defining the problem at hand visiting the  
 (16) property understanding the - the nature of the property  
 (17) understanding the nature of the valuation problem itself and  
 (18) then once the nature of the valuation problem is understood  
 (19) putting together a research design to go about generating the  
 (20) information that is necessary to analyze and establish a  
 (21) opinion regarding what the value effects are  
 (22) Q Now you mentioned that you had gone and visited the  
 (23) properties yourself and physically gone out there Could you  
 (24) describe what you did for the jury?  
 (25) And perhaps we could get the defendants map up to assist  
 (26) us there

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- (1) When did you first go in and look at the properties? And  
 (2) give the jury a general idea of where you went?  
 (3) A The - I have visited the property on - or this area on  
 (4) numerous occasions I was familiar with Prince William Sound  
 (5) and the Kenai Fjords before actually beginning this  
 engagement  
 (6) back in 1983 - or 1982 and 83  
 (7) My wife and I took what I call a working sabbatical and we  
 (8) came up and lived in Alaska for a year And part of that  
 (9) period of time I had the occasion to visit on several occasions  
 (10) Prince William Sound both in terms of pleasure and also in  
 (11) doing valuation work so I knew generally what the nature of  
 (12) the area was before the oil spill took place  
 (13) After the oil spill and as a part of this assignment I  
 (14) visited the Sound in 1991 and this includes Kenai Fjords too  
 (15) 1991 1993 and 1994  
 (16) Q Did you visit all of the properties or all of the areas  
 (17) that are covered by the exhibit that s on the screen now in  
 (18) Prince William Sound at one time or another through those  
 (19) years?  
 (20) A Yes I have  
 (21) Q And could we have the next exhibit please the - that  
 (22) included Tattilek Eyak Chugach and Chenega right? In that  
 (23) Prince William Sound?  
 (24) A That s right in the Prince William Sound  
 (25) Q What now we have before you the Kenai Fjords and lower

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- (1) Kenai did you go into those areas?  
 (2) A Yes I did  
 (3) Q And about how many times?  
 (4) A Three times as a part of this engagement  
 (5) Q And that was for Port Graham and for English Bay?  
 (6) A That s correct  
 (7) Q Did you create from - were you there as recently as 1994?  
 (8) A Yes  
 (9) Q Did you create a photo notebook for the jury that would  
 (10) assist them in understanding what it is you saw and the amount  
 (11) of contamination and oiling that you saw in 1994?  
 (12) A Yes I did  
 (13) Q Showing you what has been marked as Exhibit 1370 do you  
 (14) recognize 1370?  
 (15) A Yes This is the photo log that I put together as a part  
 (16) of my - photographs that I took myself as well as narrative  
 (17) material that I wrote myself as a part of each photograph  
 (18) describing what the photograph is all about  
 (19) Q And when were these photographs taken?  
 (20) A In May and June of this year  
 (21) MR PETUMENOS Your Honor I move the admission of  
 (22) that exhibit And I understand that we have a few things to  
 (23) work out we probably have no objection to it  
 (24) (Exhibit 1370 offered)  
 (25) MR OPPENHEIMER Your Honor it s acceptable Our

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- (1) stipulation is that we re not going to publish the captions at  
 (2) this time to the jury  
 (3) THE COURT Fine  
 (4) THE COURT I ll admit it with that understanding  
 (5) (Exhibit 1370 received)  
 (6) BY MR PETUMENOS  
 (7) Q Now did you create an exhibit that would show the jury to  
 (8) help them understand how you approached the problem of  
 coming  
 (9) up with a damage assessment for this land?  
 (10) A Yes  
 (11) Q Could I see Exhibit 1169 please?  
 (12) Now was the problem that you were presented with a  
 (13) particularly complex one in your view?  
 (14) A Yes it was  
 (15) Q And why is that?  
 (16) A There are a number of reasons One it encompasses a very  
 (17) large geographical area many hundreds of thousands of acres  
 of  
 (18) land The geography is one that is very diverse The natural  
 (19) systems the ecological systems the biological systems that  
 (20) are associated with the geography are very complex The effect  
 (21) that oil has and had on the environment differed substantially  
 (22) by location Some lands were not oiled some lands were  
 Some  
 (23) lands were lightly oiled some lands were heavily oiled The  
 (24) oil is something that is not a permanent thing that will be  
 (25) there forever it s something that has a temporal nature to it

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- (1) and will subside with time with the value impacts or as far as  
 (2) how the market perceives it it will subside with time So  
 (3) there were a lot of very complex things that a valuer would  
 (4) have to take into consideration in putting together a research  
 (5) program generating the data and going about doing the  
 (6) analysis  
 (7) Q Were there any things about how the land is owned and what  
 (8) these particular - who these particular owners were that made  
 (9) the problem more complex?  
 (10) A That is another very unique aspect of the property The  
 (11) fact that the nature of the ownership that we have here is not  
 (12) typical It s not like the home that I own maybe the home  
 (13) that you own or a piece of land that somebody has here in  
 (14) Anchorage The nature of the ownership of the Native lands in  
 (15) Prince William Sound and the Kenai Fjords area is - is  
 (16) unique It s unique to the United States and to our type of  
 (17) real estate property ownership pattern  
 (18) Q Is there any other place besides Alaska where you can find  
 (19) entitles like Native corporations that own the land quite the  
 (20) way that the Native corporations in Alaska do?  
 (21) A We have done an awful lot of valuation work for Native -  
 (22) Native groups corporations reservations this type of thing  
 (23) and this is the - this is unique as far as our experience and  
 (24) my research is concerned  
 (25) Q Take the jury through this exhibit and explain to the jury

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- (1) how you approached this problem what steps you took and how
- (2) you got to the end an overview if you will
- (3) A The first step was the definition of the problem I
- (4) mentioned just a little bit ago that what we need to do as a
- (5) part of that is to develop an understanding of the - the real
- (6) estate what is this physical commodity that we re dealing
- (7) with? What are the characteristics of it? Both the physical
- (8) characteristics as well as the biological characteristics
- (9) We have to understand the ownership pattern There are a
- (10) number of definitions that are real important as a part of this
- (11) process One of those definitions is the definition of market
- (12) value
- (13) Q Could we have Exhibit 1170 next please?
- (14) What is Exhibit 1170?
- (15) A This is the definition of market value as accepted by the
- (16) judicial system legal system in the state of Alaska
- (17) Q And you have put In addition to the definition fair
- (18) market value is a single unitary figure commonly defined as the
- (19) amount of which property would change hands between a
- (20) willing
- (21) buyer and a willing seller neither being under a compulsion to
- (22) buy or sell and both having a reasonable knowledge of the
- (23) relevant facts
- (24) Then you have a condition here that says unique aspects
- (25) What do you mean to convey with respect to that bullet or
- (26) addition?

- (1) Q Wilderness and pristine lands how is that a unique and -
- (2) unique concern?
- (3) A The - referring to this wilderness and pristine lands
- (4) involves large tracts of land that are virtually untouched
- (5) and have been virtually untouched or unaltered by human beings
- (6) and
- (7) it s a very unique resource that we have that there is in
- (8) Alaska and it s something that is becoming very scarce
- (9) People realize the scarcity with which this land is currently
- (10) becoming and there are various for example conservancy
- (11) organizations that have sprung up to acquire these lands
- (12) There are state and federal agencies who are acquiring these
- (13) lands but it s not a active market It s not like the local
- (14) residential market or not like the local office market And
- (15) there are different factors that give these lands their value
- (16) giving attributes They re different than urban land
- (17) For example generally in an urban area the intensity
- (18) there s a function between the intensity of use and value As
- (19) the intensity of use goes up value goes up For these
- (20) wilderness lands you don t want that intensity of use The
- (21) intensity of use is an adverse relationship to value
- (22) Q It s an undesirable thing if you want to have wilderness
- (23) lands preserved?
- (24) A That s right
- (25) Q So another problem is you have to apply the definition to
- (26) the concept of wilderness or conservation lands is that what

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- (1) A These are some unique things that one needs to take into
- (2) consideration as a part of the market value definition They
- (3) are things that are not standard in the typical valuation
- (4) process
- (5) Q Subsistence?
- (6) A Subsistence for example you have a situation where land
- (7) is owned and it is utilized to generate benefits from A farm
- (8) a person would raise a crop sell the crop receive cash for
- (9) the crop and take the cash and go buy the groceries that they
- (10) need this type of thing
- (11) But in Prince William Sound and in the Kenai Fjords area
- (12) that we re dealing with that is not the type of activities
- (13) that are carried on And what is conducted there are
- (14) subsistence activities people generate their livelihood from
- (15) the lands in a noncash basis There is not cash used as a
- (16) medium for exchange there Therefore land is - with very
- (17) very few exceptions it s not rented and the - so there s no
- (18) income stream that one can associate with those properties
- (19) Q Now the definition of market value is a very general
- (20) definition would you say?
- (21) A Yes it is
- (22) Q And so you have to - one of the things that the analyst
- (23) has to do is figure out how to apply this definition to these
- (24) unique concerns?
- (25) A That s correct

- (1) we re getting at here?
- (2) A Yes
- (3) Q And ANCSA what does A N C S A mean?
- (4) A That s the Alaska Native Claims Settlement Act the act
- (5) that became law in 1971 that provided the Natives with the
- (6) right to select lands in Prince William Sound and the Kenai
- (7) Fjords And those - the right that they have to select those
- (8) lands has unique ownership characteristics along with it and
- (9) so the appraisers talk about a bundle of rights that go along
- (10) with property the right to quiet enjoyment as an example And
- (11) the bundle of rights that the Natives received is somewhat
- (12) different than the bundle of rights that we re used to dealing
- (13) with in urban areas
- (14) Q So you had to take that into account as well?
- (15) A Yes
- (16) Q They have certain duties with respect to their land and
- (17) they have certain protections am I right because of ANCSA?
- (18) A That is correct
- (19) Q Could we have 1169 back please?
- (20) Now after you have got the definition of market value in
- (21) mind and the unique problems that this land creates do you
- (22) then do a preliminary analysis as to how you re going to
- (23) make - how you re going to solve the problem that s
- (24) presented?
- (25) A That s correct
- (26) Q And what preliminary analysis did you make in this case?

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(1) A The preliminary analysis involved bringing together the  
 (2) necessary information so that we could go about valuing the  
 (3) property So once we knew the nature of the property we had  
 (4) to figure out is it all the same or are there differences And  
 (5) if there are differences how are we going to deal with the  
 (6) fact that a property what property might be a good hunting  
 (7) lodge site and another property is being used for forestry  
 (8) purposes and another one would be great property to preserve  
 (9) So we develop an understanding of the different types of  
 (10) properties that there are and then we have to go about  
 (11) bringing together data that will serve as a basis for attaching  
 (12) a value to these properties And so we have - we go out and  
 (13) we do what we call search for comparable evidence We look  
 (14) for  
 (15) sales of similar types of property We look -  
 (16) Q Now let me stop you there When you say comparable  
 (17) evidence we re going to use the term comparables from time  
 (18) to time in this examination Could you put that in the context  
 (19) of how someone might get an appraisal on a house? Are we  
 (20) doing  
 (21) the same type of thing idea here for obtaining the value of  
 (22) the property?  
 (23) A It s the same basic thing And so for a comparable on a  
 (24) house what the appraiser does is go around the neighborhood  
 (25) and find some homes that have sold Maybe he ll find a dozen  
 (26) homes that have sold and he ll select the two three or four  
 (27) best or most comparable properties to the one that s being

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(1) appraised and so those are his comparable sale properties  
 (2) And he uses those comparable sales compares and contrasts  
 (3) them  
 (4) to property and then he arrives at an estimate of value for  
 (5) the subject  
 (6) Q Now no house - in that hypothetical you ve got here no  
 (7) house is exactly the same?  
 (8) A That is the exception the real exception  
 (9) Q May happen sometime?  
 (10) A For some reason people like to have things different  
 (11) Q So when you have these different comparables does the  
 (12) appraiser have to make adjustments based on the differences  
 (13) he  
 (14) sees to determine if the house next door is bigger or littler  
 (15) or different type of roof and things like that?  
 (16) A That s right  
 (17) Q Now when you re doing an analysis like this in this  
 (18) context what are some of the problems that the analyst  
 (19) confronts when he s looking for other houses if you will to  
 (20) compare to what Prince William Sound would be wilderness  
 (21) properties out there what kind of problems does that present?  
 (22) A One of the major problems that we had is that the Prince  
 (23) William Sound area and the Kenai Flord area is an area where  
 (24) there s not an active real estate market There is very very  
 (25) little privately owned land and so there s not much real  
 (26) estate that sells in that area The land is principally all  
 (27) owned by the federal government the state government and the

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(1) Native corporations And the Native corporations can t sell  
 (2) the land so there s simply not a market in that area  
 (3) Therefore we had to expand our research beyond the area  
 (4) where the subject property is located and we did actually  
 (5) research Depending on what part of our analysis we were  
 (6) working on and the nature of the property it involved the  
 (7) greater Prince William Sound area let s say It involved the  
 (8) Kenai Borough Kodiak Island Homer area for unique lands  
 (9) We  
 (10) used the entire state of Alaska as a data base there  
 (11) And then in dealing with contaminated property there s  
 (12) very very little of that sells on a nationwide basis simply  
 (13) because people don t want to buy contaminated property And  
 (14) so  
 (15) our research there involved the entire United States  
 (16) Q All right Now let s just get one thing clear The - if  
 (17) a contaminating event happens on property that is not intended  
 (18) for sale does that mean that the property wasn t damaged?  
 (19) A Could you repeat that again please?  
 (20) Q Yes If a contaminating event happens on a piece of  
 (21) property that no one contemplates selling they were going to  
 (22) keep it does that mean the property wasn t damaged?  
 (23) MR OPPENHEIMER Calls for a legal conclusion Your  
 (24) Honor  
 (25) THE COURT Overruled go ahead  
 (26) BY MR PETUMENOS  
 (27) Q You can answer

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(1) A No it does not mean that it s not damaged and it s based  
 (2) on market behavior What the appraiser does is studies how the  
 (3) market behaves and so you learn based on that market  
 (4) behavior what will likely happen in other events or situations  
 (5) that are similar  
 (6) Q And then did you also as part of your preliminary  
 (7) analysis have to come up with an appraisal date?  
 (8) A Yes  
 (9) Q Explain to the jury  
 (10) A Well in valuing something as I mentioned earlier we  
 (11) valued the Flathead Indian Reservation in Montana The  
 (12) appraisal date was 1912 You have to have a point in time  
 (13) upon - within which to express this value estimate And so in  
 (14) the case of the valuing of the property for our clients we  
 (15) selected two dates We selected March 23rd 1989 as the date  
 (16) immediately prior to the spill That s when the property had  
 (17) not been affected at all by any type of contamination from the  
 (18) Exxon Valdez  
 (19) The second date that we selected was April 23rd 1989 one  
 (20) month later And the reason that we selected the second date  
 (21) was that over that one month period of time it became  
 (22) well known to people who were knowledgeable in the  
 (23) marketplace  
 (24) - and that s one of these assumptions in terms of the  
 (25) definition of market value a knowledgeable buyer - the  
 (26) marketplace would have found out about the oiling They  
 (27) would

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- (1) have known about it and they would have been able to take that
- (2) into consideration regarding whether they would want to buy
- (3) land in Prince William Sound and the Kenai Fjords or not and
- (4) if they wanted to buy it what they would pay for it
- (5) Q Did you – lastly as part of your preliminary analysis do
- (6) you as a real estate analyst or appraiser have to find out
- (7) whether there is a need to consult with other disciplines with
- (8) other experts in the area?
- (9) A That is a standard practice especially in these
- (10) specialized areas that involve for example contamination
- (11) Q And in this instance who did you consult with for the
- (12) science aspect of your work?
- (13) A Jim Bush with ICF
- (14) Q And his staff?
- (15) A Yes
- (16) Q Let's go then to what you call here the highest and best
- (17) use analysis which is the third step in the appraisal
- (18) process
- (19) And could we see 1171 up?
- (20) What do we mean by highest and best use analysis?
- (21) A Well highest and best use analysis as you can see is the
- (22) reasonably probable and legal use of which vacant land or an
- (23) improved property which is physically possible appropriately
- (24) supported financially feasible and that results in the
- (25) highest value

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- (1) Now there are some important aspects of this definition
- (2) And so I'd like to just take it apart and spend a little time
- (3) on some of the important phrases
- (4) Q If you need to blow any of this up you have the light pen
- (5) up there and I think you know how to do it if you need to
- (6) In fact I can help you here Just leave it at the podium
- (7) A I can't see what the jury can see but I know what I can
- (8) see here I'm assuming that the jury can see this as well as I
- (9) can
- (10) The reasonably probable use means that there has to be a
- (11) reasonable likelihood that the property can be used for that
- (12) particular type of use For example some of the land in the
- (13) subject area is land that we've classified as forest land and
- (14) so the question is Is there an adequate market to support a
- (15) value for forestland? So there has to be a reasonably probable
- (16) use It can't be something like valuing the property in Prince
- (17) William Sound on a particular island for a McDonald's
- (18) The use has to be legal so it has to – if there is
- (19) zoning it has to fit within the zoning constraints and other
- (20) legal parameters We can deal with vacant land or we can deal
- (21) with improved property either one
- (22) Physically possible that means that for a particular use
- (23) you have to be able to physically use it I don't think that
- (24) there's any doubt in Prince William Sound that some of the uses
- (25) that we've classified them are physically possible

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- (1) An example of land use that would not be physically
- (2) possible would be if we classified a property as recreational
- (3) use and had it either on a steep cliff or on a mountaintop
- (4) That wouldn't physically be very possible to do
- (5) Appropriately supported again that means that there has to
- (6) be adequate demand to support that particular land use
- (7) Financially feasible there are a lot of land uses and a
- (8) lot of things that people can do with property and it never
- (9) ceases to amaze me what you see being done homes built on
- (10) cliffs One good example here in Anchorage is the Resolution
- (11) Tower Building or Resolution Building I believe it is – it is
- (12) right at 4th and M where the building was built on the slide
- (13) area that goes down the embankment right above the Alaska
- (14) Railroad It was not physically possible to build on that site,
- (15) until the engineers were able to figure out a special type of
- (16) support system so that if there is an earthquake that building
- (17) will stay put and not go sliding down into the Inlet So it
- (18) was at one time not financially feasible to build there It
- (19) eventually did become financially feasible and the last thing
- (20) is it has to result in the highest value There are a lot of
- (21) alternative uses to which you can put land What you want to
- (22) do is you want to find the one that supports the highest
- (23) value
- (24) Q So that means that for purposes of the highest value if
- (25) there is a piece of property that would be a great intersection

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- (1) for having a McDonald's you don't want to use it for some
- (2) other use like a hotel or something like that?
- (3) A Or a residence that would be a good contrast
- (4) Q Now what role does finding the highest and best use play
- (5) in determining how much property is worth? Why do you have
- (6) to
- (7) do that to find out how much it's worth?
- (8) A The reason that you need to determine the highest and best
- (9) use is that that – those are going to represent the most
- (10) valuable uses to which you're going to be able to put the
- (11) property and consequently you go out and find the data that
- (12) can be used to support that value
- (13) So what we do is we go through sort of an evolutionary
- (14) process Mr Bush was talking about it this morning in this
- (15) SWAG thing Appraisers do the same thing We – we postulate
- (16) various theories hypothesize as to what might be the best use
- (17) for property highest and best use but then we go out and
- (18) generate the data We go out and find the information and we
- (19) compare different types of uses In Prince William Sound as
- (20) you'll hear we have two uses One is high amenity for
- (21) recreation to the properties for example one is natural land
- (22) land to be preserved The question is which of those two uses
- (23) is the proper use to put the land so we had to do the research
- (24) so we understood the value of those two uses
- (25) Q So what you did is you went around all of the properties
- (26) that were to be studied in connection with the Exxon Valdez oil

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- (1) spill and tried to find out what the highest and best use was  
 (2) for each of the properties is that what you did?  
 (3) A That s correct  
 (4) MR PETUMENOS Judge I d like to go through the  
 (5) properties the property high and best uses one by one but  
 (6) first I d like to take a break if we could  
 (7) THE COURT Sure  
 (8) THE CLERK Please rise This court stands in  
 (9) recess  
 (10) (Jury out at 11 25 a m )  
 (11) (Recess from 11 25 a m to 11 47 a m )  
 (12) (Jury in at 11 47 a m )  
 (13) THE CLERK This court now resumes its session  
 (14) Please be seated  
 (15) MR PETUMENOS Your Honor Mr Diamond apparently  
 (16) wishes to approach the bench  
 (17) THE COURT Sure  
 (18) (Sidebar out of the hearing of the jury )  
 (19) MR DIAMOND This concerns the jury instruction  
 (20) THE COURT Do you want me to read it?  
 (21) MR PETUMENOS I understand the order is that we  
 (22) already litigated this and finished it and you told us to let  
 (23) you know whether you wanted to read  
 (24) THE COURT Yeah that s -  
 (25) MR PETUMENOS I was just making the request

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- (1) MR DIAMOND There are two things I wanted to say  
 (2) about this  
 (3) It was represented to us that this was a defendant s  
 (4) proposed jury instruction and I ve talked to the people who  
 (5) negotiated with Mr Fortler about the jury instructions and the  
 (6) fact this was his jury instruction And got put on about our  
 (7) captions because all the instructions that we exchanged back  
 (8) and forth had his -  
 (9) THE COURT I see but it s your instruction in the  
 (10) sense you adopted it  
 (11) MR DIAMOND We never submitted it to you  
 (12) THE COURT Okay  
 (13) MR DIAMOND The problem I have is one of substance  
 (14) This instruction says that site location information is  
 (15) confidential Highly classified information should be held in  
 (16) the strictest confidence Part of my cross examination of the  
 (17) plaintiffs witnesses will be to bring out the fact that the  
 (18) site information is not a matter of secrecy It s the  
 (19) locations of many of these places is generally well known is  
 (20) public If you give this instruction you re basically  
 (21) directing a verdict on that aspect of my cross examination and  
 (22) the Alaska aspects of my case  
 (23) THE COURT So what I thought was going the happen  
 (24) when it came to the bench is not going the happen because the  
 (25) positions of the parties are different than what they were when

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- (1) this was argued the last time is that correct?  
 (2) MR DIAMOND Correct  
 (3) THE COURT I m not going the give it That s it  
 (4) (Sidebar concluded )  
 (5) BY MR PETUMENOS  
 (6) Q Dr Mundy what is the first highest and best use that you  
 (7) determined existed on the lands that we are talking about?  
 (8) A Archaeology  
 (9) Q All right And does archaeology include within it  
 (10) historical sites sacred sites things of that nature?  
 (11) A Yes  
 (12) Q Let s show you here from - what has been admitted as  
 (13) Exhibit 1370 an example This - you recognize this  
 (14) photograph?  
 (15) A Yes I do  
 (16) Q What is it?  
 (17) A This is a photograph that I took of a memorial grave marker  
 (18) at the old Chenega Village site  
 (19) Q Could you explain to the jury what the makeup of the  
 (20) highest and best use of archaeology is for purposes of  
 (21) understanding land values? Describe for the jury what you  
 (22) mean  
 (23) by it when you ascribe that highest and best use to a land  
 (24) A The archaeological category is one where there are  
 (25) artifacts that are recognized by archaeologists as being  
 significant in the area There is a size dimension to these

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- (1) tracts Some tracts are relatively small for example areas  
 (2) where there were culturally modified trees Others are much  
 (3) larger where there were old village sites  
 (4) We have used a system developed by the Bureau of Land  
 (5) Management that assigns areas to various sites So you may  
 (6) have a burial site that is relatively small in terms of the  
 (7) area that it encompasses itself but the Bureau of Land  
 (8) Management recommends that a buffer area be kept around  
 (9) these  
 (10) sites And so while the burial area may be 100 square feet  
 (11) the site is designated for example one acre to allow for a  
 (12) buffer  
 (13) The other thing I think that s real significant is that  
 (14) where we have classified a site as archaeology and valued it as  
 (15) such we have not valued the artifacts So anything that  
 (16) could - might be exhumed from the site has not been included  
 (17) as a part of our valuation analysis  
 (18) Q Okay Now are there often legal constraints or things  
 (19) that aren t possible to do on land that is archaeological or  
 (20) has some historical value?  
 (21) A Yes that s correct  
 (22) Q And so that there may be certain things you can t do with  
 (23) the land but does land that has this historical function to it  
 (24) also have independent value because of that?  
 (25) A Yes it does Just because you can t for example develop  
 a recreational subdivision in an area where there is a large

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- (1) archaeology site does not necessarily mean that the land is  
 (2) worthless There again you have to think about who are the  
 (3) logical users for the property And when you ve got a area  
 (4) that has archaeological significance the valuer has to think  
 (5) who is the logical user for this property And it might not -  
 (6) maybe a potential would be a developer for a recreational  
 (7) subdivision but another one would be for example the Native  
 (8) corporation that wants to see that site preserved or a  
 (9) conservancy organization that wants to see it preserved  
 (10) Q So then you would go about the same process of looking for  
 (11) comparables and so forth in the archaeological area to  
 (12) determine what the value of archaeological land might be?  
 (13) A That s right You would look for similar types of  
 (14) archaeological areas that have sold  
 (15) Q What is the next highest and best use category that you -  
 (16) let me ask you this Approximately what amount of the total  
 (17) land that you looked at for purposes of your analysis was  
 (18) archaeological?  
 (19) A It was less than one half of one percent very small  
 (20) amount  
 (21) Q All right What is the next highest and best use category  
 (22) that you determined existed in the Native corporation land?  
 (23) A That is a category that we termed high amenity  
 (24) Q Okay Could I see Exhibit 1174 please? What is high  
 (25) amenity? What s the definition of that?

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- (1) A High amenity land would be land that would be suitable for  
 (2) a recreation subdivision maybe a fishing lodge It s an area  
 (3) where there are good anchorages where you can moor a boat  
 (4) out  
 (5) of a storm where you can fly in a float plane and land in  
 (6) reasonably decent type of weather  
 (7) Q All right What is low amenity land?  
 (8) A Low amenity land is just about the opposite and it s land  
 (9) that is really difficult to figure out what the heck to do  
 (10) with In this particular exhibit we have land that I think  
 (11) does a good - or there s a good instance where you have both  
 (12) types of land  
 (13) And what I ll do is write on the photograph here where you  
 (14) might have the high amenity land which would be in that area  
 (15) The area where there s a good anchorage right in here good  
 (16) mooring area nice beach areas where you can go down and clam  
 (17) and get mussels and things like this but then you ve got land  
 (18) that is behind this That is land that is really quite  
 (19) difficult to do anything with from a development standpoint and  
 (20) that would be the area that - seems that my pen - there we  
 (21) go would be for example this area here where you ve got  
 (22) very steep high mountains It certainly is a value giving  
 (23) attribute to the high amenity land you have beautiful views of  
 (24) the mountain but it s areas where it s virtually difficult or  
 (25) virtually impossible to do anything with  
 (26) Another area would be this area that is timber which I ve

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- (1) shown in here and this area a developer would have to  
 ponder  
 (2) do I go in and cut the timber off of this area or do I leave  
 (3) it as it is?  
 (4) Well if you went in and harvested the timber you probably  
 (5) would lose the high amenity nature of this land in here So  
 (6) what you would want to do is preserve this back land area and  
 (7) consequently we have assigned a lower value to these back  
 land  
 (8) areas than to the front areas The area the back land area  
 (9) would be an area that you d want to preserve  
 (10) MR OPPENHEIMER Your Honor procedurally we d like  
 (11) to have a print made of this I believe that requires us to  
 (12) request the operator to do that  
 (13) THE COURT Please go ahead  
 (14) MR OPPENHEIMER Thank you Could you make us a  
 (15) print of that?  
 (16) B : MR PETUMENOS  
 (17) Q What amount of the total land that you ascribed highest and  
 (18) best use to was high amenity versus low amenity?  
 (19) MR PETUMENOS Just for the record I don t know if  
 (20) the jury can see it This caption says Boulder Bay mouth at  
 (21) Bells Butte?  
 (22) A Yes  
 (23) Q Do you know where that is?  
 (24) A That s at Tatitlek s ownership over on the east side of  
 (25) Prince William Sound

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- (1) Q What amount of the total land for highest and best use  
 (2) purposes was high amenity and low amenity?  
 (3) A High amenity was 1 4 percent and low amenity 34 2  
 (4) percent  
 (5) Q Are you familiar with the highest and best use category  
 (6) natural lands?  
 (7) A Yes  
 (8) Q Could I see Exhibit 1176 please  
 (9) Could you define for the jury what you mean by natural land  
 (10) as a highest and best use land category?  
 (11) A Natural land is a - again a land use category and it s a  
 (12) type of land that has intact ecological systems For example  
 (13) it s an area that hasn t been logged It has good biological  
 (14) diversity to it that is it s a large intact system that is  
 (15) interactive and pretty much independent in and of itself  
 (16) Q Okay Could I see exhibit - Exhibit 1177 please?  
 (17) And have you written on the issue of natural land as a  
 (18) highest and best use  
 (19) MR OPPENHEIMER I m sorry counsel?  
 (20) A Yes I have  
 (21) MR OPPENHEIMER Oh you have another exhibit coming  
 (22) up?  
 (23) MR PETUMENOS Pardon?  
 (24) A Yes I have  
 (25) BY MR PETUMENOS

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- (1) Q Is there a market for natural lands?  
 (2) A Yes there is  
 (3) Q And what is the nature of that market?  
 (4) A The nature of the market is specialized It s relatively  
 (5) limited There are a number of actors that are in the market  
 (6) The federal government for example they acquired a large  
 (7) tract of land in Alaska Gates of the Arctic National Park  
 (8) The State is involved in the natural land market They  
 (9) just - State of Alaska just consummated an acquisition that  
 (10) you may have read about the Kachemak Bay State Park  
 (11) acquisition where they purchased some 23 000 acres from the  
 (12) Seldovia Native Association as an addition to the park The  
 (13) local government the municipality is involved in the  
 (14) marketing  
 (15) There is a park Baxter Park where there is - a large  
 (16) part of that park was acquired to retain in its natural state  
 (17) Several years ago there was quite a controversy here about  
 (18) another area it s a wetland south of the Anchorage Business  
 (19) Park at Cedar and two street - Tudor and C That was  
 (20) acquired The municipality paid business park land prices and  
 (21) just about a dollar a square foot for that land to preserve it  
 (22) as a natural preserve  
 (23) I guess one other real good example was one that recently  
 (24) happened in the Seattle area involved one of the Microsoft  
 (25) employees who is now a multi millionaire and can afford to buy

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- (1) his own preserve and he purchased a 640 acre acre tract of  
 (2) state land that s located just a very short distance east of  
 (3) Seattle that was going to be developed into a subdivision It  
 (4) was a forest It was owned by the State And that s his own  
 (5) preserve and he s taken a little corner of it and is building a  
 (6) house there and the rest of it is going to be preserve  
 (7) Q So natural land is something where the highest and best use  
 (8) of the land is to leave it alone?  
 (9) A That s right to leave it in its natural state That s the  
 (10) reason we use the category or the term natural  
 (11) Q Now I notice that when you were describing the market for  
 (12) natural land that a number of the purchasers of natural land  
 (13) were governments states municipalities United States  
 (14) government Is the fact that the government is one of the  
 (15) purchasers does that make any difference in the terms of  
 (16) whether there is a market for this kind of land?  
 (17) A No it does not There s all kinds of different entities  
 (18) that buy real estate The government buys real estate  
 (19) Corporations buy real estate Individuals buy real estate  
 (20) You apply the market as they re reacting to its  
 (21) If they re knowledgeable there s no duress For example  
 (22) you would probably not want to use a transaction involving a  
 (23) government entity if they acquired land under the threat of  
 (24) condemnation if they were taking it But the transaction is  
 (25) negotiated where there s no threat of condemnation The

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- (1) federal government is no different than state government local  
 (2) government or corporations or individuals  
 (3) Q What about the allegation that such transactions are -  
 (4) involve politics or are politically motivated? How does the  
 (5) government make its decisions in the marketplace?  
 (6) A Government makes decisions based on what individuals  
 think  
 (7) should happen There is a decision making process that  
 (8) politicians go through There s a decision making process that  
 (9) people go through in working for a company When I was the  
 (10) land economist at Weyerhaeuser Company there were all kinds  
 of  
 (11) politics in the acquisition or disposition of real estate  
 (12) There s politics that go on with a private corporation just  
 (13) like there s politics that go on in a state agency or a federal  
 (14) agency  
 (15) Q And that doesn t take it out of the realm of the market  
 (16) does it?  
 (17) A No  
 (18) Q What amount of the land that you appraised and determined  
 (19) value for of the Native corporations was natural land as a  
 (20) highest and best use?  
 (21) A It was 35 6 percent  
 (22) Q What about a land classification called timber without  
 (23) rights?  
 (24) Could I see Exhibit 1178 please?  
 (25) What is timber without rights?

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- (1) A Timberland without rights is timberland where the timber  
 (2) has been sold and there are two categories that we have in the  
 (3) area expanding from Prince William Sound through the Kenai  
 (4) Peninsula where we have timberland without rights  
 (5) One of those is where the rights to the timber have been  
 (6) sold but the timber hasn t been harvested And the second is  
 (7) where the timber rights have been sold and the timber has been  
 (8) harvested And the exhibit that you have before you shows a  
 (9) property where the timber has been harvested  
 (10) So this property in the background you see along the -  
 (11) the beach has some large trees with - well here s an outline  
 (12) of the area that has been - you would think that this pen has  
 (13) cognitive dissidence it s kind of in and out It works times  
 (14) and sometimes it doesn t I don t know if it s doing the same  
 (15) thing on your screen  
 (16) Q Looks pretty good Bill  
 (17) A This area I ve outlined shows where the timber has been  
 (18) harvested and you can see where there are some others where  
 (19) there are trees - I m trying to draw The high tech has got  
 (20) the best of me  
 (21) Q The point we re getting at is the land was used for timber  
 (22) but the rights to it have been given up and the place has been  
 (23) logged over  
 (24) A Yes  
 (25) Q What amount of property is in that highest and best use

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- (1) category?  
 (2) A 27 8 percent  
 (3) Q Have we now covered the highest and best use categories  
 (4) that you determined existed for the Native corporations?  
 (5) A No  
 (6) Q Which one am I missing?  
 (7) A Timber with rights Timber with rights is a timberland  
 (8) where the Native corporation still retains all of the rights to  
 (9) the timber  
 (10) Q And those would be areas that you would have determined  
 (11) that they had commercially harvestable potential?  
 (12) A That s correct That was about one percent of the total  
 (13) Q Did you then conduct an appraisal to determine the value by  
 (14) highest and best use of the lands of the Native corporations in  
 (15) Prince William Sound Eyak Tatitlek Chenega Port Graham  
 (16) English Bay and Chugach?  
 (17) A Yes  
 (18) Q And did you form an opinion as to what that value was?  
 (19) A Yes  
 (20) Q As of what date?  
 (21) A As of March 23rd 1989  
 (22) Q Could we see Exhibit 1179 please Exhibit 1179 will  
 (23) assist the jury in understanding what your opinion was as to  
 (24) the value of this land  
 (25) A Yes This exhibit shows the various land use categories

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- (1) provides an example of the type of land use that we re talking  
 (2) about for each category And it also shows the value per acre  
 (3) for each one of those categories  
 (4) Q Archaeology?  
 (5) A \$3 500 per acre  
 (6) Q And the kind of things we re talking about are village  
 (7) burial sites archaeological sites as you described it right?  
 (8) A That s right  
 (9) Q And high amenity land?  
 (10) A That would be recreation property fishing lodges \$1 275  
 (11) per acre  
 (12) Q Natural land? Oops let me get it all  
 (13) A \$950 per acre  
 (14) Q Now you talked about intact ecosystem park or wilderness  
 (15) preserve park or wildlife refuge What do you mean by intact  
 (16) ecosystem ?  
 (17) A Well intact ecosystem is where all of the biological  
 (18) pieces are working together where the animals and the plant  
 (19) life are still intact viable and supporting the - the various  
 (20) systems that are all interrelated together If a part of that  
 (21) system fails then the ecosystem is negatively affected and  
 (22) you could have a compounding effect and it can completely  
 (23) alter  
 (24) the ecological system  
 (25) Q Is one of the features of natural land the fact that when  
 people want to keep it in its preserved state that it stay

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- (1) preserved and that it stay as part of an overall ecosystem?  
 (2) A That s right I mean if it was not - if the integrity  
 (3) was altered then we would say it s no longer natural land and  
 (4) we would classify it into another category like low amenity  
 (5) land  
 (6) Q Speaking of which low amenity land you arrived at an  
 (7) opinion per acre bases for low amenity land?  
 (8) A \$500 per acre  
 (9) Q And that s described on the exhibits that we just had  
 (10) printed here a moment ago?  
 (11) A Yes  
 (12) Q Forest without rights?  
 (13) A Now this is where the timber has been sold and what you  
 (14) have is just the bare land and that would be \$280 per acre #  
 (15) Q And finally if you haven t sold the timber?  
 (16) A In those cases we took the \$280 per acre times the number  
 (17) of acres and then we added that to the stumpage value that is  
 (18) to the value of the timber itself  
 (19) Q So that will vary depending upon how prolific the forest  
 (20) is how easy it is to extract the timber things like that?  
 (21) A That s correct  
 (22) Q Now we need to explain to the jury how you get these  
 (23) numbers When you did the archaeological analysis and came  
 up  
 (24) with a per acre price or value for archaeological land how did  
 (25) you do that?

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- (1) Could we see Exhibit 1180 please?  
 (2) A As I mentioned earlier we as a part of our research  
 (3) process assembled very significant data base on what property  
 (4) is selling for And one part of that data base dealt with  
 (5) archaeological land  
 (6) Q I don t need the screen split I just want the whole  
 (7) screen Okay and what does Exhibit 1180 tell us?  
 (8) A Exhibit 1180 shows a number of bars The - these  
 (9) represent a number of parts of our data base The vast  
 (10) majority of the information that we used to determine the value  
 (11) of archaeological lands was obtained from the archaeological  
 (12) conservancy It s a conservancy organization located in  
 (13) Albuquerque New Mexico and they provided us with their data  
 (14) base which included around 50 acquisition of archaeological  
 (15) property in the United States principally in the southwestern  
 (16) United States And we analyzed that property in a number of  
 (17) different manners The average selling price for the property  
 (18) as a whole was around \$3 000 an acre and that s shown by the  
 (19) first bar  
 (20) The small sites which are shown by the second bar for  
 (21) example around one acre in size and - actually they range to  
 (22) around ten acres - sold for approximately \$4 500 an acre  
 (23) Larger sites that were around 60 acres in size sold for about  
 (24) \$2 000 an acre  
 (25) There s one comparable that we have that s not a

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- (1) archaeological conservancy comparable It's a property that  
 (2) was purchased in Utah It was purchased by a person to extract  
 (3) the artifacts from and that property sold for a little bit  
 (4) more than \$3 500 an acre It's represented by the last bar  
 (5) The property that we were valuing is generally smaller  
 (6) sites smaller than 60 acres but most of them are larger than  
 (7) one acre Many of them are larger than ten acres and so we  
 (8) felt that the - one of the best indicators of value was the  
 (9) Utah property quite similar to the subject and then also the  
 (10) average for the properties and we concluded that the value per  
 (11) acre for archaeology was \$3 500 per acre  
 (12) Q For the land in Prince William Sound and lower Kenai and  
 (13) Kenai Fjords?  
 (14) A That's right and the Kenai Peninsula  
 (15) Q Let's turn to the natural lands analysis that you did How  
 (16) did you go about determining the value for natural land as to  
 (17) what it was?  
 (18) A Well for natural land we selected nine properties -  
 (19) actually there's two different methods that we use in  
 (20) analyzing natural land We did what we call an aggregate  
 (21) analysis and the aggregate analysis involved the average  
 (22) selling price or acquisition price of lands by the Fish &  
 (23) Wildlife Service the National Park Service various other  
 (24) organizations involved in preserving lands That data we  
 (25) broke it down into a number of different categories but

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- (1) generally it came out to about \$1 000 an acre The vast  
 (2) majority of that land was located down in the Lower 48 so that  
 (3) was the aggregate analysis  
 (4) The second type of analysis involved transactions of land  
 (5) that we would classify as natural land properties similar to  
 (6) what we have in the Prince William Sound Kenai Fjords Kenai  
 (7) Peninsula area and five of those transactions are shown in the  
 (8) exhibit before you  
 (9) Q Okay before we get into this exhibit though I'd like to  
 (10) ask you as between the aggregate study that you did to look at  
 (11) the large number of transactions and the individual analysis  
 (12) how did those two influence your - your conclusion as to how  
 (13) much natural land was worth?  
 (14) A The aggregate analysis tended to set a framework within  
 (15) which we did a more concentrated analysis on individual  
 (16) properties and so the aggregate analysis simply told us that  
 (17) hey land that is natural land is selling for about \$850 an  
 (18) acre to around \$1300 an acre So it gave us a broad range  
 (19) within which this land was selling And then we concentrated  
 (20) our effort on the individual properties and these are what we  
 (21) really based our value conclusion on  
 (22) Q All right And so we have five of them up here and I just  
 (23) wanted you to go through - describe them on the top and then  
 (24) we'll take one of them and go through it so the jury can  
 (25) understand how you arrived at your conclusions

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- (1) A Yes The first property is a 4 750-acre property in  
 (2) Southeast Alaska called Goat Pass I'm sorry Goat and South  
 (3) Pass Island  
 (4) Q And the second?  
 (5) A The second is an 8 000 acre tract of land that was acquired  
 (6) by the Fish & Wildlife Service in the Pribilof Islands  
 (7) Q Next two - next three say Kachemak Bay?  
 (8) A These are all acquisition One is a cash acquisition and  
 (9) three and four are exchanges but there were value components  
 (10) attached to them All three of them are acquisitions for the  
 (11) Kachemak Bay State Park  
 (12) Q Showing you 1182 which I think continues on with the  
 (13) others that you've described?  
 (14) A The sixth one is a 9 200 acre acquisition Tazimina Lake  
 (15) Lake Clark National Park The seventh is a transaction that  
 (16) was just consummated on Afognak Island Seal Bay  
 (17) Q Is that just north of Kodiak?  
 (18) A Just to the northwest of Kodiak Island - northeast  
 (19) Q Okay  
 (20) A The eighth one Uganik Passage on Kodiak Island Fish &  
 (21) Wildlife Service acquisition fairly small property 151  
 (22) acres And the last one is the Chilkat Eagle Preserve 320  
 (23) acre parcel another fairly small one acquired by the State of  
 (24) Alaska  
 (25) Q Okay which one would you like to look at to show the

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- (1) jury how you went about your work?  
 (2) A Well let's take a recent one and that's transaction  
 (3) number 5 the Kachemak Bay State Park the one that was just  
 (4) acquired  
 (5) Q Let's have 1181 then please Actually I'm a little  
 (6) confused myself here let's take a look at 1183 There we go  
 (7) Kachemak Bay State Park All right tell us about Kachemak  
 (8) Bay State Park What you're doing now for the jury is you're  
 (9) going through the process of what you went through with all of  
 (10) these transactions to describe one to them so they understand?  
 (11) A That's right We'll take one so that you know the process  
 (12) that an appraiser goes through in working from the sale  
 (13) property the property that sold to the subject property the  
 (14) property that's being acquired  
 (15) So in Kachemak Bay State Park which is just on the other  
 (16) side of Homer that property was purchased in September 1993  
 (17) That's a recent acquisition It was 23 802 acres involved  
 (18) with the purchase so that comes to some \$924 per acre Cash  
 (19) was paid for the property If alternatively somebody would  
 (20) take a real estate contract or something like that and  
 (21) sometimes if - depending on the terms you have to adjust the  
 (22) cash price because of terms on a contract so this is  
 (23) reasonable to say it was purchased for cash The seller was  
 (24) the Seldovia Native Association and the buyer was the State Oil  
 (25) Trustee Council so it was the State and the Oil Trustees both

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- (1) jointly purchased this property
- (2) The next is the type of access that the property has and
- (3) it's by float plane or boat That's the only way that you can
- (4) get to it so that's quite similar to the properties that we
- (5) were valuing in Prince William Sound in the Kenai Peninsula
- (6) Utilities there's no utilities There are no improvements on
- (7) the property The topography is mixed That is there's some
- (8) that is fairly level other parts of it are quite steep
- (9) The ground cover is also mixed Some areas are mountains
- (10) and mountaintops a lot - there are nearly glaciers and other
- (11) areas are timber some of the timber areas were relatively
- (12) steep some other areas are quite flat There are creeks that
- (13) meander through the property
- (14) The type of water frontage is mountain and water it says
- (15) here or marine That means it's on Kachemak Bay It's a
- (16) maritime property
- (17) The next attribute is view and the view would be of
- (18) mountains and the water from the property The intended use
- (19) that is for an addition to the state park we have that there
- (20) so we understand the motivations of the buyer Why was he
- (21) buying that property? That has a lot to do with how we would
- (22) classify it in terms of highest and best use You wouldn't
- (23) want to use a property that a person had bought for a
- (24) McDonald's or something like that as a part of a natural land
- (25) property So we have - we want to find out what the property

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- (1) was used for
- (2) The fee simple indication indicates the State that was
- (3) purchased and this deals with the bundle of rights and this is
- (4) important in our valuation analysis here because the Native
- (5) Village Corporations own the surface estate The regional
- (6) corporation owns the subsurface estate So you've got a split
- (7) estate and what we want to do is to - we want to make sure we
- (8) compare apples and apples So for every sale we want to find
- (9) out are they buying the full fee estate that is the surface
- (10) and subsurface which is called the fee estate or are they
- (11) buying just a part of the estate that is the subsurface or the
- (12) surface
- (13) Q Let me stop you there This particular transaction
- (14) involved a Native corporation right?
- (15) A That's correct
- (16) Q The Seldovia Native Association and that situation with
- (17) the split estate exists in Prince William Sound and lower
- (18) Kenai as well That is the Chugach Alaska Corporation owns
- (19) the subsurface of the State and say the Village of Tatitlek
- (20) owns the surface estate That is the situation in lands we're
- (21) talking about?
- (22) A That's correct
- (23) Q All right
- (24) A But to follow up on that what we have done in our
- (25) valuation analysis for the subject properties is we have valued

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- (1) the surface estate separate from the subsurface estate so
- (2) we've done two separate valuation analyses And what you see
- (3) in this particular graphic right here is that there is an
- (4) adjustment that is made in the fee simple area and it shows
- (5) minus 100 per acre And so for our natural land analysis we
- (6) are valuing only the surface estate The data that we're
- (7) talking about here is just for the surface estate and since
- (8) this sale involved the fee estate that is the surface and the
- (9) subsurface we have to separate out the value of the two
- (10) Q Another way of putting it is in this sale the Seldovia
- (11) Native Association got some of the money for the sale and the
- (12) subsurface owner got some as well?
- (13) A That's correct
- (14) Q So two different parties both the regional corporation and
- (15) the village corporation were paid?
- (16) A That's correct
- (17) Q Because they own different parts of the land?
- (18) A Right And as we'll talk about in a bit it's our opinion
- (19) that the value of the subsurface estate is \$100 an acre and so
- (20) we have - we make a \$100-per acre adjustment
- (21) Q And you ended up with in this comparable a value per acre
- (22) of \$840?
- (23) A Well there's - let me just tell you a little bit about
- (24) the material
- (25) Q Quickly

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- (1) A Before there - there's a number of different attributes
- (2) that we've compared these sale properties to the subject on
- (3) and the first one is location And we felt that the location
- (4) was superior to the subject so we've got a superior
- (5) identification there
- (6) The next one was access comparable waterfront is
- (7) comparable and size is comparable So the overall compare -
- (8) or the comparison between the sale and the subject we felt was
- (9) comparable It's a good comparable
- (10) Q That's what we talked about before when you look at two
- (11) houses and they're different and some may have a better roof or
- (12) more square footage you have to make adjustments between
- (13) your
- (14) comparables right?
- (15) A That's correct
- (16) Q That's what you're doing here with the superior comparable
- (17) designations?
- (18) A Yes
- (19) Q Now could I have Exhibit 1184 please?
- (20) What is Exhibit 1184?
- (21) A This is a chart that shows all of the nine comparables So
- (22) on the horizontal axis you'll see a one two three four up
- (23) through nine Those are each of the comparables that we just
- (24) talked about For example comparable five is the one that
- (25) we've just finished talking about and it sold for \$840 per

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- (1) comparables sold for more For example comparable one sold  
 (2) for right around \$2 000 an acre Some sold for less For  
 (3) example comparable six It s our opinion that this data  
 (4) indicates a value of \$950 an acre which is the amount that is  
 (5) represented by this line right here and this value right here  
 (6) Q All right For the jury s benefit we re not going to go  
 (7) through each one of those like this From now on we re going  
 (8) to go right to the graph for each one of the highest and best  
 (9) use categories so we won t put you through it each time  
 (10) Multi purpose amenity land Exhibit 11 - excuse me 1186  
 (11) please for multiple amenity land you did the same thing you  
 (12) went and found comparables?  
 (13) A That s correct  
 (14) Q You made a graph similar to the one we just saw and came  
 (15) up  
 (16) with a value?  
 (17) A That s right We have six comparables and as you saw  
 (18) earlier our value conclusion is \$500 an acre  
 (19) Q Let s go to forestland with and without rights exhibit -  
 (20) actually with respect to forestland with and without rights  
 (21) somewhat different methodology employed?  
 (22) A We used two different data bases here We used sales of  
 (23) property in Alaska and then sales of property in Washington  
 (24) and  
 (25) Oregon  
 (26) Q And tell the jury how this chart reflects that?  
 (27) A The properties that are designated by a square which are

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- (1) the ones that are above the average line this being the  
 (2) average line right here these for example up here are all  
 (3) stumpage properties that have sold within Alaska The amount  
 (4) that these properties sell for is actually quite high ranging  
 (5) from \$2 000 an acre down to a low of about \$500 an acre  
 (6) Based on my experience in dealing with forestland that  
 (7) seemed like an awful high selling price for stumpage land that  
 (8) had been harvested and so we went to the State of Washington  
 (9) and Oregon and brought together data on what stumpage land  
 (10) sells for where forest products companies are making the  
 (11) acquisition and those are shown by the diamonds and those are  
 (12) the amounts that generally run a bit below the average line  
 (13) There was a third thing that we did and that was we said  
 (14) hey in the state of Alaska what happens if a person buys a  
 (15) piece of land let s it heal and sells it 10 years from now  
 (16) what would it be worth today? That came out to \$280 an acre  
 (17) which is right where this line is So we concluded that the  
 (18) value is \$280 an acre somewhat less than what we see in  
 (19) Alaska somewhat more than Washington and Oregon  
 (20) Q All right Then I want to talk to you about one more this  
 (21) was forest without rights We had the forestland with rights  
 (22) is that related to this chart as well?  
 (23) A That s right We just - we used the \$280 an acre with  
 (24) rights and added the stumpage value to it  
 (25) Q All right I want to talk to you about subsurface rights

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- (1) You just talked about the Kachemak Bay transaction and how it  
 (2) was that the regional corporation got money when that land was  
 (3) purchased by the government for conservation land How does  
 (4) a  
 (5) subsurface right have value in addition to how it might be  
 (6) mined for gravel or coal or whatever?  
 (7) A Well the land that is owned by the Native corporations is  
 (8) different than what we re used to dealing with when we talk  
 (9) about mineral rights which is generally what you talk about on  
 (10) the subsurface What is the coal worth? What is the oil  
 (11) worth? What is the gravel worth?  
 (12) The Native corporations actually own the subsurface area  
 (13) and if somebody wanted to - if somebody bought the surface  
 (14) and  
 (15) wanted to go in and put a big deep foundation or something  
 (16) like that in the property they would have to go to the  
 (17) regional corporation to get permission to do it to dig down  
 (18) into the subsurface area So the subsurface is actually a type  
 (19) of ownership that is very similar to the surface and it  
 (20) includes much more than just the - the minerals It includes  
 (21) the actual physical area below the surface  
 (22) Q Is that one of the things that you - right in the  
 (23) beginning when you had ANCSA A N C S-A down in the  
 (24) corner of  
 (25) your chart for unique aspects Is that one of the things that  
 (26) some were above \$100 an acre some were a little bit below it  
 (27) you have taken into consideration with respect to valuing this  
 (28) land?  
 (29) A Yes it is

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- (1) Q And what methodology then did you use in valuing the  
 (2) subsurface estate which exists underneath all of the Village  
 (3) Corporation land and is owned by Chugach?  
 (4) A We used the same method as I ve just been discussing That  
 (5) is we found sales of properties where the subsurface had  
 (6) sold Where just the subsurface had sold and that came out -  
 (7) some were above \$100 an acre some were a little bit below it  
 (8) but generally they clustered right around the \$100 per acre  
 (9) level  
 (10) Q All right Then as a result of all of this work you did on  
 (11) a per acre basis to determine what the value of the property  
 (12) was before the spill did you then determine on a  
 (13) corporation by corporation basis in the spill affected area the  
 (14) land was worth?  
 (15) A Yes we did  
 (16) Q Can I see Exhibit 1189 the English Bay Corporation what  
 (17) does 1189 depict?  
 (18) A 1189 shows the various land use categories for English  
 (19) Bay The value per acre for each one of those categories the  
 (20) number of acres in each category and then the right hand  
 (21) column is the value so we take a value per acre times the  
 (22) number of acres to get the value And that is summed up to a  
 (23) final amount which is 43 4 million dollars  
 (24) Q 1190 please Oh the Elmo please I guess What is  
 (25) 1190?

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- (1) A This is the same thing except for the Port Graham Corporation The number of acres value per acre and my opinion that the value of their land is 68.9 million dollars
- (2) Q And this is the date that you gave us before for all of these just before the spill?
- (3) A March 23rd 1989
- (4) Q Could we have the next exhibit in order please And what is this exhibit?
- (5) A This is for the Chenega Corporation shows the same thing value of 68 million dollars
- (6) Q It's 1191 Is that correct?
- (7) 1192 Now this is the Chugach Alaska Corporation?
- (8) A Yes
- (9) Q And I see that there is a separate entry there for the subsurface estate?
- (10) A That's right The subsurface is 33.3 million dollars You'll notice that the value per acre is \$57 per acre I had indicated earlier it was \$100 an acre That's because on small ownerships small subsurface ownerships we used 8 percent of value rather than \$100 per acre which has brought that value down
- (11) Q All right Could I see the next in order please? 1194 I believe - 93 excuse me
- (12) This is the same thing for the Eyak Corporation?
- (13) A That's correct

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- (1) Q 1194?
- (2) A Same thing for Tatitlek 41.7 million dollars
- (3) Q 1195 1195 then for the jury's benefit later on if they want to see it Is your summary putting all those together of what the unimpaired - what you call the unimpaired value or the value before the spill was on these corporations lands?
- (4) A That's correct
- (5) MR PETUMENOS Your Honor next I would like to talk to Dr. Mundy of how contamination affects these values but first I'd like to take a break
- (6) THE COURT Sure
- (7) THE CLERK Please rise This court stands in recess
- (8) (Jury out at 12:37 p.m.)
- (9) (Recess from 12:37 p.m. to 12:55 p.m.)
- (10) (Jury in at 12:55 p.m.)
- (11) THE CLERK This court now resumes its session
- (12) Please be seated
- (13) BY MR PETUMENOS
- (14) Q Dr. Mundy we've now discussed how you came about arriving at a value for a vast amount of land before the oil spill Now I want to talk to you about how contamination a contaminating event affects the value of land what it does to the value of land And as I understand it you have made that a particular area of your study?

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- (1) A That's correct
- (2) Q Could we have Exhibit 1196 please?
- (3) And could you tell the jury what the two - or the three heavy bold categories are that we have here in answering how contamination affects value?
- (4) A There are three major things that are listed on this graphic physical oiling stigma and parcel unity And we can start with physical oiling and one is the severity of the oiling that is how bad is it And the severity is also related to persistence That is how long is it going to be around
- (5) Q Let's talk about severity first You had an opportunity to review lots of materials that have been - that are available on the severity of the impact in this particular instance
- (6) What is your opinion about how severe the initial impact was on these lands as it would affect the category of physical oiling?
- (7) THE COURT Don't answer
- (8) BY MR PETUMENOS
- (9) Q - and value?
- (10) MR OPPENHEIMER Foundation Your Honor hearsay
- (11) THE COURT Give it to me again
- (12) MR PETUMENOS I think I can shorten it don't you think?
- (13) THE COURT Yeah Do anything
- (14) BY MR PETUMENOS

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- (1) Q Have you had the opportunity to look at videotapes pictures things about the impact of the Exxon Valdez oil spill to draw an opinion on the issue of severity of the physical oiling as it would reflect on value?
- (2) MR OPPENHEIMER Same objections Your Honor
- (3) THE COURT The objection's overruled
- (4) A Yes I have
- (5) MR PETUMENOS All right And could I see the - the exhibit which has already been - a portion of an exhibit which has already been entered into evidence from the LaTouche Island
- (6) (Videotape Played)
- (7) BY MR PETUMENOS
- (8) Q This is a videotape by Mr. Sieber that was introduced into evidence earlier in our - in the case here and admitted
- (9) MR OPPENHEIMER What's the exhibit number?
- (10) MR PETUMENOS 1369 I believe
- (11) MR STOLL 1269
- (12) MR PETUMENOS Get that? 1269
- (13) BY MR PETUMENOS
- (14) Q And in your opinion is the kind of severity of the contaminating event that you see in this film and the other material that you have reviewed how does this compare on the scale? Is this a very severe impact to value or is it low on the scale?
- (15) A It would have to be right up toward the top Severe quite

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- (1) severe
- (2) (Videotape concluded)
- (3) Q Could we get Exhibit 1196 back?
- (4) So you look at not just the persistence factor by itself
- (5) but also how severe the impact was at the outset?
- (6) A That is correct
- (7) Q Now the persistence what did you do to determine
- (8) persistence as you would apply it to value in your analysis?
- (9) A The persistence that is the length of time that the oil
- (10) will likely remain be around and affect buyer behavior is
- (11) material that has been developed jointly by ourselves and ICF
- (12) The persistence estimate and the persistence curves were
- (13) developed by ICF but we interacted with them in terms of the
- (14) criteria with which the curves would be developed
- (15) Q And so you took those - used those curves then in
- (16) determining how long you expected the contaminant to exist on
- (17) the land for purposes of determining value?
- (18) A That s correct
- (19) Q Now did you also take a trip in 1994 and do you have some
- (20) slides here to show the jury with respect to how you perceive
- (21) the land not as a scientist but as a person looking at real
- (22) estate would look at it from your trip in 1994?
- (23) A Yes I do
- (24) Q Could we show - and this is I believe part of the photo
- (25) notebook that we marked Could we show those slides please?

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- (1) (Slides are shown)
- (2) Q Could you tell the jury what they re seeing here?
- (3) A We have just a few There are a lot of photographs in the
- (4) photo notebook but this is a photo of Chugach Bay It is in
- (5) the south Kenai Peninsula area and it s - in the upper
- (6) right hand corner you can see a boot and that is a person s
- (7) boot and there are two things that are just to the left of
- (8) that boot
- (9) One is a very obvious oil sheen And then from the toe of
- (10) the boot to the left is a rock and just beyond there is
- (11) another area which is part of the oil sheen but it s actually
- (12) brown It s brown oil and there are goblets of oil on top of
- (13) it This was observed just walking along the beach
- (14) Q That s one of the points I wanted to make This was not
- (15) the result of your disturbing anything or turning anything
- (16) over this was just something that you were able to see?
- (17) A That s right yeah
- (18) This is another picture This is in Windy Bay It s
- (19) another area that was completely undisturbed and it shows the
- (20) oil oozing out of the surface This is up toward the high tide
- (21) mark and there s a fair slope to the beach here and the oil
- (22) just oozes out of the rocks and the gravel cobble and runs
- (23) down along the beach Down being down toward the lower end
- (24) of
- (24) the slide
- (25) This is north LaTouche and there s a log in the bottom of

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- (1) the picture and then a stick against a log to the right And
- (2) if you look above the log and to the left of the stick there s
- (3) a large dark area there That dark area is oil and here s
- (4) what it looks like This is a closeup of it and it s oil on
- (5) rocks There are spruce needles that are attached to the - to
- (6) the rocks This is at the storm berm line which is above the
- (7) high tide mark
- (8) This is another photograph on north LaTouche It s a tar
- (9) mat that I observed between rocks Nothing is disturbed It s
- (10) very visible
- (11) I did turn over a rock in the upper portion of the slide
- (12) and you can see how the rock is oiled on the bottom of it It
- (13) is shiny and where the top parts of the rocks have been
- (14) somewhat cleaned There s still oil spatter on them from the
- (15) wave action
- (16) Q Now you determined that you wanted to turn over this rock
- (17) after you were able to observe the rest of that tar mat as it
- (18) appears there in the -
- (19) A That s - that s correct yeah
- (20) This slide is of old Chenega Village and this is a
- (21) memorial marker memorializing I believe there were 26 people
- (22) that lost their lives as a part of the 1964 earthquake Old
- (23) Chenega Village is an archaeological site and we have
- (24) classified this as archaeology
- (25) This is the old school building on the site It s on a

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- (1) promontory You can see it when you re in the bay
- (2) This is an old house that is on the property set back in
- (3) the woods
- (4) Here is an area where there are quite a number of - of
- (5) graves that also make up a part of the Chenega old Chenega
- (6) town site
- (7) This is an example of a rock area This is also on north
- (8) Chenega Island That shows needles spruce needles that are
- (9) affixed to the rock because of all of the oil that - oil tar
- (10) that still adheres to the rocks
- (11) This is a small little marsh area as I call it You know
- (12) I m not going to say it s a scientific definition but which I
- (13) will call a marsh area on north Chenega Island
- (14) And this is - well there s a - a photo that appears to
- (15) be missing here Maybe they re out of order
- (16) This is a rock at Point Helen on the south part of Knight
- (17) Island It s - you can see it s all black around the rock
- (18) that has the shiny surface to it and the shiny surface is
- (19) actually sort of like a rainbow You can see the different
- (20) colors there and that rock I just kicked that over with my
- (21) foot and took a picture of the - the bottom part of it
- (22) (Slides completed)
- (23) Q Okay Can we have the lights please?
- (24) Now the point that I wanted to make with these slides
- (25) with the exception of the one about old Chenega this is a trip

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- (1) you took in 1994 Does - in your opinion does a person who  
 (2) is evaluating real estate and sees the kinds of things that you  
 (3) were able to see as you walked along the property is that  
 (4) person - if he s knowledgeable in the business - going to  
 (5) make inquiries about what he sees?  
 (6) A Most definitely would  
 (7) Q And why is that?  
 (8) A Well it s because what you have here is property that  
 (9) obviously has an environmental impairment to it It s  
 (10) contaminated and when you have property like that there are  
 (11) all kinds of liability issues and value issues that a possible  
 (12) buyer can end up getting into which they don t want to For  
 (13) example if you wanted to build something on it you probably  
 (14) wouldn t be able to obtain a loan  
 (15) Q Now the next thing we see as a factor for purposes of how  
 (16) contamination affects value is stigma Could you tell us  
 (17) please what - what you mean by the term stigma ?  
 (18) A Stigma is a mark or a blemish and it connotes concern it  
 (19) connotes a doubt about something So that when something is  
 (20) stigmatized be it a person or the environment people who  
 (21) associate with that person or environment are uncertain about  
 (22) the nature of the - the object They re uncertain and  
 (23) doubtful about dealing with that particular object  
 (24) Consequently it raises a level of risk in a person s mind  
 (25) Q And do events that take place nearby the property or on the

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- (1) water in the case of a waterfront property also have  
 (2) implications on the value of the property with respect to  
 (3) risk?  
 (4) A Yes  
 (5) Q And this jury has heard testimony for example of the  
 (6) return of the herring and how they return and have heard  
 (7) descriptions of it what the fish look like and things like  
 (8) that What impact do things like that have on land values on  
 (9) nearby properties?  
 (10) A Well this is part of that stigmatic effect Stigma  
 (11) generally does not refer to the specific property itself It  
 (12) refers to property that is in close proximity to or adjacent to  
 (13) a property For a property that is contaminated there may be  
 (14) a stigma that is associated with that contaminated property  
 (15) after it is cleaned One is uncertain whether it s really  
 (16) clean or not so it may take a period of time before the market  
 (17) will come back to what one would normally expect  
 (18) The same is true with properties that are adjacent to a  
 (19) property as being that one that is contaminated an adjacent  
 (20) property can have an effect on a value of a property that is  
 (21) not contaminated at all but is just located in a close  
 (22) proximity  
 (23) Q Have there been examples of that phenomenon occurring  
 (24) across the United States?  
 (25) A Yes there are a lot of them

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- (1) Q Now does the issue of how - let s go through some of the  
 (2) factors that relate to how much stigma a property or an area  
 (3) surrounding a contaminating event how that might happen  
 You  
 (4) have here disruption What do you mean by disruption ?  
 (5) A This would be how an event would change the normal lives of  
 (6) a person For example the Natives in the Kenai Peninsula or  
 (7) Kenai Fjords and their subsistence activities being able to  
 (8) harvest mussels or clams as an example  
 (9) Q Concealability?  
 (10) A This is kind of an interesting one You are aware of the  
 (11) phrase out of sight out of mind Well years ago when we  
 (12) first got into this business of analyzing contaminated  
 (13) property generally that was a pretty good saying that if the  
 (14) contamination wasn t around you wouldn t have to worry about  
 (15) it Or if you couldn t see it if you couldn t smell it you  
 (16) couldn t hear it  
 (17) But today it s just about the reverse is the case and  
 (18) that is is if you can t see it you can t smell it and you  
 (19) can t hear it but there s a possibility that it s there The  
 (20) market is more reactive than if it is concealable If it s not  
 (21) concealable if it s on the surface so is the uncertainty the  
 (22) unknown with which one deals with  
 (23) Q And the aesthetic effect?  
 (24) A The aesthetic effect would be what we saw in some of the  
 (25) slides the sheen on the water the spruce needles affixed to

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- (1) the rock outcroppings marring the natural environment  
 (2) Q Responsibility?  
 (3) A This is also an interesting variable It deals with how  
 (4) the responsibility can be attached to a person or entity For  
 (5) example stigma is much less in a natural disaster where there  
 (6) has been all kinds of problems created than in a disaster  
 (7) where the problem was created by an individual  
 (8) So where you have - where the public can attach  
 (9) responsibility to an individual or a company or whatever you  
 (10) have this responsibility factor taking - or making a big  
 (11) effect  
 (12) Q Does it then result in more scrutiny more publicity more  
 (13) attention to the event?  
 (14) A That s correct  
 (15) Q Prognosis?  
 (16) A Prognosis is sort of like persistence How rapidly is this  
 (17) stigmatic effect going to go away? Is it something that is  
 (18) short lived or is it something that s going to be around for a  
 (19) long while The longer it s going to be around the worse the  
 (20) stigma  
 (21) Q Peril?  
 (22) A Peril deals with the effect that the event can have on  
 (23) persons health their livelihood the health or livelihood of  
 (24) the natural environment  
 (25) Q And fear?

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- (1) A Fear is the concern that one has about the event and  
 (2) especially as to how it can affect one's health. So it's  
 (3) related a lot to peril, but something distinctly different than  
 (4) a peril. The fear would involve concern with harvesting clams  
 (5) or mussels and consuming them, for example, for one's self, or  
 (6) fear for one's family, elders.  
 (7) Q In the definition that we saw about market value that we  
 (8) had at the beginning, sort of the touch tone of all this, we  
 (9) saw a phrase in it that talked about a buyer and a seller  
 (10) knowledgeable about the property, or words to that effect, do  
 (11) you remember that?  
 (12) A Yes.  
 (13) Q All right. How does -- how does uncertainty figure into  
 (14) how an event like this can stigmatize a property if you have  
 (15) people disagreeing about what the effects are?  
 (16) A Well, the uncertainty can actually cause the market to just  
 (17) stop. The market won't operate until this cloud or this  
 (18) uncertainty is resolved. People don't know what the  
 (19) implications of buying a property are and, consequently, they  
 (20) just don't buy. They just don't make that decision, and market  
 (21) value is based on the assumption of a transaction taking  
 (22) place.  
 (23) Q Risk?  
 (24) A Risk is the level of risk, the -- I can't think of a -- an  
 (25) analogy to use, but it's financial risk associated with owning

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- (1) something where there is uncertainty associated with the final  
 (2) outcome of it.  
 (3) Q Now, did you do -- another factor with respect to stigma  
 (4) you mentioned, is the amount of scrutiny that an event gets,  
 (5) the amount of scrutiny the land gets under these  
 (6) circumstances?  
 (7) A Well, it's -- this scrutiny or what we call risk  
 (8) amplification, and has as the amount of scrutiny increases, the  
 (9) level of stigma increases.  
 (10) Q Did you do a study of the kind of exposure that the Exxon  
 (11) Valdez oil spill created as a result of looking into the media  
 (12) and how much media there was and all that?  
 (13) A Yes. It was part of developing an understanding of what  
 (14) the level of stigma might be that would be associated with the  
 (15) Prince William Sound, Kenai Fjords and Kenai peninsular area.  
 (16) Q Showing you what's been marked as Exhibit 1202, what is  
 (17) Exhibit 1202?  
 (18) A This represents the number of articles by headline that  
 (19) were published from 1989 to 1992 in five major national  
 (20) publications. Those publications are the Wall Street Journal,  
 (21) New York Times, Christian Science Monitor, Washington Post, and  
 (22) the Los Angeles Times.  
 (23) Q So on the vertical axis, as I've blown it up, we have the  
 (24) number of articles nationally?  
 (25) A That's correct.

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- (1) Q And then on the horizontal axis, across the bottom, we've  
 (2) got what?  
 (3) A The various incident that took place that generated all the  
 (4) media attention.  
 (5) Q Let's go through them for the jury.  
 (6) A I beg your pardon?  
 (7) Q Let's go through them for the jury.  
 (8) A The first one is nuclear power plants for this three-year  
 (9) period of time, the number of major articles that appeared in  
 (10) these publications dealing with nuclear power plants. The  
 (11) second one is the Exxon Valdez oil spill. The next one is the  
 (12) presidential election that took place in 1992. The next one  
 (13) are articles dealing with Alaska in general, regardless of what  
 (14) the topic. The next one are articles dealing with  
 (15) earthquakes. Next to the last is Hurricane Hugo. And then the  
 (16) final ones are articles dealing with floods during that  
 (17) three-year period of time.  
 (18) Q And Hurricane Hugo was the hurricane in Florida that caused  
 (19) the damage there?  
 (20) A That's correct.  
 (21) Q And what did you find out?  
 (22) A That the amount of coverage for the Exxon Valdez ranked  
 (23) second, not too awfully far behind nuclear power plants and  
 (24) surprisingly, there was more coverage on the Exxon Valdez spill  
 (25) than the presidential election had received. So a lot of -- a

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- (1) lot of press coverage on a national basis, 750 articles in this  
 (2) search, something that would indicate to us that the market  
 (3) would certainly be aware of the problem in the area where we  
 (4) have the subject properties.  
 (5) Q Exhibit 1203, please. What is exhibit 1203?  
 (6) A This shows the 750 articles that dealt with the Exxon  
 (7) Valdez, which was on the prior exhibit, but breaks them down  
 (8) on  
 (9) a year-by-year basis so we can see how many articles appeared  
 (10) in 1989 through 1992.  
 (11) Q All right. In addition to looking at the amount of media  
 (12) the nature of -- you looked into the content as well. I assume  
 (13) to determine if it was having an impact or would have an impact  
 (14) on property values?  
 (15) A Yes, we did.  
 (16) Q And in addition to looking at the kind of information that  
 (17) was out there that a person walking along the beach would be  
 (18) constrained to go research, did you look in the market to see  
 (19) if there was actually some market effects like that, that sales  
 (20) were affected?  
 (21) A Yes, we actually went and studied the nature of the real  
 (22) estate market in Prince William Sound, Kenai Fjords, and the  
 (23) Kenai Peninsula area.  
 (24) Q Let me see exhibit 1204, please.  
 (25) What is exhibit 1204?  
 (26) A This exhibit shows the -- what we call absorption of lots

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- (1) at a subdivision in Prince William Sound It's Ella Mar  
 (2) subdivision located right close to Cordova It is a  
 (3) subdivision that was not oiled as a part of the Exxon Valdez  
 (4) spill It is located to the east of where the oil was and  
 (5) this shows the number of lots that were sold on a year by year  
 (6) basis at this particular subdivision  
 (7) The vertical line shows Exxon Valdez oil spill That  
 (8) represents March of 1989 when the spill took place You can  
 (9) see that in 1988 there were a fair number of lots about ten  
 (10) lots that were sold and in 1989 the sales dropped down to  
 (11) only one lot  
 (12) And then they picked up very gradually Two were sold - I  
 (13) believe three in 1980 - or 1990 and then around six in 1991  
 (14) Q Now this was again on property that did not receive oil  
 (15) on its shoreline at all?  
 (16) A There was no oil that hit this site  
 (17) Q Could I see Exhibit 1144 please as admitted?  
 (18) Now to put some perspective on where this property is  
 (19) located could you take your pen out and maybe draw an arrow  
 (20) where it would be with respect to the path of the spill?  
 (21) A The property would be located right about in this area  
 (22) right here  
 (23) Q Drawing an arrow so at the bottom of that arrow?  
 (24) A Right at the point of that arrow  
 (25) MR PETUMENOS Your Honor this would be an excellent

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- (1) time to break for the day  
 (2) THE COURT Okay  
 (3) MR PETUMENOS Could I have a print of that please?  
 (4) THE COURT I'll let you go and remind you not to talk  
 (5) to anybody about this case including your fellow jurors and  
 (6) not to form or express an opinion on it until it's submitted to  
 (7) you for your deliberation See you tomorrow  
 (8) (Jury out at 1 25 p m )  
 (9) THE COURT All right counsel The jury is not  
 (10) present Is there anything to take up?  
 (11) MR STOLL Your Honor we had the matter of the  
 (12) instructions  
 (13) THE COURT Yes do you want to argue that or do you  
 (14) want me to just draft my own?  
 (15) MR STOLL Well I'd like to discuss it with the  
 (16) Court  
 (17) THE COURT Okay good Go ahead  
 (18) MR STOLL Your Honor I'd also like to get a  
 (19) clarification  
 (20) You indicated last week and Mr Diamond and I talked about  
 (21) this this weekend we couldn't remember exactly what the  
 (22) resolution of it was On the August 16th that the juror you  
 (23) know whether that - there's not going to be any trial that  
 (24) week for sure? It appears apparent that according to what  
 (25) Mr Diamond's told me that they're still going to be putting

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- (1) on their case on August 16th  
 (2) THE COURT Yeah I think that's true There's two  
 (3) options on that one She's only going to be gone a week I  
 (4) could recess for a week and - if it's necessary and if I  
 (5) think that that - that we're in jeopardy of going below 12  
 (6) that's exactly what I'll do  
 (7) MR STOLL I see no decision has been made  
 (8) THE COURT No I haven't made a decision The  
 (9) decision I have made is that she's going to get to go to that  
 (10) reunion  
 (11) MR STOLL Now with respect to the other question I  
 (12) had is just I think it might be easier I know if - I don't  
 (13) know if she can see you know if we could move the jurors over  
 (14) a chair  
 (15) THE COURT I can - I can have them - why don't we  
 (16) just compress them tomorrow  
 (17) THE CLERK In the top row?  
 (18) THE COURT Yeah so there's not a blank seat there  
 (19) MR STOLL Now with respect to the instructions  
 (20) Your Honor -  
 (21) MR PETUMENOS I'm sorry can Dr Mundy stand down?  
 (22) THE COURT Absolutely sure  
 (23) MR STOLL I'd like to just explain what I've done  
 (24) and my problems with the proposing of the defendants  
 (25) The first paragraph of the plaintiffs proposed

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- (1) instructions the verbatim the one that was so called  
 (2) Exhibit C from our prior one and my concern - if you recall  
 (3) on Friday I said that there was something that I didn't agree  
 (4) with that and that was just the misreading of it when I was  
 (5) standing before the Court in Friday And I agree with that  
 (6) personally agree with that and I think the Court approved that  
 (7) instruction That's the so-called Exhibit C That's verbatim  
 (8) what is the first paragraph of our proposal today  
 (9) THE COURT Okay  
 (10) MR STOLL The second paragraph is pretty  
 (11) straightforward and it's just sort of an explanation as to why  
 (12) they should disregard anything they hear or read about in the  
 (13) federal case  
 (14) The third paragraph Your Honor it really relates to what  
 (15) I call the positive outlook of what is in this case I'm very  
 (16) concerned about getting into an instruction that defendants  
 (17) have proposed that talks about subsistence claims or fishermen  
 (18) claims in other - in other cases We have not put on any  
 (19) quantitative damages as to either subsistence or fishermen  
 (20) claims in this - in this case And I think that if we're  
 (21) going to get into all the explanation of what is in that case  
 (22) it's going to be a much longer instruction than what defendants  
 (23) have proposed So I think the important thing is to focus on  
 (24) what is in this case and that's what I've tried to do with  
 (25) this instruction

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Look See Concordance Report

UNIQUE WORDS 2,901  
TOTAL OCCURRENCES 11,447

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SINGLE FILE CONCORDANCE

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- (15) 1164 through 1166 1271 through 1280 1284 1306 1354 A
- (16) 1355 1356 1368 1363 received 2658
- (17) 1155 received 2663
- (18) 1370 received 2684

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- (1) STATE OF ALASKA )
- (2) Reporter s Certificate
- (3) DISTRICT OF ALASKA )
- (6) I Joy S Brauer RPR a Registered Professional
- (7) Reporter and Notary Public
- (8) DO HERBY CERTIFY
- (9) That the foregoing transcript contains a true and
- (10) accurate transcription of my shorthand notes of all requested
- (11) matters held in the foregoing captioned case
- (12) Further that the transcript was prepared by me
- (13) or under my direction
- (14) DATED this day
- (15) of 1994
- (21) JOY S BRAUER RPR
- Notary Public for Alaska
- (22) My Commission Expires 5 10 97

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- (1) think Exxon s right If it s more than a stipulation issue
- (2) but it reaches a broader issue which is privilege then I m
- (3) not going to decide it off the cuff
- (4) MR OPPENHEIMER I don t think it does Your Honor
- (5) MR McCALLION Your Honor I think there may be a
- (6) broader issue but my primary purpose in raising that is the
- (7) language of DM 171 in dealing with communications with counsel
- (8) it tends to implicate what attorneys generally understand the
- (9) law of attorney client privilege to be
- (10) THE COURT All right So I m going to set the
- (11) discussion for you so you understand what I m doing here I
- (12) think that Exxon is right regarding the stipulation I don t
- (13) think this comes within the terms of the stipulation There s
- (14) also material in here that seems to me to be appropriate for
- (15) cross examination quite a bit of material
- (16) But to the extent that the plaintiffs are making a broader
- (17) argument here I m not deciding that issue If you re going to
- (18) make a broader argument you have to do it explicitly so we can
- (19) all understand your record But on the issue of the
- (20) stipulation I m going to allow this document to be used
- (21) because I don t see that it s within the terms of the
- (22) stipulation Or if it is this is the kind - this is the
- (23) document that I would use as an exception So now you -
- (24) that - the record you ve made is - I m only dealing with the
- (25) stipulation issue - if you re - if you re going to make a

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- (1) larger argument you must make it or you waive it
- (2) Anything else?
- (3) MR PETUMENOS Housekeeping matter When I moved in
- (4) the exhibits previously on - in connection with Mr Bush s
- (5) examination I misspoke Everywhere where I said 1141 was
- (6) 1147
- (7) THE COURT Oh okay So all the 1147 documents are
- (8) really 1141 something?
- (9) MR PETUMENOS Other way around All the 1141 dash
- (10) something documents are really 1147
- (11) THE COURT Very good The clerk can straighten it
- (12) out and if they don t they can tell me
- (13) This document is the defendants Exhibit 15195 that
- (14) should be court s exhibit 18
- (15) Anything else?
- (16) MR OPPENHEIMER Tim are you prepared to have those
- (17) exhibits go in?
- (18) MR PETUMENOS I m sorry?
- (19) THE COURT Your exhibits?
- (20) MR OPPENHEIMER Our exhibits
- (21) MR PETUMENOS No I ve been examining the witness
- (22) I haven t had a chance to -
- (23) THE COURT That s fine You can do it over the
- (24) afternoon
- (25) Is there anything else?

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- (1) MR STOLL Thank you Your Honor
- (2) THE COURT Thank you
- (3) THE CLERK Please rise This court stands in
- (4) recess
- (5) (Recess at 1 58 p m)

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- (1) I N D E X
- (2) REDIRECT EXAMINATION OF JAMES G BUSH 2612
- (3) BY MR PETUMENOS 2612
- (5) RECROSS EXAMINATION OF JAMES G BUSH 2644
- (6) BY MR OPPENHEIMER 2644
- (8) DIRECT EXAMINATION OF WILMER H MUNDY 2669
- (9) BY MR PETUMENOS 2669

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- (1) THE COURT This is Court s next in order on that  
 (2) discussion all those documents What is the number?  
 (3) THE CLERK 17  
 (4) THE COURT The documents relating to that discussion  
 (5) we just had are Court s Exhibit 17 for the record I ve put  
 (6) them in the record so that it s clear to the reviewing court  
 (7) what -  
 (8) MR OPPENHEIMER That s Court s Exhibit 17 Your  
 (9) Honor?  
 (10) THE COURT 17 yeah So what is -  
 (11) MR McCALLION Your Honor within that packet was the  
 (12) one other document which was at issue which is DX15195  
 This  
 (13) is an ICF report in August of 1989 discussing the scope of  
 (14) report and relates in part to communications with counsel  
 (15) namely myself at the time relating to the scope of report and  
 (16) inquiry by ICF  
 (17) THE COURT Let me just read it  
 (18) MR OPPENHEIMER Yes Your Honor  
 (19) THE COURT Okay go ahead Tell me what you want  
 (20) MR OPPENHEIMER Your Honor this - first of all at  
 (21) the time Bill Mundy was not even employed by anyone in this  
 (22) case This is a classic document that goes to solicitation and  
 (23) the beginning of the assignment This is not copied to any  
 (24) lawyer It contemplates something in the future maybe but  
 (25) that has nothing to do with this document

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- (1) This is a document between two experts not even within the  
 (2) same house on the subject of a proposal to be made It is -  
 (3) it s no different than any other document going to a basis for  
 (4) employment standard asslgnment and in this case it precedes  
 (5) the - it even precedes the employment And I - let me just  
 (6) double check because I say it s not - that s correct It s not  
 (7) even copied to lawyers And in fact it - It is essentially  
 (8) limited to the proposal study of the relationship which is  
 (9) clearly something we intend to go into and clearly appropriate  
 (10) area of inquiry  
 (11) So I don t think this one - we did not volunteer to redact  
 (12) this as I look at this now and I see the address to  
 (13) Mr McCallion I have no objection to taking that out It s  
 (14) not at the core of anything I would ask about but we felt  
 (15) strongly enough about this document we weren t even willing -  
 (16) we didn t think it was an appropriate candidate for redaction  
 (17) and I think it s just outside the scope of the orders  
 (18) MR McCALLION Your Honor I m fairly familiar with  
 (19) this document because at the time in August of 1989 was really  
 (20) at the inception of the formation of the professional team  
 (21) And in fact I did receive - and can represent to the Court  
 (22) did receive a copy of this document because it involved  
 (23) discussions between counsel and ICF which is the scientific  
 (24) team along with Bill Mundy who of course was the  
 (25) appraiser This was very early on in the engagement and I m

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- (1) not -  
 (2) THE COURT Early on or before?  
 (3) MR McCALLION Your Honor it s my understanding that  
 (4) the clients had - and Mr Mundy had reached an agreement on  
 an  
 (5) engagement but I cannot definitively represent that I know  
 (6) that it was on or about this time whether it was - it was -  
 (7) it s my recollection that this was at or about the time of  
 (8) engagement of Mr Mundy I know that discussions with  
 (9) Mr Mundy long preceded at least by several months this  
 (10) particular date and I - I know that the clients and Mr Mundy  
 (11) I believe had reached an agreement Whether that had been  
 (12) literally memorialized  
 (13) THE COURT What about ICF? They hadn t reached an  
 (14) agreement with ICF had they?  
 (15) MR OPPENHEIMER Yeah They had Your Honor with  
 (16) ICF It s my understanding at that time ICF was retained  
 (17) MR FORTIER I m sorry Your Honor The clients had  
 (18) reached an agreement with ICF about April of 89  
 (19) THE COURT So they had - the clients had an  
 (20) agreement with ICF In April of 89 They had an agreement with  
 (21) Mundy when?  
 (22) MR FORTIER I believe that contacts were made with  
 (23) Mundy around the first part of June It was somewhere in the  
 (24) area of August that retention was actually formed and I  
 (25) believe it was around August 29

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- (1) THE COURT Just tell me if I m wrong about this  
 (2) counsel This letter is - is a refinement of a proposal that  
 (3) would be made to counsel for the plaintiffs regarding ICF s and  
 (4) Mundy s work in this case right?  
 (5) MR McCALLION Your Honor I think what it literally  
 (6) was was a discussion between - with counsel by retained  
 (7) expert as to the - as to the scope of report And if I may  
 (8) add Your Honor I think the case law is fairly clear that  
 (9) conversations with counsel certainly in classic  
 (10) attorney client privilege law that conversations with counsel  
 (11) and contemplation of retention certainly would be - would be  
 (12) privileged as well  
 (13) THE COURT You just expanded the scope of discussion  
 (14) haven t you counsel If we re talking about the stipulation  
 (15) you re probably not a winner from your standpoint If you re  
 (16) talking about law regarding privilege then I m not prepared to  
 (17) discuss it with you all I mean you have to give me the law  
 (18) in writing so that I can go back and check on you to make sure  
 (19) you re right  
 (20) MR OPPENHEIMER Your Honor I would point out  
 (21) there s no issue of attorney client privilege here This  
 (22) doesn t indicate any aspect of attorney-client privilege  
 (23) THE COURT It may not counsel Then again it may  
 (24) All I m saying is you set the discussion by saying it was the  
 (25) stipulation issue If it s a stipulation issue I think - I

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(1) communications with counsel from - from the defendants as I  
 (2) had indicated to the Court earlier their production of  
 (3) documents came somewhat later than the plaintiffs were  
 required  
 (4) to produce and I believe - I would certainly think that if  
 (5) the - that the defendants took a broad ruling or a broad  
 (6) interpretation of DM 171 and supplemental and that to the  
 (7) extent a document related to conversations with counsel and  
 (8) involved it or sprung from it such as this document clearly  
 (9) does that - that they did not go through documents and excise  
 (10) paragraph and paragraph to try and produce to us a paragraph  
 (11) which might be unrelated to conversations with counsel  
 (12) In short it's difficult we say impossible to parse the  
 (13) paragraphs or sentence of this document to excise any matters  
 (14) relating to or springing from conversations with counsel which  
 (15) should be excluded from the cross  
 (16) MR OPPENHEIMER Your Honor the -  
 (17) THE COURT Why is it that - I mean I think that  
 (18) they're taking a less radical position than I might take if I  
 (19) were counsel in the case All they're saying is get the  
 (20) references to counsel out of there  
 (21) MR OPPENHEIMER We've done that Your Honor That's  
 (22) why I was wondering whether you have the copy of - though we  
 (23) don't think it's necessary have prepared and submitted a  
 (24) redacted version which does exactly that because that seems  
 (25) like a compromise between computing principals

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(1) THE COURT The redacted version do I have that the  
 (2) one page document?  
 (3) MR OPPENHEIMER May I approach the -  
 (4) THE COURT Because I've seen that if that's -  
 (5) MR OPPENHEIMER The redacted version is this page  
 (6) THE COURT Oh okay  
 (7) MR OPPENHEIMER This page right followed by -  
 (8) THE COURT And this page?  
 (9) MR OPPENHEIMER Correct correct and all of these  
 (10) references  
 (11) THE COURT I misunderstood then counsel Why is  
 (12) that not acceptable?  
 (13) MR McCALLION Your Honor this is a document which  
 (14) memorializes a conversation and discussions with Mr  
 Petumenos  
 (15) counsel relating to the scope of inquiry and report of Mundy  
 (16) and Associates the entire caption of this and the reason for  
 (17) this entire document is - is the fact that Bill Mundy - who  
 (18) is the Bill in it - is after speaking with Mr Petumenos on a  
 (19) number of critical issues relating to the scope of the report  
 (20) and inquiry then writes a memo to Vicki Adams communicating to  
 (21) her who was not present during the conversations between Tim  
 (22) Petumenos and Bill Mundy regarding the nature and scope of  
 (23) their discussions with counsel  
 (24) We would think that this is really a classic example of a  
 (25) memorialization of confidential attorney client communications

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(1) which is within the scope of DM 171 It was the intent to  
 (2) exclude at least for purposes of cross-examination  
 (3) THE COURT Okay I'll just tell you the way I feel  
 (4) about this and tell you the way I'm going to deal with it  
 (5) The - it's certainly arguably comes within the stipulation  
 (6) Might be part of the - I mean it might even be argued this is  
 (7) a draft expert report because it certainly deals with the kind  
 (8) of refinement that's done in the drafting process And then it  
 (9) can also be argued that this is a communication between the  
 (10) experts and counsel or their agents concerning draft expert  
 (11) reports I mean it seems to me to come legitimately within  
 (12) the stipulation which as it relates to this document may be a  
 (13) little vague it's not as clear as the last example  
 (14) But it's - but it's one document and I know that I can  
 (15) handle it in the course of trial so that what I'm going to  
 (16) tell you counsel is you can't set the stage for your  
 (17) cross examination by referring to this particular piece of  
 (18) work you know by using its own language where it says  
 (19) anything about Mr Petumenos or anything like that  
 (20) I think that you can do - you can get your  
 (21) cross examination in by asking direct questions You may very  
 (22) well be able to get some part of this simply by not setting it  
 (23) in the context of an expert consultation report  
 (24) MR OPPENHEIMER I do not intend to use this or any  
 (25) other document to get into communications with counsel

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(1) THE COURT Right  
 (2) MR OPPENHEIMER What I wish to do is examine him on  
 (3) how they - and this has been going on all through the case  
 (4) and I'm sure our experts will be crossed on it too - how you  
 (5) kept some theories or rejected others but has nothing to do  
 (6) with developing a line of questions with respect to counsel  
 (7) THE COURT It seems to me you can probably ask the  
 (8) questions and get the information you want without using this  
 (9) document Now if you had to use it I'm not categorically  
 (10) precluding that I'm doing what I said I would do even with  
 (11) the clearer example don't use it until you tell me you've got  
 (12) to use it and then we'll have a hearing out of the presence of  
 (13) the jury and I'll tell you whether or not you can use it or in  
 (14) what way you can use it But that issue may go right out of  
 (15) the case because you may get the information without having  
 to  
 (16) refer to this document I'd prefer that you do that  
 (17) MR OPPENHEIMER So would I Your Honor If possible  
 (18) THE COURT And if you - if you do that it's to your  
 (19) benefit because I may not let you use it when you tell me it's  
 (20) a terrible emergency So get what you can on the  
 (21) cross examination because it may be all you're going to get  
 (22) MR OPPENHEIMER Understood Your Honor  
 (23) THE COURT What's the next issue?  
 (24) MR McCALLION There was one other document Your  
 (25) Honor which was 15195

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- (1) relevance of and try to put it in perspective in a way that I
- (2) thought was quite fair to both sides
- (3) THE COURT Thank you counsel
- (4) Anything else? Okay I'll - I'm going to - I have to
- (5) think about this and I may redraft one or both of your
- (6) instructions but actually you've given me good ground work for
- (7) that I appreciate both of your work These - I think both
- (8) these instructions might be acceptable to certain judges and
- (9) since I'm a picky judge I'll probably change both of them
- (10) MR STOLL Thank you Your Honor
- (11) MR McCALLION Your Honor if I - excuse me if I
- (12) may briefly report this was an issue which was raised earlier
- (13) regarding objections which plaintiffs had to certain
- (14) cross-examination defendants documents relating to Dr
- (15) Mundy
- (16) which might come up tomorrow hopefully or thereafter
- (17) I'm pleased to report that discussions and correspondence
- (18) with - between counsel I think have narrowed the differences
- (19) relating to those documents and we received correspondence
- (20) from - from counsel indicating they were not going to pursue
- (21) on cross with regard to certain intended marked documents
- (22) and
- (23) we withdraw our objection with regard to defendants
- (24) Exhibit 15528 But by my count - and counsel will correct me
- (25) if I'm wrong - that would leave us with I believe two
- (26) defendants exhibits that have been marked for
- (27) cross examination of Dr Mundy One is DX15501 and the other

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- (1) tell you candidly they are both important documents in the
- (2) cross examination and there are a variety of reasons why I
- (3) don't think 171 has any purpose in precluding them at this
- (4) point
- (5) The redacted version on 15501 in my view is a - is a
- (6) belt and suspenders kind of approach they've taken We've
- (7) removed any references whatsoever to anything that could
- (8) conceivably be treated as a memorialization of any sort of
- (9) conversation with counsel
- (10) What we have here is a memorandum from Bill and that's a
- (11) reference to Mr Mundy - or Dr Mundy and Vicki and that's
- (12) Vicki Adams and this is an internal communication between the
- (13) two of them within their organization It does not pertain to
- (14) a draft report This is long before it
- (15) This is in an area where we have a category of documents
- (16) that have been examined ad nauseum in the case pertaining to
- (17) the presentation and production of basic ideas and theories
- (18) Extensive discovery has gone on into what the parties have
- (19) rejected or not rejected by way of various theories
- (20) The parties have routinely been allowed to inquire into
- (21) what theories have been kept what theories have been rejected
- (22) This is not a communication with counsel It does not disclose
- (23) communications with counsel It is not in connection with -
- (24) it's not a discussion of a draft report It is a very classic
- (25) expert work paper It's very important to our - our

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- (1) is DX15195
- (2) THE COURT Do you have them there?
- (3) MR McCALLION Yes Your Honor And this relates to
- (4) a related matter which came up regarding DM 171 and
- (5) supplemental DM 171 relating to draft reports and
- (6) correspondence with counsel
- (7) THE COURT Right
- (8) MR McCALLION With the Court's permission - or
- (9) counsel's permission with regard to DX15501 I'll give the
- (10) Court both the complete version as well as a proposed
- (11) redacted
- (12) version
- (13) And the other is DX15195 and for ease of consideration
- (14) perhaps I'll leave a copy of supplemental the DM 171 itself
- (15) the order on the supplemental
- (16) THE COURT Okay I remember it but okay
- (17) THE COURT Counsel let's do 15501 first
- (18) MR OPPENHEIMER 15501 okay good
- (19) Your Honor these documents are being discussed and are -
- (20) with all parties being very mindful of ruling 171 so that
- (21) backup is well taken
- (22) And Mr McCallion is right we have engaged - we've gone
- (23) back over in light of the Court's ruling and we have removed
- (24) anything that we thought would run afoul in the Court's
- (25) ruling So some of the exhibits that were earlier designated
- (26) before the motion are gone We're left with these two I'll

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- (1) cross examination and simply not - it just does not implicate
- (2) the rulings DM 171 and again it goes back to last year and
- (3) has been the subject of extensive deposition discovery
- (4) THE COURT Thank you counsel
- (5) Mr McCallion how do you respond with the argument that
- (6) this is not part of the stipulation because it's not -
- (7) MR OPPENHEIMER Do you have the redacted version
- (8) Your Honor?
- (9) THE COURT Yeah I have it That the entire document
- (10) is simply communication between the people in the same
- (11) organization
- (12) MR McCALLION Your Honor the caption of the
- (13) complete report is Re Prince William Sound/Tim Petumenos
- (14) and
- (15) then there's a number attached to it And it's our
- (16) understanding that this document which is an internal
- (17) document
- (18) within Mundy and Associates was a memorialization and used
- (19) the
- (20) conversations and discussions with Mr Petumenos as a spring
- (21) board for this particular analysis
- (22) It is part of the process for the preparation of the scope
- (23) of the report and flows from discussions with counsel which
- (24) it's our belief under DM 171 or at least DM 171 supplemental is
- (25) not a proper subject matter for cross examination of an expert
- (26) witness
- (27) I may add that to my knowledge we have received no
- (28) corresponding documents relating to - relating to or involving

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- (1) With the - I think that this instruction relates to the  
 (2) one that is - that they call defendants proposed jury  
 (3) instruction regarding one shareholder I don't - that's what  
 (4) it's entitled  
 (5) MR DIAMOND That's a typo Your Honor in the haste  
 (6) of putting it together That was supposed to be other pending  
 (7) actions  
 (8) THE COURT Right right  
 (9) MR STOLL Okay Well anyway just so I - and so  
 (10) I - in their proposed instruction their second paragraph I  
 (11) think goes into all of these other issues - or doesn't go into  
 (12) all of them It goes to certain aspects of the other cases and  
 (13) that's the basis of my objection to that  
 (14) I think that in the following page they've got stuff that  
 (15) goes to evidence and so on I don't think that it's really  
 (16) germane I think if you focus on what is in this case and  
 (17) that's what I've tried to do  
 (18) Now with respect to the proposal that they made regarding  
 (19) the number of shareholders I have some very - I think that  
 (20) the proposal that we made that I thought the Court approved  
 (21) on  
 (22) Friday of Exhibit B with the exception that you modified that  
 (23) in two - two areas  
 (24) One was that you deleted the third complete sentence and  
 (25) then later on you - in the instruction I think it's the  
 (26) last - or second to the last sentence you deleted the word

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- (1) limited And I don't have - truthfully I don't have any  
 (2) problem with our first paragraph of their instruction  
 (3) regarding - that's all regarding shareholders  
 (4) The second paragraph I think should be deleted with the  
 (5) exception of the first sentence which I would modify as  
 (6) follows That is I would delete the words for several  
 (7) reasons and add the words I have allowed testimony of a  
 (8) number of shareholders that own stock in some of the plaintiff  
 (9) corporations to assist you in evaluating credibility of those  
 (10) witnesses period  
 (11) Now the rest of this I think is duplicative of that very  
 (12) notion which is what you I believe approved on Friday  
 (13) Later on that same paragraph the second - the end of the  
 (14) first page the end of that instruction this implies I  
 (15) submit that other shareholders will be receiving something in  
 (16) this action In other words when they start about the amount  
 (17) that any individual shareholders might receive from a judgment  
 (18) in favor of the corporation is not something you are to  
 (19) consider It - again I think it puts before the jury that  
 (20) in fact the shareholder may get something and I don't think  
 (21) there's any evidence of that  
 (22) MR DIAMOND Let me start with that instruction  
 (23) first  
 (24) I don't think we're in disagreement as to the first  
 (25) paragraph of defendants proposed jury instruction regarding

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- (1) shareholders The - I went back and added the final sentence  
 (2) of the second paragraph I thought to address plaintiffs  
 (3) concern and to make it explicit what the jury was not su  
 (4) to consider If they don't want that sentence I have no  
 (5) desire to have it read I thought we were trying to refocu  
 (6) the jury and that was the purpose of this Certainly it's not  
 (7) in my interest to have this read  
 (8) The only other real change is I began the second paragraph  
 (9) with for several reasons because as you recall on Friday we  
 (10) discussed that arguably the number of shareholders does have  
 (11) bearing on the number of subsistence users and addresses part  
 (12) of the plaintiffs presentation here that these are lands  
 (13) which were acquired for subsistence use And it's relevant  
 (14) whether we're talking about 80 shareholders or 800  
 (15) shareholders  
 (16) or 8000 shareholders so I just began with for several  
 (17) reasons That's not critical If you want to drop that out  
 (18) and if Mr Stoll prefer it get dropped out I have no problem  
 (19) The third sentence of that paragraph simply states why you  
 (20) are allowing in the information about financial stake and what  
 (21) that has to do with anything and I thought that was simply  
 (22) providing the jury with noncontroversial information that they  
 (23) would want to know The instruction is somewhat incomplete  
 (24) about why you were allowing someone's financial stake you  
 (25) should tell them why  
 (26) This one doesn't strike me as particularly controversial

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- (1) The mistitled jury instruction which we submitted and - I  
 (2) apologize for that but it was added this morning on my way to  
 (3) court We discussed this as well on Friday the need to  
 (4) provide some explanation to this jury as to why they sat  
 (5) through a week of fish testimony and why they have sat through  
 (6) several witnesses already and more to come dealing with  
 (7) subsistence  
 (8) I think we were in agreement on Friday that some sort of  
 (9) instruction as to where that fits in and where it doesn't is  
 (10) necessary and I tried to make this as nonadversarial  
 (11) nonargumentative as it is within my adversarial accord to do  
 (12) but I think this is fairly - fairly low keyed and fairly  
 (13) factual  
 (14) If you look at the plaintiffs alternative all they say is  
 (15) this is a case in which the Native corporations and  
 (16) municipalities are seeking damages to land but that sort of  
 (17) puts us back in the starting blocks What does that mean and  
 (18) how does this evidence tie into land and why would  
 (19) interference with subsistence use be relevant to that and why  
 (20) would loss of subsistence harvest not be something for this  
 (21) jury to consider  
 (22) So this represents our best effort at trying to set forth  
 (23) context of this material provide the jury with some  
 (24) understanding as to why they've heard certain things that  
 (25) they've heard which they may legitimately question the

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## Vol 18 2768

(1) IN THE SUPERIOR COURT FOR THE STATE OF ALASKA  
 (2) THIRD JUDICIAL DISTRICT  
 (4) In re ) Case No JAN 89 2533 Civil  
 ) Anchorage Alaska  
 (5) The FAYON VALDEZ ) Tuesday July 19 1994  
 ) 8 47 a m  
 (6) )  
 (8) VOLUME 18 Pages 2768 through 2912  
 (10) TRANSCRIPT OF PROCEEDINGS (Continued)  
 (11) TRIAL BY JURY  
 (13) BEFORE THE HONORABLE BRIAN C. SHORTELL  
 Superior Court Judge

(16) APPEARANCES  
 (17) FOR THE PLAINTIFF

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(1) PROCEEDINGS  
 (2) (Jury in at 8 47 a m )  
 (3) (Call to Order of the Court)  
 (4) THE COURT Counsel can I see you at the bench just a  
 (5) for a minute?  
 (6) MR. PETUMENOS I'm sorry?  
 (7) THE COURT Would you come up here for a minute?  
 (8) Doesn't take all of you just have a message  
 (9) (Discussion off record at the bench)  
 (10) MR. PETUMENOS Could we have Exhibit 1144 back up on  
 (11) the screen?  
 (12) DIRECT EXAMINATION OF WILMER H. MUNDY (Resumed)  
 (13) BY MR. PETUMENOS  
 (14) Q Dr. Mundy yesterday you pointed out to us that Eklamar was  
 (15) right up here on the northeast part of the Sound and we have a  
 (16) print of that with your little arrow showing where it was  
 (17) When one discusses the impact of a contaminating event on the  
 (18) market is it important to limit have some reasonable limits  
 (19) on the stigma effect of the market by both time and space?  
 (20) A Yes that's important It's part of the analysis uh huh  
 (21) Q And in this instance you have limited your stigma analysis  
 (22) to properties by space within what confines?  
 (23) A Principally the Prince William Sound area and then moving  
 (24) southwesterly along the Kenai Fjords into the Kenai Peninsula  
 (25) area

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(1) Q So basically on this - you have your pen there - the  
 (2) areas in terms of the space that you have limited your stigma  
 (3) analysis to show the jury along the path of the spill where it  
 (4) is that's the northeastern section and then the - there you  
 (5) go  
 (6) A This is just a very rough -  
 (7) Q All right And you in fact were not hired - you're not  
 (8) an appraiser here for the Kodiak landowners there's someone  
 (9) else doing that is that right?  
 (10) A That's correct  
 (11) Q Now in addition to limiting the effects on the market due  
 (12) to a contaminating event of this nature by space you also seek  
 (13) to determine what the time limits are for the period of time  
 (14) that you would analyze the stigma effect on the market is that  
 (15) right?  
 (16) A That's correct  
 (17) Q Could we see please Exhibit Number 1203  
 (18) 1203 is something we saw before which was your summary of  
 (19) the volume of coverage and over time and this is national  
 (20) newspaper index search but you also looked at local coverage  
 (21) as well?  
 (22) A That's correct  
 (23) Q And you also looked at media the electronic TV media  
 (24) coverage as well?  
 (25) A Yes

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- (1) Q And one of the things I wanted to make clear when we re  
 (2) talking about the content of this coverage that you looked at  
 (3) you re not suggesting in the coverage that the coverage that  
 (4) took place was necessarily inaccurate coverage or false  
 (5) coverage or anything like that are you?  
 (6) A No We re dealing with actual coverage real things that  
 (7) have happened  
 (8) Q The same sort -  
 (9) A For example based on the scientific work that was done by  
 (10) ICF and others that the jury has heard about  
 (11) Q So that what you analyze is not just what uncertainty might  
 (12) be created by the scientists that the jury may hear in the  
 (13) courtroom but the extent to which that information makes it to  
 (14) the marketplace?  
 (15) A That s correct  
 (16) Q All right Now could we see the next exhibit please?  
 (17) Tell the jury how you have limited this effect on the  
 (18) marketplace based upon the coverage of these matters by time  
 (19) A There are three different time periods that we have used  
 (20) time periods being one year two years and three years For  
 (21) the areas that were most heavily impacted we used a  
 (22) three year  
 (23) stigma and for areas that were not quite as heavily impacted  
 (24) a two year stigma and then areas that were lightly affected  
 (25) only a one year stigma but this shows I think very clearly  
 (26) this exhibit the fact that the stigma in terms of information

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- (1) that was being received by the marketplace that would  
 influence  
 (2) their behavior was pretty much at an end at the end of 1991  
 (3) Q Now what if the persistence the actual physical  
 (4) persistence on the property extended beyond this period of  
 (5) time  
 (6) of three years according to the information you had from the  
 (7) scientists what did you do then?  
 (8) A Well if the oil was - this was based on the persistence  
 (9) numbers that were received from ICF persistence being the  
 (10) length of time that we would expect the oil to be there  
 (11) influencing market behavior Then that was another  
 (12) consideration that we took into consideration in estimating the  
 (13) period of time that the property would be damaged  
 (14) Q So if we had a persistence that were longer than three  
 (15) years would you be using stigma for that property?  
 (16) A We use stigma for the first three years and then - then  
 (17) for example if we had a persistence for eight years for the  
 (18) first three years we used the stigma impact and then for the  
 (19) fourth through the eighth year we used the persistence effect  
 (20) so we didn t double count  
 (21) Q You didn t count one on top of the other?  
 (22) A No  
 (23) Q It would be a total of eight years for an eight year  
 (24) persistence?  
 (25) A That s right  
 (26) Q But for property like the Eyak properties which are -

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- (1) there s no oil on the beach but there s oil offshore and in the  
 (2) water what did you do for property like the Eyak properties?  
 (3) A We used a one year stigma  
 (4) Q For Tatitlek for those areas that did not have oil on the  
 (5) beach but had oil offshore and on the water affecting those  
 (6) creatures that live there what did you do for that?  
 (7) A We used a wider stigma there too  
 (8) Q In the areas in the western part of the Sound where there  
 (9) was oiling are there some beaches that were - that were  
 (10) physically touched by oil and some beaches that were not?  
 (11) A Yes  
 (12) Q And what would you do with a beach that was not physically  
 (13) touched by oil but was in the middle of an area where oiling  
 (14) occurred?  
 (15) A If the beach was not touched by oil we took - it depends  
 (16) on where the property was but in the western part of the - of  
 (17) the area where there were - was a persistence that was more  
 (18) than three years for the first three years we used the stigma  
 (19) impact And then for years after that we used the persistence  
 (20) effect and the persistence took into consideration the amount  
 (21) of beach that was oiled as well as the severity of the oiling  
 (22) Q Now when we were discussing yesterday how much this  
 (23) land  
 (24) was worth what are we going to do about the fact that the  
 (25) property - at some point in the future the persistence will  
 (26) end according to ICF or Mr Bush or the stigma ends according

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- (1) to you how do you account for the fact that the property  
 (2) eventually comes back to a value similar to the value it had  
 (3) before the spill?  
 (4) A What we have assumed is that at the end of the persistence  
 (5) period the property will be essentially back to a point where  
 (6) the market will not be adversely affected Somebody wanting to  
 (7) buy the property or a person who wanted to borrow some  
 (8) money  
 (9) on the property could buy the property or there was a loan  
 (10) involved and a lender requires a level one audit of the  
 (11) property And the person doing the level one audit of the  
 (12) property would go out and inspect the property They would  
 (13) find that the property is essentially - has been cured There  
 (14) still may well be residue that remains but the residue is in  
 (15) essence inert and it s not creating any harm to the  
 (16) environment  
 (17) After that period of time after the property has  
 (18) remediated we have then applied a two year stigma to the  
 (19) property which accounts for the uncertainty in terms of the  
 (20) marketplace What we re dealing with is a market that is not  
 (21) exact And we re dealing with behavior that is not precise  
 (22) and so we have to deal with uncertainty and risk And what we  
 (23) have done is - and we will talk about this in a bit is to  
 (24) assign a slightly higher risk rate for two years to the  
 (25) property that has been affected by the spill  
 (26) Q Okay you re getting a little ahead of me though because

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- (1) all I wanted the jury to understand is that you did not take a  
 (2) price for the property the day before the spill and a price for  
 (3) the property the day after the spill and subtract the  
 (4) difference  
 (5) A No I did not  
 (6) Q You accounted for the fact that someday the property s  
 (7) going to come back to its original value and you wanted to  
 (8) determine that period of time and the amount of loss of value  
 (9) for that period of time  
 (10) A That s right It s a temporary effect  
 (11) Q Now in order to take a property value and determine over  
 (12) the course of time how much of the property value was lost  
 (13) when it s going to return to its value what do you have to  
 (14) do? Do you have to become involved with something called a  
 (15) lease rate?  
 (16) A Yes  
 (17) Q Or a stream of cash something like that?  
 (18) A Yes  
 (19) Q Explain that to the jury  
 (20) A We re dealing with as I said yesterday a very unique type  
 (21) of valuation problem and that is is we have a lot of land  
 (22) virtually all of the land which is - does not produce an  
 (23) income stream It s not like a property that is improved with  
 (24) a McDonald s or an apartment building and this type of thing  
 (25) where you have an income stream so that you can analyze the

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- (1) income stream We re dealing with a temporary problem and  
 so  
 (2) what we need to do is to figure out some mechanism so that we  
 (3) can figure out a method to calculate the damage to the property  
 (4) over this temporary period of time And so there are a number  
 (5) of approaches that an appraiser uses in estimating value  
 (6) One of those is the income approach and what we have done  
 (7) is we have taken the value of the property we have determined  
 (8) what a typical lease rate would be for real estate and we ve  
 (9) multiplied the value of the property times the lease rate to  
 (10) establish an income stream  
 (11) Q All right And this is something that is common in the  
 (12) appraisal industry to -  
 (13) A Yes it is  
 (14) Q And does it matter that the property wasn t actually going  
 (15) to be leased because it s natural land or land of that nature?  
 (16) A No it does not It s simply a mechanical mechanism by  
 (17) which to estimate value  
 (18) Q Otherwise we can t break the value of the property down  
 (19) year by year?  
 (20) A That s correct  
 (21) Q Could I see exhibit 1205?  
 (22) All right what we re going to build here is the model that  
 (23) you used for doing this task next?  
 (24) A That s correct  
 (25) Q What do we have on the screen so far?

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- (1) A Well we have the title the marketability effect showing  
 (2) that this is how we are going to measure the effect on the  
 (3) marketability of the property that is the sale of the  
 (4) property that has been affected by the spill We have a  
 (5) vertical axis which represents value so this is the value of  
 (6) property  
 (7) Q On the horizontal axis we have what?  
 (8) A Time and this represents the time dimension because some  
 (9) properties were affected for a very short period of time  
 (10) others were affected for a much longer period of time  
 (11) Q And what do we have now?  
 (12) A This next line that we have entitled real dollars shows the  
 (13) value of the property as if it were not affected by any kind of  
 (14) a problem or whatever and in this case by the oil spill  
 (15) Q So this would be the value that you came up with when you  
 (16) did the appraisal the day before the spill?  
 (17) A That would represent the value yes And it would show it  
 (18) in real dollars and show it as a constant line If we used  
 (19) nominal dollars we would have a line increasing slightly to  
 (20) reflect inflation or factor inflation out  
 (21) Q We ll keep it a little bit simpler here We re not talking  
 (22) about the price of the property the way we described it to the  
 (23) jury yesterday because we re breaking it down over time year  
 (24) by year the way you rent property or something like that  
 (25) that -

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- (1) A That s right This would in essence represent an income  
 (2) stream that would be coming into the property on a  
 (3) basis  
 (4) Q Hypothetical income stream?  
 (5) A Yes  
 (6) Q All right Now?  
 (7) A All right We have here a situation where a problem occurs  
 (8) - and this is March 23rd 1989 when the spill takes place -  
 (9) and the value of the property the rent stream that the  
 (10) property would be able to generate at that point in time that  
 (11) is a person coming into the marketplace that was interested in  
 (12) buying the property and we re expressing this in rent would  
 (13) find a great deal of uncertainty They wouldn t know what to  
 (14) expect in terms of the value of this property and how it s  
 (15) going to be impacted by the oil spill and so the value the  
 (16) property in essence becomes unmarketable and there is no  
 rent  
 (17) stream that a person could attribute to the property so it  
 (18) drops to zero  
 (19) Q This would be the period of time when we saw perhaps the  
 (20) video where the gentlemen were on the beach that we showed  
 (21) during - yesterday during your testimony?  
 (22) A That s right  
 (23) Q All right  
 (24) A Now this goes on for a period of time and this period of  
 (25) time represents the period of uncertainty that we re going to

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- (1) see in the marketplace And as I mentioned a bit earlier the  
 (2) period of time is going to vary For some areas like in the  
 (3) eastern part of the Sound it will be relatively short In  
 (4) other areas where there was a substantial oil heavy clean up  
 (5) activity and whatnot it's going to be longer  
 (6) Line three represents a period of time where the market  
 (7) starts to come back to normality It's a period of time where  
 (8) there is enough information that has been assembled by  
 (9) scientists informed people such as Jim Bush at ICF so that  
 (10) they can tell the marketplace that the property is going to  
 (11) be - here is the extent of the effect on the property and a  
 (12) knowledgeable buyer of property can take that information he  
 (13) can assess the risks and he can determine how much he is  
 (14) willing to pay for the property or how much he would be  
 (15) willing to rent the property for  
 (16) Q What if there is - I notice that this arrow doesn't go all  
 (17) the way back yet to the original value of the property What  
 (18) if there is conflict in decision dispute about what the risk  
 (19) is?  
 (20) A It depends on the amount of uncertainty that you have If  
 (21) there is a lot of uncertainty it may not come back at all  
 (22) You may end up with a line staying down at two and not coming  
 (23) back for a long period of time But generally knowledgeable  
 (24) real estate buyers - and that's what we assume in this market  
 (25) value definition - will be able to figure out what the extent

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- (1) and nature of the problem is assess the risk and make a  
 (2) knowledgeable purchase decision  
 (3) Q At point three we still have risk present?  
 (4) A There is substantial risk at this point  
 (5) Q Because the arrow hasn't returned to the real dollars line?  
 (6) A That's right There's still a period of time where the  
 (7) property for example in Prince William Sound is oiled so it  
 (8) has not been remediated There is a lot of ownership risk  
 (9) associated with it but we've gone from a period of uncertainty  
 (10) to a period of risk where we can assess the likely damage  
 (11) Q All right And four and five?  
 (12) A Four and five represents the - four would represent the  
 (13) period of time where the property is remediating We know  
 (14) what  
 (15) the nature of the problem is Five represents the short term  
 (16) stigma that is associated with the property as the ownership  
 (17) risk slowly subsides and becomes or evolves goes back to the  
 (18) normal And value would be then at the real value line  
 (19) Q All right Now I want you to explain to the jury how  
 (20) you - this line across the top that says real dollars that  
 (21) lease rate that income stream?  
 (22) A Yes  
 (23) Q Could we see exhibit 1207?  
 (24) And could you explain to the jury how you arrived at what  
 (25) that amount was for these properties? You've got real dollars  
 (26) to this right?

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- (1) A That's right  
 (2) Q You've got to apply the model What is 1207?  
 (3) A 1207 represents a number of leases There are some 14  
 (4) leases - 15 leases that we have brought together throughout  
 (5) the State of Alaska It is what land is leased for It shows  
 (6) the relationship - well it's the relationship between the  
 (7) value and how much a person pays per year for rent It's the  
 (8) lease rate and the rate varies between around 8 percent to  
 (9) around 10 percent and we have used an average of 9 percent  
 (10) for  
 (11) the annual lease rate So that's what established that real  
 (12) value line  
 (13) Q How did you go about finding the lease rate as between  
 (14) say a commercial office building or vacant land or - how did  
 (15) you go about determining which comparables to use to define  
 (16) the  
 (17) dots here on a chart?  
 (18) A Well there's a fair amount of leasing activity that takes  
 (19) place within the State of Alaska and what we did was a part of  
 (20) your data research program We went around and talked to  
 (21) people who leased property people who own property that  
 (22) they  
 (23) lease to find information on what lease rates were For  
 (24) example the Alaska Railroad leases a lot of property and we  
 (25) compiled that data and developed this information  
 (26) Q Could I see Exhibit Number 1206 please?  
 (27) Now this looks real complicated so we're going to break  
 (28) this down We've now described how far along the time the

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- (1) bottom line of your model how far we go based upon the ICF  
 (2) persistence and based upon your stigma analysis That  
 (3) determined how far we went into the future before the property  
 (4) came back to its original value?  
 (5) A Yes  
 (6) Q We've explained to the jury how you arrived at the amount  
 (7) of income stream for each property using this lease business  
 (8) with - with the percentage of the total value right?  
 (9) A Correct  
 (10) Q Now let's go to a specific example and we're talking here  
 (11) about Chenega Island?  
 (12) A Correct  
 (13) Q And why don't you feel free to use the pen and blow up the  
 (14) chart here to explain how you would have applied this model to  
 (15) the Chenega Island a parcel size of 15 630 acres?  
 (16) A Fine  
 (17) Q What we're going to do here Members of the Jury we're not  
 (18) going to show you obviously each parcel that would take a  
 (19) long  
 (20) time We're going to take one take you through it in detail  
 (21) so you can get the understanding of how - how it works with  
 (22) respect to one parcel in detail  
 (23) Go ahead  
 (24) A There are - just to begin this is a spread sheet  
 (25) developed from a computer and there are some 90 spread  
 (26) sheets  
 (27) that we have developed that relate to the various ownerships

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- (1) and what we'll do is I'll just show you some of the  
 (2) information  
 (3) Q Why don't we blow it up rather than highlight it?  
 (4) A That's what I'm trying to do. Here we go  
 (5) Q Okay  
 (6) A So this shows some information on the Chenega Island  
 (7) property. It's owned by the Chenega Corporation. It's 15,630  
 (8) acres - acres in this parcel. The persistence is 8.45 years  
 (9) That's from ICF. The shoreline length for the property is  
 (10) 246,000 and some feet. The amount of oiled shoreline is  
 (11) 100,000 feet. The stigma period, this being in the western  
 (12) part of the Sound where property was actually oiled, is three  
 (13) years. The impairment ratio is 40 percent. The impairment  
 (14) ratio represents the relationship between the oiled shoreline  
 (15) - oiled shoreline divided by the shoreline length. So that  
 (16) is what the impairment ratio is.  
 (17) Q Take off the color first and then do it.  
 (18) A Color off. All right.  
 (19) Now then, the first thing that we did is to summarize the  
 (20) value of the property and that's shown in that little box that  
 (21) I just outlined. So this particular property - and we've  
 (22) already been through this once - there's 36 acres of  
 (23) archaeology at \$3500 an acre. No high amenity land. 15,594  
 (24) acres of natural land at \$950 an acre, and so that came to 14.9  
 (25) million dollars, that's the value of this particular property.

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- (1) So that is a property as - the value of the property as if it  
 (2) had not been affected, the March 23rd, 1989 value.  
 (3) The second step involves estimating the damage. Now we get  
 (4) into what is the impairment that has resulted. And you'll  
 (5) recall in the prior screen we had some archaeology. We had 36  
 (6) acres of archaeology. It's our opinion that the archaeology  
 (7) has been permanently impaired, that is, there's a change in the  
 (8) highest and best use of the archaeology because the site is  
 (9) going to have to be excavated, and so it's not going to be an  
 (10) archaeological site anymore. This parcel is principally - or  
 (11) it's all natural land, except for the archaeology, so what  
 (12) we've done is we've taken the 36 acres out of the archaeology  
 (13) category and put it into the natural land category, so all of  
 (14) the land now is valued as if it were natural land at \$950 an  
 (15) acre.  
 (16) The second step is to deal with the impairment of the beach  
 (17) and how the persistence factor is going to play into value and  
 (18) how the stigma is going to affect value. Well, the first row  
 (19) here shows a value for the property of 14.8 million dollars.  
 (20) That's the value if it were not affected by the spill. We just  
 (21) talked about the 9 percent lease rate. The 9 percent lease  
 (22) rate times the value gives the land rent. So that's 1.3  
 (23) million dollars. So what we've done is we've converted value  
 (24) into an income stream. Now we have the annual income  
 (25) stream.  
 (26) We then go to two different columns, column one and column

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- (1) two - well, actually column two is this column right here  
 (2) Column one shows the value of the unimpaired income stream  
 (3) and so what we do is we take year one, here's the income of 1.3  
 (4) million, just carry this down to year one, Year one, 1.3  
 (5) million, Year two, 1.3 million, et cetera. We use a 30 year  
 (6) time frame.  
 (7) Q This allows you to determine when the property gets back to  
 (8) its original value?  
 (9) A No. This is as if there was no impairment on the value at  
 (10) all. This is the straight line on the marketability.  
 (11) Q I understand, but when we saw the impaired income stream  
 (12) when it gets back to the level of the unimpaired, where are we  
 (13) at?  
 (14) A That's correct. We'll be back to this number again, and  
 (15) I'll have to expand the screen a little bit to show that what  
 (16) we do is take - there's a process that an appraiser uses and  
 (17) that is to - when a person buys a property, be it a residence  
 (18) or income producing property, they pay an amount today to  
 (19) take advantage of the future use of that property.  
 (20) For an apartment building, you pay an amount today to enjoy  
 (21) the future income stream, so the amount I pay today is the  
 (22) present value of all of the future benefits that I'm going to  
 (23) get from the property. So what we do here is we calculate  
 (24) what's the present value of this income stream, and we use a  
 (25) market discount rate of 9.4 percent. And the market discount

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- (1) rate is a rate that is taken from various market evidence, and  
 (2) if we want to see that, we can see it on exhibit 1208, and we  
 (3) can come back to that.  
 (4) So that calculates the discounted present value. I'm going  
 (5) to stay with this one color since we're doing a pretty good job  
 (6) of making it work. 13.2 million dollars, so that's the value  
 (7) of this 30 year income stream. And you'll notice that it  
 (8) varies a little bit from the value that we originally  
 (9) calculated, 14.8 million. The reason for the variance is that  
 (10) we're dealing just with 30 years, and if we dealt with an  
 (11) infinite period of time, it would come back to 14.8 million.  
 (12) Q Another way of describing this discount rate is to say that  
 (13) if a person were to pay for the right to receive this income  
 (14) over time, you would have to apply this discount rate to  
 (15) determine how much they would pay now?  
 (16) A That's right. That's a market rate. It's how much I will  
 (17) pay today to receive income. The same that you do when you  
 (18) buy some stock. If it's a dividend generating stock, you pay an  
 (19) amount today, there's a dividend rate for the stock, you get a  
 (20) certain amount of income. You can sell that stock at a future  
 (21) point in time. The same thing with real estate.  
 (22) Q All right. Then I'm ready for the impaired income column.  
 (23) A Okay. Now the next column, the second column - I'll call  
 (24) this second column - the second column shows the income  
 (25) stream because of the impairment of the property. And I

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- (1) mentioned earlier that we had a three year stigma It s my  
 (2) belief that the property would not be able to generate any  
 (3) income for three years that is a person considering leasing a  
 (4) property and having the option of leasing a property in Prince  
 (5) William Sound versus somewhere else – especially a property  
 (6) like Chenega Island where all the oil was – would go someplace  
 (7) else They would not buy the property They would not lease  
 (8) the property here It would not be a marketable property  
 (9) Q They d find some alternative somewhere else?  
 (10) A That s right And so for three years we have an income of  
 (11) nothing  
 (12) Then in the fourth year we do have an income of  
 (13) \$794 000 This represents the 1 3 million times the impairment  
 (14) ratio Remember the impairment ratio measured the amount of  
 (15) oiled beach to the total amount of water frontage that was  
 (16) affected so we re – in this case it was about 40 percent that  
 (17) was affected and so the 794 000 represents 60 percent of the  
 (18) income – 40 percent is not shown 60 percent is shown – so  
 (19) this is 60 percent of the 1 3 million  
 (20) Now what we re working for looking or trying to get to  
 (21) is this number right over here The next thing that we use is  
 (22) a discount rate  
 (23) Q Why do we need a discount rate?  
 (24) A Because as in this first case we discounted the income  
 (25) back at a 9 4 percent rate right here We used this 9 4

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- (1) percent rate Now what we have is an investment that is  
 (2) oiled We ve got a property that is oiled The persistence  
 (3) period is running but we re saying that the utility has come  
 (4) back  
 (5) Remember in that little marketability chart for number  
 (6) three the arrow went back up said that the scientists had  
 (7) done their research Now we know the nature of the  
 (8) contamination problem and we can make an informed  
 (9) decision  
 (10) the marketplace can make an informed decision  
 (11) So we re saying that the property now is marketable  
 (12) However there is a price penalty that that property is going  
 (13) to suffer A person will not pay full value for it It s  
 (14) still oiled but they ll pay a part of the value for it And  
 (15) so part of the value is represented in the fact that the income  
 (16) stream is less The second aspect is the fact that the risk  
 (17) rate is higher  
 (18) We re buying a property where there s elevated amount of  
 (19) risk And the 13 4 percent which is – I m going to change  
 (20) the color on this thing – this number right here 13 4 percent  
 (21) represents a risk rate It s our opinion of what an  
 (22) appropriate risk rate would be given the nature of this  
 (23) property It s based on a number of different types of  
 (24) evidence high yield corporate bonds as well as a technique  
 (25) that appraisers use to calculate rates called the Band of  
 Investment Technique But anyway we arrived at the 13 4

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- (1) percent rate and here we discount the income stream on a  
 (2) year by year basis  
 (3) What I m going to do is –  
 (4) Q Do you need to take the color off?  
 (5) A I m going to expand this so that we can see what s going on  
 (6) for more than eight years  
 (7) So we have a high risk rate that runs for eight years  
 (8) Eight years is the persistence period And this income is  
 (9) discounted using this discount rate using this discount rate  
 (10) which translates into a factor A factor is something you can  
 (11) multiply by A rate is something you divide by  
 (12) What we do is just convert this rate into a factor and  
 (13) then we multiply the factor – in this case in the eighth year  
 (14) – 38 times the impaired income to get what the present value  
 (15) of that income would be  
 (16) Q For that year?  
 (17) A Today in the eighth year So that tells me that \$704 000  
 (18) in year eight is worth \$290 000 today  
 (19) Q Now one of the things I want you to point out to the jury  
 (20) here is that despite the fact that this chart goes on for 30  
 (21) years or something like that at the end of – or at year  
 (22) nine we re back to the original value of the property am I  
 (23) right?  
 (24) A That s right Go back to the original value of the  
 (25) property at year nine That s – the persistence period has

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- (1) ended but we still have this stigma this remaining residual  
 (2) uncertainty to deal with We don t know whether the property  
 (3) is really cleaned or not has it completely bioremediated  
 (4) itself So what we do is we use a slightly higher risk rate  
 (5) for two years rather than 13 4 percent we drop the rate down  
 (6) by two points to 11 4 percent So we discount this income  
 (7) stream at 11 4 percent to get the present value in the ninth  
 (8) and tenth year  
 (9) Q And then by year 11 is it –  
 (10) A Year 11 everything is back to normal  
 (11) Q And there are no further damages according to your  
 (12) calculation after year 11 on this parcel?  
 (13) A So what we do is take the stream of income in this last  
 (14) column which is labeled DPV which stands for discounted  
 (15) present value and we sum –  
 (16) Q Add them up?  
 (17) A We add them up and it comes to 7 88 million dollars The  
 (18) damage then is the difference between the 13 2 million and  
 (19) the 7 88 million  
 (20) Q The difference in the income stream that the property would  
 (21) have had without the event contaminating event versus what  
 (22) you think it – what you re determining it would be with the  
 (23) contaminating event?  
 (24) A That s correct  
 (25) Q So then the final answer is?

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- (1) A So this is all summarized then in the bottom part of the  
 (2) table which is the damage conclusion And we have the  
 change  
 (3) in the highest and best use which we talked about and that  
 (4) was \$91 800  
 (5) Q Now when we see HBU on this chart we re talking about -  
 (6) A Highest and best use change in highest and best use And  
 (7) then the part that we just finished talking about is the  
 (8) economic rent loss and that was the difference between the  
 (9) 13 2 million and the 7 6 approximately and that is 5 5  
 (10) million so we add the change in the highest and best use  
 (11) Q That s from the archaeology?  
 (12) A From the archaeology to the economic rent loss which is  
 (13) the persistence period and the residual stigma and we come  
 up  
 (14) with a total damage then of this parcel for 5 6 million  
 (15) dollars  
 (16) Q All right Now with respect to the archaeological highest  
 (17) and best use problem you re not an archaeologist?  
 (18) A No  
 (19) Q But you relied upon the work of archaeologists that you  
 (20) work with?  
 (21) A We relied upon the work of Dr Lob - Jack Lobdel and  
 (22) Dr Lora Johnson  
 (23) Q And those are people the jury hasn t heard from yet so I  
 (24) wanted the jury to understand this is - the decision that an  
 (25) area had to be excavated was not made by you but by one of

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- (1) them right?  
 (2) A That s correct  
 (3) Q All right I d like to go back if I could to  
 (4) Exhibit 1196  
 (5) One of the things that I noticed in the analysis that  
 (6) you ve done is that we re dealing with very large amounts of  
 (7) acreage here  
 (8) A Yes  
 (9) Q Large and the last thing that we have on how contamination  
 (10) affects value is parcel unity What do you mean by parcel  
 (11) unity since we haven t talked about that?  
 (12) A Parcel unity deals with the property that is being valued  
 (13) and we just talked about the Chenega Island property that  
 (14) contains some 15 630 acres Well that property consists of  
 (15) two components It s got the beach front component to it and  
 (16) then it s got the back land component and the - the whole  
 (17) property works as a system And in classifying property and  
 (18) analyzing property that is what a appraiser focuses on It s  
 (19) what the market deals with It s for example like a home  
 (20) and you ve got a property that s got a house in the middle and  
 (21) a front yard and a back yard When you value the property you  
 (22) don t just value the front yard you value the whole You  
 (23) value the lot and the improvements that are on it  
 (24) Well in valuing the subject properties we valued the  
 (25) entire property We valued the property as a unit And we

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- (1) analyzed what the effect on the entire unit would be because of  
 (2) the oil  
 (3) Q Is the property that we re concerned with with these  
 (4) Native corporations oriented towards the water? Is it  
 (5) marine oriented property?  
 (6) A Yes  
 (7) Q If we were to take an analogy of say a property that is a  
 (8) house on a - in a recreational area does the fact that the -  
 (9) that the house which may have its value in part because of  
 (10) the - its proximity to the water does it have to be on the  
 (11) shoreline itself if it were a quarter mile inland In order  
 (12) to be harmed in its value by a contaminating event on the  
 (13) shoreline?  
 (14) A If it was a contaminating event on the shoreline  
 (15) properties that are a quarter mile in where they impact with  
 (16) the shoreline would certainly be impacted  
 (17) Q So like a hotel or guest house or restaurant that depended  
 (18) upon the ocean for its economics if it were not on the shore  
 (19) it wouldn t matter it would still be affected?  
 (20) A That s correct  
 (21) Q All right Now what about when you re dealing with  
 (22) wilderness properties natural land Is it any different?  
 (23) A It s not different whatsoever It s an entire system You  
 (24) can look at property as a system It s all interlinked It  
 (25) interacts amongst - various parts interact amongst one

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- (1) another and it doesn t make any difference whether it s a high  
 (2) amenity parcel or a natural land parcel  
 (3) Q Based upon your land when the Native corporations say  
 (4) took LaTouche Island is it a fair process to divide LaTouche  
 (5) Island up to the mountaintops and ice on the top and say we  
 (6) can t count those acres or is there a different way of looking  
 (7) at it?  
 (8) A In my opinion you look at the whole It s the entire  
 (9) integrated unit It works together For example bears rely  
 (10) on the beach front for fishing the stream areas for fishing  
 (11) MR OPPENHEIMER Your Honor I d object on the  
 (12) grounds of foundation and hearsay  
 (13) THE COURT The objection s overruled counsel  
 (14) A They rely on the back land for their denning areas The  
 (15) entire system works as a unit and that s why we call it the  
 (16) unit rule  
 (17) BY MR PETUMENOS  
 (18) Q And when natural land is exchanged or bought and sold in  
 (19) the market Is it sold bought and sold in those ways like  
 (20) entire islands as opposed to this part not that part the  
 (21) mountains not the beach?  
 (22) A That s correct I mean we talked earlier about the  
 (23) importance of an intact ecosystem That is what the buyer of  
 (24) that property wants  
 (25) Q All right

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- (1) MR PETUMENOS Your Honor I don't know when you want  
 (2) to take breaks  
 (3) THE COURT It's a perfect time  
 (4) THE CLERK Please rise This court stands in  
 (5) recess  
 (6) (Jury out at 9 34 a m )  
 (7) (Recess from 9 34 a m to 9 48 a m )  
 (8) (Jury in at 9 48 a m )  
 (9) THE CLERK Please rise This court now resumes its  
 (10) session  
 (11) Please be seated  
 (12) BY MR PETUMENOS  
 (13) Q Dr Mundy are you all hooked up there?  
 (14) A All hooked up and ready to go  
 (15) Q Okay Now the subsurface calculation that you made for  
 (16) the subsurface estate damages did you follow the same  
 (17) methodology that you did for the surface calculation?  
 (18) A Yes we did  
 (19) Q And just to clarify the subsurface estate as we were  
 (20) talking yesterday about the split estate if someone wanted to  
 (21) build a house in the village or something like that they  
 (22) wouldn't have to contact the subsurface owner to lay a  
 (23) foundation?  
 (24) A No  
 (25) Q But if a party in the marketplace wanted to have a parcel

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- (1) A That's correct  
 (2) Q And we see for example Chenega Island here the fourth  
 (3) one down  
 (4) A That's correct  
 (5) Q You won't be able to write on it because we're on the  
 (6) Elmo --  
 (7) So if the jury looks at the spread sheet for Chenega Island  
 (8) and compares the numbers there they'll see that it matches up  
 (9) with this one?  
 (10) A That's correct  
 (11) Q And all of the other spread sheets that we have here have  
 (12) been turned over to Exxon counsel and are available for them to  
 (13) use to cross examine?  
 (14) A That's correct  
 (15) Q And are part of your report which has also been turned  
 (16) over to them?  
 (17) A Yes  
 (18) Q All right Could I have the next in order please? And  
 (19) off the Elmo  
 (20) What is --  
 (21) A This is the same table except it's for the English Bay  
 (22) Corporation so it shows the parcels and for our column on the  
 (23) right the damages which sum to 10.6 million dollars  
 (24) MR PETUMENOS Your Honor for the record that was  
 (25) Exhibit 1211

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- (1) for a park and they wanted to be sure that it wasn't mined or  
 (2) wasn't dug up they wanted to have a park for a conservation  
 (3) area they would have to purchase both the surface and the  
 (4) subsurface estate to prevent that from happening?  
 (5) A That is correct That is correct  
 (6) Q I wonder if we could then go to exhibit 1213 Could I  
 (7) have the Elmo please?  
 (8) And what is Exhibit 1213?  
 (9) A This exhibit shows for the Chenega Corporation the  
 (10) various parcels as we've identified them What the unimpaired  
 (11) value of the parcel is what the impaired value is and what  
 (12) the damage is And so this is a summary for each corporation  
 (13) This represents one of the six corporations of the damages  
 (14) that we investigated because of the spill  
 (15) Q All right Now I notice that when we say now unimpaired  
 (16) and impaired in these columns we're no longer talking about  
 (17) the entire price we're talking about this income stream  
 (18) unimpaired and impaired that we've described right?  
 (19) A This is -- this is not the income This is the value now  
 (20) We've gone from income back to value That's what we did in  
 (21) that prior spread sheet we spent so much time discussing  
 (22) Q With the impaired with the discount rates and so forth?  
 (23) A Discount present value yes  
 (24) Q And it takes into account the property goes back to its  
 (25) normal marketplace normal situation in a number of years?

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- (1) BY MR PETUMENOS  
 (2) Q Now I'm going to show you Exhibit 1212 What is  
 (3) Exhibit 1212?  
 (4) A This is for the Port Graham Corporation shows the various  
 (5) parcels the damages which sum to 16.3 million -- 16.3 million  
 (6) dollars on a rounded basis  
 (7) Q Exhibit 1214?  
 (8) A This is for the Chugach Alaska Corporation It shows their  
 (9) parcels the damages which sum to 17.4 million  
 (10) Q And for the purposes of this chart we're dealing with the  
 (11) surface estate right?  
 (12) A That's correct  
 (13) Q Exhibit 1215?  
 (14) A This is the same thing for the Eyak Corporation the  
 (15) damages 4.6 million dollars on a rounded basis  
 (16) Q And I notice for the Eyak Corporation we're dealing with  
 (17) the Eyak Corporation with stigma as opposed to the persistence  
 (18) curves because Eyak didn't have physical oil on the shoreline  
 (19) right?  
 (20) A That is correct  
 (21) Q And that is why the damages ultimately for Eyak are  
 (22) substantially less than for the other corporations?  
 (23) A Yes  
 (24) Q And Exhibit 1216?  
 (25) A This is for the Tatitlek Corporation It also is a stigma

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- (1) damage issue The damage 4 9 million  
 (2) Q And finally Exhibit 1217  
 (3) Could I have the Elmo please  
 (4) What is 1217?  
 (5) A This exhibit summarizes the exhibits which we have just  
 (6) seen on a corporation basis and the right hand column shows  
 (7) what the total damages are Toward the bottom the next to the  
 (8) last entry is Chugach SSE That s the damage to the  
 subsurface  
 (9) estate the estate that Chugach owns throughout the Prince  
 (10) William Sound/Kenai Fjords/Peninsula area The total damage  
 (11) in our opinion is 86 75 million dollars  
 (12) Q And for the Chugach Subsurface Estate we re talking about  
 (13) acreage that exists under all of the surface estates which is  
 (14) - what is on the upper portion right?  
 (15) A That is correct  
 (16) Q So on a per acre basis that s a relatively small amount  
 (17) but there are a lot of acres?  
 (18) A Yes  
 (19) Q All right Now one of the things that - or some of the  
 (20) things the jury has heard here are evidence of damage that may  
 (21) be for some of the resources relevant to this land that may be  
 (22) genetic in nature that may have a permanent impact Does  
 your  
 (23) calculation that you ve done take into account some of these  
 (24) issues relating to potential permanent damages that the jury  
 (25) may have heard?

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- (1) A No it does not  
 (2) Q And what you have done is look at the information from  
 (3) Mr Bush with respect to the persistence as he sees it and as  
 (4) you and he have worked that out?  
 (5) A That persistence plus the stigma that we ve also used  
 (6) yes That sets that relatively short time frame  
 (7) Q So if there is uncertainty that is continuing with respect  
 (8) to those issues that would be - that continues beyond  
 (9) those - that period of time that you and Mr Bush came up  
 (10) with that is not accounted for in your damage calculation  
 (11) here?  
 (12) A That s correct it s not  
 (13) Q One other point and that is you understand that this land  
 (14) also supports a subsistence value?  
 (15) A Correct  
 (16) Q And the subsistence component of the land has value as  
 (17) well?  
 (18) A That is correct it does  
 (19) Q And in arriving at your damage figures have you considered  
 (20) as a - as a dollar value factor the amount that subsistence  
 (21) plays in the course of this analysis either in determining  
 (22) highest and best use or in any other way?  
 (23) A No Subsistence values have not been added to the values  
 (24) or the damages which we have estimated  
 (25) Q But nevertheless in your opinion the subsistence value of

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- (1) the land is an important value?  
 (2) A It s a very important value yes  
 (3) MR PETUMENOS Your Honor I have no further direct  
 (4) MR OPPENHEIMER Would you leave - would you leave  
 (5) that exhibit?  
 (6) MR OPPENHEIMER Dr Mundy good morning We ve met  
 (7) before I m Randy Oppenheimer  
 (8) A Good morning  
 (9) CROSS EXAMINATION OF WILMER H MUNDY  
 (10) BY MR OPPENHEIMER  
 (11) Q I d like to ask you a few questions with respect to this  
 (12) chart just to start out here  
 (13) This is your value and damage summary this is all of the  
 (14) entities in question and these this column over here, these  
 (15) are all the damages is that correct the far column?  
 (16) A The far right column that s correct  
 (17) Q Far right column okay Let me just ask a few quick  
 (18) questions to get oriented here  
 (19) Chugach SSE subsurface estate underground correct?  
 (20) A Correct  
 (21) Q Seven and a half million dollars give or take?  
 (22) A That s correct  
 (23) Q Okay Now isn t it the case that a fair percentage of that  
 (24) subsurface estate is under what you called natural lands?  
 (25) A Yes

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- (1) Q In fact about 35 6 percent of it is under natural lands  
 (2) isn t that correct?  
 (3) A Yes  
 (4) Q And isn t it also your view that the one thing that no one  
 (5) would want to do is to dig up natural land?  
 (6) A That s correct  
 (7) Q Okay So a part of that seven and a half million dollars  
 (8) that you say is part of the damages here is for - is for  
 (9) minerals and gravels and whatever happens to be under the  
 (10) ground under land that is not going to be dug up if it s  
 (11) being used according to its highest and best use?  
 (12) A Well it wouldn t be dug up but it wouldn t be dug up  
 (13) because the purchaser would acquire the subsurface estate to  
 (14) make sure that it wasn t dug up If they acquired the surface  
 (15) estate then they would have no assurance that the subsurface  
 (16) estate wouldn t be altered so that s the reason that they re  
 (17) going to buy the whole rather than just a part  
 (18) Q There s no question in your mind that the minerals the  
 (19) gravels whatever s in the subsurface estate under natural  
 (20) lands that the Native corporations are never going to let that  
 (21) be dug up as long as they own natural lands no doubt in your  
 (22) mind?  
 (23) A I don t know what is going to happen in the future in terms  
 (24) of the subsurface estate  
 (25) Q They d have to change their - the lands that they dug up

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- (1) though into some other category besides natural lands  
 (2) wouldn't they if they did that?  
 (3) A Well I think that it would depend a lot on what happened  
 (4) in terms of the digging up activity  
 (5) Now if there were major excavations major open pit mining  
 (6) that would take place this type of thing that would  
 (7) certainly - I would certainly change my opinion regarding the  
 (8) highest and best use of that property to something other than  
 (9) natural land So I would classify it as for example having a  
 (10) highest and best use of minerals rather than natural land  
 (11) Natural land is based on the assumption that it's going to stay  
 (12) in its natural state  
 (13) Q Pristine condition?  
 (14) A And a conservancy organization for example acquiring it  
 (15) or to acquire the fee estate the surface as well as the  
 (16) subsurface to make sure that it did stay in that natural  
 (17) condition  
 (18) Q Okay Let me ask you about Eyak and Tatitlek You have a  
 (19) four and a half million dollar figure and almost a five million  
 (20) dollar figure there and I believe you've told us that that's  
 (21) for purposes of your calculation unoiled land is that right?  
 (22) A That is correct There was a very light oiling that took  
 (23) place on some of Tatitlek's land  
 (24) Q I'd like to go back to the worksheet which I believe is  
 (25) Exhibit 1206 if I may

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- (1) sent a letter to a number of people who we have done business  
 (2) with - who we'd done business with in the past and this was  
 (3) shortly after the oil spill indicating to them the work that  
 (4) we have done in valuing environmentally impaired property  
 (5) suggesting to them that there may be some substantial damage  
 (6) that their property could well incur because of the spill and  
 (7) that I would be happy to meet with them and discuss how we  
 (8) could be of service to them We're a - a service  
 (9) organization They were clients of ours seemed like a natural  
 (10) topic to bring up  
 (11) Q And the topic we're talking about is your firm's providing  
 (12) appraisal services to give a damage number to their land?  
 (13) A Helping them understand the extent to which their property  
 (14) had been damaged from a valuation standpoint  
 (15) MR OPPENHEIMER Counsel 13023  
 (16) Your Honor may I approach the witness?  
 (17) THE COURT Yes  
 (18) BY MR OPPENHEIMER  
 (19) Q Dr Mundy I'd like to show you a letter dated March 30  
 (20) 1989 to Mr Pio Park Tell me if you recognize that please  
 (21) A Yes This is our letter that is dated March 30th to  
 (22) Mr Pio Park Chugach Alaska Corporation Three pages in  
 (23) length signed by myself  
 (24) Q And what - when was the oil spill?  
 (25) A It - I believe it was March 23rd 1989

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- (1) Now you recognize this this is the worksheet that you  
 (2) were describing to us earlier is that right?  
 (3) A That's right for the Chenega  
 (4) Q Just one very simple point about this worksheet You're  
 (5) saying these numbers are an analysis of the revenue stream  
 (6) that comes in on the property and then you discount it to a value  
 (7) is that right?  
 (8) A A hypothetical revenue stream  
 (9) Q A hypothetical revenue stream?  
 (10) A That's correct  
 (11) Q There is not a single number on this worksheet that  
 (12) represents any actual income isn't that right?  
 (13) A That's correct  
 (14) Q Not a single one - I just want to be sure there's not -  
 (15) am I right there's not a single revenue number there - If I'm  
 (16) not missing anything - that is an actual revenue number?  
 (17) A No that's correct  
 (18) Q All right thank you  
 (19) I'd like to go back to how you got involved in doing your  
 (20) work in this case in the first place and just - just talk to  
 (21) you a little bit about that  
 (22) You - you solicited the plaintiffs in this case to be an  
 (23) expert and to provide a damage calculation for them did you  
 (24) not?  
 (25) A Well I don't think I would use the term solicited I

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- (1) Q Well maybe the 24th?  
 (2) A 23rd 24th  
 (3) Q And the first page of your letter reflects you had a  
 (4) conversation with Mr Pio (sic) on the 28th is that correct?  
 (5) A That's correct  
 (6) Q And Mr Pio (sic) is with the Chugach Alaska Corporation?  
 (7) A Mr Park is with the Chugach Alaska Corporation  
 (8) Q Pardon me Park Pio Park  
 (9) A That's correct  
 (10) Q So four days after the spill - were you in his office?  
 (11) A Yes  
 (12) Q So four days after the spill you're in Mr Park's office  
 (13) seeing if you can help him calculate damages?  
 (14) A Four days after the spill I was talking with Mr Park I  
 (15) was here in Alaska on other business and in fact I think some  
 (16) of the business actually involved the Chugach Alaska  
 (17) Corporation and I discussed this matter with Mr Park  
 (18) Q And on the 30th you sent this follow up letter which you  
 (19) have on your table there dated March 30 1989 Exhibit 13023  
 (20) is that right?  
 (21) A That's correct  
 (22) Q Would you turn to the last page of that letter Page 3 and  
 (23) I'm going to try to use this machine How am I doing? Oh  
 (24) good  
 (25) Now this is part of - the last part of the letter that

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- (1) you sent Mr Park after you spoke with him We re now talking  
 (2) March 30 right?  
 (3) A That s correct  
 (4) Q Just about a week after the spill?  
 (5) A Yes  
 (6) Q And forego the highlighting for a second I think we can  
 (7) read it here  
 (8) MS SMITH No you ve got it now  
 (9) MR OPPENHEIMER Oh I have Thank you  
 (10) MR OPPENHEIMER You know I m going to leave this  
 (11) alone If I do anymore of this I ll be totally  
 (12) incomprehensible Let me walk over  
 (13) BY MR OPPENHEIMER  
 (14) Q You see this on your screen don t you?  
 (15) A I can highlight it for you if you d like me to  
 (16) Q Would you do that for me please? Would you highlight the  
 (17) first sentence? Thank you You re much better at this than  
 (18) I  
 (19) A Well I don t know if the highlighter s on or not  
 (20) Q Well I tell you what I ll study up a little bit at the  
 (21) break and hopefully I ll do better  
 (22) A Here we go  
 (23) Q I tell you what that I think is going to produce -  
 (24) MR PETUMENOS When he picks it up it s going to be  
 (25) fine

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- (1) MR OPPENHEIMER It will? Okay So I don t have to  
 (2) panic  
 (3) BY MR OPPENHEIMER  
 (4) Q Let s leave it that way it s easier to read  
 (5) You say here when you re writing within the first week  
 (6) after the spill to Mr Park whom you re visiting to see if you  
 (7) can work for him it s highly probable that because of this  
 (8) spill there will be a significant value impact on those lands  
 (9) which are affected by the spill You wrote that to Mr Park?  
 (10) A That s correct  
 (11) Q Now at that time you hadn t made any scientific inquiry of  
 (12) what had happened with the spill had you?  
 (13) A No I did not make any scientific inquiries at all  
 (14) Q You hadn t been out to the land had you?  
 (15) A I had not been to the land I saw quite a bit of  
 (16) television coverage of what was happening and also I was very  
 (17) familiar with the lands as I had visited the area several  
 (18) times before  
 (19) Q Right And you hadn t talked to any scientists had you  
 (20) at that time?  
 (21) A Not that I can recall It was - I may well have It was  
 (22) during that period of time that I talked with ICF and I can t  
 (23) remember if it was at that meeting or one shortly thereafter  
 (24) that I talked with ICF But regardless based on my experience  
 (25) in dealing with environmentally impaired property I - and the

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- (1) coverage of what was going on I observed it and it appeared  
 (2) to me that there was no doubt that the market value of the  
 (3) property was going to be impaired  
 (4) Q No doubt in your mind whatsoever right?  
 (5) A That s correct  
 (6) Q Let s jump forward a little bit You - you pitched your  
 (7) services to the State of Alaska as well not just to Mr Park?  
 (8) A I also discussed this with the State of Alaska Because I  
 (9) was aware that they had property that they owned In fact I  
 (10) think I sent them a letter very similar to the one that I sent  
 (11) to Mr Park  
 (12) Q It s a little different let s take a look at it  
 (13) MR OPPENHEIMER Well actually counsel Exhibit  
 (14) 13029  
 (15) MR STOLL 02 what?  
 (16) MR OPPENHEIMER 029  
 (17) BY MR OPPENHEIMER  
 (18) Q Dr Mundy this is a letter dated June 16 1989 to Gary  
 (19) Gustafson and Dennis Latterley at the State of Alaska  
 (20) Department of Natural Resources I wonder if you would  
 (21) identify that for me please  
 (22) A This is a letter dated June 16th 1989 to Gary Gustafson  
 (23) and Dennis Latterley State of Department - Department of  
 (24) Natural Resources three pages in length signed by myself  
 (25) Q Okay So this is a little farther into the summer The

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- (1) spill s in March it s now June you re writing to the State to  
 (2) see if they ll hire you to do appraisal work in connection with  
 (3) this case for their damages correct?  
 (4) A Exploring that possibility yes  
 (5) Q Exploring that possibility In fact they did not hire  
 (6) you is that correct?  
 (7) A That s correct  
 (8) Q Now as of this time you re proposing something to them  
 (9) aren t you? I mean you ve already explained to us that in  
 (10) March when you talked to Mr Park there was no doubt in your  
 (11) mind that there was damage to the property is that correct?  
 (12) A That s correct  
 (13) Q But you re proposing in this letter something to the State  
 (14) of Alaska aren t you?  
 (15) A Well I would have to review it to -  
 (16) Q Please do I draw your attention to the second and third  
 (17) pages  
 (18) A There s a research plan that we discuss and there s a  
 (19) budget that we discuss for the first phase of the research for  
 (20) we are - suggesting -  
 (21) Q It s a proposal is it not for a \$30 000 research project?  
 (22) A That s correct  
 (23) Q That would be funded by the State if they hired you?  
 (24) A Yes  
 (25) Q And isn t it the case that the purpose of that research

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- (1) would involve an attempt to determine if - if there were real
- (2) property impacts from other major oil spills?
- (3) A Well I don't see where that quote is taken from
- (4) Q Let me - I'll tell you what here I'll put it up on the
- (5) computer screen
- (6) MR LIED You want me to do it Randy?
- (7) MR OPPENHEIMER I'll get it
- (8) BY MR OPPENHEIMER
- (9) Q See that on the screen?
- (10) A Yes
- (11) Q The research would involve an attempt to determine if there
- (12) were real property impacts?
- (13) A That's correct
- (14) Q And you wrote that to the State of Alaska inviting them to
- (15) pay you \$30,000 to do a study to find out if that were true?
- (16) A That plus a number of other things that were discussed in
- (17) the proposal but that was one of the elements in the research
- (18) yes
- (19) Q And then the other aspect of the research was to determine
- (20) if there was damage and if so the magnitude of those impacts
- (21) how much damage isn't that also true?
- (22) A Well here we're talking about other spills and to
- (23) determine if research had been done and if impacts had been
- (24) discovered from other major oil spills
- (25) Now the question that you asked me was a little bit

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- (1) different than we have here And again I don't see in this
- (2) letter -
- (3) Q You were inviting them to undertake a pretty serious
- (4) project were you not? I mean this was not a waste of their
- (5) money was it?
- (6) A Certainly not
- (7) Q In fact didn't you tell them that you thought that this
- (8) type of study would be necessary to have a successful lawsuit?
- (9) A I can't recall if I mentioned that to them or not
- (10) Q Let's turn back to the first page This is the first page
- (11) of your letter correct on the screen?
- (12) A Yes
- (13) Q It says a much more persuasive type of evidence in fact
- (14) evidence that I believe would be a prerequisite or requirement
- (15) as it were to a successful lawsuit are comparable showing the
- (16) effects on property value views using a before/after method of
- (17) analysis from similar types of disasters
- (18) Does that remind you that you told the State of Alaska that
- (19) they should pay you \$30,000 to do a study to determine if there
- (20) were land damages from comparable types of accidents?
- (21) A Well again I think that this was part of the overall
- (22) research program that we were discussing But that is
- (23) certainly something that I thought would be a fruitful area of
- (24) research back in June of 1989
- (25) Q Would you turn to the second page of the letter that is the

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- (1) second page I have on the screen?
- (2) A That's correct
- (3) Q Therefore to determine if there is a reasonable
- (4) probability of bringing a successful lawsuit against Exxon or
- (5) Alyeska I would suggest that we conduct some initial
- (6) preliminary research and that was your proposal to the State
- (7) of Alaska?
- (8) A That we conduct some preliminary research and what we've
- (9) been talking about is what I would call case studies That was
- (10) one aspect of it
- (11) Q Did you undertake the research that you had - we can take
- (12) it off please - that you had proposed to the State of Alaska?
- (13) A No I did not
- (14) Q You didn't undertake it for the State of Alaska?
- (15) A I'm sorry for the State of Alaska no
- (16) Q Did you try to do this study though on your own?
- (17) A I guess you would have to tell me more about what you mean
- (18) by on my own
- (19) Q Sure Did you try to find out whether there were real
- (20) estate impacts from comparable oil spills something you told
- (21) the State of Alaska would be a prerequisite to a successful
- (22) lawsuit?
- (23) A We did some preliminary investigatory work in that area as
- (24) a part of our work for the Native corporations yes
- (25) Q And as part of that you attempted to identify as many of

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- (1) the major oil spills as you could is that right?
- (2) A That's correct
- (3) Q And you attempted to identify the character of those
- (4) spills is that right?
- (5) A Yes Again it was not a real exhaustive study it was
- (6) kind of a preliminary research but that was one area we looked
- (7) at yes
- (8) Q And you attempted to examine the effect of those spills on
- (9) tidelands and uplands didn't you?
- (10) A Yes to a limited extent
- (11) Q And you contacted real estate valuers in the markets where
- (12) these spills occurred to see what their view was as to whether
- (13) there had been any real estate impact didn't you?
- (14) A That's correct
- (15) Q And after doing all this isn't it the case that you could
- (16) not bring together any transactional evidence that indicated
- (17) whether there may or may not have been an effect on the value
- (18) of property as a result of those spills?
- (19) A That is correct There had not been studies done on other
- (20) spills of a valuation nature where a person could - or where
- (21) people had in the past quantified the damages to the real
- (22) estate because of the spill
- (23) Q So you -
- (24) A At least based on the research we did we could not find
- (25) any information on that on that line

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- (1) Q So you could not find anyone after your research who had  
 (2) themselves done research showing the impact of major oil spills  
 (3) on real property value and your own work was not able to lead  
 (4) you to determine that either isn't that correct?  
 (5) A Well our own work involved following up on the prior oil  
 (6) spills the majority of which were - or many of which were in  
 (7) other countries and we did not do any original data research  
 (8) ourselves to determine if there had been effect on the real  
 (9) estate or not It was all secondary research not that I had  
 (10) done but work done by others  
 (11) Q So the market survey that you proposed to Alaska came up  
 (12) empty but you tried to find evidence of an impact on real  
 (13) estate by looking at other information did you not?  
 (14) A Well as I said before we tried to find other studies that  
 (15) had been done to see if there was any kind of documentation  
 (16) regarding the effect that it had on the real estate market and  
 (17) we could not find any studies that documented real estate  
 (18) effects There had been no studies done  
 (19) Q I understand that and you had not done a study to that  
 (20) effect  
 (21) Now I'm asking you did you then try to find something to  
 (22) look at that would indicate whether there was an impact on the  
 (23) real estate market here in Alaska? Did you look at the Ellamar  
 (24) Development in Prince William Sound?  
 (25) A Oh there's - sure we took a look at a lot of information

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- (1) regarding the local market Prince William Sound Kenai Fjords  
 (2) Kenai Peninsula market yes  
 (3) MR OPPENHEIMER Your Honor we jumped right into  
 (4) this This might be an opportune time to take a break I'd  
 (5) like to set up an easel  
 (6) THE COURT Sure sure  
 (7) THE CLERK Please rise this court stands in recess  
 (8) (Jury out at 10 24 a m )  
 (9) (Recess from 10 24 a m to 10 38 a m )  
 (10) (Jury in at 10 38 a m )  
 (11) THE CLERK Please rise This court now resumes its  
 (12) session  
 (13) Please be seated  
 (14) MR OPPENHEIMER Joel would you put up 1204  
 (15) Exhibit 1204?  
 (16) BY MR OPPENHEIMER  
 (17) Q Dr Mundy do you have that on your computer there?  
 (18) A Yes Ellamar lot sales  
 (19) Q Correct Now I don't want - I realize your back is -  
 (20) let me do this I'd like to have you point out and then I'll  
 (21) point it to the jury where Ellamar is on our map If I - if I  
 (22) point here am I about right?  
 (23) A That's about correct yes  
 (24) Q Okay Right about here I'll hold this up just where it  
 (25) says Galena Bay Tatitlek Narrows up here Okay Right in

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- (1) there  
 (2) Now in the absence of market studies from other spills  
 (3) establishing impact you looked at this data is that correct?  
 (4) A This is some of the information that we looked at  
 (5) Q This is an important part of the data you looked at isn't  
 (6) it?  
 (7) A Yes  
 (8) Q And the point you're making here as I understand it is  
 (9) that you have all of this activity in '88 and then it drops off  
 (10) in '89 is that correct?  
 (11) A That's correct  
 (12) Q And you attribute that to the spill? You do don't you  
 (13) attribute that to the spill?  
 (14) A I attribute it to the spill The seller of the lots in the  
 (15) Ellamar subdivision also attributed it to the spill  
 (16) Q Now I notice here that - and these numbers are hard to  
 (17) read so let me call them out Tell me if I get one wrong but  
 (18) this is 1983 84 85 86 87 88 89 90 91 and 92  
 (19) Now '83 has a pretty tall column an awful lot of sales in '83  
 (20) right?  
 (21) A That's correct the first column  
 (22) Q First column?  
 (23) A First bar yes  
 (24) Q When we say an awful lot - let me back up a second There  
 (25) aren't an awful lot of sales in the entirety of Prince William

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- (1) Sound as a general matter isn't that right?  
 (2) A That's correct  
 (3) Q This is not a place where people buy and sell a lot of  
 (4) land?  
 (5) A There's just not a lot of land to buy and sell  
 (6) Q And not a lot of land to buy and sell Now what accounts  
 (7) for 1983?  
 (8) A Well I am not certain but I presume that that's the first  
 (9) year that the subdivision came on the market and they had a  
 (10) pretty good sales activity  
 (11) Q You bet And that characterizes - oh this is  
 (12) recreational subdivision property isn't it?  
 (13) A That's correct  
 (14) Q That characterizes recreational subdivision sales doesn't  
 (15) it? When there's a marketing event you get a surge in sales?  
 (16) A Oftentimes that's the case yes  
 (17) Q Followed by a drop in sales?  
 (18) A It depends on how the marketing program is administered  
 (19) but that can happen in cases yes  
 (20) Q You've studied this phenomenon in the Sound have you  
 (21) not?  
 (22) A Yes  
 (23) Q That's what you found wasn't it that the sales of  
 (24) property like this that are depicted for this chart for Ellamar  
 (25) have a tendency to go up when there's marketing activity and  
 then drop down?

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- (1) A Well there are a lot of other factors that can affect the  
 (2) ups and downs The economy for one An oil spill for two  
 (3) Q Well you re not suggesting are you that there s an oil  
 (4) spill that accounts for the drop from 83 to 84 are you?  
 (5) A No  
 (6) Q And the drop from 83 to 84 is as great as if not greater  
 (7) than the drop from 89 - excuse me 88 to 89 is it not?  
 (8) A Well I - it s about a 71 percent drop in - from 83 to  
 (9) 84 There was a 90 percent drop from 88 to 89 So the  
 (10) drop from 88 to 1989 was greater than from 83 to 84  
 (11) Q Little difference And in fact it s the case is it not  
 (12) that the sale of these properties is characterized by bursts of  
 (13) marketing activity and then long periods of no activity is  
 (14) that right? Isn t that what you found when you studied these  
 (15) types of properties throughout the Sound?  
 (16) A That s not necessarily the case no  
 (17) Q Would it be the case that these properties have experienced  
 (18) erratic absorption with high absorption during periods of  
 (19) active marketing followed by periods of little to no activity  
 (20) would you agree with that?  
 (21) A It depends a lot on the subdivision but some recreation  
 (22) developments that s been erratic others it hasn t been as  
 (23) erratic  
 (24) Q When I m referring to remote recreational subdivisions in  
 (25) Prince William Sound would you agree that those in this area

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- (1) that have been developed have experienced erratic absorption  
 (2) with high absorption - meaning people buy them - during these  
 (3) periods of active marketing followed by long periods of little  
 (4) or no activity?  
 (5) A Where the marketing program hasn t been carried on yes  
 (6) Q Okay Do you have any information about what  
 (7) distinguishes in this subdivision the years 1988 from 1989  
 (8) other than your information that an oil spill occurred? Do you  
 (9) know anything else that went on in 87 88?  
 (10) A Regarding the subdivision?  
 (11) Q Correct  
 (12) A There is nothing that I can recall I talked with the  
 (13) person who is responsible for the marketing activity there and  
 (14) there s nothing that I can recall back in 86 87 that was -  
 (15) Q 87 88 87 88 something that would affect the number  
 (16) of sales in 88 the high number of sales something that might  
 (17) cause it  
 (18) A Well I can t recall anything that would cause a - you  
 (19) know an abnormal increase in the sales  
 (20) Q Didn t they put a road in to open up new lots so that they  
 (21) could sell more in 88? Didn t they have a new road in 1988  
 (22) 12 000 feet of newly laid gravel road?  
 (23) A I can t recall that  
 (24) Q Didn t they put a new dock in in 1988?  
 (25) A I - I can t recall a new dock being put in either

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- (1) Q Were you - do you know whether or not they conducted new  
 (2) marketing activity in connection with the Ellamar Development  
 (3) in 1988 to take advantage of the new road and the new dock to  
 (4) get more people to buy?  
 (5) A That may well have taken place I think if they - you  
 (6) know and I would accept that just accept that as a working  
 (7) assumption that they put in a new road and a new dock and  
 (8) they did a lot of additional marketing that caused this  
 (9) increase in 1988 I would certainly expect that to spill over  
 (10) to other years And so you know if you re suggesting that  
 (11) that explains 1988 I would think that it would certainly spill  
 (12) over to 1989  
 (13) Q Dr Mundy you don t even - you told us earlier that s an  
 (14) assumption on your part You haven t studied this because in  
 (15) putting together this chart you didn t even know that the new  
 (16) road had gone in and that the dock had gone in So your chart  
 (17) doesn t reflect an analysis of that does it?  
 (18) A As I say I can t recall  
 (19) Q You didn t know?  
 (20) A I may have known at the time but I can t - as I sit here  
 (21) today and discuss this with you I cannot recall the fact that  
 (22) a new road or a new dock was put in It may well have been  
 (23) Q Okay Now if - if the additional activity up here is the  
 (24) result of the new road and the new dock and the marketing  
 (25) activity which you have indicated in your own research causes

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- (1) a flurry of market activity followed by a period of inactivity  
 (2) and you adjust this bar in 1988 Isn t it the case that the  
 (3) sales in the Ellamar subdivision are about the same and in  
 (4) fact start going up as early as 1990 to a level which with  
 (5) the exception of 85 is what occurs or is greater than what  
 (6) occurs in most of the prior years?  
 (7) A Well Mr Oppenheimer I - you re I think taking things  
 (8) a little bit out of context here The fact of the matter is  
 (9) that in 1988 there were some ten lots that sold In 1989 the  
 (10) sale activity dropped down to only one lot They had to  
 (11) discount the price of that lot considerably to get that one  
 (12) sale to take place and according to Mrs Groh who -  
 (13) Q She s the manager one of the managers?  
 (14) A One of the managers yes  
 (15) Q Lucy Groh?  
 (16) A Yes of the subdivision The reason that sales dropped  
 (17) dramatically in 1989 was because of the spill They could not  
 (18) market the lots and they tried diligently to do it In 1990  
 (19) prices - or the lot sales went up but it was because they  
 (20) dropped prices significantly  
 (21) Q Let me come back to my question If for the moment you  
 (22) assume that this large bar is a result of their marketing  
 (23) activity do you agree with me that what you see is a  
 (24) relatively even band of sales - I mean after all these bars  
 (25) the jury should understand these bars are at two sales four

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- (1) sales six sales We re not talking about dozens of sales
- (2) We re talking about four sales in 84 We re talking about
- (3) four sales in 86 maybe three sales in 87 So one sale would
- (4) be 30 percent of the sales in 87 but wouldn t you agree it s
- (5) a relatively level playing field both before and after the
- (6) spill?
- (7) A No
- (8) Q Okay Now do you know anything about what percentage of
- (9) the Ellamar subdivision lots that sold were on the waterfront
- (10) as opposed to being in the uplands?
- (11) A I do not know the percentage in any particular year no
- (12) Q Do you know as to any particular year how many waterfront
- (13) lots were sold?
- (14) A I can t tell you as I sit here I believe we have that
- (15) information but I -
- (16) Q The 89 sale that you were referring to the one that you
- (17) said was a discounted sale so that it would sell?
- (18) A Yes
- (19) Q That in fact is a waterfront lot isn t it? That s the
- (20) Reid sale?
- (21) A That s correct
- (22) Q That s a waterfront lot isn t it?
- (23) A It may well be I can t recall where that lot s located
- (24) Q Isn t it the indication that for all of the years that are
- (25) shown on this chart or for most of them that on average one

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- (1) or two waterfront lots would sell before the spill after the
- (2) spill?
- (3) A I - I can t say how many waterfront lots or backland lots
- (4) were selling
- (5) Q So you can t tell so you don t know?
- (6) A I as I sit here no I don t know
- (7) Q Now as to the Reid sale that you say is the only sale in
- (8) 89 you ve told the jury that that was a discounted sale?
- (9) A That s correct
- (10) Q You are of the opinion that it went from about \$29 000 to
- (11) about \$24 000 is that right?
- (12) A That s correct
- (13) Q Didn t something else change in the terms of that deal?
- (14) This is the Reid sale now 1989?
- (15) A Yes
- (16) Q What else changed?
- (17) A I think that the terms on which the sale took place
- (18) changed
- (19) Q Right More cash got put down up front didn t it?
- (20) A I don t think more cash got put down no
- (21) Q Didn t it go from 10 percent down to 50 percent down?
- (22) A I don t believe that s the case I think \$1 000 was put
- (23) down
- (24) Q So you re not aware of a larger cash payment being made to
- (25) lower the overall price?

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- (1) A No Mrs Groh said that she was going to accept whatever
- (2) she could get to - to make the sale
- (3) Q And let me ask you a more general question You are a real
- (4) estate analyst as well as an appraiser is that correct?
- (5) A That s correct
- (6) Q And it is not uncommon is it not in a transaction to
- (7) lower the total purchase price in exchange for increasing the
- (8) amount of cash that s put down as a down payment right that s
- (9) not uncommon?
- (10) A No that s not uncommon
- (11) Q And in fact didn t that happen quite a bit within the
- (12) marketing of that very Ellamar subdivision?
- (13) A The terms and conditions upon which the sales took place
- (14) did vary
- (15) Q I m sorry?
- (16) A The terms and conditions did vary yes
- (17) Q You would agree whatever our other disagreements that by
- (18) 1990 we re back up to four sales in the Ellamar subdivision
- (19) right?
- (20) A That s correct
- (21) Q And you would agree that that s about what we had in - or
- (22) that is what we had in 86 or in 84?
- (23) A Yes
- (24) Q So things are back to what we ve seen in the past by - by
- (25) 90 right?

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- (1) A And - yeah that s correct What we said for the eastern
- (2) part of Prince William Sound was that the market was impacted
- (3) for one year
- (4) Q Let s - I d like to ask you a little bit about that
- (5) I apologize I would have set all of this up earlier but
- (6) there s just not enough room
- (7) Can you see that Dr Mundy?
- (8) A Yes
- (9) Q Can you all see that?
- (10) In your stigma analysis you talked about a geographic
- (11) reach of stigma is that right?
- (12) A That s correct
- (13) Q This whole area as far as you were concerned was
- (14) stigmatized right?
- (15) A Yes I don t know to the extent you re referring
- (16) Q Well is there any part of the map that isn t stigmatized?
- (17) A Well we did - you show on the far right hand side of the
- (18) map the Copper River Delta area and -
- (19) Q That would be right here?
- (20) A Yes
- (21) Q Right here okay And when you say you show on the map
- (22) are you saying that was not stigmatized?
- (23) A Well there was no property that we analyzed in that area
- (24) that - or there was property actually that was owned by the
- (25) Native corporations but we did not apply a stigma to that

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- (1) area  
 (2) Q That s not my question My question is was it  
 (3) stigmatized?  
 (4) A I think that probably the Copper River area would have had  
 (5) a one year stigma attached to it There was a substantial  
 (6) amount of uncertainty in the marketplace regarding where the  
 (7) oil was what the concentrations were and I think that  
 (8) probably for one year the entire Prince William Sound area was  
 (9) stigmatized  
 (10) Q Now did it go on past – off our map down the coast at  
 (11) all the stigma?  
 (12) A I really didn t take – or study how far I thought it might  
 (13) go  
 (14) Q How did you determine where it stopped?  
 (15) A That was – based on my judgment based on the work that  
 (16) we ve done – involved in contaminated properties  
 (17) Q Well is there a rule of thumb X miles per amount of  
 (18) contamination? I mean how do you tell where the stigma area  
 (19) stops?  
 (20) A This was just based on what I felt was a logical area to  
 (21) include as a part of the stigma – stigmatic area A logical  
 (22) boundary beyond which I didn t think that there would be much  
 (23) of an impact  
 (24) Q Okay Now just out of curiosity there is no – not a  
 (25) single parcel that you were asked to assess damages for for

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- (1) Q Right So the fact that property was selling at an  
 (2) abnormally good rate throughout this area in the urban centers  
 (3) was not relevant to you?  
 (4) A That was something that was not part of our analysis If  
 (5) you re suggesting that that property is selling and not  
 (6) affected by the spill I would simply suggest that you ve got a  
 (7) completely different market in urban area than you do in the  
 (8) rural and water area where the oil was affecting the beaches  
 (9) and this type of thing  
 (10) Q Now Valdez is a lot closer to the spill – you re talking  
 (11) about sales up here and other areas that there were sales in  
 (12) this area a lot closer to the spill site than – than for  
 (13) example the areas in here over by the Glacier River area  
 (14) where you did find a stigma?  
 (15) A As I – once again I did not – we did not do research on  
 (16) the urban market including Valdez and – and Cordova  
 (17) Q Okay Now in terms of the range of this stigma I know  
 (18) that you are not hired as an expert in this case for Kodiak  
 (19) that s a man by the name of Larry Shorett Is that correct?  
 (20) A That s correct  
 (21) Q Okay Now I do want to ask you though and let me ask  
 (22) you if you recognize this as a – a map that shows the Prince  
 (23) William Sound area the Kenai Fjords area the Kenai Peninsula  
 (24) Cook Inlet this is Homer and that s Kodiak correct?  
 (25) A That s correct

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- (1) any of your clients that is outside an area that you thought  
 (2) was stigmatized is that right?  
 (3) A I don t know whether I fully understand the question  
 (4) Q Well –  
 (5) A I mean if you for example are saying are there lands  
 (6) that Eyak owns that are outside of the –  
 (7) Q No that s not – that s not my question My question was  
 (8) the lands you were assessing for damages for this lawsuit you  
 (9) concluded that all of those were in a stigma area?  
 (10) A That s right We just analyzed the lands that I felt  
 (11) impacted because of the spill  
 (12) Q No doubt in your mind that urban property was selling like  
 (13) hot cakes in this area right?  
 (14) A That is something that we didn t include as part of our  
 (15) analysis We re talking about property in Cordova or Valdez?  
 (16) Q Sure  
 (17) A It s my understanding that during the clean up activity  
 (18) the real estate market in Cordova and Valdez and as well as a  
 (19) number of other markets was doing abnormally well  
 (20) Q Abnormally well And now just – many people may already  
 (21) know these places but we are talking about activity in this  
 (22) area right urban activity?  
 (23) A Well in Cordova and Valdez  
 (24) Q Cordova and Valdez You didn t analyze that?  
 (25) A We did not do any work that involved the urban areas no

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- (1) Q Kodiak stigmatized?  
 (2) A Again that s something that we did not do any research  
 (3) on I have no opinion on that  
 (4) Q Well with all the research you ve done you can t – you  
 (5) can t tell me if Kodiak was stigmatized?  
 (6) A Are you talking about the City of Kodiak?  
 (7) Q No I m talking about this area  
 (8) A Well if you re talking about Kodiak Island I think that  
 (9) probably there was a stigma there Again it s something that  
 (10) we haven t researched and so – and it s a question that hasn t  
 (11) been put to me until this instant but there was a considerable  
 (12) amount of oil that worked its way down and around Kodiak  
 (13) Island  
 (14) Q Well I just –  
 (15) A It would have been a stigmatized –  
 (16) Q I m simply asking you whether you had a view So you think  
 (17) it would have been?  
 (18) A Yes  
 (19) Q Okay Urban market in Kodiak the year after the spill  
 (20) also very hot true? Or perhaps you don t know I don t mean  
 (21) to put words in your mouth Do you know whether it was or not?  
 (22) A I have heard that from other sources I can t attest to  
 (23) it  
 (24) Q This is the Kenai Peninsula It was stigmatized?  
 (25) A I believe part of it was yes

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- (1) Q And well you have have you not done appraisals for  
 (2) Seldovia - it s not shown as a parcel here but up here in  
 (3) connection with the Kachemak Bay State Park and you ve  
 (4) reached  
 (5) the conclusion that those lands were stigmatized isn t that  
 (6) correct so it goes that far up into the Cook Inlet?  
 (7) A That s correct the oiling there  
 (8) Q Does it cross over the Cook Inlet?  
 (9) A Yes There was oil over in the west side of Cook Inlet  
 (10) too  
 (11) Q So this was stigmatized too this area?  
 (12) A The area to the west of Seldovia Again you re a bit  
 (13) further north than we ve done any research but down in the  
 (14) area to the west of Seldovia which would be sort of southwest  
 (15) of Homer yes  
 (16) Q Was Anchorage stigmatized?  
 (17) A I really have not done any research nor have I formed an  
 (18) opinion about Anchorage  
 (19) Q What is it that tells you geographically which places have  
 (20) the stigma and which places don t?  
 (21) A Well the stigma is going to have an effect on the nature  
 (22) of the real estate market that s being affected by the - the  
 (23) problem and in this case the problem being the Exxon Valdez  
 (24) crude oil that spilled from the Exxon Valdez So it s  
 (25) important - just as we classified land and broke it down into  
 various use categories it s important to look at different

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- (1) markets too and because these markets can behave  
 (2) completely  
 (3) differently  
 (4) We re talking about markets for natural land for high  
 (5) amenity land for timberland and talking about buyers and  
 (6) buyer behavior for that type of property  
 (7) Q So you have to look at the specific market?  
 (8) A The type of -  
 (9) Q You have to look at the specific market?  
 (10) A Yes The type of buyer that s involved in an urban area  
 (11) for example Anchorage or Cordova has got a completely  
 (12) different set of attributes that they re using to value it  
 (13) Q So Cordova has a different set of attributes than the Eyak  
 (14) land over here that surrounds it?  
 (15) A The buyers in the marketplace do sure  
 (16) Q Now does Prince William Sound have a market that you have  
 (17) to examine separately from Kenai to determine whether there s  
 (18) stigma?  
 (19) A If we re talking about the remote properties I think that  
 (20) you ve got buyers that would behave similarly in both markets  
 (21) Q So for remote properties you don t have to look at the  
 (22) specific lands is that correct?  
 (23) A In terms - and I assume that we re dealing with the area  
 (24) of stigma  
 (25) Q Yes of stigma  
 A Yes

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- (1) Q So for remote properties it doesn t matter where the  
 (2) remote property is?  
 (3) A As long as we re talking about the area that s impacted by  
 (4) the oil spill yes  
 (5) Q Well what I m trying to figure out is how do we know  
 (6) since it obviously includes places that aren t touched by oil  
 (7) is that correct?  
 (8) A Yes  
 (9) Q Eyak and Tatitlek s lands is not touched by oil at least  
 (10) as far as your analysis is concerned right?  
 (11) A That s correct  
 (12) Q But they re stigmatized?  
 (13) A That s correct  
 (14) Q That means that the oil doesn t have to touch a place for  
 (15) there to be stigma But how do we know where there s stigma  
 (16) and where there isn t if the presence of oil doesn t help?  
 (17) A As I mentioned that is something that was based on my  
 (18) judgment and the research that we have done in the past that  
 (19) served as a basis for that judgment  
 (20) Q All right Port Fidalgo is another recreational  
 (21) subdivision in Prince William Sound is that correct?  
 (22) A That s correct  
 (23) Q Is that in this area - well can you tell me where it is  
 (24) can you direct me to it so I can show the jury?  
 (25) A It is on the map

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- (1) Q Where s the -  
 (2) A Port Fidalgo is south and east of Tatitlek  
 (3) Q All right So is it in the Fidalgo South parcel?  
 (4) A That - yes Port Fidalgo would probably - is the waterway  
 (5) that would form the north of the Port Fidalgo South parcel  
 (6) Q So Port Fidalgo is the waterway there s a development  
 (7) there just like there was in Eliamar up here correct?  
 (8) A That s correct  
 (9) Q Now there was a fair period of time when the owners of  
 (10) Port Fidalgo didn t want to sell their lots is that correct?  
 (11) A That s correct  
 (12) Q And then they started selling them again 93 94?  
 (13) A Yes  
 (14) Q And when they opened the gates gates to let people buy  
 (15) property again how many lots sold in 93 and 94?  
 (16) A I can t recall  
 (17) Q Was it 50?  
 (18) A There were quite a few lots that sold as I recall in the  
 (19) Port Fidalgo subdivision because of some very aggressive  
 (20) pricing  
 (21) Q Right And we can t attribute to lack of sales in Port  
 (22) Fidalgo because of the oil spill because the owners had just  
 (23) taken them off the market for their own market reasons  
 (24) correct?  
 (25) A They had taken that subdivision off the market It was

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- (1) taken off before the spill took place  
 (2) Q Correct Years before the spill took place?  
 (3) A That s correct  
 (4) Q Now so we have a lot of market activity in 94 in this  
 (5) area correct? You d agree?  
 (6) A That s correct It s consistent with our analysis We  
 (7) thought there probably would be about a one year stigma  
 (8) associated with it and the market would return to normal  
 (9) Q So when stigma ends It s like a switch being thrown that  
 (10) is correct Suddenly once that stigma s over people are out  
 (11) there buying land as fast as they can?  
 (12) A Not quite like that but it can have a dramatic effect on  
 (13) behavior -  
 (14) Q How do people know when the stigma is over?  
 (15) MR PETUMENOS Excuse me Judge Mr Oppenheimer gets  
 (16) intent and he s Interrupting the witness I believe  
 (17) THE COURT That s true  
 (18) MR OPPENHEIMER I apologize I ll try not to do it  
 (19) THE COURT That s true  
 (20) MR OPPENHEIMER Mr Petumenos makes a good point  
 (21) BY MR OPPENHEIMER  
 (22) Q Please Mr Mundy continue  
 (23) A The stigma can continue to occur quite rapidly because in  
 (24) major problems such as the Exxon Valdez oil spill there is a  
 (25) tremendous amount of media coverage and that media  
 coverage -

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- (1) given the nature of the media that we have today - both  
 (2) television print media can provide the marketplace with news  
 (3) virtually instantly and that can have a very quick effect on  
 (4) the market  
 (5) Q You didn t see northeast newspaper articles in your  
 (6) research that said stigma ends buy land now?  
 (7) A I can t recall I think maybe there were some  
 (8) advertisements that I saw in the paper that Exxon paid for  
 (9) along that line No the - the stigma is something that -  
 (10) Q I don t think there s a question pending Not to interrupt  
 (11) you but I don t have a question for you But I do now  
 (12) Kodiak let me see if I can get a closeup here  
 (13) MR STOLL Can I move over here Your Honor now that  
 (14) he s going the talk about my clients property?  
 (15) THE COURT Yes  
 (16) BY MR OPPENHEIMER  
 (17) Q Kodiak now you ve testified this morning just a moment  
 (18) ago that with respect to remote properties It doesn t matter  
 (19) what market they re in they re all going to be stigmatized  
 (20) alike right?  
 (21) A I think that is a little bit out of context but why don t  
 (22) we go ahead and -  
 (23) Q Well is it wrong?  
 (24) A I - I think that the - the stigma is something that  
 (25) applies in general to a geographical area but I did not mean

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- (1) to imply for example that all of Kodiak Island was going to  
 (2) be stigmatized because of the oil that migrated down around  
 (3) Kodiak Island  
 (4) Q So even though Kodiak in your understanding was  
 (5) surrounded by oil you don t think all of it was stigmatized?  
 (6) A I have not really done any research on Kodiak Island  
 (7) I ve - you know do not know where the oil ended up around  
 (8) there If it was only on one side of the island or both sides  
 (9) of the Island I simply have not done the research am not  
 (10) knowledgeable so I just - I can t really express an opinion  
 (11) Q Dr Mundy didn t you rely in a critical way in your report  
 (12) on an analysis of Kodiak remote property land sales that Pat  
 (13) Carlson the Kodiak appraiser did on this land?  
 (14) A There is a chart that we have in our appraisal that shows  
 (15) that remote land sales on Kodiak Island dropped off after  
 (16) the - the spill The material developed by Pat Carlson also  
 (17) shows that sales of urban property increased  
 (18) Q Okay But my question is you relied upon remote property  
 (19) transactions in your report did you not in this area?  
 (20) A That s correct  
 (21) Q Okay Now were you aware that one of the plaintiffs in  
 (22) this case the Kodiak Island Borough Mr Stoll s client  
 (23) actually sold property within the one year stigma period that  
 (24) you re talking about Excuse me I misstated that because it  
 (25) was - it was a few months out of the stigma period November

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- (1) 1990  
 (2) MR PETUMENOS I just don t want the jury to be  
 (3) misled I don t think he s testified on a stigma period on  
 (4) Kodiak  
 (5) BY MR OPPENHEIMER  
 (6) Q Well there s a one year stigma period in the spill area  
 (7) isn t there Dr Mundy?  
 (8) A That s what we applied a one year stigma period to some  
 (9) areas in Prince William Sound  
 (10) Q And you used data on land sales on Kodiak Surely you  
 were  
 (11) using land sales on Kodiak because you thought they had been  
 (12) affected by the spill?  
 (13) A That s correct I -  
 (14) Q Okay So you have an understanding in your view that  
 (15) land sales in Kodiak were affected by the oil spill?  
 (16) A Yes on Kodiak Island  
 (17) Q On Kodiak Island?  
 (18) A Remote areas of Kodiak Island  
 (19) Q Are you familiar with Kodiak Island Borough land sale 11?  
 (20) A I don t know if I m familiar with that land sale or not  
 (21) Is that where there were five properties put on the market?  
 (22) Q Correct You have it Onion Bay Raspberry Island?  
 (23) A Onion Bay yes  
 (24) Q Right up here?  
 (25) A If that s where Onion Bay is I -

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- (1) Q I'll represent to you that's where Onion Bay is  
 (2) You're aware that Kodiak Island Borough in 1990 put on five  
 (3) lots. How many of those lots sold?  
 (4) A All five of them, sir.  
 (5) Q All five of them. In how many hours?  
 (6) A It - well, four of them sold at an auction, and then at  
 (7) the close of the auction, the fifth lot sold. There was no  
 (8) bids on the fifth lot and it sold.  
 (9) Q All five sold, and it was in roughly two days, three days  
 (10) correct?  
 (11) A Well, I don't know how much time led up to the auction -  
 (12) for example when the notice went that there would be an  
 (13) auction - so I don't know how much time people had to determine  
 (14) whether they wanted to bid on a lot and to submit a bid.  
 (15) Q Are you aware of the Kodiak Island Borough's policy that it  
 (16) won't sell land to the public at lower than fair market value?  
 (17) A No, I'm not aware of that policy.  
 (18) Q So you don't have an opinion as to whether these lots were  
 (19) sold at the auction at or above fair market value?  
 (20) A No, I do not.  
 (21) Q By the way, I believe I misspoke about the Port Fidalgo  
 (22) sales, the 50 sales in six months. I said '94, but it's  
 (23) actually '92, isn't it?  
 (24) A Again, I - if I had the documents before me, I could tell  
 (25) you what the time frame was, but I don't -

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- (1) Q Okay, we'll see. I believe it's in your report, but to the  
 (2) best of your recollection, is it '92 or you can't remember?  
 (3) A As I said, I can't remember.  
 (4) Q I believe I misspoke. We'll get it correct in the record.  
 (5) May we have Exhibit 1144 back on, please? Plaintiffs  
 (6) 1144. And I guess I may have to move this.  
 (7) I just wanted to confirm my understanding that - we'd  
 (8) spoke earlier about the letter that you sent to Mr. - Mr. Pio  
 (9) Park of the Chugach Corporation, soliciting work in this case,  
 (10) is that right? Remember that, it was March 30?  
 (11) A Yes, yes.  
 (12) Q Okay. Now as of March 30, according to this plaintiff's  
 (13) exhibit, the oil had reached only to the second bar there,  
 (14) right?  
 (15) A Some 90 miles from Bligh Island, yes.  
 (16) Q So you were talking to folks about working on this case  
 (17) before the oil had even reached the end of the Kenai  
 (18) Peninsula?  
 (19) A I had talked with Mr. Park about providing services to  
 (20) Chugach Alaska Corporation four days after the spill. And as  
 (21) it happens, Chugach Alaska Corporation owns significant land  
 (22) in Prince William Sound, and maybe you have it turned off, but -  
 (23) there you go.  
 (24) Q I think you're down at the bottom there, yeah.  
 (25) A This is the area where Chugach Alaska Corporation has its

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- (1) land ownership.  
 (2) Q When did you and ICF start working together?  
 (3) A I can't recall when we started working together, and it  
 (4) depends a lot on whether you're talking about on a formal basis  
 (5) or informal basis. It was shortly after the spill that I had  
 (6) conversations with ICF about some of the scientific aspects of  
 (7) the oiling problem.  
 (8) Q You also had conversations with them about some business  
 (9) aspects of the spill, isn't that right?  
 (10) A Maybe you could clarify that, Business aspects?  
 (11) Q You and they talked about getting you hired on this case,  
 (12) isn't that correct?  
 (13) A We talked about our working on this case and working with  
 (14) them.  
 (15) Q Do you recall that in August of '89, you and Mr. Klein of  
 (16) ICF were communicating about the proposal you were going to  
 (17) make to Chugach to be hired in this case?  
 (18) A I know that Mr. Klein and I discussed the proposal that we  
 (19) were preparing, yes.  
 (20) Q And he reviewed your draft proposal, is that correct?  
 (21) A That's correct.  
 (22) Q Counsel 15195.  
 (23) Dr. Mundy, I'd like to show you a copy of defendant's  
 (24) exhibit 15195 and ask you to identify that for me.  
 (25) A This is a draft memorandum from Daniel E. Klein to myself.

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- (1) Mr. Klein being with ICF Resources Incorporated. There are  
 (2) some ten pages to this document - well, there's not - five  
 (3) pages, I'm sorry.  
 (4) Q You recognize that as a document you received?  
 (5) A Yes.  
 (6) Q Do I have the right document on the screen there?  
 (7) A This - it appears to be the correct document, yes.  
 (8) Q Now Mr. Klein is at ICF, is that correct?  
 (9) A That's correct.  
 (10) Q And what is the draft proposal that he's referring to,  
 (11) there?  
 (12) A That was a proposal that I had developed for Chugach  
 (13) Alaska Corporation, and I sent a draft of it to Mr. Klein.  
 (14) Q Right. And that was a proposal to be hired as an expert in  
 (15) this case, is that correct?  
 (16) A That's correct.  
 (17) Q Did Mr. Klein at ICF have some comments on your proposal?  
 (18) A Yes.  
 (19) Q And did he, in fact, recommend one of the things that you  
 (20) ought to do was to emphasize the number of acres affected and  
 (21) the possible value of those acres, high numbers, high  
 (22) damages?  
 (23) A I can't recall. If you could direct me to -  
 (24) Q Why don't you take a look at Page 3, if you would?  
 (25) A Page 3, all right.  
 (26) MR. OPPENHEIMER: Joel, can you blow up the last

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- (1) paragraph for me? I think I need to go to perhaps an advanced
- (2) course after today
- (3) MR PETUMENOS Perhaps not an advanced course
- (4) MR OPPENHEIMER Perhaps one isn't necessary
- (5) BY MR OPPENHEIMER
- (6) Q Do you see the first sentence It would seem to me that
- (7) the key factors to emphasize - now this is in the proposal
- (8) you're sending to Chugach to be hired in this case It seems
- (9) to me the key factors to emphasize are the number of acres
- (10) affected and the possible values and damages per acre do you
- (11) see that?
- (12) A That's correct
- (13) Q And that's in connection with a - an attempt on your part
- (14) and ICF's part to be hired as opposed to someone else being
- (15) hired?
- (16) A It was a suggestion that Mr Klein was making regarding the
- (17) proposal that I was submitting to Chugach Alaska Corporation
- (18) regarding a scope of services that we might provide to them
- (19) Q Well the scope of services has nothing to do with the
- (20) possible values and damages per acre that has to do with the
- (21) result of your work whether they're high damages or low
- (22) damages doesn't it?
- (23) A That's correct
- (24) Q Isn't it the case that in order to get the case you make
- (25) sure you emphasize the high amount of - the high values and

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- (1) Q You didn't know whether they were or not? I'm sorry you
- (2) did not know whether they were soliciting other proposals or
- (3) not?
- (4) A I'm sorry I thought you meant that as a statement not a
- (5) question
- (6) Q No it's a question
- (7) A I - I believe that they were talking with at least one
- (8) other appraiser and I can't recall if that was in the context
- (9) of having them do the work rather than us or having us both
- (10) jointly do the work
- (11) Q Wasn't it your concern that somebody else was going to get
- (12) hired if you didn't do a good proposal here?
- (13) A I always try to do a very good proposal
- (14) Q Right but my question Dr Mundy is Weren't you in
- (15) competition for this work?
- (16) A I - as - again I don't know if I was in competition or
- (17) not There may well have been other people that they were
- (18) talking to
- (19) MR OPPENHEIMER Joel would you blow up the
- (20) paragraph immediately in front of this one?
- (21) BY MR OPPENHEIMER
- (22) Q I direct your attention to the -
- (23) MR OPPENHEIMER Well first can you blow it up so
- (24) it shows the heading where it says preliminary estimate of
- (25) damages?

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- (1) the high number of acres that your study will show was
- (2) damaged?
- (3) A Well I - I don't know what was in Mr Klein's mind I
- (4) think that in submitting a proposal to a client a standard
- (5) thing that I do anyway is always to provide some background
- (6) information on the nature of the problem And I think that
- (7) it's useful for the client to understand what my feelings and
- (8) thoughts are regarding the nature of the assignment
- (9) Q Okay And -
- (10) A And in this case I don't know whether I put that in the
- (11) proposal or not the number of acres the possible value and
- (12) the damage
- (13) Q Now at this point you hadn't -
- (14) MR PETUMENOS Tim excuse me I'm not sure whether
- (15) Dr Mundy was done
- (16) MR OPPENHEIMER I think he was
- (17) A No I wasn't
- (18) MR PETUMENOS I saw him taking a breath is why I -
- (19) MR OPPENHEIMER I'm sorry
- (20) A But I think that putting the information like that in a
- (21) proposal is something that provides the client in terms of
- (22) insight of what my view of things are And the client may
- (23) have been soliciting numerous proposals
- (24) BY MR OPPENHEIMER
- (25) Q May have been in fact you thought they were?
- (26) A I didn't know if they were or not

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- (1) BY MR OPPENHEIMER
- (2) Q Now Mr Klein here in the first sentence is suggesting
- (3) that you expand that section on damages right?
- (4) A That's correct
- (5) Q Now at this time you hadn't done any systematic damage
- (6) inquiry had you?
- (7) A I think that what he's talking about is the area where we
- (8) discussed the method that would be used to go about
- (9) estimating
- (10) damages
- (11) Q And that can -
- (12) A And that we were not going to do just a - what I would
- (13) call one shot valuation analysis and say here's what the
- (14) damage is but that we would work on this project in a number
- (15) of phases One developing a preliminary estimate of what the
- (16) damage was and then discussing that with the client and then
- (17) going on to another phase
- (18) Q You'll - I draw your attention to the - to the next
- (19) sentence after that It's not clear to me that Chugach share
- (20) our view that the underlying appraisal concepts can make an
- (21) enormous difference on the values as well as their
- (22) defensibilities meaning different appraisal techniques produce
- (23) very big differences in damages?
- (24) A That is true For example the cost to remediate approach
- (25) would have generated damages far far in excess of the
- (26) damages
- (27) that we have estimated and is a very legitimate approach to

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- (1) use in estimating damage  
 (2) Q And the next sentence says I fear that some of them may be  
 (3) looking at appraisal services as a composite at this to be  
 (4) acquired at the lowest price In other words you re  
 (5) expensive and if you re going to get hired you better  
 (6) indicate to them that you re going to come up with a high  
 (7) damage figure?  
 (8) A Well I find that rather amusing Mr Oppenheimer but  
 (9) the - we have a fee schedule that we provide to clients just  
 (10) like attorneys do and that fee schedule is based on a large  
 (11) part on our capability and I like to think that we re hired  
 (12) based on the quality of services that we provide And my  
 (13) experience has been that clients tend to be fairly price  
 (14) insensitive when it comes to issues that are important to  
 (15) them Now -  
 (16) Q Here - I m sorry  
 (17) A This sentence here I fear that some of them may be looking  
 (18) at an appraisal - or looking at appraisal services as a  
 (19) commodity to be acquired at the lowest price that was  
 (20) Mr Klein s opinion and there are a lot of clients that hire  
 (21) appraisal companies based on that philosophy  
 (22) Q Now this is Mr Klein from ICF the same ICF that Mr Bush  
 (23) is from?  
 (24) A That s correct  
 (25) Q And so this is a communication between you and ICF about

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- (1) getting the work that has now come to fruition in this  
 (2) courtroom?  
 (3) A That is correct  
 (4) Q Did you ever worry that it was possible that since - well  
 (5) there s no doubt in your mind by the way based on this and  
 (6) other information you had from ICF that they wanted the work  
 (7) too?  
 (8) A Well I know that ICF wanted to work on this project and I  
 (9) believe that in August of 1989 when Mr Klein wrote this  
 (10) letter they had been engaged  
 (11) Q Did you ever have any concerns that because ICF was  
 (12) working  
 (13) for the plaintiffs that they might bias their information in  
 (14) any way?  
 (15) A I don t think so I mean if you bias information  
 (16) you re -  
 (17) Q Bias it in favor of the plaintiffs?  
 (18) A No  
 (19) MR PETUMENOS Excuse me Judge I think he was in  
 (20) the middle of -  
 (21) THE COURT Well not now And besides the  
 (22) question s been answered  
 (23) MR OPPENHEIMER Fair enough Your Honor  
 (24) BY MR OPPENHEIMER  
 (25) Q Is it a possibility that ICF s data is biased?  
 (26) A I have worked with Mr Bush I have reviewed Mr Bush s

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- (1) information the analysis I have visited the beaches with  
 (2) Mr Bush observed the transects where the samples were  
 (3) taken  
 (4) I ve observed other areas and in my opinion Mr Bush has  
 (5) been  
 (6) very objective and very impartial in his assessment of the  
 (7) oiling matter that we find in Prince William Sound the Kenai  
 (8) Fjords and the Kenai Peninsula  
 (9) Q I understand that but my only question is Didn t you  
 (10) recognize that there was a possibility that their work could be  
 (11) biased?  
 (12) A Well there s always that possibility but I -  
 (13) Q And you thought that about them specifically?  
 (14) A No What I m saying is that in general there is a  
 (15) possibility that a scientist may bias the results and it s  
 (16) something that I as a valuer have to be very careful of  
 (17) because I have to In essence sign off on the work that they  
 (18) do because I have to adopt it as a part of our appraisal  
 (19) analysis Consequently I make sure that I understand what  
 (20) they re doing the processes that they re using and that it s  
 (21) not something that is biased  
 (22) MR OPPENHEIMER Your Honor would this be a good  
 (23) time for a break  
 (24) THE COURT Perfect thanks  
 (25) THE CLERK Please rise This court stands in  
 (26) recess  
 (27) (Jury out at 11 33 a m )

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- (1) (Recess from 11 33 a m to 12 40 p m )  
 (2) (Jury In at 12 40 p m )  
 (3) THE CLERK Please rise This court now resumes its  
 (4) session  
 (5) Please be seated  
 (6) THE COURT Counsel you have a witness out of order  
 (7) so -  
 (8) MR FORTIER We do Your Honor  
 (9) THE COURT I m sure you know about scheduling  
 (10) difficulties in a case like this Well this is one of them  
 (11) and so what I ve allowed is that a witness be taken out of  
 (12) order That doesn t mean that Mr Mundy s testimony is  
 (13) through He ll be back but he won t be back today We ll  
 (14) simply have this witness in the interim and then I ll let you  
 (15) go from there  
 (16) Counsel?  
 (17) MR FORTIER Thank you Your Honor  
 (18) Plaintiffs call Professor Mark Tumeo  
 (19) THE CLERK Sir would you clip the microphone onto  
 (20) your tie and remain standing for the oath and would you raise  
 (21) your right hand?  
 (22) (The Witness Is Sworn)  
 (23) THE CLERK Thank you You may be seated  
 (24) Sir for the record would you please state your full name?  
 (25) A Mark A Tumeo

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- (1) THE CLERK Would you spell your last name?  
 (2) A T as in Tom u m e o as in ostrich  
 (3) THE CLERK What is your occupation?  
 (4) A I m a professor at the University of Alaska Fairbanks and  
 (5) Director of the Environmental Technology Laboratory  
 (6) THE CLERK Thank you  
 (7) DIRECT EXAMINATION OF MARK A TUMEO  
 (8) BY MR FORTIER  
 (9) Q Professor Tumeo can you tell the jury a little bit about  
 (10) yourself please?  
 (11) A Sure I m originally from Columbus Ohio I was born  
 (12) there and brought up there I went to undergraduate school at  
 (13) the University of Notre Dame in South Bend I received a  
 (14) Bachelor s in civil engineering concentrating in  
 (15) environmental and a Bachelor s of Science in biology  
 (16) concentrating on aquatic biology  
 (17) After I graduated from Notre Dame I accepted an internship  
 (18) at Exxon Research and Engineering in New Jersey I went there  
 (19) for the summer and worked on waste problems associated with the  
 (20) cleanup of waste from refining processes mainly doing some  
 (21) consulting work for a refinery in Singapore  
 (22) At the end of that internship I was offered a position at  
 (23) Exxon but it was not in the division that I wanted to work in  
 (24) so I went back to graduate school I went to the University of  
 (25) California Davis for a Master s in environmental engineering

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- (1) once again there  
 (2) I worked on my Master s from the fall of 1981 until the  
 (3) fall of 1982 completed my Master s and went to work for a  
 (4) small consulting firm called Moldenhauer Engineering Worked  
 (5) for about a year there and then was offered an appointment at  
 (6) the International Institute for Applied Systems Analysis in  
 (7) Vienna Austria So because the world s round I went the  
 (8) other way I took the Trans Siberian Railway crossed the  
 (9) Soviet Union and went into Vienna and spent four months  
 working  
 (10) in Vienna at the institute dealing mainly with computer  
 (11) modeling of acid deposition because of coal fired power plants  
 (12) and doing impact analysis from the deposition of acids across  
 (13) Europe  
 (14) After my appointment at IIASA I returned to California  
 (15) went back to work with the consulting firm until January of  
 (16) 1984 at which time I returned to get my Ph D I decided to go  
 (17) on to get a Ph D once again at the University of California  
 (18) Davis completed my Ph D in March of 1988 and accepted a  
 (19) faculty position at the University of Alaska Fairbanks where  
 (20) I ve been ever since  
 (21) Q And what was your Ph D in?  
 (22) A Civil environmental engineering environmental engineering  
 (23) is a subdivision of civil engineering  
 (24) Q What does an environmental engineer do Professor?  
 (25) A Environmental engineering s a relatively broad field It

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- (1) encompasses any activity where you apply engineering  
 principles  
 (2) to solve pollution problems and it covers the entire gamut  
 (3) from pollution prevention source reduction through treatment  
 (4) of waste streams before they re discharged waste water  
 (5) treatment plants air pollution control devices all the kind  
 (6) of stuff that you find on automobiles to control pollution and  
 (7) then on into the remediation of contaminated sites so if  
 (8) there s a spill or a cleanup or any of the kind of problems  
 (9) associated with adverse impacts working to correct those and  
 (10) including risk analysis and those kind of activities  
 (11) Q Did there come a point in time that you were - were  
 (12) retained were requested to - to look at a beach in the Prince  
 (13) William Sound area?  
 (14) A Yes There s a - we have an ongoing research project in  
 (15) Sleepy Bay on LaTouche Island  
 (16) Q Who is we Professor?  
 (17) A The Environmental Technology Laboratory is a - kind of an  
 (18) umbrella group at the university that brings together experts  
 (19) from across the university to work on problems that are of  
 (20) interest for science engineering research  
 (21) Q So this is - when you say we you mean the university  
 (22) is that correct?  
 (23) A Yes I work for the university  
 (24) Q And when was this that you were contacted in order to -  
 (25) A The research project started in - the actual negotiations

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- (1) and proposal and all that stuff started in February March of  
 (2) 1993 and the program itself kicked off with a site visit in  
 (3) June of 1993  
 (4) Q And where was the site visit again please?  
 (5) A It s in Sleepy Bay on LaTouche Island  
 (6) Q And can you tell the jury what the experiment was that you  
 (7) were requested to do?  
 (8) A Sure We re looking at the effectiveness of a  
 (9) biosurfactant by the name of PES 51 to be used to clean up oil  
 (10) that s absorbed on the solids In this case we re looking at  
 (11) specifically a cobbly rocky beach in Prince William Sound  
 (12) that s heavily contaminated from the principals - the Exxon  
 (13) Valdez oil spill  
 (14) So we went in - my student went down in June to do  
 (15) preliminary sampling We went through dug pits along the  
 (16) beach to do a - a preliminary survey to see what the  
 (17) contamination was and how bad it was and we also selected  
 (18) samples for microbial analysis to look at the concentration of  
 (19) the population of heterotrophic bacteria and oil degrading  
 (20) bacteria We then went back after the preliminary sample to  
 (21) find out you know kind of what we had and what the  
 techniques  
 (22) were going to be needed to do the sampling  
 (23) We went back in July and I went on that trip to do the  
 (24) actual experiment itself And what that involved we went in  
 (25) before we started set down a grid on the beach did sampling

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(1) along strips so that we could have a – a good idea of where we  
 (2) are so we could go back We collected samples both for  
 (3) chemical analysis and for microbial analysis again and we  
 (4) also collected water samples down below the beach  
 (5) Then over a period of five days the biosurfactant was  
 (6) applied And the way it was applied it was injected down into  
 (7) the subsurface of the beach because that s where the  
 (8) contamination is all resident It was applied right after  
 (9) slack tide for the low tide So you wait till the tide went  
 (10) out and then you would inject the stuff And then as the tide  
 (11) came back up that would flush the stuff up and float the oil  
 (12) to the surface where it could be skimmed and collected with  
 (13) absorbent pads  
 (14) After the application which took about five days we went  
 (15) back and sampled the beach material again and sampled the  
 (16) water  
 (17) again to see what we had after we did the application We also  
 (18) did some water samples during the application to make sure  
 (19) that  
 (20) we weren t solubilizing the oil and putting it into the water  
 (21) column which would be a bad thing to do if we did that So  
 (22) we wanted to make sure that wasn t happening  
 (23) After the experiment then we brought all the stuff back  
 (24) to the lab Then we went out again in August and in September  
 (25) of 1993 and then again in May of 1994 to do sampling again so  
 (26) we could get a picture of the long term effects if any  
 (27) Q Now Professor you used a number of terms Maybe you

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(1) THE COURT Sustained  
 (2) BY MR FORTIER  
 (3) Q Let me ask you this Professor You described the  
 (4) experiment Do you know whether or not the State of Alaska  
 (5) was  
 (6) involved in the experiment?  
 (7) A Yes it was We had to get permission to apply to material  
 (8) before we could do so  
 (9) Q Okay And based upon your experience do you know  
 (10) whether  
 (11) or not the State of Alaska will – will give permission to  
 (12) apply biosurfactants without making some determination as to  
 (13) whether or not the material is toxic?  
 (14) A We had to do – the company had to provide toxicity data  
 (15) before it could be applied showing that it was not going to be  
 (16) toxic  
 (17) Q And can you tell us what the results were?  
 (18) A Of the experiment?  
 (19) Q Simply the facts as to whether or not the – simply the  
 (20) facts as to the results of the determination whether or not  
 (21) PES 51 was toxic?  
 (22) MR OPPENHEIMER Your Honor may we approach the  
 (23) bench?  
 (24) THE COURT Don t answer  
 (25) What s the objection? What s the name of the objection?  
 (26) MR OPPENHEIMER The name of this objection is ,  
 (27) nondesignation of expert witness

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(1) could explain them to the jury One of those was a  
 (2) biosurfactant Can you tell us what a biosurfactant is  
 (3) please?  
 (4) A Sure A biosurfactant is a biologically derived  
 (5) surfactant What a surfactant is is something that breaks the  
 (6) tension between oil and a solid material The best example  
 (7) the one that we re all familiar with are detergents like Dawn  
 (8) dishwashing liquid that takes grease away It s the same kind  
 (9) of concept It s a detergent and it breaks the tension that  
 (10) holds the oil onto the solid material thereby allowing it to  
 (11) be removed It s called a biosurfactant because it s derived  
 (12) from oil degrading microbes which produce an enzyme  
 (13) naturally  
 (14) to do this Since they want to eat the oil they have to get  
 (15) it off the solid and so they produce an enzyme that naturally  
 (16) does that  
 (17) Q And the name of this biosurfactant was PES 51 is that  
 (18) correct?  
 (19) A That s the tradename yes  
 (20) Q Now Professor from what you ve described would it be  
 (21) fair to assume then that this PES 51 is a biodegradable  
 (22) agent?  
 (23) A Yes by definition  
 (24) Q And so by definition it s nontoxic is that correct?  
 (25) MR OPPENHEIMER Objection Your Honor there s no  
 (26) foundation for that question

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(1) THE COURT That surprises me counsel You can  
 (2) approach the bench  
 (3) (Sidebar conference out of the hearing of the jury )  
 (4) MR OPPENHEIMER Your Honor I m prepared to – to be  
 (5) as flexible as I can be in terms of the testimony This is not  
 (6) a designated expert My understanding was he was coming to  
 (7) talk about –  
 (8) THE COURT You mean as to toxicity?  
 (9) MR OPPENHEIMER As to anything except what he saw In  
 (10) the PES 51 test In Sleepy Bay And you know I am going to  
 (11) obviously open the door a little bit on cross because some of  
 (12) what he s saying I think is quite helpful to understanding  
 (13) the situation Frankly helpful to us but I note – for  
 (14) example that where he s identified some tests he did  
 (15) subsequent to that there are areas here he could get into  
 (16) which are clearly going do constitute expert testimony and we  
 (17) have – he s not designated We have to report from him He s  
 (18) never been deposed I have no idea where – where that will  
 (19) end I would like to limit the – again we re – we d like to  
 (20) be flexible I d like to limit this lay testimony to the –  
 (21) the testimony that he definitely would object if we go beyond  
 (22) that into other material and I will ask him some of what he  
 (23) found because we needs to put it into perspective but I will  
 (24) not ask him ability the tests that go on later  
 (25) THE COURT You are asking him for an opinion as to

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- (1) whether or not this biosurfactant is toxic correct  
 (2) MR FORTIER No Your Honor I m really not What I  
 (3) was hoping to establish is a foundation was based upon the fact  
 (4) that the test went forward that one could conclude that it was  
 (5) not toxic otherwise the State of Alaska wouldn t have allowed  
 (6) it  
 (7) THE COURT I m going to allow that  
 (8) MR FORTIER Part of the reason Your Honor is  
 (9) because there has been suggestions throughout  
 cross examination  
 (10) that PES 51 was a toxic material  
 (11) THE COURT You mean in deposition?  
 (12) MR FORTIER No during trial Mr Clough stated in  
 (13) his opening it was toxic and then there was a  
 (14) cross examination of a witness  
 (15) THE COURT Anybody to contend it was toxic?  
 (16) MR OPPENHEIMER I have never  
 (17) THE COURT I m not going into that I just want to  
 (18) know in the long run in this case are you going to say that  
 (19) this biosurfactant was toxic  
 (20) MR OPPENHEIMER We are going to talk about the fact  
 (21) that the physical constituents of it are such that the  
 (22) apparatus you see people wearing in the tape are largely a  
 (23) result of the material that they re using otherwise we have to  
 (24) dispell the otherwise erroneous --  
 (25) THE COURT That s the contention but you re not

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- (1) going to deal with this witness on that issue?  
 (2) MR OPPENHEIMER You mean to try to get him to say  
 (3) it s toxic? No no  
 (4) THE COURT The objection s sustained judged on the  
 (5) basis of he s not an expert witness and I m not going to let  
 (6) him testify to what s essentially an expert conclusion about  
 (7) the toxicity of this surfactant  
 (8) MR PETUMENOS My concern is then Exxon be precluded  
 (9) from arguing to the jury that s it is toxic  
 (10) THE COURT I may do that in the long run but I m  
 (11) only dealing with the objection made as to this witness  
 (12) understand? I mean what you make as your whole record is a  
 (13) different proposition but as to this witness this objection  
 (14) is sustained  
 (15) MR FORTIER Could I ask Your Honor whether or not  
 (16) the experiment was permitted by the State of Alaska?  
 (17) MR OPPENHEIMER Sure I have no objection to that  
 (18) THE COURT You already have I think  
 (19) MR FORTIER Could I ask him that?  
 (20) THE COURT But nothing that gets into the question of  
 (21) toxicity  
 (22) MR FORTIER I understand Your Honor  
 (23) (Sidebar concluded)  
 (24) BY MR FORTIER  
 (25) Q Professor Tumeo could you tell us whether or not the State

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- (1) of Alaska permitted the experiment to go forward in Sleepy  
 Bay?  
 (2) A Yes they did  
 (3) Q Now let me ask you were you -- you weren t retained by  
 (4) any party with regard to the experiment were you?  
 (5) A No  
 (6) Q This was a Tesoro product Tesoro Alaska product is that  
 (7) correct?  
 (8) A Yes They came to the university and asked that we act as  
 (9) an independent third party to collect any data having to do  
 (10) with the effectiveness of this project We do a lot of  
 (11) experiments environmental technology laboratory experiments  
 in  
 (12) a lot of various technology areas and serve as that third  
 (13) party and the university is the contracting agent and I act  
 (14) as a professor of civil environmental engineering and do my  
 (15) job  
 (16) Q Now Professor Tumeo only the facts can you describe what  
 (17) the beach looked like when you went out there?  
 (18) A When we were --  
 (19) Q In July I m sorry  
 (20) A In July when we arrived the beach is very rocky and cobbly  
 (21) on the surface It has like an armor plate which means that  
 (22) the larger flatter rocks sit on the top and cover the  
 (23) subsurface We went in and for the preliminary marking of the  
 (24) beach we marked off 20 foot wide strips around 120 feet along  
 (25) the shoreline and we did six strips moving up the shoreline

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- (1) and numbered them one through six one being closest to low  
 (2) tide line  
 (3) Underneath the armor you have finer material some sand  
 (4) and -- and finer kind of beach material small pebbles and  
 (5) sand and it was very heavily oiled Some places measured oil  
 (6) -- instead of measuring it in milligrams which is what we  
 (7) usually do we measured it in percent A couple spots were up  
 (8) to 23 to 25 percent oil which means when you take a sample  
 and  
 (9) you re holding it 25 percent of what you re holding is oil  
 (10) Q Professor Tumeo what I d like to do is show a video You  
 (11) have seen a video that shows generally the scenes is that  
 (12) correct?  
 (13) A Correct  
 (14) MR FORTIER And I would like to have Professor Tumeo  
 (15) narrate the video with the Court s permission It s  
 (16) Exhibit 683 A  
 (17) THE COURT Yes that would be fine Do we need to  
 (18) dim the lights?  
 (19) MR FORTIER I don t believe we do Your Honor  
 (20) (Videotape Played)  
 (21) BY MR FORTIER  
 (22) Q And Professor Tumeo if at any time -- what are we seeing  
 (23) here?  
 (24) A The barge we brought our material the heavy material the  
 (25) booms the biosurfactant We pulled it up this beach This is

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- (1) the armor I m talking about Underneath is the finer material  
 (2) that s pretty heavily oiled We had to do a lot  
 (3) To do our samples we had to move some of the armor to get  
 (4) down to the beach material That s a picture of me doing the  
 (5) sampling You can see that some of the finer material - might  
 (6) want to stop it I can t talk that fast  
 (7) MR FORTIER You can stop right there  
 (8) A I talk fast but not that fast This is once again a  
 (9) picture of me sampling You can see the heavier armor on the  
 (10) top the rocks  
 (11) How can I point so that people can see it?  
 (12) BY MR FORTIER  
 (13) Q What you could do I think Professor there is a light pen  
 (14) there  
 (15) A This thing?  
 (16) Q Yes  
 (17) A The wonders of modern technology  
 (18) Q I believe it ll work I believe Mr Oppenheimer and I  
 (19) should take the same class  
 (20) A So does this -  
 (21) MR FORTIER Does anybody know if the light pen  
 (22) works?  
 (23) MR PETUMENOS Doesn t work on a video  
 (24) BY MR FORTIER  
 (25) Q Maybe you can come down here Professor if that would be

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- (1) comfortable  
 (2) A Can I do that?  
 (3) THE COURT Sure  
 (4) MR PETUMENOS Does the Court care if he gets  
 (5) perpendicular to the screen and points that thing at it? See  
 (6) that little red light? How s that look?  
 (7) A Oh handy dandy  
 (8) BY MR FORTIER  
 (9) Q Great There you go Professor  
 (10) A Okay This is the heavier armor that I m talking about  
 (11) that we had to remove to get down to subsurface Sampling big  
 (12) rocks like that doesn t really mean much Because you get one  
 (13) big rock it doesn t tell you anything So we went down  
 (14) below  
 (15) We sampled from around two to - well five to ten  
 (16) centimeters which is about two to four inches We would dig  
 (17) into this subsurface material and then we would collect a  
 (18) composite sample in these one liter jars These are glass jars  
 (19) and teflon lined lids because you don t want to cross  
 (20) contaminate any of your samples  
 (21) So we would dig along a strip We would dig five pits and  
 (22) then we would go in and sample from those pits and we d  
 (23) collect a composite sample in one of these big jars We d  
 (24) collect a composite sample triplicate composite samples for  
 (25) microbiology And then we would collect a single sample in a

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- (1) smaller jar for some other work that we re doing at the  
 (2) laboratory in Fairbanks  
 (3) Keep going  
 (4) Q Go ahead and roll it  
 (5) A This is me collecting the sample putting it in You can  
 (6) see where it s kind of wet and oily You got a lot of oil on  
 (7) you from these places This is a picture - we set up booms  
 (8) around this so that when you applied the biosurfactant and then  
 (9) the tide came up whatever you floated out didn t get floated  
 (10) out to sea We collected it in the booms and skimmed it off  
 (11) and collected it with pads  
 (12) You can see that the beach is - that has that rocky armor  
 (13) all the way across the top of it There were a couple of  
 (14) places where you d find - behind the bigger rocks where you  
 (15) would find tar balls and higher concentrations of - of oil  
 (16) that s collected which may be from being washed in When the  
 (17) tide goes back out it gets trapped behind those kind of  
 (18) things So this is spreading out the booms and stuff  
 (19) This is the containers of the PES 51 They re worn on the  
 (20) back and then you have an air compressor and a hose that you  
 (21) inject it down in I think there s a picture of that coming  
 (22) up  
 (23) This is as the tide came in You can see that the oil  
 (24) sheen is - is left from the oil coming out This is  
 (25) collecting the oil after the PES 51 has been applied So you

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- (1) can see the sheen from the oil there  
 (2) THE COURT Professor could you move the microphone  
 (3) down on your tie? You re jamming our signals here  
 (4) A Sure Oh God  
 (5) Okay so this is once again cleaning up the - the oil  
 (6) that s coming out after the application of the PES 51  
 (7) BY MR FORTIER  
 (8) Q Go ahead  
 (9) A That s the same just cleaning up the oil as it comes out  
 (10) Trying to wipe off the rocks and because as you bring it up  
 (11) out of the subsurface it you know moves up through  
 (12) This is the actual application of the PES 51 You can see  
 (13) flush water being washed down in through it You can see the  
 (14) sheen from the oil We moved quite a bit of - floated quite a  
 (15) bit of oil out of the subsurface as was demonstrated by our  
 (16) tests  
 (17) Couple things here This is the Injection You can see  
 (18) the people are wearing respirators You might want to stop  
 (19) When you inject with air you - you throw up a lot of grit  
 (20) The sand underneath is pretty loose and when you inject in  
 (21) you throw up the sea salt and the gritty kind of stuff And  
 (22) there was oil underneath and so you re throwing up some of  
 (23) the  
 (24) volatiles if there s any in the oil So we had the people  
 (25) wear respirators so that they weren t breathing in sand and  
 (26) grit because it s not real healthy when you breathe in sand

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- (1) and grit  
 (2) Q Professor would that also be so they weren't breathing in  
 (3) the volatiles from the oil?  
 (4) A If there were volatiles in the oil that would have  
 (5) protected them from it yes  
 (6) Q Okay  
 (7) A The nice thing about this this particular product is  
 (8) it's real easy to use so it doesn't take a rocket scientist to  
 (9) put it on as opposed to some other things where you have to be  
 (10) real careful  
 (11) You can see this is once again the flush water lots of oil  
 (12) coming up after the surfactant's applied it's releasing it  
 (13) from the solids and it's floating up  
 (14) This is another show of the application Getting in  
 (15) between that armor is pretty hot and then once you see the  
 (16) spray coming in is a big hose we're just spraying the  
 (17) seawater pumping the seawater up to flush through the  
 system  
 (18) Q Professor you said the getting in between the rocks was  
 (19) pretty hot Would you explain to the jury what you meant by  
 (20) that?  
 (21) A Was pretty hard because the rocks the big rocks - and  
 (22) they're very heavy and they're very close together - but all  
 (23) the contamination is down underneath so you have to kind of  
 (24) get down in between them And then in a couple places  
 behind  
 (25) some of the bigger ones you had real hot spots of

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- (1) contamination There was a lot of contamination in some of  
 (2) those so you want to really work in those areas to kind of get  
 (3) that contamination out  
 (4) Q Professor if I could ask you do you know what the  
 (5) temperature of the water was that was being injected?  
 (6) A Yeah we were using the Prince William Sound water It's  
 (7) about 14 or 15 degrees Celsius  
 (8) Q So it wasn't a hot water washing?  
 (9) A No no we were just using the regular seawater  
 (10) Once again you can see all the oil coming out floating on  
 (11) the surface More pictures of the application and then the  
 (12) hoses were just pumping seawater out of the - the ocean And  
 (13) then the people are walking around injecting the air and  
 (14) PES 51  
 (15) Q I hope everybody can hear you Professor  
 (16) A I'm sorry it's very unusual for me not to talk loud  
 (17) enough  
 (18) Then another picture of the injection and this shows  
 (19) the - the solid particles being thrown up 100 psi you know  
 (20) it's pretty hefty and so you throw up some of the solids and  
 (21) boil up the water  
 (22) Q Now Professor why - why was an air - could you explain  
 (23) to us what your knowledge is of why the air knife was used?  
 (24) A Well what you want to do - remember the contamination is  
 (25) subsurface It's not on the surface it's down in this

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- (1) sediment If you just pour your surfactant on the top that's  
 (2) not going to do you much good so what you want to do is get  
 (3) with as little disturbance as you can get the surfactant down  
 (4) into the sediments so that when the tide rises it washes the  
 (5) surfactant through the sediments and up through the - the  
 (6) beach material and out  
 (7) Q And how deep was this going down?  
 (8) A Well you can see that this - this probe is about a foot  
 (9) You know you shove it down in so you're six to 12 inches into  
 (10) the subsurface once you get in between those big rocks  
 (11) Q And Professor do you have any personal knowledge of  
 (12) whether or not injecting air and water and the surfactant the  
 (13) biosurfactant caused any damage to the organisms?  
 (14) A No I - it's not like you're going in and digging the  
 (15) beach up You're - it's a small air knife and you're  
 (16) injecting at a point and it spreads out They probably get  
 (17) more damage every time a wave hits them  
 (18) Q Continue then  
 (19) A So you can see them washing out and injecting the air down  
 (20) in And then the surfactant was included in that air so it  
 (21) was mixed in  
 (22) This is another picture of after the surfactant's applied  
 (23) You can see all the oil running out from the subsurface as it's  
 (24) being washed out and we were picking it up with booms and  
 (25) absorbing it in these absorbent pads so you can see the pads

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- (1) There's several bags of these pads used You can see the  
 booms  
 (2) out here so that it doesn't go any further than right there as  
 (3) the tide came up  
 (4) This is a picture of before we went in and applied - one  
 (5) of the things I was talking about we would find oil in  
 (6) crevices behind rocks This is relative - it's not like  
 (7) asphalt or anything it's actually oil You can wipe it off  
 (8) with your finger It's pretty liquidy kind of stuff It was  
 (9) all over in a lot of the cracks there  
 (10) (Videotape concluded)  
 (11) Q Professor a few more questions  
 (12) You indicated - I'll let you take your seat I'm sorry  
 (13) You indicated Professor that you did some measurements of  
 (14) the sediments before you applied the surfactant?  
 (15) A Uh huh  
 (16) Q And then after?  
 (17) A Uh huh  
 (18) Q Was there a decrease in the amount of - of contamination?  
 (19) A Yeah Beforehand we found on the average between 4,000  
 (20) and to 6,000 milligrams per kilogram of oil components and we  
 (21) measured two different types One is called diesel range so  
 (22) that's indicative of the kind of oil components you find in  
 (23) diesel gasoline And then we also measured semi volatiles  
 (24) which are a little bit higher in carbon link They have a few  
 (25) more carbons in their chain They're a little less volatile

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- (1) We found 20 to 30 milligrams per kilogram of the diesel  
 (2) range and between four to 6 000 milligrams per kilogram of the  
 (3) semi volatile range  
 (4) After the application of PES we found - we could not  
 (5) detect any of the diesel range so we had total removal below  
 (6) detection limits of the diesel range and we were down in the  
 (7) 1 000 to 2 000 range for the semi volatiles So we had about a  
 (8) 70 percent removal of the semi volatiles  
 (9) Q Professor one of the points you made too was that you  
 (10) wanted to make sure that the oil didn't get into the water  
 (11) column when you were washing it out?  
 (12) A Right  
 (13) Q Did you satisfy yourself that the oil did not get into the  
 (14) water column when you washed it out?  
 (15) A Yes We took samples of both for both chemistry and  
 (16) microbiology We found no components from the oil in the  
 (17) water  
 (18) column even right above the - right above the beach as the  
 (19) tide came in nor below the beach after the tide went back out  
 (20) so we didn't solubilize any and we had no impact on the  
 (21) biology the number of heterotrophs or the number of oil  
 (22) degraders within that water column  
 (23) Q Professor based upon your - solely upon your observations  
 (24) at that site do you know whether or not the oil that you  
 (25) pumped out would have risen by itself over time?  
 (26) A Because -

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- (1) MR OPPENHEIMER Your Honor excuse me no  
 (2) foundation  
 (3) THE COURT Sustained  
 (4) BY MR FORTIER  
 (5) Q Professor you observed oil in pools Could you describe  
 (6) to the jury the oil you observed if any on the surface or  
 (7) just below the surface?  
 (8) A Below the surface there was quite a bit of oil As I said  
 (9) in some places you had up to 23 percent oil The surface - as  
 (10) you walked on the beach you don't see it on the surface  
 (11) because the surface on top of this armor has been washed off  
 (12) by  
 (13) the repetitive action of the waves So what you have  
 (14) underneath is the sediment material that's relatively saturated  
 (15) and you know as the waves wash through it pulls some of that  
 (16) out  
 (17) MR FORTIER Now what I'd like to do with the  
 (18) Court's permission is to show one more video  
 (19) BY MR FORTIER  
 (20) Q You have examined a video Professor Tumeo of the Tesoro  
 (21) experiment that was produced by Tesoro is that correct?  
 (22) A That's correct  
 (23) MR FORTIER With the Court's permission then I  
 (24) would like to show Exhibit 683 A - or 683 I'm sorry  
 (25) MR OPPENHEIMER Your Honor I object It's  
 (26) cumulative It seems late in the day I believe it's the same

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- (1) type of material  
 (2) THE COURT How long does it take?  
 (3) MR FORTIER It's a ten minute video Your Honor  
 (4) THE COURT Are you going to be asking him  
 (5) different - what does it show that's different from the other  
 (6) video?  
 (7) MR FORTIER Your Honor it is more of a description  
 (8) of - of the experiment itself There is narration on the  
 (9) tape It describes the product that was injected and a bit  
 (10) more of the results  
 (11) MR OPPENHEIMER Well Your Honor we're not really  
 (12) here litigating PES 51 and it seems to me that it will  
 (13) continue to be cumulative evidence on the same subject  
 (14) MR FORTIER And Your Honor 683 A contained spots  
 (15) that were not in the corporate video I certainly don't want  
 (16) to bore the jury with - with the description of PES 51 in and  
 (17) of itself However I think that the film may demonstrate more  
 (18) to the jury about the experiment than what they have seen thus  
 (19) far  
 (20) MR OPPENHEIMER Your Honor to the extent that there  
 (21) is narration from the company making and selling the product  
 (22) it's also hearsay without any sort of reliability  
 (23) THE COURT The objection's sustained counsel  
 (24) MR FORTIER Thank you I have no other questions  
 (25) CROSS EXAMINATION OF MARK A TUMEO

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- (1) BY MR OPPENHEIMER  
 (2) Q Professor good afternoon I introduced myself briefly  
 (3) but my name's Randy Oppenheimer and I represent Exxon  
 (4) and I'd  
 (5) like to ask you a few questions  
 (6) The site that was selected Sleepy Bay I assume was  
 (7) selected because the desire was to test a product that would be  
 (8) sold to people to remove oil?  
 (9) A No The site was selected because it's indicative of the  
 (10) specific type of environment with oil contamination  
 (11) Q And one in which - I'm sure you're aware - was heavily  
 (12) contaminated during the oil spill?  
 (13) A Yes  
 (14) Q And obviously if you're going to test a product whose  
 (15) primary purpose is to remove oil it makes sense to test it at  
 (16) a place where you know there's oil?  
 (17) A Yes  
 (18) Q And there was no doubt in anybody's mind that you had such  
 (19) a beach in Sleepy Bay?  
 (20) A Well from a scientific standpoint we had to make sure  
 (21) first which was the purpose of the preliminary sampling trip  
 (22) Q Sure I understand But insofar as the commercial  
 (23) interests who were testing this product they believed there  
 (24) was oil to be tested at Sleepy Bay?  
 (25) A I didn't discuss those kind of things with the commercial  
 (26) entity involved because my involvement's through the

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- (1) university  
 (2) Q Right And I assume that neither the university nor your  
 (3) group within the university has anything to do with the sale of  
 (4) the product?  
 (5) A No  
 (6) Q And there s no funding between the two I assume?  
 (7) A No  
 (8) Q The material that – by the way PES 51 is a product that  
 (9) Tesoro s trying to market is that correct?  
 (10) A Yes I believe so  
 (11) Q And without going into detail even though it is a – it is  
 (12) a biotype product it does give off odor is that correct?  
 (13) A There is a citrus odor associated with it because of the –  
 (14) the carrier solvent fluid which is d limonene  
 (15) Q D limonene right but we re not talking about citrus  
 (16) something you d want around your breakfast table in the  
 (17) morning Some people had headaches for example at the test  
 (18) site?  
 (19) A I was not there when anyone had headaches I didn t find  
 (20) it an unpleasant smell It s kind of like lemon fresh Joy  
 (21) Q You heard reports that some people got headaches from it?  
 (22) A Not from my student I don t recall any of those If there  
 (23) were  
 (24) Q The manner in which PES 51 is injected is through these air  
 (25) knives correct?

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- (1) A In this experiment it was yes  
 (2) Q Right Well you could just layer it on but then nothing  
 (3) would come off because in that particular beach there was no  
 (4) oil to take off the surface?  
 (5) A If you layered it on you d probably take off some from the  
 (6) subsurface top layer but that wouldn t be a very effective  
 (7) cleaning mechanism  
 (8) Q Wouldn t bring up much oil?  
 (9) A Well bring up whatever oil was right on the top  
 (10) Q Right And one of the purposes for having a product like  
 (11) PES 51 is that without it the oil is a lot less likely to come  
 (12) out of the environment that it s in it s cleaner?  
 (13) A It increases the rate The oil is going to come out over  
 (14) time anyway  
 (15) Q It increases the rate as which the oil comes out?  
 (16) A Yes  
 (17) Q And by the way a lot of that oil or some percentage of  
 (18) that oil is going to biodegrade naturally Isn t that right?  
 (19) A Not in the subsurface That s a problem with  
 (20) biodegradation in the subsurface you don t have enough  
 (21) oxygen  
 (22) and you re in a really cold environment there and microbes  
 (23) don t tend to munch very heartily when it s that cold and in  
 (24) high concentrations but the bioremediation or the biological  
 (25) degradation naturally in that area is also going to be very  
 very slow

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- (1) Q If you get oxygenated water to the subsurface you get  
 (2) biodegradation?  
 (3) A You will probably get an increase but the temperature s  
 (4) going to play a big part in that also  
 (5) Q Now the PES 51 could that be analogized to a detergent  
 (6) for oil?  
 (7) A A detergent s the wrong word because the detergent gives  
 (8) you the sense of cleaning and scrubbing It s a surfactant  
 (9) Q And a surfactant removes oil from things the oil is hanging  
 (10) on to basically?  
 (11) A What it does it breaks the surface tension between It  
 (12) doesn t physically remove It just breaks the tension that s  
 (13) holding them  
 (14) Q And when the tension between the two things is broken then  
 (15) things like the tide water you described can come in and flush  
 (16) out whatever s now not holding onto the hard space?  
 (17) A Correct  
 (18) Q And you saw more sheen type material obviously after the  
 (19) application of PES 51 than before?  
 (20) A I saw oil after the application of PES 51  
 (21) Q Right And that s because it s doing what had not been  
 (22) done naturally at that rate which is to bring oil up out of  
 (23) the surface?  
 (24) A It increased the rate to a very appreciable level  
 (25) visually yes

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- (1) Q Right Now you mentioned that waves could approximate  
 (2) the  
 (3) pressure that those air knives were doing is that right?  
 (4) A Not the pressure you never get 100 psi pressure off the  
 (5) wave  
 (6) Q You wouldn t get 100 psi wave?  
 (7) A Right  
 (8) Q Right impossible How many people were out there with air  
 (9) knives? I couldn t tell from the tape  
 (10) A I would say there s probably – there were five to seven  
 (11) I wasn t paying a lot of attention to the actual physical  
 (12) application I was more interested in collecting my samples  
 (13) before they started and then doing the work after  
 (14) Q Okay And they were covering an area that relative to the  
 (15) courtroom was how big would you say? Just give us an  
 (16) estimate  
 (17) A Well it was 120 by about 120 feet so – I m not real good  
 (18) at judging distances It would be longer than the courtroom  
 (19) but not much wider  
 (20) Q And you had five or seven people with air knives out there  
 (21) injecting the material in the ground?  
 (22) A Yeah that start at the top and worked down  
 (23) Q Toward the water?  
 (24) A Right  
 (25) Q Toward the water got it And you tested the water before  
 the test – I m sorry you have to audibilize for the record

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- (1) So before the test?  
 (2) A Oh yes We tested before the test below the test site  
 (3) We tested as the tide rose over areas that had been treated and  
 (4) then after the entire set test below the test site and we  
 (5) also tested simply below our reference site  
 (6) Q And did you run the same type of test during the  
 (7) experiment?  
 (8) A As in - same kind of test?  
 (9) Q When the PES 51 testing the water column when PES 51  
 was  
 (10) being applied?  
 (11) A Below yeah where the water came out  
 (12) Q Then you tested afterwards?  
 (13) A Right  
 (14) Q And you didn't detect anything that was water soluble is  
 (15) that correct?  
 (16) A That's correct  
 (17) Q Solubility in water that's one of the pathways that oil  
 (18) or anything that can be soluble gets into an organism isn't  
 (19) that right?  
 (20) A That's one of the ways yes  
 (21) Q And there are things that are related to - like mineral  
 (22) oil for example that are not terribly water soluble and  
 (23) basically would go - you basically swallow it and it goes  
 (24) through your system without getting absorbed into the organs  
 of  
 (25) the body isn't that true?

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- (1) A No that's not true Your body can digest organics  
 (2) That's how we eat  
 (3) Q On the other hand an insoluble goes through an organism  
 (4) it is much less likely to get into the organism isn't that  
 (5) correct?  
 (6) A No that's - I'm not an internist for medicine but if you  
 (7) put organics insoluble or not into the system your body will  
 (8) tend to break those down Once they're broken down inside  
 they  
 (9) can - the harmful parts can be absorbed  
 (10) Q Nothing you tested though was water soluble in the tests  
 (11) you've described is that right?  
 (12) A No that's not true What we found - we did not find any  
 (13) solubilized petroleum compounds in the water column That  
 (14) includes basically your volatiles BTEX benzene toluene  
 (15) xylene ethylbenzene  
 (16) Q BTEX?  
 (17) A BTEX right  
 (18) Q Because -  
 (19) A Most of those since they're very volatile and this has  
 (20) been weathered three to four years most of those very volatile  
 (21) components are gone  
 (22) Q Right And you mentioned earlier that one of the reasons  
 (23) for wearing a mask is that you get debris whatnot blown back?  
 (24) A There's a lot of spray yes  
 (25) Q A lot of spray And you had said in response to something

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- (1) Mr Fortier said if there were volatiles in there they'd get  
 (2) kicked back at you right?  
 (3) A They could yes  
 (4) Q Do you have any reason to believe anybody got any volatiles  
 (5) kicked back at them given the age of the oil?  
 (6) A I would say there was a possibility since I could smell oil  
 (7) doing the stuff but there wouldn't be a high concentration  
 (8) We did find diesel range petroleum products which are soluble  
 (9) Q But particularly not soluble?  
 (10) A Depends what you said Solubility - everything is soluble  
 (11) at some point  
 (12) Q At some point?  
 (13) A Right But we didn't find unusual amounts in the water  
 (14) column  
 (15) Q About how much of the material got injected into the  
 (16) ground?  
 (17) A I believe the total application of PES was about 120  
 (18) gallons but not all of that was injected into the ground  
 (19) Q I'm sorry you're saying about 120 gallons of PES was  
 (20) injected?  
 (21) A Not injected  
 (22) Q Was available for injection?  
 (23) A Was used  
 (24) Q Not 160?  
 (25) A It could have been 160 I thought it was around 120 but I

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- (1) don't have any document with me so I don't remember off the  
 (2) top of my head It was over 100 and less than 200  
 (3) Q And did less come back out than went in?  
 (4) A I didn't measure what came out or came in My - because  
 (5) of the nature of what we were doing we looked at  
 contamination  
 (6) in the sediments so we wanted to know after the experiment  
 (7) was there less contamination in sediment than there was  
 (8) beforehand because if there was that means that our treatment  
 (9) process was successful So that - we didn't look at what came  
 (10) out because we weren't doing the mass bounds in that sense  
 (11) Q And so what you're talking to us about is not the amount of  
 (12) oil that we were seeing here but your calculation based upon  
 (13) what you think was there then you subtracted from it what you  
 (14) found when you went back and sampled the soil at a later time?  
 (15) A Well we went in beforehand so we know what was there  
 (16) beforehand and we know what was there afterwards yes  
 (17) Q Right And - but do you recall that more material - more  
 (18) of the surfactant went in and volume came back out? You have  
 (19) no - do you have no idea one way or another?  
 (20) A Once again I did not measure that  
 (21) Q The sample that came out was thrown away wasn't it?  
 (22) A What -  
 (23) Q Well no one collected the liquid that is shown on the  
 (24) videotape to determine how much of that liquid was oil how  
 (25) much was surfactant how much was muddy water?

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- (1) A Well they skimmed the -- the -- when they skimmed the  
 (2) surface of the water it was put into a tank for separation so  
 (3) the oil would separate from the water naturally  
 (4) Q But no one did any sort of scientific tests to determine  
 (5) how much of that material was oil how much was water how  
 much  
 (6) was surfactant?  
 (7) A There would be no need to determine how much was oil the  
 (8) oil versus water because the water and oil would separate  
 (9) naturally  
 (10) Q How about oil and surfactant?  
 (11) A Not that I know of  
 (12) Q When you say not that you know -- I m sorry my question  
 (13) was Would the oil and surfactant separate naturally?  
 (14) A No  
 (15) Q You couldn t tell by looking in the tank whether you were  
 (16) looking at surfactant or oil at least from a scientific point  
 (17) of view?  
 (18) A You couldn t prove whether it was oil or surfactant no  
 (19) Q And NOAA was present at one point during these tests  
 (20) wasn t it?  
 (21) A Yes they were  
 (22) Q Let me get this right National Oceanographic and  
 (23) Atmospheric Administration correct?  
 (24) A Yes  
 (25) Q And you re aware that their observers have commented that

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- (1) the liquid that they saw seemed to contain a lot of surfactant  
 (2) which means the -- the cleanser which was being injected in?  
 (3) A No I was not aware of that But that s -- was not  
 (4) relevant to my experiment  
 (5) Q I understand And that wasn t something that you were  
 (6) focused on  
 (7) MR FORTIER Counsel defendants exhibit 15486  
 (8) MR OPPENHEIMER Your Honor may I approach the  
 (9) witness?  
 (10) BY MR OPPENHEIMER  
 (11) Q Professor Tumeo I d like to show you a paper I m going  
 (12) to ask you if you ve seen it before entitled Chemistry and  
 (13) Environmental Effects of Shoreline Cleaner PES 51  
 contributors  
 (14) Gary Shigenaka Ruth Yender and Debbie Payton National  
 (15) Oceanographic and Atmospheric Administration This is 15486  
 (16) Tim?  
 (17) MR FORTIER Counsel I don t believe I received a  
 (18) copy of that  
 (19) THE WITNESS I don t think I ve seen this  
 (20) BY MR OPPENHEIMER  
 (21) Q Would you take a look at page 18 at the top?  
 (22) MR FORTIER Your Honor I ll just enter an objection  
 (23) as foundation on this  
 (24) MR OPPENHEIMER I m going to ask him if he agrees  
 (25) with a statement Your Honor

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- (1) MR FORTIER Your Honor if he hasn t seen it --  
 (2) THE COURT Does counsel know what the statement is?  
 (3) MR OPPENHEIMER I m sorry counsel top of page 18  
 (4) BY MR OPPENHEIMER  
 (5) Q I m sorry Professor Tumeo the sentence reads much of the  
 (6) floating product acted like it had a lot of surfactant which  
 (7) is the PES 51 It didn t stick and made discrete small  
 (8) droplets Is that consistent with your observation?  
 (9) A No  
 (10) Q So you disagree with the observation that NOAA made about  
 (11) the material looking as if it had a lot of surfactant in it?  
 (12) A Not having read this I disagree with the underlying  
 (13) assumption  
 (14) MR FORTIER Your Honor the objection is repeated  
 (15) THE COURT It s what?  
 (16) MR FORTIER I repeat my objection as to foundation  
 (17) He hasn t seen the document  
 (18) THE COURT The question is whether -- the question  
 (19) started out to be whether he agreed with a particular  
 (20) statement counsel  
 (21) BY MR OPPENHEIMER  
 (22) Q Professor Tumeo do you know of anyone who tested that  
 tank  
 (23) that contained the oily material that was pulled off the beach?  
 (24) A No  
 (25) Q Do you believe in fact that there never was a test out of

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- (1) that?  
 (2) A I have no reason to believe that there was or wasn t Like  
 (3) I said it wasn t my purview It wasn t part of my experiment  
 (4) Q No I understand and you may well not know  
 (5) One last question You did not find oil in all the pits  
 (6) that you dug on Sleepy Bay did you?  
 (7) A Yes every pit that we found had contamination  
 (8) Q Did you find visible oil in each pit?  
 (9) A No  
 (10) MR OPPENHEIMER Okay thank you No more questions  
 (11) Your Honor  
 (12) MR FORTIER Your Honor If I could Just a few  
 (13) redirect questions  
 (14) THE COURT Sure  
 (15) MR FORTIER Thank you  
 (16) REDIRECT EXAMINATION OF MARK A TUMEO  
 (17) BY MR FORTIER  
 (18) Q Professor Tumeo you ve had an opportunity to view what  
 (19) we ve marked as 683 the Tesoro tape?  
 (20) A Yes  
 (21) Q Is it your opinion that the tape accurately reflects the  
 (22) test?  
 (23) A Yes  
 (24) Q Okay And does the tape the Tesoro tape more accurately  
 (25) reflect the test than the short clips that we saw?

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- (1) A Yes  
 (2) MR OPPENHEIMER Your Honor that s hearsay  
 (3) THE COURT That s by the boards already counsel  
 (4) The objection has already been sustained If you re using this  
 (5) as a foundation for the Tesoro tape I m not going to let it  
 (6) in  
 (7) MR FORTIER What I d do Your Honor is simply renew  
 (8) my offer on it  
 (9) THE COURT You can make an offer of proof out of the  
 (10) presence of the jury counsel but that objection has been  
 (11) sustained  
 (12) BY MR FORTIER  
 (13) Q Now you were asked some questions about the  
 biodegradation  
 (14) of the buried oil?  
 (15) A Correct  
 (16) Q During cross exam Can you explain to the jury why you  
 (17) believe that the oil would not biodegrade under the ground?  
 (18) A Biodegradation of oil requires a couple of things to  
 (19) happen First of all you have to have the oil in a low enough  
 (20) concentration so it s not toxic to the microbes  
 (21) Second of all you have to have oxygen because oil cannot  
 (22) be degraded anaerobically You need oxygen in some form to  
 (23) break the very complex ring structure  
 (24) And then the third thing is you - you have to have it warm  
 (25) enough so that the bacteria are happy Most of the oil

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- (1) degrading bacteria are what are called mesophilic They like  
 (2) moderately warm temperatures you know we re looking in the  
 (3) 15  
 (4) to 20 to 30 degrees Celsius which is you re looking at 70 60  
 (5) 70 80 degrees Fahrenheit  
 (6) When you go into the subsurface environment in these  
 (7) beaches you tend to have a system where you have pockets of  
 (8) large quantities of oil so in those areas you probably have a  
 (9) toxic situation Plus you re in a - in an environment where  
 (10) you don t get much oxygen and that is probably the major  
 (11) limiting factor So if you don t have oxygen they re just not  
 (12) going to do their thing  
 (13) The third thing is it s a relatively cold environment and  
 (14) because you are in the subsurface you don t have a lot of  
 (15) insulation a lot of sun coming down to heat it up because  
 (16) you re down underneath the ground and so you tend to stay  
 (17) cold So as a consequence the rate in which this stuff breaks  
 (18) down biologically is going to be pretty slow  
 (19) MR FORTIER Thank you Professor  
 (20) I have no further questions Your Honor  
 (21) MR OPPENHEIMER Your Honor just two more if I  
 (22) may  
 (23) RECROSS EXAMINATION OF MARK A TUMEO  
 (24) BY MR OPPENHEIMER  
 (25) Q So the rate of breakdown is slow in - but it s there  
 correct it s still breaking down no doubt in your mind?

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- (1) A I m sure that there are areas in which it s breaking down  
 (2) yes There may be areas in which it s not because of the  
 (3) limiting oxygen because of the temperature and because of the  
 (4) high concentration it would be toxic  
 (5) Q You don t know of any such areas as a scientist you  
 (6) haven t observed any such areas?  
 (7) A No I have not observed such areas  
 (8) Q Okay thank you Thank you Is it correct that there are  
 (9) no volatile components left in the beach material on Sleepy  
 (10) Bay?  
 (11) A There are no BTEX components that s correct  
 (12) Q And so the statement is correct there are no volatile  
 (13) components left on the beach?  
 (14) A As long as volatile is confined to BTEX yes  
 (15) MR OPPENHEIMER Thank you No further questions  
 (16) MR FORTIER Your Honor I forgot to move for the  
 (17) admission of exhibit 683 - 683 A if I could do that  
 (18) (Exhibit 683 A offered)  
 (19) THE COURT There s no objection?  
 (20) MR OPPENHEIMER No objection  
 (21) THE COURT 683 A  
 (22) (Exhibit 683 A received)  
 (23) THE COURT I m going to let you go for the day  
 (24) Don t talk about the case with anybody including your fellow  
 (25) jurors Don t form an opinion on it until it s submitted for

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- (1) your deliberation  
 (2) I have one topic to talk with counsel so what I d like you  
 (3) to do is go to the jury room and you ll get the word in a short  
 (4) time that you can go So please stay in the jury room until  
 (5) you get that word  
 (6) (Jury out at 1 15 p m )  
 (7) THE COURT All right The jury is not present  
 (8) Counsel you can make your offer of proof about that second  
 (9) tape if you choose to do so  
 (10) MR FORTIER Thank you Your Honor I m going to  
 (11) defer to Mr McCallion Your Honor He s done a number of  
 (12) these tapes so he probably has a better background in it than  
 (13) I do  
 (14) THE COURT Your offer of proof is made with the  
 (15) witness counsel  
 (16) MR FORTIER May I do it - may Mr McCallion do it?  
 (17) THE COURT He can do it I don t want it out of the  
 (18) mouth of counsel I want the witness to be testifying  
 (19) MR FORTIER That s fine  
 (20) VOIR DIRE EXAMINATION OF MARK A TUMEO  
 (21) BY MR FORTIER  
 (22) Q Professor Tumeo when you viewed the Tesoro tape did you  
 (23) note the number of workers did it show accurately the number  
 (24) of workers?  
 (25) A It shows a better scan of the - of the beach and I did

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- (1) not count the number of workers but you might be able to from  
 (2) it  
 (3) Q Okay And does it show the way in which - does it  
 (4) demonstrate what the beach looked like before the PES 51 was  
 (5) applied?  
 (6) A Yeah It has an aerial view as you come into Sleepy Bay  
 (7) and it shows that  
 (8) Q So it shows a panoramic view of the beach?  
 (9) A Yes  
 (10) Q And that -  
 (11) A You can see our - you can see our experimental beach and  
 (12) our reference beach from that picture  
 (13) Q And that is a view that you observed when you came in too  
 (14) correct?  
 (15) A Yes  
 (16) Q And it accurately displays it correct?  
 (17) A Yes  
 (18) Q Now does the film also accurately reflect the oil that is  
 (19) on the beach in the area that you worked?  
 (20) A Yes There are some pictures of us taking samples that  
 (21) show the - the nature of the oil  
 (22) Q Okay And now it's correct that you were at that site for  
 (23) a period from July 1st through July 3rd while the filming was  
 (24) going on?  
 (25) A That's correct

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- (1) Q And there are pictures of you in the film too right?  
 (2) A Yes  
 (3) Q And you were collecting samples before as well as after  
 (4) correct?  
 (5) A To my recollection it shows both before and after and it  
 (6) also shows the marking off of the segment so you get a sense  
 (7) of where we were  
 (8) Q So then the Tesoro film would also show where precisely the  
 (9) area of the beach that the experiment was performed in  
 (10) correct?  
 (11) A Yes  
 (12) Q And the film the Tesoro film shows not only you but your  
 (13) assistant during this period of time?  
 (14) A Yes it shows my student  
 (15) MR FORTIER I renew my offer of proof Your Honor  
 (16) THE COURT Did you want to ask any questions  
 (17) counsel?  
 (18) MR OPPENHEIMER Your Honor I haven't heard anything  
 (19) that wasn't cumulative I don't think it necessary although I  
 (20) - it's very nice that we see a picture of the Professor's  
 (21) assistant and some of the information is also duplicative of  
 (22) what's in Ms Fobes' photographs  
 (23) THE COURT When you say it showed the oil on the  
 (24) beach does it show the oil in some quantitatively or  
 (25) qualitatively different way than the way shown in the first

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- (1) video?  
 (2) A The difference between the two films is that the second  
 (3) one the one that Tesoro did isn't broken up so you can see  
 (4) the progression of the experiment and you understand when  
 (5) the  
 (6) oil started coming out versus when it didn't  
 (7) When I was narrating that other one it's very broken up  
 (8) and it's hard to tell at what point in time things are going  
 (9) on So from the standpoint of understanding the experiment  
 (10) and  
 (11) what went on in the process of that - that whole program  
 (12) there the first film with it all broken up is not very  
 (13) helpful At least it's not very instructive to me  
 (14) THE COURT Have you heard the narration on the tape?  
 (15) A On the second one?  
 (16) THE COURT Uh huh  
 (17) A I have heard it yes  
 (18) MR OPPENHEIMER Your Honor I - I simply continue  
 (19) to observe that we're not - we're here not litigating PES 51  
 (20) and I don't know that there is a -  
 (21) THE COURT Is PES 51 Mr Clough's terribly toxic  
 (22) material where awful substances were boiling out of the beach?  
 (23) MR OPPENHEIMER Well actually the word boiling  
 (24) was used by the witness in his testimony  
 (25) THE COURT I didn't say - but he didn't say it in  
 (26) quite the way that Mr Clough did  
 (27) MR OPPENHEIMER No he was not giving an opening

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- (1) statement  
 (2) MR STOLL Having just read Mr Clough's opening  
 (3) statement while we were listening to some other testimony  
 (4) that's it Your Honor You got it  
 (5) THE COURT That's it But I don't think the Tesoro  
 (6) tape's going to help and I would not let the narration be used  
 (7) anyway Because the objection as to the narration was a good  
 (8) objection  
 (9) MR FORTIER Your Honor without the narration  
 (10) THE COURT What does an aerial view by the way add  
 (11) to this? I mean how does an aerial view show this more  
 (12) accurately than what was shown?  
 (13) MR FORTIER It shows as you come in Your Honor to  
 (14) put it in context in living color where the sea is  
 (15) THE COURT Context of what?  
 (16) MR FORTIER Why would you need it like that?  
 (17) Because the area Your Honor is only a small area of a large  
 (18) area of a large - of the beach area  
 (19) THE COURT What does that show?  
 (20) MR FORTIER That was used Well it shows you that  
 (21) there was only one area that was actually - that was actually  
 (22) treated by this PES 51 that's surrounded by a much larger  
 (23) area The area Your Honor is similar to that which  
 (24) Mr Clough I believe showed in his opening in other words  
 (25) lots of clean beach too lots of clean rocks all over the

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- (1) place So -  
 (2) THE COURT You could see that in an aerial view lots  
 (3) of clean beach and lots of clean rocks  
 (4) MR FORTIER Oh yeah sure You see the rocks from  
 (5) the top  
 (6) THE COURT Didn t this witness say that this beach  
 (7) was clean on the top?  
 (8) MR STOLL Your Honor I I -  
 (9) MR FORTIER Your Honor I defer to Mr Stoll  
 (10) THE COURT No a cumulative objection frequently is a  
 (11) good objection in a case like this because cumulation is what  
 (12) the parties are looking for but I don t necessarily think that  
 (13) this is more probative than the other tape  
 (14) MR STOLL Your Honor if I may I think if the Court  
 (15) viewed the film which I don t believe you ve had the  
 (16) opportunity to do -  
 (17) THE COURT No I haven t that s true What I was  
 (18) trying to do is if I was going to let the jury see it I d let  
 (19) them see it today  
 (20) MR STOLL What I would suggest Your Honor is that  
 (21) the film is much more complete The 683 A has specific small  
 (22) shots of - of areas during the course of the test The  
 (23) suggestion was made by counsel both by Mr Clough in his  
 (24) opening statement and by Mr Oppenheimer in  
 cross examination  
 (25) that this was a small area They sort of cherry picked the

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- (1) situation here and you know they re out there looking for  
 (2) oil and I think that the film the Tesoro film demonstrates  
 (3) that here you have this beach this - it shows the whole the  
 (4) size of the area that was tested It shows that that area  
 (5) from the surface looks the same as the rest of the beach and  
 (6) that the - and it shows the whole nature of the test  
 (7) The scenario as Dr Tumeo indicated the sequence of the  
 (8) test whereas the 683 A shows - it s a very narrow film of  
 (9) just a certain shot during the course of the testing It does  
 (10) not show the sequence doesn t show the broad range of the  
 you  
 (11) know of the beach and it doesn t show - the testing area  
 (12) appears to the naked eye at first just the same as the rest  
 (13) of the beach  
 (14) THE COURT Thank you  
 (15) MR OPPENHEIMER Your Honor I think this is a case  
 (16) of pick the poison We got the amended tape which we used  
 (17) today - last night It was the tape that was provided to us  
 (18) for review which we did for the court today and it seems to  
 (19) me that it represented their - at least that s the way we  
 (20) understood it when it was given to us yesterday as their offer  
 (21) here in connection with this testimony And there - all of  
 (22) this could have been put in that tape They could have done it  
 (23) and be done with it  
 (24) THE COURT All of what could have been put in  
 (25) MR OPPENHEIMER Any aerial shots any shots they

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- (1) wanted to What we saw today was an edited tape that we got  
 (2) yesterday that was to be the exhibit  
 (3) THE COURT I see  
 (4) MR McCALLION Your Honor -  
 (5) THE COURT All right stop I m going to look at the  
 (6) tape If I - if I agree that the tape can be admitted - this  
 (7) witness doesn t have to be here for the showing of the tape  
 (8) does he  
 (9) MR STOLL That s correct Your Honor  
 (10) THE COURT Right?  
 (11) MR OPPENHEIMER Well Your Honor I reviewed -  
 (12) THE COURT I - wait a minute I m not going to let  
 (13) the voice over in All right? I would let the tape be  
 (14) played It s a ten minute tape and that would be it  
 (15) Now your hearsay objection goes away if the voice over is  
 (16) gone Your cumulative objection may not be well taken once I  
 (17) see the - see the tape It s a short tape otherwise I d  
 (18) consider saying fine play those things that show - the thing  
 (19) that impresses me here about counsel s argument is the shots  
 (20) that show the whole beach as opposed to the area that was  
 (21) subject to the test And if they think that s important to  
 (22) show then fine the tape demonstrates that and apparently the  
 (23) witness agrees with the test but why does the witness have to  
 (24) be here?  
 (25) MR OPPENHEIMER Well Your Honor if that is the

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- (1) only part of the tape that s being shown my concern is as I  
 (2) understand it - and somebody can correct me if I m mistaken -  
 (3) is that this is a - this is a tape made by the company that s  
 (4) promoting the product I think it is commercial in the guise  
 (5) of industrial filmmaking and I think that it is - the  
 (6) narration is hearsay but so are the images if what they re  
 (7) designed to do is show prospective purchasers that all this  
 (8) stuff came out I don t think this is anything close to an  
 (9) objective tape It s going to be short pictures  
 (10) THE COURT You may be right You may be right  
 (11) counsel but I may decide against you on that point Why does  
 (12) he have to be here if I let the tape be played?  
 (13) MR OPPENHEIMER I think so - Mr Diamond points out  
 (14) to me something which is driving my assumptions I am loath to  
 (15) release the witness on cross examination on an exhibit that has  
 (16) not been marked before the day is through  
 (17) THE COURT I understand that counsel but what can I  
 (18) say? I don t want the witness to stay here when he doesn t  
 (19) have to  
 (20) MR OPPENHEIMER Is Mr Tumeo -  
 (21) THE COURT I tell you what I ll give you the  
 (22) opportunity to bring him back if you think it s necessary at  
 (23) your own expense How s that?  
 (24) MR OPPENHEIMER That s acceptable Your Honor  
 (25) MR STOLL Thank you Your Honor

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- (1) THE COURT So they can - you can let the jury go  
 (2) MR STOLL Your Honor are you going to instruct -  
 (3) if I may just say one thing as long as the jury's here on  
 (4) this business about the instruction the federal court action  
 (5) THE COURT That's for later counsel I'll - we'll  
 (6) talk about that once I let the jury go I'm not going to  
 (7) instruct them today  
 (8) MR STOLL All right  
 (9) THE COURT I don't see that there's -  
 (10) MR STOLL We understood from - indirectly  
 (11) indirectly to me that Judge Holland thought that there was  
 (12) going to be a verdict today is the only reason I brought that  
 (13) up  
 (14) THE COURT Suppose there is why wouldn't any  
 (15) instruction I give be just as effective tomorrow?  
 (16) MR STOLL Well it may be Your Honor except that  
 (17) if there's a - a news broadcast about it this evening it  
 (18) might be -  
 (19) THE COURT So I can - why don't I just tell the  
 (20) bailiff to tell them to be very careful about any news reports  
 (21) that might occur in the paper Of course that could key them  
 (22) into things but we know they're not going to disregard my  
 (23) instructions right?  
 (24) MR STOLL We know that's not going to happen  
 (25) THE COURT Okay Let them go and tell the bailiff

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- (1) than I am They submitted a new instruction yesterday  
 (2) THE COURT You're right You're right Hold on a  
 (3) minute Yes I'm sorry It was Exhibit C wasn't it? Well  
 (4) I'm sorry I'm going to give - I'm going to give the  
 (5) plaintiffs proposed instruction all right  
 (6) MR DIAMOND Instruction B that they submitted  
 (7) THE COURT Because Exhibit C is - is verbatim the  
 (8) first paragraph of that proposed instruction  
 (9) MR STOLL That's correct  
 (10) THE COURT Okay Now as to the shareholders which  
 (11) is Exhibit B I'm going to give that also And I'm going to  
 (12) strike the third sentence which begins the amount of  
 (13) damages I'm going to strike the word limited and I'm  
 (14) going to strike the last sentence And for the last sentence  
 (15) I'm going to substitute the following paragraph I will  
 (16) instruct you - following sentence I will instruct you  
 (17) further regarding this issue and others at the end of this  
 (18) trial I'm not sure what my final instruction regarding this  
 (19) evidence will be I have to listen to all the evidence  
 (20) Therefore I'm - I'm loath to commit myself at this point by  
 (21) saying you are instructed not to consider this evidence for any  
 (22) other purpose There may be another purpose that they can  
 (23) consider it for I don't want to foreclose that now  
 (24) So that deals with all of the issues that both proposed  
 (25) instructions were submitted for and I think it does it

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- (1) to tell them to avoid any media about any of these cases  
 (2) strictly today okay?  
 (3) Okay you can step down Thanks  
 (4) I'll listen to it I'll watch the tape later this  
 (5) afternoon if you set it up for me  
 (6) Is there anything else to discuss on the record?  
 (7) MR STOLL No Your Honor  
 (8) THE COURT Then let's discuss that instruction so we  
 (9) can finish up today and I won't have to bring you back I've  
 (10) determined that the instruction I'm going to give is this I'm  
 (11) going to give the plaintiffs instruction I'm going to take  
 (12) out the second  
 (13) MR DIAMOND Could I have just a moment Your Honor  
 (14) I just need to get that -  
 (15) THE COURT Sure As to paragraph one in that  
 (16) proposed instruction it refers back to Exhibit B  
 (17) MR DIAMOND Are you looking at the plaintiffs  
 (18) proposed instruction that was submitted yesterday?  
 (19) THE COURT Yes yes uh huh So paragraphs two  
 (20) three and four of that instruction I'm going to give  
 (21) Paragraph one I'm going to give with modifications The  
 (22) modification I'm going to give is this As to the third  
 (23) sentence it is stricken as we discussed The word limited  
 (24) is stricken as we discussed  
 (25) MR DIAMOND This is a - you're on a different page

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- (1) adequately  
 (2) MR STOLL Thank you Your Honor  
 (3) MR DIAMOND Your Honor - Mr Stoll is quick at that  
 (4) switch  
 (5) THE COURT For good reason counsel  
 (6) MR DIAMOND Yes  
 (7) MR STOLL I learned a long time ago Your Honor if  
 (8) you - out  
 (9) MR DIAMOND We discussed on Friday the defendants  
 (10) very strong desire to have you instruct as to proof  
 (11) concerning - not proof but the nature of claims being made by  
 (12) commercial fishermen for damage to the commercial fish catch  
 (13) and for claims pending in other courts for subsistence use I  
 (14) don't - is it your intention not to instruct on those things?  
 (15) THE COURT Not to instruct now that's right  
 (16) MR DIAMOND Your Honor you have foreclosed us from  
 (17) conducting cross examination in that area in preference of  
 (18) instructions That's how this all came up We wanted to  
 (19) cross examine the witnesses who have already testified about  
 (20) the existence of claims that they had either directly or as  
 (21) class members for lost subsistence harvest for loss to their  
 (22) commercial catch  
 (23) THE COURT That's true  
 (24) MR DIAMOND As we discussed on Friday we - we  
 (25) suggest and I think you agreed with us on Friday that this

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- (1) jury undoubtedly is suffering some measure of confusion as to  
 (2) why they've heard about fish why they've heard about damage  
 to  
 (3) commercial - damage to the subsistence harvest if those are  
 (4) not claims And quite frankly I think the largest  
 (5) determinant in the verdict that this jury returns will be the  
 (6) nature of what they think they are deciding  
 (7) In view of the fact that plaintiffs have been able to put  
 (8) on this evidence without any sort of clarification as to how  
 (9) damage to the commercial fisheries relates to land claims as  
 (10) to how lost subsistence harvest relates to land claims we have  
 (11) a grave concern that this jury is going to get cemented in  
 (12) their view that somehow that must be relevant to land damage  
 in  
 (13) some undefined way and we have not been able to through  
 (14) cross examination to bring out the fact that there are certain  
 (15) claims owned by individuals who are testifying in this case  
 (16) I would urge the Court to reconsider at least the timing  
 (17) of that instruction now that the evidence is coming in on the  
 (18) plaintiffs' side about subsistence catch and about commercial  
 (19) fisheries  
 (20) THE COURT The timing in what sense?  
 (21) MR DIAMOND Well I - I don't know that whether  
 (22) you're planning on instructing the jury at the conclusion  
 (23) concerning what claims are not part of this case and what -  
 (24) THE COURT Yes I'm considering it  
 (25) MR DIAMOND I'm sorry?

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- (1) THE COURT Yes I'm considering it because I -  
 (2) THE COURT We would urge -  
 (3) THE COURT I think that's probably the appropriate  
 (4) time to do it  
 (5) MR DIAMOND We would urge the Court do that now  
 (6) while the evidence is coming through  
 (7) THE COURT I'm not going to give them a long  
 (8) instruction on those claims because I think it can only confuse  
 (9) them And you gave me a long instruction If you give me two  
 (10) or three sentences that are dispassionate I'll consider giving  
 (11) them something as it's coming in  
 (12) MR DIAMOND We'll have something in the morning  
 (13) MR PETUMENOS Judge on Mr Diamond's statement on  
 (14) being foreclosed with cross examination I think I take issue  
 (15) with the state of the record on that There have been two  
 (16) witnesses testifying Mr Gordaoff and Mr Totemoff the only  
 (17) two Native businesses who testified and I don't believe either  
 (18) one of them have a claim for commercial fishing or asked for  
 (19) absence of subsistence and I don't think you foreclosed  
 (20) anything And it is further to the notion - my concern is  
 (21) that I don't want I guess there to be a done deal that we're  
 (22) instructing them on that That should depend on you say the  
 (23) state of the evidence  
 (24) THE COURT It's not a done deal That's why I  
 (25) don't - I don't generally give comprehensive instructions at

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- (1) the beginning of the case or comprehensive instructions on the  
 (2) second day or on the fifth day or on the 15th day Things are  
 (3) developing and I'm not - and I don't intend to instruct them  
 (4) in a way that's inconsistent with the final instructions in  
 (5) this case  
 (6) MR PETUMENOS I didn't want it to go by that these  
 (7) witnesses had claims as Mr Diamond described because I  
 don't  
 (8) think that's accurate I don't think they did have those  
 (9) claims those two witnesses that testified  
 (10) THE COURT I'm sure there might be a way counsel  
 (11) could cross examine but the record speaks for itself I don't  
 (12) believe that anybody's been unfairly foreclosed and to the  
 (13) extent that there may be confusion Instructions are the  
 (14) appropriate way to deal with it  
 (15) MR DIAMOND I was referring to bench conferences we  
 (16) have had out of the presence of the jury in which we proposed  
 (17) getting into certain lines and the Court indicated what its  
 (18) preference was I think the record will speak for itself  
 (19) THE COURT All right Anything else?  
 (20) MR OPPENHEIMER Yes Your Honor  
 (21) MR McCALLION I'm sorry go ahead  
 (22) MR OPPENHEIMER Your Honor I think we're finally in  
 (23) a position to move admission to the exhibits we discussed two  
 (24) days ago  
 (25) THE COURT Sure

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- (1) MR OPPENHEIMER I'll read them for the record We  
 (2) offered DX13227 13239 13240 13258 15480 15481 15482  
 (3) 2734 2761 2769 8942 8943 8944  
 (4) (Exhibits DX13227 13239 13240 13258 15480 15481  
 (5) 15482 2734 2761 2769 8942 8943 and 8944 offered)  
 (6) THE COURT No objection?  
 (7) All right those are all admitted I can't remember them  
 (8) so I won't repeat them Consult with them afterwards to make  
 (9) sure you get those  
 (10) MR PETUMENOS Judge there are a few objections to  
 (11) those exhibits  
 (12) THE COURT Oh I thought there was no objection  
 (13) MR PETUMENOS No one of the objections is I - now  
 (14) I think I heard some numbers I never heard - I haven't heard  
 (15) before Our records reflect that the following exhibits have  
 (16) no testimony connected with them in other words they weren't  
 (17) testified to on cross and I'm willing to look with counsel  
 (18) THE COURT Then clearly this isn't the time Consult  
 (19) with counsel see what your perspective positions are If you  
 (20) can resolve it by agreement then I'll let the exhibit in and  
 (21) if you can't I'll deal with it later  
 (22) MR McCALLION Your Honor I believe with regard to  
 (23) Dr Mundy's testimony there is some minimal outstanding  
 (24) disputes with regard to captions of his 1994 notebook We've  
 (25) resolved I think most of them but I think there's a few

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- (1) outstanding
- (2) THE COURT So tell me what they are
- (3) MR McCALLION We could do it now or if Your Honor
- (4) wanted to view the videotape at some appropriate point at your
- (5) convenience this afternoon we could do it at that time
- (6) THE COURT The videotape - no I m not going to view
- (7) the videotape with you in the room yeah that s - so when I
- (8) recess sometime this afternoon I ll just watch the videotape
- (9) but tell me what captions because it seems to me I could
- (10) resolve them now and we ll have more certainty of it
- (11) MR McCALLION Let me just consult with counsel
- (12) MR OPPENHEIMER Your Honor with all due respect I
- (13) think Mr McCallion and I both have had an unusual schedule
- for
- (14) the last two days I do believe it would be more expeditious
- (15) if we sat down I give you my word we ll do so this afternoon
- (16) THE COURT Sure
- (17) MR McCALLION If there s anything remaining Your
- (18) Honor perhaps we could take it up with the Court
- (19) THE COURT You re telling me counsel nothing in
- (20) your position is nonnegotiable is that your position?
- (21) MR OPPENHEIMER Nothing in my position is
- (22) nonnegotiable
- (23) THE COURT Excellent excellent
- (24) Anything else?
- (25) THE CLERK Please rise This court is in recess

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- (6) 683 A received 2890

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- (1) STATE OF ALASKA )
  - (2) Reporter s Certificate
  - (3) DISTRICT OF ALASKA )
  - (6) I Joy S Brauer RPR a Registered Professional
  - (7) Reporter and Notary Public
  - (8) DO HERBY CERTIFY
  - (9) That the foregoing transcript contains a true and
  - (10) accurate transcription of my shorthand notes of all requested
  - (11) matters held in the foregoing captioned case
  - (12) Further that the transcript was prepared by me
  - (13) or under my direction
  - (14) DATED this day
  - (15) of 1994
  - (21) JOY S BRAUER RPR  
Notary Public for Alaska
  - (22) My Commission Expires 5 10 97
-

Look-See Concordance Report

UNIQUE WORDS 2,383
TOTAL OCCURRENCES 9,724
NOISE WORDS 385
TOTAL WORDS IN FILE 30 649

SINGLE FILE CONCORDANCE

CASE SENSITIVE

NOISE WORD LIST(S)
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(1) IN THE SUPERIOR COURT FOR THE STATE OF ALASKA  
(2) THIRD JUDICIAL DISTRICT  
(4) In re ) Case No JAN 89 2533 Civil  
) Anchorage Alaska  
(5) The EXXON VALDEZ ) Wednesday July 20 1994  
) 8 47 a m  
(6) )  
(8) VOLUME 19 Pages 2913 through 3048  
(10) TRANSCRIPT OF PROCEEDINGS (Continued)  
(11) TRIAL BY JURY  
(13) BEFORE THE HONORABLE BRIAN C SHORTELL  
Superior Court Judge  
(16) APPEARANCES  
(17) FOR THE PLAINTIFF  
N ROBERT STOLL  
(18) Stoll Stoll Berne & Lokting  
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907/276 1550  
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JOY S BRAUER RPR  
(9) Registered Professional Reporter  
Midnight Sun Court Reporters  
(10) 2550 Denali Street Suite 1505  
Anchorage Alaska 99503  
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(1) PROCEEDINGS  
(2) (Jury in at 8 47 a m )  
(3) (Call to Order of the Court)  
(4) THE COURT Good morning  
(5) MR OPPENHEIMER Good morning Your Honor Good  
(6) morning Dr Mundy  
(7) CROSS EXAMINATION OF WILMER H MUNDY (Resumed)  
(8) BY MR OPPENHEIMER  
(9) Q In opening statements one of plaintiffs counsel  
(10) Mr Petumenos said that the appraiser for the Native  
(11) corporation will divide up the amount of money to a yearly  
(12) income stream which is the way you do temporary damages  
and  
(13) he will track a period of time during which the land is  
(14) impaired based upon what the scientists tell him and when he  
(15) does that he s going to do it not on the basis of the biology  
(16) and on the basis of where it is inside the little herring fry  
(17) Do you agree with that?  
(18) A Well I don t fully understand the statement I would  
(19) agree with that yes if I understand the context of the  
(20) statement  
(21) Q And specifically that you re not giving us a damage  
(22) calculation on the basis of biology?  
(23) A Well I am not providing an opinion based on the biology  
(24) since I am not a scientist in that area Information that has  
(25) been developed by scientists dealing with the biology

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(1) particularly people at ICF has - may have had an influence on  
(2) Mr Bush s estimate of the persistence time because the -  
(3) there are a number of things that Mr Bush and myself  
discussed  
(4) regarding the - what would be a reasonable degree of  
(5) remediation That degree of remediation culminating the  
(6) persistence period and the habitat is - was one of those  
(7) variables  
(8) Q Dr Mundy if - just for the moment if you could give me a  
(9) yes or no to the following question When you divided up the  
(10) amount of money to a yearly income stream is it true that you  
(11) did not do that on the basis of the biology and on the basis of  
(12) where it is inside the little herring fry? Just a yes or no  
(13) please  
(14) A The answer would be no but I want to make sure that the -  
(15) my no my answer is not misconstrued  
(16) Q Well let me ask you this Did you take out - did you  
(17) take into account a ten to twenty percent reduction in the  
(18) abundance of fucus in your calculations?  
(19) A Again that is something that the scientists did and it  
(20) was not something that we did  
(21) Q Did you concern yourself with the degree of kelp recovery  
(22) in your calculations?  
(23) A In our calculations no  
(24) Q Did you concern yourself - pardon me did you take into  
(25) account in your calculations the salmon runs in either 90 or

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- (1) 91?
- (2) A Well again in our calculations no However if they had
- (3) an effect on the persistence then that would have been
- (4) reflected
- (5) Q Are you aware that Mr Bush has previously testified in
- (6) this trial that he did not take into account the salmon runs in
- (7) connection with his persistence curves?
- (8) A If that s what Mr Bush testified to I would accept it
- (9) Q Did you take into account at all that the salmon runs for
- (10) 90 and 91 were record salmon runs?
- (11) A Again my response is the same that is information that
- (12) Mr Bush would have taken into consideration in his persistence
- (13) numbers
- (14) Q In thinking about stigma did you take into account whether
- (15) there was any favorable response to the fact that the salmon
- (16) runs in 90 and 91 were record salmon runs?
- (17) A That would have been one of many many variables that I
- (18) considered as a part of the stigma estimate the one two or
- (19) three year stigma estimate as it applied to various
- (20) properties
- (21) Q Are you telling us today that you took into account in
- (22) calculating your stigma periods the record salmon runs in 90
- (23) and 91?
- (24) A As I testified before the stigma estimate is based on a
- (25) large number of variables It was based on my professional

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- (1) judgment and I tried to be as informed as I possibly could
- (2) regarding things that would influence buyer behavior and I was
- (3) aware in 1990 and 1991 that there were good salmon runs I m
- (4) also aware that the salmon runs have not been so good more
- (5) recently too
- (6) Q Well when you did your calculations of stigma though you
- (7) didn t have available to you the information you just referred
- (8) to right? You had the information on the 90 and 91 runs
- (9) but you didn t have this year s information correct?
- (10) A The material that I had available to the best of my
- (11) recollection involved material from 1989 1990 1991 and
- (12) 1992 And I m not talking only about salmon run information
- (13) I m talking about general information that would influence the
- (14) behavior of buyers in the marketplace
- (15) Q And do you think buyers in the marketplace were influenced
- (16) by the record salmon runs in 90 and 91?
- (17) A I think that there are a lot of things that buyers take
- (18) into consideration in making a decision regarding where they re
- (19) going to purchase property and how much they re going to pay
- (20) for property and that well could have been one attribute or
- (21) one variable that they took into consideration
- (22) Q Did you take into account in your calculation of damages
- (23) any effects the oil spill may or may not have had on the
- (24) harlequin duck population?
- (25) A I do not think that that was something that I took into

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- (1) consideration on stigma I don t know if it s something that
- (2) ICF took into consideration on their persistence estimates
- (3) Q Did you take into account in your calculation of damages
- (4) the effect of the oil spill on the seal harbor (sic)
- (5) population?
- (6) A That is a variable that I did take into consideration yes
- (7) Q And when did you first take that into consideration?
- (8) A Well I became aware of that when I initially inspected the
- (9) properties and when I initially met with various members of the
- (10) Village Corporations
- (11) Q And when was that?
- (12) A That was in 1989
- (13) Q Did you do any follow up work on the harbor seal population
- (14) issue?
- (15) A That was a topic that I discussed with various members of
- (16) Village Corporations as well as the ICF people in 1991 1993
- (17) and 1994
- (18) Q How s the seal harbor (sic) population now?
- (19) A It s - my understanding is that the seals are much more
- (20) difficult to find
- (21) Q We talked yesterday about sales activity in the Prince
- (22) William Sound area I wanted to close that topic off this
- (23) morning with a discussion about your method how you - how
- (24) you
- (25) calculated damages One of the things you do is it not is to
- (26) take a look at sales of similar properties in order to

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- (1) determine what the value of the property - your clients
- (2) properties in this case - are worth before the spill is that
- (3) correct?
- (4) A Yes
- (5) Q These are commonly known as comparables?
- (6) A Well I don t want to confuse the jury but we look at
- (7) comparables that is sales evidence and we compare that to the
- (8) subject property or the properties that are being valued So
- (9) we take a - we consider the nature of the subject properties
- (10) We also consider comparable sales and how the two compare
- (11) Q Right So you - what you re looking for are transactions
- (12) that you can think about in terms of figuring out what the
- (13) value is on the property that you re assessing damages for
- (14) right?
- (15) A That s correct
- (16) Q Okay And isn t it the case that you looked - and you ve
- (17) collected data on properties such as this so you could examine
- (18) the damages in this case is that right?
- (19) A Now are you talking about the value of the property before
- (20) the spill or the value of the property after the oiling took
- (21) place?
- (22) Q Right now I m talking about the value of the property
- (23) before the spill
- (24) A Okay
- (25) Q Okay you refer to that in your work as the unimpaired

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- (1) value right?  
 (2) A That s correct  
 (3) Q Prespill value Now you collected data on other  
 (4) transactions to try to help you understand what the prespill  
 (5) unimpaired value of the Native properties was right?  
 (6) A That s correct  
 (7) Q And isn t it the case that you took a number of post spill  
 (8) transactions as comparables to do that?  
 (9) A That is correct  
 (10) Q Right Do you recall how many post spill comparables you  
 (11) used?  
 (12) A I have not counted them no  
 (13) Q Now a number of those post spill comparables that you re  
 (14) using to figure out the value of the land before the spill were  
 (15) transactions in 1989 weren t they?  
 (16) A There may well have been some 1989 transactions  
 (17) Q And a transaction in the lower Kenai and Peterson Bay in  
 (18) November of 89 does that ring a bell?  
 (19) A I can t recall that transaction  
 (20) Q Do you recall a transaction in the lower Kenai also in  
 (21) Peterson Bay just in January of 1990?  
 (22) A Again that is another transaction that I can t recall  
 (23) Q The lower Kenai is part of your stigma area is that  
 (24) correct?  
 (25) A That s correct

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- (1) Q So these are transactions you re using to help you  
 (2) understand the prespill predamage value of the Natives  
 (3) property and these are transactions that are within a year  
 (4) after the spill?  
 (5) A There were literally hundreds and hundreds of transactions  
 (6) that we analyzed as a part of this process I would have to  
 (7) have a look at where those transactions took place so that I  
 (8) could provide you with an accurate response I don t know if  
 (9) those are – those transactions are within the area that we  
 (10) felt was stigmatized or not And I don t know whether they  
 (11) were before the spill or after the spill in 1989  
 (12) Q The easel might be called for here  
 (13) Mr Mundy can you see that?  
 (14) A Yes  
 (15) Q There was a perfect angle at one point I ll try to get it  
 (16) again  
 (17) I just referred to a comparable in the lower Kenai You  
 (18) also have – let me see if you recall – used comparables in  
 (19) May of 89 in the upper Kenai Do you recall using those as  
 (20) comparables for your prespill values?  
 (21) A Again I can t remember the transactions themselves I  
 (22) think that they may have been some recreation lot transactions  
 (23) is that correct?  
 (24) Q That s correct  
 (25) A Okay

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- (1) Q So it s starting to ring a bell?  
 (2) A Yes  
 (3) Q Now we re talking about this area are we not?  
 (4) A Yes  
 (5) Q Now is there any doubt in your mind that the stigma  
 (6) applies to that area in the first year after the spill?  
 (7) A The – that area was stigmatized in my opinion The area  
 (8) was lightly oiled There was documentation of the lightly  
 (9) oiling mainly based on anecdotal information and I think that  
 (10) that would be at the margin in terms of where I would say  
 (11) the – there was and was not a stigma I think that you have  
 (12) selected an area right on a line in terms of – well you get  
 (13) up into for example Homer I don t think that the stigma  
 (14) would have affected the Homer area You get over into the area  
 (15) that is west of Homer into that subdivision over there – the  
 (16) name escapes me right now – but I don t think that that area  
 (17) was affected  
 (18) Moving south down closer to Seldovia Native Association  
 (19) lands there was some pretty good evidence that there was  
 (20) oiling in there and I think that that would have raised  
 (21) considerable uncertainty on the part of people So even in the  
 (22) Kenai area there – I would say that because of the more  
 (23) urbanized nature of that area that that area was probably not  
 (24) stigmatized but you go a ways south of there that s where the  
 (25) uncertainty would begin

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- (1) Q So just to clarify a little bit lower Kenai where you  
 (2) took some of your comps for post spill no question  
 (3) stigmatized?  
 (4) A I believe that in the lower Kenai depending again on  
 (5) where you are referring to when you hold up your hand but I  
 (6) would say from areas Anchor Point and south that there could  
 (7) well have been – in my opinion there would have been a stigma  
 (8) in that area  
 (9) Q But Homer was not stigmatized you re saying?  
 (10) A I don t think there was any considerable – I don t think  
 (11) there was any stigma in Homer that s correct  
 (12) Q This is Kachemak Bay is that correct?  
 (13) A Its that bay of water that runs to the northeast from  
 (14) Homer that s Kachemak  
 (15) Q Yeah this is Kachemak Bay here Homer is on the north  
 (16) side of Kachemak Bay Homer is about south do I have that  
 (17) right?  
 (18) A That s correct  
 (19) Q And this is Kachemak Bay You re saying north side of  
 (20) Kachemak Bay no stigma south side of Kachemak Bay  
 (21) stigma?  
 (22) A Yes south of where the – the subdivision activity a fair  
 (23) amount of recreation type of development that s in that area  
 (24) and I think that the stigma would not have applied to that  
 (25) area  
 (25) Q Okay Now just – this is the – this is a rather famous

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- (1) thing that comes out here people may know about this is  
 (2) called the Homer Spit right?  
 (3) A That s right  
 (4) Q Fabulous piece of land that goes straight out in Kachemak  
 (5) Bay right?  
 (6) A Yes  
 (7) Q Does the stigma reach the spit?  
 (8) A I don t think that the stigma would have had any kind of an  
 (9) impact over there on the Homer side no  
 (10) Q Okay So if you re a buyer in New York or New Jersey and  
 (11) you re thinking about – and I take it by the way you  
 (12) consider that people all over the country would potentially be  
 (13) interested in land here?  
 (14) A They could potentially sure  
 (15) Q So you re a buyer in New York or New Jersey and you re  
 (16) thinking about the area and you have no – you re not affected  
 (17) at all by stigma on the north side of Kachemak Bay but on the  
 (18) south side you wouldn t touch it for at least a year up to  
 (19) three years is that right?  
 (20) A No  
 (21) Q But there s no stigma in Homer?  
 (22) A Well taking things in the context of the example you have  
 (23) used and that is a person that s an out of state buyer I  
 (24) think that there may have been uncertainty and concern on their  
 (25) part about acquiring real estate in that area Now I think if

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- (1) they would have done the due diligence that we would expect a  
 (2) knowledgeable buyer to do they probably would have found  
 (3) out  
 (4) that there was not any cause for concern or risk and may have  
 (5) gone ahead and acquired real estate in the Homer area  
 (6) Q So there s no –  
 (7) A However that s not my opinion in terms of the area which  
 (8) is south of Homer and to the Seldovia area where there was  
 (9) more  
 (10) documentation of oiling  
 (11) Q There s a large state park in this area is there not?  
 (12) A Kachemak Bay State Park  
 (13) Q Kachemak Bay State Park No doubt in your mind that was  
 (14) stigmatized?  
 (15) A I think there may have been a stigma yes applying to that  
 (16) area  
 (17) Q In fact you ve rendered an appraisal for Seldovia in  
 (18) another lawsuit that it has against Exxon that its land is  
 (19) stigmatized Isn t that true?  
 (20) A That s true  
 (21) Q And you re supporting a claim for two million dollars in  
 (22) damages for that?  
 (23) A I can t recall the amount  
 (24) Q Okay but no question it s stigmatized?  
 (25) A That s correct  
 (26) Q Okay Do you recall a sale in July of 1990 in lower Kenai  
 (27) on the Kachemak Bay that you used as a comparable?

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- (1) A I can t recall that sale as I m sitting here  
 (2) Q Let s go back to Valdez for just a moment Do you recall  
 (3) using a comparable sale at Valdez in June of 92 to establish  
 (4) prespill values?  
 (5) A I may well have used a sale in Valdez as of June of 1992 to  
 (6) establish presale values I think that the same would be true  
 (7) for Homer if we re talking about Homer and the Kenai  
 (8) Peninsula  
 (9) area Those are transactions that probably would not have  
 (10) been  
 (11) impaired  
 (12) Q In fact you – In your work papers you ve assembled all of  
 (13) the comparables that you ve used and as best you know those  
 (14) work papers have all been provided in discovery so each of the  
 (15) comparables can be examined and we can place them in time  
 (16) and  
 (17) place?  
 (18) A That s correct  
 (19) Q I want to switch gears now a little bit and go back to the  
 (20) way that you calculate your damages by calculating a reduced  
 (21) income stream First I ll break this exhibit  
 (22) This is exhibit 155 – 15556 Now do you recognize that  
 (23) as one of your work sheets?  
 (24) A Yes I do  
 (25) Q For – okay and this is for –  
 (26) MR OPPENHEIMER The Barco looks like it s been  
 (27) moved Can the jury see that?  
 (28) THE COURT I can t even see it on this one

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- (1) MR OPPENHEIMER Can t? Okay let s see if we can  
 (2) blow this up a little bit  
 (3) BY MR OPPENHEIMER  
 (4) Q This is for Growler Island is that correct?  
 (5) A I believe that s correct It s very difficult to read  
 (6) Q I m going to blow up the top here Okay that s a little  
 (7) easier to read I suppose Growler Island correct?  
 (8) A That s correct  
 (9) Q Dr Mundy is this Growler Island?  
 (10) A Yes  
 (11) Q Is that correct? Okay  
 (12) MR PETUMENOS Judge I have no objection if he does  
 (13) that within the view of the jury because if he doesn t I  
 (14) can t see it  
 (15) MR OPPENHEIMER That s fine I ll do that  
 (16) BY MR OPPENHEIMER  
 (17) Q Growler Island is right here It s in the Prince William  
 (18) Sound correct?  
 (19) A That s correct  
 (20) Q Okay On your workup for Growler Island you have a  
 (21) column and I m just going to – we don t have to actually read  
 (22) this for the moment I just want to point out which column  
 (23) You have a column here which is your column for the income  
 (24) stream that would come in on that property Is that right?  
 (25) It s the one that starts with zero

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- (1) A That s the second column the impaired column  
 (2) Q That s - yes  
 (3) A Yes  
 (4) Q And in the first year you have a zero because that s the  
 (5) stigma period is that correct?  
 (6) A That s correct  
 (7) Q Well I m not sure that helps much but - now you told us  
 (8) yesterday that these numbers aren t actual revenue numbers is  
 (9) that correct? In other words you re not -  
 (10) A Yes  
 (11) Q You re not telling us that this is real income that either  
 (12) was or wasn t earned These are completely - these numbers  
 (13) are not real revenue numbers correct?  
 (14) A There s no revenue that s coming in to Chugach Alaska  
 (15) Corporation in the amount of \$13 700 per year for that island  
 (16) Q From Growler Island?  
 (17) A That s right  
 (18) Q However in point of fact there is some revenue on Growler  
 (19) Island isn t there?  
 (20) A If you re referring to the Stan Sears lease yes  
 (21) Q I am referring to the Stan Sears lease And what - what  
 (22) kind of operation does Mr Sears run on Growler Island?  
 (23) A He has a tourist type of operation There are - there s  
 (24) I think about one permanent building a number of tent  
 (25) platforms and a community platform there People are brought

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- (1) in from various locations on tour boats and they visit the  
 (2) location observe the Columbia Glacier Oftentimes they re  
 (3) provided food  
 (4) Q It s the - it s very close to the Columbia Glacier so  
 (5) it s a tourist stop is that right?  
 (6) A That s right  
 (7) Q Now whose land is that?  
 (8) A It s Chugach Alaska Corporation  
 (9) Q And Chugach gets money - by the way I believe it s Stan  
 (10) Sears operation is that right?  
 (11) A Stephens  
 (12) Q You and I were both saying Sears but I believe it s  
 (13) Stephens Mr Stephens operation He pays money on the  
 (14) lease  
 (15) to the Native corporation who owns the land Is that correct?  
 (16) A That s right  
 (17) Q And that revenue was actually not impaired was it?  
 (18) A No That s a long term rental agreement he has with  
 (19) Chugach Alaska  
 (20) Q When you say long term rental agreement what do you  
 (21) mean  
 (22) by that?  
 (23) A It s an ongoing agreement that he has to lease that  
 (24) property  
 (25) Q Do you know the terms of it?  
 (26) A I can t recall the terms of it as I sit here  
 (27) Q You recall though that the income from that lease to the

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- (1) corporation didn t go down at any time after the spill  
 (2) correct?  
 (3) A No and I wouldn t expect it to  
 (4) Q Right Do you recall that it is a lease that - well do  
 (5) you know what happened to the visitors at Growler Island? I  
 (6) mean that s actually an odd question I withdraw it  
 (7) Do you know how the numbers went year to year after the  
 (8) spill more or less visitors do you have any idea?  
 (9) A I have not reviewed the statistics of something that I have  
 (10) not been able to obtain  
 (11) Q You have not been able to obtain that data?  
 (12) A No  
 (13) Q Well do you know that part of the lease is that the  
 (14) corporation gets \$2 00 a head for visitors on that island?  
 (15) A That may be part of the lease  
 (16) Q So the more visitors the more money they make?  
 (17) A That s correct  
 (18) Q Now would it surprise you to learn that in 1989 6 562  
 (19) people visited that island?  
 (20) A No that wouldn t surprise me a bit  
 (21) Q Would it surprise you to learn that in 1990 the year after  
 (22) the spill 10 112 people visited that island?  
 (23) A That wouldn t surprise me either And to think that -  
 (24) Q Would it surprise you -  
 (25) A I think what you have brought out is the fact that

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- (1) visitation was down in 1989 it was up in 1990 We applied a  
 (2) one year stigma to the property  
 (3) Q Well you say that the visits were down in 89 What do  
 (4) you base that on?  
 (5) A The information that you just provided as well as my  
 (6) general understanding of what happened in terms of the visitor  
 (7) market in Prince William Sound  
 (8) Q So based on your general understanding of what happened  
 (9) to  
 (10) the visitor market in Prince William Sound you think that the  
 (11) number of visitors to Growler Island declined in 89 over 88?  
 (12) A I would have to have a look at the statistics to compare  
 (13) 88 to 89  
 (14) Q So you don t know?  
 (15) A I don t know what the relationship was between 88 and -  
 (16) Q Would it surprise you to learn that in 1988 there were  
 (17) 6 400 visitors There were more visitors in 1988 than 89?  
 (18) A Very small number  
 (19) Q But it s going up?  
 (20) A Barely  
 (21) Q Barely But Dr Mundy you told us based on your  
 (22) experience you would expect to see it go down but it goes up  
 (23) and it goes up again in 90 is that correct?  
 (24) A It s my understanding that in general there was a  
 (25) difficult time with tourism in Prince William Sound in 1989  
 (26) There was a huge amount of money that was spent on  
 (27) advertising

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- (1) to try to hold up the visitor count and the tourist industry in  
 (2) Prince William Sound after the spill and I don't want to  
 (3) convey the wrong impression Growler Island continued to  
 (4) generate income in 1989  
 (5) Q Continued to generate more income each year is that  
 (6) correct? Two dollars a head the numbers keep going up They  
 (7) go from 6400 to 6500 to 10 000 in 1990 two dollars a head each  
 (8) time to your client?  
 (9) A That's correct But to imply that that property may not  
 (10) have been marketable and that you would expect the lease to  
 be  
 (11) canceled or terminated is an erroneous and misimpression  
 (12) Q Dr Mundy that's not a pending question and I haven't  
 (13) said anything about that I'm just asking you about the number  
 (14) of tourists going to Growler Island By the way the tanker  
 (15) grounded right over here is that correct? This is Growler  
 (16) Island and the tanker grounded here?  
 (17) A I'd have to come down and look at the map I can't see -  
 (18) Q Well because of your back let me carry it up Growler  
 (19) Island and the approximate location here where I have my  
 (20) finger?  
 (21) A That would be the approximate order of where the tanker  
 (22) grounded yes  
 (23) Q Okay Are you aware of any other actual - actual rental  
 (24) activity in the Prince William Sound area during your stigma  
 (25) period - by the way I'm sorry before you answer that

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- (1) question all of this that we've been talking about with  
 (2) respect to Growler Island in '89 that's all in your stigma  
 (3) period is that correct?  
 (4) A 1989?  
 (5) Q Correct  
 (6) A Yes  
 (7) Q So when in fact your work papers have zero for that year  
 (8) the facts of what came in is that that lease was doing better  
 (9) than in '88?  
 (10) A In - in terms of the rental of that one property on  
 (11) Growler Island that is correct  
 (12) Q Okay Are you aware of any other lease activity in the  
 (13) Sound?  
 (14) A Yes  
 (15) Q Are you aware of some - well let's see if we can get a  
 (16) better map Well here Jackpot Bay right? Mr Stowell's  
 (17) lease?  
 (18) A Okay  
 (19) Q You're familiar with that?  
 (20) A I am vaguely familiar with it  
 (21) Q Are you aware - now Jackpot Bay for the jury and I have  
 (22) correctly pointed out this area is that right within the  
 (23) Sound?  
 (24) A I'd have to refer to a map to make sure  
 (25) Q Sure you have a map up there please do Chenega

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- (1) Corporation land  
 (2) A Could you point to the area again please?  
 (3) Q Yes absolutely I've got this so you can't see it I  
 (4) apologize Jackpot Bay  
 (5) A Yes  
 (6) Q And Mr Stowell runs I think what's known as a catch and  
 (7) cook operation isn't that right?  
 (8) MR STOLL He's not talking about me Your Honor  
 (9) MR OPPENHEIMER I am not in fact the jury should  
 (10) be clear  
 (11) THE COURT He's a renaissance man  
 (12) MR STOLL Thank you Your Honor  
 (13) BY MR OPPENHEIMER  
 (14) Q But is that - are you aware of that Dr Mundy?  
 (15) A I am vaguely familiar with that yes  
 (16) Q Now do you have any knowledge - well let me rephrase  
 (17) this Were you aware that in the two years after the spill  
 (18) 1990 and 1991 that Mr Fortier negotiated two price increases  
 (19) on that lease to Mr Stowell?  
 (20) A As I recall that's the case I'm not absolutely certain  
 (21) though  
 (22) Q Okay So again an example of another lease where the  
 (23) revenue's going up It's not zero It's not flat It's not  
 (24) going down It's going up Correct?  
 (25) A For that small limited location that's correct

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- (1) Q The exhibit number for the worksheet that's on the Barco is  
 (2) 15556  
 (3) Now the jury's previously seen pictures of timbering  
 (4) operation at Windy Bay Are you familiar with that?  
 (5) A Yes  
 (6) Q And with the exception of a modest delay to the - I think  
 (7) what's known in the trade as the LTF the Log Transfer  
 (8) Facility it's a dock any delay in timbering operations on  
 (9) Native land as a result of the oil spill?  
 (10) A Not to my knowledge  
 (11) Q Let's talk a little bit about subsistence You did not  
 (12) take subsistence into account in quantifying the losses from  
 (13) the oil spill is that correct?  
 (14) A If you are referring to estimating a damage to the property  
 (15) because of decreased subsistence harvests that's correct  
 (16) Q You didn't take into account decreased subsistence harvests  
 (17) in your valuation of the value of the land before the spill  
 (18) correct?  
 (19) A That's correct  
 (20) Q And you did not take it into account whether anybody was  
 (21) subsisting at all when you calculated damages after the spill  
 (22) correct?  
 (23) A Subsistence was not - the impact on subsistence activities  
 (24) was not taken into consideration in the - estimating the  
 (25) damages

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- (1) Q And in fact isn't it true that the way you've approached  
 (2) all of this you do not take into account in calculating  
 (3) damages how people are actually using the land and what  
 revenue  
 (4) they're actually getting from the land actually now during  
 (5) the period that you stay there's been stigma or damage?  
 (6) A Now you're referring to the subsistence activities?  
 (7) Q I'm referring to any use and enjoyment actual use and  
 (8) enjoyment of land You don't take that into account when you  
 (9) quantify your damages isn't that correct?  
 (10) A Well I want to make certain that there's not any  
 (11) misunderstanding Now in terms of subsistence there was no  
 (12) damage estimates made and no damages attributed to the  
 change  
 (13) in the subsistence activities There are a number of leases of  
 (14) property and you have discussed two of them on the subject  
 (15) lands Those leases are generally small very very small part  
 (16) of the value of the property Generally they are leases that  
 (17) are of a long term nature either renewable yearly and  
 (18) renewable for a very good reason like Growler Island  
 (19) Mr Stephens operation where he has considerable investment  
 (20) that he's made there and would want to continue to lease  
 (21) that Those small leases - excuse me - didn't take into  
 (22) consideration  
 (23) Now then you mentioned the timber and while the timber  
 (24) was harvested we did not value the timber and so there's  
 (25) absolutely no damage that is related whatsoever to the timber

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- (1) because all of those properties had the timber rights sold and  
 (2) so those did not factor into our calculation  
 (3) Q Dr Mundy just so I can get a - an answer to a specific  
 (4) question to what extent did you consider actual use that the  
 (5) landowners made of their land during the three year period in  
 (6) your damage calculation?  
 (7) A Well I believe I've done a pretty good job of answering  
 (8) that question  
 (9) Q Isn't the answer to that that you did not take it into  
 (10) consideration?  
 (11) A For the subsistence activities I did not take it into  
 (12) consideration  
 (13) Q Dr Mundy the question I have for you is to what extent  
 (14) did you consider actual use that the landowners made of their  
 (15) land during the three year period in your damage calculation?  
 (16) I just want to know the extent to which you did that isn't  
 (17) the answer that you did not?  
 (18) A Well based on what I just mentioned to you I think that I  
 (19) would agree with that statement  
 (20) Q You did not okay Thank you  
 (21) Are you aware of a single leasing activity where the  
 (22) revenue went down in Prince William Sound or the Kenai?  
 (23) A I cannot recall any no  
 (24) Q Let me change maps here for a second put up a map of the  
 (25) Kenai You recognize this as a map of the Kenai Peninsula?

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- (1) A That's correct  
 (2) Q Just to orient ourselves again Kachemak Bay?  
 (3) A Yes  
 (4) Q This is about where the stigma stops?  
 (5) A In that area yes  
 (6) Q This is the Homer Spit?  
 (7) A Correct  
 (8) Q You mentioned earlier in your testimony that one of the  
 (9) attributes of this land is that there is subsistence use in  
 (10) this area is that correct?  
 (11) A That's correct  
 (12) Q And you're talking about the - well this is - this is  
 (13) the - your client's land as marked on here Do you recognize  
 (14) that generally?  
 (15) A Yes  
 (16) Q And is it - is it your view that there's subsistence  
 (17) activity all throughout here?  
 (18) A That's correct  
 (19) Q Have you ever been made aware of any testimony from any  
 of  
 (20) the witnesses in this case from Port Graham or English Bay  
 (21) saying that the Kenai Fjords area - that's this area by the  
 (22) way right?  
 (23) A Yes  
 (24) Q - is too far away to do subsistence hunting?  
 (25) A I have not read statements to that effect no

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- (1) Q There's another characteristic of this area that's  
 (2) important to land appraisal isn't there this Kenai Fjords  
 (3) area?  
 (4) A Well there are a lot of factors that's important to it  
 (5) Q It's a national park isn't it?  
 (6) A That is - that's right The Kenai Fjords or that - the  
 (7) Kenai Peninsula area the national park does extend down into  
 (8) that area  
 (9) Q In fact the Kenai Fjords National Park runs from about  
 (10) Resurrection Bay down past your client's land here at West Arm  
 (11) and Nuka Bay right?  
 (12) A I can't tell you where the precise boundaries are  
 (13) Q But that's approximately correct?  
 (14) A I think they may well be correct  
 (15) Q Surely you know whether your client's land is inside the  
 (16) national park  
 (17) A That's correct  
 (18) Q It is inside the park isn't it?  
 (19) A I'm not certain if that - if the park extends over the  
 (20) client's land or not I -  
 (21) Q I'm sorry I didn't understand Are you saying you don't  
 (22) know? When you say over the - your client's land what are  
 (23) you saying?  
 (24) A Well that the land that Port Graham and English Bay own in  
 (25) the area is a part of the park or not? It may well be that the

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- (1) park comes down and borders their property but their property  
 (2) would not be included as a part of the park  
 (3) Q But are you telling us that you don't know whether that is  
 (4) the case or not?  
 (5) A What I am saying is that what you implied was that the  
 (6) park extended down and included the property and their  
 (7) property Port Graham English Bay's property is owned by  
 (8) them not by the federal government and the park includes the  
 (9) federal government ownership not the Native ownership  
 (10) Q Aren't there federal regulations Dr Mundy that prohibit  
 (11) subsistence hunting from Resurrection Bay down through Nuka  
 (12) Bay?  
 (13) A There may well be  
 (14) Q Do you know?  
 (15) A It - In the national park area I do not know  
 (16) Q Do you know sitting here today whether there are federal  
 (17) regulations which preclude your clients from conducting  
 (18) subsistence hunting in this coastal area known as the Kenai  
 (19) Fjords area?  
 (20) MR PETUMENOS I'm sorry counsel you blocked my  
 (21) view  
 (22) MR OPPENHEIMER I apologize I was referring once  
 (23) again to the area from Resurrection down past Nuka Bay  
 (24) MR PETUMENOS Including the owned land?  
 (25) MR OPPENHEIMER Including the owned land

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- (1) A Including their own lands? I don't think that would be a  
 (2) correct statement  
 (3) BY MR OPPENHEIMER  
 (4) Q You believe they can subsist on those lands?  
 (5) A That's correct  
 (6) Q And do you believe that they were able to do that in 1989?  
 (7) A Yes  
 (8) Q And 1990?  
 (9) A Yes  
 (10) Q And 1991?  
 (11) A Yes  
 (12) Q There are unique features to Native land ownership that  
 (13) make it different from when you or I buy something and have a  
 (14) deed isn't that right? They have different kinds of  
 (15) ownership?  
 (16) A That's correct  
 (17) Q They have something called selected but un conveyed lands  
 (18) isn't that correct?  
 (19) A That is correct  
 (20) Q And there are limitations on the sorts of things that they  
 (21) can do on selected but un conveyed lands Is that right?  
 (22) A There may well be  
 (23) Q Okay Now one of the things that they are precluded from  
 (24) doing in the Kenai Fjords area during the period of time that  
 (25) they have selected but have not yet had conveyed to them the

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- (1) land is subsistence hunt isn't that correct?  
 (2) A That may be the case However -  
 (3) Q Okay are you -  
 (4) A - that -  
 (5) Q Are you also aware -  
 (6) MR PETUMENOS Excuse me Judge they're talking over  
 (7) one another  
 (8) THE COURT You can finish your answer go ahead  
 (9) A That may well be the case however I don't want my answer  
 (10) to be a misleading one and I'm concerned that it is Because  
 (11) the properties that we valued were only the properties where  
 (12) they had legitimate selections There were over selections that  
 (13) had been made on ownership in the area that we're discussing  
 (14) And those over selections were deducted from our value of  
 (15) acreage to the acreages that the Native corporations were only  
 (16) entitled to  
 (17) Now there are some lands where there has not been a final  
 (18) conveyance made to the Natives However our valuation  
 (19) analysis was based on the assumption that those lands were  
 (20) fully conveyed to the Natives  
 (21) Q I'm sorry you said your valuation was based on the premise  
 (22) that all of your clients' lands was fully conveyed?  
 (23) A That's right That the acreages that we had were the  
 (24) acreages that they were entitled to and would be receiving  
 (25) Q Well we've used some terms here Dr Mundy that I think

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- (1) are worth getting a little clearer on It's complicated but  
 (2) it's important isn't it to know what the attributes of land  
 (3) ownership were when you're appraising lands?  
 (4) A That's correct  
 (5) Q And in fact you've mentioned a couple of terms and I  
 (6) want us to have a clear understanding about them Some lands  
 (7) are conveyed correct?  
 (8) A That's correct  
 (9) Q And some lands are selected but not conveyed correct?  
 (10) Correct?  
 (11) A That's true I think that what we would call those would  
 (12) be interim conveyance  
 (13) Q Sometimes known as IC lands right?  
 (14) A That's correct  
 (15) Q Okay interim conveyance - oops So selected but not  
 (16) conveyed and interim conveyance are roughly the same thing  
 (17) correct?  
 (18) A Roughly the same  
 (19) Q And then you mentioned over selections correct?  
 (20) A That's correct  
 (21) Q Now conveyed lands is where - that's the best form of  
 (22) ownership you can have isn't it? That's what's known as a  
 (23) title or a patent the land is yours correct?  
 (24) A That's correct  
 (25) Q Right And the way all this came about?

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- (1) MR PETUMENOS Excuse me Your Honor may I - I  
 (2) think I m going to need to approach the bench on this subject  
 (3) area I don t know whether you want to take a break  
 (4) THE COURT Would you like to take a break?  
 (5) MR OPPENHEIMER Sure Your Honor that would be  
 (6) fine  
 (7) THE COURT I ll send the jury out  
 (8) (Jury out at 9 41 a m )  
 (9) MR PETUMENOS I m a little confused -  
 (10) MR OPPENHEIMER Should we ask the witness?  
 (11) MR PETUMENOS If you like  
 (12) MR OPPENHEIMER I don t know what we re getting  
 (13) into  
 (14) THE COURT Dr Mundy you can -  
 (15) MR PETUMENOS We can excuse the witness that s  
 (16) fine I m not trying to spoil their fun Actually I am  
 (17) probably trying to spoil their fun  
 (18) (Witness excused)  
 (19) MR PETUMENOS I m not sure where this cross is  
 (20) going but I m getting a little concerned Depending upon  
 (21) where it s going I may or may not have an objection but I  
 (22) wanted to make the Court s aware of a legal issue that s  
 (23) becoming involved here As the Court s aware of the motion  
 (24) practice in OPA 90 these plaintiffs have the claim for any  
 (25) Exxon Valdez damages for any lands that they have issued an

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- (1) irrevocable selection on regardless of whether the land is  
 (2) actually conveyed or not  
 (3) If the jury is left with the impression that Dr Mundy is  
 (4) including in his damage claims lands that these folks don t  
 (5) have the right to claim under I m going to need an instruction  
 (6) at the time of the cross examination so they re not left with  
 (7) the misimpression If this is leading to a different point  
 (8) which it very well may be fine but I m concerned that a  
 (9) misimpression is being left by this area of the  
 (10) cross examination given the state of the law that applies to  
 (11) this case  
 (12) MR OPPENHEIMER Your Honor this is not going to go  
 (13) to OPA 90 and the Natives standing to sue in the sense in which  
 (14) Mr Petumenos is talking about This is simply trying to get  
 (15) straight the various types of land ownership because there are  
 (16) different consequences that flow from it and frankly I hadn t  
 (17) intended to get into it as deeply but I need to because the  
 (18) witness has confused some issues I think here that need to be  
 (19) straightened out He s confused selected but unconveyed I  
 (20) don t think he intended - I intend to clarify it with  
 (21) overselections They re two different things  
 (22) There are consequences for the case we re putting on with  
 (23) respect to the damages that flow directly from understanding  
 (24) these distinctions He talks about these distinctions in his  
 (25) report We re not trying to create any erroneous impression

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- (1) that people don t have a right a standing right - a standing  
 (2) right to sue under for lands which they have such a right  
 (3) that s not a part of this It is part of this clearly to  
 (4) explore his understanding of land ownership We have a right  
 (5) to do that  
 (6) MR PETUMENOS I have two requests Either that  
 (7) Mr Oppenheimer in the course of his cross make it clear that  
 (8) the claims are valid against - that the plaintiffs have  
 (9) standing to sue for these Exxon related - Valdez related  
 (10) damages if they have selected but not conveyed or that the  
 (11) Court instruct on that issue his choice  
 (12) I don t want to invade his cross examination if he doesn t  
 (13) want to do that On the other hand I think unintentionally a  
 (14) misimpression is being left here as the jury says oh these  
 (15) have been selected but not conveyed they don t have title in  
 (16) the normal course A juror would think goodness gracious  
 (17) Dr Mundy is making damages for land that these people don t  
 (18) own yet but we have a statutory  
 (19) THE COURT I can understand the concern counsel  
 (20) But frankly I don t think that impression has been created  
 (21) now and if it is created it either gets cleared up in the  
 (22) testimony or I might instruct on it I m not - I m not  
 (23) committing myself to either course right now  
 (24) MR OPPENHEIMER I would suggest any of that could  
 (25) come up in redirect anyway if it seems to be important

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- (1) THE COURT That s true If in fact it is a danger  
 (2) maybe the instruction is necessary and it could be at the time  
 (3) of the testimony I don t particularly want to do that  
 (4) MR OPPENHEIMER Your Honor I hope - certainly not  
 (5) the impression I intend to create I doubt I will I ll try  
 (6) to be mindful of it but that s not the direction we re going  
 (7) here  
 (8) THE COURT Enough said counsel  
 (9) MR OPPENHEIMER Yes Your Honor  
 (10) MR PETUMENOS Yes Your Honor  
 (11) THE COURT Anything else?  
 (12) MR PETUMENOS No not at this time Thanks  
 (13) THE CLERK Please rise This court stands in  
 (14) recess  
 (15) (Recess from 9 45 a m to 10 06 a m )  
 (16) (Jury in at 10 06 a m )  
 (17) THE CLERK This court now resumes its session  
 (18) Please be seated  
 (19) BY MR OPPENHEIMER  
 (20) Q Dr Mundy before the break we were talking about different  
 (21) kinds of land ownership that Native corporations have I think  
 (22) I may have inadvertently confused things a little bit  
 (23) We have three categories here but really we ve written  
 (24) down four haven t we? Because there is conveyed there s  
 (25) selected but not conveyed then there s interim conveyed

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- (1) right which is separate from selected but not conveyed?  
 (2) A Right  
 (3) Q It s tongue twisting but it s important  
 (4) Let me back up now Conveyed means that the Native  
 (5) corporation has it it s like a Trustee they own it it s  
 (6) theirs In the state of Alaska I believe we call that a  
 (7) patent is that right?  
 (8) A That s right  
 (9) Q Can you briefly describe for the jury - this all comes  
 (10) from ANCSA doesn t it?  
 (11) A That s correct  
 (12) Q And what is ANCSA? First of all tell us what the letters  
 (13) stand for  
 (14) A Alaska Native Claims Settlement Act  
 (15) Q Alaska Native Claims Settlement Act And that was passed  
 (16) in the 70s?  
 (17) A 1971  
 (18) Q Tell us briefly what that is  
 (19) A Well I can briefly provide you what I believe it to be  
 (20) Now I certainly am not an expert on ANCSA but -  
 (21) Q I m sorry you -  
 (22) A I m not a expert on the Alaska Native Claims Settlement  
 (23) Act  
 (24) Q Well that is the act by which the Natives acquired all of  
 (25) the property that s at issue in this lawsuit Isn t it?

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- (1) A That s correct  
 (2) Q And that is an act that allowed them to choose certain  
 (3) lands for themselves in exchange for giving up certain claims  
 (4) to other lands in the State of Alaska Isn t that right?  
 (5) A That is correct That s - at least that s my  
 (6) understanding of it  
 (7) Q And is it also your understanding that all of their rights  
 (8) that we re talking about are based upon the type of ownership  
 (9) which they have under ANCSA?  
 (10) A Yes  
 (11) Q When you appraise property it s very important Is it not  
 (12) to understand the nature of the ownership rights of the client?  
 (13) A That is correct  
 (14) Q And in this case the nature of the ownership rights comes  
 (15) from ANCSA?  
 (16) A That s correct  
 (17) Q But you don t consider yourself expert in ANCSA?  
 (18) A Well the Alaska - Alaska Native Claims Settlement Act is  
 (19) a - a large voluminous document and there are parts of that  
 (20) document which I have familiarized myself with but there are  
 (21) many parts that I have not familiarized myself with In  
 (22) addition even the areas that I know something about I would  
 (23) seek the advice of an attorney in assisting me in understanding  
 (24) the nature of the topic Just like I relied on Mr Bush to  
 (25) assist me in understanding the nature of the geology and

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- (1) biology and just like I ve relied on Dr Lobdel and  
 (2) Dr Johnson to provide us with insight regarding archaeology  
 (3) Q But among all those people you re the only appraiser?  
 (4) A That s correct  
 (5) Q As you ve described you re the one to whom we look for the  
 (6) value of the property is that correct?  
 (7) A Yes  
 (8) Q Now let - we ll try to keep this short but it is  
 (9) important Some of the Natives land is conveyed that they re  
 (10) suing on here is that correct?  
 (11) A That s correct  
 (12) Q Some is selected but not conveyed?  
 (13) A That is correct  
 (14) Q And some is interim conveyed IC?  
 (15) A That is correct  
 (16) Q Any other types of ownership that they have under ANCSA?  
 (17) A I believe that those three the conveyed the selected but  
 (18) not conveyed and the interim conveyed would encompass the  
 (19) three different types of ownership of lands which we have  
 (20) valued  
 (21) Q Okay You mentioned earlier in your conversation  
 (22) overselection  
 (23) A That s correct  
 (24) Q Now isn t that land - let me back up a step Under  
 (25) ANCSA isn t it the case that the Native corporations are

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- (1) entitled to a certain number of acres that they can choose?  
 (2) A That s correct  
 (3) Q And isn t it also correct that the process that s been  
 (4) going on since the 70s to choose that land is that Native  
 (5) corporations would all select but there s be some overlap for  
 (6) one thing right between the corporations? They - on some  
 (7) occasions they d select the same lands?  
 (8) A That s correct  
 (9) Q And there would be some preexisting easements Would  
 (10) you tell us what an easement is?  
 (11) A An easement is a form of ownership It is a right that  
 (12) somebody has to somebody else s property or for the property  
 (13) owner it is rights that they have given up to the property  
 (14) That might be for a road it might be a scenic easement  
 (15) Q Power line?  
 (16) A Power line easement yes  
 (17) Q So some of the land that the Natives chose had preexisting  
 (18) easements rights of use over them and that was another thing  
 (19) that had to be dealt with right?  
 (20) A Yes  
 (21) Q And the idea was that this would eventually all get sorted  
 (22) out and the Native corporations would end up with land that  
 (23) they were entitled to and the amount of acres that they were  
 (24) entitled to correct?  
 (25) A That s correct

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- (1) Q But there is a period of time here where it s not clear  
 (2) where those boundaries are is that right?  
 (3) A Yes  
 (4) Q And so the Native corporations would overselect They d  
 (5) take more land than they were actually entitled to This  
 (6) was - I m not suggesting this was unlawful This was done  
 (7) with the federal government the state government but they  
 (8) took more land than they were ultimately going to be entitled  
 (9) to is that correct?  
 (10) A That is correct  
 (11) Q And so if they were entitled to ten acres they d take 11  
 (12) by way of hypothetical?  
 (13) A Right  
 (14) Q And the additional lands are known as overselections  
 (15) correct?  
 (16) A That s correct  
 (17) Q Okay Now at some point this has to come to an end  
 (18) right? We have to know what we own correct?  
 (19) A Yes  
 (20) Q And the Native corporations have been in the process of -  
 (21) of - of giving up their overselections and getting down to  
 (22) what they re going to end up with is that right?  
 (23) A That is correct  
 (24) Q Okay In fact some of the Native corporations in this  
 (25) case very recently gave up some of their overselections isn t

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- (1) that right?  
 (2) A Yes  
 (3) Q They went through a - where they basically said we ll  
 (4) take this land and we ll - we will officially give back this  
 (5) land as part of the process of gifting down to what they were  
 (6) going to be entitled to at the very end of the process right?  
 (7) A Yes  
 (8) Q They relinquished part of their overselection?  
 (9) A Right  
 (10) Q Now I want to draw your attention to a part of the Harris  
 (11) Peninsula This is owned by English Bay to your knowledge  
 (12) this plot - this parcel rather?  
 (13) A Yes  
 (14) Q I m pointing to a piece of land that s in between Harris  
 (15) Bay - let me see if I can - can you see that Dr Mundy?  
 (16) Have I obliterated your view? Harris Bay on the south and I  
 (17) believe this is known as Aialik Bay on the north you see  
 (18) that?  
 (19) A Yes Very marginally though  
 (20) Q Sorry there s probably a perfect position as I said  
 (21) before How s that? A little better?  
 (22) A That s a little bit better Go ahead  
 (23) Q All right Now there was recently - English Bay recently  
 (24) gave up some of its overselection in this area isn t that  
 (25) correct?

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- (1) A I believe that is correct I can t recall for all of the  
 (2) corporations that we ve done our work for precisely where the  
 (3) lands were that were overselections that they gave up  
 (4) Q You recently revised your report did you not to take into  
 (5) account some of these decisions that your clients have made to  
 (6) give back overselections isn t that right?  
 (7) A That is correct  
 (8) Q Very recently within the last month?  
 (9) A I don t know if it was in the last month but it was very  
 (10) recently within the last several months  
 (11) Q Now you re aware are you not that the land that the  
 (12) Native corporation English Bay retained is down here at the  
 (13) southern part of this parcel by the - by the bay here?  
 (14) A Again I can t recall as I m sitting here where the  
 (15) ownership boundary runs currently  
 (16) Q Well are you aware that just north of that along the  
 (17) coast they relinquished that land to the north They kept the  
 (18) land to the south relinquished to the north Does that ring a  
 (19) bell?  
 (20) A They may have done that I simply can t remember all of  
 (21) the changes that took place  
 (22) Q Are you aware that the land that they relinquished to the  
 (23) north of the bay had not been oiled?  
 (24) A Again I - I am not precisely familiar with each of the  
 (25) parcels that was relinquished

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- (1) Q And that the land that they retained on the bay had been  
 (2) oiled?  
 (3) A That may have been the case  
 (4) Q In fact Isn t it the case that there are numerous  
 (5) instances that you have discovered in the last two months  
 (6) where in finally deciding what land to keep the plaintiffs in  
 (7) this case have on more than one occasion chosen property  
 (8) that  
 (9) was oiled over property that wasn t oiled?  
 (10) A That may well have been the case I mean I think that  
 (11) there are a lot of factors that the Village corporations have  
 (12) taken into consideration and the regional corporation in  
 (13) making the selections and in dealing with the overselection  
 (14) issue And as I ve testified earlier this oiling problem is  
 (15) one that is of a temporary nature Some areas are lightly  
 (16) oiled and some areas are heavily oiled  
 (17) I think that the way the Native corporations have  
 (18) approached the selection of lands is from a very long term  
 (19) perspective They have used these lands for years and years  
 (20) and years in the past and they anticipate using them for  
 (21) decades and decades into the future and I think that they  
 (22) realize as I do that the effect that the oiling has had on  
 (23) the properties is one that is temporary And I think that has  
 (24) influenced a lot of their decisions  
 (25) Q Let s go back briefly - oops - let s go back briefly to  
 the types of land As an appraiser when you - when you are

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- (1) valuing land it's awfully important to know whether there are  
 (2) restrictions on its use isn't that correct?  
 (3) A That is correct  
 (4) Q I mean after all if you're going to decide that land is  
 (5) great timberland and there's a rule that says you can't timber  
 (6) in it it doesn't make any sense to value it as timberland  
 (7) isn't that right?  
 (8) A That's correct  
 (9) Q Now what is a possessory interest?  
 (10) A A possessory interest?  
 (11) Q Maybe I should - well I'm not going to write it down I  
 (12) don't know how many S's it has but what is a possessory  
 (13) interest?  
 (14) A Well that's an interest somebody else has in the property  
 (15) Q It's a right to actually take possession of the property  
 (16) right?  
 (17) A Yes it could involve that yes  
 (18) Q Right to build things on it?  
 (19) A Could involve that  
 (20) Q Right to let other people build things on it?  
 (21) A Depends on the interest that the person has  
 (22) Q Selected but un conveyed lands the Native corporations do  
 (23) not have a possessory interest in that land do they?  
 (24) A That is something that I can't speak to with authority  
 (25) Q So you can't tell us wherever there are selected but

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- (1) un conveyed lands whether a Native corporation could even put  
 a  
 (2) cabin on it?  
 (3) A Again I don't know what the restrictions are for selected  
 (4) lands that have not been conveyed  
 (5) Q Do you know who -  
 (6) MR PETUMENOS Excuse me Judge for the record - I  
 (7) want the Judge - Court to know that I have an objection based  
 (8) upon our previous conference at this time to the manner of  
 (9) this examination  
 (10) THE COURT I understand the objection counsel but  
 (11) for now it's overruled  
 (12) BY MR OPPENHEIMER  
 (13) Q Do you know who Don Emmal is?  
 (14) A Yes  
 (15) Q Who is he?  
 (16) A Don Emmal is the president of English Bay Corporation  
 (17) Q And English Bay Corporation's lands are primarily in the  
 (18) Kenai area correct?  
 (19) A Well some of them are  
 (20) Q You're correct there are some in Prince William Sound as  
 (21) well is that right?  
 (22) A In the Kenai Fjords area  
 (23) Q English Bay has a lot of land in the Kenai Fjords area  
 (24) correct?  
 (25) A And in the Kenai Peninsula area

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- (1) Q And in the Kenai Peninsula meaning - you're referring to  
 (2) this land here too?  
 (3) A That's correct  
 (4) Q Yes absolutely Are you aware that Mr Emmal has  
 (5) testified to the effect that he was unable to work out a deal  
 (6) with the Forest Service to put a cabin in the Kenai Fjords area  
 (7) where they would pay him rent because until he gets some form  
 (8) of conveyance of his selected but un conveyed lands He  
 doesn't  
 (9) have control of the lands to put those sorts of things like  
 (10) guest cabins on it and to charge for them  
 (11) MR PETUMENOS Same objection Your Honor  
 (12) MR OPPENHEIMER Goes to use Your Honor  
 (13) MR PETUMENOS Very briefly Judge - do you want us  
 (14) to approach the bench?  
 (15) THE COURT Yeah I think you better  
 (16) (Sidebar conference out of the hearing of the jury)  
 (17) THE COURT Go ahead what's your objection?  
 (18) MR PETUMENOS This line of questioning would be  
 (19) proper in the absence of a statutory amendment to the usual  
 (20) plaintiff rights with respect to property I can understand in  
 (21) the normal course if somebody didn't have a possessory right  
 to  
 (22) put a cabin on or something like that you could undertake this  
 (23) cross but it is misleading in the sense that all claims all  
 (24) claims with respect to the Exxon Valdez oiling inure invest  
 (25) with the Village Corporations as of the time they make their

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- (1) Irrevocable selection  
 (2) THE COURT It was my understanding -  
 (3) MR PETUMENOS And so the fact that - the federal  
 (4) government cannot claim at all for anything in connection with  
 (5) the Exxon Valdez so my - my concern is that as counsel gets  
 (6) deeper and deeper into this area and leaves the impression with  
 (7) the jury that because they have less of an interest for other  
 (8) reasons putting cabins in doing things like that  
 (9) THE COURT What are the other reasons?  
 (10) MR PETUMENOS I'm sorry?  
 (11) THE COURT What are the other reasons  
 (12) MR PETUMENOS Well the point is that what's  
 (13) relevant for this lawsuit is who has the claim All of the  
 (14) claim for the land as a result of the Exxon Valdez and the  
 (15) answer to that is the Village Corporations whether they have a  
 (16) possessory interest for purposes of putting up a cabin right  
 (17) now or not to the extent that the land has been damaged they  
 (18) have the claim to the exclusion of anyone else and so -  
 (19) THE COURT You've tried to preserve your - your  
 (20) long term diminution of damages and your loss of use and  
 (21) enjoyment damages haven't you? You're claiming both aren't  
 (22) you?  
 (23) MR PETUMENOS The - the claim for the permanent  
 (24) damages as I understand Dr Mundy's testimony is in that area  
 (25) relating to archaeology where they have to excavate and goes

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- (1) to the next highest and best use and then it s permanently or  
 (2) forever lost as an archaeological site But all of the  
 (3) testimony that Dr Mundy has put forth has been that there s a  
 (4) period of time when based on the income stream returns to  
 (5) normal so I don t think it s - I think it s a misleading  
 (6) impression to leave with the jury That s because rights for  
 (7) purposes of development for purposes of the possessory  
 (8) interest somehow affect their claim because if the Forest  
 (9) Service puts up a cabin on this - on these properties the  
 (10) Village Corporations have the claim for the diminution of  
 (11) value It may sound like a legal fiction but it is a legal  
 (12) fiction because if there s a loss of use by the federal  
 (13) government for this period of time by legislation the Village  
 (14) Corporation has its - they have the claim as if it were theirs  
 (15) in 1989  
 (16) THE COURT Go ahead  
 (17) MR OPPENHEIMER Your Honor OPA is a standing  
 (18) statute We re not leading to the conclusion that they don t  
 (19) have a right to bring claims That s not what this is all  
 (20) about But OPA did not create any use rights and that did not  
 (21) previously exist under ANCSA And it is surely our right to  
 (22) show that there are certain uses to which they could not put  
 (23) those lands It s a tenant defensible use there and OPA does  
 (24) not change use rights It is a standing statute and there is  
 (25) simply no doubt that we have ample evidence that they - there

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- (1) are certain uses which cannot be made on the property just  
 (2) cannot be  
 (3) THE COURT What you ve shown me here is that one of  
 (4) the - there is one Native corporation thought that he had no  
 (5) right to put - may have felt that he had no right to possess  
 (6) certain property right? I mean that s what you re  
 (7) questioning this witness about  
 (8) MR OPPENHEIMER So far yes  
 (9) THE COURT So far  
 (10) MR OPPENHEIMER So far But the point is Your  
 (11) Honor they don t have possessory Interest and OPA didn t  
 (12) change that They have no right -  
 (13) THE COURT Counsel I don t know that as a matter of  
 (14) law You re giving me a legal proposition here right  
 (15) MR OPPENHEIMER I am that s correct  
 (16) THE COURT And do I have to explore this the legal  
 (17) issue before I allow the testimony?  
 (18) MR OPPENHEIMER I don t think so because I m not  
 (19) aware of any - any theory that says we cannot put on evidence  
 (20) that they - that they cannot legally use their land  
 (21) THE COURT I think that may be so but it s a  
 (22) question of law isn t it?  
 (23) MR DIAMOND Your Honor there are twin contentions  
 (24) here One diminution in value and two loss of use  
 (25) THE COURT Right That s what I said

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- (1) MR DIAMOND We re not going to who owns the claim  
 (2) we re going to whether anybody was damaged These  
 plaintiffs  
 (3) If they have not suffered any loss of use because they couldn t  
 (4) make the use in the first place haven t been damaged  
 (5) THE COURT I understand that That s what I said to  
 (6) opposing counsel  
 (7) MR OPPENHEIMER Right that is  
 (8) THE COURT But the question is when you ask a  
 (9) question relating to one lay person s evaluation of what he  
 (10) could do it s different from me saying there s no possessory  
 (11) right hereby  
 (12) MR OPPENHEIMER I don t have to ask anymore  
 (13) questions about - the fact of the matter is that the Native  
 (14) corporations have comported themselves with an  
 understanding  
 (15) that they could not do certain things with their land That s  
 (16) point one  
 (17) Point two is that as - as a matter of this man s  
 (18) expertise he should know what the ownership rights are that  
 (19) follow certain forms of ownership and conveyance and  
 because  
 (20) it does make a difference on the use claim and I think that  
 (21) that s really what we re exploring here  
 (22) THE COURT What I m trying to tell you is I haven t  
 (23) explored the law sufficiently that I feel comfortable making a  
 (24) legal ruling as to the possessory question on whether or not  
 (25) the Native corporations can - can possess certain property and

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- (1) use it in certain ways so I can t do that as a matter of law  
 (2) You are exploring facts relating to that issue  
 (3) My feeling is that a question based on the perceptions of  
 (4) the president of Native corporation when he may be wrong is  
 (5) an issue that I would prefer to explore before I allow this  
 (6) kind of speculative testimony not after you get it in because  
 (7) it may very well be that this objection is valid Murky  
 (8) counsel but valid  
 (9) I mean it s too complicated of a legal issue I m not  
 (10) sure that it s appropriate to ask a question about what one  
 (11) person s perception was If you think you can show me that  
 (12) these possessory rights are simply not possessed as a matter of  
 (13) law you should do that with me not this witness  
 (14) MR OPPENHEIMER I m comfortable we can do that I m  
 (15) trying to think how we can do that in terms of the sequence of  
 (16) events I ll tell you -  
 (17) MR PETUMENOS Can I -  
 (18) THE COURT You just go on -  
 (19) MR OPPENHEIMER Why don t I do that I do need to  
 (20) do one thing on the record because I misspoke myself I was  
 (21) referring to Don Emmal and it s in fact Pat Norman  
 (22) THE COURT Just correct that  
 (23) MR OPPENHEIMER I don t have to do that if I have a  
 (24) stipulation of counsel it won t be thrown back later that I  
 (25) had the wrong person

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- (1) MR PETUMENOS No I have other things to throw  
 (2) back  
 (3) MR OPPENHEIMER That s fine We ll move on  
 (4) THE COURT Thank you  
 (5) BY MR OPPENHEIMER  
 (6) Q Dr Mundy what is the name of your company?  
 (7) A Mundy Jarvis and Associates Inc  
 (8) Q Mundy Jarvis and Associates Inc Do you have a company  
 (9) with any other names?  
 (10) A Yes  
 (11) Q What s that?  
 (12) A Bill Mundy and Associates Inc  
 (13) Q Any other names?  
 (14) A Companies that I am a principal in or own a principal  
 (15) interest in is that what you re -  
 (16) Q I ll cut to the chase Do you have a company called Mundy  
 (17) Day D a y?  
 (18) A Mundy Day is a - a name we do business as It s a d/b/a  
 (19) of Mundy Jarvis and Associates Inc It s an association  
 (20) between Jack Day and myself  
 (21) Q Jack Day is an appraiser?  
 (22) A That s correct  
 (23) Q That s your Alaskan based operations right? That s how  
 (24) you Mundy Jarvis do business in Alaska Mundy Day?  
 (25) A It used to be Mundy Day Bunn Well it was originally

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- (1) lease right?  
 (2) A That may be the case Again I am - except for this  
 (3) deposition - not familiar with that work that Jack did  
 (4) Q Well you were alerted to the fact that your partner Jack  
 (5) Day had done an appraisal in Busby Island dead center in the  
 (6) middle of the stigma area at your deposition is that correct?  
 (7) A That is correct  
 (8) Q And are you telling me you haven t talked to Mr Day since  
 (9) your deposition about his conclusions?  
 (10) A I have not discussed that matter with Mr Day no  
 (11) Q Are you not interested in your partner s opinion of real  
 (12) estate values in the stigma area?  
 (13) A I - it was brought to me as a part of my deposition and  
 (14) Mr Day did some valuation work for a client and expressed his  
 (15) opinion of value and I - I don t see any reason why I should  
 (16) discuss it with Jack  
 (17) Q Well he appraised the value up in the year after the  
 (18) spill didn t he on Busby Island?  
 (19) A As I recall that was a lease and it was for a renewal of  
 (20) the lease that involved a term of five years and what he  
 (21) provided to the client was a recommendation regarding what  
 (22) the lease rate should be for a five year period of time and I  
 (23) believe that that was done like in 1990  
 (24) Q 89 or 90 but he recommended that the lease go up didn t  
 (25) he?

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- (1) Mundy Day Associates then it became Mundy Day Bunn Now  
 it s  
 (2) Mundy Day or Mundy and Associates  
 (3) Q Okay And -  
 (4) A We re flexible  
 (5) Q And Jack Day is a long time Alaska resident?  
 (6) A He has lived in Alaska for some time He is no longer a  
 (7) resident of Alaska  
 (8) Q He s an appraiser?  
 (9) A Yes  
 (10) Q Good one?  
 (11) A Yes  
 (12) Q I assume so or you wouldn t be in business with him right?  
 (13) A That s right  
 (14) Q Did your partner Jack Day have occasion to do an  
 (15) appraisal on Busby Island after the oil spill?  
 (16) A I believe Jack did The way we work is very independent of  
 (17) one another and I don t know what Jack does and Jack does  
 (18) not  
 (19) generally know what I and my staff are doing So I am - it  
 (20) seems to me that there as a part of this process I have  
 (21) become aware of or somebody has discussed with me an  
 appraisal  
 (22) that Jack did on Busby Island  
 (23) Q Came up at your deposition didn t it?  
 (24) A I believe that s correct yes  
 (25) Q Right That your partner Jack Day had done an appraisal  
 at Busby Island In connection with something called the Porter

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- (1) A That is correct  
 (2) Q And the lease was what s known as a percentage lease?  
 (3) A I can t recall if it was a percentage lease or not  
 (4) Q Well a percentage lease is a type of lease is it not  
 (5) that is a percentage of the land value correct?  
 (6) A No  
 (7) Q Well in this case on the Porter lease it was was it  
 (8) not?  
 (9) A The lease rate the annual lease rate was a percent of the  
 (10) land value yes It was like we ve done here on this exhibit  
 (11) that the jury can see It was a value that Mr Day arrived at  
 (12) for the land and he multiplied that times a rate of return  
 (13) capitalization rate to get an annual income stream  
 (14) Q And you became aware at your deposition in this case that  
 (15) Jack Day your partner had increased the appraisal on Busby  
 (16) Island either in 89 or 90 and you didn t talk to him about  
 (17) the implications of that to your appraisal?  
 (18) MR PETUMENOS I ll object I think the witness said  
 (19) 90  
 (20) BY MR OPPENHEIMER  
 (21) Q 89 or 90 whatever you did not talk to him about the  
 (22) implications of that to your appraisal?  
 (23) A That is correct  
 (24) Q Do you know of a colleague with whom you work by the  
 name  
 (25) of Vicki Adams?

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- (1) A Vicki is one of our staff members yes  
 (2) Q And in fact she has played an important role in your  
 (3) appraisal work in this case has she not?  
 (4) A She has yes sir  
 (5) Q You have relied upon work that she has done?  
 (6) A Yes  
 (7) Q She has conducted field research for you?  
 (8) A Yes  
 (9) Q She has conducted interviews for you?  
 (10) A Correct  
 (11) Q She talked to Jack Day your partner about valuations in  
 (12) this case didn't she?  
 (13) A She may have  
 (14) Q And didn't Jack Day tell Vicki Adams when she was  
 (15) interviewing him about the appraisal in this case that downward  
 (16) effects in land values to the extent they existed in Prince  
 (17) William Sound were the result of market behavior and not the  
 (18) spill?  
 (19) A I cannot recall that conversation She may well have had  
 (20) that with Jack and Jack may have expressed his opinion that  
 (21) for this Busby Island property he felt that the value was  
 (22) lower because of the - the market I don't think that Jack  
 (23) was dealing at all with the impact of the spill on property  
 (24) value and did not do any research in that area I think that  
 (25) if you called Jack as a witness and asked him if he had an

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- (1) opinion regarding the effect of the oiling on the value of  
 (2) property in Prince William Sound he'd probably say that he  
 (3) didn't have an opinion  
 (4) Q You're speculating aren't you? You never talked to him?  
 (5) A No I'm saying that that's -  
 (6) Q Dr Mundy you never talked to Jack Day about his appraisal  
 (7) on Busby Island have you?  
 (8) A That's exactly what I said  
 (9) Q And you never talked to Jack Day about what he told your  
 (10) colleague Vicki Adams have you?  
 (11) A That's correct  
 (12) Q Have you ever talked to Ms Adams about what Jack Day told  
 (13) her about the appraisal?  
 (14) A Not that I can recall  
 (15) Q Now you've told us that one of the things you've done to  
 (16) appraise this property is to go out and talk to people who are  
 (17) knowledgeable about real estate in the area that you think  
 (18) might have been affected isn't that correct?  
 (19) A That's correct  
 (20) Q But you did not talk to your own partner who had been out  
 (21) doing an appraisal and in your recollection 1990 in the very  
 (22) area you're talking to us about?  
 (23) A No I didn't personally conduct an interview with Jack to  
 (24) find out what his opinion was It might be that Vicki Adams  
 (25) did and if that is a part of the - her deposition transcript

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- (1) I would certainly ascribe to it But I would be absolutely  
 (2) amazed if Jack Day was expressing an opinion about the value  
 of  
 (3) property in Prince William Sound because of the oil spill  
 (4) Q You ever have occasion to review Vicki Adams' notes as part  
 (5) of her work with you?  
 (6) A There have been notes that I have reviewed in two  
 (7) contexts  
 (8) One there have been notes that Vicki has sent to me which  
 (9) I have certainly read  
 (10) The second is there are notes that I have reviewed as a  
 (11) part of the deposition process in the preparation for this  
 (12) trial that counsel has presented to me and asked me to review  
 (13) and comment on  
 (14) Q And sometimes the notes she gives you are in her  
 (15) handwriting?  
 (16) A That's correct  
 (17) Q You would recognize her handwriting?  
 (18) A Yes  
 (19) MR OPPENHEIMER Counsel I'd like to show the  
 (20) witness what has been marked as defendants exhibit 1614  
 (21) MR PETUMENOS Hold on a second  
 (22) MR PETUMENOS Could I have a moment to confer with  
 (23) counsel Judge?  
 (24) THE COURT Sure  
 (25) (Discussion off record between counsel)

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- (1) BY MR OPPENHEIMER  
 (2) Q Dr Mundy I show you a page of handwritten notes which  
 (3) appears to say at the top 2/4 February 4 Jack Day My first  
 (4) question - I'm sorry excuse me my first question to you is  
 (5) Do you recognize that handwriting?  
 (6) A This appears to be the handwriting of Vicki Adams  
 (7) Q Does that refresh your recollection as to whether Vicki  
 (8) Adams had a conversation with your partner Jack Day about  
 the  
 (9) effect of the oil spill on the real estate market in Prince  
 (10) William Sound?  
 (11) A I'm reading the memo right now  
 (12) It's possible that I was shown this as a part of the  
 (13) deposition process Again I take it for what it's worth and  
 (14) it's obviously a memorandum or some notes that Vicki made to  
 (15) herself as a part of a conversation that she had with Jack  
 (16) Day  
 (17) Q If I may I somehow in the course of two seconds here have  
 (18) misplaced my copy I'd like to take this back from you and put  
 (19) it on the overhead I know this is going to be very hard to  
 (20) read so let me - let me read this in  
 (21) Will send me his comps from Prince William Sound work He  
 (22) says there's such a dearth of sales in that region is the lack  
 (23) of fee and - can you read the next word? Property?  
 (24) A Fee owned properties  
 (25) Q Fee owned properties maybe five to ten total He recently

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- (1) updated his comps and searched for more to complete an
- (2) appraisal of Busby Island next to Bligh Reef No new sales
- (3) info
- (4) Subdivisions that are there are having real trouble because
- (5) of economy not oil spill You see that?
- (6) A Yes
- (7) Q Do you consider Vicki Adams to be a good colleague?
- (8) A Yes
- (9) Q You relied upon her interviews in a lot of other contexts
- (10) right?
- (11) A That s correct
- (12) Q Any reason to believe she inaccurately conveyed Mr Day s
- (13) comments?
- (14) A No
- (15) Q Having seen her - her notes here of her conversation with
- (16) Mr Day does this refresh your recollection as to whether you
- (17) ever looked up Mr Day to talk to him about his views?
- (18) A As I say I cannot recall talking with Jack Day about what
- (19) his opinion was on the real estate market in Prince William
- (20) Sound because of the spill I - Jack was not working on the
- (21) project Jack was not doing research to determine what the
- (22) impact of the spill was He was providing Vicki with his
- (23) opinion regarding the market activity around Bligh Island and
- (24) Busby Island as of February 4th It may well have been 1990
- (25) I don t know what year it was And I take that information at

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- (1) (Videotape Played)
- (2) VIDEO VOICES
- (3) Q The next page 225 do you know whose handwriting that is?
- (4) A That s mine
- (5) Q Now this states 2/4 Jack Day Do you know when you made
- (6) these notes?
- (7) A 1990
- (8) Q And do you know why you were talking to Jack Day at that
- (9) time?
- (10) A I was attempting to get insights from him regarding Prince
- (11) William Sound sales in subdivisions
- (12) Q It says in the second paragraph of - could you read that
- (13) for us? I can make out some of it not all of it
- (14) A The second paragraph?
- (15) Q Yes
- (16) A Starting He recently ?
- (17) Q Right
- (18) A He recently updated his comps and searched for more to
- (19) complete an appraisal of Busby Island next to Bligh Reef No
- (20) new sales info
- (21) Q As to that do you know if he - Mr Day - did do an
- (22) appraisal of Busby Island then?
- (23) A I don t know for sure
- (24) Q Did you make any efforts to obtain that information that he
- (25) gathered in conjunction with his appraisal of Busby Island?

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- (1) its face value I - we ve done our research and I ve formed
- (2) my opinions I believe I ve got a very sound defensible basis
- (3) for them
- (4) MR OPPENHEIMER Counsel at this time I would like
- (5) to - as the witness has not identified the date precisely -
- (6) play a video of the following transcript sections 332 lines 7
- (7) through 334 line 2 and 334 line 15 through 335 line 9
- (8) Your Honor with the Court s permission this is videotape
- (9) of Vicki Adams deposition
- (10) MR PETUMENOS Your Honor could I get -
- (11) MR KENDE Vicki Adams?
- (12) MR OPPENHEIMER That s correct
- (13) MR PETUMENOS Judge I m sure this is okay but I d
- (14) just like to -
- (15) (Videotape started then stopped)
- (16) MR PETUMENOS - the next page 335
- (17) THE COURT Turn it down
- (18) MR PETUMENOS I don t have Ms Adams deposition
- (19) transcript in court Could I confer with counsel what is going
- (20) to be read page and line?
- (21) THE COURT Sure
- (22) (Discussion off record between counsel )
- (23) MR PETUMENOS I have no objection Judge
- (24) MR OPPENHEIMER Joel do I have to back it up or -
- (25) MR GROSS Just restart it

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- (1) A Yes that was the - the comparables that he then provided
- (2) to me
- (3) Q Do you know in that appraisal that he was performing
- (4) whether he took into account any impact from the Exxon Valdez
- (5) oil spill on those property values there?
- (6) A I do not
- (7) Q Now it appears that you ve used several comps that were
- (8) confirmed by Mr Day Does Mr Day have particular experience
- (9) in the Alaska market on - with regard to recreational
- (10) properties?
- (11) A Yes
- (12) Q And can you describe generally the types of information
- (13) that you obtained from him relating to that in conjunction with
- (14) your work on the Exxon Indication?
- (15) A Largely comparable sale information some insights
- (16) Q So you had some discussion with him also?
- (17) A I may have or Bill may have
- (18) Q Is it accurate to state that you relied on the confirmation
- (19) of comparables that Mr Day did as to some recreational
- (20) properties in conjunction with your work on the Exxon Valdez
- (21) matter?
- (22) A Yes
- (23) Q Could you look at the next paragraph of what you just read
- (24) and would you read that for us please?
- (25) A Subdivisions that are there are having real trouble because

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- (1) of the economy not oil spill We may not be able to reach  
 (2) developers long gone  
 (3) Q Do you know if the developers were ever reached?  
 (4) A Some of them were not  
 (5) Q What impact did Mr Day s comments that subdivisions were  
 (6) having real problems because of economy not the oil spill have  
 (7) on the work that you were doing in looking at the market for  
 (8) recreational properties?  
 (9) A I don t know  
 (10) (Videotape Concluded)  
 (11) BY MR OPPENHEIMER  
 (12) Q Mr Mundy does any of that refresh your recollection  
 (13) whether you ever spoke with Mr Day about his opinions for real  
 (14) estate market for recreational properties in Prince William  
 (15) Sound?  
 (16) A I cannot recall discussing with Jack Day the recreational  
 (17) real estate market in Prince William Sound as a part of our  
 (18) Exxon Valdez research  
 (19) Now Jack and I frequently get together and I talk about  
 (20) what he s doing – or we talk about what one another are doing  
 (21) so there are general conversations we have had about the  
 (22) market And we ve talked in general about some of the things  
 (23) that we ve been doing in terms of the research on this  
 (24) particular matter But to the best of my recollection there  
 (25) is nothing that I have discussed with Jack regarding his

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- (1) opinions on property value on market conditions on the impact  
 (2) that the spill had on real estate value  
 (3) Q Let s switch subjects People rely on appraisals in their  
 (4) lives don t they?  
 (5) A There are people that rely on appraisals yes  
 (6) Q Banks rely on appraisals?  
 (7) A Correct  
 (8) Q When people buy and sell homes quite often appraisals are  
 (9) involved?  
 (10) A Yes  
 (11) Q The S and L debacle that s sometimes been attributed in  
 (12) part to bad appraisals which can have bad consequences  
 (13) correct?  
 (14) A That s correct  
 (15) Q Things might loan or not loan depending upon the integrity  
 (16) of an appraisal correct?  
 (17) A I don t know what you mean by the integrity of the  
 (18) appraisal I think that they may or may not make a loan based  
 (19) on the opinion of the appraiser and what the findings are as  
 (20) part of his research I would think that the lending  
 (21) institution in hiring an appraiser would hire an appraiser  
 (22) with integrity  
 (23) Q The point I m trying to get at – I want to see if you  
 (24) agree – is that it is important that appraisals be reliable to  
 (25) be used?

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- (1) A That s correct  
 (2) Q And that we can t have a system where everybody creates  
 (3) their own rules of appraisal can we?  
 (4) A I have not really given that concept any really – any real  
 (5) serious thought It makes sense that there are appraisal  
 (6) standards Appraisal Institute of which I am a member does  
 (7) have appraisal standards and I – they re good standards  
 (8) Q Why does the Appraisal Institute have standards for  
 (9) appraisers?  
 (10) A Well there are numerous reasons One of the reasons is to  
 (11) establish a framework within which appraisals are done  
 (12) Another reason is to provide confidence on the part of clients  
 (13) who retain appraisal services that when they receive an  
 (14) appraisal they will receive an appraisal that meets certain  
 (15) guidelines and is done in a certain manner  
 (16) Q And one of the things that that allows us to do is it not  
 (17) is to compare appraisals? If we re all playing by the same  
 (18) rules as appraisers we can compare one appraisal with another  
 (19) and evaluate it?  
 (20) A Well I think you could compare the appraisals without  
 (21) having certain standards  
 (22) Q But there are standards there are standards appraisal  
 (23) standards?  
 (24) A That s correct  
 (25) Q Would you tell the jury what USPAP is?

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- (1) A USPAP is an acronym that stands for Uniform Standards of  
 (2) Professional Appraisal Practice  
 (3) Q And it has some guidelines how you go about evaluating  
 (4) property right?  
 (5) A That s correct  
 (6) Q You for example – I will tell you I m not an MAI You  
 (7) sir are is that correct?  
 (8) A That s correct  
 (9) Q Tell the jury sir what is an MAI? An MAI is a  
 (10) professional designation much like AIA for architects or CPA  
 (11) for accountants and there are certain prerequisites to obtain  
 (12) the MAI designation MAI stands for Member Appraisal  
 (13) Institutes?  
 (14) MR PETUMENOS Excuse me Judge could we approach  
 (15) the bench very briefly?  
 (16) (Sidebar conference out of the hearing of the jury)  
 (17) MR PETUMENOS If this examination is going to  
 (18) appraisal standards and his appraisal – whether he conformed  
 (19) with it I have no – but if there s any kind of attempt here  
 (20) to go into complaints or professional like a bar grievance or  
 (21) anything like that I want to hear about it first  
 (22) MR OPPENHEIMER I do not intend to conduct my  
 (23) examination that way And in fact I d be perfectly happy to  
 (24) stipulate that as to your appraisers I m not going to raise  
 (25) that kind of thing As to ours you won t because people write

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- (1) letters all the time in that area There are letters on this  
 (2) witness  
 (3) THE COURT Specific complaints are not going to be  
 (4) raised by either side?  
 (5) MR OPPENHEIMER That s right  
 (6) MR PETUMENOS I m not aware Mr Dorchester is the  
 (7) only appraiser I know about Put it this way we ll both  
 (8) approach the bench before we do it  
 (9) MR OPPENHEIMER Wait a minute What s good for the  
 (10) goose is good for the gander  
 (11) THE COURT Put it this way tell everybody that s  
 (12) true  
 (13) MR OPPENHEIMER I m not going to – there are  
 (14) complaints I did not intend to go into them That s not  
 (15) the – that s not what I want to get to here But I do not  
 (16) want a situation where you know Mr Dorchester later is  
 (17) subject to that examination  
 (18) THE COURT I agree I agree And I think what  
 (19) counsel s saying nobody raises it before coming to the bench  
 (20) and that goes for every lawyer on both sides  
 (21) MR PETUMENOS Right And I – Randy –  
 (22) THE COURT Based on the issue of complaints you re  
 (23) not an appraiser and neither are they  
 (24) MR OPPENHEIMER As long as they stipulate that s  
 (25) fine

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- (1) (Sidebar concluded)  
 (2) BY MR OPPENHEIMER  
 (3) Q Dr Mundy as an MAI you are bound to follow the tenets of  
 (4) USPAP Is that correct?  
 (5) A That s correct  
 (6) Q And USPAP embodies – one of the things that it does is to  
 (7) help set the standard of appraisal techniques for the appraisal  
 (8) industry?  
 (9) A Yes  
 (10) Q Would you agree with me that you should not lightly diverge  
 (11) from standard appraisal techniques?  
 (12) A I would agree with the statement that you should not  
 (13) lightly diverge from appraisal standards yes  
 (14) Q Because one of the consequences of doing that is that every  
 (15) appraiser would start making up his or her own rules Isn t  
 (16) that right?  
 (17) A Well that is a possibility I don t know whether one can  
 (18) draw that conclusion or not  
 (19) Q Well you certainly wouldn t want to see that happen  
 (20) correct?  
 (21) A I don t know I – we re getting into sort of a  
 (22) philosophical area now and I think that one could argue that  
 (23) there should be standards that appraisals – appraisers abide  
 (24) by and that they don t diverge from those standards  
 (25) But on the other hand one could argue that divergence is

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- (1) good because that can foster change It can foster new ideas  
 (2) possibly better ideas better ways to – to deal with things  
 (3) Especially in times like we have right now where there s new  
 (4) information systems that are becoming available new  
 (5) statistical techniques new ways to analyze information  
 (6) So to have a rigorous framework and say that a appraiser  
 (7) cannot diverge from that could be a detriment to the  
 (8) profession  
 (9) Q We ve heard a lot of talk in this case about natural  
 (10) lands Natural lands is a divergence from standard appraisal  
 (11) techniques isn t it?  
 (12) A No it s not  
 (13) Q When you first started developing your natural lands  
 (14) theory you called it public lands didn t you?  
 (15) A There was research that we did and some material which I  
 (16) wrote that dealt with lands that are unique lands for example  
 (17) remote lands wilderness habitat lands as we ve discussed  
 (18) about that it would make sense to retain in the public s  
 (19) interest And in that context we discussed these lands as  
 (20) public interest lands  
 (21) Q Is the answer to my question yes though when you started  
 (22) on your way to developing your natural lands that you re  
 (23) talking to us about you called it public lands?  
 (24) A There was a very short period of time when we referred to  
 (25) those lands as lands that – that had – that were in the

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- (1) public interest to retain  
 (2) Q So the answer to my question is yes?  
 (3) A The reason that I restated or that I didn t say yes is  
 (4) that I wanted the audience here to understand what I refer to  
 (5) by public interest lands and what – how it was that for a  
 (6) very short period of time we called these unique remote  
 (7) wilderness lands lands that had a public interest associated  
 (8) with them This was a period of time where I was frankly  
 (9) uncertain as to what an appropriate land use category would be  
 (10) for these lands I didn t know whether it would be appropriate  
 (11) to call them natural lands public interest lands or  
 (12) wilderness lands But what I did call them is lands that  
 (13) should be retained in the public interest  
 (14) Q Dr Mundy isn t it the case that in March of 89 when you  
 (15) wrote to Mr Pio Park soliciting work on this case that you  
 (16) were using the terms public lands and natural lands  
 (17) interchangeably isn t that the case?  
 (18) A As I just said yes  
 (19) Q Okay now –  
 (20) A We called these lands wilderness lands too  
 (21) Q And you were a little bit concerned when you explained your  
 (22) theory to Mr Park shortly after the oil spill that he was  
 (23) going to find those ideas farfetched right?  
 (24) A I can t recall if that s the case or not  
 (25) MR OPPENHEIMER I m going to show 13023

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- (1) MR PETUMENOS Do you have a section of the letter  
 (2) counsel so I can refer to it?  
 (3) MR OPPENHEIMER The last paragraph on the first  
 (4) page  
 (5) This is like a game my son plays with  
 (6) BY MR OPPENHEIMER  
 (7) Q Now that was your letter to Mr Park in March of 89 that  
 (8) - when you were soliciting work Does that remind you that  
 (9) you had a little concern that he was going to find this  
 (10) farfetched?  
 (11) A That s what I stated there that the exchange of these  
 (12) lands may seem farfetched  
 (13) MR OPPENHEIMER Your Honor would this be a good  
 (14) time for a break?  
 (15) THE COURT Yes that s fine  
 (16) THE CLERK Please rise This court stands in  
 (17) recess  
 (18) (Jury out at 11 06 a m )  
 (19) (Recess from 11 06 a m to 11 35 a m )  
 (20) (Jury in at 11 35 a m )  
 (21) THE CLERK This court now resumes its session  
 (22) Please be seated  
 (23) BY MR OPPENHEIMER  
 (24) Q Dr Mundy I want to briefly go through the - the role  
 (25) natural lands plays in your damage analysis

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- (1) Joel can you bring up 1189 plaintiffs 1189?  
 (2) This is - you recognize this as the plaintiffs exhibit  
 (3) for English Bay Corporation?  
 (4) A Yes  
 (5) Q Have natural land 31 569 acres of natural land?  
 (6) A That s correct  
 (7) Q Just a hair under 30 million dollars of the total 43  
 (8) million dollar value?  
 (9) A Yes  
 (10) Q Joel 1190 please?  
 (11) Natural land component of Port Graham s land value over 43  
 (12) million out of 68 million correct?  
 (13) A Correct  
 (14) Q Joel 1191  
 (15) Chenega Corporation natural land almost 60 million  
 (16) dollars out of 68 million dollars correct?  
 (17) A Correct  
 (18) Q 1192  
 (19) Chugach natural land 38 little over 38 million dollars  
 (20) out of 120 million dollars correct?  
 (21) A Correct  
 (22) Q 1193 Eyak - by the way Eyak never oiled right?  
 (23) A Correct  
 (24) Q Natural land little over 15 million out of 51 million?  
 (25) A Correct

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- (1) Q And 1194 Almost 11 million out of 41 million for  
 (2) Tattilek correct?  
 (3) A Correct  
 (4) Q Okay thanks Joel  
 (5) Under your theory of natural land it s primarily the  
 (6) government that buys it Isn t that correct?  
 (7) A The government is a major part of that market that s  
 (8) correct  
 (9) Q The government sees oiling as a short term problem when it  
 (10) looks at land doesn t it?  
 (11) A If you re referring to interviews that we conducted with  
 (12) various federal agencies as a part of this assignment in  
 (13) talking about the - what their opinions were regarding these  
 (14) lands - and as you say a large part of them are natural land  
 (15) - their feelings were that the oiling would be a temporal  
 (16) thing relatively short term in relation to the long term  
 (17) ownership patterns that they have that s correct  
 (18) Q And the government organizations that would buy this land  
 (19) would acquire unique natural resource lands even if they were  
 (20) oiled because of this long term ownership attitude isn t that  
 (21) correct sir?  
 (22) A They may acquire them That is not an absolute It s -  
 (23) Q My question is -  
 (24) MR PETUMENOS Objection objection I don t think  
 (25) he should interrupt the witness

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- (1) THE COURT Had you finished sir?  
 (2) A What I was going to continue to say is is that the  
 (3) responses that we received from federal agencies was  
 (4) ambiguous There were some people who said that we would  
 (5) acquire the land even though it was - even because it was  
 (6) oiled because of the long term outlook Others indicated that  
 (7) they would not be willing to acquire it  
 (8) BY MR OPPENHEIMER  
 (9) Q Joel can you give me the overhead?  
 (10) This is page Roman III 26 of the witness report Exhibit  
 (11) Number DX15503 This is the report on Chugach  
 (12) You see the highlighted portion there sir?  
 (13) A Yes  
 (14) Q You wrote that did you not?  
 (15) A Yes  
 (16) Q The organizations would acquire unique natural resource  
 (17) lands even if oiled because of this long term ownership  
 (18) attitude You believed that when you wrote it in your report?  
 (19) A I believed it then and I believe it now  
 (20) Q Okay thank you  
 (21) Now some of the government people that you spoke with said  
 (22) they might expect a price adjustment and others said they  
 (23) wouldn t right?  
 (24) A That s correct  
 (25) Q When you were first pitching this assignment and thinking

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- (1) about how you would structure a theory of damages did you  
 (2) consider not including inland parts or parcels mountaintops  
 (3) because it was a little aggressive?  
 (4) A No I don't think that I ever did consider not including  
 (5) mountaintops Now I may have thought about to what extent  
 (6) should we include lands and where should the boundaries be  
 and  
 (7) I think that's a natural process for an appraiser to go  
 (8) through but because of the nature of the ownership pattern  
 (9) because of - of liability that is associated with  
 (10) environmentally impaired property because these lands were  
 (11) owned as a large continuous block I felt it was important to  
 (12) value the entire parcel not just a portion of it Especially  
 (13) given the nature of the real estate transaction of it we were  
 (14) using which was as you pointed out a lot of it is natural  
 (15) land and what natural land sells it's the big block of land  
 (16) the mountaintops are not part that is not sold  
 (17) Q Did you ever have discussions with Vicki Adams - whom we  
 (18) saw on that video - that you ought to take a look at whether  
 (19) you should cut back on certain types of land like mountaintops  
 (20) and be less aggressive?  
 (21) A I may have had a discussion like that with her I can't  
 (22) recall  
 (23) Q So you may have had such a discussion?  
 (24) A I may have had a discussion with her  
 (25) Q But you didn't decide to be less aggressive did you?

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- (1) A I decided that the logical ownership area - now talking  
 (2) about the nature of the ownership - would be to include the  
 (3) entire parcel And I feel that as I conveyed to the audience  
 (4) here there's a very good reason for it We discussed the unit  
 (5) rule and I discussed this is the way these lands are  
 (6) transacted  
 (7) Q You decided to be a little more aggressive and put the  
 (8) mountaintops in?  
 (9) A Well I mean - Mr Oppenheimer you can phrase it as more  
 (10) aggressive if you like If the mountaintops were not  
 (11) included there would have been very little effect on the value  
 (12) of the property and there were a lot of tradeoffs that had to  
 (13) be made I mean there were some decisions that we made  
 where  
 (14) the damages would go up There are other decisions that we  
 (15) made where the damages went down And it's a part of the  
 (16) appraisal process And it's not whether the value or damages  
 (17) are going to go up and are going to go down The important  
 (18) aspect is what is the proper way to value the property And  
 (19) for these particular types of properties they sell as large  
 (20) blocks like the Kachemak Bay State Park property and that's  
 (21) the way we value them  
 (22) Q Is there the slightest doubt in your mind by including  
 (23) inland parts of these parcels the mountaintops that the  
 (24) damages are much higher in this case than they would  
 otherwise  
 (25) be? Is there any doubt in your mind about that?

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- (1) A As I said the - because of the fact that the back lands  
 (2) are included there is more acreage and because of that the  
 (3) values are higher and consequently the damages are greater  
 (4) Q I'd like to switch subjects  
 (5) A Gosh I was kind of enjoying that subject  
 (6) Q Well you'll enjoy this subject too  
 (7) A Okay Well if I don't enjoy the subject can I just take  
 (8) a recess?  
 (9) MR PETUMENOS I don't know when to object Judge  
 (10) The question and answer thing has sort of gone away  
 (11) BY MR OPPENHEIMER  
 (12) Q Can you see that Dr Mundy?  
 (13) A Half of it  
 (14) Q Half of it Well - I think with all of this I could get  
 (15) this right Is that better?  
 (16) A Well I think that the break in it is becoming more and  
 (17) more pronounced but -  
 (18) Q How's that?  
 (19) A That's fine  
 (20) Q Well I may move it around so others can see  
 (21) MR PETUMENOS He can come down counsel that's  
 (22) fine  
 (23) MR OPPENHEIMER Is your back all right?  
 (24) A Oh sure my back is fine  
 (25) MR PETUMENOS Probably be easier

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- (1) MR OPPENHEIMER Now I have hemmed you in haven't  
 (2) I?  
 (3) BY MR OPPENHEIMER  
 (4) Q Now we talked earlier about the Kachemak Bay State Park  
 (5) You had rendered appraisal services in connection with certain  
 (6) property involved in that park is that correct?  
 (7) A That's correct  
 (8) Q And you rendered an appraisal on about a 24,000-acre  
 parcel  
 (9) that the Seldovia Native Association ultimately sold to the  
 (10) State of Alaska as part of the - of that park is that  
 (11) correct?  
 (12) A That's correct  
 (13) Q Point out to us if you would where that property is  
 (14) A That property would be located in this area right in here  
 (15) Q Okay thank you You can take your seat Watch out for  
 (16) the cord Great I'll get this out of your way  
 (17) So once again we're on the south side of Kachemak Bay  
 (18) stigma territory right?  
 (19) A That's correct  
 (20) Q And in fact Seldovia is suing Exxon in another case and  
 (21) you've rendered an opinion that they've been damaged as a  
 (22) result of the oil spill Is that correct?  
 (23) A That's correct  
 (24) Q That property that we're talking about do I have it right  
 (25) in here?

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- (1) A Yes  
 (2) Q In here Okay  
 (3) Now before you rendered the opinion for Seldovia in its  
 (4) lawsuit against Exxon you rendered an opinion in connection  
 (5) with their efforts to sell their land to the State of Alaska  
 (6) is that correct?  
 (7) A That s correct  
 (8) Q And that appraisal was to be used by them to negotiate the  
 (9) highest price they could get is that correct?  
 (10) A That is correct  
 (11) Q And what was the date of the first appraisal you did for  
 (12) Seldovia when it was selling its land to Alaska that  
 (13) assignment?  
 (14) A I cannot recall when it was I think it may have been in  
 (15) 1991 Maybe you can refresh my memory  
 (16) MR OPPENHEIMER Counsel I m going to show the  
 (17) witness exhibit 12836 Valuation of Seldovia Native Association  
 (18) Inholdings Kachemak Bay State Park  
 (19) BY MR OPPENHEIMER  
 (20) Q Does that refresh your recollection?  
 (21) A Yes  
 (22) Q When did you do the appraisal in connection with the sale?  
 (23) A This appraisal is as of September 1989  
 (24) Q September 1989 some months after the oil spill?  
 (25) A That s correct

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- (1) Q Any reference in there to stigma damage?  
 (2) A No  
 (3) Q Did you do a subsequent appraisal for – well again this  
 (4) is in connection with their sale of the property correct?  
 (5) A That s correct  
 (6) Q So September 1989 no stigma  
 (7) Did you do a subsequent report for Seldovia in its – by  
 (8) the way – well it doesn t – did you do a subsequent  
 (9) appraisal for Seldovia in connection with its sale of this land  
 (10) to the State of Alaska?  
 (11) A Well this was part of that – the purpose with which we  
 (12) did this September 1989 appraisal was for the sale of the land  
 (13) to the State and then there were a number of revisions that  
 (14) were done subsequently  
 (15) Q I m sorry I didn t understand the answer Did you do a  
 (16) subsequent appraisal for Seldovia in its sales activity with  
 (17) the State?  
 (18) A Yes in the same context this appraisal was done  
 (19) Q I understand The – do you remember what date that had?  
 (20) A I can t remember what date it was  
 (21) MR OPPENHEIMER Counsel showing the witness exhibit  
 (22) – defendants 12839 Supplementary Valuation of Seldovia  
 (23) Native Association Inholdings Kachemak Bay State Park  
 (24) A This appraisal is as of November 10th 1989  
 (25) BY MR OPPENHEIMER

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- (1) Q Any reference in there to stigma?  
 (2) A I would have to review the appraisal but I don t think  
 (3) that there is any reference in this appraisal to stigma or the  
 (4) oiling  
 (5) Q Then did there come a time when you did an appraisal – by  
 (6) the way if you had found stigma in either of these appraisals  
 (7) your appraisal would have been lower correct?  
 (8) A If we were doing this appraisal on analyzing the effect  
 (9) that the oiling had on the value during this one year period of  
 (10) time there would have been a difference in value I think  
 (11) that it s important to understand the purpose of the  
 (12) appraisal  
 (13) Q Well we ll get to the purpose in a second But first  
 (14) please just answer my question If you found stigma in a  
 (15) September 89 appraisal for Seldovia or the November 89  
 (16) appraisal for Seldovia they would have received less money  
 (17) from the State of Alaska in the negotiations wouldn t they?  
 (18) A I doubt it  
 (19) Q They would have had a lower appraisal to use in  
 (20) negotiations isn t that correct?  
 (21) A If we would have – it depends on the time frame that one  
 (22) is talking about and the assumptions under which the appraisal  
 (23) is made And if the State and if the Seldovia Native  
 (24) Association had agreed that the appraisal should reflect the  
 (25) very short term effect of the oiling on the value of the

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- (1) property then that would have been something that we would  
 (2) have taken into consideration as a part of this  
 (3) Q Are you telling me that the client tells you what to do  
 (4) with contamination they tell you how to take it into effect?  
 (5) A The client does not necessarily tell us what to do  
 (6) However oftentimes a client will ask an appraiser to provide  
 (7) a appraisal based on certain assumptions  
 (8) Q Did the Seldovia Native Association ask you to ignore the  
 (9) oiling in these two appraisals?  
 (10) MR PETUMENOS Excuse me I m not sure whether the  
 (11) witness was finished Mr Oppenheimer  
 (12) A I can t recall if that – if there were instructions from  
 (13) the Seldovia Native Association not to include the effect of  
 (14) oiling or not The fact of the matter is Is that the impact  
 (15) of oiling was not included  
 (16) BY MR OPPENHEIMER  
 (17) Q Just so we re clear this is all after the spill remind  
 (18) everyone the spill was in March of 89  
 (19) A That is correct  
 (20) Q And for the periods September and November 1989 you re  
 (21) here telling this jury that based on your analysis they  
 (22) should award tens of millions of dollars against Exxon because  
 (23) land was damaged in the stigma area isn t that correct?  
 (24) A Well now what we re dealing with as a part of our  
 (25) valuation analysis are lands owned by Port Graham English  
 Bay

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- (1) Chenega and other corporations What we re talking about here
- (2) is a Seldovia Native Association which is not a matter of this
- (3) trial
- (4) Q Excuse me but are you saying that whether the land is
- (5) damaged by oiling has to do with whether Seldovia owns it or
- (6) Eyak owns it or English Bay owns it or I own it? It s damaged
- (7) or it s not isn t it?
- (8) A That s correct
- (9) Q Okay for Seldovia?
- (10) A You can look at it as if it s damaged or not
- (11) Q I m sorry?
- (12) A You can value it as if it s damaged or not For example -
- (13) Q Are you telling me when you sold - when you were
- (14) participating with negotiations with the State of Alaska you
- (15) just pretended it wasn t damaged?
- (16) A It was valued as if it was not damaged that s correct
- (17) Just as we valued all of the subject properties on an
- (18) unimpaired basis We valued them on an unimpaired basis as if
- (19) they were not oiled and then we went a second step in
- (20) essence a second appraisal We took into consideration the
- (21) nature of the impairment and we valued them on an impaired
- (22) basis
- (23) Q Yes But Dr Mundy you valued the land here in an
- (24) unimpaired basis before the oil spill correct? Your
- (25) unimpaired values before this jury are the values that you

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- (1) start with as part of your analysis before the oil spill?
- (2) A That s correct We ve specifically stated -
- (3) Q There s no doubt - there s no doubt that in September and
- (4) November of 89 you re telling this jury that tens of millions
- (5) of dollars worth of damage have been done to the property of
- (6) the plaintiffs here as a result of the oil spill No doubt
- (7) about that is there?
- (8) A Tens of millions of dollars on the subject properties?
- (9) Q Correct
- (10) A That s correct
- (11) Q Okay Now there came a time however when you switched
- (12) gears on Seldovia when they too became a plaintiff isn t
- (13) that correct
- (14) A We didn t switch gears
- (15) MR PETUMENOS I object to the form of the question
- (16) as argumentative
- (17) THE COURT Objection s sustained Restate it
- (18) BY MR OPPENHEIMER
- (19) Q There came a time when you rendered a valuation for
- (20) Seldovia that was not to get the highest price for the sale of
- (21) the property for park land but rather to get the highest
- (22) damages as a plaintiff in a lawsuit is that correct?
- (23) A That s not correct
- (24) Q You never rendered?
- (25) A We have - we have done two appraisals - or sets of

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- (1) appraisals two sets of appraisals for the Seldovia Native
- (2) Association One of those was on the lands that the State
- (3) acquired for the Kachemak Bay State Park That was to assist
- (4) them in their negotiations with the State to arrive at a value
- (5) for that transaction
- (6) The second appraisal that we have done for the Seldovia
- (7) Native Association was for the purpose of assisting them in
- (8) understanding the extent to which their property was damaged
- (9) because of the oil spill Two separate appraisals two
- (10) separate purposes
- (11) Q We agree there Isn t it the case that every appraiser is
- (12) under the standard appraisal techniques when doing an
- (13) appraisal
- (14) to disclose and where appropriate discuss contamination on
- (15) property?
- (16) A Yes
- (17) Q And didn t you know when you rendered your appraisals in
- (18) September of 89 and November of 89 for Seldovia as a seller
- (19) to the State that their property was heavily contaminated
- (20) and/or stigmatized by the oil spill?
- (21) A It was not heavily contaminated At that point in time
- (22) there was very considerable uncertainty as to the nature of the
- (23) oiling There was substantial research that we had to
- (24) undertake after we started valuing Seldovia Native
- (25) Association s property to assist them in understanding the
- (26) impact of the oiling Substantial research that we had to do

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- (1) to arrive at a conclusion as to whether the property was oiled
- (2) or not and if the oiling had been extensive enough to cause an
- (3) effect on value
- (4) Q So you re saying that in the September and November 89
- (5) appraisals you were sufficiently uncertain whether there was
- (6) any effect from the oil that you didn t mention a word of it to
- (7) the people at the State with whom you were negotiating?
- (8) A The oiling on the Kachemak Bay state property if there was
- (9) any was not mentioned in these appraisals that s correct
- (10) that was done for the State
- (11) Q Now prior to these appraisals - prior to these appraisals
- (12) you were once again soliciting to work as an expert on a
- (13) damage case on those properties in Seldovia isn t that
- (14) correct?
- (15) A In the Seldovia Instance we did not solicit as you define
- (16) it work Seldovia Native Association came to us and asked us
- (17) to provide them with appraisal services The services were
- (18) unsolicited
- (19) MR OPPENHEIMER Counsel I m going to put on the
- (20) Elmo defendants 13027
- (21) MR PETUMENOS Let me stay with you counsel
- (22) MR PETUMENOS I m sorry Judge I don t understand
- (23) the foundation for this exhibit
- (24) MR OPPENHEIMER This is cross examination Your
- (25) Honor this is a letter written by Mr Mundy

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- (1) THE COURT May I see it?  
 (2) MR OPPENHEIMER Yes Your Honor  
 (3) (Discussion off record at the bench)  
 (4) BY MR OPPENHEIMER  
 (5) Q Dr Mundy do you recognize this as - this is defendants  
 (6) exhibit 13027 - as a letter that you wrote to Mr Fred Elvsass  
 (7) of the Seldovia Native Association in June of 1989?  
 (8) A I can't make out the date but if it's June of 1989 I will  
 (9) accept that  
 (10) Q Let me give you -  
 (11) A Looks like it's to Fred Elvsass  
 (12) Q Let me give you a clean copy so there's no doubt I'm  
 (13) handing the witness exhibit 13027  
 (14) A Thank you Yes this is a letter dated June 16th 1989 to  
 (15) Fred Elvsass It's a three page letter signed Mundy and  
 (16) Associates and I signed it Bill  
 (17) Q Who wrote it?  
 (18) A I wrote this letter  
 (19) Q And you're telling Mr Elvsass who's property in September  
 (20) and November of '89 you say nothing about having any stigma  
 (21) that he should consider - in fact there's a reasonable  
 (22) probability that there are real property value effects of an  
 (23) adverse nature caused by the oil spill?  
 (24) A That's correct  
 (25) Q So in June long before these two appraisals with - where

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- (1) you don't say a word about stigma - you're communicating with  
 (2) the property owners on that property on the subject matter of  
 (3) the potential damage to them from the oil spill?  
 (4) A That is correct  
 (5) Q But there's not a word about that in the two appraisals  
 (6) that form part of the negotiations between Seldovia and the  
 (7) State of Alaska for 24 000 acres to be bought for park land?  
 (8) A That's correct  
 (9) Q Let's get back to the fact that there came a time when you  
 (10) rendered an appraisal for Seldovia not in their capacity as  
 (11) someone selling land to the State but in their capacity as a  
 (12) plaintiff against Exxon correct?  
 (13) A Are you asking me if we provided appraisal services to  
 (14) them?  
 (15) Q Yes I am  
 (16) A In that regard?  
 (17) Q Yes  
 (18) A Yes  
 (19) Q And you found damage there didn't you?  
 (20) A Yes  
 (21) Q You found stigma damage?  
 (22) A That's correct  
 (23) Q Do you remember the date of that?  
 (24) A I do not  
 (25) MR OPPENHEIMER Counsel I'm going to show the

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- (1) witness the front page of defendants exhibit 15495  
 (2) BY MR OPPENHEIMER  
 (3) Q Dr Mundy does this refresh your recollection of when you  
 (4) did an appraisal for Seldovia in their capacity as a plaintiff?  
 (5) A This is a cover sheet from a limited appraisal report on  
 (6) SNA Cook Inlet lands It's dated April 12th 1991 and there  
 (7) are just a few pages of the document that are here  
 (8) Q You recognize them as pages from your appraisal?  
 (9) A Yes  
 (10) Q What's the as of date?  
 (11) A April 12th 1991  
 (12) Q And now there's stigma on the property?  
 (13) A This as it - as I stated it's a limited appraisal  
 (14) report and it's a preliminary estimate of what the damage may  
 (15) be to the Seldovia Native Association lands based on a very  
 (16) limited amount of anecdotal information that we had received  
 (17) Q You're saying you're still uncertain whether there's stigma  
 (18) on that land with an appraisal date of April '91?  
 (19) A I think that in April of '91 I was probably fairly certain  
 (20) that the stigma was that there was stigma and that the stigma  
 (21) was going to have an impairing effect on the marketability of  
 (22) property in the Kenai Peninsula area However I was at this  
 (23) point in time still uncertain as to how far into Cook Inlet  
 (24) that stigma might go  
 (25) There had not been any formalized research that had been

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- (1) done - for example SCAT teams doing segment analysis  
 doing  
 (2) beach walks and this type of thing - of the properties that  
 (3) are involved with the Seldovia Native Association And there  
 (4) was anecdotal information that we had from a number of people  
 (5) who indicated that there had been some oiling  
 (6) I had spent time with Fred Elvsass walking the beaches  
 (7) attempting to find evidence of oil and was not able to  
 (8) Consequently this limited appraisal report is based on the  
 (9) assumption that there was limited oiling and that there was a  
 (10) stigma  
 (11) Now then In dealing with the Seldovia Native Association  
 (12) valuation analysis that we did to help them in determining the  
 (13) damages - if you'll bear with me - we did exhaustive research  
 (14) subsequent to this date to carefully document the nature of the  
 (15) oiling that had taken place in Cook Inlet And after that  
 (16) research that is when I concluded that a buyer doing diligent  
 (17) research to make sure that he was looking after his interests  
 (18) in buying property would have discovered that there was oil  
 (19) that there was uncertainty amount - in terms of the amount of  
 (20) oil where it was and that it would be justifiable or one  
 (21) would be justified in using the stigma period of one year after  
 (22) the oil spill  
 (23) Q Well you mean you don't reach the determination that  
 (24) there's a one year stigma until two years after the spill?  
 (25) A It was even later than two years after the spill before I

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- (1) was convinced that there was – had been enough evidence to  
 (2) arouse an adequate amount of uncertainty on the part of a  
 buyer  
 (3) that would influence his decision making process causing him  
 (4) to either decide not to lease or decide not to buy the  
 (5) property but to go someplace else and make that acquisition  
 (6) somewhere else  
 (7) Q Well tell me Dr Mundy between March of 89 and April  
 (8) 12 91 when there s still some doubt in your mind about  
 (9) whether these properties are stigmatized would you be certain  
 (10) and happy and willing to buy and use them?  
 (11) A Now we re talking about the Seldovia Native Association  
 (12) property is that –  
 (13) Q Sure yes  
 (14) A I think that during the period from March of 1989 until  
 (15) around March of 1990 – when there was very significant  
 (16) clean up activity taking place tremendous amount of press  
 (17) coverage – that a buyer would have been very cautious about  
 (18) buying real estate in this area And that they would have done  
 (19) one of two things They may have decided to go someplace  
 else  
 (20) or to defer making a decision or secondly they may have  
 gone  
 (21) ahead and made the acquisition but at a reduced price to  
 (22) account for the risk that they would be assuming  
 (23) Q So you think there was some stigma in September and  
 (24) November 89?  
 (25) A I think that that – the area in the period after 1989 was

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- (1) stigmatized  
 (2) Q But not a word about it in the appraisals in the State  
 (3) negotiations?  
 (4) A That is correct And as I stated the – it was not until  
 (5) quite late – and this is probably 1992 1993 – where we had  
 (6) done the research to adequately serve as a basis for concluding  
 (7) that a one year stigma would be justified  
 (8) Q Would you turn to the third page of what I ve handed you?  
 (9) And it will show page 13 at the top  
 (10) Now this is part of a table is it not from your  
 (11) appraisal showing damage estimates for Seldovia s lands is  
 (12) that correct?  
 (13) A That is correct  
 (14) Q Would you look down until you – well you ll see two  
 (15) entries for KBSP?  
 (16) A Yes  
 (17) Q That s the Kachemak Bay State Park land correct?  
 (18) A That s right  
 (19) Q Now in each case interestingly in the damage appraisal  
 (20) there s a zero next to that isn t there?  
 (21) A That is correct  
 (22) Q Still no number for the stigma on Kachemak Bay State Park  
 (23) land the land that s being discussed for sale to Alaska  
 (24) correct?  
 (25) A That is correct

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- (1) Q Right And the land had not sold as of this report yet  
 (2) had it?  
 (3) A No  
 (4) Q Still negotiating with the State over whether to buy that  
 (5) land and what price to pay for it right?  
 (6) A That s correct  
 (7) Q Dr Mundy the moment those sales closed you put a  
 number  
 (8) where that zero is isn t that true? You issued a supplemental  
 (9) appraisal and suddenly there was a damage number there?  
 (10) A Well I don t understand the nature of the question The  
 (11) date – the time that the sales closed that is when the State  
 (12) acquired the property from Seldovia?  
 (13) Q No you didn t associate a damage number from the oil spill  
 (14) with the lands that were being sold to Alaska until the deal  
 (15) closed until after the deal closed with Alaska isn t that  
 (16) true?  
 (17) A The Kachemak Bay State Park transaction closed in  
 September  
 (18) of 1993 and as I just discussed it was in 1992 or 1993 that  
 (19) we had finally done an adequate amount of work for Seldovia  
 (20) Native Association so we felt confident there would have been  
 (21) a one year stigma on that property  
 (22) Q The sale with the State of Alaska of the Kachemak Bay State  
 (23) Park lands closed in September of 1993 correct?  
 (24) A That s correct  
 (25) Q And in October of 1993 barely a month later lo and

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- (1) behold in your damage report in this case – which I m about  
 (2) to show you in case you ve forgotten – there s a damage figure  
 (3) for those lands isn t that correct  
 (4) MR PETUMENOS I object to this –  
 (5) A For the Kachemak Bay State Park –  
 (6) THE COURT Hold on Hold on  
 (7) MR PETUMENOS Just for clarification I ll object to  
 (8) this case The Seldovia Association indication is not this  
 (9) case I don t want the jury to be confused  
 (10) THE COURT I think the jury understands  
 (11) MR OPPENHEIMER I m not referring to those lands  
 (12) I m referring to the damage for the lands in the area  
 (13) BY MR OPPENHEIMER  
 (14) Q Would you identify – if you would just read from the  
 (15) bottom of that page of your report in this case  
 (16) A The number is NCX00191676  
 (17) Q And that shows a damage figure for lands in the same area  
 (18) of the lands that were sold to the State as part of the  
 (19) Kachemak Bay State Park is that correct?  
 (20) A This is a spread sheet for the Kachemak Bay State Park  
 (21) lands  
 (22) Q And the first time a damage figure is put to that is in  
 (23) October 1993 isn t that correct?  
 (24) A No  
 (25) Q When was the first time the damage figure was put next to

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- (1) it?
- (2) A Well I don't recall when the first time a damage number
- (3) was put to that land. As I indicated the research this
- (4) report the report that you just provided to me was a part of
- (5) the study that had been going on for quite some period of
- (6) time. And the limited appraisal report which you have
- (7) provided to me its exhibit 15495 is dated April 12th 1991
- (8) Q And it has no damage figure in it?
- (9) A At that point in time there was no damage number that we
- (10) associated with the Kachemak Bay State Park and there are a
- (11) number of other lands too where we had no damage number
- (12) associated with them
- (13) Q And the first time -
- (14) A And as I indicated we were - we did a substantial amount
- (15) of additional research in this area to attempt to determine -
- (16) or to determine the degree to which the market may have been
- (17) affected because of the oiling. This was sort of on the edge
- (18) in terms of where in my opinion market behavior would
- (19) change. And there was a substantial amount of research that I
- (20) wanted to do to make sure that I could justify a stigma or
- (21) effect on the value of property during that - during some
- (22) period of time. And this would have been from March of 1989
- (23) through March of 1990 the one year period
- (24) Q So the first time that you published to the world a damage
- (25) figure on lands that are in the area of the lands that were

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- (1) sold to the State for the Kachemak Bay State Park was after the
- (2) sale to Alaska closed?
- (3) A That happens to be when that report was dated. The
- (4) research that we had done for that report took several years to
- (5) do and that research was ongoing. To suggest that in October
- (6) of 1992 - or whatever that report is - we're all of the
- (7) sudden (snaps fingers) like that assigned a stigma to that
- (8) property and came up with a value is you know absurd
- (9) MR OPPENHEIMER No further questions Your Honor
- (10) THE COURT Counsel?
- (11) MR PETUMENOS Your Honor we have been in session
- (12) about an hour my redirect will go smoother and more quickly if
- (13) I can review my notes
- (14) THE COURT Sure that's fine I'll give you a break
- (15) THE CLERK Please rise This court stands in
- (16) recess
- (17) (Jury out at 12 22 p m)
- (18) (Recess from 12 22 p m to 12 37 p m)
- (19) (Jury in at 12 37 p m)
- (20) THE CLERK This court now resumes its session
- (21) Please be seated
- (22) REDIRECT EXAMINATION OF WILMER H MUNDY
- (23) BY MR PETUMENOS
- (24) Q First of all Dr Mundy just so the jury has some idea
- (25) what all the documents and records that have been pulled up

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- (1) here in the course of your cross examination how many days
- (2) were you in deposition by Exxon total do you have any idea?
- (3) A Fourteen
- (4) Q Fourteen days of deposition. And how many pages of
- (5) documents were created in the course of these appraisals how
- (6) many back up documents how much paper are we talking
- (7) about
- (8) here?
- (9) A Well there was thousands and thousands of pages I mean
- (10) if you're talking about my deposition transcript that's
- (11) probably better than a thousand pages and then all of the
- (12) exhibits that went along with it there must be - I don't
- (13) know 20 to 30 legal size or long boxes of material which we
- (14) had in our office they dealt with
- (15) Q You've been asked lots of questions about this?
- (16) A Yes
- (17) Q We're almost done okay?
- (18) This issue of there not being any money changing on the
- (19) charts you know we had the Chenega Island numbers on the
- (20) chart
- (21) that we all went through together during the direct
- (22) examination and they brought up Growler Island as another
- (23) one. Were there work sheets to come up with damage
- (24) numbers do
- (25) you remember those?
- (26) A Yes
- (27) Q A point was made on cross examination that there's no
- (28) actual money that was paid back and forth that appears on that

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- (1) chart and I want to ask you a hypothetical question if I
- (2) could
- (3) Let's assume that I own a house and I've lived in it for a
- (4) long time and I want to stay living in it for a long time and
- (5) somebody spills a contaminant all over my property and I'm
- (6) pretty mad and I want to find out how much I'm owed for that
- (7) event. How would you go about determining first of all how
- (8) much my property was worth at the time that somebody spilled
- (9) gunk all over it?
- (10) A Well to determine how much it was worth we would search
- (11) for sales transactions that have taken place of properties
- (12) similar to yours. We would compare those sales to your
- (13) property and arrive at a value
- (14) Q And if it were to be the case that the property wasn't
- (15) going to have gunk on it forever how would you go about
- (16) determining how much of my value of my property was lost if it
- (17) was going to come back to normal? What would you do?
- (18) A Well one would - since we're talking about a temporary
- (19) damage problem one would need to establish an income
- (20) stream
- (21) for the property deal with it as if you had - were renting
- (22) the property or you had the property rented to somebody else
- (23) And so we would figure out what the rental value of the
- (24) property is on a hypothetical basis and determine to what
- (25) extent that income stream had been impaired
- (26) Q But I haven't sold the property so no money has changed

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- (1) hands I m still living in it right?  
 (2) A That s correct  
 (3) Q And I haven t rented the property so no rent has been  
 (4) collected by me because my children are living in it and we re  
 (5) continuing on as we always have is that right?  
 (6) A That s correct  
 (7) Q And then when I want to get a cash settlement now for all  
 (8) the period of time that the property may have gunk on it into  
 (9) the future you have to do some calculations to be fair about  
 (10) how much money I receive now given the fact that the damage  
 (11) may not have accrued yet?  
 (12) A That is correct We have to forecast what may happen into  
 (13) the future  
 (14) Q And that s what all this business was about discounting to  
 (15) present value and the four columns that you had and so forth  
 (16) right?  
 (17) A That is correct  
 (18) Q And when I go through that exercise living in my house and  
 (19) never moving away none of those numbers will be actually  
 (20) cash  
 (21) exchanging back and forth Isn t that so?  
 (22) A That s correct  
 (23) Q Now let s go to this Growler Island business this - this  
 (24) lease that went up in value I was carefully taking notes at  
 (25) that part and looking at the transcript It seems that in  
 (26) 1988 there were 6 400 people who came to Growler Island and

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- (1) Chugach got two dollars a head is that what you understand?  
 (2) A Yes  
 (3) Q But in 1999 It went up to 6 562 people and so -  
 (4) THE COURT Wrong year counsel  
 (5) BY MR PETUMENOS  
 (6) Q 1989 6 562 people so it went up from 6 400 to 6 562  
 (7) right?  
 (8) A That s correct  
 (9) Q And they got two dollars more per person for each of those  
 (10) additional people right?  
 (11) A That s correct  
 (12) Q So how much money in this 11 million gallon oil spill did  
 (13) the Chugach Alaska Corporation receive more in 1989 than in  
 (14) 1988?  
 (15) A Well give me the two numbers again and I ll -  
 (16) Q 6 562 6 400 was the previous year and it s two dollars a  
 (17) head?  
 (18) A That would be about \$320  
 (19) Q So what we spent 20 minutes on in court here was the fact  
 (20) that on a small lease here on Growler Island the Chugach  
 (21) Alaska Corporation made an additional \$240?  
 (22) A \$320  
 (23) Q I m sorry excuse me \$320 All right  
 (24) How much of Growler Island is covered by this lease do you  
 (25) know?

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- (1) A A very small part  
 (2) Q And how much of the oil spill area are covered by leases  
 (3) like this?  
 (4) A Very very very small part  
 (5) Q We talked about - I think people were talking about a  
 (6) place called Jackpot Bay But I think the real place is Paddy  
 (7) Bay and this was the thing that Mr Fortier so skillfully  
 (8) negotiated for Chenega do you remember that testimony?  
 (9) A Yes  
 (10) Q Are you aware about how much money is involved in the  
 (11) license at that location? Is it thousands is it hundreds?  
 (12) A It s like \$1 200 per year something like that  
 (13) Q And Mr Fortier apparently negotiated that lease up in some  
 (14) amount Do you know whether that was in -  
 (15) A Several hundred  
 (16) Q So Chenega made several hundred dollars more in that  
 (17) location?  
 (18) A Yes  
 (19) Q And that particular lease area is a large part or a small  
 (20) part of that property?  
 (21) A Again a very very small part  
 (22) Q So we re now up to \$500 for this 11 million dollar -  
 (23) 11 million gallon oil spill right?  
 (24) A Yes  
 (25) Q Now there were some questions about this letter that was

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- (1) written to Mr Park and the fact that you had made some - you  
 (2) thought it highly probable that there were some real estate  
 (3) impacts from the Exxon Valdez within ten days of the spill  
 (4) Could you tell the jury how the electronic - the TV media that  
 (5) you had looked at compared say with the video that we  
 (6) showed  
 (7) with the jury when we were talking about the severity of the  
 (8) persistence you know the one where the fellow s scooping up  
 (9) the oil - did you see when you made your conclusion a film of  
 (10) a comparable nature?  
 (11) A Yes I did  
 (12) Q Fair amount of it?  
 (13) A A large amount of it  
 (14) Q At that time that you were seeing that film tell the jury  
 (15) a little bit about what your experience had been in looking at  
 (16) other contaminated properties and knowing how those  
 (17) evaluations  
 (18) came out in other situations at the time that you saw that film  
 (19) and reached that conclusion  
 (20) A There were a number of contamination issues contaminated  
 (21) property matters that we were working with during that period  
 (22) of time or had recently completed One of them was a  
 (23) situation that is very close to home right here It s in  
 (24) Peters Creek and there was a service station tank an  
 (25) underground tank that had ruptured in the Peters Creek area  
 (26) and  
 (27) this had gone undetected for quite some period of time A  
 (28) plume had resulted

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(1) Water in the area was contaminated actually came up in  
 (2) some of the people s wells in Peters Creek and there was a lot  
 (3) of uncertainty as to where the contamination was and where it  
 (4) was going to be going where it might end up It caused a  
 (5) complete disruption in the market Even after the municipality  
 (6) extended water into the Peters Creek area there was still a  
 (7) substantial stigma and uncertainty regarding the value of  
 homes  
 (8) and what the effect was going to be The marketability of the  
 (9) homes dropped way off It was very difficult to sell homes  
 (10) Values dropped That was one job that we were working on  
 right  
 (11) during this period of time  
 (12) We had just also completed a large project down in Oregon  
 (13) that dealt with the relocation of a site where there was low  
 (14) level radioactive material and there was a new storage site  
 (15) that was developed as a part of this It was not properly  
 (16) built There was contaminated water that resulted It went  
 (17) into a farming area contamination was found in the milk of  
 (18) dairy cattle The entire area had to - all of the cows had to  
 (19) be disposed of all of the milking had to stop and the stigma  
 (20) was so bad that farmers in this entire area couldn t even sell  
 (21) their hay  
 (22) And so those are a couple of examples of research that we  
 (23) had been working on or were working on that dealt with  
 (24) hydrocarbons the way people perceive these problems and  
 how  
 (25) they react to them

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(1) Q Dr Mundy was it common sense when you saw the film of  
 (2) the Exxon Valdez and the oil washing up on the shores in the  
 (3) concentrations that you observed that there was going to be an  
 (4) impact to the real estate market when you saw that - that  
 (5) film in your view?  
 (6) A Yes  
 (7) Q Now we talked about a place called Onion Bay You started  
 (8) to explain to the jury - and I wanted to see if you could  
 (9) complete your answer - that this was an auction situation?  
 (10) A That s correct  
 (11) Q Explain to the jury what was going on there with respect to  
 (12) this notion that all of this property sold in a big hurry  
 (13) A Well this was an area on Kodiak Island where there was a  
 (14) small amount of land that the borough owned and they had  
 some  
 (15) problems with squatters on the land - people who were using  
 (16) the land that didn t own it - and so they decided that the  
 (17) best thing to do was to go ahead and dispose of it And being  
 (18) a public body they thought that the fairest way to handle the  
 (19) disposition would be at an auction sealed bids  
 (20) They were going to - or the sale had been scheduled for  
 (21) May of 1989 but because of the spill and all of the  
 (22) uncertainty the borough decided to postpone the spill (sic) -  
 (23) they postponed it to November of 1990 and in November of 90  
 (24) they had the auction  
 (25) The people who were the squatters on the property were

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(1) informed of the auction There were five lots that were  
 (2) available There were bids that were submitted on four of the  
 (3) five lots On three of the five lots the only bids that  
 (4) were - I m sorry two of the five lots the only bids that  
 (5) were received were from people who were - actually had been  
 (6) using the land some of the squatters and then one of - a  
 (7) third squatter also had submitted a bid on one of the  
 (8) properties and another person outbid him and so he went to  
 (9) the counter and purchased the last lot  
 (10) So what happened was that there were five lots that were  
 (11) sold all sold at the same time Three of them were sold to  
 (12) people who were already on the land and had been using it for  
 (13) some time The borough made the sale to eliminate this  
 (14) problem The other two were sold to people who wanted to  
 build  
 (15) cabins on the property and had been attempting to acquire the  
 (16) property for some time as a cabin site  
 (17) Q Very good evidence in your opinion Dr Mundy that the  
 (18) oil spill didn t have any effect on property?  
 (19) A It s certainly evidence that the Kodiak Borough didn t want  
 (20) to try to sell the property during this period of time when  
 (21) there was a lot of uncertainty And it s I think a sale  
 (22) situation where there are some very unique circumstances  
 under  
 (23) which the transaction took place  
 (24) Q And what is the - what is the result of these unique  
 (25) circumstances? Why is that important to know?

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(1) A Well it s important to know the circumstances under which  
 (2) the sale took place so you know whether it s an arm s length  
 (3) transaction or not whether it s something you can do your  
 (4) value on  
 (5) Q And this one has attributes to it that make it suspect in  
 (6) that regard?  
 (7) A That s correct  
 (8) Q Now Port Fidalgo do you know what s going on there?  
 (9) A Yes  
 (10) Q Tell the jury  
 (11) A Well there are two different properties in Port Fidalgo  
 (12) One of the properties is at Two Moon Bay This is a property  
 (13) that is owned by the Tattilek Corporation and they conveyed to  
 (14) their shareholders lots in this subdivision And part of the  
 (15) conveyance agreement was that the corporation would buy  
 back  
 (16) the lots The lots were valued at \$25 000 each and the  
 (17) corporation said that we will buy back the lots if you don t  
 (18) want them and we ll buy them back at \$12 000 each and so  
 (19) there were quite a number of lots that were conveyed to the  
 (20) shareholders and then a number of the shareholders  
 reconveyed  
 (21) the lots for cash back to Tattilek That is Two Moon Bay  
 (22) Q Is that an arm s length transaction?  
 (23) A No that would not be an arm s length transaction  
 (24) Q Why not?  
 (25) A Well for one the conveyance did not involve any

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- (1) consideration going to the shareholders and the second was  
 (2) that this was sort of a buy back favor that the Tattilek  
 (3) Corporation offered to the shareholders for some people who  
 (4) needed some cash resources  
 (5) The second transaction is further on up the Fidalgo Bay  
 (6) area and it's a subdivision where there were some 193 lots  
 (7) It's a part of an old mining claim and back in the early 1980s  
 (8) quite a few of those lots sold and in between 1985 and 1990  
 (9) there was no sale activity at all They - the people who  
 (10) owned the property just did not try to sell any of the lots  
 (11) In 1992 the people who - the person who owned the  
 (12) subdivision decided that he wanted to get rid of as much of the  
 (13) inventory as he could and so he priced the lots very  
 (14) favorably He advertised them He sold them at nothing down  
 (15) no interest and the buyer had the option of selling the lot  
 (16) back within I believe it was either 60 or 90 days if they  
 (17) didn't like it And 40 lots were sold in 1992 on that basis  
 (18) Q What's the significance of telling that - significance of  
 (19) telling us all that?  
 (20) A Well the significance is that it was - I want to make  
 (21) sure that the jury understands that the sale activity that has  
 (22) been discussed earlier took place under some very unique  
 (23) circumstances  
 (24) Q Very good evidence that the oil spill didn't have any  
 (25) effect on the property?

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- (1) A Well I think that it certainly is evidence that the market  
 (2) is unique that there wasn't any sale activity for a year after  
 (3) the spill And that even into 1992 to sell the property very  
 (4) unique terms and conditions had to be offered to get the sale  
 (5) to take place  
 (6) Q Now let's - let's as Mr Oppenheimer says switch gears  
 (7) here and talk about the role that subsistence plays in this  
 (8) calculation this analysis  
 (9) When you come up with a highest and best use of natural  
 (10) land for example what kinds of activities take place on  
 (11) natural land and is subsistence one of them?  
 (12) A Subsistence would be one of the activities yes  
 (13) Q So when you take into account what highest and best use to  
 (14) place upon the various parcels that you evaluated you do take  
 (15) into account the use to which the land is put am I correct?  
 (16) A That's correct  
 (17) Q In fact that's one of the principal considerations and  
 (18) analyses that you conduct?  
 (19) A Well it's an important consideration Sometimes land is  
 (20) used at a use - and it doesn't represent the highest and best  
 (21) use - but generally people tend to use the land at the most  
 (22) profitable use or highest and best use  
 (23) Q That is a way though in which you determine that natural  
 (24) land is the highest and best use and that subsistence has  
 (25) value It has a real value That is a component of the

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- (1) highest and best use of natural land am I right?  
 (2) A That was an aspect of it yes  
 (3) Now the fact that subsistence activities were taking place  
 (4) on those lands and the Natives could conduct subsistence  
 (5) activities on the natural lands was not a situation where we  
 (6) added value to the lands because of it  
 (7) Q Right But it went into the determination that it is in  
 (8) fact natural land?  
 (9) A That was a factor yes  
 (10) Q And with respect to subsistence activities it is correct  
 (11) that you interviewed a number of people in the area to  
 (12) determine whether or not subsistence use was interrupted and  
 (13) whether there were different ways of conducting subsistence  
 (14) because of the oil spill?  
 (15) A That is correct We did interviews with each one of the  
 (16) Native corporations with members of the Native corporations  
 (17) Q And that would - those disruptions and those concerns that  
 (18) you learned about would impact the use of the natural land  
 (19) because that's one of the value - one of the components of the  
 (20) highest and best use decision am I right?  
 (21) A That's correct  
 (22) Q Now we went through on this easel business the issue of  
 (23) land that was patented or conveyed land that was selected  
 (24) and  
 (25) land that was interim conveyed remember those questions?  
 (26) A Correct

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- (1) Q Now are you aware that the plaintiffs in this case with  
 (2) respect to any land for which they have made an irrevocable  
 (3) selection selected that land have the claim for any damages  
 (4) resulting from the Exxon Valdez oil spill  
 (5) MR OPPENHEIMER Your Honor objection calls for a  
 (6) legal conclusion is counterfactual  
 (7) MR PETUMENOS This is exactly what I thought I was  
 (8) allowed to address on redirect  
 (9) THE COURT Approach the bench counsel  
 (10) (Sidebar conference out of the hearing of the jury)  
 (11) THE COURT Seems to be a question that I could - I  
 (12) also said you could question him about the area and  
 (13) appropriate  
 (14) areas but that doesn't mean that Mr Oppenheimer can't  
 (15) object  
 (16) MR PETUMENOS Why don't we do this as judicial  
 (17) notice of law Could we do it that way?  
 (18) THE COURT It depends I mean judicial notice of  
 (19) law contrary to you I mean to me I'm not sure what the  
 (20) final answer's going to be  
 (21) MR PETUMENOS This is going to get too complex to  
 (22) handle I understand  
 (23) THE COURT Yes fine  
 (24) MR PETUMENOS We'll handle it with a jury  
 (25) instruction That's fine  
 (26) (Sidebar concluded)  
 (27) BY MR PETUMENOS

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- (1) Q In terms of how you evaluated the lands that were Interim  
 (2) conveyed you evaluated those lands with a bundle of rights  
 (3) that you talked about as being with the Village Corporations  
 (4) is that right?  
 (5) A That s correct  
 (6) THE COURT Counsel you used the term interim when  
 (7) you were using selected but not conveyed before  
 (8) MR PETUMENOS All of the lands - good point  
 (9) Judge  
 (10) BY MR PETUMENOS  
 (11) Q All of the lands that had been - that had had an  
 (12) irrevocable selection which the government placed on them  
 you  
 (13) evaluated those with a full bundle of rights with the Village  
 (14) Corporation?  
 (15) A As if the Village Corporation owned them fee simple  
 (16) estate that s correct  
 (17) Q Now I want to get to this business about your associate  
 (18) Mr Day  
 (19) First of all in the area that we re talking about the  
 (20) area of Bligh Island tell the jury what period of time you  
 (21) concluded that the property was impaired?  
 (22) A There was a one year stigma that we applied to Bligh  
 (23) Island  
 (24) Q And in Exhibit 16174 when the conversation took place with  
 (25) Mr Day and Ms Adams I think what we have here is a date of

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- (1) February 4 of 1990 - if I m not mistaken according to the  
 (2) deposition - how far into this one year stigma period are we  
 (3) in when this conversation takes place?  
 (4) A Eleven months  
 (5) Q Eleven months And counsel talked about - I think I m  
 (6) misspeaking I said Bligh I mean Busby Island  
 (7) A Busby Island Bligh it was all part of the same area yes  
 (8) Q And counsel kept talking about an appraisal that was done  
 (9) by Mr Day during his cross examination if I m not mistaken  
 (10) Do you know what the difference between an appraisal and an  
 (11) opinion letter of value is? Have I got that right?  
 (12) A Letter of opinion of value  
 (13) Q Letter of opinion of value?  
 (14) A Yes  
 (15) Q What s the difference?  
 (16) A Well the difference is the content that is included in the  
 (17) report A letter of opinion is a very brief report that does  
 (18) not include back up material and frequently even the basis for  
 (19) which a value opinion is arrived at  
 (20) MR PETUMENOS Counsel -  
 (21) A Oftentimes it s like a two or three page summary  
 (22) MR PETUMENOS Counsel DX12151 please  
 (23) BY MR PETUMENOS  
 (24) Q Dr Mundy showing you what has been marked as - for  
 (25) identification as DX - whatever I said - would you take a

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- (1) look at it please and tell me if this does not appear to be a  
 (2) December 28 1989 letter done by Mr Day that we ve been  
 (3) talking about?  
 (4) A Yes it is  
 (5) Q Does he not say in this - no say in this letter this  
 (6) letter appraisal does not meet the minimum requirements of the  
 (7) American Institute of Real Estate Appraisers and thus is  
 (8) offered to you as an indication of value regarding the fair  
 (9) market rental of the subject property At your specific  
 (10) request I would be willing to prepare a full narrative  
 (11) appraisal if required  
 (12) And doesn t he close with the paragraph it should be  
 (13) reiterated that due to the limited nature of this letter that  
 (14) it should be dealt with as an indication of value for the fair  
 (15) market rent of the subject property and should not be  
 (16) interpreted as an appraisal due to the fact that a letter  
 (17) appraisal does not meet the minimum requirements of the  
 (18) American Institute of Real Estate Appraisers The indication  
 (19) of value however as of January 1 1990 for fair market value  
 (20) of the subject property is \$1200 per year  
 (21) Is that the caveat that he put on at the end of the  
 (22) letter?  
 (23) A Yes it is  
 (24) Q So this was by no means an appraisal conducted by  
 (25) Mr Day is that right?

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- (1) A That s correct  
 (2) Q And finally I want to discuss with you this Kachemak Bay  
 (3) appraisal business that we ended on in the cross examination  
 (4) First Mr Oppenheimer read to you from certain parts of  
 (5) the appraisal that you did now for the sale of Kachemak Bay  
 (6) the one we wrote down September 1989 and then he wrote  
 down  
 (7) November 1989 But in the appraisal it s important is it not  
 (8) to disclose the limiting conditions upon which you are writing  
 (9) the appraisal right?  
 (10) A That is correct  
 (11) Q And it was well known - indeed we have charts to show it  
 (12) - it was well known that the Exxon Valdez oil spill had  
 (13) impacted in and around that area by everybody including the  
 (14) State?  
 (15) A Yes  
 (16) Q Showing you what s been marked as DX12836 your  
 appraisal  
 (17) as of September 1989 read to the jury what you wrote to inform  
 (18) the State of how your appraisal was limited under the statement  
 (19) assumptions and limiting conditions right here  
 (20) A This is in the fourth paragraph and each one of the  
 (21) paragraphs begins with that so it might seem a bit different  
 (22) or unique but the paragraph reads That no research has been  
 (23) done to determine the absence and presence of hazardous and  
 (24) toxic materials on the subject property Research shows that  
 (25) contamination can have a significant effect on property value

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- (1) Because of engineering analysis and value impact analysis  
 (2) regarding contamination is outside the scope of this  
 (3) assignment we render no value opinion on this issue  
 (4) Q You disclosed on the what third page of the appraisal  
 (5) that you had not taken into account any potential impacts of  
 (6) contamination on the property?  
 (7) A That is correct That no research had been done in that  
 (8) regard  
 (9) Q And in the November 1989 appraisal again for the purpose  
 (10) of the sale under assumptions and limiting conditions you did  
 (11) it again right?  
 (12) A Yes  
 (13) Q And you disclosed to the State notwithstanding the fact  
 (14) that it was well known that the spill had hit this general  
 (15) area that you had not attempted to address that issue?  
 (16) A That is correct The same paragraph appears in the second  
 (17) appraisal that is dated November 1989  
 (18) Q Now Dr Mundy you operate a business?  
 (19) A Yes  
 (20) Q You have to pay people for what they do?  
 (21) A That s correct  
 (22) Q You have a staff and they have family?  
 (23) A Yes  
 (24) Q In order to conduct the kind of studies that you do to  
 (25) determine impact on such things like the Exxon Valdez oil

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- (1) spill those studies have to be funded don t they?  
 (2) A That s correct  
 (3) Q Somebody has to pay the bills?  
 (4) A Yes  
 (5) Q Had the Seldovia Native Association funded your project for  
 (6) the oil spill related inquiries that you were later to conduct  
 (7) as of the time that these appraisals were done in sufficient  
 (8) amounts to allow you to do the work that you felt had to be  
 (9) done?  
 (10) A They had not funded the work This became a very serious  
 (11) matter with Seldovia Native Association and it was not until  
 (12) considerably later on that I was finally able to convince them  
 (13) that either we did the research or that I was going to withdraw  
 (14) and not do any valuation work for them  
 (15) Q And in the years that went by you finally obtained the  
 (16) appraisal funding to do this project?  
 (17) A That s correct  
 (18) Q And the area that you were talking about was an area about  
 (19) which you had some concern about how to evaluate it how  
 (20) much  
 (21) to evaluate the area because of where it was?  
 (22) A Yes  
 (23) Q Explain to the jury - you were talking before about how in  
 (24) the lower - in the Kenai Fjords area the lower Kenai Prince  
 (25) William Sound the plaintiffs in this case there was a  
 (26) substantial amount of information about the extent of oiling in

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- (1) that area and compare that to the kind of information that was  
 (2) available in the Seldovia Native Association area?  
 (3) A Well the difference was like night and day I mean there  
 (4) were for the Prince William Sound Kenai Fjords and lower  
 Kenai  
 (5) Peninsula there had been teams that had walked the beaches  
 (6) This was done on a year by year basis carefully documenting  
 (7) the nature of the oil  
 (8) The clients that we were working with had hired ICF to go  
 (9) in and do special studies of the extent of oiling and the  
 (10) nature of the oiling Very substantial amount of data was  
 (11) available upon which to derive some conclusions regarding the  
 (12) nature and the amount of oiling  
 (13) This had not been done at all in the Cook Inlet area So  
 (14) for the area where Seldovia Native Association owned its land  
 (15) - which was both on the east side and the west side of Cook  
 (16) Inlet - there was no documentation and there was very limited  
 (17) anecdotal material and it was not until after the material was  
 (18) released from the State case that this material became  
 (19) available and a library was set up in Anchorage where we would  
 (20) go to the library and do the research there to find this  
 (21) information  
 (22) Q I m looking for a document here I think in which you  
 (23) basically say that  
 (24) Counsel DX15495 page 14  
 (25) This is the excerpts from the Seldovia Native Association

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- (1) appraisal which you did on the oil spill in 1991 which was  
 (2) addressed in your cross examination and I wonder if you would  
 (3) read for the jury the section entitled Determination of  
 (4) Persistence and Stigma?  
 (5) A Okay This is what I had before and was questioned about  
 (6) but what I had before was simply three pages This is a more  
 (7) complete set of information  
 (8) Under - on page 14 - Determination of Persistence and  
 (9) Stigma It reads information on the exact location and degree  
 (10) of oiling within Kachemak Bay and West Cook Inlet has not  
 been  
 (11) as well or completely documented as in Prince William Sound  
 (12) and for the most part has yet to be disseminated to the  
 (13) public  
 (14) Q All right And that you re referring to is the fact that  
 (15) unlike some of the treatment related documents that were out  
 (16) and about in public records a lot of these documents had to  
 (17) come about as a result of actually this litigation right?  
 (18) A That s correct  
 (19) Q Dr Mundy please tell the jury whether you were trying to  
 (20) trick the State of Alaska into paying too much for the Kachemak  
 (21) Bay property by withholding information from them in your  
 (22) appraisals  
 (23) A There was absolutely no way that I was trying to trick the  
 (24) State This process is one where - the process I m talking  
 (25) about where the Seldovia Native Association sold its lands to

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- (1) the State has been one that has been very carefully  
 (2) scrutinized The work that we have done has been reviewed by  
 (3) numerous appraisers both who work for the State as well as  
 who  
 (4) have been retained by the State It has also been reviewed by  
 (5) numerous administrative people on the part of the State To  
 (6) try to trick the State would have been foolhardy and absolutely  
 (7) counterproductive  
 (8) Q I have one final subject area to question you about and  
 (9) that is this business about the Native Village Corporations  
 (10) selecting some land that was oiled instead of - and letting go  
 (11) some land that was unoiled  
 (12) We have heard testimony in this case that the degree of  
 (13) oiling and the persistence - and you may be aware of this from  
 (14) your work with with Mr Bush - is related to often how  
 (15) quiescent or quiet the property is with respect to wave energy  
 (16) and the water and how it affects the shore and where it -  
 (17) where it comes up on the shore  
 (18) Do some of these same attributes of waterfront property  
 (19) relate also to its desirability in terms of its real estate  
 (20) potential or its amenity?  
 (21) A They certainly do  
 (22) Q And so when selecting whether property whether a village  
 (23) might want this land and not that land would they be also  
 (24) interested in what the water is like when it reaches the shore  
 (25) the surf pounding versus a quiet place to land and things of

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- (1) that nature?  
 (2) A Yes  
 (3) Q And based upon your communications with Mr Bush do you  
 (4) understand that the persistence of oil is likely to be greater  
 (5) in an area that is quiescent or quiet than in one in which the  
 (6) surf pounds?  
 (7) A That s correct  
 (8) MR PETUMENOS I have no further questions  
 (9) MR OPPENHEIMER Fewer than five minutes Your Honor  
 (10) THE COURT All right  
 (11) MR OPPENHEIMER I realize that s a weighty promise  
 (12) I ve just made so I ll hurry  
 (13) RE CROSS EXAMINATION OF WILMER H MUNDY  
 (14) BY MR OPPENHEIMER  
 (15) Q Dennis Latterley is a review appraiser for the State of  
 (16) Alaska for the Kachemak Bay sale correct?  
 (17) A Yes Are you asking is he a review appraiser  
 (18) Q He is is he not?  
 (19) A Yes he is  
 (20) Q Involved with the Kachemak Bay sale?  
 (21) A He was involved with that transaction yes  
 (22) Q Right And he expressed concern over your natural lands  
 (23) appraisal of those lands did he not?  
 (24) A Yes he did  
 (25) Q Reference has been made to some disclaimers on your work

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- (1) and to the fact that Mr Day s opinion letter was an opinion  
 (2) letter and not an appraisal In either of those two cases are  
 (3) you suggesting that major contamination should go  
 unobserved?  
 (4) A I can t remember - recall the first instance The second  
 (5) situation that you discussed was the Jack Day limited appraisal  
 (6) letter  
 (7) Q Yes that s correct Does the fact that it s a limited  
 (8) appraisal mean that he would just ignore an oil spill major  
 (9) oil spill?  
 (10) A No  
 (11) Q And the fact that you put disclaimers in into an  
 (12) appraisal does that mean if you know about significant  
 (13) contamination you re not required under USPAP to disclose it?  
 (14) You can t disclaim that away can you?  
 (15) A Well I can t recall if there is - there was back during  
 (16) that period of time anything in USPAP that dealt with the  
 (17) contamination issue Now if you could tell me what time frame  
 (18) it was that we re dealing with again so I - what was the  
 (19) date? The Kachemak Bay 1991  
 (20) Q How about 89?  
 (21) A 1989? There were some guide notes that came out from  
 (22) USPAP Guide Note 8 dealing with the contamination issue  
 And  
 (23) I - it was around 1989 It may have been before or It may  
 (24) have been after 1989 I can t recall exactly when it was that  
 (25) the Uniform Standards of Professional Appraisal Practice

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- (1) recommended strongly that appraisals contain descriptive  
 (2) information on contamination  
 (3) Now our appraisal that we did in 1989 had the - had a  
 (4) disclaimer there that indicated that we were not valuing the -  
 (5) or that the appraisal did not reflect the impact of  
 (6) contamination  
 (7) The body of the report does not discuss the Exxon Valdez  
 (8) spill and the oil that came into Kachemak Bay and the  
 (9) uncertainty that we had regarding the nature of the oil at that  
 (10) period of time and I - that is something that sitting here  
 (11) today and looking back to the past I should have done And I  
 (12) should have had a paragraph or two in the report discussing the  
 (13) nature of the oiling But the fact of the matter is is that  
 (14) it wasn t there It was discussed in the assumptions and  
 (15) limiting conditions The client was aware of the oiling as  
 (16) was the State  
 (17) Q I just wanted to end on the subject of Onion Bay Onion  
 (18) Bay is the sale of lots in Kodiak do you recall that?  
 (19) A Yes sir  
 (20) Q Land sale Number 11 right?  
 (21) A I don t know if it was land sale Number 11 or whatever I  
 (22) know it as the Onion Bay land sale  
 (23) Q Held in November of 90 You had indicated it was  
 (24) scheduled to go in May of 89 It actually was scheduled to go  
 (25) in April of 89 wasn t it?

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- (1) A The conversation that I had with Pat Carlson the Kodiak  
 (2) assessor indicates that – or indicated that it was in May of  
 (3) 1989  
 (4) Q Do you know who Bud Cassidy is?  
 (5) A No I do not  
 (6) Q Bud Cassidy – let me see if I can refresh your  
 (7) recollection – is the land manager for Kodiak?  
 (8) A I do not know Bud Cassidy  
 (9) Q Have you ever been advised that Mr Cassidy has testified  
 (10) in this case that the land sale Number 11 was delayed from  
 (11) April 89 until November 1990 because he could not get a  
 (12) helicopter for his surveyor to go out and do the boundary work  
 (13) necessary to put on the sale?  
 (14) A It s – that s news to me  
 (15) MR OPPENHEIMER No further questions  
 (16) A The information I have is from the assessor who is very  
 (17) familiar with the transaction and he indicated that it was  
 (18) delayed because of the oil spill  
 (19) BY MR OPPENHEIMER  
 (20) Q Were you aware that it was Mr Cassidy s job as the land  
 (21) manager to conduct that sale?  
 (22) A I do not know what Mr Cassidy s responsibilities are As  
 (23) I mentioned I do not know him  
 (24) MR OPPENHEIMER No further questions Your Honor  
 (25) THE COURT You can step down Watch out for the

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- (1) microphone clipped on your tie  
 (2) All right I ll let you go for the day Don t talk about  
 (3) the case with anyone don t form or express any opinion on it  
 (4) until it s submitted to you for your deliberation See you  
 (5) tomorrow at 8 30  
 (6) (Jury out at 1 23 p m )  
 (7) MR PETUMENOS Judge I think I made a mistake  
 (8) There was an exhibit I was going to move into evidence  
 (9) Perhaps we can do it by stipulation without having testified to  
 (10) it Otherwise I have to end up keeping Mr Mundy here  
 (11) overnight but I have Exhibit Number 1541 1541 is the spread  
 (12) sheets for each of the parcels that were involved In view of  
 (13) the cross examination that was conducted I now want to put  
 (14) them into evidence  
 (15) (Exhibit 1541 offered)  
 (16) MR OPPENHEIMER No objection Your Honor  
 (17) THE COURT All right they re in What s the  
 (18) number?  
 (19) MR PETUMENOS 1541  
 (20) THE COURT 1541 is admitted  
 (21) (Exhibit 1541 received)  
 (22) THE COURT You can all sit down there unless you  
 (23) like standing up  
 (24) MR PETUMENOS I wanted to move in the rest of my  
 (25) exhibits if I could and I think Mr Oppenheimer does as

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- (1) well  
 (2) MR OPPENHEIMER May I have the same courtesy of just  
 (3) being able to look at them?  
 (4) MR PETUMENOS You want to do them tomorrow?  
 (5) MR OPPENHEIMER I d like to move ours in since we  
 (6) waited three days Is that okay?  
 (7) MR PETUMENOS Which ones?  
 (8) MR OPPENHEIMER The ones we discussed the Bush  
 (9) ones  
 (10) MR PETUMENOS Absolutely I think we already did  
 (11) it  
 (12) MR OPPENHEIMER No we haven t We d like to move  
 (13) in – this is from the Bush testimony – the following  
 (14) exhibits I believe there s no objection Defendants 13227  
 (15) 13239 13240 13258 15480 15481 15482 2734 2761 Page  
 (16) 2 4  
 (17) chart 2 2 of exhibit 2769 exhibit 8942 exhibit 8943 and  
 (18) exhibit 8944  
 (19) (Exhibits 13227 13239 13240 13258 15480 15481 15482  
 (20) 2734 2761 page 2 4 chart 2 2 of 2769 8942 8943 and 8944  
 (21) offered)  
 (22) THE COURT Any objection?  
 (23) MR PETUMENOS No  
 (24) THE COURT All right they re all admitted Here s  
 (25) the list  
 (26) (Exhibit 13227 13239 13240 13258 15480 15481 15482

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- (1) 2734 2761 page 2 4 chart 2 2 of 2769 8942 8943 and 8944  
 (2) received)  
 (3) MR PETUMENOS Mr Oppenheimer you want me to wait to  
 (4) move in the Mundy exhibits until you have a chance?  
 (5) MR OPPENHEIMER May I?  
 (6) MR PETUMENOS Sure I think what we have is the  
 (7) nature of a stipulation that we don t have any foundation  
 (8) problems with the Mundy exhibits on either side so if he has  
 (9) to be called back we just wish to move for –  
 (10) MR OPPENHEIMER That was with respect to captions of  
 (11) photographs  
 (12) MR PETUMENOS Yes okay Well then let s  
 (13) hopefully resolve this this afternoon so that I can let  
 (14) Dr Mundy go  
 (15) MR DIAMOND Your Honor pursuant to the Court s  
 (16) invitation of yesterday afternoon concerning jury instructions  
 (17) or perhaps the invitation that I wrangled out of the Court  
 (18) yesterday afternoon  
 (19) THE COURT I ve read it I ve read it counsel I  
 (20) guess it s Mr Stoll You finally get to talk Mr Stoll It  
 (21) must be tough going five hours without saying anything  
 (22) MR STOLL Well this is my big moment What would  
 (23) you like me to say Your Honor?  
 (24) THE COURT I d like you to say that that instruction  
 (25) as modified by counsel is acceptable to you

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- (1) MR STOLL No it s not Your Honor  
 (2) THE COURT Why?  
 (3) MR STOLL I think the - I don t have a problem with  
 (4) the - on the second portion of it The - the addition that  
 (5) he added on is Page 2 at the bottom of Page 2  
 (6) THE COURT Uh huh  
 (7) MR STOLL I don t have a problem with that  
 (8) THE COURT Right  
 (9) MR STOLL The problem I have is with the first -  
 (10) the material contained in the first page I think again we re  
 (11) getting into all the claims in the federal court We re  
 (12) drawing attention there I think the focus should be what are  
 (13) the claims in this court and I think that the - the second -  
 (14) the material that s on the bottom of the second page continuing  
 (15) on to the third page puts in context what the - the  
 (16) subsistence used in the commercial fisheries is in this case  
 (17) I don t think that we need to get into anymore Otherwise I  
 (18) am - and I just got this at the beginning of the day and I  
 (19) haven t spent any time drafting on this thing because I just  
 (20) think that - otherwise we got to get into a big explanation of  
 (21) what s involved in the federal court action I don t want to  
 (22) get into that  
 (23) THE COURT Okay tell me This is what you re  
 (24) objecting to right? As you may have heard the claims being  
 (25) litigated there - there being the federal court - include

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- (1) claims of commercial fishermen for lost fish catch and claims  
 (2) of Alaskan Natives for lost subsistence harvests of traditional  
 (3) foods These claims go on to belong to individuals not the  
 (4) Native corporations and are not being pursued here  
 (5) MR STOLL That s correct  
 (6) THE COURT That s what you object to?  
 (7) MR STOLL That s what I object to  
 (8) THE COURT What s incorrect about that?  
 (9) MR STOLL Well I d want to explain more Your  
 (10) Honor what s going on in federal court I think that it s -  
 (11) THE COURT Well that s exactly what I stopped  
 (12) Mr Diamond from doing I mean essentially that s what I did  
 (13) when I said compress it  
 (14) MR STOLL I understand  
 (15) THE COURT So I m going to tell you the same thing  
 (16) Compress it But this is the instruction I m going to give if  
 (17) I don t get a contrary - don t get an expanded version by 4 00  
 (18) today Now the question is with what the timing of the  
 (19) instruction should be When do I give it?  
 (20) MR STOLL Can I just say one other thing on this?  
 (21) THE COURT You can say two It doesn t matter I m  
 (22) just telling you where I am and believe me I ve had lots of  
 (23) time to think about this  
 (24) MR STOLL I understand that My only point is is  
 (25) that I don t think that we need to get into what is going on in

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- (1) the federal court the nature of that case and you apparently  
 (2) want to explain you know more about what s going on there I  
 (3) just think that it s - the focus really should be as to -  
 (4) more to what is going on in this case  
 (5) THE COURT I tend to agree with you counsel up to a  
 (6) point On the other hand any instruction that lessens  
 (7) confusion - and confusion could be very rampant in this case  
 (8) unless the jury knows what the claims are and why the - we re  
 (9) giving this explanation to them Anything that aids in  
 (10) dispelling confusion is in my view good  
 (11) So as I said yesterday an overlong or argumentative or  
 (12) unbalanced instruction I wouldn t accept On the other hand  
 (13) this is not unbalanced It may be incomplete in your view but  
 (14) it s not unbalanced So you give me something that s concise  
 (15) nonargumentative and objective You can do it But the  
 (16) problem is -  
 (17) MR STOLL 4 00 s fine?  
 (18) THE COURT Within the limits of the adversary system  
 (19) you re going to have to do it by 4 00 or I m giving this  
 (20) instruction  
 (21) MR STOLL I understand  
 (22) THE COURT Okay  
 (23) MR STOLL Your Honor the one question I have  
 (24) though is I don t think that there s been testimony - maybe I  
 (25) just forgot it - but I don t recall any testimony about that

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- (1) we ve put on about commercial harvest The commercial  
 (2) harvest I mean the only evidence is there was a closure We  
 (3) haven t - we haven t put on any evidence about you know -  
 (4) THE COURT There s all kinds of evidence - not all  
 (5) kinds but there s substantial evidence in this record of lost  
 (6) commercial fishing opportunities in Prince William Sound  
 (7) MR STOLL Well there is - you mean in the sense  
 (8) that there was a closure in 1989?  
 (9) THE COURT The harvests are bad it was in the  
 (10) testimony of the - of the Native corporation witness  
 (11) MR STOLL Okay  
 (12) THE COURT Anything else? So I m giving the  
 (13) instruction I could give it tomorrow morning You can pick  
 (14) the time When do you want me to give it?  
 (15) MR DIAMOND We would prefer that you do it as soon  
 (16) as possible everybody expects a - a federal jury decision is  
 (17) imminent  
 (18) THE COURT I ll try to give it tomorrow morning It  
 (19) may be the first thing I do  
 (20) MR STOLL That s fine  
 (21) THE COURT Thank you  
 (22) THE CLERK Please rise This court stands in  
 (23) recess  
 (24) MR STOLL Excuse me Judge I just wanted to ask one  
 (25) question As I understand it the instruction you re going to

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- (1) give is this instruction Intertwined with -
- (2) THE COURT Plus Exhibit B
- (3) MR STOLL Yeah Thank you
- (4) (Recess at 1 31 p m )

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- (1) EXHIBITS
- (2) 1541 offered 3038
- (3) 13227 13239 13240 13258 15480 15481 15482 2734
- (4) 2761 page 2 4 chart 2 2 of 2769 8942 8943 and 8944
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- (1) STATE OF ALASKA )
- (2) Reporter s Certificate
- (3) DISTRICT OF ALASKA )
- (6) I Joy S Brauer RPR a Registered Professional
- (7) Reporter and Notary Public
- (8) DO HERBY CERTIFY
- (9) That the foregoing transcript contains a true and
- (10) accurate transcription of my shorthand notes of all requested
- (11) matters held in the foregoing captioned case
- (12) Further that the transcript was prepared by me
- (13) or under my direction
- (14) DATED this day
- (15) of 1994
- (21) JOY S BRAUER RPR  
Notary Public for Alaska
- (22) My Commission Expires 5 10 97

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TOTAL OCCURRENCES 8,833
NOISE WORDS 385
TOTAL WORDS IN FILE 27,669

SINGLE FILE CONCORDANCE

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(1) IN THE SUPREME COURT FOR THE STATE OF ALASKA  
 (2) THIRD JUDICIAL DISTRICT  
 (3) In re ) Case No 3-4 89 2533 C1 11  
 (4) ) Anchorage Alaska  
 (5) The EYXON VALDZ ) Thursday July 21 1994  
 (6) ) 8 43 a m  
 (7) )  
 (8) VOLUME 20 Pages 30-9 through 32??  
 (9) TRANSCRIPT OF PROCEEDINGS (Continued)  
 (10) TALKED BY JURY  
 (11) BEFORE THE HONORABLE BRIAN C. SHORT LL  
 (12) Superior Court Judge

(1) APPEARANCES

(2) FOR THE PLAINTIFF

(3) BY ROBERT STOLL  
 5011 5011 Bern & Lokling  
 209 Southw St Oak Street  
 (4) Portland OR 97204  
 503/227 1600  
 TIMOTHY J. PETUMENOS  
 (5) Birch Horton Bittner & Cherot  
 1177 West Smith Avenue  
 (6) Anchorage AK 99501  
 907/270 1300  
 SAMUEL J. FORTIER  
 (7) Fortier & Mitko  
 2550 Donnell Street Suite 604  
 (8) Anchorage AK 99503  
 907/277 772

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(1) PROCEEDINGS  
 (2) (Jury in at 8 43 a m )  
 (3) (Call to Order of the Court)  
 (4) THE COURT Good morning Mr Petumenos  
 (5) MR PETUMENOS Good morning Judge May we approach  
 (6) the bench?  
 (7) THE COURT Yes  
 (8) (Sidebar held out of the hearing of the jury)  
 (9) MR PETUMENOS A couple of preliminaries this  
 (10) morning  
 (11) We have a witness named John Black who is going to testify  
 (12) today The evidence issues are proliferating to such a degree  
 (13) I don't want to leave the Court in a situation where we have a  
 (14) bench conference with matters can't be solved on the bench  
 (15) We're going to have to file a brief and bump him off the  
 (16) schedule I talked to John Clough about it Next week we can  
 (17) talk about it We're prepared now I want to publish and read  
 (18) to the jury the foreseeability stipulation at this point and I  
 (19) don't know if the Court has an instruction on what stipulation  
 (20) is available to it I'd like to have that read if I can  
 (21) THE COURT I've got it memorized  
 (22) MR PETUMENOS Okay Lastly I also want to read the  
 (23) stipulation since you'll be giving the instruction on the  
 (24) corporate standing which is you know a technical point And  
 (25) then there was a third point darn it and I can't remember

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(1) FOR THE DEFENDANTS  
 (2) CHARLES P. DIAMOND  
 (3) 4 DONALD COPPER  
 LINDA J. SMITH  
 (4) 0 1 My & My rs  
 60 South Hope Street  
 (5) 213/569 500  
 (6) CHARLES CLOUGH III  
 Clough & Associates  
 (7) 314 Franklin St #702  
 Juneau AK 99801  
 907/586 5777  
 (8) REPORTED BY  
 (9) OY S ~ PR  
 (10) Registered Professional Reporter  
 MICHIGN SUN COURT REPORTERS  
 (11) 2550 Donnell Street Suite 1305  
 Anchorage Alaska 99511  
 (12) 907/258 7100

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(1) MR STOLL We gave the other instruction yesterday  
 (2) MR PETUMENOS Story?  
 (3) MR STOLL The other instruction  
 (4) MR PETUMENOS Oh the next thing that's going to  
 (5) happen is a deposition so I'm going to need the - you said  
 (6) you were going to give the instruction on depositions the first  
 (7) time one is read and that's what we're going to do That's  
 (8) all I have  
 (9) THE COURT You're going to read two stipulations and  
 (10) I'll tell them what a stipulation is  
 (11) MR PETUMENOS I'm going to announce we're doing a  
 (12) deposition and you tell them what a deposition is  
 (13) MR DIAMOND I'm sorry too many people up here I  
 (14) just saw that stipulation for the first time The stipulation  
 (15) that was signed yesterday is it a good standing stipulation?  
 (16) MR PETUMENOS That's all it is  
 (17) THE COURT You've got a copy of it?  
 (18) MR PETUMENOS Right in my hand  
 (19) THE COURT I just signed it  
 (20) MR PETUMENOS I was just going to read it myself  
 (21) MR DIAMOND Are you going to instruct the jury on  
 (22) the federal verdict?  
 (23) THE COURT What time do you want me to do it? When  
 (24) they break?  
 (25) MR DIAMOND If we're going to do instructions - do

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(1) you want to talk about it first?  
 ( ) THE COURT Well the answer to that --  
 (3) MR DIAMOND Yes we object  
 (4) THE COURT It you say want then the answer is no  
 (5) But if you say will I the answer is yes  
 (6) MR PETUMENOS I d rather not give those instructions  
 (7) at the same time I want -- this is sort of an evidentiary  
 (8) thing and then maybe at a later point before they get  
 (9) discharged if that s all right  
 (10) MR DIAMOND That s fine I think Mr Stoll and I  
 (11) probably would like to talk to you about his proposed language  
 ( ) THE COURT Even on the record?  
 (13) MR DIAMOND On the record but we can do that at a  
 (14) break  
 (15) MR STOLL He wants to talk I m a happy camper  
 (16) THE COURT That s it thanks  
 (17) (Sidebar concluded)  
 (13) THE COURT Mr Petumenos is going to read to you some  
 (19) material It s called a stipulation You ve probably heard  
 ( ) that word before A stipulation is simply a way of resolving  
 ( ) what might be contested issues of fact As you know you re  
 ( ) the judges of the facts in this case so normally you d hear  
 ( ) evidence and then decide what the facts were but the parties  
 ( ) in the case are allowed to stipulate that certain facts are  
 ( ) true and once they do stipulate then you the jury are to

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(1) accept the facts that are stated in the stipulation as true  
 ( ) So as to these things which are stipulated to you are to  
 (2) accept them as true  
 (4) Mr Petumenos?  
 (5) MR PETUMENOS Thank you Judge  
 (6) It is hereby stipulated that for purposes of this lawsuit  
 (7) the following shall be deemed as established That at all  
 (8) relevant times it was reasonably foreseeable that an oil spill  
 (9) could result in significant impact to the waters and resources  
 (10) of Prince William Sound and could cause significant damage to  
 (11) Native corporation lands within the Prince William Sound and  
 ( ) Kenai Fjords areas including archaeological resources  
 (13) contained on those lands  
 (14) In view of this stipulation the parties have agreed that  
 (15) evidence relating to discussions among the oil companies and  
 (16) Native corporation representatives concerning the release of  
 (17) Native claims to lands located at the Valdez pipeline terminal  
 (18) will not be necessary  
 (19) And Judge I will file this and have it available for the  
 ( ) jury as they require  
 ( ) The second stipulation it is hereby stipulated by the  
 ( ) parties hereto that for the purposes of this lawsuit each of  
 ( ) the Native corporation plaintiffs was as of the date of th  
 ( ) lawsuit as of the date the lawsuit was filed a corporation in  
 ( ) good standing under the laws of the State of Alaska and each

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(1) having filed its biannual reports and having paid its corporate  
 ( ) franchise taxes for the last reporting period has fully  
 (2) complied with Alaska statute 10 68 048  
 (4) Judge those are the stipulations  
 (5) Judge Shortell next we would present the deposition of  
 (6) Mr Dan Taft Mr Kende an attorney will be reading the  
 (7) portions of the deposition that were the plaintiffs attorneys  
 (8) involved and I think the defendants attorneys as well  
 (9) Plaintiffs attorney was me but I ve said it once I m not  
 (10) going to say it again and if we could get the instruction to  
 (11) the jury on depositions  
 ( ) THE COURT Sure This is a deposition A deposition  
 (13) is an examination under oath You don t see the witness here  
 (14) but the witness has been examined under oath in a setting  
 (15) that s similar to the courtroom In other words the witness  
 (16) takes an oath It s subject to penalty for perjury if it s  
 (17) found that the witness has lied It has all the solemnities of  
 (18) testimony in court So you just simply accept this testimony  
 (19) as if it were given in court  
 ( ) The instruction that I ll give you later in the case at the  
 ( ) end of the case says that you re to -- you re to -- you are to  
 ( ) consider depositions just as if they were given in court It  
 ( ) you believe somehow as a jury in your collective judgment that  
 ( ) the absence of the witness is significant then you can give it  
 ( ) the weight you think that deserves but basically this is

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(1) simply the same as in court testimony except the witness isn t  
 ( ) here before you  
 (3) MR KENDE Good morning Your Honor May I proceed?  
 (4) THE COURT Yes  
 (5) MR KENDE We re going to be having Mr Romero from  
 (6) the Good Kind Office reading for the witness and I have a copy  
 (7) for the Court if the Court would like to follow along  
 (8) THE COURT I appreciate that Thank you  
 (9) THE CLERK Sir could you stand up and attach the  
 (10) microphone? I d like to swear you in  
 (11) MR ROMERO About here?  
 ( ) THE CLERK That s fine Raise your right hand  
 (13) (The Witness Is Sworn)  
 (14) THE CLERK Please be seated  
 (15) MR KENDL Good morning this is the deposition of  
 (16) Daniel Taft which was taken on March 24th 1992 and then  
 (17) there was a second section on October 28th 1993  
 (18) Daniel Taft having been first duly sworn was called as a  
 (19) witness herein and was examined and testifies as follows  
 ( ) DIRECT EXAMINATION OF DANIEL TAFT  
 ( ) BY MR KENDL  
 ( ) Q Mr Taft do you remember where you were when you first  
 ( ) heard that Exxon Valdez had hit the rocks?  
 ( ) A No  
 ( ) Q What was your position with Exxon when that happen d do

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- (1) you remember that?  
 ( ) A Yes I was a project leader for the Subsea Production  
 (3) Systems Group at Exxon Production Research  
 (4) Q And what does all of that mean? What did you do?  
 (5) A Subsea Production Systems are where you put a well head  
 on  
 (6) the sea floor and we were the group that - my group was the  
 (7) one responsible for research in that area  
 (8) Q And did you do undersea mapping as part of that group?  
 (9) A No  
 (10) Q Had you done mapping for Exxon before?  
 (11) A No  
 (12) Q What is your educational background?  
 (13) A I went to Michigan for my undergraduate degree in naval  
 (14) architecture and marine engineering and I attended Carnegie  
 (15) Mellon in civil engineering as a graduate  
 (16) Q What years did you receive your degrees then?  
 (17) A 1972 and '76  
 (18) Q And I take it then you did work in undersea drilling all  
 (19) the time you've been at Exxon?  
 (20) A No  
 (21) Q When did you come to Exxon?  
 ( ) A I started in 1972 Well I worked a summer in 1971  
 (23) Q And when you started in 1972?  
 (24) A I was in marine engineering Well I don't know what it  
 ( ) was called at the time but I was a stability person for

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- (1) offshore drilling rigs mainly That was my main shop  
 ( ) Q And how long did you work in that?  
 (3) A Until 1974 when I went back to school  
 (4) Q And 1974 where did you go to school?  
 (5) A Carnegie Mellon  
 (6) Q That's when you went to Carnegie Mellon?  
 (7) A Yes  
 (8) Q Was that through any Exxon program that you went there?  
 (9) A No  
 (10) Q On your own?  
 (11) A Entirely on my own  
 (1 ) Q When you came out of Carnegie Mellon you decided to  
 come  
 (13) straight back to Exxon?  
 (14) A Yes I worked for Exxon for a summer while I was at  
 (15) Carnegie Mellon and then I came back to Exxon  
 (16) Q And in what capacity?  
 (17) A Deep water drilling 9 000 foot water depth drilling  
 (18) Q And who called you up to put you into the Exxon team?  
 (19) A I don't know  
 ( ) Q Do you remember what they told you you were going to do?  
 ( ) A My first involvement was at EPR  
 ( ) Q I'm going to stop you every time There are so many  
 ( ) acronyms in this case - acronyms in this case excuse me?  
 ( ) A I'm sorry Exxon Production Research  
 (25) Q And what role did Exxon Production Research have in

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- (1) connection with the spill?  
 (7) A I was tasked with putting together a program to evaluate  
 (3) equipment used during the cleanup to plan a program  
 (4) Q Do you remember the approximate date that you were first  
 (5) put on any team having to do with the Exxon Valdez oil spill?  
 (6) A May something I'm not sure  
 (7) Q So some six weeks or so after the spill itself?  
 (8) A Yes  
 (9) Q After you worked on this evaluation plan was it in July  
 (10) you've told me of 1989 that your duties changed?  
 (11) A Yes  
 (12) Q And tell me how that happened  
 (13) A I was called and asked if I was willing to go to Valdez  
 (14) and I was and I went  
 (15) Q And who called you?  
 (16) A I don't know  
 (17) Q When you were called what did they ask you to do in  
 (18) Valdez?  
 (19) A I was asked to work on the shoreline approval process in  
 ( ) Prince William Sound  
 (21) Q How long were you at this job?  
 (22) A From about July 30th to September 6th or 8th something  
 ( ) like that  
 (24) Q And is the significance of the September date when the 1989  
 (25) clean up process began to wind down because of weather?

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- (1) A No  
 (2) Q What led do your leaving that position?  
 (3) A It was time for my rotation out  
 (4) Q Tell me how that worked  
 (5) A Most of the Exxon people on shore worked 30 days on and  
 ten  
 (6) days off It was time for me to leave  
 (7) Q You were a little bit overdue?  
 (8) A Yes  
 (9) Q What job did you move to then?  
 (10) A I became the supervisor for the Surveillance Mapping  
 (11) Analytical and Data Base Group  
 (12) Q Is that a group that had previously existed before you  
 (13) became its supervisor?  
 (14) A Not really  
 (15) Q Was that a group that became organized because of a  
 (16) perceived need to have some structure to do that work?  
 (17) A There was a perceived need for collating the data yes  
 (18) Q Were there any firms that were involved in assisting Exxon  
 (19) in surveillance mapping that you were aware had been hired by  
 ( ) Exxon during that period of time July 30 1989? I'm not  
 ( ) saying they were hired at that point but they were engaging in  
 ( ) those activities during that period of time?  
 ( ) A Yes  
 (24) Q Who were they?  
 ( ) A AcroMap U S Woodward Clyde That's it

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- (1) Q Can you describe for me how you define the work that  
 ( ) AeroMap did versus WCC? Did they have different tasks that  
 (2) they performed for Exxon in the summer of 1989?  
 (4) A Yes  
 (5) Q How would you define what AeroMap was assigned to do?  
 (6) A Okay AeroMap was asked to remap part of the Sound which  
 (7) was changed from the earthquake in 1964 They also were  
 asked  
 (8) to put the data from the surveys onto those maps Woodward  
 (9) Clyde supported survey teams more of a field operation than a  
 (10) scientific mapping operation  
 (11) Q Now is there an in house Exxon mapping effort that went on  
 (12) in addition to any mapping effort that went on from Aero or  
 (13) WWC?  
 (14) A When?  
 (15) Q At any point in time?  
 (16) A At any point in time yes  
 (17) Q When did that in house mapping effort begin --  
 (18) A September of 1989  
 (19) Q -- with the formation of this group that you became the  
 ( ) head of?  
 ( ) A Yes  
 ( ) Q What was that group called again please?  
 ( ) A Surveillance Mapping Analytical and Data Base called  
 SMAD  
 ( ) Q Why did Exxon form SMAD?  
 ( ) A We realized in 1989 we needed a more coordinated mapping

- (1) light oiling?  
 ( ) A Yes  
 (3) Q And were there specific criteria defining those terms in  
 (4) 1989?  
 (5) A Yes  
 (6) Q And were those written down?  
 (7) A Yes  
 (8) Q And where were those -- where were they written down?  
 (9) A There was a shoreline assessment manual that was used by  
 (10) the survey teams  
 (11) Q And this shoreline assessment manual was not just used by  
 (12) Exxon it was used by other entities as well?  
 (13) A Correct The definitions were agreed on by other entities  
 (14) Q After SMAD was formed did those descriptions of oiling  
 (15) change?  
 (16) A No  
 (17) Q Did you begin using the designations wide medium and  
 (18) narrow?  
 (19) A Yes  
 (20) Q And did you cease using the terms heavy moderate and  
 (21) light?  
 ( ) A Yes  
 (23) Q Why?  
 ( ) A The description if you review the descriptions of wide or  
 ( ) heavy you'll find that they are the same Or light and

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- (1) effort with more oversight by Exxon  
 ( ) Q And why did you need -- for what purposes did you need that  
 (2) mapping effort?  
 (4) A There was a lot of the data coming in and that data needed  
 (5) to be selected where it could be got at under one umbrella  
 (6) Q And for what purposes?  
 (7) A For -- both for planning of any future effort and for  
 (8) figuring out what the status was  
 (9) Q So it was for the planning of future clean up efforts  
 (10) When you say future efforts we're talking about future  
 (11) clean up efforts?  
 ( ) A Potentially yes  
 (13) Q And determining what the status was why was that  
 (14) important?  
 (15) A If there didn't need to be any cleanup  
 (16) Q Either way the purpose of putting this group together was  
 (17) to assist in managing the cleanup?  
 (18) A Yes  
 (19) Q And then in October you began implementing the data base  
 ( ) management system that you had selected?  
 ( ) A Yes  
 ( ) Q And then when you began manning that data base system  
 you  
 ( ) used the staff that you had created within SMAD?  
 ( ) A Yes  
 ( ) Q Well do you remember hearing the terms heavy medium  
 and

- (1) narrow you will find that those two are the same The  
 ( ) definition of light is a band width has nothing to do with  
 (2) thickness Description for heavy was a band width had nothing  
 (4) to do with thickness and the connotation of heavy implies  
 (5) thickness to people Therefore we proposed to change the  
 term  
 (6) used in relation to each description to something more  
 (7) appropriate  
 (8) Q So in your mind the change from heavy to wide for  
 (9) example was one of nomenclature and not substance?  
 (10) A Yes  
 (11) Q Is the same true for moderate to medium?  
 ( ) A Yes  
 (13) Q And from light to narrow?  
 (14) A Yes  
 (15) Q Did Exxon begin using a term very light?  
 (16) A Exxon used a term called very light in the summer of 1989  
 (17) outside of Prince William Sound  
 (18) Q Did you continue to use that -- did you continue the use of  
 (19) that term after SMAD was formed?  
 ( ) A In some point we started using it everywhere yes  
 (21) Q So the change if you will was that the term very light  
 ( ) began to be used in other places than out -- phrased  
 ( ) differently the term very light began to be used in Prince  
 ( ) William Sound for example whereas before it was not used?  
 ( ) A Correct

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- (1) Q Do you remember having any conversations with any other  
 (2) representatives from other agencies about that change in  
 (3) designation?  
 (4) A Yes  
 (5) Q And who did you have those conversations with?  
 (6) A Jim Stocum from ADC Diane somebody and Rich McMahon  
 from  
 (7) ADNR and somebody from NOAA I m sure was at that  
 meeting  
 (8) Q These conversations took place in a formal meeting?  
 (9) A Yeah  
 (10) Q Do you remember when the meeting took place  
 approximately?  
 (11) A In 1990 early 1990 sometime I would guess in February or  
 (12) March  
 (13) Q Was that part of any ongoing effort that was taking place  
 (14) when you had this meeting?  
 (15) A Yes  
 (16) Q What was that effort called?  
 (17) A It was preplanning for the 1990 survey  
 (18) Q People from as you listed to them people from ADEC for  
 (19) example seemed comfortable with the change?  
 (20) A As I remember everybody thought that they were more  
 (21) meaningful  
 (22) Q I think we left off we were discussing the process of  
 (23) inputting data for the purposes of making maps and you  
 (24) described a field map that was written on and sent in What  
 (25) other kinds of input was used to make oiling maps?

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- (1) A We got ecological data from various agencies ecological  
 (2) constraint data basically We got shoreline type data from  
 (3) several different sources We got archa ological sites We  
 (4) obtained land ownership data from some agencies We  
 obtained  
 (5) exposure data wave exposure data These are the major ones  
 (6) Q The ecological data from different sources that you  
 (7) described what were the sources for the ecological data?  
 (8) A We got eagle nest locations from U S Fish and Wildlife  
 (9) Service We received - we obtained salmon stream locations  
 (10) from ADF&G We obtained seal haul out areas from a  
 combination  
 (11) of - I think it was ADF&G and NMFS National Marine Fisheries  
 (12) Service We obtained a lot of data from the Alaska State  
 (13) Habitat Management Guide I believ d that s what it s called  
 (14) Q Did that data include the location of mussels clams  
 (15) edible mollusks?  
 (16) A The Habitat Management Guide gave some guidance there  
 (17) general guidance yeah  
 (18) Q And you said there were different sources for shoreline  
 (19) type data?  
 (20) A Yes  
 (21) Q What were those sources?  
 (22) A One of them was Kay Kreig Another one was the SCAT  
 1959  
 (23) SCAT survey or video survey data This is a video survey  
 (24) Q Right Who is Mr Kreig?  
 (25) A He is a photo interpreter in Anchorage Ray Kreig and

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- (1) Associates  
 (2) Q What does he do when he interprets photos?  
 (3) A He can do a lot of different things with photos We asked  
 (4) him to - in the summer of 1989 he was asking to review a  
 (5) series of photographs and say what kind of shoreline type  
 (6) identify the various shoreline types within Prince William  
 (7) Sound by photographically interpreting  
 (8) Q What kinds of conclusions would he draw from those  
 photos?  
 (9) A He would tell you where there were rocks rocky headlands  
 (10) or just bedrock beaches where there were fines in the beach  
 (11) Q Where there were what?  
 (12) A Fines fine sediment Basically he would classify the  
 (13) sediment type on the shoreline  
 (14) Q Where did you get your information on archaeological sites?  
 (15) A From the archaeologists working for Exxon  
 (16) Q Mr Mobley?  
 (17) A And Mr Haggart  
 (18) MR KENDE I believe that should be Haggarty at this  
 (19) and it s a misprint  
 (20) BY MR KENDE  
 (21) Q And did they simply identify for you on a map where they  
 (22) thought the archaeological sites were?  
 (23) A Actually I think we received a lat/long file latitude/  
 (24) longitude file  
 (25) Q Was the latitude/longitude file provided by your

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- (1) archaeologists further broken down to the type of site that was  
 (2) involved?  
 (3) A No  
 (4) Q So you would not have any way of knowing whether this site  
 (5) was a surface scatter or a midden pile or a culturally modified  
 (6) tree you have no way of knowing from your data?  
 (7) A No  
 (8) Q What is the difference between the shoreline type data that  
 (9) you described and the exposure data that you described?  
 (10) A Shoreline type is sediment type Exposure is the wave  
 (11) exposure  
 (12) Q I would like to know whether or not the exposure data and  
 (13) the shoreline type data influenced in any way the conclusion as  
 (14) to how much or to what the nature of the oiling was on a given  
 (15) occasion  
 (16) A No  
 (17) Q What was the purpose of inputting shoreline type data and  
 (18) exposure data? And if you ne d to break that down do  
 (19) A Exposure data was inputted to allow us to get a handle on  
 (20) what we thought might happen over the winter of 1989/ 90 to  
 (21) help us in focusing where we survey in 1990 The  
 (22) shoreline type data there were a lot of people that wanted  
 (23) that - that thought that would be useful I don t know as we  
 (24) ev r used it for anything  
 (25) Q When you say there were a lot of people that thought that

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- (1) was going to be useful who were you referring to people  
 ( ) within Exxon or outside offer Exxon?  
 (3) A Yes within Exxon  
 (4) Q And in your experience it wasn't used as a management tool  
 (5) that often?  
 (6) A I don't think it was  
 (7) Q Did that group SMAD ever input subsurface oiling data?  
 (8) A Yes  
 (9) Q When?  
 (10) A 1991  
 (11) Q Never before?  
 (1 ) A Never before  
 (13) Q Let me break it down When is the first time that you can  
 (14) remember in any of your capacity as a discussion about  
 whether  
 (15) or not to look for subsurface oiling data in the field?  
 (16) MR KENDE Question from counsel For purposes of  
 (17) mapping or for any purpose?  
 (18) Response from Mr Petumenos for any purpose  
 (19) A 1989  
 ( ) Q And in what context do you remember those discussions?  
 (1 ) A It was August of 1989 about how to treat subsurface oil  
 ( ) Q Presumably in order to treat subsurface oil you would have  
 (3) to know where it is?  
 (4) A Yes  
 (5) Q Was there any discussion of trying to find out where the

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- (1) subsurface oil was prior to August of 1989 that you were privy  
 ( ) to?  
 (3) \ No  
 (4) Q Had you been privy to discussions before August of 1989  
 (5) about the accumulation of subsurface oil data?  
 (6) A No  
 ( ) Q Who were the discussions with about the treatment of  
 (8) subsurface oil that you were involved with?  
 (9) A It was discussed in ISCC Interagency Shoreline Cleanup  
 (10) Committee Andy Teal Within Exxon it was discussed with the  
 (11) operations coordinators Scott Naumien - Nommien - and Bill  
 (1 ) Stillings and the operations manager Bill Rainey  
 (13) Q Now I didn't mean to mischaracterize your testimony  
 (14) obviously in the shoreline assessment process in 1989 certain  
 (15) amount of data was coming in about the existence of  
 subsurface  
 (16) oil isn't that right?  
 (1 ) A Yes  
 (18) Q And what decision do you recall being made in August of  
 (19) 1989 with respect to the treatment of subsurface oil if any?  
 ( ) \ By -  
 (1 ) Q Anyone  
 ( ) \ There were discussions about what to do about subsurface  
 (3) oil in the ISCC and in late August it was decided that there  
 (4) would be no further tests of any system to try to address  
 (5) subsurface oil in 1989

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- (1) Q Was that the reason that SMAD decided not to attempt to  
 map  
 ( ) subsurface oiling data?  
 (3) A No  
 (4) Q What was the reason?  
 (5) A Twofold One we had plenty of other things to do And  
 (6) secondly the data was not cohesive coherent The data was  
 (7) basically a sheet that said yes there was Yes there was  
 (8) subsurface oil on a segment  
 (9) Q Were any plans made within Exxon to attempt to -- were you  
 (10) aware of any plans at Exxon to attempt to remedy that situation  
 (11) and accumulate some cohesive data about subsurface oiling as  
 of  
 (12) the fall of 1989?  
 (13) A Not as of the fall of 1989  
 (14) Q When do you first recall any discussions within Exxon with  
 (15) respect to the accumulation of data about subsurface oil in a  
 (16) cohesive way?  
 (17) \ Sometime during the winter of 1989 90 I don't know  
 (18) Sometime during that winter  
 (19) Q What was the method that was decided upon for the testing  
 ( ) of subsurface oil in the fall winter of 1989/ 90?  
 (21) A The survey teams were to dig pits where they thought  
 ( ) subsurface oil existed They were to document where they dug  
 (23) pits and what they found  
 (4) Q What were they to use to determine where they thought  
 (5) subsurface oil was?

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- (1) \ The oil geomorphologist on the team was to use his  
 ( ) expertise and in the spring of 1990 it was a joint survey  
 (3) and if others thought no you need to dig over there they  
 (4) were supposed to test those areas  
 (5) Q Are you aware of any accumulation of subsurface oil data  
 (6) taking place in a cohesive way by Exxon outside of Prince  
 (7) William Sound sector at any point in time?  
 (8) A Yes  
 (9) Q When?  
 (10) \ 1990 and 1991  
 (11) Q And where was this additional subsurface oil data  
 (1 ) accumulation taken?  
 (13) A Wherever the survey teams went  
 (14) Q Did they go to Kodiak?  
 (15) A Yes  
 (16) Q Did you understand that in 1989 the goal and principal  
 (17) purpose of the cleanup was to remove surface oil?  
 (18) A I wouldn't phrase it that way  
 (19) Q Why not?  
 ( ) A Our goal was to remove as much oil as we could reasonably  
 (1 ) in 1989 bulk oil  
 ( ) Q Including oil in the subsurface if that was reasonable?  
 ( ) \ Yes  
 (4) Q Same is true in 1990?  
 (5) A No

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- (1) Q What s the difference?  
 (2) A In 1990 our goal was to do things that would result in a  
 (3) benefit to the shoreline and that benefit that trade off was  
 (4) not always as clear as it was in 1989 And in some cases  
 (5) leaving the oil there was a better option than taking it out  
 (6) So you can t just say removing the oil was our target  
 (7) Granted our treatments were targeted to get rid of as much oil  
 (8) as we could but that was – that wasn t the only criteria  
 (9) Q Certainly if you thought that getting the every last bit of  
 (10) oil would destroy the creatures in the beach beyond what the  
 (11) oil was doing you wouldn t do it is that your point?  
 (12) A Yes  
 (13) Q And that assessment had to be made over and over again on a  
 (14) beach by beach basis?  
 (15) A Yes  
 (16) Q But that process was also undergone in 1989 and 90 I  
 (17) assume but is the difference that the circumstances had  
 (18) changed substantially that the trade off might not come out the  
 (19) same?  
 (20) A Yes  
 (21) Q Would you expect that given the nature of the surveys that  
 (22) were conducted in 1989 1990 or 1991 that there are areas that  
 (23) are depicted with no oil where oil can still be found today  
 (24) March 24 1992?  
 (25) A There could be

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- (1) Q What is the most accurate surface oiling map in Exxon s  
 (2) possession for Prince William Sound?  
 (3) A I have lots of very accurate data sets I need to know a  
 (4) time  
 (5) Q Well I want to know right now March 24 1992 the nature  
 (6) and extent of oiling in say Prince William Sound  
 (7) A As of today?  
 (8) Q As of March 24 1992 what is your best map?  
 (9) A The MAYSAP map would be the best map  
 (10) Q Why is it you believe the MAYSAP –  
 (11) MR KENDE that s M A Y S A P  
 (12) Q – maps are the most accurate?  
 (13) A They are the latest survey available They represent the  
 (14) latest look at what the shoreline looked like  
 (15) Q And what data went into the MAYSAP surface maps?  
 (16) A Data from the survey that was conducted by the joint survey  
 (17) teams in April and May of 1991  
 (18) Q And what kind of surveys were they? Let me be more  
 (19) specific Were surveys done on all segments in the spill  
 (20) area?  
 (21) A No  
 (22) Q How were segments determined or selected for survey?  
 (23) A Segments were designated by the involved agencies and  
 (24) landowners Those lists of segments were submitted to Exxon  
 (25) and the other agencies They formed a master list All of the

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- (1) interested parties commented on that list Some segments  
 were  
 (2) added and some were deleted  
 (3) Q And the segments that were signed off on if you will in  
 (4) 1990 as requiring no further treatment were not surveyed in  
 (5) 1991 is that correct?  
 (6) A Some of them were not surveyed Some of them were  
 (7) Q Under what circumstances would a segment that had been  
 (8) signed off for no further treatment nevertheless been surveyed  
 (9) as part of the MAYSAP process?  
 (10) A Areas that were of special interest to different parties  
 (11) for instance Areas that we knew the landowner had a very  
 deep  
 (12) interest in Areas that were very sensitive ecologically  
 (13) potentially could have been rescheduled Areas that were  
 (14) designated by an agency as saying this is important for us to  
 (15) look at Some that were designated by Exxon as being  
 important  
 (16) for us to have a record of what they looked at what they  
 (17) looked like in 1991  
 (18) Q And the segments that – were there segments that you re  
 (19) aware of that were not part of the MAYSAP survey that you  
 (20) believe contained oiling?  
 (21) A Yes  
 (22) Q And is that because a segment that as a result of a cost  
 (23) benefit analysis could have oil on it but the decision could  
 (24) be made not to treat it either because of the nature of  
 (25) treatment that would be required and the damage that it would

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- (1) cause or for other reasons that it perhaps might not be cost  
 (2) effective to do so?  
 (3) A I do not remember hearing any discussion of the cost of  
 (4) surveying being involved I think the decisions were generally  
 (5) based on we know that the oiling here is not a problem or is  
 (6) sporadic or for whatever reason and we have some time  
 (7) constraints in surveying and because of that and the known  
 (8) conditions and impact of just going to it we elected not even  
 (9) to look at it  
 (10) Q With a very few exceptions the kind of treatment that was  
 (11) being conducted in 1989 1990 and 1991 on the beaches was  
 (12) surface treatment true?  
 (13) A A majority of the treatment was surface treatment yes  
 (14) Q Would you agree that the vast majority of it was?  
 (15) A In 1989 I would agree  
 (16) Q And in 1990 you would not?  
 (17) A I would say a lot of it addressed subsurface in 1990  
 (18) Q Prior to the Exxon Valdez oil spill had you ever worked on  
 (19) an oil spill before?  
 (20) A No  
 (21) Q How does a shoreline produce sheen?  
 (22) A Okay Sheen is produced off of a shoreline by several –  
 (23) there s several methods that wash oil off a shoreline onto the  
 (24) water The most common method and one that we expect is the  
 (25) most prevalent is due to storms or wave action waves

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- (1) striking the beach and washing off the beach due to that
- (2) turbulent water
- (3) Another way that moved - that can move oil off the beaches
- (4) is just the tidal cycle cycle pumping off the beach pumping
- (5) of the beach The tide coming in rising up lifting some of
- (6) the oil off the rocks and sweeping some of that oil out into
- (7) the ocean
- (8) Third way which is I believe prevalent - was prevalent in
- (9) March of 1990 - was melt water from the upper inner tide
- (10) lines snow melt causing runoff throughout the - through the
- (11) beaches washing basically water washing the beaches
- Those
- (12) are three of the methods Those are the three prevalent ones
- (13) Q Now are there factors that relate conditions that are more
- (14) conducive than others for the efficacy of that process? In
- (15) other words when the water moves through the oiled shoreline
- (16) are there conditions that would make that more effective
- (17) causing a shoreline to produce sheen than others?
- (18) A Yes
- (19) Q And what are those?
- (20) A First the amount of oil that is mobile on the shoreline
- (21) Secondly the temperature which effects the viscosity of the
- (22) oil And thirdly - and maybe as important or more important
- (23) than the other two - is the velocity of the water that is
- (24) impinging on the shoreline High waves high tides are more
- (25) effective than low waves low tides High runoff rates would

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- (1) be more effective than low runoff rates
- (2) Q How about beach tide?
- (3) A To an extent it will have some influence but not
- (4) enough - just in the ability of the water to percolate through
- (5) the beach sediment In most cases in Prince William Sound the
- (6) beach type is not a - water can get in and out of the sediment
- (7) pretty easily in Prince William Sound
- (8) Q So beach type was not a significant factor to this process
- (9) in Prince William Sound?
- (10) A I don't believe so
- (11) Q And upon what do you base that?
- (12) A I base that on the factor that these other - that is
- (13) just not as important as these others That is my opinion
- (14) Q I know but I get the basis of your opinion
- (15) A That the shoreline types in Prince William Sound all allow
- (16) water to percolate pretty easily except for one small area
- (17) That the beaches are fairly porous from a fluid flow
- (18) standpoint
- (19) Q And what about in the Kodiak/Alaska Peninsula area is the
- (20) same true?
- (21) A Yeah pretty much the same
- (22) Q There are things that are sheens that are not necessarily
- (23) petroleum?
- (24) A Okay yeah things that look like sheens
- (25) Q There are organic material on the water that create sheens

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- (1) but that aren't petroleum for example but for the purposes of
- (2) nomenclature they are still sheens is that right?
- (3) A Those would still be sheens yes
- (4) Q So to clarify your problem with the State's program it was
- (5) not that they were misidentifying sheens but they were
- (6) misidentifying what they saw as sheens as being oil related is
- (7) that more accurate?
- (8) A No They were identifying things as sheens that had no oil
- (9) of any sort in them That is my belief
- (10) Q Would that be the problem of false sheens?
- (11) A Yes
- (12) Q And what steps did you take in your program to distinguish
- (13) a false sheen from an actual one?
- (14) A We spent a fair amount of time early in the program
- (15) identifying areas that would tend to show those sorts of
- (16) sheen like looking phenomena fresh water outflows for
- (17) instance glacier outflows We also spent some time observed
- (18) or spent some time looking at how we would distinguish wind
- (19) sheens from oil sheens and ways to do that And there are
- (20) methods to do that
- (21) Q Wind sheens from oil sheens?
- (22) A Yes
- (23) Q And what is a wind sheen?
- (24) A A wind sheen is a - is - I don't know if that is really
- (25) the term for it but it is something that will look like a

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- (1) sheen on the water from certain angles due to the wind shearing
- (2) the surface of the water and making it look different than the
- (3) surrounding water from certain angles That can appear to be
- (4) a sheen look like an oil sheen a petroleum based sheen From
- (5) other angles it will not look that way So you have to take
- (6) some precautions about that
- (7) Q Okay Now as a result of all these things that are called
- (8) false sheens was it your experience during 1989 1990 1991
- (9) that people often thought that there was oil where there
- (10) wasn't?
- (11) A Yes
- (12) Q And you're smiling as if to indicate that was a common
- (13) occurrence
- (14) A Yes
- (15) Q So to the untrained eye persons might think that water and
- (16) land was subject to oiling that weren't?
- (17) A Yes definitely
- (18) Q And did you observe that phenomenon even fairly far from
- (19) the oiled area?
- (20) A Oh yes
- (21) Q Now you explained that increase in sightings of sheen in
- (22) September of 1990 as corresponding to berm relocation is that
- (23) right?
- (24) A Correct
- (25) Q And what led you to conclude that the berm relocation was

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- (1) the cause of the increased sheening?  
 (2) A Well we looked at where the sheens were being spotted and  
 (3) they were being spotted a lot of them near - adjacent to  
 (4) shorelines where we had relocated storm berm  
 (5) Q Why were the berms being relocated?  
 (6) A There was oil in the berms  
 (7) Q Was there oil above the berms?  
 (8) A I do not believe so in general I don't have any  
 (9) experience of there being oil above the berms  
 (10) Q Never in your experience in the course of the - all your  
 (11) experience with the Exxon Valdez did you understand oil had  
 (12) reached above the berms?  
 (13) A I have never visited a shoreline where there was oil above  
 (14) the storm berm And I thought I visited the worst ones so -  
 (15) Q And the storm berm was subject to less water flushing than  
 (16) lower parts of the beach?  
 (17) A Yes  
 (18) Q And as a consequence of that the oil would tend to persist  
 (19) in those berms?  
 (20) A Yes  
 (21) Q And the purpose of the relocation effort was to break down  
 (22) the berms so that the water would go through that part of the  
 (23) beach and be flushed into the sea?  
 (24) A Sort of  
 (25) Q Do you have a quarterer with that statement?

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- (1) A Yeah yes  
 (2) Q And what is it?  
 (3) A It doesn't really describe storm berm relocation  
 (4) Q Why don't you describe it?  
 (5) A Okay Storm berm relocation is picking up oiled sediment  
 (6) from the storm berm and moving that sediment down into the  
 (7) intertidal area and allowing the tidal action and the waves to  
 (8) get at it So it's actually moving the material down the slope  
 (9) on the beach  
 (10) Q And the reason for doing that is if the oiled sediment was  
 (11) to stay where it was it would not be subject to as much water  
 (12) flushing and would stay on the beaches longer is that right?  
 (13) A Not be subject to water flushing right  
 (14) Q Now if you were correct that the sheening was the  
 (15) consequence of this berm relocation effort how long would you  
 (16) have expected the sheens to persist on the water before that  
 (17) process dissipated returned to normal?  
 (18) A How long would a sheen persist?  
 (19) Q No the sheens in general in the area if the berm  
 (20) relocation effort took place over a course of time then would  
 (21) you expect the flushing from that process to be complete and  
 (22) you wouldn't see any continued increase in sheening?  
 (23) A I don't know how long it would take to - how long you'd  
 (24) continue to get sheens out of this material  
 (25) Q When you terminated the program was it still happening?

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- (1) A Yes  
 (2) Q Near the end of your report you discuss some areas in 1990  
 (3) of persistent sheening which were ultimately boomed and were  
 (4) monitored more closely Page 15 if you want to take a look  
 (5) A Yes okay  
 (6) Q Where were these?  
 (7) A There were several Mares Point on Perry Island Northwest  
 (8) Bay  
 (9) Q That's on Knight Island?  
 (10) A No on Eleanor Island  
 (11) Q Eleanor Island?  
 (12) A At times Parts of Sleepy Bay and Point Helen parts of  
 (13) Smith Island I think those are it pretty much There might  
 (14) have been one on Herring Bay I'm not sure  
 (15) Q Sure Was there ever any subsurface oiling surveys done  
 (16) out of Prince William Sound by Exxon?  
 (17) A Yes  
 (18) Q Where?  
 (19) A In Kenai I'm not sure exactly of which segments but some  
 (20) segments in Kenai  
 (21) Q In the Kenai Fjords?  
 (22) A Well on the Kenai Peninsula someplace  
 (23) Q Did you take any steps - well on the basis of those  
 (24) surveys was subsurface oil discovered?  
 (25) A Where?

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- (1) Q On the Kenai Peninsula  
 (2) A I believe there were two small pockets of it discovered  
 (3) yes  
 (4) Q Where were they?  
 (5) A One was Windy Bay and I don't know where the others were.  
 (6) Q Let me ask you this When were those surveys done?  
 (7) A Summer of 1990  
 (8) Q Did you subject that area to aerial surveillance for oil  
 (9) sheens after the survey?  
 (10) A No  
 (11) Q Why not?  
 (12) A It was outside of Prince William Sound I didn't go  
 (13) there  
 (14) Q Why not?  
 (15) A It was outside of our survey area at that point Our  
 (16) design didn't go there so -  
 (17) Q I know but what was the reason that your design elected  
 (18) not to go there at that point in time?  
 (19) A Why didn't we change the design you mean?  
 (20) Q Well did you consider changing the design when you  
 (21) learned  
 (22) that there was subsurface oil in those areas?  
 (23) A No  
 (24) Q Why not?  
 (25) A They were very very small accumulations and we didn't worry  
 (26) about it from a sheening standpoint

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(1) MR KENDE That concludes the reading of Mr Tatt s  
 ( ) deposition Your Honor  
 (3) MR FORTIER Your Honor would this be an appropriate  
 (4) time for a break or -  
 (5) THE COURT Yeah I want to discuss a few things with  
 (6) you anyway counsel so I'll send the jury out  
 (7) (Jury out at 9 28 a m )  
 (8) THE COURT All right You can be seated  
 (9) Counsel let s talk about the instruction that I ve  
 (10) proposed to give to the jury at the end of the day today  
 (11) It s - as things have percolated down we have only  
 (12) Mr Stoll s added language to deal with So two things  
 (13) MR DIAMOND I was unclear whether Mr Stoll was  
 (14) proposing that we remove the second and third paragraphs of  
 (15) what you had signed off on tentatively yesterday I assume he  
 (16) has not  
 (17) THE COURT I don t think so This is just changes  
 (18) right?  
 (19) MR STOLL It s just moving one sentence from the -  
 ( ) all I did was reword that first paragraph Your Honor And the  
 (1) first whole sentence is really - the first full sentence that  
 (2) is underlined is the sentence from the last paragraph that  
 (3) was - that Mr Diamond had added yesterday I just moved it  
 (4) from that last paragraph into this paragraph so it was in the  
 (5) context of the other material

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(1) of stating the proposition that these people are only  
 (2) plaintiffs in this case I think that probably would do it  
 (3) that sentence  
 (4) THE COURT Thank you counsel  
 (5) Mr Stoll?  
 (6) MR STOLL Your Honor the reason that I added or  
 (7) proposed to add these two sentences one is is that the first  
 (8) sentence explains the nature of the claim here about the lost  
 (9) productivity of the land as a result as an element  
 (10) The second one is I think that that is very necessary  
 (11) given bringing in this - these claims being in federal court  
 (12) because I m very concerned that the jury could be led to the  
 (13) conclusion that well these same people are over in federal  
 (14) court and they re double dipping and that s - and that is  
 (15) the - that is heightened I might say by Mr Clough s  
 (16) statement in his opening statement that - about payments  
 (17) having - Exxon had already made payments or words to that  
 (18) effect that implied that Exxon had already made payments on  
 (19) the archaeological thing Sounds like the Native corporations  
 ( ) in particular are double dipping and so I thought that there  
 (1) was some clarification  
 (2) Again our position was that we didn t want to get into  
 (3) what the claims were in federal court but once you do that  
 (4) then I think we have to explain this is it for these  
 (5) plaintiffs And -

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(1) MR DIAMOND I don t have any objection any strong  
 ( ) objection to moving that sentence from one place to another I  
 (3) do object to the - the other additions that Mr Stoll has put  
 (4) in her The first one is on the second line of Page 2 of his  
 (5) instruction which adds the economic value of the - and  
 (6) continues loss of subsistence harvest I think that makes that  
 (7) sentence very confusing and unnecessarily so  
 (8) The two sentences that he has added strike me as - as  
 (9) argumentative the first one dealing with productivity of the  
 (10) land makes it sound like we re dealing with a farm case here  
 (11) Productivity isn t defined comes out of left field and really  
 (12) is duplicative of the prior sentence which talks about causing  
 (13) the Native corporations damage by interfering with the use of  
 (14) their land  
 (15) The addition of this sentence addressing lost productivity  
 (16) of the land strikes me as somewhat argumentative Clearly  
 (17) though the next sentence the state court case is the only  
 (18) case in which these plaintiffs the Native corporations and the  
 (19) municipalities are seeking damag-s caused by the Exxon  
 Valdez  
 ( ) oil spill is something that one would expect to hear in closing  
 (1) argument not a jury instruction And there s nothing in this  
 ( ) paragraph or elsewhere in the two paragraphs to suggest that  
 (3) there s som other case pending in which these corporations  
 are  
 (4) plaintiffs  
 (5) Even if there were there d certainly be a more benign way

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(1) THE COURT Counsel isn t this an erroneous  
 ( ) statement The state court case is the only case in which  
 (3) these plaintiffs the Native corporations and the  
 (4) municipalities are seeking damages caused by the Exxon  
 Valdez  
 (5) oil spill isn t that erroneous?  
 (6) MR STOLL No it s not  
 (7) THE COURT Aren t you looking for punitive damages  
 (8) over in federal court?  
 (9) MR STOLL Those are not damages caused by the Exxon  
 (10) Valdez oil spill You want to use the word compensatory  
 (11) damages that s fine I don t -  
 (12) MR DIAMOND There s also the TAPP flow proceedings  
 (13) THE COURT Well counsel the truth is I think this  
 (14) is one of those debates that s - that the resolution of which  
 (15) if I took either one of your versions it would be acceptabl  
 (16) But frankly I like the - I like Mr Diamond s last version  
 (17) the best so that s what I m going to give So I m going to  
 (18) give Exhibit B and I m going to give the - the instruction  
 (19) that Mr Diamond proposed Let s see if I can find it here on  
 (20) the 20th  
 (21) MR STOLL Your Honor could we ask one - one  
 ( ) modification?  
 (23) THE COURT Sure sure  
 (24) MP STOLL And that is that the sentence we move -  
 (5) he doesn t have an objection we moved the sentence that he

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- (1) added from the back to the first paragraph so that it s all  
 ( ) together there  
 (3) THE COURT Tell me which sentence  
 (4) MR STOLL Can I approach the bench?  
 (5) THE COURT Sure  
 (6) MR STOLL It s the - it s the first full sentence  
 (7) on my revision I submitted yesterday  
 (8) THE COURT Oh I see  
 (9) MR STOLL It s underlined on - see you have his  
 (10) there  
 (11) THE COURT Oh I see You want to take this and move  
 (12) it back  
 (13) MR STOLL No no no I want to take this sentence  
 (14) - starts right here this sentence - and move it - just a  
 (15) minute  
 (16) THE COURT I tell you what you don t have any  
 (17) objection to changing it do you counsel? That s fine with  
 (18) me What I want you to do is just get me a clean copy so that  
 (19) I can read it Also get me a clean copy of Exhibit B so I  
 ( ) won t read any of the segments that I wasn t going to read  
 (21) And I ll give that at the end of the trial day  
 (22) MR STOLL Fine Your Honor  
 ( ) THE COURT Both of those at the end of the trial  
 ( ) day  
 ( ) Now Mr Petumenos unless you had something else to

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- (1) discuss I d like to talk about whatever it was that you came  
 ( ) to the bench for at the beginning of the trial day  
 (3) MR PETUMENOS Sure We thought that by preview of  
 (4) snapshot of what the problem is or -  
 (5) THE COURT Yes you mean this is going to take a long  
 (6) time?  
 ( ) MR PETUMENOS Well it s not going to take a huge  
 (8) amount of time but the problem is we have a witness who  
 (9) documents the administrative claims of Chugach th-  
 management  
 (10) time that was devoted to the oil spill a Mr John Black which  
 (11) is the Chugach administrator that was in the case We received  
 ( ) in the cross examination exhibits a contract with a copy of a  
 (13) check for payment made under the Chugach OSRT program  
 which  
 (14) was the program whereby Exxon paid to have certain Native  
 (15) representatives in the field accompanying th m for survey  
 (16) work  
 ( ) And as I began to work on the problem of their putting in  
 (13) another check for payments and its relationship to the claim  
 (19) that we re making and what appeared to be a contract defense  
 ( ) or an accord and satisfaction defense I began looking at the  
 ( ) pleadings to see if it had been pled as a defense It s not  
 ( ) there whereupon we began writing a brief And I was just  
 ( ) mindful of the Court s situation yesterday over OPA 90 where  
 w  
 ( ) we re trying to argue fairly complex matters at the bench which  
 ( ) was unfair to the Court and decided this was one of those

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- (1) And I have Mr Black on the schedule for today and talked  
 (2) to Mr Clough and said I thought that we ought to push it off  
 (3) the schedule or bump him for the day at least because it was  
 (4) just not the sort of thing I wanted to bring to the bench and  
 (5) start fussing about at least without advance notice to the  
 (6) Court  
 (7) I also didn t want to file a brief on the same day as the  
 (8) testimony is because that would have got me in trouble So I  
 (9) want to raise it with the Court where we were I m going to  
 (10) file a brief today Mr Clough will want time to respond I m  
 (11) sure but the issues are getting a little sticky Not overly  
 (12) so but enough that I didn t want to do it at the bench  
 (13) MR CLOUGH If I might briefly respond Your Honor  
 (14) This issue has been out there for several days now We  
 (15) clearly believe that plaintiffs by making this particular  
 (16) claim have opened the door and we were very mindful of your  
 (17) admonition to bring this up argue it in advance outside of the  
 (18) presence of the jury I was and am prepared to argue it  
 (19) outside of the presence of the jury today  
 ( ) My concern is when Mr Petumenos brought this up today  
 (21) about the issue of briefing which I never heard about before  
 (22) this morning is he also suggested pushing the witness off  
 ( ) today s schedule we planned for him today then said well he  
 ( ) might not - he says we re going to file a brief What s the  
 ( ) briefing schedule going to be? And if we can t get it done by

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- (1) tomorrow can we do the witness by telephone next week?  
 ( ) Quite frankly I m opposed to doing the witness by  
 (3) telephone We re in a jury trial here The witness is here  
 (4) now My preference would be to argue it orally today get this  
 (5) out of the way and go ahead with the witness Alternatively  
 (6) this witness was originally listed for Tuesday of this week  
 (7) We looked - then thought he was going to be on Wednesday  
 We  
 (8) now thought he was going to be on today I certainly don t  
 (9) want to switch back and I m not prepared to do him by  
 (10) telephone in order to allow Mr Petumenos an opportunity to  
 (11) brief this I don t think it s as complicated an issue and  
 (12) we re prepared to argue it today  
 (13) THE COURT Tell me what the argument is  
 (14) MR CLOUGH There was an agreement between Chugach and  
 (15) Exxon to reimburse a variety of expenses related to the oil  
 (16) spill  
 (17) THE COURT That s what the contract said  
 (18) MR CLOUGH Yes we have listed the contract  
 (19) THE COURT Says that the language is this is to  
 (20) reimburse  
 (21) MR CLOUGH Absolutely it contains a couple of  
 ( ) provisions with it It contains one express provision saying  
 ( ) it pays this person that person lists them out by name It  
 ( ) also says beyond that there s a provision where it adds a ten  
 ( ) percent general overhead charge on top of all of that

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(1) Now the claim being asserted by Mr. Black is essentially  
 (2) for \$122,000 for his own time and expenses. Now Mr. Black  
 (3) the evidence will show dealt with Exxon on this particular  
 (4) agreement worked with Exxon on the matters that the  
 agreement  
 (5) covered and our evidence will show that we thought we were  
 (6) paying for his time by that ten percent general overhead  
 (7) charge. We thought this was something that had been paid  
 (8) The expressed defense of accord and satisfaction is not  
 (9) listed in our complaint - excuse me in our answer. However  
 (10) we have pled setoff. We have pled settlement and release.  
 (11) Also under Gilbert vs. Olsen if worse came to worse if we were  
 (12) looking at a pure accord and satisfaction.  
 (13) I would move to amend the pleadings to include the accord  
 (14) and satisfaction defense. What's even more significant on a  
 (15) purely relevance argument this gentleman just for his own  
 (16) time is asserting \$122,300 for a claim. Originally had been  
 (17) closer to 200,000. They cut it down just this week. The  
 (18) entire amount paid under that contract for the 15 people he was  
 (19) supervising was 122,600 and the evidence I believe will show  
 (20) that they never once mentioned to Exxon through the course of  
 (21) all those negotiations that for this one gentleman they were  
 (22) planning to make a request equal to what the entire 15 people  
 (23) that were being compensated under the contract under his  
 (24) supervision on which he was dealing with Exxon. We feel this  
 (25) was - this is one. It's relevant to the issue of whether his

(1) hired specifically to manage the lands advise the corporation  
 (2) as to what they should do and what the land management  
 issues  
 (3) that were raised concerned. So it has got nothing to do with  
 (4) the contract.  
 (5) The cuts that we made that Mr. Clough alludes to relate to  
 (6) this Court's order to make sure that litigation related  
 (7) materials litigation related expenses not be presented before  
 (8) the jury. And there were times when the accounting was such  
 (9) that we had to cut things that were not litigation related but  
 (10) because the accounting didn't track it separately well enough  
 (11) we felt it was improper to put it in front of the jury if it  
 (12) contained a little of both and we couldn't clearly indicate  
 (13) which it was so that had you know nothing to do with these  
 (14) contract principals.  
 (15) So I don't think it's specifically pled. I think  
 (16) Mr. Clough is trying to bootstrap things related to TAPA and  
 (17) some other things that were pled into this situation. The  
 (18) point is it's sufficiently complicated. It's going to be  
 (19) hard. There's back and forth. You've got to see the  
 (20) contract. You've got to hear the law on accord and  
 (21) satisfaction and contract defenses and how it must be pled and  
 (22) I didn't see how we were going to be able to do that at the  
 (23) bench and all I was attempting to do now is get it scheduled  
 (24) not resolve it.  
 (25) THE COURT Give me - give me a brief summary of what

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(1) time claim might be exaggerated and two we feel we have  
 paid  
 (2) for this already we feel by making this particular claim  
 (3) They have opened the door  
 (4) MR. PETUMENOS I obviously would have a response if  
 (5) you want to argue the whole thing now  
 (6) THE COURT Go ahead  
 (7) MR. PETUMENOS You have to see the contract. It's  
 (8) not as Mr. Clough represents. There's a - this contract was  
 (9) limited by Exxon to include OSRT related projects. Exxon was  
 (10) not opening the door to all management of the oil spill of the  
 (11) Chugach Alaska Corporation by entering into this contract with  
 (12) Exxon. The contract benefitted Exxon in that it put landowner  
 (13) input into the survey process and it was understood that there  
 (14) might have to be some administration of these people in the  
 (15) field. But Mr. Black's position with Chugach was not related  
 (16) to reporting to Exxon not related to working with Exxon to  
 (17) advise them about what was going on. Mr. Black's duties were  
 (18) to assist the corporation and his duties and loyalties were to  
 (19) the corporation and there are provisions of the contract that  
 (20) limited and exclude general management issues related to the  
 (21) corporation.  
 (22) Mr. Black worked with the United States government with  
 (23) the Forest Service trying to determine what the situation  
 (24) was. He covered archaeological issues. He dealt way outside  
 (25) the contract and its - and its purpose as a management person

(1) the law as you see it on accord and satisfaction and in a  
 (2) notice - notice pleading case like this. Generally all  
 (3) requires fair notice of what the defenses will be.  
 (4) MR. PETUMENOS Accord and satisfaction is an  
 (5) affirmative defense they must establish by the preponderance  
 of  
 (6) the evidence. It is subject to discovery. It is subject to a  
 (7) determination of whether or not the party when they signed the  
 (8) documents or exchanged letters or accepted payment could  
 (9) reasonably be said to be settling the claim that's before the  
 (10) jury now. The conversations surrounding the exchange of  
 (11) letters that Mr. Clough wants to put forward all of that would  
 (12) be appropriately the subject of accord and satisfaction type  
 (13) discovery.  
 (14) We have to have sufficient notice that when they said oh  
 (15) there were settlements. My goodness there were TAPA  
 (16) settlements there was a Chugach fishery settlement for 9.2  
 (17) million dollars. There was all sorts of settlements in this  
 (18) case. If they wanted to plead accord and satisfaction as to  
 (19) Chugach's administrative claims they had several opportunities  
 (20) to do it. And the answer which you remember was a subject of  
 (21) a fair amount of back and forth this winter when we said  
 (22) where's your answer please give us your answer we're going  
 (23) to move to default you please give us your answer we had  
 (24) discussion about the minute order. They finally got it. It's  
 (25) not there. We had order 40 where the specific factual issues

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(1) to be tried So if the parties -- if there's any doubt we'd  
 (2) be able to tell what the issues were It's not there  
 (3) So I don't think that they -- it's a notice pleading state  
 (4) but in a case like this which is vastly complex and voluminous  
 (5) amount of discovery to conduct and numerous opportunities  
 (6) we've  
 (7) had to deal with one another I think simply the situation  
 (8) Exxon finds themselves in just before they get ready to  
 (9) cross examine the witness they think here's a theory  
 (10) let's try this and that's what happened  
 (11) I think it's -- I won't tell you you're not without  
 (12) discretion midtrial in a case like this to do it but I don't  
 (13) think it would be good use of your discretion to allow it  
 (14) THE COURT Thanks counsel  
 (15) MR CLOUGH very briefly all right?  
 (16) MR CLOUGH Very briefly Your Honor  
 (17) MR PETUMENOS Just one thing on the telephonic  
 (18) thing that was just a suggestion If Mr Clough wanted to  
 (19) agree to it It's unfortunate that I raised something with  
 (20) counsel and say oh we could try to do it by telephone have a  
 (21) huge objection If he wants to object to by telephone that's  
 (22) fine  
 (23) THE COURT Fine that solves one of my problems  
 (24) MR CLOUGH Mr Petumenos keeps talking a lot about  
 (25) accord and satisfaction What he's saying he doesn't want  
 (26) Mr Black to testify today I have our answer right here It

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(1) just plead settlement and release  
 (2) THE COURT Pleads what?  
 (3) MR CLOUGH Claims by some persons may have been --  
 (4) or have been settled and released We have a cover letter  
 (5) They went through a long process including Mr Black where  
 (6) they went through the invoices and made the amount of  
 (7) judgments  
 (8) back and forth There's a cover letter Here's what we agreed  
 (9) on This is what we owed you and no more That's a settlement  
 (10) and release  
 (11) Additionally we talk about -- we have a pleading here We  
 (12) voluntarily paid claims for economic loss Do the words  
 (13) accord and satisfaction appear there? Well no they  
 (14) don't Am I entitled -- if it turns out under the technical  
 (15) rules this is an accord and satisfies not a voluntarily  
 (16) release even after judgment we're not at that stage yet yes  
 (17) that's Gilbert V Olsen that's been the law here in the state  
 (18) for a long time  
 (19) THE COURT I know counsel I see this as a factual  
 (20) matter That's -- that first I don't -- this is the way I see  
 (21) it just in a general sense The pleading issue certainly  
 (22) would not keep a legitimate cross examination under -- under  
 (23) the circumstances that have been described to me from being  
 (24) raised in the trial That's what I believe I will find after I  
 (25) read your pleadings  
 (26) Second this looks like a factual issue to me It looked

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(1) like -- when I dealt with this in a dispositive motion context  
 (2) these things looked like factual issues to me and I felt that  
 (3) they should be brought to my attention before the jury heard  
 (4) anything which is exactly what you're doing So I applaud you  
 (5) for that but I -- I have a feeling that -- that all this is  
 (6) over After all the pleadings is in and the arguments are  
 (7) made that this is simply going to be another factual issue  
 (8) that's going to have to be determined on the basis of direct  
 (9) and full fair cross examination which may very well include  
 (10) this contract and payments made  
 (11) So -- but who am I to keep you from -- from briefing  
 (12) issues and who am I to say that you have to stick to a  
 (13) schedule that you've changed so many times in the past and  
 (14) appear to be doing every day So the answer is yes you can  
 (15) take the witness off -- off the presentation list now You can  
 (16) present him later I'll listen to your briefing I'll do it  
 (17) on your schedule that's convenient to both of you You will  
 (18) not present the witness by telephone You will present the  
 (19) witness live  
 (20) You may want to take a look at this issue and see if it's  
 (21) really worth all this  
 (22) MR CLOUGH Thank you Your Honor  
 (23) THE COURT So what does that do to the presentation  
 (24) of the evidence today though?  
 (25) MR PETUMENOS We have a full presentation

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(1) THE COURT Good that's good  
 (2) MR PETUMENOS Full experience for the jury  
 (3) THE COURT Anything else?  
 (4) MR DIAMOND No Your Honor  
 (5) MR STOLL Thank you Your Honor  
 (6) THE COURT Well you're welcome  
 (7) Why are you getting up? We're going to get the jury right  
 (8) back in here I don't want to make these breaks last too  
 (9) long  
 (10) MR STOLL Good we'll sit down  
 (11) (Jury in at a m )  
 (12) MR FORTIER Your Honor plaintiffs call Mr Charles  
 (13) Homan  
 (14) THE COURT The jury is present counsel  
 (15) THE CLERK Sir can you attach the microphone to your  
 (16) tie and remain standing for the oath? Raise your right hand  
 (17) (The Witness Is Sworn)  
 (18) THE CLERK Please be seated Sir for the record I  
 (19) need you to state your full name  
 (20) A My name is Charles E Homan H o m a n  
 (21) THE CLERK And your occupation?  
 (22) A I'm a general contractor and consultant  
 (23) THE CLERK Thank you  
 (24) DIRECT EXAMINATION OF CHARLES F HOMAN  
 (25) BY MR FORTIER

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- (1) Q Good morning Mr Homan  
 (2) A Good morning  
 (3) Q Mr Homan can you tell the jury a little bit about  
 (4) yourself please?  
 (5) A Yes I m basically – well start with my educational  
 (6) background I am a graduate of Central Washington University  
 (7) in Ellensburg Washington graduated there in 1958 with a  
 (8) Bachelor of Arts degree in economics minors in business and  
 (9) geography that type thing And from there I moved into the  
 (10) banking field in 1959 started working for the Old National  
 (11) Bank and commenced with my training in that field as a  
 (12) management trainee In that particular job and when I moved  
 (13) to Alaska I was – participated in the American Institute of  
 (14) Banking which is a professional trade organization for the  
 (15) education of people in banking institutions  
 (16) Q Mr Homan let me interrupt for a moment When did you  
 (17) move to Alaska?  
 (18) A 1963  
 (19) Q And did you go to work for a bank when you moved up here?  
 (20) A Yes I did I went to work for National Bank of Alaska  
 (21) Q And could you continue with your – with your history?  
 ( ) A And from there I – when I arrived here I worked for  
 ( ) National Bank of Alaska for approximately six years and at  
 ( ) that time I continued my education in the field of banking  
 ( ) earning the prestandard and standard certificates offered by

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- (1) the American Institute of Banking and then I specialized into  
 ( ) the field of mortgage banking where I got – graduated from  
 (3) the graduate school of Northwestern University at Evanston  
 (4) Illinois I worked for National Bank of Alaska for – until  
 (5) 1969 when I joined the – what was then called the Matanuska  
 (6) Valley Bank and which later was to become Alaska Bank of  
 (7) Commerce and eventually First Interstate Bank of Alaska  
 (8) In that capacity first in the National Bank of Alaska I  
 (9) worked in the real estate department managed – became the  
 (10) assistant manager We handled primarily home loans in that  
 (11) particular business but we also expanded into financing  
 (1 ) apartments and commercial buildings I was directly  
 (13) responsible for most all of the interim construction financing  
 (14) for both new homes and on commercial buildings  
 (15) When I moved over to the Matanuska Valley Bank I was  
 (16) manager of their home loan department and their mortgage  
 (17) loan  
 (1 ) originations and we provided the opportunity for people to buy  
 (13) homes and get mortgages In that capacity I also developed  
 (19) outlets for commercial buildings and financed multifamily  
 ( ) projects both through the HUD FHA program and through the  
 ( ) conventional sources such as New York Life Insurance  
 ( ) Company  
 ( ) From there when the – the bank in order to increase its  
 ( ) capitalization sold the mortgage department in 1972 is my  
 ( ) recollection and the whole department was acquired by what  
 ( ) was  
 (23) Rainier Mortgage Company It no longer exists as such  
 ( ) because

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- (1) it was part of the acquisition that occurred with Bank of  
 (2) America when they bought the Rainier National Bank in Seattle  
 (3) Q Mr Homan let me interrupt for just a moment You have  
 (4) been a banking officer for a number of years is that correct?  
 (5) A That s correct  
 (6) Q And that would be a lending officer?  
 (7) A I ve always been a lending officer in practically all of  
 (8) that experience  
 (9) Q And that would be for a period of time in 1963 until –  
 (10) until when?  
 (11) A In Alaska from 1963 until – with an institution till 1989  
 (1 ) Q Okay And have you worked as a senior loan officer?  
 (13) A Well that s – I was pretty well designated that from –  
 (14) certainly from 1970s on I was considered a senior real estate  
 (15) loan officer  
 (16) Q Now does a senior loan officer senior real estate loan  
 (17) officer work in the area of making loans to people for real  
 (18) estate?  
 (19) A That s our primary activity  
 (20) Q And does that include examining real estate before you make  
 (21) the loan on it?  
 ( ) A That is correct  
 ( ) Q Would – as a senior real estate loan officer have you  
 ( ) examined the collateral that is being offered in order to  
 (23) assess the risk of the property?

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- (1) A That is correct We examine to determine the risk of the  
 ( ) property or our perception of the risk  
 (3) Q Okay And that s some thing you ve been doing for how  
 (4) many  
 (5) years Mr Homan?  
 (6) A Thirty years  
 (7) Q In addition to your work experience do you hold  
 (8) certifications?  
 (9) A Yes I do I was – through my work history I was  
 (10) approved as a Fannie Mae appraiser Federal National  
 (11) Mortgage  
 (12) Association when they entered into the conventional loan  
 (13) programs required approval of the appraisers I reached that  
 (14) goal and then I also was approved as a Fannie Mae  
 (15) underwriter  
 (16) meaning that I could underwrite loans to be sold through the  
 (17) Federal National Mortgage Association in the secondary  
 (18) mortgage  
 (19) market  
 (20) As I said I graduated from the School of Mortgage  
 (21) Banking I am also a certified review appraiser I hold that  
 (22) designation with a professional organization National  
 (23) Association of Review Appraisers And I have been designated  
 ( ) as a certified underwriter with another professional  
 ( ) organization  
 ( ) Q In addition to that Mr Homan have you – do you have any  
 ( ) teaching experience?  
 ( ) A Yes I ve taught courses for the American Institute of  
 ( ) Banking in – at the community college Now it s part of UAA

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- (1) but at that time it was part of the community college and in  
 (2) mortgage lending and in construction finance  
 (3) Q Approximately how many courses have you taught Mr Homan?  
 (4) A Actually I've only taught about three courses  
 (5) Q Have those been at the University of Alaska?  
 (6) A They are what is now University of Alaska correct  
 (7) Q And in addition to the certifications and training do you  
 (8) have any other specialized training - excuse me certification  
 (9) and teaching do you have any specialized training in the area  
 (10) of real estate lending practices?  
 (11) A Well my - my training mostly is on the job I have taken  
 (12) numerous courses and attended a lot of seminars many  
 (13) different  
 (14) classes to become educated as to the requirements of - for  
 (15) lending institutions to meet both federal and state and for  
 (16) what is normal practice in the area of finance  
 (17) Q And Mr Homan are you presently working as a consultant?  
 (18) A Yes I am  
 (19) Q Can you - have you worked as a consultant in the area of  
 (20) real estate lending for a few years?  
 (21) A Yes I have  
 (22) Q How many years?  
 (23) A Actually I've been working as a consultant basically since  
 (24) about 1985 in conjunction with my other employment  
 (25) Q And in your experience as a real estate - or in your  
 (26) practice as a real estate consultant real estate lending

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- (1) consultant have you ever had any - any experiences with  
 (2) working with owners of contaminated property?  
 (3) A Yes I have  
 (4) Q Can you tell the jury about your experiences in that  
 (5) regard?  
 (6) A Well specifically the problem that is faced by owner of  
 (7) property that is contaminated -  
 (8) Q Excuse me Mr Homan explain to the jury one of the  
 (9) experiences you have had  
 (10) A That's what I'm going to do here. In this particular  
 (11) regard one case was for Mr Robert Navrot He owned a  
 (12) garage  
 (13) that - it's called Al's Carburetion on 88th - had a loan with  
 (14) Alaska U S A Federal Credit Union of about a balance of about  
 (15) \$700,000 and they had moved for foreclosure and had asked  
 (16) for  
 (17) relief from stay in the bankruptcy Mr Navrot consulted with  
 (18) me because he wanted to maintain his only means of livelihood  
 (19) which was operating the garage and we reviewed the situation  
 (20) at the garage and I noted the contamination the oil  
 (21) contamination and other types of problems there asked the -  
 (22) met with the officers at Alaska U S A and told them to come  
 (23) out and view the property which they did After their  
 (24) consultations review they reduced the loan balance or  
 (25) actually balance due to \$55,000 because they did not want to  
 (26) lose title to the property The major problem that's faced by  
 (27) a lending institution -

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- (1) MR DIAMOND Your Honor may we qualify the witness  
 (2) first before he begins giving substance of his testimony?  
 (3) MR FORTIER Your Honor I had a couple more  
 (4) questions that I was going to move to qualify I don't  
 (5) objection to the interruption  
 (6) BY MR FORTIER  
 (7) Q Mr Homan have you testified in state court as an expert  
 (8) witness on banking and lending practices previously?  
 (9) A Yes I have  
 (10) Q Could you just tell the name of the cases that you  
 (11) testified in?  
 (12) A I can't recall them all sitting here but the most - one  
 (13) of the larger cases was with Great Western Savings Bank -  
 (14) Q That was a state court case?  
 (15) A - versus Easley Construction and involved the Liberty  
 (16) Center where I - I was the expert witness for the bank and  
 (17) talked and set forth the typical bank practice with regards to  
 (18) making construction loans disbursement of funds on  
 (19) construction loans and handling those type of matters  
 (20) MR FORTIER Thank you Mr Homan  
 (21) Your Honor at this time we would move to qualify Mr -  
 (22) Mr Homan as an expert in the area of bank lending practices  
 (23) MR DIAMOND Your Honor I had thought that Mr Homan  
 (24) was being offered as an expert in the contaminated - or the  
 (25) collateral value of contaminated oil spill property If that's

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- (1) the purpose for which he's being offered I'd like to voir  
 (2) dire  
 (3) THE COURT Is it both counsel?  
 (4) MR FORTIER I will limit it Your Honor to bank  
 (5) lending practices with regard to contaminated collateral  
 (6) THE COURT So you want to question right counsel?  
 (7) MR DIAMOND I think I do yes  
 (8) THE COURT Yes  
 (9) VOIR DIRE EXAMINATION OF CHARLES E HOMAN  
 (10) BY MR DIAMOND  
 (11) Q Good morning Mr Homan  
 (12) A Good morning  
 (13) Q Let me introduce myself to you My name is Chuck Diamond  
 (14) one of the lawyers for the defendants here Exxon Corporation  
 (15) MR FORTIER Your Honor I'm sorry if I could  
 (16) interrupt at this point Would it be possible to perform the  
 (17) voir dire and make an offer of proof I suppose outside the  
 (18) presence of the jury?  
 (19) THE COURT I don't think that's necessary  
 (20) MR FORTIER Okay Your Honor Thank you  
 (21) BY MR DIAMOND  
 (22) Q I wore my banker suit today You're not currently a  
 (23) banker is that right?  
 (24) A Not on a full time basis I do make loans for - I work  
 (25) with Seattle Mortgage Company as a correspondent for them

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- (1) making typically fairly large commercial loans Just completed
- (2) an apartment house loan 146 unit building here in Anchorage
- (3) for Mr Lathrop Processed a number of HUD FHA loans for them
- (4) Q This is acting as a consultant currently?
- (5) A Yes
- (6) Q But your last employment as a bank loan officer was in
- (7) 1989 is that correct?
- (8) A That is correct with Home Savings Bank
- (9) Q And you - your current principal occupations are as a
- (10) self employed general contractor?
- (11) A That is correct
- (12) Q And is it also not true that you are a part time securities
- (13) and insurance salesman?
- (14) A That is also right correct
- (15) Q You weren't involved in the banking business since the time
- (16) of the Exxon Valdez oil spill isn't that right?
- (17) A Not - no that's correct
- (18) Q And you never therefore in your career as a bank officer
- (19) had to deal with a proposed loan being presented by somebody
- (20) who had Prince William Sound property that was contaminated by
- (21) Exxon Valdez oil spill oil?
- (22) A I've never had such a request to handle
- (23) Q You were out of the industry by the time those things
- (24) happened?
- (25) A Well I want to reiterate that I'm still and I have still

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- (1) been active in accepting loan applications and processing them
- (2) through the financial institutions
- (3) Q How long has sort of environmental concerns and pollution
- (4) problems been at the forefront of thinking of bankers? That's
- (5) relatively recent is it not?
- (6) A Actually it is fairly recent However the mid 1980s is
- (7) really when the legislation that affected the requirements of
- (8) banks and then the impacts of it have not - did not occur
- (9) until probably the mid 80s to late 80s
- (10) Q That's because in the mid to late 80s banks became
- (11) concerned that if they required collateral they loaned on in
- (12) foreclosure they might get stuck with clean up
- (13) responsibilities?
- (14) A Exactly
- (15) Q And as a result the banking institutions in the late 80s
- (16) began requiring their customers to fill out environmental
- (17) questionnaires and the like?
- (18) A That's correct Generally most of those things were
- (19) instituted in - well we were doing that in 1989 at Home
- (20) Savings Bank when the FDIC moved in and seized the bank
- (21) Q That was your last job for a bank it was for Home Savings?
- (22) A That is correct
- (23) Q Did you continue working for Home Savings after the
- (24) regulators took over?
- (25) A I was there for a period of time

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- (1) Q The bank was under supervision of the regulators before the
- (2) takeover was it not?
- (3) A Actual direct supervision was only for a period of about
- (4) two or three months before I left there and closure occurred
- (5) another about eight or nine months later
- (6) Q The bank was having liquidity problems what we generally
- (7) regard as not having enough money on hand everyone before
- (8) the takeover?
- (9) A Insufficient capital requirements
- (10) Q And so during the two years 87 through - I'm sorry 86
- (11) and 87 well -
- (12) A 87 and -
- (13) Q 87 and 89 when you were at Home Home was not doing a
- (14) lot
- (15) of lending was it?
- (16) A On the contrary We were doing a great deal of lending and
- (17) that was why I was brought on board because of my expertise
- (18) in
- (19) commercial loan - real estate loans And we were making
- (20) commercial real estate loans and selling those through the
- (21) Federal Home Loan Bank Freddie Mac
- (22) Q Let me ask you during the two years you were at Home
- (23) before it was taken over were you ever presented with a
- (24) proposed loan commercial or industrial where the collateral
- (25) being proposed to secure the loan was contaminated by some
- (26) sort
- (27) of pollutant?
- (28) A The - can't actually answer that affirmative I've had

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- (1) several properties that were presented to me that I'm not sure
- (2) that it was at Home Savings Bank or not because we had a lot of
- (3) polluted properties that have been used for collateral lending
- (4) here particularly in the industrial areas
- (5) Q I'm asking you during your career as a banker at least for
- (6) the last two years 87 through 89 when you were at Home it
- (7) is true that you never had to value collateral that was being
- (8) presented for a loan that had been the subject of a spill or
- (9) other industrial contamination?
- (10) A That - no that wouldn't be true We had to look into
- (11) those issues and we turned down properties that - particularly
- (12) salvage yards and that type of thing where there was obvious
- (13) battery contamination and that type of problem
- (14) Q This was while you were at Home?
- (15) A Yeah
- (16) Q Did you ever - were you ever presented with a loan
- (17) commercial or industrial that was proposed to be secured by
- (18) land that had been the subject of oil contamination oil spill
- (19) contamination?
- (20) A Not that I can recollect
- (21) Q Okay Prior to being at Home you were with Alaska
- (22) Continental Bank?
- (23) A That's right
- (24) Q That also is an institution that was taken over by
- (25) regulators?

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- (1) A That is correct  
 (2) Q You were there for what -  
 (3) A Six months roughly  
 (4) Q Six months During the course of your employment with  
 (5) Alaska Continent did you ever - were you ever put in a  
 (6) position where you had to value the collateral being presented  
 (7) in connection with a proposed loan where the land had been  
 (8) contaminated by oil?  
 (9) A That I - I believe in the case of a particular loan that  
 (10) I'm thinking of some people name of Forret (phonetic) that  
 (11) was one of our considerations and we weren't able to extend  
 (12) credit on it  
 (13) Q What kind of property is that sir?  
 (14) A It's still here It's a mini storage area park out here  
 (15) south of town off Arctic  
 (16) Q What kind of pollution?  
 (17) A They had some oil contamination on the property at the  
 (18) time as well as other problems that we were concerned about  
 (19) Q What were the other problems?  
 (20) A I can't recall all of them This is quite a while ago  
 (21) Q Did you get involved in evaluating the likely cost of  
 (22) rehabilitating the property from a contamination sense?  
 (23) A It didn't go that far because if there was contamination  
 (24) that was enough to scare us away  
 (25) Q And your prior employment was with Security National Bank?

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- (1) A I was at Security National Bank for a short time on a -  
 (2) basically as a contractor because I sold the mortgage company  
 (3) in which I was an owner And they were having severe financial  
 (4) problems asked me to come on board to handle those  
 problems  
 (5) Q That takes us back to mid 1986?  
 (6) A That's correct  
 (7) Q While you were with Security Pacific Bank?  
 (8) A Security National  
 (9) Q I'm sorry Security National Did you ever have to  
 (10) determine the value of real estate that was being proposed as  
 (11) collateral that had been the subject of oil spill  
 (12) contamination?  
 (13) A Not that I'm aware of That was a very short tenure  
 (14) there  
 (15) Q How about during the five or so years that you were - I  
 (16) guess longer than five or so years what from about February  
 (17) 1984 - well only two years February 84 through 86 you  
 (18) were out on your own?  
 (19) A That's correct  
 (20) Q As a mortgage banker?  
 (21) A That's correct  
 (22) Q During that period of time did you ever represent either a  
 (23) borrower or a lender in connection with a proposed loan that  
 (24) was planned to be secured by contaminated property?  
 (25) A We had presented to us on that occasion in that period of

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- (1) time a number of properties that had contamination problems  
 (2) and that was because we were the - sort of the source of last  
 (3) resort because they had tried the other lenders in the area  
 (4) and couldn't get financing And it was obvious that if you had  
 (5) a contaminated property that no outside lender lending  
 (6) institution was going to consider - they were going to give  
 (7) very definite consideration to that problem  
 (8) Q How much such properties were you involved in?  
 (9) A I don't know We had probably half a dozen or such a  
 (10) manner as that  
 (11) Q Were any contaminated as a result of spilled oil?  
 (12) A Most of them a lot of them would have involved like I  
 (13) can recall several of them were service stations that had that  
 (14) type of credit where they had oil contamination as a result of  
 (15) underground storage tank failures  
 (16) Q Leaks into the subsurface?  
 (17) A That's correct  
 (18) MR DIAMOND Nothing further Your Honor  
 (19) THE COURT Let me understand what you're offering him  
 (20) for counsel As an expert testifying as to real estate  
 (21) lending practices as they relate to circumstances involving  
 (22) environmental contamination?  
 (23) MR FORTIER That's correct Your Honor  
 (24) MR DIAMOND Your Honor we have no objection for  
 (25) that purpose so long as the witness is not going to get

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- (1) involved testifying about these specific properties  
 (2) THE COURT Well we'll deal - if that comes up  
 (3) counsel I can deal with it  
 (4) MR FORTIER Mr Homan I have a couple more  
 (5) introductory questions for you I suppose One of them  
 (6) whether or not - I'm sorry Your Honor did you -  
 (7) THE COURT That's fine  
 (8) DIRECT EXAMINATION OF CHARLES E HOMAN (Resumed)  
 (9) BY MR FORTIER  
 (10) Q Were you involved during your period of time as a bank  
 (11) lending officer with making loans to Native corporations?  
 (12) A Yes I've been involved with Native corporations  
 (13) Q Was one of those Native corporations English Bay  
 (14) Corporation?  
 (15) A That's correct They had a financing at Security National  
 (16) Bank  
 (17) Q And that was before the oil spill?  
 (18) A That is correct  
 (19) Q Okay Now with regard to what you've been called to  
 (20) testify for today can you tell the jury who retained you?  
 (21) A I was retained by English Bay Corporation Port Graham  
 (22) Corporations and Chenega  
 (23) Q That would be Chenega Corporation?  
 (24) A Chenega Corporation  
 (25) Q And what was the scope of the engagement? What were you

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(1) ask d to do?  
 ( ) A I was asked specifically to address the problems of  
 (3) obtaining financing on properties that had been contaminated  
 by  
 (4) oil  
 (5) Q And can you tell the jury what you did in order to -- to  
 (6) undertake this task to do this thing?  
 (7) A Well actually having had quite a bit of experience  
 (8) with -- in the past with what happens when you have  
 (9) contamination I -- that s my background my understanding my  
 (10) knowledge And also the professional organizations which I am  
 (11) a member continuously provide us with like the National  
 (12) Association of Review Appraisers provide us with information  
 (13) relative to federal regulators and the like on meeting  
 (14) contamination requirements and what those are and what  
 things  
 (15) to be aware of in our review of properties  
 (16) With that background I called five lending institutions  
 (17) that I -- officers I knew and discussed with them their  
 (18) attitudes about lending and their institution s attitude about  
 (19) lending on properties that had contaminated oil spill  
 (20) situations and --  
 ( ) Q And approximately what period of time are you doing this?  
 ( ) Excuse me Mr Homan  
 ( ) A Well I did it in two periods at the specific request of  
 (4) counsel The first was in February -- January February of  
 (5) 1993 and then later it was again about in February of 1994

(1) foolhardy to take on a piece of property that had contamination  
 ( ) on it without a thorough investigation and knowledge that it  
 (3) could be cleaned up and what the cost of that cleanup is  
 (4) Q Mr Homan in your experience as a banker and as a  
 (5) consultant can you tell the jury how lenders discover whether  
 (6) or not borrowers have contamination on their property?  
 (7) A Well many institutions require that you do what is call-d  
 (8) a phase one or level one environmental study of the property  
 (9) Q And what is that Mr Homan?  
 (10) A That basically is a historic study of the site  
 (11) Q And this is the collateral that s being proposed by the  
 ( ) borrower is that --  
 (13) A That s the collateral being proposed by the borrower For  
 (14) example this loan that I was referring to that I just was  
 (15) involved with two million plus dollar loan the life insurance  
 (16) company in order to fund that loan required that a registered  
 (17) engineer perform a study He had to go back actually they  
 (18) wanted 50 year history of the property Now 50 year history  
 (19) of a property in Anchorage Alaska really isn t possible in  
 ( ) most areas and it wasn t in that case but they have to go  
 (21) back on the title find out who owned the property what it was  
 ( ) used for and define that in a written report They have to do  
 ( ) aerial photos on site photos determine if by visual  
 ( ) observation there s any obvious contamination Then they have  
 ( ) to reach out a half a mile radius to determine if there s

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(1) Discuss-d with them what their positions were On both  
 ( ) occasions all of these lending officers were very specific in  
 (3) saying that they would not lend on properties that had oil  
 (4) contamination They would require cleanup before that could  
 (5) occur or any loans could be made  
 (6) Q Now Mr Homan on either of these occasions did you tell  
 (7) the bankers that you were inquiring as to property that had oil  
 (8) contamination crude oil contamination?  
 (9) A I mentioned crude oil contamination yes  
 (10) Q And did that make a difference to the bankers?  
 (11) A No No it was a perception of contamination that s  
 ( ) primarily the problem  
 (13) Q What I d like to do now for a moment Mr Homan is refer  
 (14) you back to your own experience with -- as a banker Why don t  
 (15) bankers based upon your experience like to make loans on  
 (16) contaminated property?  
 (17) A B cause we -- it s an unknown risk Risk evaluation to a  
 (18) banker is the most critical issue and there are many risks  
 (19) As obviously occurred in Anchorage the oil belt area in the  
 ( ) late 1980s when we had the downturn in the economy and we  
 lost  
 ( ) the vast majority of your lending institutions because of the  
 ( ) economic circumstances that occurred Those were risks that  
 ( ) in many cases the bankers could not foresee but in taking on  
 ( ) a risk of having a contaminated property is something -- you  
 ( ) know you ve got that and it would be a -- in my opinion

(1) anything out there that might affect the value of that  
 ( ) property  
 (3) Q The --  
 (4) A And very specifically they want to know whether that -- if  
 (5) there s contamination out there which there was in this case  
 (6) whether that groundwater is being contaminated that would  
 (7) surface or could cause contamination of the site That s the  
 (8) kind of study that is required  
 (9) Q Now what you ve just described is what a phase one audit  
 (10) is is that correct?  
 (11) A That -- that is correct  
 (12) Q And you indicated Mr Homan that it was a half a mile  
 (13) radius?  
 (14) A That s correct  
 (15) Q This is a half a mile radius around the collateral that s  
 (16) being proposed is that right?  
 (17) A That is correct It s a radius around the collateral being  
 (18) proposed  
 (19) Q Okay Now have you ever heard of the term level two  
 ( ) audit?  
 ( ) A Yes Level two is the next step up  
 ( ) Q What is a level two audit?  
 ( ) A A level two audit is where they suspect or see or find that  
 ( ) there s potential contamination and they go out and they  
 ( ) drill If it s ground contamination oil contamination they

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- (1) will drill to determine its presence in the ground what  
 (2) extent take soil samples It s extremely expensive  
 (3) Q Now in your experience as a – both as banker and as a  
 (4) consultant Mr Homan do you know whether or not there – or  
 (5) has it been your experience that before a bank will loan on  
 (6) suspected contaminated property it will require both a phase  
 (7) one and a phase two audit?  
 (8) A Well they may It depends on what s discovered on phase  
 (9) one Phase one is when you find out if there might be a  
 (10) problem and then you usually go into phase two if you do have  
 (11) a problem  
 (12) Q Suppose you re the owner of a contaminated property or  
 (13) property that you know has contamination such as – the source  
 (14) may be crude oil from an oil spill?  
 (15) A Right  
 (16) Q And suppose that that person were to come to you as the  
 (17) banker and say I would like to borrow on this collateral what  
 (18) would you require that individual to do?  
 (19) A I would typically require a phase two environmental audit  
 (20) Which means I d require them to go out to determine if there  
 (21) was any oil contamination on that property still existent  
 (22) that might cause problems or might end up in water in the  
 (23) water contaminant the water the viability of the property  
 (24) We would go from there then We would want to know if they –  
 (25) there was if there was presence of hydrocarbons or that type

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- (1) of thing oil what the cost of that cleanup would be before we  
 (2) would ever consider financing it  
 (3) Q And after you determine the cost of the cleanup then  
 (4) would you finance the property although knowing it was  
 (5) contaminated Mr Homan?  
 (6) A Typically they would require – and the lenders I talked  
 (7) to they would definitely require the cleanup be completed  
 (8) before any funding was done on the property An example of  
 (9) that might be a job that my – I just completed for a – for  
 (10) Fred Bailey on what used to be Bailey s Rent All on the corner  
 (11) of Northern Lights and A street the National Bank of Alaska  
 (12) required a level one audit on that site in order for the  
 (13) borrower to acquire financing The borrower in that case  
 (14) happened to be a lessee of Mr Bailey and I agreed – we  
 (15) agreed – this has been – started like three years ago and we  
 (16) agreed to go in our construction company and handle this  
 (17) matter for him because he no longer lives in the area At the  
 (18) request of the bank the lessee requested the owner  
 (19) Mr Bailey to do that  
 (20) We went ahead and acquired the services of an engineering  
 (21) firm Howard Gray Engineer and proceeded to remove three  
 (22) tanks These tanks the engineer found had no leaks but  
 (23) there had been oil spilled around those tanks over the years  
 (24) so they – the amount of contamination just slightly exceeded  
 (25) those that was required The cost of removing the tanks was

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- (1) about \$6 000 but the cost of engineering and the reports that  
 (2) had to be filed with the Department of Environmental  
 (3) Conservation for the State of Alaska took the better part of  
 (4) two years and about \$13 500 even though there was no  
 (5) significant contamination properties  
 (6) Q And Mr Homan how large a piece of property was this?  
 (7) A This was a fairly good sized piece of property on the  
 (8) corner of – I m not sure Probably 20 000 square feet  
 (9) Q So about a half an acre then?  
 (10) A Yeah  
 (11) Q And it was \$13 000 in order to comply with the DEC studies?  
 (12) A Just to do the studies yeah  
 (13) Q On a half acre parcel of contaminated property?  
 (14) A That s correct  
 (15) Q Now in contacting the banks did you receive any  
 (16) information from any bank regarding voluntary reporting of the  
 (17) condition of environmental risk like an environmental risk  
 (18) questionnaire?  
 (19) A Yes I did  
 (20) Q Could I have the Elmo for a moment please?  
 (21) Mr Homan I m going to – hope like heck I can get this to  
 (22) work  
 (23) MR STOLL Let me show you  
 (24) MR FORTIER Thank you  
 (25) BY MR FORTIER

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- (1) Q Mr Homan I m showing you on the screen there what s been  
 (2) marked for purposes of identification PX1223 It is a  
 (3) document that s been titled Environmental Risk Questionnaire  
 (4) Can you tell us where you received this document?  
 (5) A I received that from Richard Brittain at First National  
 (6) Bank of Anchorage – he s a loan officer there involved in real  
 (7) estate – said that this is what they – ask their borrowers to  
 (8) complete when they re applying for real estate loans  
 (9) Q Is this a document that you received when you made an  
 (10) inquiry regarding whether or not banks would loan on  
 (11) contaminated property or property contaminated by the Exxon  
 (12) Valdez oil spill?  
 (13) A Yes sir that is one of those documents I received  
 (14) Q I don t think I m going to get this in any better focus  
 (15) A I can t read it to be honest with you  
 (16) Q Mr Homan I d like you to just point out a few things to  
 (17) the jury if you could Was it your understanding that this  
 (18) was a form that the First National Bank of Anchorage required  
 (19) to be voluntarily disclosed or filled out by any borrowers?  
 (20) A That s correct It was a form that they required to be  
 (21) completed voluntarily so that – as part of their risk  
 (22) analysis  
 (23) Q Okay And some of the questions I d like to refer you to  
 (24) Mr Homan the question number 3 – can you read that please?  
 (25) A I can t read it I mean I m sorry

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(1) THE COURT You can read it to him counsel  
 (2) MR FORTIER I thought it might be better  
 (3) THE COURT You can read it to him You can just read  
 (4) it  
 (5) MR FORTIER Okay  
 (6) BY MR FORTIER  
 (7) Q Question number three Mr Homan says have past owners  
 of  
 (8) the property or have you during your ownership of the property  
 (9) or adjacent owners of property ever handled produced or  
 (10) stored any hazardous substances or waste? Examples of some  
 (11) substances or materials are as follows Diesel fuel and  
 (12) gasoline  
 (13) Now is it your experience that there is a general duty to  
 (14) disclose the -- the handling production or storage of such  
 (15) materials as diesel fuel or gasoline on one s property when one  
 (16) is applying for a loan?  
 (17) A Yes yes  
 (18) MR DIAMOND Objection Your Honor as to duty No  
 (19) foundation Duty to disclose  
 (20) THE COURT The objection s overruled  
 (21) BY MR FORTIER  
 (22) Q And Mr Homan finally did you form an opinion regarding  
 (23) whether or not lands contaminated by the Exxon Valdez oil spill  
 (24) may be used as collateral?  
 (25) MR DIAMOND Your Honor I ll object as beyond the

(1) question  
 (2) A I believe that the value would be substantially reduced by  
 (3) the fact there was oil on the properties and would not be  
 (4) eligible for lending purposes  
 (5) THE COURT What information do you have at your  
 (6) disposal that leads you to that opinion?  
 (7) A Actually my basis is that I m aware because of the  
 (8) general knowledge of the public that there was oil  
 (9) contamination on the sites and on the properties And that oil  
 (10) contamination from what I ve been able to discern from -- on  
 (11) my own is that some of that contamination remains and until we  
 (12) had a level two environmental study on a particular property to  
 (13) determine that there was no remaining oil contamination then I  
 (14) would not want to be a loan officer nor was I -- the loan  
 (15) officers I discussed this matter with and talked to would in  
 (16) my opinion loan on those properties  
 (17) THE COURT Did you ask them specifically about the  
 (18) Exxon Valdez oil spill as it relates to these properties  
 (19) THE WITNESS No I did not  
 (20) THE COURT Counsel what -- this is an offer of  
 (21) proof If you want to ask him some questions you can  
 (22) MR FORTIER Your Honor if I could could I ask just  
 (23) a few more?  
 (24) THE COURT You have more?  
 (25) MR FORTIER I did have a couple more questions

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(1) scope of proffer and without foundation  
 (2) THE COURT Second objection now is sustained but how  
 (3) do you want me to treat this? Out of the presence of the jury  
 (4) or in the presence? I m asking you Mr Diamond  
 (5) MR DIAMOND I would prefer it do it without them  
 (6) THE COURT Out?  
 (7) MR DIAMOND Out  
 (8) THE COURT I wonder is the jury room being used?  
 (9) THE CLERK Yes it s being used  
 (10) THE COURT I tell you what I m going to let you mill  
 (11) around out there for a minute If you ll go out for just a  
 (12) second  
 (13) MR DIAMOND Your Honor perhaps we could just  
 (14) approach?  
 (15) THE COURT No I d rather do it outside the  
 (16) presence  
 (17) (Jury out at 10 34 a m )  
 (18) THE COURT I had to get a lemon drop counsel  
 (19) Excuse me  
 (20) All right The question was what counsel?  
 (21) MR FORTIER My question Your Honor is whether or  
 (22) not he formed an opinion as to whether or not the lands  
 (23) contaminated by the Exxon Valdez oil spill have a value as  
 (24) collateral  
 (25) THE COURT Just for the record sir answer that

(1) THE COURT Sure go ahead  
 (2) BY MR FORTIER  
 (3) Q Mr Homan in your view and based upon your exper i nce  
 do  
 (4) you know whether or not media coverage of an event would  
 (5) impact -- such as the Exxon Valdez let s say plays any role  
 (6) in whether or not a lending decision is made on a certain piece  
 (7) of property?  
 (8) MR DIAMOND Your Honor I m going to object as  
 (9) beyond the scope of this expert s report No mention of  
 (10) stigma media coverage or --  
 (11) MR FORTIER Let me -- I can take a bit longer if you  
 (12) want Your Honor  
 (13) THE COURT You can what?  
 (14) MR FORTIER I can ask a few other questions  
 (15) BY MR FORTIER  
 (16) Q Such as Mr Homan do you know whether or not the  
 (17) reputation of a property as contaminated property may affect  
 (18) its value as collateral?  
 (19) A Yes that would be my position  
 (20) Q And do you know whether or not media coverage impacts the  
 (21) reputation of the property?  
 (22) A I think it do s Because it would impact me as a loan  
 (23) officer and that s why it does impact me because I know th se  
 (24) properties have had oil contamination  
 (25) Q Okay So if you were to see something on TV a news show

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- (1) on TV about a piece of property that obtains - that has a  
 (2) certain reputation for contamination then you as a loan  
 (3) officer would be influenced by what you've seen when you  
 were  
 (4) being asked to make the loan is that correct?  
 (5) MR DIAMOND Objection leading  
 (6) THE COURT Definitely  
 (7) MR FORTIER Well it is leading Your Honor  
 (8) THE COURT But this is an offer of proof counsel so  
 (9) I'll allow the answer  
 (10) MR DIAMOND We can dispense with the question and  
 (11) answers then  
 (12) A Yes it would definitely impact a person I can't believe  
 (13) that a loan officer would want to walk into his - to his bank  
 (14) or his financial institution and say I made loans on this  
 (15) property that was oiled by the Exxon Valdez oil spill His  
 (16) reputation would suffer  
 (17) BY MR FORTIER  
 (18) Q Okay Now besides the media events are there - besides  
 (19) television events that cover - that cover say that provide  
 (20) reputation evidence on - or reputation to the bank are there  
 (21) other methods by which bankers obtain information concerning  
 (22) contamination reputation of a property?  
 (23) A Well we've already mentioned the level one but we also do  
 (24) on site inspections before we make loans or we're supposed  
 (25) to That's a criteria that is addressed very heavily in many

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- (1) of the new federal regulations governing appraisal and  
 (2) evaluation of collateral You have to go out to the site and  
 (3) look And you also have what's called a title report gives  
 (4) you a lot of information relative to the property  
 (5) Q Mr Homan do you know whether it's more likely or less  
 (6) likely that a banker would go out - would require a level one  
 (7) audit of property within the Exxon Valdez oil spill impacted  
 (8) area?  
 (9) A I would say it would require level two  
 (10) Q And why is that?  
 (11) A Because he already knows that history says there's already  
 (12) been oil there There's been crude oil spilled and if it's a  
 (13) known fact that you've got crude oil on this property and  
 (14) you're going to take it for collateral you might become the  
 (15) owner of it If you become the owner of it state statute is  
 (16) very explicit about responsibility for making all that public  
 (17) knowledge if you sell that property and you're not going to  
 (18) sell property that's got oil contamination  
 (19) Q And by you you mean the bank when it comes into  
 (20) possession?  
 (21) A Meaning the bank when I say you  
 (22) THE COURT Hold on Mr Diamond How long do you  
 (23) think you'll take on this?  
 (24) MR DIAMOND Ten minutes five minutes  
 (25) THE COURT Okay I'm going to have her take the jury

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- (1) back to the jury room  
 (2) BY MR DIAMOND  
 (3) Q Mr Homan when was your last trip out to Eyak to inspect?  
 (4) A I have not been to Eyak  
 (5) Q What?  
 (6) A I have not been to Eyak  
 (7) Q Ever?  
 (8) A I have not been  
 (9) Q And walked any of their shorelines?  
 (10) A No sir  
 (11) Q When was your last trip to Tatitlek to inspect the oiled  
 (12) condition of their shorelines?  
 (13) A I have never been there  
 (14) Q Never? Not in your entire life?  
 (15) A No not in my entire life  
 (16) MR STOLL There's no jury present Look over there  
 (17) there's nobody in the box over there  
 (18) THE COURT No harm in a reversal counsel  
 (19) BY MR DIAMOND  
 (20) Q You haven't inspected the shorelines of Chenega have you?  
 (21) A No sir  
 (22) Q And you haven't inspected the shorelines at Port Graham or  
 (23) English Bay?  
 (24) A I happened to have been to English Bay only because other  
 (25) things that I was working with on English Bay

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- (1) Q You didn't go there to inspect the degree of contamination  
 (2) by oil?  
 (3) A No sir  
 (4) Q What knowledge do you have about the percentage of the  
 (5) lands of any of those entities and the Chugach Alaska  
 (6) Corporation percentage of those entities shoreline that was  
 (7) subject to Exxon Valdez oil do you have any information on  
 (8) that?  
 (9) A No sir  
 (10) Q Just what you read in the newspaper?  
 (11) A That is correct  
 (12) Q What information do you have about the degree to which any  
 (13) of the lands that were oiled were heavily oiled?  
 (14) A Only what I read in the newspaper and what I've seen in  
 (15) print and that type of thing  
 (16) Q What investigation have you made concerning the level of  
 (17) remediation that's already been performed on any of these  
 (18) properties?  
 (19) A Beyond what has been publicized none  
 (20) Q What investigation if any have you made about the  
 (21) decisions by any regulators state or federal concerning  
 (22) whether additional cleanup is required under applicable state  
 (23) and federal law?  
 (24) A Beyond what is published in the media none  
 (25) Q Okay You really don't have any information concerning the

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- (1) state of these properties that s any more accurate any more
- (2) knowledgeable or any more thorough than what you presume
- (3) anybody in the jury to have?
- (4) A That is correct
- (5) MR DIAMOND Nothing further Your Honor
- (6) THE COURT What s the objection counsel?
- (7) MR DIAMOND No foundation for this expert for this
- (8) individual to render an opinion on whether these properties
- (9) have any collateral value To the extent that he s relying on
- (10) media coverage and stigma that s certainly beyond what he
- (11) was
- (12) offered for There s nothing in his report about that The
- (13) only opinion he renders in the written report is - concerns
- (14) his reactions as a banker to the potential cost of cleanup and
- (15) what that would do to the collateral value of this property
- (16) There s absolutely no foundation
- (17) THE COURT Was he deposed on this issue?
- (18) MR DIAMOND Was he deposed on this issue stigma
- (19) the notoriety?
- (20) THE COURT Yeah deposed on what lenders would
- (21) require on this specific kind of property
- (22) MR DIAMOND He had no knowledge about these
- (23) properties
- (24) THE COURT That s not my question His testimony
- (25) relates to what a lender would require in view of all of the
- (26) factual circumstances surrounding this property Since this

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- (1) MR PETUMENOS Not at all Your Honor I ll go back
- (2) to where I was
- (3) THE COURT The in court clerks have told me I won t
- (4) get any more lemon drops unless I give them a break so I have
- (5) to give them a break
- (6) (Recess from 10 45 a m to 1103 a m )
- (7) (Jury in at 11 03 a m )
- (8) THE CLERK This court now resumes its session
- (9) Please be seated
- (10) DIRECT EXAMINATION OF CHARLES E HOMAN (Resumed)
- (11) BY MR FORTIER
- (12) Q Mr Homan did you form an opinion as to whether or not
- (13) lands contaminated by Exxon Valdez - by the Exxon Valdez oil
- (14) spill have any value as collateral?
- (15) A Yes I did
- (16) Q Could you tell the jury what that is please?
- (17) A I - I don t believe they have value for collateral those
- (18) lands that were affected by the Exxon Valdez oil spill because
- (19) they have contamination
- (20) MR FORTIER Thank you No further questions Your
- (21) Honor - oh Your Honor I would move for the admission of
- (22) exhibit 1223 at this time
- (23) (Exhibit 1223 offered)
- (24) THE COURT What is the number?
- (25) MR FORTIER 1223 Your Honor

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- (1) property might be contaminated that s what his testimony goes
- (2) to Okay he was deposed on the issue wasn t he?
- (3) MR FORTIER He was Your Honor
- (4) MR DIAMOND Your Honor I m thinking It s been a
- (5) while since I ve read his transcript Only in the general
- (6) general sense of - I don t think he was asked any - may I
- (7) consult? I don t want to misrepresent
- (8) THE COURT Sure sure
- (9) MR PETUMENOS Judge while he s consulting could I
- (10) have my two cents?
- (11) MR DIAMOND I really can t do - I only have one ear
- (12) that works
- (13) THE COURT That s fair enough No the answer is
- (14) no
- (15) MR PETUMENOS How about after he finishes the
- (16) reading?
- (17) MR DIAMOND Your Honor Mr Lied who conducted the
- (18) deposition of Mr Homan advises me he was deposed about
- (19) whether he would be prepared to lend on property such as
- (20) this
- (21) and why He was not deposed on broader questions of the
- (22) extent
- (23) to which lending decisions would be influenced by reputation
- (24) and notoriety of the property
- (25) THE COURT I see what you mean I don t think that s
- (26) the critical issue counsel I m going to allow the question
- (27) Mr Petumenos do you want to give you two cents worth?

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- (1) THE COURT Any objection counsel?
- (2) MR DIAMOND Is that the questionnaire?
- (3) THE COURT 1223
- (4) MR DIAMOND No objection
- (5) THE COURT It s admitted 1223
- (6) (Exhibit 1223 received)
- (7) MR DIAMOND Hello again Mr Homan
- (8) CROSS EXAMINATION OF CHARLES E HOMAN
- (9) BY MR DIAMOND
- (10) Q You re of the opinion that these properties have no
- (11) collateral value is that correct?
- (12) A Those affected by the contamination that is correct
- (13) Q Can you tell the Ladies and Gentlemen of the Jury when the
- (14) last time you visited the Eyak properties was?
- (15) A I ve never visited any of the properties involved
- (16) Q Never visited the Eyak properties in your life?
- (17) A No sir
- (18) Q When was the last time you visited the Tatitlek properties?
- (19) A Never visited any of those properties
- (20) Q With the exception of a visit to English Bay properties for
- (21) an unrelated reason you ve never visited any of the properties
- (22) that we re litigating about in this case isn t that right?
- (23) A That is correct I have not been to the properties
- (24) Q Can you tell the jury what investigation you made - before
- (25) forming an opinion what kind of investigation did you make

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- (1) concerning the degree to which the properties that we are  
 (2) litigating over in this case were oiled?  
 (3) A The -- my investigations as I have previously pointed out  
 (4) is in this particular situation was the discussion with other  
 (5) lending officers which I knew and talked to those people and  
 (6) got their perceptions of what contamination creates as a risk  
 (7) or a perceived risk I know in my own experience as a lending  
 (8) officer that the fact that these properties had a perceived  
 (9) risk that was evident by the newspaper media that based upon  
 (10) that fact that without extreme and diligent engineering being  
 (11) performed to determine the exact extent of that oil  
 (12) contamination these properties would not be used for  
 (13) collateral on lending -- normal lending practice  
 (14) Q Okay thank you but that wasn't my question My question  
 (15) was Isn't it true that you have made no investigation or made  
 (16) no effort to inform yourself in a knowledgeable and thorough  
 (17) way about the degree to which any of these properties got  
 (18) oiled?  
 (19) A That is --  
 (20) Q Isn't that true?  
 (21) A That is correct I have not  
 (22) Q All right And wouldn't that be a factor that a prudent  
 (23) banker would want to take into account before turning  
 (24) somebody  
 (25) down on a loan how badly their property was affected by an  
 (26) event like this?

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- (1) A In my opinion no The perceived situation is what usually  
 (2) would lead to the turndown  
 (3) Q So you think that whether a bank would or would not loan on  
 (4) these properties really would have nothing to do with the  
 (5) degree of oiling is that your opinion today?  
 (6) A That would be my opinion as to what would happen before --  
 (7) extensive engineering studies were provided  
 (8) Q Mr Homan that wasn't your opinion when you were  
 (9) deposed  
 (10) in this case?  
 (11) A I believe it was  
 (12) Q Are you sure?  
 (13) A Well that's what I believe  
 (14) Q I've put your deposition in front of you You were deposed  
 (15) on -- over the course of two days in this case were you not?  
 (16) A Two occasions yes  
 (17) Q And there was an attorney representing the Native  
 (18) corporations present on your behalf?  
 (19) A That is correct  
 (20) Q And you understood that the deposition was just like giving  
 (21) testimony in court did you not?  
 (22) A That's correct  
 (23) Q Take a look at page 37 of your deposition Did you not  
 (24) state sir that whether a bank would lend on these properties  
 (25) would depend upon the degree of contamination?  
 (26) A That's -- that is correct That's what I've said this

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- (1) morning  
 (2) Q So the degree to which these properties were impacted by  
 (3) oil is a factor is it not in whether a bank would lend on  
 (4) them?  
 (5) A The degree -- yes the degree of contamination is going to  
 (6) ultimately determine that but that can only be after  
 (7) engineering studies were completed and the property is found  
 (8) to  
 (9) be free of oil  
 (10) Q You're not telling the jury are you that if a bank  
 (11) conducted a -- an investigation of for example the Eyak  
 (12) properties and determined that they were never impacted by oil  
 (13) that bank still wouldn't make a loan on those properties?  
 (14) A Not saying that at all  
 (15) Q Oh okay You think point of fact if the borrower were  
 (16) otherwise qualified and the property was worth what the  
 (17) borrower was saying it was a loan would be made?  
 (18) A That is correct  
 (19) Q So sitting here today -- are you aware that Eyak wasn't  
 (20) oiled?  
 (21) A I -- no I'm not I have not specifically addressed the  
 (22) on site situations  
 (23) Q All right Let's assume that as a hypothetical Is it not  
 (24) true sir if Eyak was never oiled there would be no obstacle  
 (25) to Eyak getting a loan on these properties isn't that right  
 (26) sir?

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- (1) A In review of the contamination of the properties correct  
 (2) Q Okay thank you Wouldn't it also be a relevant factor for  
 (3) you to take into account the extent to which the property being  
 (4) pledged by collateral or the property being pledged for  
 (5) collateral was now here near the shoreline? That's unclear let  
 (6) me start again  
 (7) In making a lending decision on properties such as those  
 (8) that we're litigating about in this case if in fact a  
 (9) significant portion of the property were inland and removed  
 (10) from the shoreline that might be a factor that would lead a  
 (11) banker such as yourself into making a favorable lending  
 (12) decision would it not?  
 (13) A That's a very difficult question because first of all you  
 (14) would have to subdivide you would not want to acquire title by  
 (15) default  
 (16) Q Let's assume you could do that Let's assume that the  
 (17) borrower was willing only to pledge the inland and the upland  
 (18) portions of the property for the loan Wouldn't you agree  
 (19) that under those circumstances some shoreline oiling would  
 (20) not affect the lending decision?  
 (21) A As regards the contamination it would not affect the  
 (22) lending decision but you've got the problem of collateral  
 (23) value that gets involved there because you're parcelling And  
 (24) when you do that usually your highest and best property is the  
 (25) shoreline and it's the access to recreation the access to all

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- (1) the maritime activities It's a hard question  
 (2) Also the factor is like with the Department of  
 (3) Environmental Conservation they require you to go for a mile  
 (4) to determine if there's any groundwater penetration of oil  
 (5) contamination so you're talking maybe a mile from the  
 (6) shoreline  
 (7) Q Well we've heard testimony in this case from a prior  
 (8) witness that the inland portions of these properties are worth  
 (9) upwards of 500 to \$1,000 an acre So bear with me an  
 (10) assumption If you assume that the inland and upland portions  
 (11) of the property had sufficient value to secure the loan the  
 (12) fact that there was some shoreline oiling would not be an  
 (13) insurmountable obstacle to borrowing on the property isn't  
 (14) that right?  
 (15) A Not if you could subdivide that property off  
 (16) Q Isn't it true sir that the real problem that banks have  
 (17) in loaning on property that has been subject of exposure to any  
 (18) toxic material is the threat that if the bank forecloses and  
 (19) acquires the property in foreclosure they are going to be  
 (20) facing a substantial clean up bill?  
 (21) A That's - that's the perception There is no question  
 (22) about it  
 (23) Q Right And banks like to make sure that they're not going  
 (24) to be facing that kind of exposure that kind of clean up  
 (25) exposure when they make a loan isn't that right?

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- (1) Absolutely  
 (2) Q And if you as a - as a prudent banker had assurances that  
 (3) there would not be any such clean up costs that you would be  
 (4) protected then you'd be perfectly inclined to consider the  
 (5) loan as you would any other loan would you not?  
 (6) A I'd have to agree yes  
 (7) Q All right Wouldn't it make a difference to you as a  
 (8) banker looking at a piece of property that was being offered  
 (9) as collateral if the borrower could represent to you that the  
 (10) person responsible for the spill or what have you was a large  
 (11) solvent corporation which had publicly declared its intention  
 (12) and made a commitment to clean up the property to the  
 (13) satisfaction of all state and federal regulators wouldn't that  
 (14) make a difference to you?  
 (15) A It would be a part of your decision making process  
 (16) Q And don't you know just from reading the newspaper that  
 (17) in this case the Exxon Corporation committed to cleaning up the  
 (18) oil'd shorelines to the satisfaction of the State and federal  
 (19) regulators?  
 (20) A That is -  
 (21) Q Don't you know that?  
 (22) A That is my perception in the newspapers correct  
 (23) Q Mr Homan is it your perception from reading the  
 (24) newspapers that most of the oil that was deposited if not all  
 (25) of the oil that was deposited on these shorelines was

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- (1) deposited in the area where the tides come in and out?  
 (2) A That is my understanding correct  
 (3) Q You're aware that the State of Alaska owns that land are  
 (4) you not?  
 (5) A That is correct to the high water mark  
 (6) Q The mean high tide mark?  
 (7) A That's right  
 (8) Q Right? That's the average of the high tide Everything  
 (9) below that seaward is owned by the State is it not?  
 (10) A That's correct  
 (11) Q You know that's where most of the oil got deposited from  
 (12) the Exxon Valdez don't you?  
 (13) A That's correct  
 (14) Q Okay If you were to make a loan on a piece of property  
 (15) shoreside property that was subject or exposed to the oil  
 (16) spill and none of the privately owned property which was being  
 (17) pledged as collateral - by that I mean everything upland of  
 (18) the high mean tide - was clean had never been touched by oil  
 (19) and it could be shown to your satisfaction don't you think you  
 (20) might make a favorable lending decision under that set of  
 (21) circumstances?  
 (22) A As you've outlined the circumstances where you were clean  
 (23) and where there was no ground penetration of the oil had not  
 (24) affected at all the uplands under those circumstances I would  
 (25) agree that that would not badly impact your lending decision

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- (1) Q Well you are aware are you not sir that with respect to  
 (2) all of the lands below the mean high tide line there is a fund  
 (3) in existence to clean up those lands in perpetuity are you not  
 (4) aware of that?  
 (5) A No sir  
 (6) MR FORTIER Your Honor can I object for a moment?  
 (7) Could we approach?  
 (8) THE COURT You want to approach the bench? Sure  
 (9) (Sidebar out of the hearing of the jury)  
 (10) THE COURT Go ahead  
 (11) MR FORTIER Your Honor I think that there is a  
 (12) motion in limine or there's an order in limine that prohibits  
 (13) inquiry into third party payments and to the - into the fund  
 (14) that Mr Diamond referred to which is apparently the Exxon  
 (15) Valdez oil spill -  
 (16) THE COURT No there is not That's not pertinent to  
 (17) this question  
 (18) MR DIAMOND Your Honor he has opened the door by  
 (19) saying that in his view continuation of the shoreline would  
 (20) lead to an unfavorable lending decision I want to elicit from  
 (21) him the fact that he is aware first that the fund has been  
 (22) created to clean up all of the shoreline and that he as a  
 (23) banker would not be exposed to that risk and that as a  
 (24) result he would be inclined to make a favorable lending  
 (25) decision Had it not been opened I would not have pursued it

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- (1) but Mr Fortier opened this up by asking this gentleman's  
(2) position  
(3) THE COURT How far are you going to pursue this  
(4) counsel?  
(5) MR DIAMOND I want to establish with him the fact  
(6) and I'm going to ask him if in fact it would not lead to a  
(7) more favorable lending decision and otherwise --  
(8) MR FORTIER Your Honor?  
(9) THE COURT Yes  
(10) MR FORTIER I think the fund he's referring to is  
(11) really the restoration fund  
(12) THE COURT The settlement fund?  
(13) MR DIAMOND Settlement fund  
(14) MR FORTIER That has nothing to do with in  
(15) perpetuity  
(16) THE COURT That's the problem counsel  
(17) MR DIAMOND I'm revising the in perpetuity I'll just  
(18) ask him that if in fact he has knowledge of the nine hundred  
(19) million dollar fund to clean up the intertidal zone oiling  
(20) THE COURT I'm not going to let you ask that  
(21) question  
(22) MR DIAMOND Okay all right  
(23) (Sidebar concluded)  
(24) BY MR DIAMOND  
(25) Q Mr Homan as a prudent banker wouldn't you agree with me

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- (1) that if a borrower approached you with some property that had  
(2) been subjected to the oil spill or any contaminating event and  
(3) provided you with evidence that the regulators the  
(4) environmental regulators had signed off on the cleanup of that  
(5) event you probably would make a favorable lending decision  
(6) all other things being equal under those set of circumstances  
(7) would you not?  
(8) A After -- yes I would say that's true  
(9) Q And hasn't that happened here?  
(10) A That is what I understand is the signoff The other --  
(11) there's other factors involved when there's -- that may not  
(12) have occurred  
(13) Q Well counsel for the Native corporations has informed you  
(14) that the Alaska Department of Environmental Conservation  
(15) acknowledged that the oil spill cleanup was performed to their  
(16) satisfaction under all state and federal regulations You were  
(17) advised of that were you not?  
(18) A No  
(19) Q No? They didn't tell you that?  
(20) A (No response)  
(21) MR DIAMOND Counsel exhibit 38 -- I'm sorry 3958  
(22) MR FORTIER Counsel before you publish that --  
(23) MR DIAMOND Your Honor I will represent that this  
(24) document was previously furnished to counsel several days  
(25) ago  
(26) THE COURT Counsel wanted to see it didn't you?

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- (1) MR FORTIER Could I just take a look at it Chuck?  
(2) I don't have a copy  
(3) MR DIAMOND Sure I'll give you a copy  
(4) BY MR DIAMOND  
(5) Q Mr Homan I'm going to put on the screen a letter  
(6) somewhat out of focus which is dated June 22 1992 which is  
(7) signed by John Sandor Commissioner of the Department of  
(8) Environmental Conservation and ask you surely you've seen  
(9) this letter before this morning have you not?  
(10) A No I have not  
(11) Q Let me direct your attention to where I've highlighted a  
(12) portion of the first sentence which reads the shoreline  
(13) assessment and subsequent clean up work on the Exxon  
(14) Valdez oil  
(15) spill were found to be completed to both federal and state of  
(16) Alaska standards Were you not aware of that before this  
(17) morning sir?  
(18) A Only general reference to it in the newspapers I have  
(19) never seen it no  
(20) Q That might be something that would be important for you to  
(21) know as a banker making a lending decision on properties  
(22) involved in this case would it not sir?  
(23) A It would be important issue  
(24) MR DIAMOND No further questions  
(25) MR FORTIER Mr Homan I have a few questions for  
(26) you

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- (1) REDIRECT EXAMINATION OF CHARLES E HOMAN  
(2) BY MR FORTIER  
(3) Q Let me ask you first do you recall questions from defense  
(4) counsel regarding the -- whether or not oiling of the shoreline  
(5) area would impact your decisions as a lending officer?  
(6) A Yes sir  
(7) Q You recall that series of questions Mr Homan how far  
(8) radius is it that needs to be accomplished under a phase one  
(9) audit?  
(10) A One half mile  
(11) Q So that's a half mile radius around the subject property?  
(12) A That is correct  
(13) Q To your knowledge could you tell us whether or not that  
(14) would include the shoreline area if it were within a half mile  
(15) as a contamination area?  
(16) A It would certainly seem it would  
(17) Q Now you were also I think asked a series of questions  
(18) regarding whether or not this oil spill clean up effort had  
(19) been thoroughly accomplished Do you recall those series of  
(20) questions?  
(21) A Yes I did  
(22) Q Okay Now if you were informed that real estate  
(23) appraisers and environmental scientists have recently returned  
(24) from the areas impacted by the oil spill and those real estate  
(25) appraisers and environmental scientists have located oil

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- (1) along - along the beach front properties from the Exxon Valdez  
 (2) oil spill? Would that make any difference to you as a loan  
 (3) officer in 1994 that there's still oil out there?  
 (4) A It there's still oil out there obviously it's going to  
 (5) make a difference because you got the contamination present  
 (6) Q Okay So could you tell us what the difference would be?  
 (7) A It would make the difference between either accepting the  
 (8) land as collateral or not accepting the land as collateral If  
 (9) you actually receive facts that there are - there exists oil  
 (10) contamination even though it had previously been cleaned in  
 (11) quotes you'd still have the same perception that you have  
 (12) contaminated property  
 (13) Q So in other words Mr Homan am I correct that regardless  
 (14) of whether or not the state and federal authorities say that  
 (15) the clean up phase is over and now it's time for restoration  
 (16) if you as a bank officer received a loan application from  
 (17) somebody with property contaminated by the Exxon Valdez oil  
 (18) spill you would still want to make sure whether or not there  
 (19) was oil on that property is that correct?  
 (20) MR DIAMOND Objection leading  
 (21) THE COURT Objection sustained It's an awfully long  
 (22) question counsel  
 (23) MR FORTIER Let me try again  
 (24) BY MR FORTIER  
 (25) Q Would you still want to find out whether or not there was

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- (1) THE COURT Hold on hold on The objection's  
 (2) sustained  
 (3) BY MR FORTIER  
 (4) Q You also have some experience -  
 (5) MR FORTIER Your Honor could I lay a foundation for  
 (6) that?  
 (7) THE COURT You can try  
 (8) MR FORTIER Thank you  
 (9) BY MR FORTIER  
 (10) Q You also have some experience I think you stated in your  
 (11) certifications that you are certified as an appraiser or you  
 (12) have a certificate as an appraiser is that correct?  
 (13) A Yes I am not a practicing appraiser though Make it  
 (14) very clear  
 (15) Q As a part of your loan duties - as part of your loan  
 (16) officer duties for the past 30 years in real estate loans you  
 (17) have reviewed appraisals?  
 (18) A That was one of my principal duties was to review  
 (19) appraisals yes sir  
 (20) Q And in fact Mr Homan do you hold a certificate as a  
 (21) review appraiser?  
 (22) A I do  
 (23) Q What do review appraisers do?  
 (24) A They - they review the appraisal that's presented to  
 (25) determine the methods of calculation used to formulate a value

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- (1) oil on the property?  
 (2) A Yes I'd want to find out if there was oil on the  
 (3) property  
 (4) Q Okay Now another series of questions that Mr Diamond  
 (5) posed to you was whether or not property that was uplands  
 (6) would  
 (7) be - would be useful as collateral property Do you recall  
 (8) that series of questions?  
 (9) A Yes I do  
 (10) Q Now Mr Homan do you know whether or not if you  
 (11) subdivide  
 (12) property in the uplands from the beach front property the  
 (13) property in the uplands is going to be worth substantially  
 (14) less? Do you know anything about that?  
 (15) MR DIAMOND Objection foundation  
 (16) MR FORTIER As a loan officer  
 (17) MR DIAMOND As a loan officer?  
 (18) THE COURT I'm sorry counsel I lost the question  
 (19) Say it again  
 (20) MR FORTIER I will Your Honor  
 (21) BY MR FORTIER  
 (22) Q As a loan officer Mr Homan do you know - having  
 (23) examined a number of real estate loans do you know whether  
 (24) or  
 (25) not property in the uplands that's subdivided from shore front  
 (26) property say a half a mile up is going to be less valuable  
 (27) than if it was a contiguous whole?  
 (28) MR DIAMOND Objection foundation

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- (1) to come to a value and what comparables are used to  
 (2) determine  
 (3) market Basically they're reviewing the methodology of the  
 (4) appraiser to see if they arrive at a reasonable value in the  
 (5) reviewer's opinion That's basically it  
 (6) Q And the 30 years that you - how long have you been a  
 (7) review appraiser?  
 (8) A I've worked in the review of appraisals for some 25 years  
 (9) I would guess  
 (10) Q And have you reviewed appraisals that appraise beach front  
 (11) property?  
 (12) A Yes yes Sure  
 (13) Q Have you done that a lot?  
 (14) A Not a lot I have had a couple  
 (15) Q How many is a couple?  
 (16) A Well I've had some fairly large loans that involved beach  
 (17) front properties and yes I've reviewed those  
 (18) Q Did any of those properties also include back lands?  
 (19) A Yes They have the uplands yes  
 (20) Q Now based upon your experience and reviewing appraisals  
 (21) as  
 (22) a lending officer including shore front property and property  
 (23) that includes both - appraisals that include both shore  
 (24) property and uplands property - do you know whether or not  
 (25) the  
 (26) uplands property is as valuable as the shore front property?  
 (27) MR DIAMOND Objection no foundation for this  
 (28) THE COURT The objection's overruled

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- (1) A Generally speaking the partition of the shore front  
 (2) property from the uplands devalues the value of your collateral  
 (3) of the upland  
 (4) BY MR FORTIER  
 (5) Q So if you were to subdivide property what would be the  
 (6) result between say a half a mile up and the shoreline?  
 (7) A Typically you would be reducing the value of your overall  
 (8) parcel of property simply because you lose the valuable  
 (9) shoreline properties  
 (10) MR FORTIER Thank you I have no further questions  
 (11) MR DIAMOND No further questions  
 (12) THE COURT You can step down Mr Homan Thank you  
 (13) very much Watch the microphone don t take it with you  
 (14) MR DIAMOND Your Honor we would offer into  
 (15) evidence DX3956  
 (16) THE COURT 56? I thought it was 58  
 (17) MR DIAMOND 56? I m sorry - I grabbed the wrong  
 (18) document 58  
 (19) THE COURT I m right for the first time hey?  
 (20) (Exhibit 3958 offered)  
 (21) THE COURT 3958  
 (22) MR FORTIER If I could Your Honor I d object only  
 (23) on the basis of foundation I don t believe that Mr Homan s  
 (24) testimony establishes that these are - I don t think he s the  
 (25) appropriate witness

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- (1) THE COURT It s not necessary to admit it I m not  
 (2) going to admit it not now anyway  
 (3) The next witness counsel?  
 (4) MR FORTIER Your Honor plaintiffs call Dr David  
 (5) Green Yes Dr David Green please  
 (6) THE CLERK Sir can you attach the microphone and  
 (7) remain standing for the oath The little one right there  
 (8) attach it to your tie Raise your right hand please  
 (9) (The Witness Is Sworn)  
 (10) THE CLERK Please be seated  
 (11) Sir for the record I need you to state your full name  
 (12) A My name is George Hayden Green I live at 9611 Burning  
 (13) Bush Anchorage Alaska 99507  
 (14) THE CLERK Can you spell your last name please?  
 (15) A G r e e n  
 (16) THE CLERK And your occupation?  
 (17) A I m the Associate Dean of the School of Business at the  
 (18) University of Alaska Anchorage and I hold a rank of full  
 (19) professor of that university  
 (20) THE CLERK Thank you  
 (21) DIRECT EXAMINATION OF GEORGE H GREEN  
 (22) BY MR FORTIER  
 (23) Q Professor Green how long have you been employed by the  
 (24) University of Alaska?  
 (25) A Twenty years

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- (1) Q And can you tell the jury a bit about yourself please?  
 (2) A Yes I received a Bachelor s degree from Northern Arizona  
 (3) University in 1963 in the field of marketing after which time  
 (4) I went to work for a company called the United States Gypsum  
 (5) Company which was at that time the largest manufacturer of  
 (6) building materials in the world  
 (7) My job there in the beginning was to represent the company  
 (8) with architects and builders and engineers I also did sales  
 (9) work with building suppliers My last job with the company was  
 (10) as a - the regional financing credit manager  
 (11) I left that job and while I was there I went to night  
 (12) school received a Master s degree in business administration  
 (13) from Pepperdine University I left that company joined the  
 (14) faculty at Northern Arizona University Flagstaff Arizona as  
 (15) an instructor in the field of marketing While I was at  
 (16) Northern Arizona University I also started the first real  
 (17) estate courses taught at that university and I put on the  
 (18) first graduate realtors institute program there and during the  
 (19) summer months I associated myself with a real estate  
 (20) brokerage  
 (21) company and was licensed in that estate to sell real estate  
 (22) I left Northern Arizona University went to the University  
 (23) of Arkansas in Fayetteville Arkansas where I was a graduate  
 (24) assistant for two years and then assistant professor for one  
 (25) year There I was teaching marketing and I obtained a Ph D  
 in the field of marketing with a subsequent field in the area

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- (1) of resource economics and quantitative analysis  
 (2) While I was at the University of Arkansas for three years  
 (3) I had an appraising business to help support my education and  
 (4) there I was appraising property for the FHA the VA some of  
 (5) the lending institutions We appraised mostly houses and land  
 (6) during that period of time  
 (7) I left University of Arkansas and joined the University of  
 (8) Alaska in 1974 as an assistant professor of marketing And  
 (9) after one year I was promoted to an associate professor and  
 (10) after five years I was promoted to a full professor and am  
 (11) currently the senior full professor in the School of Business  
 (12) at the university and I also am the Associate Dean the  
 (13) Academic Dean for the school  
 (14) In 1975 and 76 I served as the director of the Anchorage  
 (15) Urban Observatory which is a research center at the  
 (16) university and there we were doing demographic studies  
 (17) population studies and a variety of economic development  
 (18) studies and issues for most of the south central region and a  
 (19) lot of the areas of Alaska  
 (20) Upon arriving in Alaska in 1974 I associated myself on a  
 (21) part time basis with a firm called Dirksen Appraisal Company  
 (22) In those days we were appraising a lot of the lands having to  
 (23) do with the pipeline and a lot of appraising in the Valdez area  
 (24) and the Dirksen Paul Dirksen and his company specialized in a  
 (25) lot of right of way appraising easements things of that

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- (1) nature and I would take overload work from him  
 (2) In 1982 approximately 1982 also I obtained a real estate  
 (3) license salesman license in 1974 here in Alaska And in 1982  
 (4) I formed my own company a company called the Cornerstone  
 (5) Realty and have operated through that company ever since  
 (6) Q Professor let me interrupt you for just a moment  
 (7) A Sure  
 (8) Q Do you teach courses at the university?  
 (9) A Yes I do I -- I started the real estate program at the  
 (10) university in 1974 at the request of the Dean there and I  
 (11) developed a Bachelor's of Business Administration degree in  
 (12) real estate and I have taught approximately eight courses in  
 (13) real estate as part of that degree  
 (14) And in 1975 or '76 I think it was about '76 I put  
 (15) together a Master's degree Master of Science degree in real  
 (16) estate at the university and have taught my recollection is  
 (17) four graduate courses pertaining to that degree I've taught  
 (18) those courses a number of times  
 (19) Q You -- you teach real estate courses Can you tell us what  
 (20) real estate courses are what the field of real estate is?  
 (21) A Yes At the undergraduate level I've taught what we call  
 (22) the basic course course called real estate fundamentals We  
 (23) have real estate law real estate investment analysis property  
 (24) management We've -- used to have a course called real estate  
 (25) computer analysis of real estate and a course on real estate

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- (1) financing We offered two courses in real estate appraising at  
 (2) the undergraduate level  
 (3) At the graduate level we've offered a graduate course in  
 (4) real estate appraising a course in doing feasibility and  
 (5) market analysis a graduate course on real estate development  
 (6) and we've had some seminar kinds of courses on special  
 (7) things in the field of real estate  
 (8) Q And these are courses that you teach on a regular basis?  
 (9) A I've taught all of these courses yes  
 (10) Q Professor you also said that you have your own business?  
 (11) A Yes  
 (12) Q Does that business involve appraising of properties?  
 (13) A Yes it does I am a certified general appraiser in the  
 (14) State of Alaska which means I'm qualified to appraise  
 (15) properties of any value as long as it's real property And  
 (16) for the last ten years approximately -- no a little more than  
 (17) that I have specialized in appraising environmental lands  
 (18) easements right of ways things of that nature My appraising  
 (19) work all has to do with land valuation and particularly in  
 (20) remote areas  
 (21) Q You mentioned the term environmental lands  
 (22) A Yes  
 (23) Q Is that unusual a unique term Doctor?  
 (24) A No it's not a unique term  
 (25) Q Can you tell us what you mean by it?

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- (1) A Yes The people in the United States and people around the  
 (2) world have begun to recognize that we're running out of a lot  
 (3) of pristine lands lands that have important features to them  
 (4) and there is a -- been a general movement to acquire and  
 (5) preserve a lot of those lands We're talking about the lands  
 (6) that have special historic or archaeological significance  
 (7) lands that have very special biological things such as  
 (8) endangered species or important wildlife activity  
 (9) I was recently called by a group that wanted me to go down  
 (10) to Montana and Idaho and appraise lands that had endangered  
 (11) grasses for example We -- we see issues having to do with  
 (12) old growth forests and rain forests and all kinds of special  
 (13) things special hydraulic -- hydraulic issues and things of  
 (14) that nature  
 (15) Q Now Professor Green could you tell the jury about a  
 (16) couple of the cases you have worked on other than this case  
 (17) involving environmental lands please?  
 (18) A Yes Up on the North Slope I appraised some lands for a  
 (19) company called the UIC Corporation  
 (20) Q What is the UIC Corporation? Is that a Native corporation?  
 (21) A It's a Native corporation Village Native corporation  
 (22) They received lands part of the Native Claims Settlement Act  
 (23) and as part of their -- then they did some trading and their  
 (24) was some fairly complicated trades  
 (25) The United States Navy Surplus the Old Arctic

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- (1) Environmental Data Center up there and as part of that the  
 (2) Natives received that I helped consult to them in those  
 (3) negotiations And then as part of that they gave up some  
 (4) lands what was called the submerged lands and then they --  
 (5) the United States Navy conveyed to the borough the rights to  
 (6) the gas fields there And as part of that the Native  
 (7) corporation granted easements across the gas field to the  
 (8) borough and the question asked to me is After all this was  
 (9) done for tax purposes and for other corporate decision making  
 (10) purposes what was the value of all these things that got  
 (11) traded? Easements there was gravel rights there was some  
 (12) buildings there was some actual lands given up and they  
 (13) wanted to look at whether this was all an equal balanced trade  
 (14) Q So Professor would it be fair to understand that work  
 (15) then as involving certain divisible parts of property? You  
 (16) were valuing certain rights and not a whole I guess what we've  
 (17) heard termed here in the last few weeks is fee simple?  
 (18) A Yes Some of it was fee simple surface rights but some  
 (19) of it was parcel rights easements gravel rights things of  
 (20) that nature Yeah I also couple years ago valued the land  
 (21) along the Karluk River Drainage which is part of -- owned by a  
 (22) Native corporation which is very important bear habitat And  
 (23) the U.S. Fish and Wildlife Service was and may still be I  
 (24) believe negotiating with the Native corporation to acquire  
 (25) that land to preserve that habitat for the bears and the

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(1) Native corporation hired me to value it so they would know the  
 (2) value of it in their negotiations  
 (3) Q Doctor where is the Karluk area?  
 (4) A It is in Kodiak  
 (5) Q And this bear habitat is that an example of environmental  
 (6) lands?  
 (7) A Yes it is very important environmental lands Kodiak  
 (8) bears do not do well around people and - and there are not  
 (9) many areas left in the world where bear - where there s good  
 (10) bear habitat  
 (11) Q Bears eat people too don t they?  
 (12) A They do They just don t get along with folks real well  
 (13) Q Kind of a mutual feeling there?  
 (14) A Another project I recently worked on - some of you may  
 (15) have even seen it in the paper in the last few weeks - had to  
 (16) do with Anaktuvik Pass The Village Corporation at Anaktuvik  
 (17) Pass and the Park Service desired to exchange some rights  
 The  
 (18) Natives wanted to travel use their ATV vehicles on park land  
 (19) The Park Service wanted to be able to cross anyplace on the  
 (20) Native lands They also had some land that they wanted to  
 (21) exchange The Natives wanted some land that was a little  
 (22) closer to the village and was known to be very good hunting  
 (23) grounds The Park wanted to consolidate some of their park  
 (24) holdings with land that the Natives owned and so the Native  
 (25) corporation hired me to value all the - both the land as well

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(1) as the rights that would be exchanged and given up  
 (2) Q This - this exchange of rights was that again exchange  
 (3) of easements?  
 (4) A It s easements yes  
 (5) Q Did it involve a sale of property of - excuse me a sale  
 (6) of a surface estate Doctor?  
 (7) A It s an exchange of some surface estate lands as well as  
 (8) exchange of rights for easements  
 (9) Q And that would be exchange of a right to go in and out of a  
 (10) certain area is that right?  
 (11) A That s correct  
 (12) Q And part of this was that Natives were allowed to - what  
 (13) was being discussed Natives were allowed to take ATVs into the  
 (14) park?  
 (15) A That s what being proposed I believe it s before the  
 (16) Congress right now to make that final determination  
 (17) Q Was that an unusual sort of thing to be able to take ATVs  
 (18) into the park?  
 (19) A Yes  
 (20) Q Is that something the parks - if you know do you know  
 (21) whether or not the Park Service normally allows people to take  
 (22) ATVs into the park?  
 (23) A Not on that not on the gates of the Arctic they do not  
 (24) Q So Doctor did you make any determination as to whether or  
 (25) not the properties that were the subject of the exchange that

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(1) the Park Service wanted were as valuable as the right to take  
 (2) in ATVs?  
 (3) A I didn t value the park lands I only valued the Native  
 (4) lands They were my client and they were wanting to know  
 (5) what - what the value of those rights were so they could make  
 (6) decisions in their negotiations  
 (7) Q Have you worked on any - you ve spoken about two  
 exchanges  
 (8) or three exchanges I guess the UIC exchange the Anaktuvik  
 (9) exchange and the Kodiak exchange?  
 (10) A Well the Kodiak exchange there s been no exchange yet  
 (11) In fact that was the - that is as I understand a cash  
 (12) potential sale  
 (13) Q Now besides those Doctor have you worked - let me  
 (14) switch to another area  
 (15) Do you have any experience in the area of contamination and  
 (16) property?  
 (17) A I ve worked on some projects of that nature I worked on a  
 (18) case called Poppy Lane which is down in the Kenai area That  
 (19) was a case where an oil company had dumped drilling mud in  
 an  
 (20) old gravel pit and the - the drilling mud contaminated the  
 (21) groundwater They d hired some appraisers to come in and try  
 (22) to value the - the effect that had on the - on the value of  
 (23) the homes nearby  
 (24) The problem was that because of the - well a lot of it  
 (25) was word of mouth Word got out in that community that there

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(1) was this contamination problem and there was some publicity  
 (2) about it The homes in the area didn t sell They went for  
 (3) several years nobody could seem to sell a home there so it  
 (4) was difficult for the appraisers to determine the - how much  
 (5) of the value of the land had been impacted because there  
 (6) hadn t been a sale  
 (7) So I was hired by the home owners through their attorney  
 (8) to do what s called a contingency valuation analysis There I  
 (9) went in and we did a survey of homeowners a controlled  
 survey  
 (10) to determine how much knowledge they had about that  
 (11) contamination and whether it affected their perception of the  
 (12) area and whether they would live in the area  
 (13) One of the interesting things on that case was that the  
 (14) groundwater under the homes had never - was never  
 (15) contaminated The contamination flow was away from the  
 homes  
 (16) but the people - because of that the people in the area had a  
 (17) strong resistance from living in the area and we determined  
 (18) that it would take about a 60 percent discount before people  
 (19) would begin to consider living there and some people wouldn t  
 (20) live there at all We found one what we call a psychographic  
 (21) personality of people that would live there but beyond that  
 (22) it was a very small market  
 (23) Q Can you tell us just a little bit about the psychographic  
 (24) sort of personality?  
 (25) A Well in the marketing research we do one of the important

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(1) consumer behavior criteria is that there are different permits  
 (2) different types of people who have different age demographic  
 (3) characteristics as well as certain psychographic or mental  
 (4) characteristics about life and one of the important things we  
 (5) do in marketing is to try to identify the type of people that  
 (6) will react a certain way to certain buying behavior modes and  
 (7) that's what we were doing there  
 (8) Q Now Doctor with regard to the Poppy Lane contamination  
 (9) was there any actual physical contamination on any of the  
 (10) properties?  
 (11) A No  
 (12) Q That were the subject?  
 (13) A No there wasn't It was adjacent to the homes  
 (14) Q And how much adjacent?  
 (15) A The homes were across the street from the - and I don't  
 (16) recall the exact distance but they were across the street and  
 (17) the groundwater plume was going in the opposite direction  
 (18) from  
 (19) those homes  
 (20) I also - if you want me to continue that  
 (21) Q Yeah please continue  
 (22) A I also worked on a case in Anchor River a service station  
 (23) contaminated the groundwater which contaminated the well at  
 (24) the  
 (25) Anchor River inn and I was asked to determine the damages to  
 (26) the Anchor River Inn as a result of that groundwater  
 (27) contamination

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(1) I also recently worked for some oil companies on a case out  
 (2) here at Peters Creek where one of their stations contaminated  
 (3) groundwater which affected the groundwater in about five or  
 (4) six subdivisions  
 (5) Q And that was - is that a case that's over now Doctor?  
 (6) A It was settled yes  
 (7) Q And it was a case involving contamination of groundwater  
 (8) is that true?  
 (9) A It was contamination of groundwater yes  
 (10) Q Is that a case where a contamination physically touched the  
 (11) property?  
 (12) A The - the surface properties were never touched only the  
 (13) groundwater  
 (14) Q With regard to the Poppy Lane case and the Peters Creek  
 (15) case do those cases involve stigma? Have you ever heard that  
 (16) term?  
 (17) A I'm well aware of that term and I would say that  
 (18) particularly in the Poppy Lane case that stigma was a very  
 (19) important factor The reputation - the fact that the water  
 (20) wasn't contaminated but the perception that it - it may be  
 (21) or the perception that there might be environmental hazard is  
 (22) what hurt the value of the property In fact I probably  
 (23) should have mentioned that at the time this was going on the  
 (24) drilling mud had already been cleaned up  
 (25) Q It was out of there?

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(1) A It was out of there It was just the publicity and the  
 (2) word of mouth and the concern that people had that caused the  
 (3) value of the land to go down  
 (4) Q With regard to the Poppy Lane case was there any  
 (5) determination or did you make any determination about  
 (6) whether  
 (7) or not this publicity was media covered? Do you know whether  
 (8) or not it was?  
 (9) A Some of it was media covered Some of it was result of  
 (10) homeowners concerns that would go before the various  
 (11) agencies  
 (12) and ask for some help or some clarification Quite a bit of it  
 (13) was just word of mouth  
 (14) Q Doctor have you - besides that sort of work have you  
 (15) published any papers over the course of the past 20 years?  
 (16) A Yes  
 (17) Q Could you tell us -  
 (18) A I've published - and I haven't actually ever sat down and  
 (19) counted all of them - but somewhere between 40 and 50  
 (20) published articles research documents things of that nature  
 (21) I've published in the Journal of Appraising the Journal of  
 (22) Real Estate Appraisal Analysis Journal of Real Estate  
 (23) Appraising and Economics the Journal - the Real Estate  
 (24) Research a variety of others as well as I have presented  
 (25) papers on the field of real estate and marketing issues almost  
 (26) every year once or twice a year here in the United States I  
 (27) presented papers in China Taiwan Singapore Australia had a

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(1) variety of that kind of normal academic kinds of work  
 (2) Q Have you ever published any papers on use of - on  
 (3) environmental lands? Excuse me  
 (4) A Well I published a paper on that Poppy Lane work that I  
 (5) did yes  
 (6) Q Do any of your - does the subject of any of your work  
 (7) concern the use of GIS systems?  
 (8) A Yes And I did - I recently presented a paper at the  
 (9) American Real Estate Society meetings on some research that I  
 (10) did as a result of some work I did on the North Slope I got  
 (11) interested in the whole issue of rural lands remote lands in  
 (12) Alaska I was not happy with the way it was being appraised  
 (13) I wasn't happy with my knowledge of it and so I submitted and  
 (14) was funded a grant through the Alaska Land Bank through the  
 (15) university and I spent about a year and a half just in my  
 (16) office gathering sales from all over the state of Alaska  
 (17) running a whole variety of different kind of computer models  
 (18) and algorithms that would find a way to predict even valuing  
 (19) land in rural Alaska remote lands And as part of that I  
 (20) developed some ideas and thoughts on it and one of the things  
 (21) I did was present a paper on my thoughts on whether you gain  
 (22) any particular level of - of precision by expending all the  
 (23) extra money that's necessary to do a GIS kind of analysis  
 (24) versus a - the kind of traditional evaluation that an  
 (25) appraiser would normally do

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- (1) Q Now was this paper that you've just spoken about peer  
(2) reviewed Doctor?  
(3) A It was peer reviewed yes  
(4) Q What's that mean in real estate?  
(5) A It means that other professors reviewed it Generally  
(6) they are other professors who have a background in appraising  
(7) and would have reviewed it and I made a presentation before  
(8) about I don't know 35 other professors on that paper  
(9) Q Now Professor do you hold - besides the - I think it  
(10) was the general appraiser certificate do you hold any other  
(11) certificates?  
(12) A I hold a General Accredited Appraiser designation from the  
(13) Appraisal Section of the National Association of Realtors I  
(14) am a member of a number of professional organizations  
(15) Q Can you list a few of them for us?  
(16) A I'm a member - in fact I'm a lifetime member of the  
(17) American Real Estate Association that's a group of real estate  
(18) professors primarily from around the world Reason I'm a  
(19) life member is a few years ago the paper I presented at the  
(20) conference was voted the outstanding paper As a result of  
(21) that they made me a lifetime member All that means is I  
(22) don't have to pay annual dues which is nice  
(23) I also am a member of the National Association of  
(24) Realtors I've been a member since about 1968 or '69 member  
(25) of the Appraisal Section of the National Association of Realtors

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- (1) member of the Anchorage Board of Realtors and I've been an  
(2) active - involved in the National Association of Corporate  
(3) Real Estate Executives I just recently dropped my membership  
(4) in that The Urban Land Institute Those are the main ones I  
(5) think of right now I belong to a group called FICIB which is  
(6) an acronym for an international real estate organization I  
(7) serve on their faculty to teach courses on international real  
(8) estate  
(9) MR FORTIER Your Honor would this be a good time  
(10) for a break?  
(11) THE COURT Sure  
(12) THE CLERK Please rise This court stands in  
(13) recess  
(14) (Jury out at 12:00 p.m.)  
(15) (Recess from 12:00 p.m. to 12:18 p.m.)  
(16) THE CLERK Please rise This court now resumes its  
(17) session Please be seated )  
(18) THE COURT Mr Stoll?  
(19) MR STOLL Your Honor we have - this thing's  
(20) never-ending We have only one dispute I guess and that  
(21) relates to the Exhibit B which you have before you  
(22) THE COURT Right  
(23) MR STOLL Mr Diamond wants to insert the words in  
(24) the last sentence I will instruct you further and he wants to  
(25) add on this

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- (1) MR DIAMOND We don't have a transcript of what you  
(2) said  
(3) THE COURT I said I will instruct you further  
(4) regarding this issue and others at the end of this trial  
(5) MR STOLL Well I didn't know what it was My  
(6) writing was incomplete so that's fine  
(7) MR OPPENHEIMER Your Honor -  
(8) THE COURT I'm going to give that instruction and the  
(9) defendants proposed jury instruction regarding federal  
(10) action  
(11) MR DIAMOND Mr Stoll made one other handwritten  
(12) change on Page 2  
(13) MR STOLL I put it on his copy  
(14) THE COURT I think I've got that  
(15) MR DIAMOND Fine  
(16) THE COURT On Page 2 or Page 1  
(17) MR STOLL One on Page 2 and while you were out  
(18) Your Honor I - we agreed on that  
(19) THE COURT The federal court instead of that?  
(20) MR STOLL Yeah  
(21) THE COURT And allowed here because on the first  
(22) page -  
(23) MR STOLL Yeah  
(24) THE COURT Got it  
(25) MR STOLL No problem

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- (1) THE COURT Are we ready for the jury?  
(2) MR OPPENHEIMER Your Honor we thought -  
(3) Mr Fortier and I thought there might be a housekeeping matter  
(4) on some of the direct exhibits that would be faster to take  
(5) care of if we could now so I don't have to object  
(6) THE COURT That's fine  
(7) MR OPPENHEIMER Your Honor we have - we have a  
(8) long list of exhibits which we've resolved objections to but  
(9) we have one two three four five six seven photographs to  
(10) which we still pose an objection and a videocassette to which  
(11) we pose many objections  
(12) THE COURT Which videocassette is it?  
(13) MR OPPENHEIMER This is a collection of news pieces  
(14) and sound bites It's currently designated 12212 A I believe  
(15) THE COURT That's the one I reviewed yesterday?  
(16) MR FORTIER Yes Your Honor  
(17) THE COURT I'm not going to admit it  
(18) MR OPPENHEIMER And we have - we have then a  
(19) collection of these photographs Your Honor If you'd like  
(20) maybe we could just approach the bench and resolve it  
(21) MR FORTIER What they are Your Honor is slides  
(22) that were taken of a certain type of - they don't deal with  
(23) the oil spill they deal with things Dr Green relies upon  
(24) determining the impact of contamination on the value of the  
(25) property And it's kind of fundamental to his statement of -

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- (1) MR OPPENHEIMER The spill - for example you just  
 (2) turned to one that says warning these are not - these  
 (3) are - I would analogize them to sound bites you get on the  
 (4) movie  
 (5) THE COURT They are but here s - my impression of  
 (6) these exhibits is this I don't want to have anything against  
 (7) admitting exhibits like this If they are illustrative of the  
 (8) testimony he can point to representative samples and say this  
 (9) is the kind of thing I'm talking about This is the kind of  
 (10) thing that causes the condition or the problem that might  
 (11) affect property values but they're not going to be admitted  
 (12) There's no reason to do that  
 (13) MR OPPENHEIMER You might just check the last Your  
 (14) Honor If you hand them to me I think there might be a  
 (15) generic change and if we have photographs that are  
 (16) illustrative  
 (17) Actually if counsel can just give me a foundation for the  
 (18) last two photographs there  
 (19) MR FORTIER Okay that is the -  
 (20) MR OPPENHEIMER Does this -  
 (21) THE COURT Is that part of the bigger picture?  
 (22) MR FORTIER Foundation here will be that he went  
 (23) down and he reviewed what was available to the public which  
 (24) is  
 (25) included in the public media and that is one of them yeah  
 (26) regarding what was happening on our clients' property

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- (1) THE COURT Was this in the media?  
 (2) MR FORTIER It was not in the media it is part of  
 (3) the resource library files  
 (4) THE COURT What's the issue?  
 (5) MR FORTIER The issue is this stuff was publicly  
 (6) available kind of following up on what Mr. Homan discussed  
 (7) These documents are things that relate to the time and the  
 (8) period of the oil spill and that one  
 (9) THE COURT Is that -  
 (10) MR OPPENHEIMER I turned it upside down myself  
 (11) MR FORTIER That's the oil slick in front of Chenega  
 (12) Bay  
 (13) THE COURT That's the same thing available in the  
 (14) public files?  
 (15) MR FORTIER Right  
 (16) THE COURT No  
 (17) MR OPPENHEIMER So those would be exhibits 1247 70  
 (18) and 1247 74  
 (19) THE COURT If he wants to describe or something you  
 (20) can get - as part of research project you can do that in  
 (21) testimony without having to use the photographs  
 (22) MR FORTIER Okay  
 (23) MR OPPENHEIMER Thank you  
 (24) THE COURT Are we ready?  
 (25) Mr. Fortier would you do me a favor? Tell the camera

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- (1) people the new ones that they can't film the jury The rules  
 (2) preclude that  
 (3) MR FORTIER Okay  
 (4) (Jury in at 12:25 p.m.)  
 (5) THE COURT Be seated Thank you  
 (6) Counsel?  
 (7) MR FORTIER Your Honor I move to offer Dr. Green as  
 (8) an expert witness  
 (9) MR OPPENHEIMER No objection Your Honor  
 (10) THE COURT He's accepted as an expert witness  
 (11) MR OPPENHEIMER Your Honor perhaps we ought to  
 (12) describe as to what  
 (13) THE COURT Counsel can do that can't he?  
 (14) MR OPPENHEIMER I was afraid if we do it in the  
 (15) front end it might expand in scope  
 (16) MR FORTIER We were so happy Your Honor  
 (17) THE COURT He is not an expert on antique cars  
 (18) counsel?  
 (19) MR FORTIER Your Honor we offer him as an expert  
 (20) witness in the area of real estate valuation and marketing of  
 (21) Alaska rural Alaska properties  
 (22) MR OPPENHEIMER No problem Your Honor  
 (23) THE COURT He's accepted  
 (24) BY MR FORTIER  
 (25) Q Professor Green can you tell the jury who retained you?

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- (1) A Yes I was retained by your firm Fortier and Mikko on  
 (2) behalf of the English Bay Port Graham and Chenega  
 (3) Corporations  
 (4) Q And can you tell the jury what the scope of your engagement  
 (5) was Professor Green?  
 (6) A I was asked to look at the damages caused during the first  
 (7) three years while the beaches were being treated on these  
 (8) corporations' lands  
 (9) Q Professor Green are you generally familiar with the  
 (10) location of the Native corporations English Bay Port Graham  
 (11) and Chenega?  
 (12) A Yes I am  
 (13) Q And in undertaking your assignment did you become  
 (14) acquainted with the land ownership of each of the  
 (15) corporations?  
 (16) A Yes I did I studied the legal documents on file with the  
 (17) BIA - BLM rather - and I studied obtained documents from  
 (18) your office as well as from the clients  
 (19) Q Can you describe what the documents were that you  
 (20) reviewed  
 (21) at the BLM? What is the BLM first of all?  
 (22) A Bureau of Land Management That has jurisdiction over the  
 (23) distribution of land under the Native Claims Settlement Act  
 (24) I reviewed the interim conveyances as well as present  
 (25) documents documents pertaining to claims against - against  
 (26) their lands and reviewed maps provided by land consultants  
 and

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- (1) others  
 (2) Q Now Dr Green prior to examining the maps did you obtain  
 (3) title documents and check title as to each of the Village  
 (4) Corporations Port Graham English Bay and Chenega?  
 (5) A I did I went through all of the interim conveyance  
 (6) documents and the patent documents and interviewed people  
 at  
 (7) the BLM relative to additional entitlements that these  
 (8) corporations might enjoy  
 (9) Q Have you ever heard the term OPA 90?  
 (10) A I have  
 (11) Q Can you tell us generally what your understanding of OPA 90  
 (12) as it relates to these Native corporations is?  
 (13) MR OPPENHEIMER Your Honor I think it calls for a  
 (14) legal conclusion with respect to standing issues This is the  
 (15) very issue we were talking about yesterday to the extent  
 (16) there is a question that ought to be briefed but this is a  
 (17) question that goes to legal standing issues  
 (18) THE COURT Well I'll let him testify Go ahead  
 (19) The objection is overruled  
 (20) BY MR FORTIER  
 (21) Q Okay Go ahead Professor Green  
 (22) A Well there is three different ways of obtaining title here  
 (23) if you would One is through what is called interim conveyance  
 (24) the other is a patent The only difference between an interim  
 (25) conveyance and a patent is that the patent land has been

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- (1) surveyed  
 (2) Native corporations also have land that they have selected  
 (3) but hasn't been conveyed and there is basically two claims  
 (4) against that and one is called OPA 90 Under OPA 90 land the  
 (5) Native corporation has an irrevocable selection They select  
 (6) the land They can't reverse themselves on that but they are  
 (7) also entitled to any damage revenues that they would receive  
 (8) that would be paid on those lands up to the extent of their  
 (9) entitlement  
 (10) MR OPPENHEIMER Your Honor reassert the objection  
 (11) It misstates the law  
 (12) THE COURT Well the objection is overruled This is  
 (13) as far as you're going on this aren't you  
 (14) MR FORTIER This is Your Honor  
 (15) THE COURT Okay go ahead  
 (16) BY MR FORTIER  
 (17) Q Okay Now Professor Green having worked in Alaska as a  
 (18) professor at the university for the past 20 years did you ever  
 (19) research why Native corporations were formed?  
 (20) A Yes I've been involved with Native corporations since I  
 (21) first came to Alaska I've advised many of them worked very  
 (22) closely with these corporations The Native Claims Settlement  
 (23) Act was enacted to resolve aboriginal claims on the lands of  
 (24) Alaska as well as claims against hunting and fishing rights  
 (25) The reason for that is that the Natives of Alaska when the

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- (1) United States government purchased Alaska from the -- Russia  
 (2) there was no agreements made with the Alaska Native The  
 (3) Alaska Native was also not a conquered people They weren't  
 (4) conquered in war There was no agreements with them and so  
 (5) they had some what we'll call historic and aboriginal rights  
 (6) to the land as well as to certain hunting and fishing rights  
 (7) The purpose of the Native Claim Settlement Act was to  
 (8) extinguish those claims  
 (9) Q So then they gave up those claims for some land?  
 (10) A For land and some money  
 (11) Q Now Dr Green in your study of Native corporations  
 (12) particularly English Bay Port Graham and Chenega did you  
 look  
 (13) at how land was selected in the Kenai Fjords area?  
 (14) A Well there is two ways the corporations are entitled to  
 (15) land One is what they call 12(a) entitlements and this is --  
 (16) this is entitlement based on population There is also what is  
 (17) called 12(b) entitlements and that is land they get through the  
 (18) regional corporation That is also based on population  
 (19) subsistence rights and other historical uses  
 (20) And if the corporation the Village Corporations are to  
 (21) select their lands in what they call the core townships which  
 (22) is the areas around their village In the case of English Bay  
 (23) and Port Graham there is two corporate -- two villages fairly  
 (24) close together A lot of their selections were cross filed on  
 (25) top of each other When I sorted that all out there wasn't

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- (1) enough land in what they call the core township to satisfy all  
 (2) their entitlements  
 (3) Therefore under what is called -- trying to recollect but  
 (4) I think it was 11(a) or 11(c) the Secretary of Interior was  
 (5) required to set additional lands aside for their selection  
 (6) Now those additional lands were required to be lands that were  
 (7) historically used by the corporations and lands that were  
 (8) similar to the core township lands  
 (9) The Native Claims Settlement Act was passed in 1971 and so  
 (10) the Secretary of Interior -- Interior is the -- set these lands  
 (11) in the Kenai Fjords area aside for selection by the Native  
 (12) corporations The park there was set up under ANILCA which  
 (13) is -- was passed in 1980 so most of that was all decided prior  
 (14) to there actually being the Kenai Fjords National Park  
 (15) Q So what you've just told us then Doctor is it correct  
 (16) that English Bay selected in the Kenai Fjords area before the  
 (17) park was created?  
 (18) A The land was designated for their selection prior to the  
 (19) park being designated -- created  
 (20) Q Doctor I'm going to show you a map that has already been  
 (21) entered in this case It is Exhibit 1162 Do you want to --  
 (22) MR FORTIER Would you mind Your Honor if Professor  
 (23) Green came down?  
 (24) THE COURT No he can go ahead yes  
 (25) Doctor you have to keep that microphone on though

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(1) BY MR FORTIER  
 (2) Q Professor Green what I'd like to show you is 1162 Can  
 (3) you point out to the jury generally - come here a little  
 (4) closer  
 (5) MR OPPENHEIMER Professor be mindful You're not  
 (6) free to roam as far as you might think  
 (7) A Am I at the end of my rope?  
 (8) MR FORTIER Not yet you haven't been  
 (9) cross examined  
 (10) BY MR FORTIER  
 (11) Q I'm going to point - would you point out to us where  
 (12) English Bay proper is?  
 (13) A English Bay Corporation is the village here and the Port  
 (14) Graham village is right here  
 (15) Q Okay That's what you were talking about about two  
 (16) villages being fairly close together?  
 (17) A This land in this area is their core townships  
 (18) Q And what that means was that some of the land under which  
 (19) you said was 11(a) or something like that that was available  
 (20) for their selection?  
 (21) A For 11(a) as well as 11(b) but there wasn't enough land  
 (22) in this area to satisfy all their selection because also you  
 (23) have Seldovia Native corporation in here too plus the State  
 (24) of Alaska had claims so just literally they ran out into the  
 (25) ocean is what happened when they got so far So lands in this

(1) documents and went over them to verify whether in fact those  
 (2) were correct  
 (3) Q So then you verified the accuracy of the selections as  
 (4) shown on the maps correct?  
 (5) A From all the documents I had yes  
 (6) Q Dr Green what I'd like to do -  
 (7) MR OPPENHEIMER Your Honor before we get into this  
 (8) could we ask a few questions on voir dire? Because two of the  
 (9) questions that were given in response just now suggest that  
 (10) there may be a foundational problem If there's not I'll make  
 (11) no objection  
 (12) THE COURT Yes but limit it I don't want to have a  
 (13) long period of questioning  
 (14) MR OPPENHEIMER Agreed  
 (15) VOIR DIRE EXAMINATION OF GEORGE H GREEN  
 (16) BY MR OPPENHEIMER  
 (17) Q Professor Green are you saying that you've had an  
 (18) opportunity to review the map there that we're about to see  
 (19) recently?  
 (20) A Yes I have  
 (21) Q Okay And have you had an opportunity to investigate the  
 (22) basis for the depiction on that map with respect to the most  
 (23) recent irrevocable selections?  
 (24) A I've read and have copies of - received recently copies of  
 (25) those documents have read them yes

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(1) area were then set aside by the Secretary of the Interior for  
 (2) their selections  
 (3) Q Now Doctor I think - is it correct that the lands in  
 (4) here that they were entitled to select were withdrawn were  
 (5) supposed to be lands that were similar in nature and character  
 (6) to that down in the English Bay area?  
 (7) A That's correct  
 (8) Q And the same for Port Graham?  
 (9) A That's correct  
 (10) Q Now Doctor maybe you can clarify a point for us  
 (11) Yesterday we heard some business about - if you would stay  
 (12) there Doctor I want to show you another map  
 (13) We heard some business about English Bay Corporation  
 (14) having  
 (15) relinquished some unoiled property for oiled property in the  
 (16) Harris Bay area Are you generally familiar with English Bay's  
 (17) selections in the Harris Bay area?  
 (18) A Yes I've been - I am  
 (19) Q And are you generally familiar with the status map of  
 (20) English Bay Corporation?  
 (21) A Yes I am  
 (22) Q Okay And this would be the map that you referred to that  
 (23) was shown to you by the land team for English Bay?  
 (24) A Yes Mr Moore prepared those maps as I understand it  
 (25) Q Did you rely upon those maps as you prepared your report?  
 (26) A I relied on those maps but I also took the conveyance

(1) MR OPPENHEIMER Fine  
 (2) MR FORTIER Thank you  
 (3) DIRECT EXAMINATION OF GEORGE H GREEN (Resumed)  
 (4) BY MR FORTIER  
 (5) Q Then I'd like to show you Professor Green what's been  
 (6) marked as D\1133 I'd like to refer you to several areas one  
 (7) is Aialik Bay?  
 (8) A Yes  
 (9) Q And the other is Harris Bay?  
 (10) A Yes  
 (11) Q Now can you point out to us English Bay's 12(b) selections  
 (12) on the Aialik site?  
 (13) A These areas here in - in green are the 12(b) selections  
 (14) Q And those are the English Bay 12(b) selections?  
 (15) A Yes they are  
 (16) Q Now Doctor when a Village Corporation goes about the  
 (17) business of selecting - selecting its properties is - how  
 (18) does it do that? Is it confined by any regulations?  
 (19) A They have the like kind property There has to be some  
 (20) historical uses and there's a requirement they be contiguous  
 (21) properties You cannot leave - select a property less than  
 (22) 1200 acres you can't - you can't - for example you can't  
 (23) select here and hopscotch up here and leave something in  
 (24) between They have to be continuous  
 (25) Q So Doctor you pointed with your pen to I think what's

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- (1) been - it's got a big number of a 26 Do you know whether or  
 (2) not that's a priority number?  
 (3) A That - that was the priority number Let's see I believe  
 (4) it was priority number 25 that constitutes their entitlement  
 (5) Priority 26 7 8 29 and 30 are overselections  
 (6) Q Okay So their entitlement is supposed to end it's your  
 (7) understanding at what's been marked here as 25?  
 (8) A Yes as priority 25 that's correct  
 (9) Q So Doctor do you know whether or not English Bay  
 (10) Corporation had any discretion to - as a for instance hopscotch  
 (11) over say Section 24 let's say up to Section 28 so it could  
 (12) avoid oil?  
 (13) A No they would not be allowed to do that  
 (14) Q And why is that Doctor?  
 (15) A Because of the continuous requirement  
 (16) Q So then it has been suggested in this case that English Bay  
 (17) elected to take an oiled property and to forego an unoiled  
 (18) property?  
 (19) A Well I'm not familiar with that issue but I do know that  
 (20) having reviewed their documents that - that priority 25  
 (21) fulfills their entitlements according to the documents that I  
 (22) have reviewed leaving five sections of overselection  
 (23) Q Now Doctor do you know why it is that a Village  
 (24) Corporation would overselect properties?  
 (25) A Well it's recommended by the BLM and required in some

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- (1) cases that they overselect and the reason for that is that  
 (2) when this property is originally interim conveyed it's interim  
 (3) conveyed on maps Then the land is later surveyed and then  
 (4) they receive a patent to it Well the maps and the actual  
 (5) field surveys don't always come out the same and there may be  
 (6) deficiencies once the survey comes in  
 (7) Also there are claims against a lot of this land  
 (8) Shareholder claims or Native allotment claims third party  
 (9) claims claims like that and those claims have to be  
 (10) adjudicated And if they are adjudicated and taken out of the  
 (11) Native selection then the - then the corporation is entitled  
 (12) to select some additional lands which would be their next  
 (13) priority lands So they generally overselect so that when  
 (14) those other issues are resolved there is lands that's already  
 (15) been predetermined pre-designated that they would pick up  
 (16) their deficiencies from  
 (17) Q So Doctor then it is possible - is it possible that as  
 (18) a for instance with English Bay on the Harris Peninsula on  
 (19) the peninsula on the Atlix Bay side that they may reach up  
 (20) into Section 26 or 27?  
 (21) A It's possible once all those issues have been adjudicated  
 (22) they may pick those up  
 (23) Q And so Doctor when you examined the title to the Village  
 (24) Corporations in the preparation of your reports did you  
 (25) attempt to define the reports only for the lands up to

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- (1) entitlement?  
 (2) A I only valued the - the amount of the lands of their  
 (3) entitlement  
 (4) Q Okay thank you Doctor You can take your seat  
 (5) Doctor when we were talking with you earlier this morning  
 (6) you indicated that you believed that there was such a thing as  
 (7) environmental lands Can you tell us whether or not  
 (8) environmental lands from the viewpoint of an appraiser are an  
 (9) important consideration and why?  
 (10) A Yes One of the things an appraiser does is look at what  
 (11) we call the highest and best use of the property That  
 (12) analysis involves looking at the potential market for property  
 (13) by different segments or classes It involves looking at the  
 (14) physical characteristics of the property It also involves  
 (15) looking at a lot of the legal aspects of the property and  
 (16) it's - and the economic environment around it  
 (17) Then the appraiser would determine in his opinion if  
 (18) that - if that property was placed on the market what would be  
 (19) the - where would - where would be the most probable area  
 (20) that the property would sell for the highest price and it is  
 (21) sometimes the land to be set aside for preservation for public  
 (22) use is the best use of the land  
 (23) It goes back to a basic resource economics issue and that  
 (24) has to do with when the collective whole of people determine  
 (25) that something has value and that value is equal to or greater

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- (1) than the value to individuals typically that will be acquired  
 (2) and - for the - for public purposes and that's kind of the  
 (3) issue we're looking at here  
 (4) When you look at a lot of land in Alaska particularly in  
 (5) remote areas or rural areas you have a small market And  
 (6) particularly we have very pristine land like we're dealing  
 (7) with here there is a movement in this country to try to  
 (8) preserve and acquire and preserve a lot of this pristine land  
 (9) And if we looked at the amount of - of - when we look at the  
 (10) market out there for land and how long it would take to sell  
 (11) all this land in the private market we come to the conclusion  
 (12) that the best use of it would be to preserve it for future  
 (13) generations  
 (14) Q Okay And Professor Green you just studied this this  
 (15) concept called environmental lands as a part of your work?  
 (16) A I have I've reviewed literally hundreds of articles and  
 (17) studies on that issue  
 (18) Q Excuse me Professor  
 (19) MR FORTIER Could I have up what's been marked as  
 (20) 1247  
 (21) MR PETUMENOS Mr Fortier you may want to move the  
 (22) case!  
 (23) MR FORTIER I may  
 (24) A And I consider it a very valid market segment  
 (25) BY MR FORTIER

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- (1) Q Professor Green I've put on the screen 1247 76 Can you  
 (2) explain what this is for the jury please?  
 (3) A It is just a few headlines from articles that -- about the  
 (4) preservation of lands in the United States around the world  
 (5) At one time my office we were doing some research I had a  
 (6) graduate assistant pulling these articles I literally had  
 (7) boxes of them They're just numerous articles about this kind  
 (8) -- properties in California being purchased for preservation  
 (9) properties in New York Mexico rain forest being preserved  
 (10) private lands and various parts of the United States that have  
 (11) been purchased for preservation purposes  
 (12) Q Professor who are the -- who are the groups who's the  
 (13) market that's buying this environmental land?  
 (14) A Well there are some private groups that buy the land We  
 (15) haven't seen a lot of that in Alaska There is also  
 (16) governmental entities that do It can be the borough or  
 (17) county it can be the state It can be various agencies of the  
 (18) state It can be also various agencies of the federal  
 (19) government  
 (20) Q Professor Green I'm going to show you what's been marked  
 (21) as exhibit 1247 77 Can you tell me what this is?  
 (22) A That's just some more of the same kind of articles that one  
 (23) talks about a sale that occurred recently in Kachemak Bay  
 where  
 (24) the State of Alaska purchased the lands for preservation One  
 (25) in Texas where land has been -- some of the lands that was part

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- (1) of the RTC lands which was foreclosure lands that the  
 (2) government acquired which was being turned into a natural --  
 (3) nature preserve One here in California where they passed a  
 (4) 65 million dollar program to protect the California  
 (5) environment which included a portion to buy lands and then  
 (6) some of the issues in the Northwest having to do with the  
 (7) protection of the white owl  
 (8) Q Let's go to 78 please  
 (9) These are some more articles you collected Doctor 77  
 (10) these articles that are on the --  
 (11) A Yes  
 (12) Q If we could please go to 78  
 (13) A This is just an article that was in the Anchorage Daily  
 (14) News here about -- a few months back talking about one  
 (15) scientist who says that there is a link between the environment  
 (16) and the preservation of our natural resources as it relates to  
 (17) the mental health of people who live in urban centers His  
 (18) theory is that human beings have been so attached to nature for  
 (19) so many years that if there isn't some continued involvement  
 (20) that it can cause health problems and so on And we've seen  
 (21) a number of these kinds of issues around  
 (22) Q Is this something you rely upon Doctor in determining  
 (23) whether or not there is such a thing as environmental lands?  
 (24) A It's just a lot of the general things As I've said I had  
 (25) at one time boxes full of these articles in my office

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- (1) Q What are the important features to evaluate lands that  
 (2) you're considering whether or not they're environmental lands?  
 (3) A Well I look at the same features whether it's to be  
 (4) environmental lands or -- or some other market segment but the  
 (5) features that I typically look at are here on the board is --  
 (6) Q Doctor I'm showing you what's been marked as Exhibit  
 (7) Number 1253  
 (8) A Yes And these are the things some of the things that I  
 (9) look at These are the access the biological features of the  
 (10) land meaning the wildlife birds mammals things of that  
 (11) nature The hydrology Some lands are very important  
 because  
 (12) of important water resources The geographic features would  
 be  
 (13) things like mountains glaciers streams things like that  
 (14) One of the things you want to recognize is that when you  
 (15) start talking about environmental lands some of the features  
 (16) that we normally think of as in -- as being negative features  
 (17) on land that would be set aside for development purposes are  
 (18) extremely valuable for preservation purposes for -- for the  
 (19) kind of lands we're talking about here Ocean views any kind  
 (20) of views are important Archaeological significant sites  
 (21) historical significance the vegetation and then I look at  
 (22) what's called the absorption rate for the land  
 (23) Q You've got this -- you've got marked here Doctor it's a  
 (24) rating method employed?  
 (25) A I use this method I develop a rating system where I take

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- (1) the property that I'm looking at I use maps all kinds of data  
 (2) that I can find about the property and I go through and rat  
 (3) that against a predesignated rating system And then I also do  
 (4) that in looking at other environmental lands and comparing  
 (5) those lands to say the subject land that I'm looking at  
 (6) Q One of the areas you've got here Professor is access?  
 (7) A Yes  
 (8) Q Can you describe to us what you mean by access?  
 (9) A Well we're talking either -- you know access can be  
 (10) roads access by water float plane things of that nature  
 (11) Sometimes for preservation purposes access can be almost a  
 (12) negative factor instead of a positive factor We're looking  
 (13) here at lands that have you might say pristine features  
 (14) although some access is often highly desirable So we're  
 (15) looking at whether there is roads and water access things like  
 (16) that Alaska access is extremely important  
 (17) Q Professor in undertaking this assignment did you utilize  
 (18) a rating method such as that displayed here using these  
 (19) criteria?  
 (20) A Yes I did  
 (21) Q Did you also look Professor at what property rights were  
 (22) involved?  
 (23) A Yes I did  
 (24) Q Could I have exhibit 1250 please?  
 (25) Professor I'm showing you what's been marked as exhibit

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- (1) 1250 Can you tell me what that is?  
 (2) A It s a list of the – some of the traditional or  
 (3) fundamental rights to real estate When you look at real  
 (4) estate a lot of times we think of real estate as being the  
 (5) dirt and the trees and the physical aspects of it But a  
 (6) person who owns real estate is also entitled to certain rights  
 (7) that run with the real estate These rights can be sold They  
 (8) can be separated They have value They have value as a  
 (9) group They have value individually One of the first things  
 (10) that an appraiser has to do in appraising land is determine  
 (11) what rights that are being valued  
 (12) Q Are these some of the rights that you looked at when you  
 (13) undertook this assignment Professor?  
 (14) A Yes they are These are very important rights relative to  
 (15) this particular engagement  
 (16) Q Professor I note that one of the rights is quiet  
 (17) enjoyment Would you tell the jury what you mean by that?  
 (18) A Yes People who own real estate have the right to be able  
 (19) to enjoy their real estate That means that they have the  
 (20) right to exclude others from it They have the right to use it  
 (21) for their personal use They also have the right to not use  
 (22) it if they so desire But they – other people do not have  
 (23) the right to infringe upon those particular rights of what we  
 (24) call the quiet enjoyment of our property  
 (25) Q So Professor did you look at whether or not property that

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- (1) may not have been used by one of the plaintiffs was interfered  
 (2) with in some way?  
 (3) A Well I think it s important to kind of understand a little  
 (4) bit – when we talk about property rights understand a little  
 (5) bit of what happened out there and what was there prior to the  
 (6) oil spill Prince William Sound the Gulf of Alaska the South  
 (7) Kachemak Bay area that s a quiet pristine area Not a lot of  
 (8) people out there lots of wildlife beautiful area Been  
 (9) described by some as being one of the most pristine areas of  
 (10) the world  
 (11) When the oil spill occurred suddenly we had a situation  
 (12) where there is 11 million gallons of oil heading towards these  
 (13) peoples land That oil is for a period anyway it s –  
 (14) appears to be toxic It is moving around in the water It  
 (15) is – it s been described as goo For a period of time you  
 (16) have no idea where it s going to land where it s going to  
 (17) settle It is moving around in the water so the people  
 (18) downstream of this and where this stuff is heading it s  
 (19) pretty hard for them to at that point in time understand what  
 (20) the consequences is going to be of that – that oil spill if  
 (21) you would  
 (22) Q Professor if I could interrupt for a moment  
 (23) A Sure  
 (24) Q I had a few more questions on this particular subject  
 (25) A Sure

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- (1) Q Did you analyze Professor the right to sell property and  
 (2) the right to use and occupy and sell it as part of your –  
 (3) A Oh yes yes All these rights are rights that the  
 (4) property owner enjoys  
 (5) Q Okay One of the rights Professor that you have down  
 (6) here is something called littoral rights?  
 (7) A Yes  
 (8) Q Could you tell us what littoral rights are?  
 (9) A Littoral rights are the rights that an owner of real estate  
 (10) has at the point where water – where the land and water comes  
 (11) together And the property owner has certain rights to be able  
 (12) to access the property and to if you would leave the  
 (13) property and certain rights to resources at that point  
 (14) Q Now Professor do each of the components that are listed  
 (15) on these fundamental rights have a value in itself?  
 (16) A Yes  
 (17) Q Could I see exhibit 1254 please?  
 (18) I m showing you what s been marked as exhibit 1254  
 (19) A Yes  
 (20) Q Professor could you tell me what this is?  
 (21) A This is just an example of some – some examples where less  
 (22) than fee interests have been acquired by different  
 (23) organizations The first one is some property at the Tazimina  
 (24) Lake The National Park Service – it is owned by Native  
 (25) corporation The National Park Service wanted to acquire it

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- (1) The Natives wanted to continue to use it but felt in their  
 (2) interest that it would be good to have that land preserved so  
 (3) they entered into an agreement with the Park Service to sell  
 (4) them their – what we would call their development rights to  
 (5) the land They had the land appraised and then they  
 (6) determined  
 (7) that – as my recollection the land was appraised for \$475 an  
 (8) acre and then they paid them a price that represented about 85  
 (9) percent of the fee value of the land to take away those  
 (10) development rights  
 (11) The Natives no longer have the right to borrow money  
 (12) against their land They no longer have the right to build on  
 (13) their land They cannot – they cannot convey it sell it do  
 (14) most of the kinds of things that we re talking about here  
 (15) They still have the right to some use of the land They can  
 (16) hunt and fish on it and have access to it So the agreement  
 (17) was that the Native corporation would give up 15 percent of the  
 (18) value for the rights for those rights and the government  
 (19) would pay them approximately 85 percent of the value for the –  
 (20) to take away these development rights  
 (21) The Salamatoof Native Corporation is down in the Kenai  
 (22) area They have been developing land along the Kenai River I  
 (23) was a consultant to them for seven years which developed  
 (24) three  
 (25) miles of Kenai River on both sides And in that project we set  
 (26) aside what s called nondevelopment easements along the river  
 (27) So we put easements in there stating that no one could do –

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(1) build anything or cut any trees or do any kind of development  
 (7) activity from the mean high tide to the top - well actually a  
 (3) little bit beyond the top of the ridge along the river - so  
 (4) that we could protect the integrity of the riverbank  
 (5) The U S Fish and Wildlife Service has then approached the  
 (6) Native corporation and is now negotiating to acquire those  
 (7) development - that nondevelopment easement because they  
 would  
 (8) like to maintain and control that easement to make sure that it  
 (9) is properly protected  
 (10) I looked at some of the files for the Alaska Energy  
 (11) Authority to look at where they have run high powered electric  
 (12) lines things like that what they have paid for easements  
 (13) And I found an example in there where one Native allotment  
 down  
 (14) in the Homer area was - the Energy Authority approached - I  
 (15) believe her name was Mabel Nelson She because it was a  
 (16) Native allotment the BIA has oversight responsibility on that  
 (17) and the BIA chief appraiser said that if they want to acquire  
 (18) that easement they would have to pay 95 percent of the fee  
 (19) value of the land in exchange for the - that easement becau-  
 (20) the lady would have to give up most of or all of her  
 (21) development rights and only have some minor rights In the  
 (22) end they elected to just buy the land in fee value rather than  
 (23) do that but the determination was made that that represented  
 (24) the loss of the right to develop that land and the opinion of  
 (25) the BIA people represented about 95 percent of the value of the

(1) A Yes yes  
 (2) Q And that the government for instance would pay 85  
 (3) percent?  
 (4) A Yes  
 (5) Q Now do you know whether or not environmental hazards  
 (6) impact these property rights we've been talking about?  
 (7) A Absolutely they do  
 (8) Q Okay Could we -  
 (9) A Before I was describing a little bit of what happened in  
 (10) Prince William Sound You know people had land Now some  
 of  
 (11) that land wasn't being used but that doesn't having anything  
 (12) to do with what we're talking about Just like if I have a  
 (13) motorhome sitting beside my house or a cabin a winter cabin  
 (14) or a summer cabin and I'm not using it I don't expect  
 some-body  
 (15) else to come along and use it just because I'm not using it  
 (16) In fact if I discovered that somebody else was involuntarily  
 (17) using my property I would certainly expect them to  
 compensate  
 (18) me for the use of my property or if they infringed upon the  
 (19) rights that - my rights I would expect them to compensate me  
 (20) for that  
 (21) In the case of Prince William Sound we have a quiet  
 (22) peaceful area that where suddenly there's 11 million gallons of  
 (23) oil in the water there are some jurisdictional disputes going  
 (24) on being reported in the press There's reports of tens of  
 (25) thousands of birds and mammals and game dying out there

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(1) property  
 (2) Now I looked at some like Matanuska Electric Association  
 (3) I looked at some of the transactions on the Trans Alaska  
 (4) Corridor and I found that depending upon the disruption of -  
 (5) to the land that the rights to transport electricity and oil  
 (6) and stuff across someone's land can represent anywhere from  
 as  
 (7) low as 40 percent to as much as 95 percent of the fee value of  
 (8) the land  
 (9) Q Professor how large was the Tazimina transaction do you  
 (10) recall?  
 (11) A It's quite a large one I'd have to look in my notes  
 (12) Q Professor I'll withdraw the question  
 (13) A Okay  
 (14) Q Was it larger than a few acres than two acres?  
 (15) A Well it's several thousands of acres I'd have to look at  
 (16) the exact amount  
 (17) Q Okay Now does it make any difference with regard to the  
 (18) rights that we're talking about the quiet use or quiet  
 (19) enjoyment rights and the littoral rights and those sort of  
 (20) rights whether or not you own a quarter of an acre or 100 000  
 (21) acres?  
 (22) A No it's the same rights  
 (23) Q Okay And part of this right suspended then is to show  
 (24) us what these rights are worth is that correct? The right to  
 (25) exclude others and -

(1) There's - they suddenly brought into the area thousands of  
 (2) workers who are now on the beaches They're running up - you  
 (3) know they're working in protective clothing which would imply  
 (4) to me that someone - that there may be an environment -  
 (5) health hazard  
 (6) Q Professor before we go into the actual subject what I  
 (7) wanted to do was ask you a couple of questions -  
 (8) A Sure  
 (9) Q - on whether or not you researched the issue of the impact  
 (10) of contamination on the property values?  
 (11) A Well I - yes I have done research on that issue  
 (12) Q Okay I have put on the screen what has been marked as  
 (13) 1247 79  
 (14) A Sure  
 (15) Q Can you tell us what this is please?  
 (16) A Well this is just some articles and in the real estate  
 (17) literature we see a lot of this have been for the last five or  
 (18) six years or so People being - people in the industry being  
 (19) worried about environmental contamination Real estate  
 (20) brokers for example in this state for the last four years  
 (21) there has been mandatory regulation requirement to renew  
 your  
 (22) license as part of the continuing education program that they  
 (23) all study about the environmental hazards The bankers have  
 (24) been warned about it because if a banker takes title - let's  
 (25) say a banker loans money and then has to take title to the

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(1) property under foreclosure that's going to expose a banker to  
 (2) liability  
 (3) There have been you know insurance articles to insurance  
 (4) people and real estate appraisers and others warning the whole  
 (5) industry about environmental hazards I personally have taught  
 (6) some classes on that I taught a class before the - the  
 (7) annual realtor's convention here two years ago  
 (8) Q What is this 1247?  
 (9) A This is just some more of the same kind of articles and I  
 (10) just selected a few just to - as an example This is articles  
 (11) having to do with insurance law one from the banking one that  
 (12) was in a banking review one was in a law review So there's  
 (13) been - I just tried to show a sample of how that has permeated  
 (14) the whole industry  
 (15) Q Now Doctor in this case could you describe to the jury  
 (16) how you approached the appraisal problem? You were asked  
 to  
 (17) look at the impact for the first three years after the oil  
 (18) spill?  
 (19) A Yes Well I - as I have just been describing I've  
 (20) looked at all the circumstances surrounding the spill the  
 (21) impact and effect it had on the land and how - and the effect  
 (22) that had on the property rights of these owners and you know  
 (23) as I've just described you have what I would call almost a  
 (24) land that has been traumatized I mean you have - and so  
 (25) what I looked at is to try to find a way to determine what that

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(1) impact was to these property rights that these landowners have  
 (2) during that first summer  
 (3) Q Excuse me before you go into that Professor -  
 (4) \ Sure okay  
 (5) Q - what did you look at in order to make that  
 (6) determination?  
 (7) \ Well I looked at - okay these areas that you put up here  
 (8) on the board  
 (9) Q Looking at exhibit 1251?  
 (10) A Yes The physical intrusion of oil on the beaches There  
 (11) was actual physical oil out there There is a disruption to  
 (12) the ecological system which we were able to determine By  
 (13) that - and we're talking about environmental land that is  
 (14) important ecological environment if you would and that  
 (15) environment was disrupted because there was thousands of  
 (16) animals and birds and things that were dying and affected and  
 (17) in some cases the food chain is affected  
 (18) There was the actual intrusion by the clean up effort or  
 (19) the beach treatment if you would Hundreds of people up and  
 (20) down on these beaches There was a certain amount of general  
 (21) chaos that prevailed out there at the time There were a lot  
 (22) of - well there's a lot of uncertainty I mean how does  
 (23) anybody know who owns land that's got 11 million gallons of oil  
 (24) coming at them? How do they know what the effect of that's  
 (25) going to be It's probably one of the most uncertain

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(1) situations that you could look at  
 (2) In Alaska owners of land have an obligation to disclose  
 (3) environmental hazards so now we have a situation where the  
 (4) landowner - in order to lease their lands sell their land  
 (5) rent their land convey it in any way - would have an  
 (6) obligation to disclose that there may be a potential  
 (7) environmental hazard  
 (8) There were all kinds of catastrophic predictions being  
 (9) made I read everything from scientists saying oh it'll be a  
 (10) short term thing to some saying that the Prince William Sound  
 (11) these areas will never recover They will never be the same  
 (12) So we had some of the best scientists in the world putting out  
 (13) all kinds of different statements  
 (14) Those of us who are not scientists we would be confused by  
 (15) that And there was some gag orders put on actual scientific  
 (16) materials I read articles pertaining to that - those  
 (17) complaints that from one agency to the other even within like  
 (18) state agencies that wouldn't share information about what was  
 (19) going on And as I mentioned there was some jurisdictional  
 (20) disputes  
 (21) So if you look at all this all these things that are going  
 (22) on you had a lot of mass confusion You had a real unsettling  
 (23) situation if you would You had tremendous uncertainty  
 (24) Q Now with regard to your research into this matter  
 (25) Professor Green can you describe to the jury what you did?

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(1) A I - well one thing I was living there when the spill  
 (2) occurred I had two sons working out there I went out and  
 (3) looked early in - early on during the first summer I have a  
 (4) firsthand view of what was going on I viewed the property  
 (5) on - on more than one occasion I've reviewed lots of  
 (6) documents about it about the - about the area I've reviewed  
 (7) literally dozens and maybe hundreds of press releases having  
 to  
 (8) do with what went on I've been to the - the library the oil  
 (9) spill impact library and reviewed lots of documents looked at  
 (10) lots of photographs that were taken during that - about some  
 (11) of those properties I spent days reviewing the documents on  
 (12) file in Mr Fortier's office and I talked to a number of the  
 (13) people who lived out there  
 (14) Q Did you arrive at an opinion as to the harm to the  
 (15) property if any?  
 (16) A I did arrive at an opinion and that is it's my opinion  
 (17) that in the early stages of this - of the spill that the  
 (18) property rights to the - to these landowners that I  
 (19) represented that a portion of the property rights that they  
 (20) typically enjoy were suspended By that I'm saying that it  
 (21) would be unrealistic particularly in the first three or four  
 (22) months following that spill for one to think that business  
 (23) would just go on as usual The landowner could just continue  
 (24) to do whatever they were doing prior to that  
 (25) It's pretty unrealistic to think that would be - would be

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- (1) negotiating a sale of property a lease on property unless it  
 (2) was like small isolated agreements It's pretty unrealistic  
 (3) to think that one would be able to use their land in what we  
 (4) would call quiet enjoyment when you have thousands of people  
 (5) running up and down your beaches Access became  
 somewhat  
 (6) difficult  
 (7) I've seen photographs of beach workers with oil up to their  
 (8) shoulders working on those beaches You had boats brought -  
 (9) many boats brought into the area You had helicopters flying  
 (10) all over the place You had barges with huge hoses spraying  
 (11) down the beaches It's difficult to think that you would have  
 (12) what we would call quiet enjoyment of your - of the use of  
 (13) your land during that period of time  
 (14) Q Can we have 1252?  
 (15) MR FORTIER Your Honor would you like to break for  
 (16) the day at this point?  
 (17) THE COURT Well question is counsel would you?  
 (18) I've got 15 minutes but if you want to break I'd be happy  
 (19) to  
 (20) MR FORTIER Oh no I could go for another 15 Your  
 (21) Honor  
 (22) THE COURT Okay go ahead  
 (23) BY MR FORTIER  
 (24) Q Professor Green I'm showing you what's been marked as  
 (25) exhibit 1252 Does this illustrate how you estimated damages

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- (1) on account of the oil spill activities during the first three  
 (2) years?  
 (3) A Yes it does What I was - I looked at is that during  
 (4) these first three or four months my understanding - well the  
 (5) spill occurred in March There was a lot of activity going on  
 (6) as I've described through the summer and somewhere - my  
 (7) recollection about October they suspended the beach  
 treatment  
 (8) areas and assessment  
 (9) During that period of time that's when normally in Alaska  
 (10) we do most of our - any development work I've developed  
 (11) quite a little bit of land in Alaska and some other properties  
 (12) and that's when you - that's when you do most of your  
 (13) development activity or work The reason they suspended the  
 (14) beach treatment areas is that it - because of climatic  
 (15) conditions it becomes extremely difficult to work out in those  
 (16) areas So if you miss that first few months the whole summer  
 (17) months in terms of most activity you pretty much miss the  
 (18) whole year So what I did was I looked - I determined that a  
 (19) large share of the property rights these rights that these  
 (20) landowners enjoy were suspended and they were suspended for  
 (21) that first year  
 (22) Q That would be across the whole of the properties owned by  
 (23) Chenega Corporation?  
 (24) A Across the whole of their properties that's correct  
 (25) Q And the whole of the properties of the English Bay

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- (1) Corporation?  
 (2) A English Bay Port Graham and Chenega Corporation  
 (3) Q Go ahead please  
 (4) A After that for year two and three I just looked at the  
 (5) areas along the beaches I took a quarter of a section of the  
 (6) land along the beaches because those - those beaches were  
 (7) being continued to be treated for year two and three and so  
 (8) I - I looked at those and in effect what I'm saying is that  
 (9) I looked at it and said there was physical use of the  
 (10) property there was a suspension of the - of a certain amount  
 (11) of these property rights and the company that suspended  
 these  
 (12) rights and was using this property should pay to these  
 (13) corporations rent for the use of their land  
 (14) It's no different than if you discovered somebody living in  
 (15) your house you would expect them to pay you rent for the use  
 (16) of your property Or if you came home and discovered that they  
 (17) dumped trash in your yard or did something to disrupt your use  
 (18) of it you want to be compensated for that That's the same  
 (19) concept we've used here Straightforward concept  
 (20) Q You've accepted for - the bottom bullet for 1252 -  
 (21) damages for long term oil persistence not estimated Do you  
 (22) see that?  
 (23) A Yes I see that I did not look at the long term  
 (24) persistence issue Any issue beyond three years that was  
 (25) being done by Dr Mundy

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- (1) Q And Professor when you looked - did you arrive at a  
 (2) value for the lands and therefore of the rights that we  
 (3) suspended for each of the corporations?  
 (4) A Yes What I did was appraise the land using regular market  
 (5) value direct sales comparison approach to value for the lands  
 (6) and I assumed I - you might say a moment before the spill  
 (7) just before the spill what that - what the value of those  
 (8) lands were prior to the spill And then I determined that  
 (9) based on the information that I showed you here previously  
 (10) that since most of the development rights were taken but the  
 (11) Native corporations had some continued use There was even  
 (12) some minor economic use of the property so the way I adjusted  
 (13) for that is I reduced that by 15 percent Otherwise I looked  
 (14) at it from the standpoint that the Natives would continue to  
 (15) have about 15 percent of those rights The Exxon Corporation  
 (16) was in effect using 85 percent of those rights and then I  
 (17) assessed a rent for the use of these property rights and the  
 (18) property  
 (19) Q Professor I put on the screen what has been marked as I  
 (20) believe 1256 and - 1256 and 57?  
 (21) A Well I hope your eyes are better than mine  
 (22) Q My eyes are worse over there but we've got this magic  
 (23) thing here Mr Petumenos dropped the other pen I think but  
 (24) if you grab that pen there - you recall we've done this a  
 (25) couple of times We tried to anyway

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- (1) MR PETUMENOS Judge could I assist maybe?  
 (2) THE COURT I certainly hope so  
 (3) MR PETUMENOS So do I  
 (4) BY MR FORTIER  
 (5) Q Would you Professor Green first point out on 125 - on  
 (6) the bottom one there 1257 I believe the amount of value you  
 (7) arrived at for Chenega Corporation and you can do it -  
 (8) MR PETUMENOS You want me to do it for you?  
 (9) MR FORTIER Go ahead  
 (10) MR PETUMENOS What part of the thing do you want?  
 (11) The bottom one?  
 (12) MR FORTIER The bottom one  
 (13) MR PETUMENOS How much?  
 (14) A I can see that now On the Chenega lands I valued it two  
 (15) different - in effect two values  
 (16) One I valued the lower lands what I - I referred to them  
 (17) on my report as the prime lands and these were lands at below  
 (18) as I - my memory serves me correct below either 300 or 500  
 (19) feet elevations which most of the lands around the - around  
 (20) the water and the lower elevations the more developable type  
 (21) lands then I - and I valued those at \$1367 an acre which  
 (22) there was approximately 46 000 - almost 47 000 acres for a  
 (23) value of 64 million dollars  
 (24) Q And this was for the lands that were closer to the  
 (25) waterfront?

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- (1) A This was the lower lands yes  
 (2) Q In valuing those lands closer to the waterfront Professor  
 (3) did you look at anything any of the natural resources that  
 (4) were along that area?  
 (5) A Well yes absolutely I looked at a lot of studies I  
 (6) went to the university library and looked at the environmental  
 (7) impact studies that had been done on Prince William Sound  
 (8) and  
 (9) others to try to determine what the resource base was there  
 (10) type of animals type of activities type of vegetation I  
 (11) looked at all of those factors and that's one reason on this  
 (12) particular land I separated it because I felt that these lower  
 (13) lands were the most productive lands  
 (14) Q Let's go to 1257 If we could Mr Petumenos will give me  
 (15) a tutorial  
 (16) Okay I'm showing you now 1257  
 (17) A Yes This was the lands I called less than the prime lands  
 (18) or the - some of the back lands I estimated there to be  
 (19) almost 30 000 acres of those and I appraised those for \$473 an  
 (20) acre for a total value of 14 million dollars  
 (21) Q And did you use the same methodology with regard to  
 (22) English  
 (23) Bay and Port Graham lands as well?  
 (24) A Yes I did The only difference on English Bay and Port  
 (25) Graham is that I valued those all as - as one value  
 (26) Otherwise in effect I merged these values would be the same  
 (27) if I just merged these values together

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- (1) MR PETUMENOS I thought I had a day off  
 (2) MR FORTIER I stay away from electric lawnmowers  
 (3) too  
 (4) BY MR FORTIER  
 (5) Q Professor Green I'm showing you what's been marked as  
 (6) 1263 - I'm sorry this is 1259 Can you tell me what this  
 (7) is?  
 (8) A Well I believe this is English Bay and -  
 (9) Q I note that you've got a price per acre of \$668?  
 (10) A That's correct  
 (11) Q Does that include the whole of English Bay's lands?  
 (12) A That's the whole of English Bay lands and that is a value  
 (13) without timber  
 (14) Q And that's rounded to 53 million dollars for all of its  
 (15) lands?  
 (16) A Yes  
 (17) Q And then if we could show Port Graham Corporation I show  
 (18) you what's been marked Doctor as exhibit 1263  
 (19) A Well you have - Sam you have the overhead that only  
 (20) shows the second and third year lands along the beaches  
 (21) You  
 (22) need to put that - the other one where we valued the whole -  
 (23) Q I'm sorry it should have been exhibit 1262 And this one  
 (24) you can see?  
 (25) A Yes This is Port Graham Corporation They have 111 657  
 (26) acres of entitlement I appraised that land for \$668 an acre

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- (1) and it rounds to 750 (sic) million dollars  
 (2) Q That's 75 million  
 (3) A I'm sorry 75 million dollars  
 (4) Q And Doctor you also arrived at a value for the - for the  
 (5) next two years for Port Graham and English Bay?  
 (6) A Yes What I did was on year two and three I took the  
 (7) lands within a quarter section of the beaches because those  
 (8) were the beaches that were - where there was those  
 (9) assessment  
 (10) and treatment continuing and I just took the land along those  
 (11) beaches and revalued just the - just the beach areas and  
 (12) there I got a value of \$1146 an acre That would be as if you  
 (13) took the beaches and cut off the back lands Most of the value  
 (14) in these kind of lands are up kind of along the beaches  
 (15) That's the most valuable property and that would be the value  
 (16) per acre if we assumed that we cut off the back lands And  
 (17) then I valued those the amount of land along those beaches  
 (18) Q Did you do a similar sort of analysis with regards to  
 (19) English Bay with regard to the latter two years Doctor?  
 (20) A Yes I did  
 (21) Q So you examined the value of the property along the - the  
 (22) beach front?  
 (23) A I valued all their lands as a whole and then I valued the  
 (24) land along the beaches within a quarter section of the water  
 (25) Q And Doctor you also arrived at a value for the land  
 (26) rights that were suspended during those three years is that

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(1) correct?  
 ( ) I arrived at a value then I reduced it by 15 percent In  
 (3) other words I took 85 percent of the value of the land and -  
 (4) to determine the amount of - the total value of the land that  
 (5) was impacted and then I assessed a rent against that  
 (6) THE COURT Counsel this is the time to take a  
 (7) break  
 (8) MR FORTIER Okay Your Honor  
 (9) THE COURT Right on the dot  
 (10) All right I'd let you go for the day Remember don't talk  
 (11) to anybody about this case and don't form or express any  
 (12) opinion on it until it's submitted to you for deliberation  
 (13) Oh I'm sorry I have an instruction to give I forgot  
 (14) about that  
 (15) I have some instructions to give you because I think since  
 (16) you haven't heard the whole trial you may be a little confused  
 (17) about the theories that are in this case as opposed to theories  
 (18) that might be in another case And I have another instruction  
 (19) to give you based on some of the evidence that's been  
 (20) presented so listen very carefully to this These will  
 (21) probably be incorporated in the final instructions also but I  
 (22) thought it appropriate to give them to you now  
 (23) The first instruction is as follows As you know the  
 (24) Native corporations are seeking recovery for damages to their  
 (25) lands Alaska law recognizes any corporation as a person

(1) information and instructions presented to you in this  
 ( ) courtroom You are not to consider whether any other party  
 (3) will or may recover for any claims in the federal action  
 (4) If you hear or see anything pertaining to the federal  
 (5) trial or a result there you should disregard that information  
 (6) because the evidence and issues in that court are different  
 (7) from those in this court Also the information you receive  
 (8) may be incomplete or inaccurate as it will be second or  
 (9) thirdhand and it is not evidence in this trial  
 (10) In fulfilling your duties as jurors in this trial you  
 (11) should consider only evidence I have permitted to be admitted  
 (12) in this trial and you should consider only the issues presented  
 (13) in this trial  
 (14) Exxon and the municipal plaintiffs in the case before you  
 (15) have now settled the claims that were before you that do not  
 (16) relate to the municipality's lands damages Thus the claims  
 (17) of all of the plaintiffs in this case both the Native  
 (18) corporations and the municipalities relate to damages to their  
 (19) land as a - as a result of the Exxon Valdez oil spill  
 (20) In addition four of the Native corporations have claims  
 (21) relating to archaeological damages and Chugach Alaska  
 ( ) Corporation has certain claims relating to administrative  
 ( ) costs Now these claims will all be related to in detail in  
 (24) the final instructions in this case But I thought there might  
 (25) be some confusion here and I do feel that you should  
 remember

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(1) distinct from its shareholders Just as an individual is  
 ( ) entitled to own land and recover for injury to his or her  
 (3) property so too is a corporation without regard to the number  
 (4) of shareholders it may have  
 (5) I have allowed testimony regarding the number of  
 (6) shareholders comprising the Native corporations to assist you  
 (7) in evaluating the credibility of witness - witnesses I will  
 (8) instruct you further on this issue and others at the conclusion  
 (9) of this case  
 (10) Now the second instruction is this Many of you may be  
 (11) aware that a trial against Exxon Corporation is also proceeding  
 (12) in the United States District Court As you may have heard  
 (13) the claims being litigated there including - include claims of  
 (14) commercial fishermen for lost fish catch and claims of Alaska  
 (15) Natives for lost subsistence harvests of traditional foods  
 (16) These claims belong to individuals not to Native corporations  
 (17) and they are not being pursued here Evidence of damage to  
 (18) subsistence resources and damage to commercial fisheries has  
 (19) been allowed here because it may be relevant to whether the oil  
 (20) spill reduced the value of the Native corporation's property or  
 (21) caused them damages by interfering with the corporations' use  
 ( ) of their land You are instructed not to consider any aspect  
 ( ) of the federal court proceeding whether by comment of  
 ( ) counsel  
 ( ) media information or other source You are to consider the  
 ( ) claims before you on their own merit only on the basis of

(1) every day the admonition I give you that you're not to consider  
 ( ) sources of information from outside this court Particularly  
 (3) the media And that's - with those words I'll let you go  
 (4) (Jury out at 1:34 p.m.)  
 (5) THE COURT Counsel because of the lengthy  
 (6) discussions on the - on these instructions that I just gave  
 ( ) and other issues regarding instructions I may not have given  
 (8) I'm going to put all of the documents that relate to those  
 (9) issues in the Court's exhibit and it will be Court's Exhibit 19  
 (10) or 18?  
 (11) THE CLERK 19  
 (12) THE COURT 19 Take the yellow tags off I have a  
 (13) question from a juror I've told the juries that if they have  
 (14) questions they can write them down give them to me and then  
 (15) I'll screen them and share them with you and see whether -  
 (16) whether or not we answer their questions And here's the way I  
 (17) deal with this  
 (18) The first - I let you tell me whether you think it's  
 (19) appropriate to get these questions answered To the extent  
 (20) that - that you do think it's appropriate I generally leave  
 ( ) it to counsel to incorporate it in their further examination  
 ( ) If it's something that you think is a delicate subject or  
 ( ) something like that you can ask me to ask the questions and I  
 (24) may or I may not ask them but here's the question  
 (25) We'll make copies of it and you can tell me what you want

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(1) to do about that in the morning It s a simple question and -  
 (2) and it appears appropriate for me to find some answer to it  
 (3) Is there anything else now on the record?  
 (4) MR DIAMOND Your Honor we have one matter that  
 (5) probably would require about 15 minutes of your attention this  
 (6) afternoon concerning a witness on schedule for tomorrow It is  
 (7) something that you reserved for trial concerning matrixes of  
 (8) information that I understand the Native corporations wish -  
 (9) wish to present in connection with the archaeology claims as  
 (10) to which we take strong exception  
 (11) THE COURT Well I ll tell you what my schedule is  
 (12) I ve got a calendar call at 2 00 and a calendar call at 2 30  
 (13) That usually lasts until about 3 00 - that s right I have an  
 (14) order to show cause - not with any of you participating in it  
 (15) - at 3 30 I suppose I could fit you in at 3 00 if you want  
 (16) to come over here  
 (17) MR DIAMOND Mr Fortier and I will be there  
 (18) THE COURT Anybody else that wants to come is  
 (19) welcome too  
 (20) MR STOLL Your Honor we submitted with a courtesy  
 (21) copy to your chambers a memorandum regarding the  
 videotape of  
 ( ) the statements by the scientists the tape you previewed  
 ( ) yesterday I believe  
 (24) THE COURT You mean the tape made in Kodiak?  
 (25) MR STOLL Yes

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(1) THE COURT Yeah I ll read that  
 ( ) MR DIAMOND We have one on the way  
 (3) MR STOLL And I m just - tomorrow some time - I m  
 (4) sure that s not going to go on tomorrow but maybe we could do  
 (5) that at a break or immediately following  
 (6) THE COURT Talk about it you mean?  
 ( ) MR STOLL Pardon me?  
 (3) THE COURT Talk about it you mean?  
 (9) MR STOLL Yes  
 (10) THE COURT Sure no problem  
 (11) MR STOLL Thank you  
 (1 ) THE COURT So stay here and get your questions  
 (13) okay?  
 (14) THE CLERK Please rise This court stands in  
 (15) recess  
 (16) (Recess at 1 38 p m )

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- (1) STATE OF ALASKA )
- ( ) Reporter s Certificate
- (3) DISTRICT OF ALASKA )
- (6) I Joy S Brauer RPR a Registered Professional
- ( ) Reporter and Notary Public
- (3) DO HERBY CERTIFY
- (9) That the foregoing transcript contains a true and
- (10) accurat transcription of my shorthand notes of all requested
- (11) matters huld in the foregoing captioned case
- (1 ) Further that the transcript was prepared by me
- (13) or under my direction
- (14) DATED this day
- (15) of 1994
- (1 ) JOY S BRAUER RPR
- Notary Public for Alaska
- ( ) My Commission Expires 5 10 97

Look-See Concordance Report

UNIQUE WORDS 2,959
TOTAL OCCURRENCES 12,406
NOISE WORDS 385
TOTAL WORDS IN FILE 36,298

SINGLE FILE CONCORDANCE

CASE SENSITIVE

NOISE WORD LIST(S)
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## Vol 21 3223

(1) IN THE SUPERIOR COURT FOR THE STATE OF ALASKA  
 (2) THIRD JUDICIAL DISTRICT  
 (4) In re ) Case No JAN 89 2533 Civil  
 ) Anchorage Alaska  
 (5) The EXXON VALDEZ ) Friday July 22 1994  
 ) 8 44 a m  
 (6) )  
 (8) VOLUME 21 Pages 3223 through 3394  
 (10) TRANSCRIPT OF PROCEEDINGS (Continued)  
 (11) TRIAL BY JURY  
 (13) BEFORE THE HONORABLE BRIAN C SHORTELL  
 Superior Court Judge

## (1) APPEARANCES

## (17) FOR THE PLAINTIFF

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## Vol 21 3225

(1) PROCEEDINGS  
 (7) (Jury in at 8 44 a m )  
 (3) (Call to Order of the Court)  
 (4) THE COURT Good morning everybody Go ahead  
 (5) MR FORTIER Thank you Your Honor  
 (6) DIRECT EXAMINATION OF GEORGE H GREEN (Resumed)  
 (7) BY MR FORTIER  
 (8) Q Good morning Dr Green  
 (9) A Good morning  
 (10) Q Professor Green yesterday when you left off we discussed  
 (11) the values you arrived at for Chenega Port Graham and English  
 (12) Bay land  
 (13) A Yes  
 (14) Q And then we were going to discuss your methodology for the  
 (15) damages for – for what you identified as the chaos and  
 (16) confusion Can you briefly describe to the jury what your  
 (17) methodology was?  
 (18) A Yes Well first I valued the property and then I  
 (15) determined that from first year the property rights to the  
 (20) whole of the property were 85 percent of the property rights  
 (21) were suspended for that first year  
 (72) For year two and three I used the land along the  
 (23) coastline along the beaches and I valued those and then I  
 (74) determined the rate of rent that should be paid on those  
 (25) assets

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(1) Q And was the rate of rent Professor Green based upon  
 (2) percentage?  
 (3) A It was Now when I first started the project that was  
 (4) before it had – the three-year treatment period had been  
 (5) determined So when I first started the project what I did  
 (6) was look at what the corporation could get in the marketplace  
 (7) if they had their money and had it invested in a safe  
 (8) investment  
 (9) And on the chart you can see the last one on there I  
 (10) looked at the Moody s Bond Rate Survey to determine what the  
 (11) bond rate was on March 22nd which was the closest day that  
 was  
 (12) reported and at that point the bond rate for a very safe  
 (13) investment would have been 9 68 percent so I used the 9 68  
 (14) percent in the first year  
 (15) After it was determined that the treatment period would go  
 (16) on we – I added in year two and three and then I looked at  
 (17) the marketplace to try to determine what long term lease rates  
 (18) were on real estate because if – in real estate if you have  
 (19) a period of less than one year generally you treat it as a  
 (20) rental agreement If it goes beyond that you start looking at  
 (21) it as a leasehold arrangement So I started looking at what  
 (22) other people had – were renting or – excuse me leasing their  
 (23) land for and I have a few of those listed  
 (24) The City of Seward has a number of land leases the City of  
 (25) Juneau Cordova and Anchorage and those range anywhere  
 from

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- (1) 8 percent to 10 percent at that particular time So I decided  
 (2) to use 9 percent the midpoint there as the rate for –  
 (3) rent rate for year two and three  
 (4) Q Now we're referring to what's been marked as PX1255 I  
 (5) believe  
 (6) A Yes  
 (7) Q Why did you change the rent rate from 9.68 to 9 percent?  
 (8) A Well as I said when I first did this I was only looking  
 (9) at a one year period because that was early in the  
 engagement  
 (10) and we didn't know at that point how long the treatment would  
 (11) go on and exactly how long you might say Exxon would be  
 using  
 (12) their land So I was only looking at the first year and I –  
 (13) in investment analysis typically you look at what's called the  
 (14) safe rate of investment what someone could reinvest their  
 (15) money for and I decided to use the published bond rate at that  
 (16) point in time  
 (17) Q So you used a rate of 9.68 percent for the first year?  
 (18) A For the first year  
 (19) Q And then 9 percent for two years following?  
 (20) A Years two and three  
 (21) Q And Professor Green you talked about this period of  
 (22) treatment Could you explain to the jury what you mean by  
 (23) that?  
 (24) A Well if you followed the – a lot of the – certainly the  
 (25) news coverage and the statements being made when the spill

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- (1) first occurred there was a lot of talk about clean – cleanup  
 (2) we'll clean the beaches and that language seemed to change  
 (3) somewhere along the line to the term treatment And then  
 (4) later more recently I've been reading the term net  
 (5) environmental impact as a term being thrown – bandied around  
 (6) I think that to me it implies that there was some change in  
 (7) thinking along the way relative to what clean means  
 (8) Q And so for the first three years you used – you looked at  
 (9) the first three years as treatment?  
 (10) A I did because what I did was use the period of time when  
 (11) the Commander of the Coast Guard stipulated that his opinion  
 (12) there was no additional reason to continue to treat the  
 (13) beaches So I used that three year period there until when  
 (14) that official made the statement that – and determined to quit  
 (15) the beach treatment and that was my – that was my particular  
 (16) engagement on this project  
 (17) Q Professor Green, have you in your studies made any sort of  
 (18) determination as to whether or not the beach treatment effort  
 (19) should conclude all damages as against Exxon against the  
 (20) corporation?  
 (21) A No I don't believe it does All that means is that there  
 (22) is – as what has been defined as a net environmental benefit  
 (23) to continuing the treatment Nobody has ever said that they're  
 (24) going to return this land to the condition it was prior to the  
 (25) spill

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- (1) Now it's real easy for government people and Exxon people  
 (2) to say well there's no additional benefit here to continuing  
 (3) to clean the beach but the property owner is left with  
 (4) property that still has oil on it and it's in my way of  
 (5) thinking another way of passing the risk to the property  
 (6) owner I know in one of the videotapes or news show that I  
 (7) watched on NOVA –  
 (8) MR OPPENHEIMER Your Honor hearsay and foundation  
 (9) THE COURT Sustained  
 (10) MR FORTIER Could I lay a foundation Your Honor?  
 (11) THE COURT No you can come to the bench and tell me  
 (12) what the theory is though  
 (13) MR FORTIER Thank you  
 (14) (Sidebar conference out of the hearing of the jury)  
 (15) THE COURT What he's going to say so why isn't it  
 (16) hearsay?  
 (17) MR FORTIER Well it could be hearsay Your Honor  
 (18) but he's entitled to rely upon hearsay He's an expert As to  
 (19) the foundation what I propose to do I could lay more of a  
 (20) foundation about the way in which he prepared for his report  
 (21) and what he did what he watched and the portion of the  
 media  
 (22) THE COURT Is he going to state a scientific  
 (23) proposition as given him by the television show NOVA?  
 (24) MR FORTIER I don't think he'll state that Your  
 (25) Honor I think what he'll probably do is state that over the

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- (1) course of preparing his report and reviewing the different  
 (2) television shows and that sort of thing what – what came out  
 (3) was that there was a period of treatment and then there was  
 (4) announcement that it was net environmental benefit  
 (5) THE COURT That's what he said  
 (6) MR FORTIER He may be able to explain what net  
 (7) environment benefit means  
 (8) THE COURT Not through the television show NOVA No  
 (9) television show as a source of foundation period Objection  
 (10) sustained  
 (11) I think it's dangerous because if he somehow thinks he's  
 (12) allowed to say everything that he's ever seen and tell that to  
 (13) the jury then he's going to get it in whether you ask him the  
 (14) question or not He's got to be cautioned  
 (15) MR OPPENHEIMER Your Honor I had another objection  
 (16) to raise  
 (17) This witness has category damages for three years and I  
 (18) have an objection Some questions have been asked about  
 (19) whether he thinks –  
 (20) MR FORTIER I can't hear you  
 (21) MR OPPENHEIMER I renew the objection I made earlier  
 (22) with another witness I think it's more acute here that I  
 (23) think he's about to embark upon the series of questions having  
 (24) to do with analysis of events after three years  
 (25) THE COURT That was my worry too Is that what he's

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- (1) going to be doing?
- (2) MR FORTIER Your Honor in his opinion - which they
- (3) had a full opportunity to explore - he expresses the same
- (4) thing
- (5) THE COURT Doesn't make a difference The question
- (6) is whether or not I should let it in now
- (7) MR McCALLION Your Honor if I may I believe that
- (8) Dr Green with regard to the NOVA show was going to limit his
- (9) remarks to statements and admissions made by Mr Otto
- Harrison
- (10) as well as possibly Paul Boehm both of whom
- (11) THE COURT I certainly didn't hear that in the
- (12) question counsel and I'm afraid he's not going to do that
- (13) The objections sustained
- (14) If you want me to hear this out of the presence of the
- (15) jury send this jury out For this minimally important piece
- (16) of evidence I'll do it You want me to do that and chop your
- (17) presentation up?
- (18) MR FORTIER Well Your Honor I think that - let me
- (19) think about that for a minute
- (20) I can -
- (21) MR McCALLION Your Honor we could show - I have
- (22) the tape cued up to that particular segment It would be about
- (23) a two minute -
- (24) THE COURT This is not an issue of whether or not
- (25) there are damages over and above the damages that he's

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- (1) estimated?
- (2) MR McCALLION No the issue is whether - what clean
- (3) means what is
- (4) MR OPPENHEIMER That's exactly the point Your
- (5) Honor
- (6) THE COURT I'm not going to let it in I'm not going
- (7) to let it in at this point You have another subject to go
- (8) to?
- (9) MR FORTIER I do Your Honor but if I could just
- (10) make one more point There was an aversion yesterday
- through
- (11) Mr Homan on cross examination that this beach treatment was
- (12) stamped as light moderate by the federal governments and
- (13) therefore there should be no concern on the part of the
- (14) landowner They opened it and we need to address it as
- quickly
- (15) as possible
- (16) MR McCALLION It goes to the definition of the net
- (17) environmental benefit All Dr Green is saying when they
- (18) pulled out and used the term no more net environmental
- (19) benefit -
- (20) THE COURT I'm going to hear this out of the presence
- (21) of the jury I suspect I'm going to keep it all out If you
- (22) want to press it have to have an opportunity to do that you
- (23) want me to send the jury out or do you want to go to another
- (24) subject
- (25) MR McCALLION Go to another subject and perhaps we

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- (1) could take it up on break Your Honor
- (2) (Sidebar concluded)
- (3) BY MR FORTIER
- (4) Q Professor Green after arriving at a rate of rent did you
- (5) go on to compute rent for a period of three years of treatment
- (6) that is during a period of time that Exxon was using the lands
- (7) of Chenega Bay Port Graham and English Bay Corporation?
- (8) A Yes I did
- (9) Q Could I see 1258?
- (10) Now Professor Green I'm showing you what has been marked
- (11) as exhibit 1258
- (12) A Yes
- (13) Q Can you explain to the jury what this is?
- (14) A Yes On the first line I determined that the total value
- (15) of Chenega land was 78 million dollars The rights taken were
- (16) 85 percent The rate of rent used in the first year was 9.68
- (17) percent The rate of land lease in year two and three is nine
- (18) percent I used a discount rate for discounting from future
- (19) value to present value of 10.25 percent
- (20) The value of the land damaged in year one The 85 percent
- (21) was \$66,300,000 therefore the rent due in the first year -
- (22) no the first year was \$6,417,840 That's 9.68 percent of the
- (23) 66 million
- (24) The amount of land damage in year two and three was 16.648
- (25) so that's the amount of land along the beaches within

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- (1) one-quarter of a section of the - of the mean high tide The
- (2) value of that land in year two and three is 19,343,000 The
- (3) rent due for year two and three is three million dollars and I
- (4) add those the six million and the three million together for
- (5) a total rent due for the three year period of \$9,430,000 for
- (6) the Chenega Corporation
- (7) Q Professor Green what I'd like to do is address rights
- (8) taken for a moment if we could
- (9) A Yes
- (10) Q You've got the rights taken at 85 percent?
- (11) A That's correct
- (12) Q Could you describe for the jury what rights you believe
- (13) were taken and how you analyzed that?
- (14) A Yes I looked at all the rights that we discussed
- (15) yesterday the right of quiet enjoyment the rights to be able
- (16) to rent your land or lease your land or sell your land or the
- (17) littoral rights that we talked about and all the other - all
- (18) the other rights that a property owner generally has and that
- (19) includes the right to do nothing with your property That is a
- (20) very valid right that a property owner has
- (21) I was able to determine that the - there wasn't a complete
- (22) loss of rights that the Native corporation could have some
- (23) minimal use of the land during this period of time They could
- (24) access the land at various points They could continue to
- (25) collect rents on small commercial ventures that they had They

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- (1) could continue to enter into negotiations subject to future
- (2) cleanup or treatment with other people
- (3) And so having looked at the kind of agreements that we
- (4) discussed yesterday having to do with utility easements
- (5) nondevelopment easements things of that nature I determined
- (6) that a rate of about 15 percent was a reasonable rate to leave
- (7) for the Natives the minimal uses that the Natives could enjoy
- (8) during that period of time of that land and that a rate of
- (9) about 85 percent would be a reasonable rate for the rights
- (10) taken by the Exxon Corporation
- (11) Q I ve forgotten how to zoom out here I m sorry
- (12) Now Dr Green I also note that you computed the rent for
- (13) the first year across the whole of the property of Chenega
- (14) Corporation?
- (15) A That s correct
- (16) Q And for the next two years you stated it was for a quarter
- (17) mile - or a quarter section of the beach?
- (18) A Of the beach yes
- (19) Q Could you explain to the jury what your reasoning was for
- (20) the whole of the property during the first year?
- (21) A Yes As I described yesterday the tremendous trauma
- (22) subjected to the Prince William Sound and the gulf area in the
- (23) first year would mitigate the ability of a property owner to
- (24) use the property for the normal uses That would include the
- (25) right to just quietly enjoy the property or the right to not

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- (1) even use the property when suddenly you have this intrusion of
- (2) both oil and people and all the things that was going on during
- (3) that period of time
- (4) And as I described yesterday it - the initial shock of
- (5) that occurred from March through October of that summer
- (6) That
- (7) was the - what we would call the development season or the
- (8) season when that property could be utilized So once we get
- (9) into the winter everything pretty much stopped so I used the
- (10) first year as a period when all that property was what I would
- (11) call traumatized
- (12) And then from that point the year two and three I
- (13) determined that there was some information coming forward at
- (14) that point enough information that the corporations could
- (15) begin to segment the areas of damage and I then elected to
- (16) use
- (17) the strips along the beaches as the areas that were most
- (18) greatly impacted at that point
- (19) Q And Dr Green again for Chenega Corporation the total
- (20) rent due for the first three years you computed at \$9 430 000?
- (21) A That s correct
- (22) Q Could I see exhibit 1264 please?
- (23) Dr Green I m showing you what s been marked as 1264 Can
- (24) you tell the jury what this is please?
- (25) A Yes That s the Port Graham corporation - wait a minute
- (26) you ve got that - well the first line on that says English
- (27) Bay land so there s a typographical error there I want to

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- (1) make sure that that is - let me look at some numbers here on
- (2) that You have a typographical error on that
- (3) Q I ll tell you what could we have the machine switched over
- (4) there for Dr Green s pen? And Dr Green if you would take
- (5) your pen and perhaps cross out the English Bay land and put
- (6) on
- (7) Port Graham land
- (8) A Yes I just want to make sure that that is the correct
- (9) numbers that you re looking at there that there aren t other
- (10) typographical errors in that
- (11) Q I hope not Yes
- (12) A Yes that is Port Graham
- (13) Q So what you can do Dr Green is take your pen there -
- (14) first of all touch the color down on the left hand portion
- (15) where it says color
- (16) MR PETUMENOS It s already on
- (17) MR FORTIER If I could help you
- (18) THE COURT The color s on I think
- (19) MR FORTIER I beg your pardon?
- (20) THE COURT It s already on
- (21) MR FORTIER Okay
- (22) THE COURT You get better as you go
- (23) THE WITNESS I was going to say I need some practice
- (24) on that
- (25) MR FORTIER We ll go over it with you
- (26) MR PETUMENOS This class is getting bigger Your

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- (1) Honor
- (2) THE WITNESS I have some students that would say
- (3) that s pretty normal
- (4) BY MR FORTIER
- (5) Q You computed the total value of the Port Graham lands as 75
- (6) million dollars is that right?
- (7) A That s right
- (8) Q And you computed the rights as taken at 85 percent?
- (9) A Yes I did
- (10) Q Why did you do that for Port Graham?
- (11) A It was the same concept that I viewed that there be -
- (12) there would be some continued uses of the property that they
- (13) could access the property at various points They could
- (14) collect some rents for some commercial projects on - on the
- (15) inlands ongoing activities but that most all of the - the
- (16) general activities the general rights to the property would be
- (17) frozen
- (18) Very similar situation to the lands we talked about in the
- (19) Tazimina Lake area where the government purchased away the
- (20) development rights leaving the - you might say
- (21) nondevelopment easements or rights to the land I viewed this
- (22) as a nondevelopment easement that was left to the Native
- (23) corporations although they had the right to collect the - you
- (24) know continue to collect some rents and economic benefits If
- (25) they hadn t been for that fact I would have used a higher

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- (1) number 90 or 95 percent but the fact they were able to  
 (2) collect some minor rents and things I decided to use 85  
 (3) percent  
 (4) Q And you used the rate of rent in the first year as 9 68  
 (5) percent?  
 (6) A 9 68 percent which is the volume there  
 (7) Q And similarly the rate of rent for the next two years -  
 (8) A Nine percent for year two and three A discount rate of  
 (9) 10 25 percent and the way I arrived at that I took the  
 (10) average rate of the consumer price index during that period of  
 (11) time and then added to that the average rate of inflation and  
 (12) the - the amount of - the value of the land damaged the 85  
 (13) percent of it was 63 750 000 Rent due in the first year  
 (14) 6 171 000 The amount of land damaged in years two and  
 (15) three  
 (16) the land along the beaches was 13 280 acres according to my  
 (17) calculations and that - the value of that was 12 750 000  
 (18) with rent due of 1 984 867 for a total - for a total rent for  
 (19) the three year period of a total of \$8 156 000  
 (20) Q Now Professor Green did you make any inquiry as to  
 (21) whether or not the lands of Chenega Corporation were actually  
 (22) oiled?  
 (23) A I looked at a lot of - a lot of information Some of the  
 (24) documents from the clean up crews or the assessment crews I  
 (25) looked at the ICF studies I looked at maps prepared by ICF  
 (26) I looked at maps prepared by the State of Alaska as to where

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- (1) the oil was out there And I also have visited some of those  
 (2) areas but I didn't do my own personal inspection of all the  
 (3) beaches as far as testing or oil I left that to the  
 (4) experts  
 (5) Q And did you arrive at any conclusion as to whether or not  
 (6) the lands of the Chenega Corporation had been oiled in 1989?  
 (7) A Oh yes there was definite intrusion of oil on those  
 (8) beaches  
 (9) Q And similarly with regard to Port Graham Corporation?  
 (10) A I did the same analysis and I came to the conclusion that  
 (11) there was intrusion of oil on - on beaches  
 (12) Q And with regard to both Chenega Corporation and Port  
 (13) Graham  
 (14) Corporation Professor Green did you make any inquiry as to  
 (15) what sorts of treatment were - were conducted on both of those  
 (16) lands in 1989?  
 (17) A Yes I did I looked at a lot of photographs and read a  
 (18) lot of the data that was on file at various places I recall  
 (19) there being high pressure treatment of those beaches as well  
 (20) as some chemical treatment of the beaches  
 (21) Q Anything else Doctor that you -  
 (22) A Well there was also some talk about letting nature treat  
 (23) some of the beaches  
 (24) Q What did that mean Doctor?  
 (25) A Well that means to me that it is - that the level of  
 (26) technology for cleaning beaches does not exist to return the

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- (1) beaches to the condition they were -  
 (2) MR OPPENHEIMER Your Honor foundation  
 (3) A Before -  
 (4) THE COURT The objection is sustained The jury is to  
 (5) disregard the last statement  
 (6) BY MR FORTIER  
 (7) Q Dr Green did you make an inquiry into what it meant to  
 (8) leave it to nature?  
 (9) THE COURT I didn't hear your question  
 (10) BY MR FORTIER  
 (11) Q I asked whether or not he made an inquiry into whether -  
 (12) into what it meant to leave it to nature What did you do?  
 (13) A I talked to various people Jim Bush I talked to some of  
 (14) the people who - from the Native corporations who worked on  
 (15) the - on the site investigation teams just a variety of  
 (16) folks And the conclusion that I came to from that -  
 (17) THE COURT Stop don't give a conclusion  
 (18) MR OPPENHEIMER Same objection foundation  
 (19) THE COURT The objection is sustained Move on  
 (20) BY MR FORTIER  
 (21) Q Now did you also examine the land or the rent due for  
 (22) English Bay Corporation?  
 (23) A Yes I did  
 (24) Q Could I see 1261 please?  
 (25) 1261 could you tell us what 1261 is Doctor?

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- (1) A Yes It is the same analysis for the English Bay  
 (2) Corporation I determined that the value of all their land was  
 (3) 53 million dollars I used the same 85 percent as the amount  
 (4) of the rights taken and in the first year I used the 9 68  
 (5) percent rate And the year two and three I used the 9 percent  
 (6) rate I used the 10 25 percent rate of discount for  
 (7) discounting the future values to the present or the date of the  
 (8) spill  
 (9) I determined that the value of the land damaged in year one  
 (10) was 45 050 000 The rent due for the first year of \$4 360 840  
 (11) the amount of land damaged in year two and three was 15  
 (12) million - 15 200 acres The value of those acres was  
 (13) 14 450 000 Rent due for year two and three would be  
 (14) 2 249 000 for a total value of \$6 610 000  
 (15) Q That is the rent due for the three years the treatment was  
 (16) being -  
 (17) A That is the rent that the Exxon Corporation should pay to  
 (18) the English Bay Corporation for the use of their land for that  
 (19) period of time and for the rights that they were suspended  
 (20) during the treatment period  
 (21) Q And with regard to English Bay Corporation Professor  
 (22) Green did you make any sort of an inquiry into whether or not  
 (23) the lands of English Bay Corporation were oiled?  
 (24) A Yes I did I looked at the same documents the ICF maps  
 (25) the State of Alaska oiling maps I reviewed a number of the

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- (1) field reports that were submitted by the assessment teams and  
 (2) I determined that there was physical intrusion of oil on those  
 (3) beaches  
 (4) Q And did you also make any determination as to whether or  
 (5) not treatment activities were taking place on English Bay  
 (6) lands?  
 (7) A There was – my understanding there was some treatment  
 (8) activities that did take place  
 (9) Q And what did you rely upon? What information did you have  
 (10) available?  
 (11) A I relied upon the – a lot of the information contained in  
 (12) your files I spent several days going through all those  
 (13) documents looking at the letters from the Coast Guard to the  
 (14) Native corporations talking about treatment and continued  
 (15) treatment and revisitation of certain areas things of that  
 (16) nature  
 (17) Q Now Professor Green you've looked at the subject of  
 (18) stigma in other cases haven't you?  
 (19) A Yes I have  
 (20) Q I think you indicated that the Poppy Lane case down in  
 (21) Kenai involved a stigma?  
 (22) A Yes  
 (23) Q Do you have an opinion as to whether or not – I withdraw  
 (24) that question In examining the facts of this case Professor  
 (25) Green do you believe that stigma would be an applicable

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- (1) theory?  
 (2) A Yes I – this is not – was not a well kept secret this  
 (3) oil spill  
 (4) Q Now Professor Green what I'd like to do is come back –  
 (5) we looked at one – one map for English Bay Corporation?  
 (6) A Yes  
 (7) Q I'm going to grab that map If I could have all of the  
 (8) maps please  
 (9) Now Professor Green with regard to the map we've looked  
 (10) at for English Bay Corporation in the Kenai Fjords area you  
 (11) had indicated that you had also – you verified the accuracy of  
 (12) the map by first examining documents from the Bureau of Land  
 (13) Management is that correct?  
 (14) A That's correct  
 (15) Q And then you'd also examined documents – you'd also  
 (16) examined other title documents is that correct?  
 (17) A Yes  
 (18) Q Now did you do a similar sort of inquiry with regard to  
 (19) the lands of Chenega Corporation?  
 (20) A Yes I did  
 (21) Q And do you know whether or not Chenega Corporation also  
 (22) has  
 (23) a base map of its lands?  
 (24) A Yes I do  
 (25) Q Did you verify through records of the Bureau of Land  
 Management that the map is accurate?

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- (1) A I went through the – the patent the interim conveyance  
 (2) documents interviewed the BLM officials who were handling  
 (3) these particular lands and I spent a considerable time with  
 (4) Mr Jack Moore who was the land planning consultant that  
 (5) prepared these maps and I used Mr Moore's maps after some  
 (6) verification myself of going over them to document the  
 (7) accuracy of them  
 (8) Q Professor Green if you'd step down here for a moment  
 (9) again  
 (10) I'm going to show you Professor Green what has been  
 (11) marked as Exhibit 1123 Can you tell us what that is?  
 (12) A This is a map of the Chenega Corporation's land  
 (13) entitlements These were the maps that we relied upon – or I  
 (14) relied upon There is on the maps in my report – since I  
 (15) prepared my maps there's been a few acreages that have been  
 (16) eliminated from their selection They were areas of  
 (17) overselection One is the Bettles Island area here which  
 (18) doesn't show on this map In my report it does show that  
 (19) And this area right here that's in – oh this area right here  
 (20) has dropped off since they were prepared and on my map is –  
 (21) MR OPPENHEIMER Counsel could we have the section  
 (22) number? Maybe that would help  
 (23) MR FORTIER He is referring to Section 18 of  
 (24) Township 1 North  
 (25) MR OPPENHEIMER Could I have the prior section he

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- (1) pointed to?  
 (2) MR FORTIER It was Section 36  
 (3) A Sorry Section 36  
 (4) And then on my maps also – if I can get my – there's  
 (5) Section 15 here that shows up on my maps because that has  
 (6) since dropped off from their – that was an overselection and  
 (7) has since dropped off from the maps and this map has been  
 (8) reprepared since I prepared my original maps  
 (9) BY MR FORTIER  
 (10) Q And so Professor Green the acreage in – the acreage  
 (11) numbers that are shown on this map then you've verified are  
 (12) an accurate depiction of Chenega Corporation?  
 (13) A Yes These two sections Sections 16 and 21 are also  
 (14) overselections that are shown  
 (15) Q And you're noting that that's outside of the heavier line?  
 (16) A That's correct  
 (17) Q And Professor Green I note that there's also a recorded  
 (18) title document part of 1123?  
 (19) A Yes  
 (20) Q Now within the recorded title documents section there's a  
 (21) notation for irrevocable elections?  
 (22) A Yes there is  
 (23) Q Can you tell us what that is?  
 (24) A Well that's on what we discussed yesterday which is  
 (25) referred to as OPA 90 This is land that they have selected

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- (1) They cannot change their mind They re irrevocable The BLM  
 ( ) just hasn t gotten around to conveying them through interim  
 (3) conveyance yet and so they don t actually have the interim  
 (4) conveyance document but they cannot change their mind  
 about  
 (5) it It s not the corporation s fault that the government  
 (6) hasn t gotten around to conveying the property to them but  
 (7) these are lands that have been selected They can t change  
 (8) their mind And they are also lands that they are entitled to  
 (9) receive damages from  
 (10) Q And that s a very small part of what appears on this map?  
 (11) A Yes it is  
 (12) Q Would you point out to the jury what areas they are?  
 (13) A I - I don t recall on this map  
 (14) Q Do you know whether or not this - these numbers four and  
 (15) five is irrevocable?  
 (16) A I believe that is correct It was a very small area  
 (17) MR OPPENHEIMER Pardon me counsel Is that the  
 (18) section number?  
 (19) MR FORTIER It s priority numbers four and five  
 (20) MR OPPENHEIMER Priority numbers?  
 (21) MR FORTIER Yeah  
 (22) BY MR FORTIER  
 (23) Q Now with regard to Port Graham Corporation you also did  
 (24) the same inquiry Doctor?  
 (25) A Yes I looked at Port Graham

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- (1) Q Professor Green I show you what s been marked as  
 (2) Exhibit 1125 Can you tell me what 1125 is?  
 (3) A That s Port Graham Corporation s entitlement  
 (4) Q Is this within the core area Doctor?  
 (5) A This is the core area  
 (6) Q What s that mean?  
 (7) A That means it s all within the location of the village that  
 (8) they were entitled to select from  
 (9) Q And to your knowledge are all these lands that are marked  
 (10) in red conveyed lands?  
 (11) A Those are conveyed lands Yes they are  
 (12) Q Professor Green I show you what s been marked as  
 (13) Exhibit 1126 Can you tell me what 1126 is?  
 (14) A These are lands down in the Kenai Fjord area in the Gulf of  
 (15) Alaska These are lands entitlements of the Port Graham  
 (16) Corporation  
 (17) Q And again, Doctor these are lands that have been  
 (18) irrevocably -  
 (19) A Selected  
 (20) Q - selected under OPA 90?  
 (21) A That s correct  
 (22) Q Professor Green I show you what s been marked  
 (23) Exhibit 1127 Can you tell me what it is please?  
 (24) A This is property - it s more of the same type of property  
 (25) elected under OPA 90 in the Kenai Fjords area in what s called

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- (1) Aialik Bay area and Harris Lagoon and these are irrevocably  
 (2) selected lands  
 (3) Q So these are lands that Port Graham Corporation has a right  
 (4) to claim damages for with regard to the Exxon Valdez oil spill?  
 (5) A That s correct  
 (6) Q Professor Green I show you what s been marked as 1131  
 (7) Can you tell the jury what this is please?  
 (8) A This is English Bay Corporation This is their - what we  
 (9) refer to as the core township area These are all - these are  
 (10) lands that have actually been conveyed  
 (11) Q And Professor Green I show you what s been marked as  
 (12) Exhibit 1132 Could you tell me what that is?  
 (13) A These are lands as part of OPA 90 They have been selected  
 (14) irrevocably have not been conveyed which belong to the  
 (15) English Bay Corporation  
 (16) Q And again even though these haven t been conveyed  
 English  
 (17) Bay Corporation has a right to claim for damages caused by the  
 (18) Exxon Valdez oil spill for these lands?  
 (19) A Yes they do  
 (20) Q Thank you Doctor  
 (21) MR FORTIER Your Honor I think now might be an  
 (22) appropriate time for a break  
 (23) THE COURT Okay sure  
 (24) THE CLERK Please rise This court stands in  
 (25) recess

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- (1) (Jury out at 9 27 a m to 9 40 a m )  
 (2) THE CLERK Please rise This court now resumes its  
 (3) session  
 (4) Please be seated  
 (5) THE COURT We re on the record The jury is not  
 (6) present  
 (7) Counsel you wanted to see me?  
 (8) MR STOLL Not me  
 (9) THE COURT Somebody did Somebody wanted to see me  
 (10) out of the presence -  
 (11) MR McCALLION Yes Your Honor  
 (12) With regard to the matter taken up at side bar in terms of  
 (13) an offer of proof the area which Dr Green was proceeding into  
 (14) related to the issue as to whether when the cleanup was  
 (15) declared over three years after the spill what that meant from  
 (16) a real estate standpoint and he traced the evolution of the  
 (17) clean up goals from cleaning up the spill to treating it  
 (18) And then the term net environmental benefit which to  
 (19) Dr Green from an appraisal of real estate standpoint he would  
 (20) take to mean that while some oil had been removed additional  
 (21) oil was present and that a determination was made that there  
 (22) would be no net environmental benefit to further clean up  
 (23) efforts thereby leaving the remaining oil which had not been  
 (24) cleaned up on the plaintiffs property  
 (25) Now the basis for Dr Green s knowledge relating to this

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(1) are the sources which he indicated but the area which he was  
 (2) at least temporarily foreclosed from going into – and properly  
 (3) so without without a hearing on the issue or an offer of proof  
 (4) on it – is certain news media reports namely a PBS NOVA show  
 (5) and other news reports specifically those where Exxon s  
 (6) spokespeople including Mr Otto Harrison who is here in  
 (7) court made statements regarding the objective to treat the  
 (8) beaches to a point where – Mr Otto Harrison s words so we  
 (9) can leave it in a shape where we can achieve the maximum  
 (10) environmental benefit There s no use going out there and  
 (11) killing a lot of wildlife to remove small amounts of oil that s  
 (12) not damaging the environment  
 (13) In addition there is a statement by Dr Paul Boehm who is  
 (14) an Exxon spokesperson and witness for them in this case  
 (15) cleaning up the environment removing all the oil is impossible  
 (16) in this type of environment  
 (17) Now and in addition there s a statement by another Exxon  
 (18) spokesperson This is contained in approximately one to two  
 (19) minutes of the news media broadcast tape plaintiffs exhibit  
 (20) 1222 A which has been redacted and offered and which the  
 (21) Court determined should not be shown to the jury  
 (22) Leaving aside the other aspects of that particular tape  
 (23) the specific sections which I m alluding to namely the  
 (24) statements from Exxon s scientist Paul Boehm Otto Harrison  
 (25) and one other Exxon spokesperson we would like to briefly  
 play

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(1) for the Court in just one minute It does provide the basis  
 (2) for Dr Green s testimony on this as well as Dr Mundy s  
 (3) testimony regarding the use of the media or the importance of  
 (4) the news media as the medium by which information about the  
 (5) Exxon Valdez oil spill and the status of the beaches and  
 (6) clean up activity was transmitted to relevant parties namely  
 (7) the public the market lending bankers lending institutions  
 (8) and indeed as Your Honor may recall Mr Homan was  
 (9) cross examined with regard – yesterday wrth regard to  
 (10) information which he may have gleaned from the – from the  
 (11) news  
 (12) I would underscore that at least for this limited purpose  
 (13) we are not relying upon nor does Dr Green rely upon any  
 (14) general news reports of news broadcasters speaking but  
 (15) specifically Exxon representatives and specific statements  
 (16) made by them And I may add Your Honor –  
 (17) THE COURT Could I –  
 (18) MR McCALLION I don t believe this is an issue in  
 (19) dispute  
 (20) THE COURT Hang on counsel You say he s going to  
 (21) testify what it meant from a real estate standpoint What did  
 (22) it mean from a real estate standpoint? I haven t heard that  
 (23) part yet  
 (24) MR McCALLION Yes I believe Dr Green started to  
 (25) go into the area These terms net environmental benefit we

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(1) can t clean up all the oil We will be treating the beaches  
 (2) instead of cleaning them was an important issue of dispute in  
 (3) 1989 90 and 91 and Dr Green s view based upon his  
 (4) expertise And I don t think it s an issue seriously in  
 (5) dispute in this case that when the cleanup was completed and  
 (6) the oil spill workers after the third cleanup summer left the  
 (7) beaches that it was understood by all parties at that point  
 (8) And indeed Exxon spokespeople broadcasted their view on the  
 (9) media among other places that while there was still remaining  
 (10) oil on the beaches and on the property for the purposes of  
 (11) this case plaintiffs property that there was no net  
 (12) environmental benefit to be gained from further clean up  
 (13) activity and that the remaining oil should be left to Mother  
 (14) Nature  
 (15) THE COURT What does that mean from a real estate  
 (16) benefit? You haven t told me that  
 (17) MR McCALLION I believe that Dr Green would offer  
 (18) the opinion that that would communicate to the real estate  
 (19) market that there is still oil on the property And since the  
 (20) property is still contaminated that that may further continue  
 (21) the period of damages relating to the property since its  
 (22) basically an admission by Exxon that there is still oil on –  
 (23) contamination on the subject property  
 (24) THE COURT All right Thank you  
 (25) Counsel?

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(1) MR OPPENHEIMER Your Honor this case periodically  
 (2) veers very close to just trying Exxon in the press and a  
 (3) couple of observations Dr Green s testimony is about three  
 (4) years of damage This whole line of questioning in my  
 (5) opinion is objectionable because what it does is ask the jury  
 (6) to speculate on a time period that isn t even covered by his  
 (7) damage analysis Your Honor s questions with respect to the  
 (8) effect on an appraiser of these kinds of statements is well  
 (9) taken in a variety of ways but certainly as to that point  
 (10) We are being invited to allow testimony from television  
 (11) shows about a time period after the damage assessment with  
 (12) respect to terms that this witness could only understand to the  
 (13) extent he understands them at all as they come at the  
 (14) television tube – out of the television tube There s no  
 (15) foundation for this it s hearsay  
 (16) There s no evidence it s an inconsistent statement because  
 (17) none of these people have testified in court There s no  
 (18) evidence that in fact he understands what any of these  
 (19) witnesses were saying when they said it and the first quote we  
 (20) heard we heard apparently Mr Harrison explaining that there  
 (21) was no environmental damage We re taking these things from  
 (22) an  
 (23) area that is post the date of his report –  
 (24) THE COURT Counsel assuming this is what the  
 (25) videotape shows Exxon – an Exxon representative s in a  
 full faced shot is saying to the camera we re leaving some oil

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- (1) on the beaches Isn't that independently admissible?  
 (2) MR OPPENHEIMER Not with respect to this testimony  
 (3) I don't think that it would be  
 (4) THE COURT All right But it is independently  
 (5) admissible in this case? It's an admission and you're  
 (6) screaming that nature has cleaned up this whole area or  
 (7) somebody's screaming that  
 (8) MR OPPENHEIMER Your Honor on those terms - and  
 (9) there are three - I think the answer to that is yes but not  
 (10) on the foundation we have here That's the problem  
 (11) THE COURT I know what the problem is  
 (12) Dr Green would you take the stand again? I want to hear  
 (13) from you  
 (14) MR McCALLION Your Honor if it would be of aid to  
 (15) the jury the particular tape in question has been cued up to  
 (16) that point where the Exxon representative is speaking and I  
 (17) believe it's approximately one minute  
 (18) THE COURT I just want - Dr Green you're still  
 (19) under oath If you'd put the microphone on please  
 (20) A Yes Yes Your Honor  
 (21) THE COURT Just for the record explain what you saw  
 (22) with regard to Exxon representatives talking about net  
 (23) environmental benefit  
 (24) A Okay I saw one representative of Exxon who indicated that  
 (25) they could not clean up the - all the oil And another one

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- (1) indicating that there was - it wasn't that the oil was all  
 (2) cleaned up that the damage to the environment that would be  
 (3) caused by continued cleanup wouldn't justify continuing to  
 (4) cleanup the beaches That would indicate to me that there is  
 (5) still oil on those beaches  
 (6) I have received - I have read reports indicating there is  
 (7) still oil on those beaches and if there is still oil on those  
 (8) beaches then now these property owners have certain risks  
 (9) associated with that They are continuing risks and that would  
 (10) affect the value of that real estate  
 (11) THE COURT All right In - so what significance  
 (12) does that information have to your analysis of the damages in  
 (13) this case?  
 (14) A The only significance is that there is - there is  
 (15) continuing risk and damages that I have not evaluated  
 (16) THE COURT All right So it doesn't add or subtract  
 (17) from the damages that you have calculated right  
 (18) A No it doesn't  
 (19) THE COURT The objection's sustained I'm not saying  
 (20) that this admission can't come in in some way but it's just  
 (21) not part of his analysis  
 (22) Now let's bring the jury in  
 (23) (Jury in at 9:53 a.m.)  
 (24) THE COURT You can all be seated  
 (25) BY MR FORTIER

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- (1) Q Professor Green I'm going to show you a series of pictures  
 (2) from 12 - they begin at 1247 and just ask whether or not you  
 (3) took these pictures and tell the jury when you took them  
 (4) A Yes I took these pictures - I took them on a variety of  
 (5) visits to the subject properties the Chenega Corporation  
 (6) English Bay and Port Graham and they were taken at various  
 (7) times I don't recall all the exact dates but these -  
 (8) this - these are - these pictures show the properties in  
 (9) question  
 (10) Q Okay And Professor Green if you could just go through  
 (11) them On the back of the pictures there are exhibit numbers  
 (12) and just tell us what the exhibit numbers are  
 (13) A 124765 124772 124771 58 - do you want me to read all  
 (14) the numbers for - they're all 1247 - 58 60 61 62 94  
 (15) 39 13 37 16 15 9 36 -40 -41 -42 -43 18#  
 (16) number 7 8 14 17 35 -44 -45 and 34  
 (17) Q Okay And Dr Green those are pictures of the Village  
 (18) Corporations lands Chenega Port Graham and English Bay  
 (19) lands?  
 (20) A Yes they are  
 (21) Q Now you mentioned something about looking at  
 (22) comparable  
 (23) properties during your testimony  
 (24) A Yes I looked at the properties that had been purchased  
 (25) by - in the marketplace other similar lands  
 (26) MR OPPENHEIMER Your Honor may we confer just  
 (27) briefly?

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- (1) THE COURT Uh huh  
 (2) (Discussion off record between counsel)  
 (3) BY MR FORTIER  
 (4) Q You prepared a map of the comparable properties that you  
 (5) looked at didn't you?  
 (6) A Yes I did  
 (7) Q I'm going to show you a copy of that that map Dr Green  
 (8) and just ask if that's a correct copy  
 (9) Dr Green what's on your screen? Can you tell us what it  
 (10) is?  
 (11) A Yes This is a map of the State of Alaska and it shows  
 (12) the - the general area from each of the different comps that I  
 (13) looked at  
 (14) I should clarify that not all of these properties were  
 (15) actually used as comparables There are six of them that were  
 (16) used in the final analysis Some of the - there's about three  
 (17) or four of them that were only put in there for informational  
 (18) purposes and there's some others that were used to make  
 (19) adjustments to the comps But the comps the primary comps  
 (20) that I used are the ones right in this general area here of  
 (21) South Central Alaska reasonably close to the subject  
 (22) properties  
 (23) Q And Dr Green could you just with your colored pen  
 (24) circle the ones that you actually used as comparables?  
 (25) A Okay I'm going to have to try to remember this from

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- (1) memory I used comp number 1 if - and this is a little  
 (2) blurred on my screen so I'm having trouble reading somewhat  
 (3) I believe it's that one - oops that I just blocked out I  
 (4) used comparable number 13 which is right over here  
 (5) Q What is that one Dr Green?  
 (6) A That's the Tazimina Lake area  
 (7) Q That's the one you were describing as the environmental  
 (8) easement?  
 (9) A Yes I used Number 8 which is over here  
 (10) Q And which one is that Dr Green?  
 (11) A It's over in the Tok area This was the one that was the  
 (12) lowest on my - lowest priority on my list  
 (13) Q Is that known as the Backscatter Project?  
 (14) A It is I used number five and six which are here these  
 (15) two here which are in the Kachemak Bay area I used number  
 (16) 10 which is this - this property here  
 (17) Q And which one is that Dr Green?  
 (18) A That's what's known as Point Possession which is across  
 (19) the Inlet from the subject properties  
 (20) Q Is that known as environmental property too Dr Green?  
 (21) A It is environmental property yes I think that's the ones  
 (22) that I used if I'm correct  
 (23) Q And could I have a print of that please?  
 (24) And then Dr Green you prepared pictures with regard to  
 (25) each of these comparables so the jury could view them?

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- (1) A Yes I did  
 (2) Q What I'd like to do Dr Green is have you run through  
 (3) those and tell us again from the back what they are  
 (4) A Okay These are photographs and maps that I provided in  
 (5) my  
 (6) report showing the areas of the properties that were purchased  
 (7) and a photograph of the property You want just the numbers?  
 (8) Q Yeah let me - perhaps it would help if I ran through them  
 (9) with you 1247 5?  
 (10) A Yes That's - that is a property in Kodiak that was  
 (11) purchased by Kodiak Borough  
 (12) Q Is that known as the Rifle Range?  
 (13) A Yes it is  
 (14) Q Okay Then the picture next to it 98?  
 (15) A Is the Rifle Range  
 (16) Q Number 30?  
 (17) A This is property in Southeast Alaska called Goat Island  
 (18) This is property that was purchased by the United States  
 (19) Government  
 (20) Q Was that used as a comparable Doctor?  
 (21) A I didn't use it as a comparable because of its location  
 (22) but it's - I used it for making adjustments to my - to my  
 (23) other comparable sales  
 (24) Q Number 46 Doctor?  
 (25) A That is property in the Kachemak Bay area that was acquired  
 by the State of Alaska And I used that

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- (1) Q Number 12 is that a locator map Doctor?  
 (2) A On the locator map I believe that's number five  
 (3) Q Which is another Kachemak property?  
 (4) A Oh I'm sorry yeah That is another Kachemak property  
 (5) another acquisition by the State of Alaska  
 (6) Q And also environmental property?  
 (7) A It was acquired to protect environment and the aesthetics  
 (8) of the area  
 (9) Q Would you continue on with two? Do you have two there?  
 (10) A I'm sorry I - I don't know what you're calling number 2  
 (11) Okay we have two pictures on the one for Kachemak Bay  
 Then  
 (12) the next map that I have which is number 19  
 (13) Q Uh huh  
 (14) A That is two properties two Village Corporations over in  
 (15) the general Tok area properties that was purchased for - by  
 (16) the U S Air Force for a radar site And the next four five  
 (17) six photographs are photographs of that - of those  
 (18) properties  
 (19) Q That's 54 55 27 and 26?  
 (20) A Yes And then the next one is a property that was part of  
 (21) that radar site acquisition on the - we're in what I refer to  
 (22) the Glennallen area south - south of Tok and that is some  
 (23) additional property property purchased from the Ahtna  
 (24) Corporation  
 (25) Q The Ahtna Corporation is a Native corporation?

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- (1) A Is a Native Village Corporation  
 (2) Q Purchased by the Air Force?  
 (3) A United States Air Force that's correct  
 (4) Q Then the pictures following that are also pictures of the  
 (5) property?  
 (6) A Yes The one picture shows what the land looked like and  
 (7) the other picture shows the generation - the generating plant  
 (8) that was built for that project prior to the project being  
 (9) abandoned  
 (10) Q That's number 48? Go ahead just on the back  
 (11) A I think your numbers are different It's number 52 on  
 (12) mine  
 (13) Q Okay that's fine And following that Doctor?  
 (14) A That is a map of property over in what's called Point  
 (15) Possession  
 (16) Q Okay That was the environmental property?  
 (17) A That is property that was - at the time I used that comp  
 (18) it was a sale in escrow but then later the sale didn't close  
 (19) I understand it's now - it's back in escrow as another sale  
 (20) but it was because of the proximity of that property the  
 (21) features of the property I felt was an important comp And the  
 (22) next the next which is 49 is a picture of that property  
 (23) And the next one is a map of the Tazimina Lower Tazimina  
 (24) Lake area We discussed here - that's number 22 And the  
 (25) next two three photographs - four photographs are pictures

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- (1) around the lake and of the properties
- (2) Q Okay Doctor just a couple more points here
- (3) We've heard a lot over the last few days about -- last day
- (4) and a half I guess about environmental lands
- (5) A Yes
- (6) Q You've heard the term natural lands?
- (7) A I have
- (8) Q Are environmental lands similar to natural lands?
- (9) A It's just a term that some people use. It's -- a lot of us
- (10) use different terms mean maybe the same thing
- (11) Q You've heard of Dr Mundy?
- (12) A Yes
- (13) Q You've heard of his theory of natural lands?
- (14) A I've read his article yes
- (15) Q And you relied -- did you cite those articles in your
- (16) report?
- (17) A I did cite those articles
- (18) MR FORTIER I have no further questions Thank
- (19) you
- (20) THE COURT You may examine
- (21) CROSS EXAMINATION OF GEORGE H GREEN
- (22) BY MR OPPENHEIMER
- (23) Q Good morning Professor How are you?
- (24) A Good morning
- (25) Q We met previously but I'm Randy Oppenheimer and I'd like

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- (1) to ask you a few questions
- (2) We stopped here on the note of comparables so maybe it
- (3) would be useful to just talk a little bit more about those
- (4) See if I can get an easel here
- (5) Can you see this if I write on it?
- (6) A I can see it
- (7) Q The first one you mentioned was the Rifle Range Now this
- (8) is -- this is Salomie Creek in Kodiak is that right?
- (9) A Yes
- (10) Q Does that ring a bell? Okay The Salomie Creek Rifle
- (11) Range that's not on the water is it?
- (12) A No
- (13) Q And it's near a housing development isn't it?
- (14) A Well it's outside of Kodiak There are homes closer to it
- (15) than any of the other properties yes
- (16) Q Do you treat Salomie Creek as a -- as a remote or rural
- (17) property?
- (18) A I do treat it as that yes
- (19) Q Okay fair enough If I were to represent to you that Pat
- (20) Carlson who is the appraiser on Kodiak does not treat that as
- (21) remote or rural property because it's on the road system would
- (22) that surprise you?
- (23) A I have no knowledge of what Pat would do on that
- (24) Q So you haven't had a chance to confer with him about his
- (25) view of what's remote and what's rural?

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- (1) A Well you mentioned the road system There's a lot of
- (2) debate as to who owns that road The Regional Corporation
- (3) contend that they own the road and that they could shut it
- (4) down anytime they want
- (5) Q I noticed in your report when you -- I understand what
- (6) you're saying You referred to the road in the Salomie Creek
- (7) area if you call it that right? I take it it's not a super
- (8) highway?
- (9) A It's far less than a super highway It's a trail
- (10) Q Let's take a look at another comp you mentioned at Tok
- (11) A Yes
- (12) Q And again -- I hope I haven't blocked the view of everyone
- (13) -- but Tok is up here right?
- (14) A Yes
- (15) Q And you referred to that in connection with the Air Force's
- (16) Backscatter Radar Site correct?
- (17) A That's correct
- (18) Q And in fact they had what three or four Backscatter
- (19) sites in that area?
- (20) A They purchased land from three different corporations for
- (21) that project
- (22) Q Right And that project as best we all know has been
- (23) abandoned at this point?
- (24) A It has been abandoned It was started and then it was
- (25) later abandoned

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- (1) Q So this was a purchase by the government for a location for
- (2) a radar site?
- (3) A Yes
- (4) Q Point Possession Now the price -- I should back up a
- (5) step
- (6) One of the things -- and I don't mean to oversimplify your
- (7) theory so bear with me I'm just focusing on one aspect of
- (8) the comps that you used -- is the -- is the price per acre from
- (9) those comps correct?
- (10) A Well that's one of the things yes
- (11) Q Sure In other words if you're using a comparable
- (12) property such as the Rifle Range and it sells for
- (13) hypothetically 10 dollars an acre you would take that into
- (14) account in deciding what a per acre price would be for similar
- (15) property in this case?
- (16) A After some adjustments to it
- (17) Q Absolutely And with Point Possession was it not the only
- (18) comp you used where you didn't actually use sale price but the
- (19) asking price?
- (20) A Well it -- I didn't use the asking price I used the -- a
- (21) contract price that was in escrow at the time I used it
- (22) Q And it fell out of escrow?
- (23) A It later did not close that's correct
- (24) Q So when -- I wonder if I could have the Elmo on
- (25) Let me hand you a copy of your report I'm told I just

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- (1) misspoke  
 (7) This is a partial copy Doctor -- Professor but this is  
 (3) Exhibit 16108 and what I'd like to do is draw your attention  
 (4) to the Table of Comparable Property Characteristics which is  
 (5) at this page NVC 12774  
 (6) A Yes  
 (7) Q I'm sorry that was 16108?  
 (8) MR OPPENHEIMER 104 I believe  
 (9) MR PETUMENOS 108 is what I have  
 (10) MR OPPENHEIMER Pardon me you're right it's 108  
 (11) 16108  
 (12) BY MR OPPENHEIMER  
 (13) Q So on Point Possession under the price -- pardon me under  
 (14) the date of the transaction let me zoom back out just a  
 (15) second Perhaps let's get a little better fix on this This  
 (16) is a table is it not from your report?  
 (17) A Yes it is  
 (18) Q And one of the -- and this is data that you've collected  
 (19) from each of your comparables?  
 (20) A Yes  
 (21) Q Now one of the dates that you have for each comparable --  
 (22) I hope everybody can see -- is date of sale?  
 (23) A That's correct  
 (24) Q Okay And as we read across we see various dates and  
 (25) when we get under Point Possession we get asking and that's

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- (1) understood your testimony correctly in escrow on today is the  
 (7) same price used in your comp?  
 (3) A I do not  
 (4) Q Do you know whether it went up or down?  
 (5) A I don't know  
 (6) Q One of the characteristics of environmental land -- and  
 (7) that is by the way the categorization you've given to all the  
 (8) plaintiffs' land in this case is that true?  
 (9) A Well I refer to it as environment or preservation lands  
 (10) Some of these lands were acquired for purposes other than just  
 (11) the true sense of preservation I think if you'll read my  
 (17) report you'll see that I -- that I indicated that usually a  
 (13) specific purpose why government would acquire these sites  
 but  
 (14) these are all purchases by -- generally purchases by the  
 (15) government or a purchase for some environmental purpose  
 (16) Q Right And the -- the primary purchaser in this market for  
 (17) environmental and preservation lands -- I stand corrected on  
 (18) the term -- is the government?  
 (19) A In Alaska that's correct  
 (20) Q Now I think you've explained that one of the things that  
 (21) would motivate the purchase of this type of land would be to --  
 (22) because it had some sort of historical significance?  
 (23) A Yes I've said that  
 (24) Q And Point Possession in fact has some historical  
 (25) significance -- and I know this because I have read your report

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- (1) because it was still in escrow?  
 (7) A Probably a better word would have been pending if you  
 (3) would because I used the data from the closing of the  
 (4) transaction recorded on the deed as the date of sale  
 (5) Q In any event the price you had at that point the deal  
 (6) didn't close but it's pending again?  
 (7) A I understand there is another sale pending yes  
 (8) Q Who do you understand the buyer to be for Point  
 Possession?  
 (9) A The current buyer?  
 (10) Q Is it different from the buyer who was thinking about  
 (11) buying it when you used it as a comp?  
 (12) A I believe it is yes  
 (13) Q Let's start with the first Who did you understand to be  
 (14) buying Point Possession when you used it as a comparable?  
 (15) A I was never given the name of the individual because it  
 (16) was a pending transaction I didn't trust that issue In  
 (17) fact I was told by Ken Gain that there were two buyers that  
 (18) there had been two offers one was accepted and was in  
 escrow  
 (19) and there was another one standing in the wings and it's my  
 (20) understanding that neither of those materialized at that time  
 (21) after I used it  
 (2) Q Do you have information as to who the current potential  
 (3) buyer is?  
 (4) A I do not  
 (25) Q Whether the price that the property is in escrow on if I

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- (1) -- what is that? Why don't you tell the jury what that is?  
 (2) A Well there was a -- I recall reading some -- some history  
 (3) but I'm not sure what you exactly -- what you make reference  
 (4) to  
 (5) Q What I'm referring to it's called Point Possession is it  
 (6) not because in 1778 or so goes the theory for the history of  
 (7) that property Captain Cook took possession of some part of the  
 (8) land in this area for -- for England?  
 (9) A Well you know after you look at all the land in the  
 (10) Prince William Sound and all that area every one of them says  
 (11) that he -- he landed there as well as a lot of other folks  
 (12) Q Explorers tend to do that?  
 (13) A There was -- there's a lot of history of folks landing  
 (14) around in that area goes way back before the -- those white  
 (15) explorers got there  
 (16) Q Absolutely absolutely I didn't imply that there wasn't  
 (17) The fact is it does have some historical significance?  
 (18) A Yes  
 (19) Q But as of this point no sale has been closed on Point  
 (20) Possession?  
 (21) A Not to my knowledge Now last time I talked to Ken Gain  
 (22) he and I was working on a project in Fairbanks together and on  
 (23) our trip up there he mentioned to me about the pending sale I  
 (24) haven't discussed with him whether it has closed  
 (25) Q One of the other things I think you mentioned yesterday in

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- (1) your theory is that another motivating factor for the purchase  
 (2) of lands is to protect endangered species?  
 (3) A That would be one use yes  
 (4) Q That however does not apply to any of these lands?  
 (5) A To my knowledge there was -- there s no endangered  
 species  
 (6) on the lands that I ve investigated  
 (7) Q Okay One of the other reasons to buy this type of land  
 (8) that you mentioned is to protect it from -- from certain forms  
 (9) of degradation or damage to preserve it in its pristine state?  
 (10) A Uh huh  
 (11) Q You agree?  
 (12) A (Nods head up and down)  
 (13) Q Is clear cutting timber consistent with that use of land?  
 (14) A No it wouldn t be  
 (15) Q So when you -- are you familiar with -- with whether or not  
 (16) there are any areas among the lands that you ve appraised in  
 (17) this case that are suitable for timbering?  
 (18) A Depends on what -- at what level you re making reference  
 (19) to There s no timber on the Rifle Range There s no timber  
 (20) on the Tok properties There is some minor timber or  
 (21) there s -- Point Possession is treed We -- I assisted another  
 (22) Native corporation who owns the property fairly close to that  
 (23) Point Possession property We had a timber survey done at  
 that  
 (24) time and it was determined that it really wasn t of commercial  
 (25) value

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- (1) It might be for pulp mills things of that nature but --  
 (2) and depend on the price of the property things of that You  
 (3) have to realize that I looked at these at a point in time and  
 (4) at that point in time in discussion with timber people it s  
 (5) my determination that the timbers on Point Possession had  
 (6) little commercial value  
 (7) Q What about the lands that you re appraising damage for? In  
 (8) other words the lands that you ve used the comps to -- to have  
 (9) a damage estimate for some of those considered timberlands?  
 (10) A Could you be specific?  
 (11) Q Sure Any of the Port Graham lands considered  
 timberlands?  
 (12) A Well I appraised Port Graham and English Bay without  
 (13) timber I took out the stumpage rights  
 (14) Q And the same for Chenega right?  
 (15) A No I included some of the timber on the -- in the Chenega  
 (16) Bay  
 (17) Q And would you consider consistent with the use of these  
 (18) lands as environmental preservation lands for someone to go  
 in  
 (19) and cut the timber?  
 (20) A Well I would consider for example in Chenega Bay that if  
 (21) they started cutting the timber that -- that after they got  
 (22) beyond a certain point that may well hurt the possibility of  
 (23) having it preserved Although it s not -- it s not a total --  
 (24) a totally unreal situation they might want to do that I  
 (25) mean there s a lot of species and a lot of wildlife and other

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- (1) things that they -- that might want to well be protected  
 (2) Q Isn t it the case -- let me ask you this You are an  
 (3) expert in -- in marketing real estate as well as in appraising  
 (4) is that correct?  
 (5) A Yes  
 (6) Q And in fact you ve taught courses in that?  
 (7) A Yes  
 (8) Q You have given thought to and you have investigated how it  
 (9) is people sell natural -- I mean environmental and  
 (10) preservation lands what type of marketing techniques they use  
 (11) to sell them isn t that true?  
 (12) A Yes  
 (13) Q And isn t one of the techniques that s used by the Native  
 (14) corporations that you ve looked at in selling land to do things  
 (15) like threaten to clear-cut it unless the government buys it?  
 (16) A Well I think I would take some exception to your term of  
 (17) threatening to clear cut They have options They can -- you  
 (18) know timberland is very valuable in Alaska and one of their  
 (19) options is to harvest the timber Now if they plan to harvest  
 (20) the timber and a public agency or other group desires that it  
 (21) not be harvested and would buy it from them in lieu of that  
 (22) then I certainly would think that you know that s -- that s  
 (23) another option  
 (24) Q In fact you ve seen this phenomena operating in this  
 (25) marketplace have you not?

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- (1) A I m not sure what phenomena you re referring to  
 (2) Q The phenomena of threatening to do something that is  
 (3) inconsistent with keeping the land preserved in order to get  
 (4) the government to buy it  
 (5) A Well I don t know that you would call it a threat I  
 (6) think it s more like a reality We have these options and  
 (7) we re going to use our land for this purpose and people find  
 (8) out they re going to be used for that purpose they would  
 (9) rather it not be used for that purpose and purchase in lieu of  
 (10) that  
 (11) Q Well in fact in your research into the way in which these  
 (12) precise types of lands are marketed you ve come across  
 (13) situations where the owners have threatened to take out a  
 (14) permit to create a nuclear dump site on their land in order to  
 (15) get the government to buy the land haven t you?  
 (16) A Well I don t know that it was for the purpose of getting  
 (17) the government to buy the land I believe it was -- you know  
 (18) a permit was filed and the -- to do that I think I m on  
 (19) record as saying that would certainly encourage people to take  
 (20) a look at those lands  
 (21) Q Sure would You -- you ve discovered in your examination  
 (22) of marketing land that it can take years to sell this type of  
 (23) natural preservation land is that correct?  
 (24) A Sometimes -- some of these transactions we ve looked at  
 (25) have taken several years and some have been actually fairly

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- (1) short in duration  
 (2) Q And you have found that this technique of threatening to  
 (3) clear cut or put a subdivision in or put a nuclear waste  
 (4) facility in has a tendency to speed up the marketing of these  
 (5) lands?  
 (6) A Well I think I take exception with the – your continued  
 (7) use of the word threat but I would say that the alternative  
 (8) use of them for those purposes yes would help speed up that  
 (9) process  
 (10) MR OPPENHEIMER Counsel playing a part of videotape  
 (11) running from transcript 202 line 13 to 204 line 22 Roll  
 (12) that segment  
 (13) (Videotape Played)  
 (14) VIDEO SPEAKER  
 (15) Q You made reference of a submarket What submarket were  
 (16) you referring to?  
 (17) A The preservation conservation market  
 (18) Q In Alaska?  
 (19) A In Alaska  
 (20) Q With your experience in that market how – if you had  
 (21) property such as the subject property and you wanted to  
 (22) market  
 (23) it who would you approach in an effort to do so?  
 (24) A Which subject properties are we talking about?  
 (25) Q Let s talk about English Bay Port Graham and Chenega  
 (26) A Okay What you would have to do – what has been done in

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- (1) the past in terms of the specific strategy to – to sell some  
 (2) of this property There was – for example one Native  
 (3) corporation in Kodiak who applied for a permit to use their  
 (4) property for a nuclear waste disposal area It s amazing to me  
 (5) how quickly suddenly that property became listed as a – as  
 (6) one of the properties that the environmentalists and some of  
 (7) the environmental organizations wanted preserved  
 (8) One of the properties that has been talked about a lot is  
 (9) the property out on – out at the in Pribilof – I always  
 (10) mispronounce that how do you –  
 (11) Q Pribilof  
 (12) A Pribilof Actually that was a mistake that started out  
 (13) with as the bird – the bird cliffs and stuff out there was  
 (14) never intended to be conveyed to the Native corporation  
 (15) anyway That s what I was told It somehow was a mistake and  
 (16) the Indian – when the Natives announced that they were going  
 (17) to subdivide them all of a sudden a lot of people decided that  
 (18) that was a high priority to buy that land back  
 (19) When the Seldovia Natives announced that they were going to  
 (20) clear cut their land across from Homer that became a high  
 (21) priority land for acquisition And I have made reference on  
 (22) several occasions to the marketing strategy that would be  
 (23) necessary to bring about a possible sale of this kind of land  
 (24) I can t go into any of the detail but I happen to be working  
 (25) on – am involved with another transaction another possible

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- (1) transaction where the world environmental fund has rated it  
 (2) the number one piece of land in the world for acquisition and  
 (3) it happened to be because these people announced that they  
 (4) were  
 (5) going to build some – start selling sites for – for lodges  
 (6) out there  
 (7) Well there are – there are a number of things that can  
 (8) bring about these kind of transactions We re seeing right now  
 (9) in Cordova when they started trying to clear cut the land  
 (10) along the beaches and around where the salmon run all of a  
 (11) sudden negotiations been going on for years suddenly came  
 (12) about or are coming and very rapidly  
 (13) So in Alaska I realize that things get done differently in  
 (14) other parts of the world in the United States but in Alaska  
 (15) there is a marketing strategy for specific submarket of land  
 (16) that has been relatively successful okay?  
 (17) (Videotape concluded)  
 (18) BY MR OPPENHEIMER  
 (19) Q I want to hold on your – your report for a little bit  
 (20) longer  
 (21) You have before you there I think Professor the pages of  
 (22) comparables Let me just double-check to make sure I m not  
 (23) misspeaking Yes you have before you that part of your report  
 (24) that includes the comparables There are a number of  
 (25) comparables there that you used that are after the spill is  
 that correct?

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- (1) A Well the ones that I actually used for analysis?  
 (2) Q Well I m not – you re making a good point and I don t  
 (3) mean to be misleading I am not saying that I m going to ask  
 (4) you about any of the six that you winnowed it down to but you  
 (5) mentioned you had more than just the six comparables and  
 (6) some  
 (7) you used for background and some you used for adjustments  
 (8) that s correct?  
 (9) A That s correct  
 (10) Q Now the table in your report lists 16 properties that you  
 (11) list there as having comparable property characteristics  
 (12) A Actually it may be 17 but I think one is 8 1  
 (13) Q One is 8 1 And by the way that s a comp known as  
 (14) Tanacross?  
 (15) A Yes  
 (16) Q That s another Tok radar site?  
 (17) A That s true  
 (18) Q Of the comps that you looked at were two or three the  
 (19) radar sites?  
 (20) A I listed three of those radar sites I only used one of  
 (21) them as a comp and I used it as one of – the lowest of – in  
 (22) adjusting as opposed to –  
 (23) Q On your screen there Professor I ve put up page 12774  
 (24) which you also have in hard copy in front of you but this is a  
 (25) page from your comparable property characteristics table do  
 you recognize this?

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- (1) A Yes  
 (2) Q Just for the moment I want to – Mr Fortier has set a  
 (3) high standard which I m going to try to follow here  
 (4) If you look at the date of sale and then go over we have  
 (5) three sales I d like to focus on for just a minute Now these  
 (6) are all post spill sales are they not?  
 (7) A Yes  
 (8) Q And in fact at least one of them the Rifle Range is  
 (9) Salonic Creek right? That actually did make it into your  
 (10) comps?  
 (11) A Yes it did  
 (12) Q Okay Now the Salonic Creek sale is in May of 92?  
 (13) A Yes  
 (14) Q Did you adjust that for the effect of the oil spill?  
 (15) A No I didn t It wasn t on the water I saw no evidence  
 (16) of impact on that – on that particular transaction  
 (17) Q Because it wasn t on the water?  
 (18) A It – it wasn t oiled  
 (19) Q Do you believe the oil spill had no impact on properties  
 (20) that weren t oiled?  
 (21) A I believe that it – properties that were not oiled may  
 (22) well be and probably were impacted by it but I did not  
 (23) conduct that analysis  
 (24) Q So in choosing the Salonic Creek Rifle Range as a comp for  
 (25) damages in this case you did not think whatever effect the

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- (1) spill had – at least as of the date of that transaction in 92  
 (2) – was worth making any adjustment to the comp about?  
 (3) A Not considering who the buyer was and the circumstances  
 (4) around that sale no  
 (5) Q When you say considering who the buyer was what do you  
 (6) mean by that?  
 (7) A Well this is a transaction that had been negotiated and  
 (8) ongoing for some time It wasn t just like it just suddenly  
 (9) occurred in 1992  
 (10) Q Right knowledgeable buyer and seller long history of  
 (11) negotiation?  
 (12) A And long – yes  
 (13) Q And now in terms of most of the land that you ve appraised  
 (14) here that we call preservation – I m sorry I ve mixed up the  
 (15) term again but it is environmental preservation land do I  
 (16) have that right?  
 (17) A Yes  
 (18) Q With respect to most of that land you explained that it is  
 (19) primarily the government that buys it Now the government is  
 (20) a sophisticated purchaser?  
 (21) A Well there s been a lot of debate about that  
 (22) Q At its best at its best is the government a sophisticated  
 (23) purchaser?  
 (24) A The government transactions are typically reviewed by many  
 (25) people They have a lot of public hearings and things go on

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- (1) so that there is a great deal of review on those Given that  
 (2) review I would say that those transactions typically if they  
 (3) work within a realm of market value that somebody would  
 (4) certainly look that up  
 (5) Q And with respect to all of these lands that we re talking  
 (6) about today the Port Graham and English Bay and Chenega  
 (7) lands  
 (8) where the government is the primary potential purchaser isn t  
 (9) it clear that starting within hours of the spill it began to  
 (10) amass probably more information about those lands than any  
 (11) other group of people except maybe the State of Alaska and  
 (12) Exxon?  
 (13) A Which government the State –  
 (14) Q The federal government Either the state or the federal  
 (15) government The governments of the State of Alaska and the  
 (16) federal government were intimately involved in the operations  
 (17) of cleanup treatment whatever you want to call it after the  
 (18) oil spill is that correct?  
 (19) A Yes  
 (20) Q And in fact NOAA the National Oceanographic and  
 (21) Atmospheric Administration was the science advisor to the  
 (22) federal on scene coordinator who was in fact in charge of  
 (23) cleaning up all this land is that also true?  
 (24) A If you say so  
 (25) Q Well I understand it to be the case Do you know whether  
 that s true?

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- (1) A I read documents and things on that  
 (2) Q So it s your understanding that the most likely purchaser  
 (3) of all the land we re talking about is also directing the  
 (4) cleanup?  
 (5) A Its my understanding that Exxon was in charge of the  
 (6) cleanup  
 (7) Q So you are of the view based on what you looked at that  
 (8) Exxon was in charge of directing these cleanups?  
 (9) A I don t know about directing I believe a lot of cleanup  
 (10) was being done by the Veco Company and they were under  
 (11) contract to Exxon as I understand  
 (12) Q Do you understand the role – do you have an understanding  
 (13) of the role that the federal government played in the cleanup  
 (14) of these beaches?  
 (15) MR FORTIER Your Honor I think this is going  
 (16) outside the scope of the direct It s also assuming a lot of  
 (17) facts not in evidence  
 (18) THE COURT The objection s overruled counsel  
 (19) A Could you restate the question?  
 (20) BY MR OPPENHEIMER  
 (21) Q Certainly Professor  
 (22) Do you have an understanding of the role that the federal  
 (23) and state governments played in the cleanup of these beaches?  
 (24) A Yes They were they were – there was a certain amount of  
 (25) oversight and they were there watching making sure it was

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- (1) being done
- (2) Q Do you have an understanding of who was in charge of
- (3) cleanup as between Exxon the State of Alaska and the federal
- (4) government?
- (5) A I m not sure what you mean by in charge The on site
- (6) coordinator was the Commander of the Coast Guard
- (7) Q Okay And it is your understanding that NOAA was the
- (8) science advisor to the federal on scene coordinator?
- (9) A I believe that s correct
- (10) Q And NOAA is a - is a part of the federal government which
- (11) would be the buyer for these lands is that correct?
- (12) A Well when you say the buyer of these lands I think
- (13) it s - I ve often heard the term the government is the buyer
- (14) but there are many government agencies and the buyer may
- (15) be
- (16) one of those agencies and those agencies always are not -
- (17) there s not real good coordination necessarily between them
- (18) So when you say the government is I m not aware that NOAA
- (19) was
- (20) buying any real estate
- (21) Q Are you aware of any instance where a government
- (22) department
- (23) that might be interested in buying lands up here couldn t get
- (24) information from NOAA about its view of the State of cleanup?
- (25) A Well I assume if they wanted information they could get
- (26) information
- (27) Q Now we talked about some of the risks that an oil spill
- (28) like this could create for a potential buyer Let s go down

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- (1) just a few of them Let s first - legalities first talk about
- (2) collateral barring you buy property - and Professor I ll be
- (3) straight man for another government observation joke but it s
- (4) worth doing Does the government need to borrow money to
- (5) buy
- (6) this land?
- (7) A It generally buys land through appropriations
- (8) Q So the government doesn t need to go to a bank to borrow
- (9) money to buy this land?
- (10) A It buys it through appropriations
- (11) Q So the government doesn t need to be worried about filling
- (12) out a form disclosing contamination on its property for another
- (13) governmental agency? I mean it is the governmental agency
- (14) isn t that correct?
- (15) A Well that s not exactly true Out on the Tok properties
- (16) that property was bought by the U S Air Force and when they
- (17) started building the Corps of Engineers shut them down
- (18) because
- (19) they didn t have a Corps of Engineers permit -
- (20) Q They eventually got one?
- (21) A Well they eventually got one but they got shut down for
- (22) several months because they forgot to get a permit from
- (23) another
- (24) agency of the government
- (25) Q Point well taken So a few months go by and somebody talks
- (26) to somebody s boss and the Backscatter Project is back up in
- (27) operation or at least the property goes forward right?
- (28) Didn t stop the sale?

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- (1) A Well it didn t stop the sale because the folks who bought
- (2) it hadn t thought about the permits and didn t realize that the
- (3) ground was underlain with permafrost
- (4) Q Right But they did get the permit?
- (5) A They got a permit to build one road
- (6) Q You don t agree the government would be buying the
- (7) property
- (8) for the long term if they bought it?
- (9) A Depends on the use If it was being bought to preserve it
- (10) that would be for the long term
- (11) Q That s one of the primary - I believe you explained one of
- (12) the primary motivations in governments buying this kind of
- (13) land which is to preserve it for the long term
- (14) A Yes
- (15) Q Can you think of any group of people with a better capacity
- (16) to assess whether this land would be okay in the long term than
- (17) the federal and state governments in Alaska?
- (18) A Well I think they are in a position to do that I
- (19) wouldn t say they re the best but I think they re in a
- (20) position to do that
- (21) Q Now were you in the courtroom the other day when Dr
- (22) Mundy
- (23) was talking about the attitude that he discovered in his
- (24) research of the - of the federal and state governments with
- (25) respect to the presence of oil on this property?
- (26) A I was not
- (27) Q Would it be consistent with your understanding that in the

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- (1) main they view it as a transitory problem something that will
- (2) go away?
- (3) A I can t testify to that I don t have any knowledge of
- (4) that
- (5) Q Have you made any inquiry of these - of this most likely
- (6) potential purchaser of any of its agencies of what its
- (7) attitudes are about the oil spill and whether it affects its
- (8) view of the desirability of these properties as environmental
- (9) preservation lands?
- (10) A Keep in mind counselor I appraised this land first for a
- (11) one year and then a three year period and given all that was
- (12) going on at that particular point in time a lot of things
- (13) stopped a lot of discussion between government and Native
- (14) and
- (15) things actually came to somewhat of a stop because everybody
- (16) was so involved in - in the spill
- (17) So now what would go on beyond the three years that I ve
- (18) been confined to here you know that - I m not going to
- (19) speculate on But part of my analysis was that part of the
- (20) damage here is that these - these negotiations and
- (21) opportunities would come to a halt for at least a period of
- (22) time
- (23) Q Were you aware of any negotiations between the government
- (24) and any of the landowners in this case that came to a halt
- (25) during the period of time covered by your report?
- (26) A There had been some discussion between Port Graham for

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- (1) example English Bay some of the lands they acquired One  
 (2) reason they haven't received title to it is the government was  
 (3) objecting to them getting some of that land I believe it was  
 (4) important to them There was some discussions  
 (5) Q Well now those discussions though were objections that  
 (6) some folks in the federal government had to giving part of the  
 (7) Kenai Fjords National Park to the Native corporations isn't  
 (8) that correct?  
 (9) A Well they're lands that in the government's opinion are  
 (10) important and they would like to keep them  
 (11) Q Right But that's -- that's a discussion about the  
 (12) government not wanting lands in the Kenai Fjords area to  
 (13) transfer to the Natives I'm talking about the other way Are  
 (14) you aware of any negotiations that were interrupted by the oil  
 (15) spill between the government for purchase of any of the lands  
 (16) that you've assessed?  
 (17) A Between the government -- not that I recall no  
 (18) Q Now in fact we are talking about huge pieces of land  
 (19) here are we not?  
 (20) A Yes  
 (21) Q And those aren't the sorts of things that you run out  
 (22) during a summer period and just decide you're going to buy  
 (23) 100,000 acres of land right?  
 (24) A No but some -- there have been some transactions occurred  
 (25) in fairly short time periods

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- (1) Q Have you ever heard of 100,000 acres being identified  
 (2) negotiated over and sold in one summer buying period?  
 (3) A There has never been 100,000 acres sold in Alaska  
 (4) Q So from your perspective -- and I appreciate that you are  
 (5) very knowledgeable about how these transactions work -- when  
 (6) you buy a piece of property like this this is this is a  
 (7) process a transaction that requires lots of work doesn't it?  
 (8) You have to research as you said with the government the  
 (9) agencies have to talk to each other is that right?  
 (10) A Yes  
 (11) Q They have to do an analysis correct?  
 (12) A Yes  
 (13) Q They probably may have to talk to a congress person or two  
 (14) in some cases these are big purchases?  
 (15) A Yes  
 (16) Q Probably have a lot of work computer workup of various  
 (17) types to do -- to see what kind of resources are there what  
 (18) kind of species whether any of them are endangered Am I  
 (19) giving a pretty good description of some of the variables in  
 (20) this kind of huge purchase?  
 (21) A Yes  
 (22) Q And just out of curiosity you could do some of that or a  
 (23) lot of it in winter months in offices in Anchorage Washington  
 (24) D C correct?  
 (25) A Could do some of that yeah

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- (1) Q And in fact isn't that what happens that when these huge  
 (2) purchases are made that take years they involve an enormous  
 (3) amount of negotiation an enormous amount of research and a  
 (4) lot of it has nothing to do with being out at the property  
 (5) looking at the property?  
 (6) A Some of that yes  
 (7) Q And a lot of the information that these potential  
 (8) government buyers have they have had for years about these  
 (9) properties isn't that true?  
 (10) A Yes  
 (11) Q And in many cases they have been thinking about some of  
 (12) these purchases for years is that also true?  
 (13) A Yes  
 (14) Q Isn't it also true that in order to get one of these big  
 (15) deals closed you have to get on -- typically on a government  
 (16) list a priority list of purchases?  
 (17) A No In fact that particular point is what I was  
 (18) discussing on video that you showed here the -- there had been  
 (19) some testimony discussion that lands are never purchased  
 (20) unless they have been on somebody's priority list and I was  
 (21) making a point that most of the lands that I've viewed here in  
 (22) Alaska in fact weren't on the government priority list prior to  
 (23) them being acquired  
 (24) Q And none of the lands here are as best you know on a  
 (25) government priority list correct?

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- (1) A Which ones are you talking about?  
 (2) Q Let me back up a step I think you just said -- correct me  
 (3) if I'm wrong -- that one of the ways you can get land purchased  
 (4) from the -- by the government if it's not on a priority list  
 (5) is threaten to clear cut or put a nuclear power plant on the  
 (6) property is that correct?  
 (7) A That speeds the process  
 (8) Q Now if you don't do that don't you in the course of the  
 (9) case of the federal government have to get yourself on what's  
 (10) known as a priority list?  
 (11) A Yes  
 (12) Q None of these lands were on a priority list at the time you  
 (13) examined them?  
 (14) A Not that I know of no  
 (15) Q And the best that you know still none of them are on a  
 (16) priority list?  
 (17) A Which lands?  
 (18) Q Any of the lands you've assessed for damages in this case  
 (19) A Well it's my understanding there has actually been some  
 (20) ongoing negotiations to acquire some of this land  
 (21) Q Recently?  
 (22) A Yes  
 (23) Q And any of them made the priority list?  
 (24) A Not that I know of no  
 (25) MR OPPENHEIMER Your Honor would this be a good

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- (1) time for a break?
- (2) THE COURT If you want one
- (3) MR OPPENHEIMER Sure
- (4) THE COURT All right
- (5) THE CLERK Please rise This court stands in
- (6) recess
- (7) (Jury out at 10 50 a m )
- (8) (Recess from 10 50 a m to 11 08 a m )
- (9) (Jury in at 11 08 a m )
- (10) THE CLERK This court now resumes its session
- (11) Please be seated
- (12) BY MR OPPENHEIMER
- (13) Q Professor Green I d like to explore a little bit the -
- (14) the method that you ve used and I d like to walk through a
- (15) couple of things but let me ask you some preliminary
- (16) questions In years two and three of your study - by the way
- (17) let me back up even farther excuse me
- (18) We ve heard testimony from Dr Mundy about a damage study
- (19) that he did and today we re hearing testimony from you about a
- (20) damage study that you have done Your damage study is
- (21) independent and separate from Dr Mundy s is that correct?
- (22) A Yes
- (23) Q So when we think about your study it is - it s not
- (24) something that we re adding to Dr Mundy s study it s
- (25) something that we consider along with it separate from Dr

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- (1) Mundy s study It s another way of looking at the first three
- (2) years of the oil spill it s not intended to be added on?
- (3) A It s only the first three years
- (4) Q Only the first three but otherwise what I ve said is
- (5) correct Okay I m going to do a schematic here I don t
- (6) intend to represent that it represents anything to your
- (7) report Feel free to correct me in any way but basically if
- (8) we conceptualize this as the land that you appraised in the
- (9) first year - let s call this year one - you would - and this
- (10) is - bear with me here this is water best I can do - you
- (11) would evaluate the damage to the land by looking at all the
- (12) land so far so good?
- (13) A Yes
- (14) Q Okay Now in years two and three you - you make an
- (15) adjustment that you ve described to us where you take into
- (16) account an area near the shore correct?
- (17) A Yes
- (18) Q And you examine this area for purposes of damage correct?
- (19) A Correct
- (20) Q I believe you said during years two and three the area you
- (21) looked at here - that s the shoreline related area - is
- (22) roughly one quarter of a section?
- (23) A Yes
- (24) Q Now here you may need to correct me but I believe - this
- (25) is the area - I believe a section is 640 acres?

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- (1) A Yes
- (2) Q It s a square mile?
- (3) A Yes
- (4) Q And in fact when we saw - just borrow your exhibit Sam
- (5) - when we saw these maps earlier?
- (6) A Yes
- (7) Q And you were discussing with us these boxes those are
- (8) sections?
- (9) A That s correct
- (10) Q So it s a - it s a convention that real estate
- (11) professionals share as a unit of measurement?
- (12) A It s a survey map yes
- (13) Q Survey measure okay So one quarter section in from the
- (14) water in years two or three is that a quarter of a mile in?
- (15) A About a quarter of a mile
- (16) Q Okay And that s the area that you re analyzing that you
- (17) believe may still be affected in years two and three of your
- (18) study correct?
- (19) A (Nods head up and down)
- (20) Q Okay
- (21) MR OPPENHEIMER Your Honor with the Court s
- (22) permission and Mr Diamond s could I ask if Mr Diamond
- (23) could
- (24) just hold this up? I d like to do a comparison here
- (25) MR DIAMOND Only if he can rip it off
- BY MR OPPENHEIMER

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- (1) Q Okay Now just for the moment - just for the moment -
- (2) MR DIAMOND I m having a Vanna White experience
- (3) BY MR OPPENHEIMER
- (4) Q I want to go back to year one - I think you re blocking
- (5) the Professor s view
- (6) Professor I d like to go back to year one Hypothetical
- (7) I would like you to assume for the moment that what we analyze
- (8) for damages is the shoreline related area
- (9) Let me take a specific example to see if I can give this
- (10) some - let s take Chenega Now currently in your report
- (11) the damage for the - for the first year for Chenega measured
- (12) as lost rent is 6 4 million Does that seem right to you?
- (13) A Yes
- (14) Q Okay
- (15) A Let me correct one thing You said the lost - that it was
- (16) lost rent I said it was rent on the - on the property for
- (17) the loss of property rights
- (18) Q Point well taken There s no actual rent that s being lost
- (19) that you re aware of or you take into account?
- (20) A That s correct
- (21) Q We ll get back to that in a minute but good point
- (22) Now basically what has happened here what I want to do is
- (23) go over to an analysis which - divide this in half This is
- (24) the actual report and here s the assumption I want you to
- (25) make I will - we can check this in your report if you like

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- (1) but I'll represent to you that according to your report the  
 (2) shoreline related area that you used in years two and three -  
 (3) not year one but years two and three is 16 640 square feet  
 (4) okay?  
 (5) A Acres  
 (6) Q Acres pardon me 16 640 acres And that you assigned to  
 (7) those acres a per acre value of \$1 368 sound right?  
 (8) A For - is this for Chenega?  
 (9) Q This is for Chenega  
 (10) A I believe that's correct  
 (11) Q Okay Let's assume we did that in year one so that we say  
 (12) this is - we're going to look at the same area you looked at  
 (13) in years two and three 16 640 acres okay at \$1 368 an acre  
 (14) Now that gives you a number That gives you 22 8 million  
 (15) agreed?  
 (16) A Uh huh  
 (17) Q Now at that point as you've explained to us you - that  
 (18) would be the value Professor - correct me if I'm wrong - for  
 (19) all of the shoreline related area before your adjustment for  
 (20) the fact that there is some use correct?  
 (21) A Okay  
 (22) Q In other words it's before the 85 percent factor is that  
 (23) correct?  
 (24) A Yes I believe that is correct  
 (25) Q Okay So we have to do - this is step number one Now

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- (1) we have to do step Number 2 We have to multiply this number  
 (2) by 85 percent In other words we're not going to use the full  
 (3) 22 8 million we're going to use a lower number That's 85  
 (4) percent of it correct?  
 (5) A That's correct  
 (6) Q And then we're going to apply a rental rate to that and  
 (7) the rental rate that we're going to use here is the one you  
 (8) used 9 68 percent?  
 (9) A On year two and three it was 9 percent  
 (10) Q It was lower but I'm going to use the rental rate used in  
 (11) year one for the hypothetical okay? So we have 9 68 percent  
 (12) that would be applied to 85 percent of this number right?  
 (13) A Yes  
 (14) Q Now if we did all those things we did all those things  
 (15) we would have applied an analysis to the shoreline related part  
 (16) of the property correct?  
 (17) A Yes  
 (18) Q Now I understand you didn't do that but that's what we  
 (19) would have done We would not have taken into account the  
 (20) uplands here and if we calculate these out would you agree  
 (21) that the number we would get for the first year would be not  
 (22) 6 4 million but 1 9 million? Agreed on the hypothetical? It  
 (23) would be 16 640 acres times the per acre price of \$1 368 is  
 (24) 28 8 million multiplied by 85 multiplied by 0 968 1 9  
 (25) million?

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- (1) A Well if you assume that the backlands were not impacted  
 (2) you're correct  
 (3) Q Absolutely I make that assumption and I fully realize  
 (4) that you did not I understand that I am making that  
 (5) assumption we are not including the uplands Agree with the  
 (6) hypothetical?  
 (7) A Well it's your hypothetical  
 (8) Q It is indeed that But you agree with the numbers that if  
 (9) you didn't - if you looked at the shoreline related area and  
 (10) didn't take the uplands in your damage number would be 1 9  
 not  
 (11) 6 4?  
 (12) A Well I'm assuming your numbers are correct I haven't  
 (13) calculated them I assume you've worked them out in advance  
 (14) Q I couldn't have done this without this cheat sheet  
 (15) Professor This is exactly the type of document you would not  
 (16) allow me to bring into one of your tests I assure you  
 (17) With those representations that I believe I've done the  
 (18) math correctly you would agree that this hypothetical works  
 (19) out this way?  
 (20) A If you accepted all those premises yes  
 (21) MR DIAMOND May I sit down?  
 (22) MR OPPENHEIMER Yes I appreciate it  
 (23) MR PETUMENOS Good job Mr Diamond  
 (24) BY MR OPPENHEIMER  
 (25) Q So at least with respect to that hypothetical including

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- (1) the uplands does make a big difference in the final analysis  
 (2) and you don't even need this hypothetical to figure that  
 (3) right?  
 (4) A Yes It's my opinion that yeah if the uplands have been  
 (5) affected if the rights to those properties have been impacted  
 (6) that yes they should be included  
 (7) Q I want to go back to the discussion we were having earlier  
 (8) about the - the impact on use and rental You corrected me  
 (9) earlier rightly so when I referred to an interruption of  
 (10) rental income Your theory does not have anything to do with  
 (11) an actual rental stream coming off the property correct?  
 (12) A That's correct  
 (13) Q And have you been in court at any time during which we have  
 (14) been discussing some of these leases that are out there in  
 (15) Prince William Sound the Growler lease the Porter lease on  
 (16) Busby Island any of the -  
 (17) A I have not been I don't believe  
 (18) Q You are I take it though familiar that there's some -  
 (19) there is in fact some rental income coming in?  
 (20) A Some small amount yes  
 (21) Q Some small amount Now let me ask you to put your  
 (22) professional hat on Let's talk the significance of that from  
 (23) a theoretical point of view Not much rental income coming in  
 (24) on these properties right? You would agree?  
 (25) A Yes

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- (1) Q Let me ask you this In your – in your study here did  
 (2) you look at any rental that came into the properties?  
 (3) A Yes  
 (4) Q So you would agree with me that based on your investigation  
 (5) there s not rental income that comes in?  
 (6) A That s correct  
 (7) Q And that s historically been the case is that not right?  
 (8) A That s correct  
 (9) Q Now when you re looking at rentals from land isn t it the  
 (10) case that whether the rental amount is small or large in  
 (11) assessing the value of the land on which the rental is based  
 (12) the fluctuations in rentals can be very important from a  
 (13) theoretical point of view isn t that correct?  
 (14) A Well if you re including the rental – see what you re  
 (15) taking as a small area and trying to somehow equate that small  
 (16) area and that small rent to the whole Is that what you re  
 (17) trying to do?  
 (18) Q No let s back up First of all if these properties have  
 (19) historically had limited rentals and if you wanted to find out  
 (20) whether the value of the property had been affected with  
 (21) respect to the rents you would at least have to look at what  
 (22) information there was isn t that correct?  
 (23) A Yes  
 (24) Q Doesn t matter whether it s a lot of rental property or a  
 (25) little correct?

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- (1) A Yes  
 (2) Q Now when rents are based upon – what is a percentage  
 (3) lease typically?  
 (4) A A percentage lease?  
 (5) Q Right  
 (6) A It s a lease that s based on a certain percentage of –  
 (7) Q Of what?  
 (8) A Of the property  
 (9) Q Of the value of the property?  
 (10) A Of the value that s correct  
 (11) Q Now whether that lease throws off two cents in rent or a  
 (12) million dollars a year in rent it is based upon the value of  
 (13) the property is that correct?  
 (14) A That type of agreement is yes  
 (15) Q So in the Porter lease Busby Island goes up or down and  
 (16) it s based on an assessment of the property That s telling  
 (17) you something about the value of the property irrespective of  
 (18) how much the rental is isn t that correct?  
 (19) A Well depends on the term of the lease  
 (20) In answer to your question I just worked on a project for  
 (21) the State of Alaska on the Frontier Building In 1985 when the  
 (22) market crashed they had a lease that they had already entered  
 (23) into so during a period of five six years seven years when  
 (24) the rents went way down their rent didn t go down They were  
 (25) paying over \$3 00 a square foot for rent when everybody else

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- (1) was getting lesser Now that agreement just terminated and  
 (2) now they ve renegotiated for a lower rate  
 (3) Q No question if you re in the middle of a lease it s kind  
 (4) of hard to get the terms and conditions That s why we have  
 (5) leases so we have terms that go on to the end of the lease  
 (6) Are you familiar with the terms of the Porter lease on Busby  
 (7) Island?  
 (8) A I am not no I don t recall them off the top of my head  
 (9) Q Let me phrase it in terms of a hypothetical If a lease is  
 (10) based – if a rent rate is calculated as a percentage of the  
 (11) value of the land – well in fact that s – let me back up  
 (12) That s what you ve done here isn t it? You have valued  
 (13) the land You have come up with a value for the land and then  
 (14) you applied either a 9 68 percent rental rate you applied that  
 (15) to the value said the land is worth ten dollars and the rent  
 (16) per year will be 9 68 percent of that correct?  
 (17) A Yes  
 (18) Q Let s take a hypothetical Now whether that rent is two  
 (19) cents or \$100 it still tells us something about the value of  
 (20) the land as I ve described it doesn t it because you have to  
 (21) define what the value of the land is before you can apply the  
 (22) rental rate to it?  
 (23) A If that s the method you ve used  
 (24) Q Sure sure So if you have somebody appraising a lease  
 (25) that s based on the value of the land irrespective of how much

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- (1) money s involved they have to form a judgment as to the value  
 (2) of the land?  
 (3) A If that s the method used There are a lot of times that s  
 (4) not necessarily the method used  
 (5) Q Let me ask a – sort of a different question Are you  
 (6) familiar with Growler Island?  
 (7) A With which island?  
 (8) Q Growler Island is – well let me ask without bringing out  
 (9) a map  
 (10) Are you familiar with an operation on Growler Island that s  
 (11) near Columbia Glacier where people get lunch and there s a  
 (12) kind  
 (13) of tour operation there?  
 (14) A I m aware that it goes on I m not aware of any specifics  
 (15) that I can recall  
 (16) Q Let me ask you again Keep your professorial hat on  
 (17) Let s think theoretically here for a minute  
 (18) If I were to tell you that the lease for Growler Island is  
 (19) based in part on a – a modest charge for every person who  
 (20) comes as a tourist to the business there and that in the year  
 (21) after the spill more people went to Growler Island as tourists  
 (22) than in the year before the spill And then in the second year  
 (23) after the spill more came than the year before the spill  
 (24) Irrespective of how much money that generated wouldn t  
 (25) that tell you something about the actual use of Growler  
 Island?

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- (1) A Well it would indicate that it was more use and it would  
 (2) indicate maybe that a lot of interest from people to come out  
 (3) and take a look at the -- this big disaster that was in all the  
 (4) newspapers  
 (5) Q Columbia Glacier didn't get oiled did it?  
 (6) A I don't recall  
 (7) Q I'd like to talk a little more about the method that you've  
 (8) used You rate properties on an index as part of the process  
 (9) is that correct?  
 (10) A I fix an index to those properties yes  
 (11) Q And actually I think you explained it quite well on your  
 (12) direct but I'd like to bring out a few things in a little  
 (13) more -- in a little more detail  
 (14) You have a system -- by the way is this a system that you  
 (15) have created?  
 (16) A It's one that I use for myself I've seen other similar  
 (17) ones used I believe the Forest Service used one similar to  
 (18) that but this is one I -- that I use I don't know if others  
 (19) use it  
 (20) Q Let me put one of your exhibits back on You had an  
 (21) exhibit -- I think it would be easier -- which listed the  
 (22) attributes that you rate Give me one second here  
 (23) Well -- I'll have somebody see if we can get that on the  
 (24) screen I think it would help a little bit Let me start so  
 (25) we don't lose time

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- (1) You look at properties and you're going to rank them by  
 (2) what you call a developability scale correct?  
 (3) A Yes  
 (4) Q And to do that -- and I have your report close at hand I  
 (5) want to make sure I have this right -- you have a -- you have  
 (6) a -- we have it? Great  
 (7) Okay Well you have a code or a category excuse me for  
 (8) access right?  
 (9) A Yes  
 (10) Q Well if I could spell We'll get that correct You have  
 (11) a code for biological?  
 (12) A Yes  
 (13) Q I say code I should really be saying category right?  
 (14) A Yes  
 (15) Q You have a category for hydrologic That means what?  
 (16) A Water  
 (17) MR FORTIER We found ours if you'd like to put that  
 (18) up  
 (19) MR OPPENHEIMER I'd love it It will be a lot  
 (20) better than somebody trying to read my writing  
 (21) MR FORTIER Billy will put it up not me  
 (22) BY MR OPPENHEIMER  
 (23) Q Here we go okay  
 (24) What you do -- but again correct me if I get this wrong --  
 (25) you go through other properties and you go down each one of

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- (1) these categories and you assign a number from -- is it one  
 (2) through five?  
 (3) A It varies  
 (4) Q Okay You assign a number indicating whether it has  
 (5) good -- in effect good or bad qualities in these categories  
 (6) fair statement?  
 (7) A Yes  
 (8) Q Okay And as I understand it zero is not good the higher  
 (9) numbers get better?  
 (10) A Yes  
 (11) Q So if you had four for access then you have a hundred  
 (12) percent access to the property?  
 (13) A I believe that's correct  
 (14) Q Okay Now you have an archaeological category there and  
 (15) you have as I understand it three -- three categories Zero  
 (16) the lowest rating is no known archaeological features That  
 (17) would add value to the parcel correct?  
 (18) A Yes  
 (19) Q Number one which is the next highest rank up is  
 (20) archaeological features of low or average interest That might  
 (21) add a small value to the parcel correct?  
 (22) A Yes  
 (23) Q And three the highest rating -- pardon me it's zero one  
 (24) two so two the highest rating world class archaeological  
 (25) features that would add value to the parcel or might create

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- (1) some political pressure that might influence value?  
 (2) A Yes  
 (3) Q What do you mean by some political pressure that might  
 (4) influence value?  
 (5) A Well influence value important archaeological sites are  
 (6) one of the things that can motivate and influence environmental  
 (7) groups and other groups to bring some pressure on the  
 (8) government to acquire the property  
 (9) Q Is there a little bit of contradiction in the model that  
 (10) we're talking about here between the value of the property  
 (11) going up because it has archaeology on it and the fact that --  
 (12) at least we have heard -- that people like to keep  
 (13) archaeological sites secret?  
 (14) A I'm not sure I understand your point  
 (15) Q Well can you think of a way in which having an  
 (16) archaeological site on your property would not be -- would not  
 (17) increase the value that would in fact decrease the value?  
 (18) A Under certain conditions that's true  
 (19) Q And tell the jury what those would be  
 (20) A Well if the property were being sold to a private  
 (21) developer let's say an archaeological site might be under  
 (22) certain conditions -- let's say be set aside or something to --  
 (23) for that property to be developed I do know that -- I'm told  
 (24) that there are markets for archaeological sites around so there  
 (25) is value under certain conditions

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- (1) In my model what I try to do and what I discovered when I  
 (2) mentioned I spent about a year and a half doing academic  
 (3) research on this issue under a grant what I came to the  
 (4) conclusion was that the thing that - what influenced the  
 (5) prices of this kind of property is that - are certain features  
 (6) of the property and you know there is a - there is kind of a  
 (7) pressure between the government and private developers to  
 (8) acquire the pressure - the property  
 (9) As certain attributes go up - as the number of attributes  
 (10) go up the competition and pressure between the private side  
 (11) wanting the property and the government side wanting it to  
 (12) preserve it is what forces brings - forces that value  
 (13) upward  
 (14) For example if you have old growth timber that a timber  
 (15) company would love to get and harvest and at the same time  
 (16) an  
 (17) environmental group would - wants it preserved the pressure  
 (18) between those two competing uses is what helps drive the  
 (19) property up So what my - my categories do is help me When  
 (20) I take the property and look at the subject properties I - I  
 (21) go through and kind of rate categories what's there and then  
 (22) I look at the comparable properties to see what was there to  
 (23) see if I can't kind of compare these - the forces of the  
 (24) market that would influence the price  
 (25) Q We've gone a little bit off my question on archaeology but  
 (26) I think into a useful area and I want to stay here for just a

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- (1) second You're saying that competition between the  
 (2) government  
 (3) and private parties equals a higher price is that basically  
 (4) correct?  
 (5) A Not necessarily a higher price  
 (6) Q A better price?  
 (7) A Not necessarily a better price  
 (8) Q Not a better price What kind of price a lower price?  
 (9) No?  
 (10) A Well it's these - it's these attributes that we're  
 (11) talking about For example if you take some of the Tok  
 (12) properties those properties were purchased by the United  
 (13) States Government through - through negotiation between two  
 (14) parties If you look at the price of that they sold for in  
 (15) the neighborhood of 400 and some dollars or \$511 an acre If  
 (16) you analyze the property as I do and go through and look at  
 (17) the attributes that those properties have you will see that  
 (18) there are few attributes that would cause the government to  
 (19) have to compete with a private developer to acquire that  
 (20) property  
 (21) Q So the price would go down?  
 (22) A So the price is lower  
 (23) Q Right And if the government had to compete with a private  
 (24) party who say wanted to develop it they'd have to pay more  
 (25) to get it out of the hands of the private party right?  
 (26) A That's the pressures on time

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- (1) Q Can't we say better or higher price?  
 (2) A Well a higher or lower price depending on what those  
 (3) competing pressures are  
 (4) Q If there are fewer competing pressures the government can  
 (5) get the preservation land cheaper If it's got to fight a  
 (6) developer it's going to have to pay more?  
 (7) A Assuming that there's a willing seller  
 (8) Q You agree with that as a general principle that where there  
 (9) is competition in the market for the land the government if  
 (10) it really wants this land is going to have to pay more money?  
 (11) A That's a correct statement  
 (12) Q Okay Now isn't it the case that in the areas that we're  
 (13) talking about in this case and especially the Prince William  
 (14) Sound that your investigations have shown you that in fact  
 (15) it has a - it scores very low on your developability end of  
 (16) it not a lot of private developers out there developing it  
 (17) right?  
 (18) A That's why the price is low  
 (19) Q Okay and that you have historically very little interest  
 (20) in recreational development out there correct?  
 (21) A Some but it hasn't been a big market  
 (22) Q And in fact don't you rate all of the properties in this  
 (23) case with a 1 which is a low rating?  
 (24) A I believe that's correct  
 (25) Q One of them is 1.5 I believe?

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- (1) A 1.5 And I think Chenega is higher than that I think  
 (2) Q The shoreline related area of Chenega is 3 does that ring  
 (3) a bell?  
 (4) A That's correct  
 (5) Q The highest rating the next highest is 1.5 and most of  
 (6) them are 1 correct?  
 (7) A Yes  
 (8) Q And in fact the 3 applied to the shoreline related area  
 (9) of Chenega and a 1 applied to the upland area correct?  
 (10) A I think that's correct  
 (11) Q Okay let's go back to archaeology I'm a developer Do I  
 (12) want archaeological sites on the land I'm going to develop?  
 (13) A Depends on what you want to develop it for  
 (14) Q Let's say I want to develop a lodge Do I want an  
 (15) archaeological site on my property?  
 (16) A You might if you're trying to bring people there tourists  
 (17) and stuff an archaeological site might be a real attribute  
 (18) Q Let's talk about the plaintiffs in this case You have I  
 (19) think explained to us that you've done a fair amount of study  
 (20) into the area of archaeological lands?  
 (21) A No I don't think I've said that I think I have said that  
 (22) I looked at how archaeological significance and historical  
 (23) significance affects the value of land I've done that but  
 (24) no I'm not an archaeologist  
 (25) Q No I didn't mean to imply - but in doing that research

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- (1) you have included have you not that there are two –  
 (2) typically two types of purchasers for archaeological land  
 (3) governments and so called pot hunters?  
 (4) A Well I think you ve got me mixed up with someone else I  
 (5) have not addressed archaeological sites as a separate market  
 (6) I have only addressed the archaeological sites as it relates to  
 (7) the value of the whole  
 (8) Q Well –  
 (9) A I ve only indicated that there were some archaeological  
 (10) significance to the different properties and I ve rated that  
 (11) but I ve not indicated that – that I would separate those out  
 (12) into a separate market  
 (13) Q Okay Fair enough But you – is it generally correct  
 (14) that within your analysis if you have an archaeological site  
 (15) the value of the property is higher?  
 (16) A If there are particularly significant sites and if the  
 (17) people who value those things or put value on it it might be  
 (18) one of the factors that would – that would induce or encourage  
 (19) environmental groups or other groups or governmental groups  
 (20) to want to preserve the land  
 (21) Q Have you encountered in your research Professor  
 (22) situations where developers have gone into a piece of land  
 (23) they didn t know it s an archaeological site have encountered  
 (24) it and have been delayed for years in developing the site  
 (25) because they had to deal with the fact that they had a

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- (1) sensitive area that they couldn t develop?  
 (2) A I m aware that that can slow up development  
 (3) Q And from your professional point of view and your – your  
 (4) academic point of view would you agree that the developers  
 (5) who might be competing with the government here and the  
 (6) competition  
 (7) that might drive up the prices would shy away from lands that  
 (8) had archaeological sites on them if they at all could?  
 (9) A Not necessarily We re talking here about large blocks of  
 (10) land The archaeological sites are actually quite a small  
 (11) percentage of that and that could easily be set aside I  
 (12) don t see how that would – in these particular properties how  
 (13) that would have a real negative impact on that  
 (14) Q Well getting back to your rating here if you have an  
 (15) archaeological site where the value goes up on what did you  
 (16) base that conclusion?  
 (17) A I based that conclusion on this competing pressure between  
 (18) government and the private sector and that that is one of the  
 (19) factors that would cause the government to want to bid or be a  
 (20) bidder in the process  
 (21) Q If – if Professor they were in competition with someone  
 (22) correct?  
 (23) A Well they re always in competition with someone  
 (24) Q Are they always in competition with someone?  
 (25) A Well there s always alternative uses of the land  
 (26) Q Yes but as they become more difficult the price goes

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- (1) down isn t that correct? There is land that only the  
 (2) government is going to buy isn t that correct?  
 (3) A I m not sure You d have to give me an example  
 (4) Q Let s stuck with archaeology still for a little bit If  
 (5) the government is not competing with a private party for  
 (6) archaeological land it doesn t need to pay as much for  
 (7) archaeological land is that correct?  
 (8) A Are we talking now about – are you addressing to me that  
 (9) they would buy it specifically only for that attribute?  
 (10) Q Well let s take a piece of land where you have a high  
 (11) archaeological value okay?  
 (12) A Okay  
 (13) Q Let s assume that the government might want to buy that  
 (14) preserve it possibly correct?  
 (15) A It would be one of the – one of those economic forces that  
 (16) would be important to them and might drive that property value  
 (17) up  
 (18) Q Now if no one else wanted that site that had high  
 (19) archaeological value because they weren t interested in high  
 (20) archaeological value we the taxpayers could pay less for the  
 (21) archaeological site correct?  
 (22) A If no one else wanted it and for any other reason I mean  
 (23) we may have timber we may have –  
 (24) Q Let met try to simplify I really want to focus on  
 (25) archaeology for a minute

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- (1) Let s assume all the other values are zero and for this  
 (2) particular piece of property the property s got a very good  
 (3) well classed archaeological site on it In your case you  
 (4) would give it a 2 highest value The government decides they  
 (5) want to buy the property with an archaeological rating of two  
 (6) Got zero on the rest but in that hypothetical if it doesn t  
 (7) have to compete with anybody else for the property at all it  
 (8) would pay less for the property?  
 (9) A It would but if I could use an example –  
 (10) Q That much is correct you d agree with me there?  
 (11) A Well it s a pretty unrealistic type of thing  
 (12) Q It s a pretty simple hypothetical but it s essentially  
 (13) correct is that right?  
 (14) A If that was the only –  
 (15) Q That s the hypothetical  
 (16) A – asset it had then – but it would fall also in my  
 (17) indexing method as the lowest level  
 (18) Q Who is it that ran this model for you? Who is the  
 (19) gentleman that ran the model for you? Can you remind me of  
 (20) his name? Starts with a D  
 (21) A He didn t run this model for me He just –  
 (22) Q Dirksen?  
 (23) A He used the computer  
 (24) Q Mr Dirksen Paul Dirksen?  
 (25) A He didn t have anything to do with this model

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- (1) Q I understand you re not a statistician  
 (2) A I don t sell myself as a statistician no  
 (3) Q You re aware that Mr Dirksen s been deposed in this case  
 (4) A He has been deposed I m not sure on these lands but he  
 (5) has - because he - because he didn t - he did very little on  
 (6) any of this work  
 (7) Q He was asked in the way that this model turns out rating  
 (8) he indicated that the developmental - the developmental index  
 (9) that s up there those pieces go into was the most important  
 (10) variable in coming up with the final number for these - these  
 (11) properties Do you agree or disagree with that?  
 (12) A The index?  
 (13) Q Yes  
 (14) A Yes  
 (15) Q Okay So getting back to just one part of that index the  
 (16) archaeology part again - please bear with me - only  
 (17) archaeological value the government wants it you would agree  
 (18) that if there were no private party out there who wanted it  
 (19) the value should be lower for the property?  
 (20) A Yes  
 (21) Q Okay Have you made any studies to determine who  
 besides  
 (22) the government might compete with the government to buy  
 (23) archaeological lands?  
 (24) A Well let me provide one other caveat to what you have just  
 (25) said and that has to do with the seller

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- (1) If the seller puts a lot of value on that archaeological  
 (2) site then there may be problems with say a meeting of the  
 (3) minds If in fact you re saying that the value goes down  
 (4) there has to be a willing buyer willing seller so the seller  
 (5) in this also has - brings some pressure to bear in this - in  
 (6) what you re discussing  
 (7) Q There are lots of things I d love to charge a high price  
 (8) for I ve got a used car that I d like to sell that falls into  
 (9) the same category but unless I find somebody to buy it for the  
 (10) price I want to sell it for we won t have a transaction  
 (11) right?  
 (12) A That s true  
 (13) Q Putting aside how important the archaeological lands are to  
 (14) the owners all I m asking is Have you undertaken any  
 (15) research into who would have competed with the government  
 for  
 (16) archaeological land on the lands that are in this lawsuit?  
 (17) A I have read some studies indicating that there are people  
 (18) who buy archaeological sites I have not assumed that in my  
 (19) model I ve only assumed in my model that as the historical  
 (20) significance of the property goes up that that is part of the  
 (21) pressures that can influence the price And my model includes  
 (22) some you know some adjustments in terms of indexing that  
 can  
 (23) drop out certain factors if - if other factors aren t involved  
 (24) and it s - my model is a accumulation of a lot of factors not  
 (25) one factor

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- (1) Q Can you identify for us any public groups that are  
 (2) generally thought to be interested in archaeological land?  
 (3) A I don t deal in those lands and off the top of my head -  
 (4) but I can t recall the names of the groups I have read  
 (5) studies I have read some documents - papers and things  
 (6) indicating that there are archaeological sites that are  
 (7) acquired for preservation I believe in most cases museums  
 (8) Q Are you aware of a single purchase of an archaeological  
 (9) site for archaeological preservation that was in Alaska?  
 (10) A I am not aware of that no  
 (11) Q Do you believe there have been any?  
 (12) A I m not aware of any  
 (13) Q My question though is Do you believe that there have  
 (14) been any?  
 (15) A You re asking me to speculate on something I have no  
 (16) knowledge about  
 (17) Q You re right You re right I don t want to do that  
 (18) Let s go back to Tok Tok and Tanacross These were near  
 (19) Tok Alaska I assume give or take correct?  
 (20) A Yes  
 (21) Q Okay And they were bought by the Air Force for radar  
 (22) sites?  
 (23) A For - yes  
 (24) Q Was the government motivated by a desire to preserve these  
 (25) lands?

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- (1) A They - there was actually some agreements there that they  
 (2) would be - that that would be the only use for them so that  
 (3) that land would be preserved and the Natives would have some  
 (4) continued use  
 (5) Q Absolutely That was from the seller s point of view the  
 (6) Native corporations - I don t mean to say corporations I  
 (7) don t know but those who were selling didn t want any uses  
 (8) made whatever they agreed the Air Force could do with respect  
 (9) to the backscatter sites?  
 (10) A That was important consideration in the negotiations  
 (11) Q Sure But the Air Force wasn t buying that land to  
 (12) preserve it was it? It was buying that land for radar sites?  
 (13) A That s right radar sites  
 (14) Q But by using your rating method you are able to in your  
 (15) approach to still assign these various values you can assign  
 (16) a number for access and biological and hydrological and all of  
 (17) that to those lands that the Air Force bought as radar sites  
 (18) is that correct?  
 (19) A Yes  
 (20) Q So that you can take - from your point of view in your  
 (21) theory you can take that purchase of a radar site and you can  
 (22) get some idea of what the government would pay for lands it  
 (23) wants to preserve is that correct?  
 (24) A Yes  
 (25) Q Did you make any study of how important those radar sites

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- (1) were to the United States?  
 (2) A Yes I did I talked to quite a few people  
 (3) Q And they were important were they not?  
 (4) A They were important although they had alternative sites  
 (5) They didn't have to build those in Alaska  
 (6) Q Oh that's certainly true Were they part of NORAD?  
 (7) A Yes as I recall  
 (8) Q High priority at the time I realize the project's been  
 (9) canceled but they needed the land for the radar sites?  
 (10) A Yes  
 (11) Q Do you have any idea whether they would have bought that  
 (12) land if they didn't need it for the radar sites?  
 (13) A I would just be speculating on that I know why they  
 (14) bought it  
 (15) Q From your point of view given your -- your theory are you  
 (16) able to look at different kinds of land located different  
 (17) places apply this rating system to it and then make  
 (18) comparisons to land in other locations?  
 (19) A That's the purpose yeah  
 (20) Q In this case -- well let me back up You've done an  
 (21) appraisal of -- of preservation environmental and preservation  
 (22) lands in Tigara is that correct?  
 (23) A I have  
 (24) Q When was that?  
 (25) A I don't recall the exact date of the -- I think it was in

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- (1) 89 but I'm sure you can refresh my memory  
 (2) Q I think it was in '89 Does that sound right? We have a  
 (3) copy for you but '89 sounds right to you?  
 (4) A Sounds right  
 (5) Q Before or after the oil spill?  
 (6) A I don't recall  
 (7) Q And again that was the same type of land that you're  
 (8) valuing in this case?  
 (9) A It was the same highest and best use  
 (10) Q Same highest and best use It was environmental  
 (11) preservation land correct?  
 (12) A No I think if you'll read that report I didn't use that  
 (13) term I think that in that report I said the highest dollar  
 (14) amount would come from selling it to a government agency I  
 (15) don't know that I said for preservation I just don't recall  
 (16) but I looked at it from basically the same -- that would be the  
 (17) mark --  
 (18) Q It was the same -- it was the same type of -- it's the same  
 (19) type of land It's the type of land the government would buy  
 (20) to preserve correct?  
 (21) A Yes  
 (22) Q So by any other name it's the same type of land we're  
 (23) talking about here highest and best use that's all I'm  
 (24) talking about correct?  
 (25) A Yes

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- (1) Q And did you apply this same rating method to the Tigara  
 (2) land?  
 (3) A I don't recall if I did or not I think I actually  
 (4) developed this after I did that study I realized that  
 (5) that's one reason I applied for the grant that I did a lot of  
 (6) this I realized how imprecise and how little knowledge there  
 (7) was in Alaska about that kind of process  
 (8) Q Did you try to take into account these kinds of qualities  
 (9) in the land in Tigara?  
 (10) A I took those into consideration yes but I -- I don't  
 (11) believe I used this rate -- I'm almost positive I did not use  
 (12) this rating system  
 (13) Q Okay but you looked at the same -- you're trying to figure  
 (14) out the same types of things correct? Value the land as land  
 (15) that would have a certain value to someone wanting to preserve  
 (16) it?  
 (17) A Yes  
 (18) Q Do you recall that you came up with a per-acre price for  
 (19) that particular land of \$190 an acre?  
 (20) A I'm going to answer your question yes but I want to go on  
 (21) record as saying that only because I'm in court that do I feel  
 (22) comfortable about speaking about that That was done in -- for  
 (23) another private individual It was not done as part of this  
 (24) court this assignment that I'm here for and I have no  
 (25) authorization to talk about that from the client

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- (1) Q I won't push on it then but let me ask you again here  
 (2) what were your range of per-acre values?  
 (3) A In the range of \$200 an acre  
 (4) Q Well doesn't it range from about 600 to over \$1100 an  
 (5) acre?  
 (6) A What I appraised it for?  
 (7) Q Here in this case  
 (8) A Well -- oh in this case?  
 (9) Q Yes sir  
 (10) A Oh oh I'm sorry I misunderstood  
 (11) Q I may have misspoke In this case  
 (12) A Yes Problem is they're 700 miles apart  
 (13) Q But the Tigara property was pretty amazing property wasn't  
 (14) it?  
 (15) A It's one of the most remote spots on earth  
 (16) Q And it's pretty amazing property?  
 (17) A It's all mountains  
 (18) Q But do you agree with me it's pretty amazing property?  
 (19) A I don't know what you call amazing It's tough terrain  
 (20) I should also point out counselor when you talk about  
 (21) this that property on the North Slope and above the Brooks  
 (22) Range is a somewhat different environment than we have in  
 (23) South  
 (24) Central Alaska  
 (25) MR FORTIER Could I ask counsel what --  
 (25) MR OPPENHEIMER Yes I'm sorry counsel This is

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- (1) Exhibit 15037 and I'm going to show - I'll give the document  
 (2) to the witness I'm on page 7 of that document This is the  
 (3) Tigara page  
 (4) BY MR OPPENHEIMER  
 (5) Q Professor if you would look - you can look at any part of  
 (6) it but what I have in mind to ask you about is the beginning  
 (7) of this paragraph While many -  
 (8) A While many arctic tribes were forced to wander in search of  
 (9) food the Inupiat people of the Point Hope area settled  
 (10) comfortable on an amazing piece of real estate they call it  
 (11) Tigara a word that translates as index finger and describes  
 (12) the peninsula that extends into the Chugach Sea directly in the  
 (13) migration of sea mammals and a myriad of game  
 (14) Q My point being it's an amazing piece of property  
 (15) A Not the - not the parcel that I appraised This I'm  
 (16) talking about the point where the village is and I didn't  
 (17) appraise that  
 (18) Q Did it have any effect on the property?  
 (19) A What do you mean effect on the property?  
 (20) Q Are you making just an idle comment in your report?  
 (21) A No I'm pointing out that where that village sits is an  
 (22) important - in fact been described as the oldest continuously  
 (23) inhabited site in the North American continent  
 (24) Q And this is a piece of property that's close enough to it  
 (25) that it's worth observing in that area as amazing property?

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- (1) A That point But I want to point out that the property I  
 (2) appraised was up on the mountains away from that  
 (3) Q And that lowered its value?  
 (4) A Did it lower its value?  
 (5) Q I assume that's why you just told me that  
 (6) A I would - I didn't appraise the other but yes I would  
 (7) say that the value there on that point would be greater than  
 (8) the value up on the mountain  
 (9) Q When you appraise property I should - let me make another  
 (10) table as soon as I find my marker I apologize Well perhaps  
 (11) I can do this without drawing I don't feel like drawing  
 (12) anyway  
 (13) Your - what you do is you - you get a value for the  
 (14) property before the spill you - and that's one of the things  
 (15) you have to do in your model is that correct?  
 (16) A In the approach that I used in this appraisal problem?  
 (17) Q Right right  
 (18) A I value the property moments you might say before the  
 (19) spill that's correct  
 (20) Q Before the spill By the way in your analysis you don't  
 (21) care whether the property has been oiled is that correct?  
 (22) That wasn't very well said because there's a sense in which  
 (23) that's inaccurate Let me try this again  
 (24) You - in calculating the damages Professor you don't  
 (25) make a distinction between shoreline that's been oiled and

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- (1) shoreline that's been oiled is that correct?  
 (2) A I don't no  
 (3) Q The significance to your theory of the fact that there was  
 (4) even an oil spill is that you believe the property was  
 (5) traumatized and that there were work crews and whatnot that  
 (6) disrupted the use of the property or at least it's theoretical  
 (7) use correct?  
 (8) A That's correct  
 (9) Q Because it is theoretical use is it not? We haven't  
 (10) identified here any actual uses that have been impaired?  
 (11) A No I think I've testified it doesn't matter whether they  
 (12) were using it or not They have the rights to use it  
 (13) Q I understand My point though is nothing you've said  
 (14) today has anything to do with any actual use impairment  
 (15) correct?  
 (16) A Not completely I mean if you've got people running up  
 (17) and down your beaches there's a certain amount of loss of use  
 (18) of it And if you have oil on your beaches there's a loss of  
 (19) use of it but what I have tried - I have looked at is not  
 (20) only - and I talked earlier about the actual physical  
 (21) intrusion of oil on those beaches but in addition the effect  
 (22) that has on - and in all these other factors we talked about  
 (23) on the property rights  
 (24) Q Okay but you're not aware of any actual business  
 (25) interruptions correct? I'm not being critical that's not

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- (1) part of your theory you're not aware of any business  
 (2) interruptions correct?  
 (3) A That's correct  
 (4) Q You're not aware of any actual sales being lost?  
 (5) A People have a right to sell or not to sell  
 (6) Q I'm not criticizing but you're not aware of any actual  
 (7) sales that were interrupted?  
 (8) A No  
 (9) Q Are you aware of any sales that were delayed?  
 (10) A No  
 (11) Q Are you aware of any negotiations that were interrupted?  
 (12) Not as speculation do you know of any negotiations that were  
 (13) actually disrupted?  
 (14) A Only some discussions but I'll say no to that  
 (15) Q Okay Know of any actual rental stream that was impaired?  
 (16) A No  
 (17) Q Okay Back to the fact that you're going to place a value  
 (18) on the land that's really an important point important part  
 (19) of what you're talking to us about today because then you're  
 (20) going to - you're going to determine rental rate based on  
 (21) that correct?  
 (22) A Yes  
 (23) Q You have to give us a value for the property In doing  
 (24) that is it important for you to take into account any  
 (25) preexisting contamination?

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- (1) A That might – that would be a consideration if I had  
 (2) access to information about that I didn't – in fact I think  
 (3) if you read my report I stipulated up front that I did not  
 (4) have access to or knowledge of any pre environmental damage  
 of  
 (5) concerns there I am aware that at the village there were some  
 (6) oil tanks at Chenega for example there were some oil tanks  
 (7) that –  
 (8) Q There was some –  
 (9) A There was some discussion about being there you know  
 (10) some – some oiling around those but that's a small part of  
 (11) the property  
 (12) Q Sawmill Bay?  
 (13) A I believe that's correct  
 (14) THE COURT Mr Oppenheimer we're going to take a  
 (15) break sometime You can pick a time  
 (16) MR OPPENHEIMER Now would be fine Your Honor  
 (17) THE CLERK Please rise This court stands in  
 (18) recess  
 (19) (Jury out at 12 03 p m )  
 (20) (Recess from 12 03 p m to 12 15 p m )  
 (21) (Jury in at 12 15 p m )  
 (22) THE CLERK This court now resumes its session  
 (23) Please be seated  
 (24) BY MR OPPENHEIMER  
 (25) Q Dr Green we're just about through here

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- (1) We were talking about Sawmill Bay Do you recognize this  
 (2) as a picture of Sawmill Bay?  
 (3) A Yes I believe it is  
 (4) Q Well Dr Green could you come down briefly?  
 (5) A Sure Oops  
 (6) Q Sorry All right Now we're looking are we not at  
 (7) Sawmill Bay This is an Chenega land?  
 (8) A Yes It looks like an old photograph  
 (9) Q Okay Now this is the hatchery?  
 (10) A Yes  
 (11) Q Okay And Chenega proper doesn't show up but it's up the  
 (12) coast toward where you're standing is that correct?  
 (13) A I guess that's true yes  
 (14) Q Now are you aware of two sites of potential pre spill  
 (15) contamination in this area?  
 (16) A When you say two sites I'm – the one I am familiar with  
 (17) is the – the oil or the storage gas storage tanks or fuel  
 (18) tanks that have since been remediated  
 (19) Q Going to step over you here  
 (20) Do you recognize this as the site of a cannery located in  
 (21) Sawmill Bay?  
 (22) A I think that's correct  
 (23) MS SMITH Randy the exhibit number?  
 (24) MR OPPENHEIMER I'm sorry pardon me The exhibit  
 (25) number on this is with my eyesight unreadable It is DX9227

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- (1) and the exhibit number of the large photograph of Sawmill Bay  
 (2) is DX13221  
 (3) MR OPPENHEIMER Mr Diamond thank you very much I  
 (4) appreciate it  
 (5) BY MR OPPENHEIMER  
 (6) Q Now Dr Green that old cannery site is located right  
 (7) here is it not?  
 (8) A I believe that's correct  
 (9) Q The fishery is here is that correct?  
 (10) A Yes  
 (11) Q And the town site is north You're not aware of the  
 (12) site there near the town site as another possible area?  
 (13) A I'm not aware no  
 (14) Q Do you know how long the cannery has been in this  
 condition  
 (15) as Port Ashton?  
 (16) A How long?  
 (17) Q Yes sir Do you have an understanding it predates the  
 (18) spill?  
 (19) A I believe it did  
 (20) Q Do you know what's in those tanks? By the way do you  
 (21) recognize this as another picture of the tanks?  
 (22) A Yes  
 (23) MR DIAMOND I have another hand free  
 (24) BY MR OPPENHEIMER  
 (25) Q Well here I can use this Do you know what is contained

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- (1) in these tanks?  
 (2) A It's my understanding there was fuel in them at one time  
 (3) but other than that I don't know what  
 (4) Q Now do you understand what's running down here along  
 this  
 (5) rock face is from the tanks?  
 (6) A I don't have knowledge of that no  
 (7) Q Do you have any knowledge as to whether it runs into  
 (8) Sawmill Bay?  
 (9) A I have no knowledge of that  
 (10) Q Did you undertake any investigation of the contamination  
 (11) pre spill contamination in Sawmill Bay when you did you  
 (12) appraisal?  
 (13) A I was aware that this economist had but because of the –  
 (14) when we're talking 68 000 acres and this small area I – I put  
 (15) certain caveats in my report that I did not have information  
 (16) that would allow me to make judgments on the adjustments for  
 (17) that  
 (18) Q Was it your understanding that this contamination had been  
 (19) remediated?  
 (20) A At the date of the spill?  
 (21) Q Yes sir  
 (22) A No it had not  
 (23) Q Is it your understanding that it's been remediated as of  
 (24) today?  
 (25) A I believe that there has been some work done there

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- (1) Q On what do you base that?  
 (2) A Just discussions that I've heard  
 (3) Q Has someone told you that these tanks and this flowing material has been cleaned up?  
 (4) A I've heard some discussions between individuals that led me to believe there's been some work. I can't testify other than that.  
 (5) Q By the way, both of these - how far would you estimate they are from the fishery?  
 (6) A I don't know exactly.  
 (7) Q All right. Thank you, Doctor. If you'd resume your seat.  
 (8) One more brief set of questions.  
 (9) MR OPPENHEIMER: Counsel, I'm going to show the witness Exhibit 1139, your exhibit again.  
 (10) BY MR OPPENHEIMER:  
 (11) Q Dr. Green, if I could ask you a question, I'm putting before you Exhibit 1139. If you could grab one end and I'll grab the other here for a second. And you had described a selection issue yesterday that had to do with need to maintain a contiguous property line or contiguous property by Port Graham Corporation, do you recall that?  
 (12) A Yes.  
 (13) Q Okay. Do you know of any reason why Sections 19 and 25 and 26 would not have been chosen?  
 (14) A You're asking why they could not have been chosen?

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- (1) Q Yes.  
 (2) A At this - I wouldn't have chosen them.  
 (3) Q That's not my question. Do you know of any reason why they could not have been chosen?  
 (4) A No, I don't.  
 (5) MR FORTIER: Your Honor, he can answer the question.  
 (6) THE COURT: I'm sorry, counsel, I lost you. I lost the objection because I was listening to the witness.  
 (7) MR FORTIER: I just wanted him to answer the question he was trying to answer.  
 (8) BY MR OPPENHEIMER:  
 (9) Q That's not quite in keeping with standards of our prior exhibits, perhaps, but the - the map we're looking at, this is the map that - at least in terms of the sections that we looked at yesterday, is it not?  
 (10) A Yes.  
 (11) Q And you were explaining yesterday that where the land was oiled that was relinquished, if the land north of it had been taken, there would have been a - if they'd given up the oiled southern portion around Aialik Bay, that they would not have had contiguous touching property between the holdings on Harris Bay and the holding on Aialik Bay, do you recall that?  
 (12) A Yes.  
 (13) Q But you've just explained that there's no reason why they couldn't - now, may have chosen not to, and I understand

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- (1) that - but there's no reason why they couldn't have chosen  
 (2) Sections 19, 25 and 26 which would have given them a contiguous  
 (3) piece of land up to the unoiled shoreline, correct?  
 (4) A You want to remember that the BLM encourages them to select  
 (5) lands that are contiguous because the BLM does not want to have  
 (6) a lot of isolated parcels to manage. It's a land management  
 (7) issue.  
 (8) Q Correct, but they could have chosen those sections?  
 (9) A As I said, I wouldn't have chosen them.  
 (10) Q There may be reasons why someone doesn't, but they could have chosen those sections?  
 (11) A I think they could have, but it wouldn't have been in their  
 (12) best interests to do that.  
 (13) MR OPPENHEIMER: Thank you, Your Honor. No further questions.  
 (14) REDIRECT EXAMINATION OF GEORGE H. GREEN  
 (15) BY MR FORTIER:  
 (16) Q Professor Green, you were asked a series of questions concerning voluntary sorts of decisions that a Native corporation might make for the sale of its property or for the use of its property. Do you recall that series of questions?  
 (17) A Yes.  
 (18) Q One of the questions was whether or not a Native corporation might make a decision to put in a nuclear power dump, do you recall that?

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- (1) A Yes.  
 (2) Q Or a nuclear dump?  
 (3) A Yes.  
 (4) Q Now, when you appraised these lands of these Village Corporations, were you appraising any voluntary uses that they were putting the lands to, or were you appraising the involuntary nature of the oiling by Exxon?  
 (5) A The involuntary nature.  
 (6) Q Okay. And when you did that, Dr. Green, did you look at what rights were being used or what - excuse me, what rights Native corporations were using or what Exxon was taking from them?  
 (7) A The rights that were suspended.  
 (8) Q One of those rights was quiet enjoyment, wasn't it?  
 (9) A Yes.  
 (10) Q Did Exxon's oiling have any impact on the financing ability of any Village Corporation?  
 (11) A Well, it was talked about here later that the government can buy lands without financing. I was not talking about that. The right that I was talking about is the ability to use the land as collateral to borrow money. That's one of the rights a property owner has. I believe those rights were hindered.  
 (12) Q Okay. So when you were talking towards financing that wasn't with regard to Village Corporations' rights, though?

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- (1) A I m sorry well -  
 (2) Q Maybe - go ahead I m sorry  
 (3) A I m sorry ask your question I missed you  
 (4) Q One of the questions was financing how does government  
 (5) purchase this property?  
 (6) A Yes  
 (7) Q Okay  
 (8) A And that was my response that the - the Village  
 (9) corporations I wasn t talking about hinderance of the  
 (10) government to finance or buy the property I was talking about  
 (11) the ability of the Village corporations to be able to use it as  
 (12) collateral  
 (13) Q Okay And what s your opinion on that?  
 (14) A I believe that it would - the oil spill the presence of  
 (15) oil and all the things that we talked about going on would  
 (16) hinder their ability to use it as collateral  
 (17) Q Now Dr Green you were asked some questions concerning  
 (18) your - your appraisal of Chenega Corporation lands I think  
 (19) it s been marked as DX15108 One of the series of questions  
 (20) that you were asked concerned the use of shoreline related  
 (21) areas do you recall that?  
 (22) A Yes yes  
 (23) Q Can you tell the jury why you appraised for the first year  
 (24) the whole of the property of each of these Native  
 (25) corporations?

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- (1) A Yes It was my opinion that the property rights that were  
 (2) suspended extended to all the property during that first year  
 (3) and I used the term traumatized because of all the  
 (4) activities and things that were going on out there It s my  
 (5) opinion that 85 percent of the rights of those - all those  
 (6) properties were certainly being used by Exxon if you will or  
 (7) having been suspended  
 (8) Q Now Dr Green were there other ways to value the harm to  
 (9) the land caused by the Exxon Valdez oil spill?  
 (10) A There are other ways of approaching this problem I  
 (11) suspect that if you had a number of appraisers that they  
 (12) would - might use different approaches yes  
 (13) Q Would one approach perhaps be remediation costs?  
 (14) A Yes that is one of the things that is -  
 (15) MR OPPENHEIMER Your Honor I just object on the  
 (16) grounds of foundation and beyond the scope of the -  
 (17) THE COURT Second objection is sustained but as to  
 (18) any future questions counsel  
 (19) BY MR FORTIER  
 (20) Q Now Dr Green you were also asked some questions  
 (21) concerning the three-year period Do you recall those  
 (22) questions?  
 (23) A Yes  
 (24) Q Okay And among the questions that was posed to you were  
 (25) questions concerning the interplay between NOAA as a science

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- (1) advisor and Admiral Ciancaglino do you recall that?  
 (2) A Yes  
 (3) Q Now when you wrote your report you considered that  
 (4) interplay didn t you?  
 (5) A Yes I think if you read my report you see that I used the  
 (6) Admiral s point which he determined that there was no further  
 (7) treatment that would - that would go on I should say  
 (8) Q And in reaching that conclusion Doctor did you conclude  
 (9) that that was the end of - that was the end of the question?  
 (10) A No I think if you read my report I stipulated in my  
 (11) report that the - that his determining that the - that  
 (12) discontinuation of beach treatment does not necessarily mean  
 (13) that all the beaches have been that the beaches are clean or  
 (14) that there isn t some continued presence of oil  
 (15) Q Doctor I put on the overhead page 69 of your report  
 (16) MR OPPENHEIMER Your Honor may we approach the  
 (17) bench?  
 (18) THE COURT Yes  
 (19) (Sidebar conference out of the hearing of the jury)  
 (20) MR OPPENHEIMER Your Honor I think this is the same  
 (21) issue we discussed  
 (22) THE COURT It is the same issue but the question is  
 (23) how far are you going to go with it?  
 (24) MR FORTIER I m just going to ask him that one  
 (25) question

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- (1) THE COURT That one question okay you can ask him  
 (2) that one question  
 (3) (Sidebar concluded)  
 (4) BY MR FORTIER  
 (5) Q Dr Green what I d like to refer you to is the second  
 (6) paragraph where the pen is  
 (7) A Yes It says this should not be interpreted - did you  
 (8) want me to read the whole paragraph two sentences  
 (9) Q Go ahead yes No just the last sentence is fine  
 (10) A Okay This should not be interpreted as meaning that he  
 (11) meaning the admiral was stating that - meaning that he was  
 (12) stating that no oil was present only that no additional  
 (13) cleanup was anticipated  
 (14) Q Doctor you were asked some questions concerning Tigara  
 (15) Corporation?  
 (16) A Yes  
 (17) Q Tigara is up on - in the Point Hope area isn t it?  
 (18) A Yes it is  
 (19) Q And that s way up above even Nome isn t it?  
 (20) A It s - yes and I personally feel it s a mistake using -  
 (21) trying to compare properties on the North Slope with properties  
 (22) in South Central Alaska  
 (23) Q And you didn t - did you use the Tigara appraisal as a -  
 (24) or the Tigara property as a comparable?  
 (25) A No

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- (1) Q In your appraisals for this –  
 (2) A No I didn't use it at all  
 (3) Q You were asked some questions Doctor concerning whether  
 (4) or not you were a statistician  
 (5) A Yes  
 (6) Q Now did you develop this model with a statistician?  
 (7) A Yes I did  
 (8) Q Who was that statistician?  
 (9) A Professor named Askar Chudary  
 (10) Q Professor where?  
 (11) A At the University of Alaska in Anchorage  
 (12) Q You talked about a paper during your earlier testimony with  
 (13) me  
 (14) A Yes he and I co authored – actually we've co authored a  
 (15) couple papers together We co authored a paper on this issue  
 (16) Q Now have you examined Dr Green whether or not an  
 Alaska  
 (17) Native corporations are willing to sell archaeological sites?  
 (18) A I've never known one to be sold  
 (19) Q And Doctor finally with regard – in your – in your  
 (20) analysis you look at the bond rates the 9 percent bond and  
 (21) the 9.68 percent bond  
 (22) A Well the – the 9.68 was a bond rate The 9 percent was  
 (23) a – a market rate for land uses  
 (24) Q The 9.68 percent rate can you explain what that bond rate  
 (25) means to the jury just a bit?

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- (1) A Well that – that was the rate at which if you had money  
 (2) you could go and put it into what we would call a safe  
 (3) investment a – that was a U S government guaranteed bonds  
 (4) so that it's what generally would be considered most  
 (5) conservative rate because it would be insured and guaranteed  
 (6) by the United States government So if I were buying a bond  
 (7) for one year and wanted the safest investment that would be  
 (8) probably what you would buy  
 (9) Q Doctor I'm curious why wouldn't you select those sections  
 (10) that counsel was asking you about in the Kenai Fjords?  
 (11) A They're inland and they're mostly mountains and glaciers  
 (12) I would choose that waterfront property  
 (13) Q Rather than try to get mountains and glaciers?  
 (14) A Yes I would  
 (15) Q And finally Doctor with regard to this – this market of  
 (16) environmental lands is it just the government that's involved  
 (17) in that market?  
 (18) A No there are others like the Nature Conservancy – well  
 (19) my mouth is dry but –  
 (20) Q I would pour you some water but –  
 (21) A But there are private groups that buy this land  
 (22) Q Can you tell us more about that?  
 (23) A Well you know in the Lower 48 we've seen quite a lot of  
 (24) that type of purchase behavior We haven't seen a lot of it in  
 (25) Alaska There have been a few parcels

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- (1) Q Now I do have one more question for you Doctor We all  
 (2) looked at some pictures of Sawmill Bay  
 (3) A Yes  
 (4) Q We looked at the cannery  
 (5) A Yes  
 (6) Q The old cannery  
 (7) A Yes  
 (8) Q Doctor do you know whether or not that cannery was  
 (9) constructed before 1964?  
 (10) A I – I don't know I don't recall I do know that it  
 (11) wasn't – well no I don't recall  
 (12) Q Do you know whether or not it was a cannery that was not  
 (13) constructed by Chenega Corporation?  
 (14) A I don't know that  
 (15) MR FORTIER I have no further questions  
 (16) MR OPPENHEIMER Two minutes?  
 (17) THE COURT You got it two minutes  
 (18) MR OPPENHEIMER I promise two minutes  
 (19) RE-CROSS EXAMINATION OF GEORGE H GREEN  
 (20) BY MR OPPENHEIMER  
 (21) Q You would have chosen the sections that we referred to that  
 (22) you couldn't have gone up because they have mountains and  
 (23) glaciers is that right?  
 (24) A They were interior In that area as you go back off the  
 (25) beach it becomes –

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- (1) Q Professor there's no glacier on those sections is there?  
 (2) A Well I say mountains and glaciers I don't remember those  
 (3) precise ones but there's a lot of that in that area and you  
 (4) would – I would choose the beach front property  
 (5) Q You have concluded have you not that there would not be a  
 (6) very high demand for the English Bay Port Graham or Chenega  
 (7) lands as an environmental purchase by any private  
 environmental  
 (8) group haven't you?  
 (9) A I'm sorry would you –  
 (10) Q You have concluded that there would not be a very high  
 (11) demand for the English Bay Port Graham of Chenega lands as  
 an  
 (12) environmental purchase by any private environmental group  
 (13) haven't you?  
 (14) A I've concluded that it would probably not be as great as  
 (15) certainly Chenega  
 (16) Q Are you aware of any attempt to use land that was used as  
 (17) collateral that was impeded because of the effect of the oil  
 (18) spill?  
 (19) A It doesn't matter because the –  
 (20) Q Professor my question are you aware of any?  
 (21) A No  
 (22) Q Your study assumes that all uses are available to the  
 (23) plaintiffs in this case during the three year period of your  
 (24) damage analysis is that correct? In other words you do not  
 (25) assume there's any impediment to any activity on the land?

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- (1) A You ll have - I m probably - the question -  
 (2) Q It s late and we ve been at this but your study assumes  
 (3) that all uses of the land were available to the plaintiffs in  
 (4) this case during the three year period covered by your study  
 (5) correct?  
 (6) A To the plaintiffs? No I m not saying they were available  
 (7) to the plaintiffs I m saying they suspended those rights  
 (8) I m not saying the plaintiffs had the right to borrow money  
 (9) Q But for - but for the oil spill your study assumes that  
 (10) all land uses were available to the plaintiffs in this case on  
 (11) the lands in question for the three year period correct?  
 (12) A With the surface estate they had full fee - fee rights  
 (13) yeah  
 (14) Q They had fee rights?  
 (15) A Yeah  
 (16) Q Thank you  
 (17) MR OPPENHEIMER Your Honor no further questions  
 (18) THE COURT You can step down sir Thank you very  
 (19) much  
 (20) MR STOLL Your Honor I have a witness I d like to  
 (21) call now  
 (22) THE COURT All right  
 (23) MR CLOUGH Your Honor before this witness takes the  
 (24) stand there is one matter we need to take up outside the  
 (25) presence of the jury It will be brief

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- (1) THE COURT Come to the bench let s see if we can  
 (2) solve it up here  
 (3) MR CLOUGH That s fine Your Honor  
 (4) THE COURT Bring the witness in now  
 (5) MR STOLL He s here  
 (6) (Sidebar conference out of the hearing of the jury)  
 (7) MR CLOUGH Your Honor last night we received a  
 (8) phone call from Mr Stoll indicating that he wanted to  
 (9) introduce a new exhibit a physical exhibit He described it  
 (10) as a mousse patty He has it here in a courtroom in a piece of  
 (11) Tupperware I have quite a few objections to this and I will  
 (12) try -  
 (13) THE COURT I hope they re not health objections  
 (14) MR CLOUGH Not a health objection although he  
 (15) hasn t opened the lid yet  
 (16) THE COURT Moose patty?  
 (17) MR STOLL That s not an M-double-o s-e  
 (18) MR CLOUGH That would have been a moose nugget Your  
 (19) Honor  
 (20) THE COURT Excuse me counsel I was using the wrong  
 (21) terms  
 (22) MR CLOUGH First off one of pure timeliness two  
 (23) separate orders of the Court first of all pretrial 40  
 (24) requires identification on the list for exhibits Second new  
 (25) exhibits ordered into -

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- (1) THE COURT Explain to me why you produced it now  
 (2) MR STOLL It was pure inadvertence We re going to  
 (3) put it on next week This witness we had to put on this week  
 (4) and frankly we just left it off the list It s not a - it s  
 (5) not a - it s not a - I don t think it s any - all this  
 (6) witness is going to do is say this looks like the mousse  
 (7) patties and you know the tar mousse we saw  
 (8) THE COURT It s not necessary to do that It s  
 (9) fine The objection s sustained  
 (10) MR CLOUGH Thank you Your Honor  
 (11) (Sidebar concluded)  
 (12) MR STOLL Your Honor we call Mr Pete Squartsoff  
 (13) THE CLERK Sir would you clip the microphone to the  
 (14) top of your shirt and remain standing for the oath Closer to  
 (15) your collar if you could That s fine Thank you  
 (16) Would you raise your right hand for the oath?  
 (17) (The Witness Is Sworn)  
 (18) THE CLERK Thank you You may be seated  
 (19) Sir for the record would you please state your full name?  
 (20) A Peter M Squartsoff  
 (21) THE CLERK Would you spell your last name?  
 (22) A S q u a - r t s - o f f  
 (23) THE CLERK What is your occupation?  
 (24) A I m a part time commercial fisherman outfitter and lodge  
 (25) owner

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- (1) THE CLERK Thank you  
 (2) DIRECT EXAMINATION OF PETER M SQUARTSOFF  
 (3) BY MR STOLL  
 (4) Q Mr Squartsoff where do you live?  
 (5) A Sir?  
 (6) Q Where do you live?  
 (7) A In Port Lions on Kodiak Island  
 (8) Q How long have you lived in Port Lions?  
 (9) A Since 1971  
 (10) Q And are you married?  
 (11) A Yes I am  
 (12) Q And you have two daughters I believe?  
 (13) A Yes sir  
 (14) Q And you re the Mayor of Port Lions?  
 (15) A Yes sir  
 (16) Q And where were you - where did you grow up?  
 (17) A In Ouzinkie on Spruce Island which is 15 miles from Port  
 (18) Lions  
 (19) Q All right Now I have a map here of Kodiak Island and  
 (20) Ouzinkie is right up here?  
 (21) A Yes  
 (22) Q And then right -  
 (23) A It s right up on the tip there as you come out of Kodiak  
 (24) Q Okay And then Port Lions is right over here?  
 (25) A It - yes in Kizhuayak Bay

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- (1) Q Have you lived – other than the time you were in the Army
- (2) have you lived most of your life in this area?
- (3) A All my life
- (4) Q All your life?
- (5) A Yes
- (6) Q Okay And what s your – you operate a lodge up in that
- (7) area?
- (8) A I have an outfitting business in that area I ve had since
- (9) 1980 I m part owner of a lodge which is on the south end of
- (10) the island
- (11) Q And you also work as a herring spotter I believe?
- (12) A Yes I have
- (13) Q And what is that – what is a herring spotter?
- (14) A Herring spotting is you go in a airplane and you fly
- (15) around and look for the fish and direct your boat to try to
- (16) catch these fish with a lot of other competition
- (17) Q And you were a Deputy Mayor of Port Lions I believe from
- (18) 1988 to 1990?
- (19) A Yes
- (20) Q And incidentally counsel suggested some financial
- (21) interest You don t have any financial interest personally
- (22) in this litigation do you?
- (23) A No I don t
- (24) Q Okay And as Mayor do you receive any salary at all?
- (25) A I receive a stipend yes

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- (1) Q When you were Deputy Mayor?
- (2) A Yes
- (3) Q But did you keep that money?
- (4) A No I didn t
- (5) Q What did you do with that money?
- (6) A I donated I started a program called Alaska s Future
- (7) Leaders
- (8) Q What s that?
- (9) MR CLOUGH Excuse me Your Honor I personally have
- (10) very high regard for Mr Squartsoff s work in this regard but
- (11) I don t believe this particular testimony is relevant to the
- (12) issues of this litigation so I object on the basis of
- (13) relevant
- (14) MR STOLL Just giving a little background about
- (15) himself
- (16) THE COURT He s given enough on that issue
- (17) MR STOLL Okay
- (18) BY MR STOLL
- (19) Q I may have you do this Joel This is Exhibit 1035
- (20) This is an aerial photograph of Port Lions?
- (21) A Yes it is
- (22) Q And the village of Port Lions is over to the upper upper
- (23) left?
- (24) A Yes
- (25) Q And then the boat dock is in the lower right is that

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- (1) correct?
- (2) A Right
- (3) Q I mean excuse me sort of the center there And could we
- (4) also show the photographs of Exhibits 954 960? Let me see if
- (5) I can – is this the picture of Port Lions also?
- (6) A Yes it is This is right downtown center of Port Lions
- (7) and my home is right there by the beach
- (8) Q And this is another picture of Port Lions?
- (9) A Yes it is This is the causeway that links Port Lions
- (10) community with Port Wakefield dock the ferry dock
- (11) Q And this is the boat harbor?
- (12) A Yes it is
- (13) Q I also have a map here of the Port Lions municipal
- (14) property This is Exhibit 1048 Can you see that
- (15) Mr Squartsoff?
- (16) A Yes
- (17) Q And is the property that is in the green area here is this
- (18) the land that s owned by the municipality?
- (19) A Yes it is
- (20) Q And then it s surrounded – this area that s in dots here
- (21) what is this?
- (22) A That s the Settlers Cove that s the bay
- (23) Q And then what s over here with the dots?
- (24) A That s Kizhuyak Bay
- (25) Q Okay So this entire area is ocean front property?

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- (1) A Yes it is
- (2) Q Would you tell the jury please what that property is used
- (3) for by the residents of Port Lions?
- (4) A Yes It s mainly recreational area It s for hiking
- (5) sport fishing camping swimming some kids go swimming out
- (6) on
- (7) the point there on the beach and a lot of fishing over by the
- (8) ferry dock
- (9) Q And is there shellfish fishing there?
- (10) A Yes there is in some – some small areas
- (11) Q And is some of this area it s a variety of terrain in
- (12) here isn t that correct?
- (13) A Yes it s heavily timber
- (14) Q And then the shoreline some of that is beach land some of
- (15) it s rocky et cetera?
- (16) A Yes
- (17) Q And incidentally what s – what s this area down here?
- (18) A That s new addition home residence
- (19) Q This is home residential property?
- (20) A Right
- (21) Q And what s this out here this –
- (22) A That s the ferry dock
- (23) Q So this – this park land is adjoining that?
- (24) A What s that?
- (25) Q This park land this area here or this recreation land
- (26) that you described that adjoins –

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- (1) A It s not a park yet but I d like to - in the future I ve  
 (2) always wanted to make a lot of that area into a park so it  
 (3) doesn t become developed  
 (4) Q And how many parcels do we have here six - six parcels?  
 (5) A Yeah  
 (6) Q And these - for instance this parcel here number B  
 (7) tract B is - says on here 49 acres of 5 621 feet of ocean  
 (8) front?  
 (9) A Yes  
 (10) Q And that s with - each one of these parcels there is a -  
 (11) the number of acres for instance Tract C is 41 acres and it s  
 (12) got 3300 ocean front feet does this accurately reflect the  
 (13) parcels that are owned by Port Lions?  
 (14) A Yes as far as I know yes  
 (15) Q What type of a community is Port Lions? What - what do  
 (16) people do there?  
 (17) A It s mainly - it s a commercial fishing community  
 (18) Q Somewhat similar to Ouzinkie in that regard?  
 (19) A Sir?  
 (20) Q Is it similar to Ouzinkie -  
 (21) A Yes it is  
 (22) Q - in that regard?  
 (23) A It s a little bit bigger than Ouzinkie is  
 (24) Q Now in May of 1989 did you - you were living in Port  
 (25) Lions then?

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- (1) A Yes I was  
 (2) Q As you have I guess most of your life?  
 (3) A Off and on  
 (4) Q Yeah And did you - had you been out spotting or flying  
 (5) around in your airplane?  
 (6) A Yes I was - I was working as a spot a pilot at that  
 (7) time starting the middle of April through the end of May and  
 (8) partially into June  
 (9) Q All right The herring season in - in Prince William  
 (10) Sound had been closed isn t that correct?  
 (11) A As far as I know yes  
 (12) Q And when you came into Port Lions did you notice anything  
 (13) different about Port Lions?  
 (14) A Yes I did Upon coming in there as we were circling over  
 (15) I could see some sheen in the tide streaks around Port Lions  
 (16) out in front of Port Lions And then we landed and I went and  
 (17) asked the VPSO what was going on and he said they weren t  
 doing  
 (18) any work because they were told not to pick up any of the oil  
 (19) without proper - proper training  
 (20) Q What s the VPSO?  
 (21) A Village Public Safety Officer  
 (22) Q And so you talked to him about trying to clean up some of  
 (23) the oil that was out there?  
 (24) A I was wondering why nobody was out picking it up  
 (25) Q And - and what did you do when he told you this statement

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- (1) that they were told not to pick it up?  
 (2) A The next day I went into Kodiak and met with some people  
 (3) from Veco One person I - I was a little surprised when I  
 (4) went in there because there was guards all over and  
 (5) everything and I knew one person Yvonne Zharoff and I talked  
 (6) to her about and told her what I thought and why it wasn t  
 (7) being picked up And in fact she - asked me or wanted to  
 (8) talk to some people and asked me if I would - wanted a job  
 (9) working there in the office in Kodiak and I said no my  
 (10) concern was getting the oil picked up out around Port Lions  
 (11) And couple days later a few days later I m not exactly sure  
 (12) but they did send some people out to give the people training  
 (13) so they could start picking up the oil  
 (14) Q Was a safety concern expressed by the Veco people?  
 (15) A Yes  
 (16) MR CLOUGH Excuse me Your Honor I d like to object  
 (17) on basis of relevance again to the issues present in this  
 (18) litigation  
 (19) THE COURT The objection s overruled  
 (20) MR CLOUGH Thank you  
 (21) BY MR STOLL  
 (22) Q I m sorry what was your answer?  
 (23) A I -  
 (24) Q Was there some concern expressed as to the Veco people  
 (25) concerning safety?

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- (1) A Yes there was proper training and equipment  
 (2) Q And then did you - at that time and during the course of  
 (3) the summer of 1989 did you observe oil on the beaches in Port  
 (4) Lions?  
 (5) A Yes I did  
 (6) Q And would you tell to the jury please what you saw?  
 (7) A I - depending on the tides and the winds whichever - we  
 (8) have a lot of changing of winds and tide comes in and out  
 (9) every six hours or so depending on which way the wind and the  
 (10) tide blew it would come into different areas and in the tide  
 (11) streaks which have eddies around points and by living there  
 (12) all my life I pretty much knew exactly where to go and look to  
 (13) find this And I went out and I found it many times and it  
 (14) even came in on the beach right down in front of my home  
 (15) Q What did the oil look like? Could you describe that to the  
 (16) jury?  
 (17) A It was various sizes of - of mousse patties like from  
 (18) light brown to fairly dark colored  
 (19) Q And was it - there was attempts to clean this up though?  
 (20) A What s that?  
 (21) Q There was there was - later on not initially but after  
 (22) a while there was attempts to clean this up though wasn t  
 (23) there?  
 (24) A Yes there was  
 (25) Q And after it was - a beach was cleaned up did it just

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- (1) stay clean then or what happened?  
 (2) A No it didn't -- well depending again on the tides and the  
 (3) winds and some -- in some areas if we had some hot sunny  
 days  
 (4) it would melt and sink into the sand or the rocks and you  
 (5) couldn't really get it all out without picking up the beach  
 (6) Q The mousse patties as you called them -- that's  
 (7) m o u s s e would those mousse patties would those mousse  
 (8) patties -- not the same ones but would other mousse patties  
 (9) come back after you know with the shift in the tides?  
 (10) A Yes they would They -- the people that were working were  
 (11) designated areas to cleanup so they went from area to area  
 (12) They each had an area for a certain day and a lot of them  
 (13) didn't realize the way it was set up They should have went by  
 (14) the tides and the winds and they would have known exactly  
 where  
 (15) to go to pick up  
 (16) Q After they cleaned up would the tides come back?  
 (17) A If we had a rising tide and the wind was blowing offshore  
 (18) from that area it would get back out in the water and go in on  
 (19) another area  
 (20) Q And did you subsequently go to -- at some point in time did  
 (21) you go up to Prince William Sound to see some oiling there?  
 (22) A Yes I did Well I went to an oiled Mayor's meeting in  
 (23) Valdez  
 (24) Q What was oiled Mayors?  
 (25) A It was mayors from the villages that were in the area of

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- (1) the oil  
 (2) Q That had been oiled?  
 (3) A Right  
 (4) Q Okay And when you went up to -- you got a tour of some  
 (5) areas of Prince William Sound?  
 (6) A Yes we did We went out one day on a -- on a charter boat  
 (7) with the Mayors from the Amoco Cadiz spill from Brittany in  
 (8) France and we went out and seen some clean up work being  
 done  
 (9) Q And was the -- the oiling in Port Lions wasn't as bad as  
 (10) the oiling in Prince William Sound?  
 (11) A No I don't believe so  
 (12) Q Okay Now Mr Clough in his opening statement showed a  
 (13) photograph and I want to ask you if this is what kind of  
 (14) oiling that you're talking about in Port Lions Could we see  
 (15) Exhibit D160S009?  
 (16) MR GROSS Could you scan it from the podium?  
 (17) MR STOLL Pardon me?  
 (18) MR GROSS Could you scan it from the podium?  
 (19) MR STOLL This is just -- I've got a photocopy of  
 (20) it  
 (21) MR CLOUGH I think if you scan it Bob it'll work  
 (22) Try it  
 (23) BY MR STOLL  
 (24) Q Now let me ask you this question Mr Clough said this  
 (25) was the oil on Kodiak Is this --

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- (1) MR CLOUGH Objection Your Honor that is --  
 (2) THE COURT Sustained objection sustained  
 (3) BY MR STOLL  
 (4) Q Let me ask you this Is this a typical kind of oiling that  
 (5) you're talking about that you're complaining about in Port  
 (6) Lions?  
 (7) A No it is not This looks like it might have been where  
 (8) somebody picked up a mousse patty and the stain on the rocks  
 (9) Q You're -- what size of -- what -- describe a little bit to  
 (10) the jury what you're talking about?  
 (11) A Well --  
 (12) Q With your hands maybe or --  
 (13) A Well with a pencil sitting there and a guy's boot that  
 (14) just look like a little tiny -- little tiny piece had sat and  
 (15) there was just all different sizes of mousse that came in  
 (16) Q And was it -- was it an isolated mousse patty or were there  
 (17) many of them?  
 (18) A There was many of them This looks like there was only --  
 (19) only one there  
 (20) Q Okay Now could you tell the jury -- could you tell the  
 (21) jury what changes if any occurred in terms of the use of  
 (22) these municipal properties by the residents? Did they -- for  
 (23) instance you mentioned swimming Did people continue  
 swimming  
 (24) in this area after -- through 1989?  
 (25) A No they did not

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- (1) Q Why is that?  
 (2) A They were afraid afraid of getting oil on them or the  
 (3) kids Nobody went out Nobody went on the beaches in '89  
 and  
 (4) till late probably by late fall of '90 after the spring  
 (5) cleanup summer  
 (6) Q There was more cleanup in 1990 as well?  
 (7) A Yes there was the spring of 1990  
 (8) Q Okay And what about picnicking and other recreational  
 (9) uses on the beaches at Port Lions?  
 (10) A There was none of it done in '89  
 (11) Q And what about the shellfish? Were people -- did people go  
 (12) shellfishing?  
 (13) A No they did not Nobody ate any shellfish  
 (14) Q And what about --  
 (15) A That I know of  
 (16) Q And that -- did that -- did those changes in uses continue  
 (17) until at least the fall of 1990 to your knowledge?  
 (18) A To my knowledge yes  
 (19) Q Okay Now today do you think the beaches are clean or  
 (20) what's your -- what do you --  
 (21) A I -- I think they're clean yes but I'm not 100 percent  
 (22) sure because some of the mousse patties on hot sunny day  
 would  
 (23) melt and sink sink down into the sand  
 (24) MR STOLL That's all I have  
 (25) MR CLOUGH Hi Mr Squartsoff My name John

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- (1) Clough We haven't met but I think you met Keith Lied from my  
 (7) office during your deposition back in February Good  
 (3) afternoon sir  
 (4) CROSS EXAMINATION OF PETER M SQUARTSOFF  
 (5) BY MR CLOUGH  
 (6) Q I'd like to start out if I could just by following up on  
 (7) a couple of questions Mr Stoll asked you  
 (8) When you were talking he was reading to you from this  
 (9) chart some acreage and some footage information and you  
 (10) testified it was correct to the best of your knowledge I  
 (11) wanted to ask you have you ever personally measured any of  
 (17) these shorelines?  
 (13) A No I haven't but I've walked around there many times  
 (14) Q Have you reviewed any municipal documents which - where  
 a  
 (15) surveyor has been hired by Port Lions to measure this acreage  
 (16) for you?  
 (17) A Not to my knowledge  
 (18) Q So as you're sitting here today you don't know personally  
 (19) of your own knowledge whether these - whether for example  
 (20) on Tract C is it - it is in fact 3 373 75 feet of shoreline?  
 (21) A No I don't  
 (22) Q You don't know if any of these acreages are correct either?  
 (23) A No I don't  
 (24) Q Now you were in Port Lions during much of the spring of -  
 (25) the spring of 1989?

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- (1) A Yes off and on  
 (2) Q And isn't it true sir that it took a while for the oil to  
 (3) make it from the Valdez spill which was up in Bligh Island in  
 (4) Prince William Sound down all the way to the Kodiak Island  
 (5) area?  
 (6) A Yes it did  
 (7) Q Before the spill got there did you have some concerns as  
 (8) to whether in fact your area was going to be oiled?  
 (9) A I - I wasn't really sure I didn't know Personally I  
 (10) didn't - I didn't really think that it would come back that  
 (11) far  
 (12) Q Were other residents of your community concerned?  
 (13) A Yes they were  
 (14) Q Is it fair to say they were quite concerned?  
 (15) A Yes  
 (16) Q Would it be fair to say that they were afraid that Port  
 (17) Lions would be very heavily oiled by the oil spill?  
 (18) A I - I can't speak for them but I - I believe so  
 (19) Q In fact it turned out that their worst fears were  
 (20) never realized isn't that true?  
 (21) A What's that?  
 (22) Q Their worst fears were not realized were they?  
 (23) A No  
 (24) Q And in fact sir the amount of oil that actually reached  
 (25) the Port Lions area was - was relatively small wasn't it?

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- (1) A I don't know what you mean by small It - in comparison  
 (2) to Valdez or some of the areas over there I would say small  
 (3) Q Well during your testimony - during your testimony you  
 (4) mentioned your work with the oiled Mayors  
 (5) A Yes  
 (6) Q Do you recall the oiled Mayors retained an organization  
 (7) called IAI to go and interview leaders of the communities  
 (8) throughout the areas affected by the spill?  
 (9) A Yes  
 (10) Q And do you recall back in March of 1990 less than a year  
 (11) after the spill you in fact were interviewed?  
 (17) A Yes  
 (13) Q And you were interviewed by a Dr John Russell who was  
 one  
 (14) of the leaders of that project isn't that correct?  
 (15) A I - I don't remember  
 (16) Q You remember the interview though?  
 (17) A Right  
 (18) Q And do you remember there was a tape recorder there?  
 (19) A I don't remember the tape recorder I don't - I think it  
 (20) was over the phone  
 (21) Q And in fact Dr Russell prepared a transcript of the  
 (22) questions and answers that he asked you during that interview  
 (23) Do you recall being asked questions and answers by Dr  
 Russell  
 (24) during the interview?  
 (25) A Yes

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- (1) Q And during the interview you were asked - and this is on  
 (2) page five the bottom of page five to the top of page six and  
 (3) this is back in March let me get the exact date What's the  
 (4) exact date of it? March 14th sir 1990 Back during this  
 (5) interview you were asked by Dr Russell was there any oil  
 (6) that ever actually got there speaking to your community And  
 (7) you responded at that time oh yes it was right on the beach  
 (8) down there you know but it was small The biggest chunks  
 (9) were maybe eight ten inches or so that I've seen around  
 (10) here There was some maybe a little bit bigger than that I  
 (11) guess up in around the backside of the beach there  
 (12) Now is that - is that an accurate statement by you?  
 (13) A Yes it is I'm speaking about right down in front of my  
 (14) house in Port Lions  
 (15) Q And you were - you were asked whether it was a big mess?  
 (16) A Yes  
 (17) Q And was it a big mess?  
 (18) A Not in comparison with Valdez  
 (19) Q And in fact didn't you tell Dr Russell that it was  
 (20) really just in tide streaks?  
 (21) A Yes And the tide streaks landed in different beaches at  
 (22) different times  
 (23) Q That's right And in fact Dr Russell asked you to -  
 (24) talked to you about the fact that you had gone up to Valdez and  
 (25) seen some of the beaches up there isn't that correct?

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- (1) A Yes  
 (2) Q And in response to his questions didn't you tell him that  
 (3) if you took all the oil from all the beaches around Port Lions  
 (4) where you lived and stacked it up on just one of the beaches  
 (5) you saw in Prince William Sound it would still look pretty  
 (6) good compared to the other beaches you saw in Prince William  
 (7) Sound?  
 (8) A I - yes that's what I said  
 (9) Q It was really a whole different world of oiling down your  
 (10) neck of the woods versus those beaches up in Prince William  
 (11) Sound wasn't it?  
 (12) A Yes It was a different type of oil  
 (13) Q And there wasn't really a lot of it was there?  
 (14) A In comparison with Prince William Sound no But we're a  
 (15) lot of miles away from Prince William Sound  
 (16) Q That's right And the oil had weathered and fortunately  
 (17) certainly I'm sure you were pleased that your community wasn't  
 (18) oiled anything like Prince William Sound aren't you?  
 (19) A Yes  
 (20) Q Now you talked some about the clean up program that was  
 (21) undertaken in your area And you recall that quite a few  
 (22) people from your community were involved in the cleanup  
 (23) A Yes  
 (24) Q And you talked to Dr Russell about that during the  
 (25) interview also didn't you?

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- (1) A Yes  
 (2) Q Isn't it true sir that you were actually concerned that  
 (3) more people worked on the cleanup than was really necessary  
 (4) to clean up the amount of oil in your area?  
 (5) A Yes  
 (6) Q And in fact your own wife worked on the cleanup for a  
 (7) while didn't she?  
 (8) A Short period yes  
 (9) Q And is it fair to say without getting into your domestic  
 (10) situation sir - I'm in perilous waters here - but you  
 (11) actually asked her to leave the clean up program?  
 (12) A Yes  
 (13) Q And the reason you asked her to leave was because you felt  
 (14) pretty strongly that there were too many people out there doing  
 (15) the cleanup?  
 (16) A Oh I don't know if that's - no I don't think that's the  
 (17) reason why I asked her to leave because it was too many  
 (18) people  
 (19) Q Well didn't you think there were too many people out there  
 (20) working on the cleanup?  
 (21) A I - what I was saying there is there was a lot of people  
 (22) that weren't doing what they were supposed to have been  
 (23) doing in the cleanup They were - they just hired everybody that  
 (24) wanted to work Every boat and every skiff they put out there  
 (25) Q And you thought that for the amount of oil in your

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- (1) community they had more people working than they needed?  
 (2) A Yes right in Port Lions  
 (3) Q And in fact she told you in terms of - did she work for  
 (4) what about eight or nine days I think?  
 (5) A I'm not exactly sure It was a short period  
 (6) Q And did she tell you about her work on those beaches?  
 (7) A Not really I don't recall  
 (8) Q Did you ever get a chance to observe any of the cleanup  
 (9) being done on any of the beaches around your community?  
 (10) A Yes I did I - I didn't actually walk with the people  
 (11) but I seen them going around the bay  
 (12) Q Okay And is it fair to say that - so you've seen them  
 (13) going around the bay literally the local residents who were  
 (14) working in the cleanup would literally walk along the  
 (15) shorelines is that correct?  
 (16) A Yes they would walk up and pick up the oil that they found  
 (17) as they were walking  
 (18) Q They carried plastic bags with them right?  
 (19) A Bags and buckets yes  
 (20) Q If they came along and found one of those eight inches or  
 (21) ten inches or less mousse patties you were describing to the  
 (22) jury and they saw it they used a pick or shovel or maybe just  
 (23) hands and gloves but picked it up and put it in the bag  
 (24) right?  
 (25) A Yes

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- (1) Q And in fact and they were able to pick up this stuff off  
 (2) the beach weren't they?  
 (3) A Yes  
 (4) Q And in fact as they did it they picked up a lot of other  
 (5) stuff too didn't they?  
 (6) A I don't know what they picked up  
 (7) Q Well during your interview with Dr Russell didn't you  
 (8) tell him that - and I'm not criticizing these folks I would  
 (9) have done it too if it had been my shoreline - but that  
 (10) while they were out there they also picked up debris and  
 (11) trash and old fishing stuff and pretty much anything that was  
 (12) on the beach whether it was related to the oil spill or not?  
 (13) A No I think - I believe that was picked up out in the  
 (14) water If there was oil on the kelp or stuff like that out on  
 (15) the beach they picked it up They didn't go on the beach  
 (16) picking up every bit of debris A lot of it was picked up in  
 (17) the water is where I seen a lot of people picking up  
 (18) everything  
 (19) Q Well do you recall when Dr Russell asked you were they  
 (20) actually becoming up oil off the - like the tide speaks like  
 (21) I do you responded among other things and they were putting  
 (22) - everything was going into these bags They kept - I'm  
 (23) sorry counsel this is page 9  
 (24) I apologize There wasn't a piece of kelp or a piece that  
 (25) drifted out in the bay all summer They kept it clean I

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- (1) mean they picked up everything not just the oil?  
 (2) A That's what I'm saying out in the bay  
 (3) Q And in fact -  
 (4) A In the tide streaks because the tide brought everything  
 (5) together and the oil and the kelp and everything would be in  
 (6) these tide streaks  
 (7) Q And they filled a lot of bags didn't they?  
 (8) A Yes they did  
 (9) Q But in the individual bags as a general rule there wasn't  
 (10) too much oil in them was there?  
 (11) A On some - some were and some weren't  
 (12) Q Well didn't in your interview with Dr Russell you tell  
 (13) him about in your opinion about 10 or 15 percent of the bags  
 (14) contained oil?  
 (15) A Yes They picked up -  
 (16) MR STOLL Your Honor I don't think that's an  
 (17) accurate statement  
 (18) THE COURT You can take care of it on redirect  
 (19) counsel  
 (20) MR CLOUGH Just a couple more questions  
 (21) Mr Squartsoff because among other things you wanted to get  
 (22) home  
 (23) THE WITNESS My daughter's coming home from summer  
 (24) school at 1:30 she'll be here  
 (25) MR CLOUGH I promise to get done before that My

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- (1) daughter she would insist upon it too  
 (2) BY MR CLOUGH  
 (3) Q Are you aware that there was a winter monitoring program  
 (4) that went on over the winter '89 to '90?  
 (5) A Yes I was  
 (6) Q You saw some of the reports that came back from that  
 (7) program?  
 (8) A Yes  
 (9) Q And Dr Russell talked to you about that as well isn't  
 (10) that correct?  
 (11) A Yes  
 (12) Q This is on page 30 The winter monitoring program involved  
 (13) people going out and seeing if they could still find oil on  
 (14) some of the beaches isn't that correct?  
 (15) A Yes yes they weren't marked and designated areas There  
 (16) were small sections where they had to go and check to see if  
 (17) there was oil coming into that area  
 (18) Q And based on what you saw from those reports it appeared  
 (19) there was very very little oil out there, isn't that what you  
 (20) told Dr Russell?  
 (21) A Yes in those areas  
 (22) Q There was another unfortunate incident that occurred in  
 (23) Port Lions in December of 1989 do you recall what that was?  
 (24) A Yes  
 (25) Q What was that sir?

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- (1) A The fish processing plant sunk  
 (2) Q When you say the fish processing plant are we referring  
 (3) to a big fish processing vessel - if I pronounce it wrong  
 (4) please tell me - the Smokwa?  
 (5) A Smokwa  
 (6) Q Smokwa thank you It sank while it was actually tied  
 (7) right up to the dock didn't it?  
 (8) A Yes it did  
 (9) Q And it unfortunately leaked quite a bit of fuel oil into  
 (10) the harbor didn't it?  
 (11) A I wouldn't say quite a bit It was boomed off right away  
 (12) Q Didn't a number of residents including people like Janet  
 (13) Thompson come and complain to you including other  
 (14) members of  
 (15) the City Council in fact it leaked on a lot of stuff and #  
 (16) gotten outside the booms and onto their property?  
 (17) A Yes  
 (18) Q And didn't they also complain that they didn't feel very  
 (19) good cleanup had been done of that oil that spilled from the  
 (20) fish processing vessel right there in your own harbor?  
 (21) A Yes  
 (22) Q Now in the following spring in March of 1990 you were  
 (23) involved in a program I believe sir where you walked some of  
 (24) the beaches - and can you help me out what's the  
 (25) pronunciation of the bay?  
 (26) A Kizhuyak

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- (1) Q Kizhuyak Thank you sir - where you walked some of the  
 (2) shorelines in Kizhuyak Bay looking for oil?  
 (3) A Yes  
 (4) Q And as part of that process you were asked to fill out  
 (5) essentially daily reports that said where you went what you  
 (6) did and what you saw is that correct?  
 (7) A Yes  
 (8) Q Could we have DX12255 please? 12255 right  
 (9) MR CLOUGH Your Honor I'm going to put this on the  
 (10) Elmo I'm also going to give a copy to the witness directly  
 (11) if I might because these are little difficult to read  
 (12) Is the Elmo on Joel?  
 (13) BY MR CLOUGH  
 (14) Q Okay Now this exhibit consists of four -  
 (15) Zoom it out just a little four separate pages I realize  
 (16) that the jury's not going to be able to read the highlighted  
 (17) language from where you are but what I'm going to do is ask  
 (18) Mr Squartsoff if he from the copy he has in front of him can  
 (19) read the highlighted language Oh is the chart in people's  
 (20) way at all Can you see past the chart?  
 (21) Okay here Now this is a document that's the first page  
 (22) of defendants exhibit 12255 It's dated March 22nd 1990 is  
 (23) that correct Mr Squartsoff?  
 (24) A Yes  
 (25) Q And there's a signature down in the lower left hand

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- (1) corner Is that yours?  
 (2) A Yes it is  
 (3) Q And you filled this document out didn't you?  
 (4) A Yes  
 (5) Q And this is your report your daily log sheet for at least  
 (6) one of the sections that you walked out - and you'll have to  
 (7) help me again?  
 (8) A Kizhuyak  
 (9) Q - Kizhuyak Bay thank you looking for oil in March of  
 (10) 1990 is that correct?  
 (11) A Yes  
 (12) Q And under description of activities I've highlighted -  
 (13) it's my highlighting not in the original - I've highlighted  
 (14) some of what you wrote Could you from your copy read to  
 (15) the jury what you wrote at that time?  
 (16) A Yes Walked four miles of beach east side meaning  
 (17) Kizhuyak Bay from Leto Point to three miles from the head of  
 (18) the bay No trace of any type of oil Beaches are very clean  
 (19) on that side of Kizhuyak Bay  
 (20) Q Okay Now sir if you could turn to the second page of  
 (21) the exhibit Now this is entitled Skiff Cleanup Report - and  
 (22) please correct me if I'm wrong but I believe that this is a  
 (23) second page of your report describing the same walk not a  
 (24) different walk - I don't want to mislead anybody - but the  
 (25) same walk that you did on March 22nd 1990 on that portion of

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- (1) Kizhuyak Bay is that correct?  
 (2) A Yes  
 (3) Q And that's your signature on the bottom of that as well?  
 (4) A Yes it is  
 (5) Q And this is sort of a fill in the blanks form I don't  
 (6) know if you can see that from where you're sitting Maybe we  
 (7) can - at the top there's a fill in the blank for where you  
 (8) fill in the type of oily material that you observe during the  
 (9) walk and is that the purpose of that blank in the form?  
 (10) A Right  
 (11) Q And I notice that there's nothing filled in under gravel  
 (12) kelp mousse or other Is that because you didn't observe any  
 (13) oily gravel mousse kelp or other during that walk?  
 (14) A Right  
 (15) Q And looking down to the bottom of the form what I've  
 (16) highlighted here there's another fill in the blank for yards  
 (17) of beach cleaned and there's nothing listed Is that because  
 (18) there was in fact nothing to clean when you went out there?  
 (19) A Right  
 (20) Q And it says total bags Now we were talking earlier that  
 (21) the clean up crews out in your area would carry these plastic  
 (22) bags out and just dump a mousse patty or whatever it was into  
 (23) them when they found it When it says total bags here is  
 (24) that the type of bags that that blank in the form is to refer  
 (25) to?

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- (1) A Yes  
 (2) Q And you've got zero down for that?  
 (3) A Yes  
 (4) Q And that's because you didn't find anything to put in a bag  
 (5) on that particular trip is that right?  
 (6) A Right  
 (7) Q Now sir if you could turn to the next page in order this  
 (8) is a daily log sheet dated the next day March 23rd 1990 and  
 (9) again the highlighting is on my copy Is this also your  
 (10) signature and handwriting sir?  
 (11) A Yes it is  
 (12) Q And does this describe a separate inspection tour if you  
 (13) want to call it that that you made?  
 (14) A Yes  
 (15) Q And where did you go this time?  
 (16) A Up - up at the head of the bay near the head of the bay at  
 (17) the Terror Lake landing for the hydro pilot  
 (18) Q And could you read the highlighted portion under your  
 (19) description of activities for that walk?  
 (20) A Yes walked about two miles from Terror Lake landing site  
 (21) out to Kaitak (phonetic) Found no traces of oil on beaches  
 (22) head of Kizhuyak opposite -  
 (23) Q Could it be appears if I may presume to try to read your  
 (24) writing for you?  
 (25) A Right It's - copies appears to be clean clean of oil

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- (1) Q And the last page of this exhibit sir is another one of  
 (2) those skiff clean up reports and I believe if you take a  
 (3) second to look at it is this the skiff clean up report for  
 (4) your two mile walk along that you just described at the other  
 (5) portion of Kizhuyak Bay?  
 (6) A Yes it is  
 (7) Q And on this one also there's nothing listed under oily  
 (8) material because you didn't observe any?  
 (9) A No  
 (10) Q And there's nothing listed under yards of beach cleaned is  
 (11) there?  
 (12) A No  
 (13) Q Because you didn't clean any beach on that two miles did  
 (14) you?  
 (15) A No  
 (16) Q And there's zero under bags is that correct sir?  
 (17) A Yes  
 (18) Q And that's because there wasn't anything there to be picked  
 (19) up and cleaned during that two miles that you walked?  
 (20) A Right  
 (21) Q And that was on March 23rd 1990?  
 (22) A Yes  
 (23) MR CLOUGH Thank you No further questions Your  
 (24) Honor Thank you very much  
 (25) MR STOLL I have a few questions I just have a few

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- (1) questions Mr Squartsoff  
 (7) REDIRECT EXAMINATION OF PETER M SQUARTSOFF  
 (3) BY MR STOLL  
 (4) Q With respect to these eight to ten inch mousse patties  
 (5) that came in at the various times counsel quoted a line out of  
 (6) a statement that you had previously made when you said that  
 (7) these - it came in in tide streaks However how often do the  
 (8) tides come in?  
 (9) A Basically every six hours six and a half hours  
 (10) Q And after your wife quit or you got her to quit working on  
 (11) the clean up crew more oil came in after that later in the  
 (12) summer is that correct?  
 (13) A Yes  
 (14) Q With these tides?  
 (15) A With the tides yes depending on the tides and the winds  
 (16) Q And counsel has referred to a place where you said  
 (17) something about 15 percent Didn't you say also 85 percent -  
 (18) same line counsel that you quoted from earlier  
 (19) MR CLOUGH Which page is that please?  
 (20) MR STOLL Page 9  
 (21) BY MR STOLL  
 (22) Q Didn't you say it was 80 to 85 lot of times they told me  
 (23) 10 to 15 percent oil the rest was - and then it goes on?  
 (24) MR CLOUGH I'd like to object Your Honor perhaps  
 (25) we need to approach to show the Court That I think is

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- (1) mischaracterizing what it says there  
 (2) THE COURT Come up here  
 (3) (Sidebar conference out of the hearing of the jury)  
 (4) MR CLOUGH I believe it talks about -  
 (5) THE COURT Let me read it  
 (6) MR CLOUGH Sure  
 (7) THE COURT What this blank is bags? Do you know?  
 (8) MR CLOUGH It's their - this is prepared by their  
 (9) folks Your Honor not ours  
 (10) MR STOLL I don't know what the blank is  
 (11) THE COURT You can read it verbatim From the  
 (12) transcript It's got blanks in it Read what it is  
 (13) MR CLOUGH I have no objection to reading them  
 (14) verbatim Your Honor  
 (15) (Sidebar concluded)  
 (16) BY MR STOLL  
 (17) Q Mr Squartsoff this reference to 10 to 15 percent doesn't  
 (18) it say - it starts to ask what was the percentage of oil and  
 (19) it's blank blank and it was 80 to 85 lot of times they told  
 (20) me 10 to 15 percent oil and the rest was blank blank some  
 (21) drifting in the water and they were putting everything -  
 (22) everything was going into these bags?  
 (23) A Uh huh  
 (24) Q So there are different percentages terms of which tides  
 (25) and what was going on isn't that correct?

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- (1) A Yes  
 (2) Q And another thing I'd like to put in context is these  
 (3) beaches the quotes from these monitoring in 1990 when you  
 went  
 (4) out to these various locations in Kizhuyak Bay The first  
 (5) location -  
 (6) May I use the Elmo please?  
 (7) This is that same photograph - little faster to put them  
 (8) up on this  
 (9) The aerial photograph of Port Lions now Kizhuyak Bay and  
 (10) where you're describing you're walking along the beach and  
 you  
 (11) saw no patties on a particular day in 1990 that's not even in  
 (12) this photograph is it?  
 (13) A No it isn't  
 (14) Q In fact the first - the first indication that counsel  
 (15) quoted you from was a location some eight or ten miles away  
 (16) isn't that correct?  
 (17) A Yes  
 (18) Q And then there's no claim by your municipality for any  
 (19) damages resulting from that is it? It's not property you own?  
 (20) A No no not that I know of  
 (21) Q And the second location is some ten miles away from Port  
 (22) Lions isn't that right?  
 (23) A Well yeah Now it's - I believe from the ferry dock to  
 (24) the head of the bay is eight miles  
 (25) MR PETUMENOS Counsel is that on its side that

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- (1) photograph? My neck hurts  
 (2) MR CLOUGH Try it the other way  
 (3) MR STOLL Straight on down I don't know it hurts  
 (4) my head any way I look at it or my neck  
 (5) BY MR STOLL  
 (6) Q At any rate it's at least eight miles away?  
 (7) A Yes  
 (8) Q And the purpose of this was you were - you were out there  
 (9) looking around and you were going to give this report and you  
 (10) were trying to get them to open fishing in 1990 isn't that  
 (11) right?  
 (12) A Yes that -  
 (13) Q Commercial fishing?  
 (14) A Yes And there was other days that I did find some oil in  
 (15) other areas These are just two of my - two - I think I  
 (16) worked for two weeks  
 (17) Q So on this - these particular - these particular two days  
 (18) out of two weeks you found no oil?  
 (19) A Right  
 (20) Q Okay Ten miles - some ten miles away or eight miles  
 (21) away excuse me?  
 (22) A Yes  
 (23) Q And did this - did the - to get another thing in  
 (24) perspective here this - this oiling that occurred from the  
 (25) fish processing floating fish processing plant going in was

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- (1) that - did that leave mousse patties?
- (2) A No it did not
- (3) Q That was diesel oil wasn't it?
- (4) A Yes it was
- (5) Q And was it anything close to the kind of oil you're talking
- (6) about in the - from the Exxon Valdez?
- (7) A No
- (8) Q What was the - just tell the jury what was the
- (9) difference?
- (10) A It was just diesel oil sheen on the water
- (11) MR STOLL That's all I have
- (12) MR CLOUGH Just two literally just two questions
- (13) Your Honor and I think I can keep to that
- (14) RE-CROSS EXAMINATION OF PETER M SQUARTSOFF
- (15) BY MR CLOUGH
- (16) Q First of all back to the Kizhuyak Bay just to confirm
- (17) you walked a total of five miles of beach on those two days and
- (18) didn't see any evidence of oiling as of March 1990 isn't that
- (19) correct?
- (20) A Yes
- (21) Q And lastly sir I really don't want there to be any
- (22) confusion on this point about 85 percent or 15 percent So if
- (23) I may approach the witness and here we go again Okay
- We're
- (24) going to be talking about this last portion here
- (25) Mr Squartsoff this is again Dr Russell's - the

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- (1) transcript of Dr Russell's interview with you and I'm going
- (2) to put the whole thing in context including what you said
- (3) immediately after what Mr Stoll read to you So I think what
- (4) might work best with the Court's permission is I'd like to
- (5) read verbatim into the record what it says here and then
- (6) Mr Squartsoff is free to correct me if he sees any mistakes
- (7) THE COURT Go ahead
- (8) BY MR CLOUGH
- (9) Q The first question was asked to you by Dr Russell Were
- (10) they actually picking up oil off the - off the like the
- (11) tide?
- (12) Then it says tiffel - I'm assuming it's a misprint -
- (13) times a few times not very many I thought if they were to
- (14) pick it up right away like I said depending on the winds and
- (15) tides they would not have - they would have picked up the
- (16) Marmot - does Marmot refer to a location do you recall?
- (17) A No Marmot Island is way out No I don't know what
- (18) this - I don't know what that is
- (19) Q It goes on to read this is again your response There
- (20) wasn't a piece of kelp a piece that drifted out in the bay all
- (21) summer Kept it clean I mean they picked up everything not
- (22) just the oil I was asking my brother and Jackie Nelson and
- (23) ah - who was one of the other ones about ah you know I
- (24) started finally asking them what was the percentage of oil in
- (25) our - there was a blank there Whoever was describing it put

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- (1) a blank apparently they couldn't figure out what the word
- (2) was
- (3) MR STOLL Couple blanks
- (4) MR CLOUGH Couple blanks Thank you counsel
- (5) BY MR CLOUGH
- (6) Q And it was 80 to 85 dot dot dot a lot of times they
- (7) told me 10 to 15 percent oil and the rest was blank blank
- (8) some oil drifting in the water And they were putting dot
- (9) dot dot everything was going into those bags - these bags
- (10) Am I correct so far?
- (11) A Yes
- (12) Q Then it says question Dr Russell apparently said oh
- (13) my
- (14) Answer and then you said so there was really a small
- (15) percentage of actual oil that went into all them bags
- (16) Isn't that what you said?
- (17) A Guess so
- (18) MR CLOUGH Thank you Go visit your daughter
- (19) Thank you very much
- (20) MR STOLL Okay Your Honor he's forced me I've
- (21) got to ask another question You have the next page of this
- (22) transcript?
- (23) A Same one?
- (24) MR STOLL Same statement
- (25) REDIRECT EXAMINATION OF PETER M SQUARTSOFF

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- (1) BY MR STOLL
- (2) Q Now isn't the very next question that counsel stopped
- (3) reading from about how much of this whole area was oiled do
- (4) you have any sense of that? That's the very next question do
- (5) you see that?
- (6) A Yes
- (7) Q I think that the oil ended up pretty much every -
- (8) everywhere little piece here and there but there were certain
- (9) blades like you know I know like because of living here and
- (10) the tides and like this beach in -
- (11) A Brarobra
- (12) Q - Brarobra gets - because of northeast and the tides and
- (13) it goes right in there You know certain spots - they just
- (14) were the tides and the winds push it into Same thing in
- (15) Prince William when I seen - when I was over there There was
- (16) certain beaches got hit not all the beach
- (17) That's what you've been saying?
- (18) A Yes
- (19) MR STOLL Okay Thank you very much
- (20) THE COURT You can step down sir
- (21) Thanks very much and I'll let you go for I believe it's the
- (22) weekend So I'll see you on Monday at 8:30 Remember next
- (23) Friday we're not in session so don't talk to anybody about
- (24) this case don't form or express any opinion on it until it's
- (25) submitted to you for deliberation See you on Monday

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- (1) (Jury out at 1 31 p m )  
 ( ) THE COURT Counsel anything to take up this  
 (3) afternoon?  
 (4) MR STOLL Yes we have a couple of matters Your  
 (5) Honor  
 (6) THE COURT Now?  
 (7) MR STOLL We can do it now or -  
 (8) THE COURT That s fine with me if we can get it all  
 (9) out of the way now  
 (10) MR STOLL Your Honor we have the matter of the Mary  
 (11) Katzke tape of Kodiak We submitted a brief on that and I  
 (12) guess I m still waiting They were supposed to file one  
 (13) yesterday  
 (14) MR DIAMOND I don t know that I was supposed to file  
 (15) one yesterday I said I would have it Mr Stoll as soon as  
 (16) possible and I will get it to him this afternoon Get it to  
 (17) the Court this afternoon as well  
 (18) MR STOLL I thought we were going to argue that this  
 (19) afternoon  
 (20) THE COURT When did you want to use it  
 (21) MR STOLL Monday morning I mean that s - on  
 (22) Wednesday set up a schedule to argue this  
 (23) THE COURT Are you prepared to argue it?  
 (24) MR DIAMOND I d be prepared to argue it this  
 (25) afternoon Your Honor if you d like us to come back

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- (1) THE COURT I wouldn t like you to come back I d like  
 (2) for you to argue it now but I ll defer  
 (3) MR DIAMOND There s a Ninth Circuit case directly in  
 (4) point which controls and I don t have it in my hand  
 (5) THE COURT Well as you know I always like to read  
 (6) the cases counsel  
 (7) MR DIAMOND Can I get it to you say by 2 30?  
 (8) THE COURT Sure come over here at 2 30 both of you  
 (9) and bring your case with you I don t mean your briefcase  
 (10) Hang on just a minute  
 (11) MR DIAMOND Just going to say while we were talking  
 (12) about cases directly on point I mentioned yesterday during the  
 (13) hearing there was a case directly on point and issue I was  
 (14) debating with Mr Petumenos and I want to apologize to him  
 (15) and  
 (16) to you I had misremembered that case I went back and read it  
 (17) this morning it was the drug company case and it deals with  
 (18) hearsay within hearsay in the business record and I just  
 (19) didn t want to leave the wrong impression  
 (20) MR PETUMENOS Mr Diamond s credibility is therefore  
 (21) enhanced Your Honor  
 (22) MR CLOUGH Your Honor I just wanted to move in  
 (23) defendants exhibit 12255 the reports we had during this  
 (24) witness  
 (25) (Exhibit 12255 offered)  
 (26) MR STOLL Your Honor I d also like to move in -

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- (1) THE COURT You have no objection to that?  
 (2) MR STOLL I have no objection to that  
 (3) THE COURT It s admitted 12255  
 (4) MR CLOUGH Yes Your Honor  
 (5) (Exhibit 12255 received)  
 (6) MR STOLL Your Honor I d like to move the admission  
 (7) of 1048 and the - I don t have the numbers I ll provide those  
 (8) later the little photographs of - I just have -  
 (9) MR CLOUGH I have no objection to the introduction  
 (10) of the photographs I do object to the introduction of the  
 (11) map He testified he has no idea if any of those numbers are  
 (12) right There s no foundation  
 (13) THE COURT Do you have somebody that can lay a  
 (14) further foundation?  
 (15) MR STOLL That s final  
 (16) THE COURT Do you have somebody?  
 (17) MR STOLL Yes I do  
 (18) THE COURT Do it It s not admitted into evidence  
 (19) MR STOLL The photographs Your Honor are 954 960  
 (20) 1035 and 10 - excuse me D160A00 9  
 (21) (Exhibit D160A00 9 954 960 1035 offered)  
 (22) MR CLOUGH Are you certain of that last number? I  
 (23) think that might be wrong  
 (24) THE COURT I think that s probably the radio call  
 (25) numbers counsel

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- (1) MR STOLL I have no idea Whatever your - this is  
 (2) the famous pen and boot photograph I don t know -  
 (3) MR CLOUGH I ll track down the proper exhibit  
 (4) number I have no objection to it being introduced I ll  
 (5) track it down for Mr Stoll  
 (6) THE COURT They re all admitted Make sure the clerk  
 (7) has the right numbers all right?  
 (8) (Exhibit D160A00-9 954 960 1035 received)  
 (9) MR STOLL Next I d like to set up a briefing  
 (10) schedule on our motion to enforce pretrial order Number 81  
 (11) which we filed either yesterday or day before yesterday This  
 (12) relates to plaintiffs objection to certain lay witnesses that  
 (13) look like expert witnesses to us They ve never been  
 (14) designated as experts We just need to brief it I don t want  
 (15) to argue it now I just want to -  
 (16) MR DIAMOND Your Honor will you read their motion  
 (17) first before you require us to file a response?  
 (18) THE COURT We can talk about it at 2 30 all right?  
 (19) MR STOLL That s fine And Mr McCallion has a  
 (20) couple of minor housekeeping -  
 (21) MR FORTIER Your Honor before Mr McCallion does I  
 (22) have some green exhibits I have a list of them I could read  
 (23) them into the Court record now or -  
 (24) THE COURT Don t read them now counsel Please  
 (25) don t read them now but I ll get them in for you

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- (1) MR FORTIER I beg your pardon?  
 (2) THE COURT I will get them in for you  
 (3) MR FORTIER Thank you Your Honor  
 (4) MR PETUMENOS Judge on this motion I m worried  
 (5) about Mr Diamond s tactic here having counsel read it  
 (6) THE COURT Counsel I said we d discuss it at 2 30  
 (7) that s what we ll do I don t want any argument on it  
 (8) MR PETUMENOS I didn t hear you  
 (9) MR McCALLION Your Honor just a couple of matters  
 (10) As I believe at the Court s suggestion we filed a brief  
 (11) memorandum today addressing the issue on interim conveyed  
 (12) properties that issue and how the Court should deal with the  
 (13) title ownership of the Native corporation  
 (14) THE COURT So the question would be when I take it  
 (15) up Are we going to have continuing dispute during - with  
 (16) these witnesses about this interim conveyance issue?  
 (17) MR DIAMOND I don t know that there is - whether  
 (18) there s a continuing dispute I do think there s some  
 (19) underlying legal issues that you re going to have to deal with  
 (20) to the significance of that  
 (21) THE COURT Sure If I deal with them early resolve  
 (22) the problem you don t have to waste minutes or hours of time  
 (23) questioning and questioning witnesses about maps  
 (24) MR DIAMOND We have in preparation a responsive  
 (25) memorandum and I assume if it s not filed by close of business

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- (1) today -  
 (2) THE COURT I ll require you to file it close of  
 (3) business Monday  
 (4) MR OPPENHEIMER That s fine Your Honor  
 (5) MR McCALLION Your Honor hopefully lastly maybe  
 (6) not during the cross examination of Mr Homan yesterday  
 (7) Mr Homan was questioned regarding a letter from the State  
 (8) It s defendants Exhibit 3958 which was the letter dealing  
 (9) with the purported state and federal signoff on clean up  
 (10) activities and during the cross-examination we objected in  
 (11) view of the fact that he did not have that particular document  
 (12) and the cross examination then proceeded  
 (13) This could be an error on our part but I think it may be  
 (14) an error inadvertent error on Mr Diamond s part where he  
 (15) represented that the document had been produced We took  
 (16) that  
 (17) to mean that it had been produced as one of the  
 (18) cross examination exhibits for Mr Homan Our review is that  
 (19) it did not  
 (20) Now that does not mean that Mr Diamond would be precluded  
 (21) from cross-examining Mr Homan on it because each side is  
 (22) permitted what s called a three ambush exhibit What our  
 (23) concern is Your Honor is that the thrust of the questioning  
 (24) relating to the document was not so much to impeach the  
 (25) witness but to I believe impeach the credibility of counsel  
 in that the witness was asked repeatedly didn t counsel show

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- (1) you this particular document? We re concerned about that and  
 (2) feel that a curative instruction may be appropriate  
 (3) MR DIAMOND Your Honor I have a -  
 (4) THE COURT You ll have to submit one counsel before  
 (5) I ll give one  
 (6) MR DIAMOND I do want to make a statement to - to  
 (7) Mr Fortier because I have a letter on my desk that s going  
 (8) out today apologizing for the representation I made when he  
 (9) was  
 (10) looking for the exhibit fumbling for it I did say that we  
 (11) had included it in our cross examination materials That was  
 (12) incorrect We had not It was one of the three that was held  
 (13) back I don t think that deflects the cross examination  
 (14) because clearly based on the witness testimony here and in  
 (15) the deposition he had said repeatedly that the significance of  
 (16) the governmental signoff the environmental signoff would be  
 (17) very significant to a lending decision and in fact the ADEC  
 (18) letter is legendary in this case it s no secret and I still  
 (19) would have been entitled to cross examine Mr Homan on the  
 (20) fact  
 (21) that he had not seen that document before But I was in error  
 (22) when I said on the record - and I apologize again for it -  
 (23) that it was one of the documents that we d sent over in advance  
 (24) of the cross-examination That was not correct  
 (25) THE COURT Thank you So submit your instruction  
 we ll see what the other side says and I ll decide at the time  
 - and at the time it s submitted and after the other side s

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- (1) had an opportunity to comment whether or not I ll give the  
 (2) instruction  
 (3) MR McCALLION Your Honor will you need a pleading  
 (4) for that or could we simply exchange something with counsel?  
 (5) THE COURT No I don t need a pleading all you need  
 (6) is a clean version of what you d have me instruct the jury on  
 (7) served on counsel  
 (8) MR McCALLION Yes Your Honor  
 (9) THE COURT Is there anything else before 2 30?  
 (10) MR DIAMOND No Your Honor  
 (11) MR STOLL Your Honor I have - I do have the number  
 (12) of that exhibit that Mr Clough  
 (13) THE COURT Xxx22774  
 (14) MR STOLL It s DX13160 9  
 (15) THE COURT That s just as confusing as the last one  
 (16) MR CLOUGH Based on the representation of 007 here  
 (17) I have no objection  
 (18) THE COURT It s admitted  
 (19) (Exhibit DX13160 9 received)  
 (20) THE CLERK Please rise This court stands in  
 (21) recess  
 (22) (Recessed at 1 42 p m )

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(1) STATE OF ALASKA )
(2) Reporter s Certificate
(3) DISTRICT OF ALASKA )
(6) I Joy S Brauer RPR a Registered Professional
(7) Reporter and Notary Public
(8) DO HERBY CERTIFY
(9) That the foregoing transcript contains a true and
(10) accurate transcription of my shorthand notes of all requested
(11) matters held in the foregoing captioned case
(12) Further that the transcript was prepared by me
(13) or under my direction
(14) DATED this day
(15) of 1994
(21) JOY S BRAUER RPR
Notary Public for Alaska
(22) My Commission Expires 5 10 97

Look-See Concordance Report

UNIQUE WORDS 2,430
TOTAL OCCURRENCES 10,999
NOISE WORDS 385
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SINGLE FILE CONCORDANCE

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 yeah [6] 3261 4 3288 25  
 3298 4 3319 19 3343 13  
 3377 23  
 year [54] 3225 19 21 22  
 3226 14 16 19 3227 3 12  
 17 18 3233 16 17 20 21  
 22 24 3234 2 3 3235 13 20  
 23 3236 9 11 3239 4 8 13  
 3242 4 5 9 10 11, 13  
 3286 11 3292 9 3294 4 6  
 11 3295 3 11 3296 9 11 21  
 3300 12  
 3301 16 3302 19 21 22  
 3307 2 3335 23 3336 2  
 3340 7 3361 10  
 Years [1] 3227 20  
 years [33] 3227 19 3228 8 9  
 3230 17 24 3233 5 3235 16  
 3236 18 3239 7 14 3242 15  
 3250 15 3254 4 3274 22 25  
 3277 10 3286 16 3289 2 8  
 12 3291 16 3292 2 3 14 20  
 3293 14 17 3295 2 3 13  
 3300 23 3311 24  
 yesterday [18] 3225 10  
 3232 10 3234 15 3235 4 21  
 3236 4 3246 24 3252 9  
 3270 25 3331 19 3332 15  
 17 3383 13 15 3384 12  
 3386 11 3388 6  
 You'd [1] 3313 3  
 you'd [9] 3244 15 3245 8  
 3255 19 3304 17 3314 10  
 3331 11 3383 25 3390 6  
 You'll [2] 3343 1 3389 4  
 you'll [4] 3269 11 12  
 3320 12 3371 6  
 You've [5] 3234 10 3263 6  
 11 13 3319 20  
 you've [31] 3236 24 3243 17  
 3246 11 3267 18 3269 7 20  
 3271 16 3272 8 3273 6 14  
 24 3274 12 21 3280 13  
 3287 16 3290 18 3291 14  
 3292 15 3295 17 3297 13  
 3301 12 23 3303 7 3310 19  
 3311 4 3325 13 16 3332 24  
 3365 12 3373 2  
 3382 17  
 yours [1] 3371 1  
 yourself [1] 3290 9  
 Yvonne [1] 3353 5

## - Z -

Zero [1] 3305 15  
 zero [6] 3305 8 23 3314 1 6  
 3373 2 3374 16  
 Zharoff [1] 3353 5  
 Zoom [1] 3370 15  
 zoom [2] 3235 11 3267 14

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(1) IN THE SUPERIOR COURT FOR THE STATE OF ALASKA  
 (2) THIRD JUDICIAL DISTRICT  
 (4) In re ) Case No. 344-87-2533 Civil  
 ) Anchorage Alaska  
 (5) the ECHO VALDEZ ) Monday July 25 1994  
 ) 8:00 a.m.  
 (6) )  
 (8) VOLUME 22 Pages 3395 through 3543  
 (10) TRANSCRIPT OF PROCEEDINGS (Continued)  
 (11) TRIAL BY JURY  
 (15) BEFORE THE HONORABLE BRIAN C. SHOTTELL  
 Superior Court Judge

(16) APPEARANCES

(17) FOR THE PLAINTIFF

(18) N. ROBERT STOLL  
 Stoll Stoll Berne & Locking  
 209 Southwest Oak Street  
 Portland OR 97204  
 503/227-1600  
 (21) TIMOTHY J. PETUNEN  
 Birch Horton, Bittner & Chocot  
 1127 West Seventh Avenue  
 Anchorage AK 99501  
 907/276-1550  
 (22) SAMUEL J. FORTIER  
 Fortier & Mikko  
 2550 Denali Street Suite 604  
 Anchorage AK 99503  
 907/277-4222

(11) PROCEEDINGS  
 (12) (Jury out at 8:40 a.m.)  
 (13) (Call to Order of the Court)  
 (14) THE CLERK Please rise  
 (15) THE COURT We're on the record and the jury is not  
 (16) present  
 (17) Counsel did you want to take something up before we  
 (18) start?  
 (19) MR. CLOUGH Yes Your Honor We had three  
 (20) evidentiary and exhibit questions to bring up outside the  
 (21) presence of the jury for the first couple of witnesses. It  
 (22) would be easier to do that at the opening.  
 (23) THE COURT Sure  
 (24) MR. CLOUGH First of all I don't know if this is  
 (25) directed to the clerk or to Jodi they have asked for the sound  
 (26) to be turned on in the auxiliary courtroom I don't know who  
 (27) turns that on. Having made my effort in that direction  
 (28) The first thing I wanted to address was the mousse patty  
 (29) which is back again today. Over the weekend -  
 (30) THE COURT I haven't seen the mousse patty by the  
 (31) way  
 (32) MR. CLOUGH I think it would be good if the Court  
 (33) sees it. And a very fine piece of Tupperware. The mousse  
 (34) patty is listed for all three of the first witnesses and the  
 (35) first two or three tomorrow as well. The objection is

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(1) FOR THE DEFENDANTS

(2) CHARLES P. DIAMOND  
 M. RANDALL OFFENHEIMER  
 LINDA JANE SMITH  
 (3) O'Melveny & Myers  
 400 South Hope Street  
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 (5) JOHN F. CLOUGH III  
 Clough & Associates  
 (6) 431 N. Franklin St. #202  
 Juneau, AK 99801  
 907/586-5777  
 (7) Reported by  
 (8) LEONARD J. DIPIAULO PPR  
 Registered Professional Reporter  
 Midnight Sun Court Reporters  
 (10) 2550 Denali Street Suite 1505  
 Anchorage Alaska 99503  
 (11) 907/258-7100

(1) different  
 (2) We have had an opportunity to look at it thank you Mr  
 (3) Stoll given an opportunity to take a brief sample of it over  
 (4) the weekend. However it's my understanding based on what  
 (5) Mr. Stoll told me that this particular mousse patty was  
 (6) collected off a beach in Old Harbor in 1991 and that none of  
 (7) the witnesses here were involved in the picking up of this  
 (8) particular mousse patty.  
 (9) I believe it's going to be offered for is this like what  
 (10) you saw. And if that's what the purpose is I do have an  
 (11) objection to it because there is no foundation through any of  
 (12) these witnesses where this mousse patty came from - where it  
 (13) came from or whoever picked it up off the beach thought it was  
 (14) and whatever else it was stirring around there.  
 (15) It could be from right underneath a boat lubricating oil  
 (16) We would like to make some evidence that there was a lot of  
 (17) things spilled in the water through witnesses testifying here  
 (18) in court as to where the mousse patty came from and the  
 (19) circumstances under which it came. We would object to it  
 (20) being  
 (21) used here in court.  
 (22) THE COURT Counsel it's your mousse patty  
 (23) MR. STOLL Your Honor this happens to be a mousse  
 (24) patty. The answer is that it's similar to the testimony will  
 (25) be by all these witnesses that it's similar to if not  
 (26) identical to mousse patties that they saw or removed from

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(1) beaches on numerous occasions. It looks like it. It's the  
 (2) same consistency. It smells like it. It's similar.  
 (3) It's just like having a gun or a knife. You say is this  
 (4) what the knife looked like or is this what the knife looked  
 (5) like? We are not saying this is necessarily a mousse patty  
 (6) from the Exxon Valdez although we think it is. We are - or  
 (7) that this particular witness picked this up. I don't think we  
 (8) need to show that.  
 (9) This is only - these witnesses identify this as being  
 (10) similar to the mousse patties that they saw in their area.  
 (11) That's all. I think it's perfectly admissible for that  
 (12) purpose.  
 (13) THE COURT: You cannot - it's not admissible but you  
 (14) can certainly show it. Let the jury see it and say it was  
 (15) similar to that but I'm not going to admit it not without a  
 (16) foundation for admission.  
 (17) MR. CLOUGH: Your Honor, if I might be heard.  
 (18) I'm leery to revisit a topic once you ruled. My concern is  
 (19) precisely what you said the fact that it's similar or  
 (20) identical. One of the things we've tried to indicate in this  
 (21) case is that there is a lot of oil related products on some of  
 (22) these beaches and in fact they do look somewhat similar.  
 (23) If we had any - obviously they got this from someplace.  
 (24) If they presented us with a foundation under the circumstances  
 (25) which this particular mousse patty was obtained, I could

(1) this letter had apparently made it - requested that a  
 (2) particular investigation be made and this sets forth the  
 (3) results of that investigation. This is, I believe, the type of  
 (4) document that factual findings resulting from a special  
 (5) investigation which is not within the public records  
 (6) exception and obviously we have a particular concern because  
 (7) the description of the last paragraph is Mr. Haakanson's  
 (8) personal observations in the course of this special  
 (9) investigation and he's not being presented here in the  
 (10) courtroom for cross examination.  
 (11) THE COURT: Just a second.  
 (12) MR. STOLL: Your Honor, I think this is - I don't  
 (13) agree with counsel. I think it's straightforward. I think  
 (14) it's a business record and a public document.  
 (15) Mr. Chichenoff is the Mayor of Ouzinkie and this is in the  
 (16) business records of the city of Ouzinkie.  
 (17) THE COURT: Who is Mr. Haakanson?  
 (18) MR. STOLL: He was the Ouzinkie oil coordinator during  
 (19) 1989 and '90.  
 (20) THE COURT: What was he doing when he did this  
 (21) letter?  
 (22) MR. STOLL: He was simply responding to - Mayor  
 (23) Brodic was the chairman of the Oiled Mayors Committee and  
 (24) Mayor Brodic had made an inquiry apparently - I don't exactly  
 (25) know exactly what Mayor Brodic had done. He was just writing

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(1) cross examine the witness and they might say it came from  
 (2) under  
 (3) a boat they were changing the oil on.  
 (4) THE COURT: They could have a papier mache moussé  
 (5) patty painted brown and say that's what this looks like.  
 (6) MR. CLOUGH: If I can move on to the next exhibit -  
 (7) and I need to approach the bench.  
 (8) This is a document you're going to get a copy this is  
 (9) 967. Your Honor, if I may retrieve this.  
 (10) THE COURT: Thank you very much. Hold on. I'm  
 (11) finish this okay? I've read it.  
 (12) MR. CLOUGH: Your Honor, this exhibit has been listed  
 (13) with Mr. Chichenoff the Mayor of Ouzinkie who is our first  
 (14) witness here today. He's not the author. He's not cited on  
 (15) it. He's obviously not associated with the City of Kodiak to  
 (16) whom the letter is addressed.  
 (17) Our objection is this does not fit into an exception of the  
 (18) hearsay rule. Mr. Stoll argues that it fits into the public  
 (19) records exception. If you look at Rule 8038(b)(4) part B of  
 (20) subsection 8 on the public records lists the exceptions where a  
 (21) public record does not qualify as admissible in exception to  
 (22) the hearsay rule and it says that one of the things that  
 (23) cannot be admitted are factual findings resulted from the  
 (24) special investigation with particular complaint case or  
 (25) incident.  
 (26) In this particular situation Mayor Brodic according to

(1) Mayor Brodic telling him about the oil on their beaches.  
 (2) THE COURT: Isn't that in the investigative report?  
 (3) MR. STOLL: I don't think it's an investigative  
 (4) report.  
 (5) THE COURT: Why?  
 (6) MR. STOLL: I think in investigative report is one  
 (7) where there is some special investigation conducted. I don't  
 (8) know that this is in that category.  
 (9) THE COURT: What do you think this was?  
 (10) MR. STOLL: I don't know.  
 (11) THE COURT: You don't know and I don't know. What do  
 (12) you think I'm going to do?  
 (13) MR. STOLL: I think that - well I think that it says  
 (14) what it is - it is what it appears to be.  
 (15) THE COURT: What letter led up to this do you have  
 (16) it?  
 (17) MR. STOLL: We don't have that here. Your Honor.  
 (18) THE COURT: I'm with you going to testify as to  
 (19) what he saw out there?  
 (20) MR. STOLL: Mr. Haakanson?  
 (21) THE COURT: The witness.  
 (22) MR. STOLL: The witness is going to testify as to what  
 (23) he himself saw.  
 (24) THE COURT: Is he going to testify he saw the oil out  
 (25) there in these locations?

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(1) MR STOLL He's going to say - I don't know about  
 (2) every one of these particular locations but he's going to say  
 (3) generally that he saw oil on Mr - Mr Chichenoff will testify  
 (4) that he saw oil on these various beaches owned by the  
 (5) municipality of Ouzinkie  
 (6) THE COURT I've got some problems with this  
 (7) counsel. It appears to me it may be an investigative report  
 (8) prepared by or for a government public officer or agency  
 (9) This is the city of Ouzinkie right?  
 (10) MR STOLL Right  
 (11) THE COURT In that instance the factual findings  
 (12) resulting from special investigation of a particular  
 (13) complaint I won't know what this is until I see the letter  
 (14) that generated this letter  
 (15) MR STOLL Can I lay a foundation in case we get the  
 (16) preceding letter?  
 (17) THE COURT Sure  
 (18) MR STOLL Should I do that outside the hearing of  
 (19) the jury  
 (20) THE COURT Probably might be able - we'll pick a  
 (21) right time to take a break  
 (22) MR STOLL I don't think he's going to be that long  
 (23) so maybe we can put him at the very beginning  
 (24) MR CLOUGH The last matter - if I may approach the  
 (25) bench - you have asked us to bring to your attention anything

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(1) monitoring oil out there He can ask him that question but I  
 (2) think that this monitoring agreement raises all kinds of  
 (3) collateral issues about the amount of pay and so on and I'd  
 (4) object to this monitoring agreement even if it is redacted to  
 (5) take out the amount of dollars because I think we get into an  
 (6) issue of whether they got compensated how much money I  
 (7) think  
 (8) - I think it's a big issue  
 (9) THE COURT Counsel I'll let you ask the questions  
 (10) if he answers in a way that he doesn't remember or say no then  
 (11) you can refresh his recollection with a document The  
 (12) document  
 (13) will probably not be admitted  
 (14) MR CLOUGH That would be fine selection of the  
 (15) sites and the reporting requirements I want to make sure I  
 (16) have that available to get the testimony out  
 (17) THE COURT Do you want that back?  
 (18) MR CLOUGH It's my copy Can I keep this because I  
 (19) may need it?  
 (20) MR CLOUGH Yes  
 (21) THE COURT Are we ready for the jury?  
 (22) MR STOLL Yes Your Honor  
 (23) MR STOLL Your Honor should we put Mr Chichenoff  
 (24) on with respect to this document -  
 (25) THE COURT You want to do it - yes  
 (26) MR STOLL Do it right now and if we can bring in  
 (27) the other documents subsequently

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(1) that could come near the issue of payment I don't want to  
 (2) introduce this for dollar amounts or the issue of payment at  
 (3) all but what is an important fact is that the city of Ouzinkie  
 (4) contracted with Exxon to perform shoreline monitoring during  
 (5) the winter of 1989 to '90 and as part of that business  
 (6) contract went out was required to make regular surveys  
 (7) report et cetera I would like certainly to be able to refer  
 (8) to the fact that Ouzinkie - it was Mr Chichenoff this  
 (9) witness in his capacity as Mayor of Ouzinkie who signed the  
 (10) contract  
 (11) I would like to be able to refer to the fact that Ouzinkie  
 (12) contracted with Exxon to perform these services and to the  
 (13) results of their monitoring program I do not want to make any  
 (14) reference to the amount of money conveyed if that would  
 (15) prevent me from doing that If the result would be to block  
 (16) out the amount I'm prepared to do that  
 (17) We do think though we should be entitled to introduce the  
 (18) fact that there was a contract entered into between actually in  
 (19) this case the two parties to perform a particular service  
 (20) related to the main issue at hand what oil was out there And  
 (21) under that contract we were required to make surveys and the  
 (22) reports and the results of those reports  
 (23) MR STOLL Your Honor I think if he wants to ask a  
 (24) question as to whether or not there was an agreement between  
 (25) the city of Ouzinkie and Exxon as to whether they were

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(1) THE COURT Sure if you want to  
 (2) MR STOLL Mr Chichenoff?  
 (3) THE CLERK Sir can you please attach the microphone  
 (4) and remain standing for the oath  
 (5) THE WITNESS I have a little problem hearing  
 (6) THE CLERK Can you attach the microphone to your  
 (7) shirt or collar? Can you stand up and raise your right hand  
 (8) (The Witness Is Sworn)  
 (9) THE CLERK Please be seated  
 (10) Sir for the record can you state your full name?  
 (11) A My name the Zack Peter Chichenoff  
 (12) THE CLERK Can you spell your last name please?  
 (13) A C h i c h e n o f f  
 (14) THE CLERK And your occupation?  
 (15) A Retired fisherman and I'm the Mayor of the city of  
 (16) Ouzinkie  
 (17) VOIR DIRE EXAMINATION OF ZACK P CHICHENOFF  
 (18) BY MR STOLL  
 (19) Q Mr Chichenoff I'm going to show you what has been  
 (20) marked  
 (21) as plaintiffs Exhibit 9671 Are you familiar with this  
 (22) document? Is this a document city of Ouzinkie?  
 (23) A I know the signature of the man that signed that thing  
 (24) Q Is this a record of the city of Ouzinkie?  
 (25) A That's one of our whatever you call it It's one of our  
 (26) papers

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- (1) Q From your business records?  
 (2) A Yes  
 (3) MR STOLL That's all I have Your Honor  
 (4) THE COURT Mr Stoll is economical with his time He  
 (5) surprised me We're going to have to wait for the jury  
 (6) MR STOLL Your Honor if you recall I put on a  
 (7) witness Friday my direct was less than 30 minutes - 20  
 (8) minutes  
 (9) THE COURT I was thinkin\_ about awarding you a  
 (10) certificate counsel  
 (11) MR STOLL Oh good  
 (12) THE COURT The witness will be sworn before the jury  
 (13) so they can see him  
 (14) MR CLOUGH I have one brief area to follow up on the  
 (15) foundation  
 (16) VOIR DIRE EXAMINATION OF ZACK P CHICHENOFF  
 (17) BY MR CLOUGH  
 (18) Q Mr Chichenoff my name is John Clough I'm from Juncau  
 (19) Good morning  
 (20) Do you still have the document in front of you? Can you  
 (21) hear me okay?  
 (22) A Will you speak up a little louder  
 (23) Q I will be happy to do that Can you hear me now?  
 (24) A Yes  
 (25) MR CLOUGH Permission to approach the witness Your

- (1) Q But you're not asserting\_ involvement for damages of the Dump  
 (2) Beach are you?  
 (3) A Well I don't know that's up to my attorney  
 (4) MR CLOUGH Your Honor rather than put  
 (5) Mr Chichenoff through this paragraph by paragraph I just  
 (6) represent - I don't think Mr Stoll will dispute this only  
 (7) limited portion of the properties listed here are parcels at  
 (8) issue in this litigation That was the point I was trying to  
 (9) get across thank you Mr Chichenoff  
 (10) THE COURT Mr Chichenoff you're going to take the  
 (11) oath again  
 (12) A Beg your pardon?  
 (13) THE COURT You'll take the oath before the jury  
 (14) (Jury in at 9:00 a.m.)  
 (15) THE COURT Good morning everybody You may be  
 (16) seated  
 (17) THE CLERK Sir will you raise your right hand

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- (1) Honor I think this would work a little easier  
 (2) THE COURT Fine  
 (3) BY MR CLOUGH  
 (4) Q Mr Chichenoff can you read on your copy do you see  
 (5) where  
 (6) it describes some general areas in the vicinity of your town?  
 (7) See where it starts for example on the northern part of  
 (8) Spruce Island can you read that on that copy sir?  
 (9) A Yes  
 (10) Q Now for that first paragraph there the one that says on  
 (11) the northern part of Spruce Island North Cape Beach is  
 (12) Pinnacle Cove and the island adjacent to Pinnacle Cove  
 (13) none  
 (14) of those are properties owned by the city of Ouzinkie are  
 (15) they?  
 (16) A That portion of Pinnacle Cove  
 (17) Q Aside from the portion of Pinnacle Cove the rest of it is  
 (18) not owned by the city?  
 (19) A As far as I know owned by the Native corporation  
 (20) Q Now let's go to the next one Do you see where it says on  
 (21) the west side Garden Point Beach the Dump Beach Mission  
 (22) Beach and Sourdough Flats Ouzinkie does own Sourdough  
 (23) Flats?  
 (24) A Yes we do  
 (25) Q But the city doesn't own Garden Point Beach or Dump Beach  
 (26) or Mission Beach?  
 (27) A Dump mission is the city property right at the end of the  
 (28) airstrip

- (1) JACK P CHICHENOFF  
 (2) called as a witness herein being first duly sworn to state the  
 (3) truth the whole truth and nothing but the truth testified as  
 (4) follows  
 (5) THE CLERK Sir for the record I need you to state  
 (6) your full name spelling your last name  
 (7) A My name is Zack Peter Chichenoff and my last name is  
 (8) spelled C h i c h e n o f f  
 (9) THE CLERK And your occupation?  
 (10) A Although I'm not Major League Baseball player and  
 (11) fishermen  
 (12) DIRECT EXAMINATION OF ZACK P CHICHENOFF  
 (13) BY MR STOLL  
 (14) Q Mr Chichenoff where were you born?  
 (15) A Pardon?  
 (16) Q Where were you born?  
 (17) A I was born in Alognak Village in the year 1927 September  
 (18) 17th  
 (19) Q And you live in Ouzinkie?  
 (20) A And I moved from Alognak in 1934 and I've lived there ever  
 (21) since  
 (22) Q In Ouzinkie?  
 (23) A Yes in Ouzinkie  
 (24) Q And what was your occupation before you retired?  
 (25) A I've been a fisherman all my life

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(1) Q And you re now the Mayor of Ouzinkie?  
 (2) A Yes I've been the Mayor for approximately 15 years steady  
 (3) I think  
 (4) Q Why do you live in Ouzinkie?  
 (5) A Where do I live?  
 (6) Q Why do you live there?  
 (7) A I wouldn't live anywhere else Such a beautiful place We  
 (8) live on an island probably around eight miles long and at the  
 (9) widest point five miles wide and covered with spruce trees and  
 (10) the whole northern end of Kodiak Island We are separated  
 from  
 (11) Kodiak by about a quarter mile call it Ouzinkie Narrows And  
 (12) in other words I think Ouzinkie originated its name from the  
 (13) Russian name Ouzki which means narrows and just like my  
 wife  
 (14) said I never want to live anywhere else but here  
 (15) Q Now just to get our bearings straight here I show you  
 (16) this exhibit this map which is 1354 A and Ouzinkie is up here  
 (17) near the top end of - well it's actually on Spruce Island a  
 (18) separate little island?  
 (19) A Yes it is  
 (20) Q Above Kodiak?  
 (21) A Yes on the northern tip of Kodiak Island  
 (22) Q And the narrows you're talking about are the narrows  
 (23) between Spruce Island and Kodiak Island?  
 (24) A Yes it is  
 (25) MR STOLL Could you just show the jury some pictures

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(1) Q And I'd like to show you Exhibit 1034 which is an aerial  
 (2) photograph See if I can do that That is an aerial  
 (3) photograph of Ouzinkie?  
 (4) A Yes it is  
 (5) Q What do people in Ouzinkie do Mr Chichenoff? What's  
 (6) their occupation? What's their principal occupation?  
 (7) A Well I think it's salmon fishing Just fishing period  
 (8) that's the main occupation  
 (9) Q Now I have an exhibit here Exhibit 1046 and are you  
 (10) familiar with this map?  
 (11) A I believe that has to do with municipal property  
 (12) Q Yes and are these various tracts of land are these  
 (13) properties that are owned by the city of Ouzinkie?  
 (14) A Yeah I suppose you could call them municipal reserves  
 (15) but yes they are  
 (16) Q And would you describe to the jury please these areas  
 (17) that are in red here in this cove here? What's this cove  
 (18) here?  
 (19) A That's what we call Ouzinkie Harbor  
 (20) Q And are the beaches in there?  
 (21) A Yes there are  
 (22) Q And also around in this area here (indicating)?  
 (23) A Yes there is beaches there  
 (24) Q And can you describe this area out here on this point?  
 (25) A That's main recreational area It's a wooded area and the

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(1) of Ouzinkie 946 and then 951?  
 (2) BY MR STOLL  
 (3) Q Mr Chichenoff on the big screen here you'll see some  
 (4) pictures and I want you to identify if you would those  
 (5) pictures  
 (6) Is this Ouzinkie? Actually you can see it on this screen  
 (7) right in front of you Mr Chichenoff You can see it right on  
 (8) this screen here - totally the same on  
 (9) A That's Ouzinkie  
 (10) Q 1946 is that out of Ouzinkie?  
 (11) A Pardon?  
 (12) Q Is that part of Ouzinkie?  
 (13) A Yes that's part of Ouzinkie  
 (14) Q Can we see 951?  
 (15) Is that a picture of Ouzinkie also?  
 (16) A Yes that's a picture of Ouzinkie  
 (17) Q And then 5004 A is that another picture of Ouzinkie?  
 (18) A That's a picture of Ouzinkie  
 (19) Q And 5004 B Would you pull up 5004 B I think that's the  
 (20) wrong picture Is that also from Ouzinkie?  
 (21) MR CLOUGH I don't think he could hear you  
 BY MR STOLL  
 (22) Q Mr Chichenoff is that also from Ouzinkie?  
 (23) A Yes that's a picture of Ouzinkie and the post office  
 (24) is there

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(1) flats over here and everybody uses it during the summertime  
 (2) also back here by this lake There is trails through the  
 (3) spruce trees going this way and also along the shoreline  
 (4) through this picnicking area as we call them And over  
 (5) through this hill here There used to be lakes here before the  
 (6) tidal wave dried them up  
 (7) Q The tidal wave you're talking about the 1964 earthquake?  
 (8) A Yes sir  
 (9) Q Do people use these beaches down here in the harbor?  
 (10) A Yes there is one right here in the center below you  
 (11) Russian church that's used regularly for lapture I don't  
 (12) know It's a ball game And also for the kids go swimming  
 (13) once in a while People cast off this beach for trout and  
 (14) salmon Right there is what we call the sandy beach That's  
 (15) the name of it I guess  
 (16) Q You can take the picture off the screen  
 (17) Now the municipal property has quite a bit of ocean front  
 (18) according to this map is that accurate?  
 (19) A Yes  
 (20) Q Now in 1989 were you - you were the Mayor of Ouzinkie  
 (21) then also is that correct?  
 (22) A Will you repeat that?  
 (23) Q In 1989 you were the Mayor of Ouzinkie?  
 (24) A Yes I was  
 (25) Q And in sometime in May of 1989 did you find oil on the

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(1) beaches of Ouzinkie and elsewhere?  
 (2) A Yes Right in those areas I just pointed out  
 (3) Q Would you tell the jury please - would you describe to  
 (4) the jury what you found first time that you were - the first  
 (5) time that you saw oil there Just describe what you saw just  
 (6) tell the jury  
 (7) A Well when the oil first hit Ouzinkie actually we  
 (8) anticipated it would come there I don't know why - whether  
 (9) it just in our minds myself and President of the Native  
 (10) corporation and so we had a few - some funds so we decided  
 (11) we were going to try to protect some of our subsistence areas  
 (12) And the city just got done having an airstrip built and there  
 (13) was some logs laying around and we were having a sanitary  
 (14) landfill cleared for our garbage And we had logs laying  
 (15) around and somebody suggested we make log booms I don't  
 (16) know where it came from So we sort of combined our equipment and  
 (17) materials we had together and that was before VECO or the  
 (18) borough or even some of these other organizations did  
 (19) anything  
 (20) So the corporation had a few dollars and the city had some  
 (21) equipment and the city had some materials so we just  
 (22) combined  
 (23) our efforts together and then built the boom Well during  
 (24) that time after that then when they hired some boats to go  
 (25) out they finally came in and started hiring people to clean up  
 (26) the oil

(1) anything ruined like that  
 (2) And we have - like we have a tidal wave or earthquake  
 (3) it's something we can't really help Something like that is  
 (4) something different I don't know makes me feel bad  
 (5) Q Did you see oil on other beaches in Ouzinkie that year?  
 (6) A Yes, I did  
 (7) Q And would you describe to the jury were - some of this  
 (8) oil that you described - let me start over  
 (9) You described that there were some bags that had been left  
 (10) apparently by some clean up crews and apparently there was some  
 (11) oil there?  
 (12) A Yes there was oil and debris but I wasn't even looking at  
 (13) that I knew that's what we were picking up  
 (14) In fact another thing that made me feel bad my kid were  
 (15) working on that oil spill and anytime you mentioned it or  
 (16) something they wouldn't want to have any of that They had  
 (17) seen dead fish dead animal  
 (18) Q Did it change - now you described - did you see oil down  
 (19) in these beaches down here in the harbor or well?  
 (20) A Yes I have - I had  
 (21) Q And how would you describe the consistency of this oil  
 (22) what would you - tell the jury  
 (23) A What can I say? It's a mess you know I seen what you  
 (24) call tar balls  
 (25) Q Tar balls?

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(1) So this one day when the people were all out there was  
 (2) mostly us older guys in the village and some women left so I  
 (3) decided I was going to take a walk and actually see what it was  
 (4) like in some of our picnic areas which only takes about ten  
 (5) minutes from the city to the back what we call the other side  
 (6) Q That's the side over here (indicating)?  
 (7) A Right there by the lake  
 (8) Q Right over here?  
 (9) A Right by the lake yeah And I walked back there with my  
 (10) dog I'm a dog lover I love dogs and I always have dogs or  
 (11) cats following me around I walked there I was sort of - I  
 (12) had a funny feeling in me Walked over there just by myself  
 (13) and my dog And I walked down by the beach where my wife  
 (14) and  
 (15) I and the kids used to go and have picnics There was so many  
 (16) bags already stored there with oily debris in them  
 (17) Q These are clean up bags?  
 (18) A Pardon?  
 (19) Q These were clean up bags?  
 (20) A Yeah And my dog ran out on the beach and all the sudden  
 (21) she stopped - it was a female dog - right by the water's  
 (22) edge and she was shaking her legs And I started walking down  
 (23) there and I saw all this mess down there this oily substance  
 (24) I don't know how to describe it It wasn't natural And the  
 (25) dog shook her legs and walked back up And I tell you - I  
 (26) mean I guess I cried I just couldn't help it I hate to see

(1) A Mouse whatever you call it  
 (2) Q Now let me show you what has been marked for  
 (3) identification as Exhibit 1536 and ask you if that - how does  
 (4) that look compared to the - what you described as mouse in  
 (5) the - on the parcels of Ouzinkie - is that more or less like  
 (6) it looked like or not?  
 (7) A Well yes in a sense but I'm not saying that all of them  
 (8) were that big or anything like that  
 (9) Q Was it just one or a lot of little pieces like that or was  
 (10) it -  
 (11) A No it was all over here and there and some places it was  
 (12) just mixed in with the sand and some places when the sun  
 (13) would  
 (14) come up then it would disappear for a while But it kept -  
 (15) like I told you about the cleanup back there well they had  
 (16) just got done with that beach and they left again Well the  
 (17) tide came in and some more stuff came  
 (18) Q Did that happen continually during the summer of 1989?  
 (19) A Yes it did I don't know how many times they went back to  
 (20) certain places and cleaned it up  
 (21) Q Did it smell like this?  
 (22) A I never got close that close to smelling it no  
 (23) Q Now I want to move this for a moment Now the city of  
 (24) Ouzinkie has made a claim in this court for damages to its  
 (25) beaches caused by the Exxon Valdez oil spill You're bringing  
 (26) that claim correct?

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(1) A Yes  
 (2) Q Could we see Exhibit DX13160 9 please?  
 (3) Now what I want to know Mayor Chichenoff is this the  
 (4) kind of complaint that you're making in this lawsuit is that  
 (5) what you're talking about? Is that why you brought this  
 (6) lawsuit?  
 (7) A What is that supposed to be?  
 (8) Q That's supposed to be an oiling of Kodiak I believe  
 (9) MR CLOUGH Your Honor may we approach the bench?  
 (10) THE COURT Yes don't answer  
 (11) (Sidebar conference off the record )  
 (12) (Sidebar concluded )  
 (13) BY MR STOLL  
 (14) Q Mr Chichenoff during the summer of 1989 into the fall  
 (15) the children continue to swim down there during 1989 Did  
 (16) people use the beaches during 1989 like they had in the past?  
 (17) Were they having picnics out there and using these for -  
 (18) A No  
 (19) Q Were they able to use these different areas where they  
 (20) fished for subsistence or sport fishing?  
 (21) A No  
 (22) Q There was no commercial fishing that year was there?  
 (23) A No  
 (24) Q And how long did the oil - I don't mean in the same oil but  
 (25) I mean how long did you have oil in Ouzinkie Did it

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(1) Q This one in red And you're personally familiar with that  
 (2) one aren't you sir?  
 (3) A Yes  
 (4) Q Now does the city have any leases or - does the city  
 (5) lease or rent this property out at all?  
 (6) A No not at the moment Not at this time  
 (7) Q Did it back in 1989 or 1990?  
 (8) A Not that I can recall  
 (9) Q And in fact the city doesn't generate any dollar income  
 (10) from these properties does it?  
 (11) A No it doesn't  
 (12) Q Now this particular property people don't use for  
 (13) subsistence off the beach here because there is a sewer outflow  
 (14) there isn't there? Isn't there one down - I think it's the  
 (15) west end of the beach  
 (16) A Yeah I believe there is an outflow yeah  
 (17) Q And that's why people don't use that part for subsistence?  
 (18) A I wouldn't know I suppose  
 (19) Q Now over here - now this is Block 24 that's what the  
 (20) appraisers and real estate people call them blocks What do  
 (21) you call this area here what I'm pointing to as Block 24?  
 (22) A Municipal Reserve I guess  
 (23) Q That section there what you call the municipal Reserve  
 (24) now that also wasn't leased for any money or anything was it?  
 (25) A Not that I can remember

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(1) continue into 1990?  
 (2) A Yeah I think it did Because I saw some myself when we  
 (3) were fishing - commercial fishing I didn't pick it up myself  
 (4) but one of the crew members did  
 (5) Q And today people are - are people using these beaches  
 (6) again now in 1994 are they using these beaches like they used  
 (7) to?  
 (8) A Yeah  
 (9) MR STOLL That's all Thank you  
 (10) CROSS EXAMINATION OF ZACK P CHICHENOFF  
 (11) BY MR CLOUGH  
 (12) Q Just one moment Mr Chichenoff I'll be right with you  
 (13) Hi Mr Chichenoff You remember we met a few minutes  
 (14) ago I'm John Clough and I represent Exxon here in th  
 (15) I want to talk to you about just a few things that you  
 (16) testified with Mr Stoll about just a moment ago here if I  
 (17) could And first of all what I would like to talk to you  
 (18) about is some of the parcels When I say parcels do you  
 (19) understand that I mean the properties owned by your city sir?  
 (20) A Yes I do  
 (21) Q And referring to them just trying to get an idea about  
 (22) them try to see Block 23 here Now do you see this property  
 (23) in here  
 (24) A Yes

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(1) Q And there is some picnic tables and stuff in there aren't  
 (2) there?  
 (3) A There might be  
 (4) Q And - well a portion of this is a really steep dropoff  
 (5) like a cliff of this part called Block 24?  
 (6) A Yes right  
 (7) Q And is that portion of this land right here?  
 (8) A Right near the dock  
 (9) Q And then it comes down from the dock and that's where you  
 (10) have your dock and boat landing is that right?  
 (11) A Would you repeat that?  
 (12) Q Sure On the other side of the dropoff is where your dock  
 (13) is right?  
 (14) A On the harbor side?  
 (15) Q Right And there is a boat landing area down in here  
 (16) correct? Don't people use this area to land their boats in  
 (17) your town?  
 (18) A Oh I'm getting a little confused about that Can you  
 (19) explain right where you're talking?  
 (20) Q Sure Can I bring it over to you?  
 (21) Don't people use this stretch in here to land their boats?  
 (22) A Of course they do They have skiffs they land there They  
 (23) bring salmon in for smoking  
 (24) Q Exactly Now they used that for boat landings before the  
 (25) oil spill right?

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- (1) A Yes they did  
 (2) Q And even during 1989 people still used that to land their  
 (3) boats there didn't they?  
 (4) A Well they used that because they needed boats for the  
 (5) clean up also  
 (6) Q But they were still able to use it as a boat landing is  
 (7) that correct?  
 (8) A I suppose you could say that  
 (9) Q And the oil spill didn't prevent them from using it as a  
 (10) boat landing like they always have?  
 (11) A What option did they have?  
 (12) Q That's the place people always landed their boats is that  
 (13) right?  
 (14) A Right  
 (15) Q Now you talked a lot about all the trails and stuff in here  
 (16) and the paths and the lakes do you remember that?  
 (17) A Yes I did  
 (18) Q This is Sourdough Flats?  
 (19) A That's Sourdough Flats  
 (20) Q And there is a lot of nice trails and stuff back in there?  
 (21) A Yes there is  
 (22) Q And you testified and it's your recollection that people  
 (23) weren't using this recreational area that much back in 1989 is  
 (24) that right?  
 (25) A Well how could they with all the oil on the beaches

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- (1) Q And you got out there on some of the shorelines and see the  
 (2) bags that people would pick these up off the beaches and put  
 (3) them into the bags?  
 (4) A That's correct  
 (5) Q And the bags would be carried away?  
 (6) A Not right away  
 (7) Q Sometimes it would be a few days or a week or more?  
 (8) A That's right  
 (9) Q But eventually the bags with the mounds would be taken  
 (10) away?  
 (11) A Eventually yes  
 (12) Q And you described how the tide might come back and bring  
 (13) more of these mousse patties?  
 (14) A Yes they did  
 (15) Q But the people worked throughout the summer?  
 (16) A Yes they worked  
 (17) Q And so they would go back to the coast line that they didn't  
 (18) they?  
 (19) A Yes they did  
 (20) Q And they would pick up the stuff that came in off the  
 (21) tides didn't they?  
 (22) A Yes  
 (23) Q And they would put it in the bags right?  
 (24) A Yes they did  
 (25) Q And they carried it away?  
 (26) A Yes they did

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- (1) Q Wasn't one of the reasons that people weren't using it was  
 (2) because all the young parents were out working on the  
 (3) cleanup?  
 (4) A That's possible yes  
 (5) Q And in your deposition didn't you explain that to  
 (6) Mr. Albright that the parents weren't home to take the kids out  
 (7) there that's why they couldn't use that?  
 (8) A Would you repeat that please?  
 (9) Q Let me just put it this way A lot of people from your  
 (10) town were working on the cleanup huh?  
 (11) A That's correct  
 (12) Q And they worked pretty much throughout the summer?  
 (13) A Well they were all working right  
 (14) Q But throughout the summer of 1989?  
 (15) A Yes through the summer yes  
 (16) Q And where is the mousse patty? They were out there to pick  
 (17) up things like this right?  
 (18) A Well yes they were picking oil up I wouldn't say what  
 (19) kind they were picking up  
 (20) Q And there were some tar balls?  
 (21) A There were some tar balls  
 (22) Q And this is a mousse patty There was some mousse patties  
 (23) like this and some of them were smaller than this?  
 (24) A Yes they were  
 (25) Q In fact some of them were a lot smaller right?  
 (26) A Well I wouldn't say that

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- (1) Q Now do you know Bill Pyles?  
 (2) A Bill Pyles?  
 (3) Q Yes You know who Bill Pyles is?  
 (4) A Yes of course I do  
 (5) Q Can you tell the jury who Bill Pyles is?  
 (6) A Bill Pyles was the Village Police Safety Officer or VPSO  
 (7) during the 1989 oil spill And I think he was hired by VECO to  
 (8) coordinate the cleanup and -  
 (9) Q Now the Village Public Safety Officer that sort of like  
 (10) the village police officer that type person for your village  
 (11) is that right?  
 (12) A That's right Has to watch out for the health and safety  
 (13) of the people but didn't carry any arms or anything  
 (14) Q Exactly And in a number of small communities in Kodiak  
 (15) Exxon used the public safety officers as the person to  
 (16) coordinate the response effort to clean up the beaches is that  
 (17) right?  
 (18) A That's correct  
 (19) Q And it was Mr. Pyles that they used in your town?  
 (20) A Yes he was from Ouzinkie  
 (21) Q Did you know him fairly well in your capacity as Mayor?  
 (22) A Yes I did  
 (23) Q And he has since moved from Ouzinkie He works in Kodiak  
 (24) as a police officer there doesn't he?  
 (25) A Yes he does

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(1) Q Now his job was essentially to supervise all the people  
 (2) from your town that were out there cleaning up the shorelines  
 (3) in your area isn't that right?  
 (4) A Well I don't really know what - how much jurisdiction he  
 (5) had or whatever. Because they had some other coordinators  
 (6) the  
 (7) city had its own - like people that took care of - made sure  
 (8) where they were cleaning up at and made reports and records  
 (9) Like for instance Mr. Haakanson on that paper there he was  
 (10) one of the coordinators also  
 (11) Q But during the summer of 1989 you just testified that they  
 (12) used the Village Public Safety Officer who was Mr. Pyles to  
 (13) coordinate the clean up crews - actually I think he even  
 (14) worked on hiring them to hire and coordinate the clean up  
 (15) crews from your town isn't that right?  
 (16) A I said that - well maybe I did say that  
 (17) Q Now Mr. Pyles has been deposed in this case okay and he  
 (18) testified under oath that by the end of the summer there really  
 (19) wasn't -  
 (20) MR STOLL Hold it hold it Your Honor -  
 (21) THE COURT Ask direct questions counsel don't use  
 (22) hearsay  
 (23) MR CLOUGH I appreciate that  
 (24) BY MR CLOUGH  
 (25) Q Would you agree with me Your Honor - Mr. Chichenoff?  
 (26) THE COURT Probably not

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(1) MR CLOUGH Ladies and gentlemen of the jury would  
 (2) you agree with me? I don't think there is anybody in the  
 (3) courtroom that would agree with me at this point. Excuse me  
 (4) everybody. Well h - Your Honor h - the Mayor  
 (5) BY MR CLOUGH  
 (6) Q Your Honor the Mayor Mr. Chichenoff would you agree  
 (7) with  
 (8) me sir that over the course of the summer there was less and  
 (9) less oil coming in with the tide?  
 (10) A I don't know if I could agree with you or not  
 (11) Q Well then let me just ask you this. Would you agree with  
 (12) me that Mr. Pyles as the oil spill coordinator from your town  
 (13) would be in a better position than you to know how much oil  
 (14) was  
 (15) coming in over the summer?  
 (16) A I doubt that also  
 (17) Q Why?  
 (18) A Because I get facts from other people you know my own  
 (19) kids that were working on there - like from other people besides  
 (20) Mr. Pyles. As far as I know he stayed over in that office  
 (21) most of the time for the corporation  
 (22) Q And he was the Village Public Safety Officer for the entire  
 (23) city of Ouzinkie right?  
 (24) A He was a first public safety officer and I wish we had him  
 (25) back again  
 (26) Q Because he was good at his job and you trusted him?  
 (27) A Yeah I trusted Bill

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(1) Q Now during the winter of 1989 and 90 your community  
 (2) entered into an arrangement with Exxon to monitor the  
 (3) shorelines in the general vicinity of Ouzinkie to see what oil  
 (4) might be turning up through the winter and into the spring  
 (5) isn't that right?  
 (6) A Yes  
 (7) Q And you signed a contract with Exxon whereby the city of  
 (8) Ouzinkie was actually hired by Exxon to go out and check not  
 (9) just beaches these municipal properties but shorelines in the  
 (10) whole area around your community to see what if anything  
 (11) might be out there in 1990 isn't that right?  
 (12) A Yes  
 (13) Q And as part of that agreement you the city and Exxon  
 (14) selected I think four different sites that would be visited  
 (15) on a regular basis by Ouzinkie residents hired by Exxon just  
 (16) for the purpose of checking how much oil was out there isn't  
 (17) that right?  
 (18) A I guess must be right  
 (19) Q And those sites do you recall were one Sourdough Flats  
 (20) the big area you're talking about here is that right sir?  
 (21) A Yes  
 (22) Q And then some areas I don't think show up quite on the map  
 (23) and maybe you can give us some idea where they are. Camel's  
 (24) Rock Area where is that?  
 (25) A That's right across

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(1) Q Would be down in here?  
 (2) A Yeah Kodiak Island side  
 (3) Q On the Kodiak Island side so it would be down in here?  
 (4) A Yes  
 (5) Q And then Garden's Point where would that be?  
 (6) A See where that little tip comes out there little bit  
 (7) further this way right in that area  
 (8) Q This general area here (indicating) And then also Monks  
 (9) Lagoon where would that be?  
 (10) A That's on the south - part of Spruce Island  
 (11) Q So that would be a little farther away?  
 (12) A Right towards Kodiak  
 (13) Q And under your contract that the city signed with Exxon you  
 (14) were required basically to fill out written reports for each of  
 (15) these inspections as to what the people from Ouzinkie found on  
 (16) these shorelines isn't that right?  
 (17) A Yeah I guess  
 (18) Q Would it help if you saw the contract - let me ask do you  
 (19) recall signing the contract on behalf of the city?  
 (20) MR STOLL Your Honor may I approach the bench?  
 (21) (Bench conferred off the record)  
 (22) BY MR CLOUGH  
 (23) Q Mayor Chichenoff sir I just want to show you something  
 (24) which for record purposes if I may refer to it by the exhibit  
 (25) number DX 12363 which is entitled Shoreline Monitoring

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(1) Agreement entered into on September 22nd 1989 between Exxon  
 (2) company and the city of Ouzinkie I'd like you to just take a  
 (3) look at that and I think you'll see sir on the last page  
 (4) that you signed this on behalf of the city Just take a second  
 (5) and look at that  
 (6) A My signature  
 (7) Q Now if I could direct your attention sir to the second  
 (8) page and the paragraph here 2 B which has the rather messy  
 (9) blue pen line which is mine and not part of the original  
 (10) Could you read that -  
 (11) THE COURT To yourself  
 (12) BY MR CLOUGH  
 (13) Q Yes very much to yourself  
 (14) A (Witness complies)  
 (15) Q Now looking at that paragraph Mayor Chichenoff do you  
 (16) recall now that part of the terms of your agreement with Exxon  
 (17) for this shoreline monitoring program was that you would send  
 (18) regular written reports back to Exxon documenting what the  
 (19) people from the city of Ouzinkie who worked on this contract  
 (20) found in the way of oil on the shorelines at these sites?  
 (21) A You mean we didn't?  
 (22) Q No all I'm asking wasn't that one of the requirements?  
 (23) A That's what it said right there  
 (24) Q I actually have here Mr Chichenoff - I'd forgotten I had  
 (25) it or I would have put it up earlier

(1) (Sidebar conference held out of the hearing of the jury )  
 (2) THE COURT What's the objection?  
 (3) MR STOLL Hearsay  
 (4) MR CLOUGH Well these are clearly business records  
 (5) compiled under the terms of the contract regularly kept in the  
 (6) course of the business and the contract was entered into  
 (7) between the city and Exxon That's what we were required to  
 (8) do classic business records Rule 8036 exception  
 (9) THE COURT This is - are reports from the village  
 (10) government  
 (11) MR CLOUGH Yes pursuant to the contract  
 (12) THE COURT Isn't it an admission?  
 (13) MR CLOUGH I have that as a fall back argument  
 (14) MR STOLL Okay  
 (15) THE COURT Could very possibly be Objection is  
 (16) overruled  
 (17) (Sidebar concluded )  
 (18) BY MR CLOUGH  
 (19) Q I'm going to be asking you some questions about the reports  
 (20) under the terms of your agreement And I realize that in  
 (21) places this may be a little difficult to read so we'll do the  
 (22) best we can and I'll come up and help you  
 (23) Do we have another copy that we can give the witness?  
 (24) MS SMITH John can't read it at all  
 (25) BY MR CLOUGH

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(1) MR CLOUGH Mr Stoll this is a map which I think  
 (2) locates the four sites If you want to look at it first - I  
 (3) apologize I don't have a copy of it  
 (4) BY MR CLOUGH  
 (5) Q Can you see that on your screen Mayor Chichenoff? Can  
 (6) you  
 (7) see the map on your screen there?  
 (8) Mayor Chichenoff does that accurately show the locations  
 (9) of the four monitoring sites we talked about Sourdough Flats  
 (10) C.M.I.s Pock Area Garden's Point?  
 (11) A I can barely make out the letters on that  
 (12) Q It is tough Let me help you out This is Monks - down  
 (13) to this - that's Monks Lagoon I should use the pointer for  
 (14) that Well I can point with my finger That is Monks Lagoon  
 (15) down in that area?  
 (16) A Yeah I suppose  
 (17) Q And over here is Sourdough Flats that we were talking about  
 (18) earlier and up here is Garden's Point?  
 (19) A Yes  
 (20) Q And up here is the North Cape site?  
 (21) A Yes  
 (22) Q And counsel for your reference what I'm referring to is  
 (23) out of defense Exhibit 12080 and portions of Defendants  
 (24) Exhibit 10609  
 (25) MR STOLL We have an objection to this  
 (26) MR CLOUGH That's why I wanted to tell you

(1) Q I'm going to give you this also Mayor Chichenoff This  
 (2) is a written copy what we're going to see on the screen I'm  
 (3) going to try to blow up what's on the screen and we'll see  
 (4) what's the easiest for you to read all right?  
 (5) Zooming in some here The very top it says Winter  
 (6) Monitoring Form Kodiak Island city or village and it says  
 (7) Ouzinkie th re right sir?  
 (8) A Yes  
 (9) Q And there are three names for the monitors Can you read  
 (10) the names? The...  
 (11) gentlemen of the jury are up in this corner of the monitor  
 (12) MR PETUMENOS Plaintiff's pen  
 (13) MR CLOUGH Instruction course would be equally  
 (14) appreciated  
 (15) BY MR CLOUGH  
 (16) Q Are those Andy Christofferson Cliff Panamarioff and  
 (17) Katherine Panamarioff?  
 (18) A Yes  
 (19) Q Those are all residents of the Ouzinkie?  
 (20) A Yes  
 (21) Q And they all worked for the city of Ouzinkie on this  
 (22) program?  
 (23) A Yes I believe they did It's been awhile  
 (24) Q But your best recollection is that they did?  
 (25) A Yeah I think

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(1) Q And what they and the other people who worked for the city  
 (2) would do is travel out to these sites on a number of occasions  
 (3) and examine the shoreline and see what they could find right?  
 (4) A Yes  
 (5) Q And then they would fill in these reports reporting what  
 (6) they found. Now I'd like to look at this report. If you can  
 (7) see the date, looks like this one is dated December 27th  
 (8) 1989. Can you see that? Again I apologize it's a copy of a  
 (9) copy. That happens in the field.  
 (10) A Yes  
 (11) Q And then there is a section under this called Type of  
 (12) Oiling Observed During This Survey. Do you see that a little  
 (13) farther down?  
 (14) A Yes  
 (15) Q And it says number of tar balls per hundred yards and it  
 (16) says none right?  
 (17) A Yes  
 (18) Q Number of mousse patties per hundred yards and it says  
 (19) none again right?  
 (20) A Yes  
 (21) Q And then it talks about bands of oil and they didn't see  
 (22) any bands of oil. Still on the first page we're going to get  
 (23) to the second one in a second. Just directing your attention  
 (24) to the first page there Mayor Chichenoff do you see where it  
 (25) says bands of oil and it's checked none or no. Is that

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(1) legible from where you are?  
 (2) A Yes I know it  
 (3) Q And no pools or pockets of oil?  
 (4) A Yes  
 (5) Q And no sheens near the shoreline?  
 (6) A Yes  
 (7) Q Now your crew went back out there a little later on  
 (8) January 14th same place Sourdough that's part of the  
 (9) program you keep going out there over and over again to make  
 (10) the observations. So here is what they saw on the 14th and  
 (11) this time looks like it was Cliff and Katherine. And I will  
 (12) in the interest of everybody's time won't walk through them  
 (13) one by one but can you see in fact they observed no oiling  
 (14) tar balls mousse patty tar balls or sheens of any kind  
 (15) during their inspection?  
 (16) A I don't understand what you're trying to do with this  
 (17) Q All I'm asking you sir isn't that what the report file by  
 (18) your city said?  
 (19) A I'm not familiar with these reports. Some of these reports  
 (20) I didn't see.  
 (21) Q All I'm asking you sir is that what it said? That's  
 (22) really all I'm asking.  
 (23) MR STOLL Counsel we'll stipulate that it is  
 (24) that.  
 (25) BY MR CLOUGH

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(1) Q Looking to the next page - and again this is the  
 (2) Sourdough property which is the largest property owned by the  
 (3) city - they went out there again or at least a crew went out  
 (4) there again on February 16th  
 (5) MR CLOUGH Perhaps counsel will stipulate again  
 (6) BY MR CLOUGH  
 (7) Q On the February 16th inspection conducted by this case  
 (8) four residents of Ouzinkie on behalf of the city under the  
 (9) monitoring contract there were no tar balls no mousse patties  
 (10) no bands of oil no pools no pockets and no sheens near the  
 (11) shore?  
 (12) MR STOLL Area - we're jumping to the 16th of  
 (13) February to a different beach  
 (14) MR CLOUGH No still the Sourdough test site  
 (15) MR STOLL That's fine says what it says  
 (16) BY MR CLOUGH  
 (17) Q Now I've got a whole lot of these I don't want to put  
 (18) you through putting them up there  
 (19) A You got to take the condition you know that time of year  
 (20) the weather is bad you know probably don't even go in there  
 (21) take a good look  
 (22) Q Let me ask you this A number of different residents of  
 (23) the city worked on this program didn't they?  
 (24) A Would you repeat that?  
 (25) Q Sure didn't a number of different residents of your city

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(1) work on the monitoring program?  
 (2) A Right  
 (3) Q And their job was to go out and document oil when they  
 (4) found it?  
 (5) A I understand that  
 (6) Q And do you believe those people did the best job they  
 (7) could?  
 (8) A Well you have to have monitors monitoring the monitors  
 (9) Q My question is Do you believe the residents of your town  
 (10) that were hired to do this job did the best they could?  
 (11) A I suppose  
 (12) Q And if we were to go through all of these reports together  
 (13) isn't it true that although in March they would find a couple  
 (14) of very isolated incidents where they would find a tar patty  
 (15) tar ball or mousse patty isn't it true generally they found  
 (16) very very little oil in 1990 on those sites?  
 (17) MR STOLL Your Honor I have an objection  
 (18) Counsel if you want to put this exhibit into evidence I  
 (19) welcome it And you want to refer to these particular  
 (20) documents covering - I think it's six occasions on four  
 (21) different places out of many months of monitoring - you can do  
 (22) that  
 (23) THE COURT Enough argument counsel You're offering  
 (24) to stipulate the document into evidence?  
 (25) MR STOLL Yeah

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(1) MR CLOUGH We would like to offer the entire series  
 (2) of monitoring reports for the entire time  
 (3) THE COURT Counsel?  
 (4) MR STOLL No objection  
 (5) THE COURT I'll admit them You can give me the  
 (6) numbers later  
 (7) MR CLOUGH With that stipulation from counsel - I  
 (8) thought we had no further questions One last question which  
 (9) counsel has properly brought to my attention  
 (10) BY MR CLOUGH  
 (11) Q You did mention in 1990 you yourself did on one occasion  
 (12) see some oil when you were salmon fishing? Do you recall  
 (13) testifying to that this morning?  
 (14) A I'm having a hard time understanding you okay?  
 (15) Q Sure This morning when Mr Stoll was asking you some  
 (16) questions sir - and I'm paraphrasing I'm not trying to quote  
 (17) you - I believe you testified that in 1990 once when you were  
 (18) out salmon fishing you saw some oil?  
 (19) A Yes  
 (20) Q My question for you is Wasn't the oil you saw well out to  
 (21) sea?  
 (22) A Not really Right by the beach there It was floating  
 (23) around the water you know  
 (24) Q Wasn't it about three or four miles away from Spruce  
 (25) Island?

(1) summer - or during 1989 when the people were out trying to  
 (2) clean up these beaches were the children able to use these  
 (3) beaches? The children weren't out on the clean up crews were  
 (4) they?  
 (5) A No the children weren't able to use those beaches during  
 (6) the cleanup because there was oil here and there  
 (7) Q And the -  
 (8) Can I have the use of this Elmo please?  
 (9) This map that Mr Clough put up - the city of Ouzinkie is  
 (10) up here correct?  
 (11) A That's correct  
 (12) Q And the only one of the four sites that people were  
 (13) contracted to inspect that is on municipal property is this one  
 (14) site in this cove on - called Sourdough Cove isn't that  
 (15) right? If you just look at that map  
 (16) A Yeah that's where the site was  
 (17) Q The others are not - the other sites are not on municipal  
 (18) property isn't that right? Garden's Point isn't on municipal  
 (19) property?  
 (20) A What's the question?  
 (21) Q Garden's Point is not municipal property it's not a  
 (22) municipal part?  
 (23) A No it isn't  
 (24) Q And North Cape certainly is not a municipal property is  
 (25) it?

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(1) A No In fact it was on Spruce Island  
 (2) Q But Spruce Island isn't part of Ouzinkie property is it?  
 (3) A Come at that again  
 (4) Q Wasn't this oil at least three or four miles away from your  
 (5) village that's all I'm asking?  
 (6) A From the village?  
 (7) Q Yes  
 (8) A It was on Spruce Island though  
 (9) Q But where you saw it it was at least three or four miles  
 (10) from the village?  
 (11) A It was in the Narrows between Wooded Island and close to  
 (12) North Cape  
 (13) Q Do you recall - isn't that three or four miles away from  
 (14) Ouzinkie?  
 (15) A Well from the village right  
 (16) MR CLOUGH No further questions Your Honor  
 (17) MR STOLL I just have a few questions  
 (18) REDIRECT EXAMINATION OF ZACK P CHICHENOFF  
 (19) BY MR STOLL  
 (20) Q With respect to Block 23 counsel asked you about if there  
 (21) was subsistence fishing here This is the beach area where  
 (22) they play that ball game that you were describing They used  
 (23) to play the ball game before the oiling?  
 (24) A Well it went below the church  
 (25) Q Right in this area here (indicating) And during the

(1) A No  
 (2) Q And Monks Lagoon is not municipal property is it?  
 (3) A No  
 (4) Q And Exxon contracted hired people from the municipality of  
 (5) Ouzinkie because Exxon left Ouzinkie in September 1989 isn't  
 (6) that right?  
 (7) MR CLOUGH Objection Your Honor  
 (8) THE COURT The because is the problem counsel  
 (9) Rephrase the question  
 (10) BY MR STOLL  
 (11) Q Did Exxon leave Ouzinkie in September of '89?  
 (12) A I'm not too sure  
 (13) Q It was in the fall of 1989 wasn't it?  
 (14) A Yes  
 (15) Q And did you see anybody from Exxon there during the winter  
 (16) months of 1989-1990 doing cleanup?  
 (17) A Would you repeat that please?  
 (18) Q Did you see anybody from Exxon or VECO there in Ouzinkie  
 (19) during the winter of 1989-1990 or was it just your people  
 (20) from the village?  
 (21) A No I don't believe I did  
 (22) Q Do you know whether Exxon was required by law to have  
 (23) somebody monitor these sites?  
 (24) A No I don't  
 (25) Q With respect to this - Mr Clough asked you a question -

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(1) MR STOLL May I approach the witness  
 (2) MR CLOUGH Can I see which page you're talking  
 (3) about?  
 (4) MR STOLL Yeah I'm talking about 11490  
 (5) BY MR STOLL  
 (6) Q Mr Stoll asked you about January 14th 1990 on Sourdough  
 (7) Beach and this also has - one of the things on this form is  
 (8) the number of inches of snow that's covering the ground And  
 (9) would you tell the jury what this says about inches of snow or  
 (10) rain there?  
 (11) A 4 11 inches  
 (12) Q Do you have any difficulty seeing oil under snow?  
 (13) A Been awhile I can't really remember  
 (14) MR STOLL That's all I have  
 (15) CROSS EXAMINATION OF ZACK P CHICHENOFF  
 (16) BY MR CLOUGH  
 (17) Q Several things very quickly  
 (18) First of all the Sourdough site - you and Exxon jointly  
 (19) selected the sites for the monitoring program isn't that  
 (20) true? When I say you I mean the city  
 (21) A I don't know  
 (22) Q Well the contract was signed by both of you right?  
 (23) A Yes  
 (24) Q And there had been discussions back and forth between you  
 (25) and Exxon in advance?

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(1) A Yes  
 (2) Q And one of the things you talked about was what sites were  
 (3) going to monitor?  
 (4) A Three  
 (5) Q And the one that you picked for the city site was the  
 (6) great big green one Sourdough Flats?  
 (7) A That's correct  
 (8) Q Not the little red one here right? You didn't pick this  
 (9) little one?  
 (10) A Would you repeat that question?  
 (11) Q Sure The site that you selected to monitor was the great  
 (12) big one the green one?  
 (13) MR STOLL Your Honor may I - you who's you?  
 (14) BY MR CLOUGH  
 (15) Q The site that the contract listed to be the city property  
 (16) to be inspected with the large green parcel Tract C correct?  
 (17) A I guess  
 (18) Q And you're just looking at this map see that Tract C has  
 (19) the great majority of all the shoreline that the city of  
 (20) Ouzinkie is going about in this case doesn't it and you can  
 (21) look and compare the green area versus the little red ones over  
 (22) here?  
 (23) A Both  
 (24) Q Now Mr Stoll asked you a question about Exxon leaving  
 (25) Ouzinkie Exxon was never in Ouzinkie were they?

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(1) A They weren't?  
 (2) Q No Bill Pyles was in Ouzinkie for Exxon wasn't he?  
 (3) A And also John Peavey  
 (4) Q John Peavey would come to visit on occasion from Kodiak  
 (5) right? Correct?  
 (6) A I saw him quite a few times  
 (7) Q But Bill Pyles was hired by Exxon full time to be in  
 (8) Ouzinkie right?  
 (9) A I guess I don't know for sure  
 (10) Q Because Bill Pyles was as you said the Village Public  
 (11) Safety Officer for your hometown?  
 (12) A Yes he was  
 (13) Q And he was there throughout the summer?  
 (14) A I suppose yes  
 (15) Q And he stayed on after the summer until he finally moved to  
 (16) Kodiak and became a police officer there?  
 (17) A Oh yes He was a VPSO until just about a year ago yes  
 (18) Q And in fact all the people who worked for Exxon and  
 (19) Ouzinkie were local residents They hired local residents to  
 (20) do this didn't they?  
 (21) A What was that?  
 (22) Q What Bill Pyles did for Exxon was hire local residents from  
 (23) right there in Ouzinkie to do this cleanup?  
 (24) A Well I don't know if he was the hiring person  
 (25) Q The people who were doing the cleanup on your shorelines

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(1) were the residents of your own community who had been hired  
 (2) by  
 (3) Exxon right?  
 (4) A Yeah Well they were hired by VECO  
 (5) Q By VECO for Exxon and they were your residents?  
 (6) A Yeah that's correct  
 (7) Q And lastly about the snow on the beaches I looked down in  
 (8) a place - I live down in a place Auke Bay in Juneau I'm  
 (9) fortunate to live on the water When we have heavy snow the  
 (10) tide comes in and out unless it's snowing at that particular  
 (11) moment there is no snow on the intertidal area because the  
 (12) water washes it off doesn't it?  
 (13) A I wouldn't know  
 (14) Q You have never seen - you've seen lots of snow around  
 (15) Ouzinkie come on  
 (16) A What are you trying to say?  
 (17) Q Let me show you some pictures that might help All from  
 (18) DX 10609 which we produced from the winter monitoring  
 (19) program  
 (20) and will be part of all the photographs and materials compiled  
 (21) by the residents of Ouzinkie under this contract?  
 (22) MR STOLL Is this a designated -  
 (23) MR CLOUGH Yes all part of DX 10609  
 (24) BY MR CLOUGH  
 (25) Q Now this is one of the photographs taken and I can show  
 (26) you the contract again by the way but one of the things that  
 (27) your people did under that contract was they took photographs



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(1) A I have three two boys nine and seven and a girl who s  
 (2) four  
 (3) Q And you're a commercial fisherman and a school teacher  
 you  
 (4) said?  
 (5) A Yes I am  
 (6) Q And where do you teach school?  
 (7) A I teach school at Kodiak Junior High in Kodiak Alaska  
 (8) Q What do you teach?  
 (9) A Eighth grade science chemistry physics some  
 (10) environmental sciences a little bit of Earth science  
 (11) Q How long have you been a school teacher?  
 (12) A Since 1983 so this will be my eleventh year  
 (13) Q And how long have you been a commercial fisherman?  
 (14) A I started with my father in 1965 so roughly 30 years 29  
 (15) years  
 (16) Q And did you go to college incidentally?  
 (17) A Yeah I went to University of - Oregon State University in  
 (18) Corvallis Oregon from '75 through '81  
 (19) Q Did you obtain a degree there?  
 (20) A I got my Bachelor's degree in biology and a minor in  
 (21) education  
 (22) Q And then did you subsequently get a Master's degree?  
 (23) A Yeah went to the University of Northern Colorado '89 and  
 (24) '90 school year in Greeley Colorado and got a Master's in  
 (25) chemistry

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(1) Q You said you're a commercial fisherman?  
 (2) A Yes I am  
 (3) Q Do you have your own permit now?  
 (4) A Yeah I received my own permit in 1976 and had my own  
 (5) permit in 1977  
 (6) Q And where do you fish normally?  
 (7) A Exclusively the Kodiak Island area  
 (8) Q Now here is Exhibit 1334 A and this is a map of Kodiak  
 (9) Island And could you show the jury - you could come down  
 (10) from there  
 (11) THE COURT I leave the microphone on  
 (12) BY MR. STOLL  
 (13) Q And this will follow you around And just show the jury  
 (14) please where you fish on Kodiak Island  
 (15) A Well Kodiak District runs essentially from Cape Douglas  
 (16) which is on the entrance to Cook Inlet down to a place called  
 (17) Kilokak which is down in this area and the entire Kodiak  
 (18) area And as I say I've been fishing for 30 years There is  
 (19) probably nowhere on Kodiak Island that I have not fished in  
 (20) those 30 years of fishing  
 (21) Q Which - do you fish the Ayakulik area as well on the  
 (22) southern end of Kodiak Island?  
 (23) A Early on usually in June it gets a pretty good run of red  
 (24) salmon Yeah I fish there  
 (25) Q Incidentally have you been able to fish in the sockeye

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(1) season this year in the Ayakulik area?  
 (2) A Not at all at the Ayakulik  
 (3) Q And you fish - do you sort of move around during the  
 (4) course of summer -  
 (5) A Yeah  
 (6) Q - in a normal year?  
 (7) A Yes we're very mobile  
 (8) Q Describe for the jury please what you do  
 (9) A Salmon season opens in early June We have some  
 (10) traditional spots that have red salmon or sockeye salmon early  
 (11) on One of them is the Ayakulik Other areas include the  
 (12) mainland area Generally the fleet goes out we go to those  
 (13) areas As fish are reported in certain areas we move to those  
 (14) areas If there happens to be fish on the east side of Kodiak  
 (15) I go there If there happens to be fish on the north end  
 (16) Shuyak Afonak we go there We're very mobile move  
 around  
 (17) We have closures certain areas will close we will move to  
 (18) new areas  
 (19) Q Now why do you live in Kodiak?  
 (20) A I guess - that's a good question I grew up there I  
 (21) have a lot of very positive experiences My father was a  
 (22) commercial fisherman started in 1950 and I guess the whole  
 (23) experience of fishing and hunting and the outdoors is  
 (24) something I was raised with and I really enjoy it  
 (25) And now I have three boys - or three children two boys

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(1) and a girl and I want to give that experience that I had  
 (2) Both my boys fish with me hunt with me And it's just - I've  
 (3) been a lot of places  
 (4) When I was going to college I traveled a lot and I guess  
 (5) it's to me probably the most beautiful place in the world  
 (6) especially when the weather is nice We do get rain but it's  
 (7) beautiful  
 (8) Q And do you recreational fish and subsistence fish as well?  
 (9) A Yeah Usually in - during the summer from the first of  
 (10) June to September I'm busy salmon fishing but in September  
 we  
 (11) do a lot of - we go out on the weekends when I'm not working  
 (12) take the family we do a lot of sport fishing and we do a lot  
 (13) of hunting  
 (14) Q Do you do clamming and shellfish or did you used to?  
 (15) A Yeah we used to That was kind of like a family thing  
 (16) I'd dig the kids would pick up clams kind of situation It  
 (17) was a family activity I guess  
 (18) There were a lot of beaches in the near vicinity of Kodiak  
 (19) that you can go on the road system and additionally we'd go  
 on  
 (20) hunting trips and sport fishing trips and on low tides we  
 (21) would stop and dig clams  
 (22) Q Would you take your family out on your boat in the summer  
 (23) or in the fall to go on picnics and recreate?  
 (24) A Having the boat is a nice I guess access give us access  
 (25) to remote areas of Kodiak Island and we do that quite a bit

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(1) We call it camping. There is no tent involved but it's a  
 (2) camping trip for the kids.  
 (3) Q What would you do? Just describe it for the jury?  
 (4) A I guess we would pick a place and Friday night after  
 (5) school we would load everybody on the boat and sleeping bags  
 (6) and we would travel to you know pick a place that we wanted  
 (7) to go maybe down to Uyak Bay or around some of the areas on  
 (8) Afognak. Especially in the fall we get a lot of silver salmon  
 (9) take the kids to where they can catch a silver. If it's a day  
 (10) trip go to the islands in the near vicinity of Kodiak maybe an  
 (11) hour run go on the shore play on the beach sport fish hike  
 (12) in the woods swim in the ocean. The kids do. It's a little  
 (13) cold for us but those kinds of things.  
 (14) Q Now in 1989 during the summer of 1989 you weren't there  
 (15) has been testimony already you were not able to commercial  
 (16) fish in Kodiak?  
 (17) A That is correct.  
 (18) Q And that was because of the Exxon Valdez oil spill?  
 (19) A That is also correct yeah.  
 (20) Q Now during the course of that summer after the closure  
 (21) did you do some work under the direction of the Alaska  
 (22) Department of Fish & Game?  
 (23) A Yes I did.  
 (24) Q And would you tell the jury please what that was?  
 (25) A I was under the direction of Alaska Department of Fish &

(1) responsible for was from Old Harbor to the south end of Kodiak  
 (2) Cape Trinity in that area there.  
 (3) Q Old Harbor is -  
 (4) MR STOLL Let me move this Your Honor towards the  
 (5) jury so they can see.  
 (6) BY MR STOLL  
 (7) Q Old Harbor is right here and then down to Sitkinak and  
 (8) Trinity Island is here and that was your area?  
 (9) A Yes that is correct.  
 (10) Q And that was the area that you were assigned by the ADF&G?  
 (11) A Yes.  
 (12) Q And so you would make that route back and forth?  
 (13) A Yeah we had a cycle. We talked to various fishermen  
 (14) before they left where do you set? And we would go to those  
 (15) areas and see if it was free of oil.  
 (16) Q Did you get a training course to determine you know what  
 (17) to look for and so on?  
 (18) A I did not. I had a trained observer supplied by Fish &  
 (19) Game.  
 (20) Q And when you were out there did you - incidentally you  
 (21) find that you were told to set your nets if you didn't see any  
 (22) oil?  
 (23) A That is correct.  
 (24) Q Now were these your own nets?  
 (25) A They were supplied I guess by VECO.

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(1) Game to do what is called a test fishery. There was -  
 (2) everybody was geared up I guess is where I'll start. We  
 (3) assumed we were going to go fishing the first part of June. I  
 (4) had a salmon crew ready to go the boat was geared up all  
 (5) ready to go salmon fishing and then due to the I guess oil  
 (6) spill we were unable to go.  
 (7) In mid June I was contacted wondered if - they wanted me  
 (8) to be a test boat. I said what's involved? And essentially  
 (9) what I did was went to traditional fishing areas that boats  
 (10) would normally fish determine whether there was oil in the  
 (11) water and monitor or observe and monitor the oil.  
 (12) We - if there was not oil or - evident in a particular  
 (13) area that we would normally fish we were to set our net take  
 (14) samples of fish. We were to do beach surveys which involves  
 (15) getting off the boat and walking around.  
 (16) In addition to myself and the three men that work with me  
 (17) our salmon crew we had a trained observer supplied by the  
 (18) Alaska Department of Fish & Game. Their responsibility was to  
 (19) assist me and yes there is oil no there is not yes set  
 (20) your net no you don't.  
 (21) Additionally he collected samples from fish from the net  
 (22) from the beach from the water monitored the movement of oil  
 (23) in certain areas with the tides. We put out passive monitors  
 (24) which was an oil absorbent material that would pick up oil that  
 (25) might be traveling with the tide. And the area that I was

(1) Q A contractor?  
 (2) A A contractor that supplied the net.  
 (3) Q Were you willing to use your own nets out there?  
 (4) A No I was not.  
 (5) Q Why is that?  
 (6) A There was oil in the water and we were you know - it's a  
 (7) \$20,000 piece of equipment and if it were to be oiled and  
 (8) ruined and not be used again that's a tremendous expense in a  
 (9) business.  
 (10) Q So you would not be in there to believe you said?  
 (11) A Yeah mid June.  
 (12) Q You can sit down.  
 (13) During the initial several weeks that you did this did you  
 (14) have much opportunity to put your nets down?  
 (15) A When we first started in that area we - there was a lot  
 (16) of oil in the water and we were directed not to set the net if  
 (17) there was oil present. And so during the first two or three  
 (18) weeks I would say we did a lot of traveling around and  
 (19) observing oil so no the net was infrequently set.  
 (20) Q Did there come a time when you were - you received other  
 (21) instructions to put your nets down regardless of whether there  
 (22) was oil?  
 (23) A Yeah as we progressed through we were told to set the nets  
 (24) irregardless of the presence of oil or not.  
 (25) Q The fish that you caught in these nets did you then sell

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(1) those commercially or did you eat them?  
 (2) A No we did not  
 (3) Q Would you tell the jury please what happened to the fish  
 (4) that were in the net?  
 (5) A We made essentially a traditional salmon set we pursued it  
 (6) up brought the fish up along side the boat One fish would be  
 (7) removed from each set and frozen Five other fish would be  
 (8) wiped with an oil rag to check for the presence of oil and the  
 (9) remainder would be released The five that were wiped would  
 (10) also be released with the others  
 (11) Q Did you also observe beaches?  
 (12) A Yeah we did  
 (13) Q Tell the jury please where you went on those you know  
 (14) the various areas Is that whole coastline along there?  
 (15) A Yeah I would say over the course of essentially two  
 (16) months we probably were on 90 percent of those beaches  
 (17) during  
 (18) that time  
 (19) Q And would you tell the jury please what the - what did  
 (20) the oil appear - how did it look both in the water and on the  
 (21) beaches?  
 (22) MR CLOUGH Objection one of the rare times I would  
 (23) like to raise a double question objection There maybe a  
 (24) substantial difference between oil floating in the water and -  
 (25) MR STOLL That's fine  
 (26) BY MR STOLL

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(1) Q Would you describe to the jury please what you observed  
 (2) of oil in the water?  
 (3) A We had a sheet that described to us how to describe the  
 (4) oil It was a - I guess you would call it a sheen on top of  
 (5) the water It varied from a light sheen which would be maybe  
 (6) in streaks or just very light on the oil to heavy sheens  
 (7) silver sheens A variety of terms were used to categorize it  
 (8) as being from very small amounts to very large amounts  
 (9) Traditionally in this area on the water we saw a  
 (10) tremendous amount of sheen virtually everywhere we went  
 (11) The  
 (12) tides are - a lot of tides move in and out and there was a  
 (13) lot of sheen on the water  
 (14) In addition there was what was called mousse It's oil  
 (15) that's very heavy and thick with water mixed in it organic  
 (16) material that would float around look'd like cow patties is  
 (17) the easiest way to say it I guess They ranged in size from a  
 (18) thumbnail size to a dinner plate size So those would be  
 (19) floating in the currents as well  
 (20) They would collect a lot of material bird feather kelp  
 (21) anything that was floating in the water - in the eddies of  
 (22) sheen with the tide you'd have the cow patties  
 (23) Q Now I want to know you what's been marked as plaintiffs  
 (24) Exhibit 1536 I think -  
 (25) A That is what you had we would call a mou se patty  
 (26) Q I that typical of untypical of what you would see?

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(1) A Very typical in size and consistency untypical in that  
 (2) there is not the bird feathers and organics that we would find  
 (3) lots of bird feathers dead birds It collects whatever is  
 (4) near it  
 (5) Q Did you see this just during the first two or three weeks  
 (6) of your experience out there?  
 (7) A No  
 (8) Q How long did that continue?  
 (9) A Until we were removed from the contract  
 (10) Q So all summer long essentially?  
 (11) A Yes essentially the whole time we were out there  
 (12) Q Now let's talk about what you saw on the beaches  
 (13) What did you see on the beaches?  
 (14) A Again varying amounts of different types of oil This was  
 (15) very typical to find on all the beaches that we walked on  
 (16) Again varying sizes from very small drops or chunks I guess  
 (17) the sizes of a thumbnail to dinner plate size  
 (18) In addition there were bands of oil left on the beaches in  
 (19) certain areas Oftentimes as I said the organic material -  
 (20) this would be rolled up in a ball of kelp It would be rolled  
 (21) up in bird feathers Whatever was there it would collect and  
 (22) roll up on the beach in So I guess that would be what we  
 (23) would find typically on beaches  
 (24) Q Now let me ask you to look at exhibit - you said it was  
 (25) different varieties of oiling Is this - did you see this

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(1) type of oiling as well as -  
 (2) A This dark spot right here?  
 (3) Q Yes  
 (4) A Yeah That was - there was that  
 (5) Q Was this most - would you describe you know most you  
 (6) saw  
 (7) was this kind of oiling or was it a heavier oiling assuming  
 (8) that's an oil spot?  
 (9) A Yeah I guess I'd have to assume that I wouldn't call  
 (10) that oiling compared to what we saw on the beaches When I  
 (11) talk about bands of oil on beaches it would be dark bands that  
 (12) would extend a whole beach that would look like this not a  
 (13) spot on the beach We would see - if you saw that you would  
 (14) find this  
 (15) Q Now did you observe clean up crews out there?  
 (16) A Yes  
 (17) Q And after the clean up crew was gone then was the beach  
 (18) cleaned?  
 (19) A That day it would be clean for a day  
 (20) Q And then what would happen?  
 (21) A New oil would come on the beaches  
 (22) Q How did that happen?  
 (23) A We have tides that move in and out we have currents we  
 (24) have winds that push whatever is in the water around  
 (25) Depending on those things new oil would go on the beaches  
 (26) We walked beaches within a few days after a clean up crew

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(1) had been on the beach and they would have bags of cleaning  
 (2) material that would have oil on the bags where the tide had  
 (3) come up and touched them  
 (4) Q You mean the outside of the bags?  
 (5) A Yes now oil  
 (6) Q As well as debris that was collected inside the bags?  
 (7) A Yes  
 (8) Q Now you were out here during the summer months and did  
 (9) you see - did the oil sort of go through here in one swoop and  
 (10) then - then it was gone and just sort of sloshing around so  
 (11) to speak or was the oil more continual?  
 (12) A I would say that there was just as much oil when we went  
 (13) off contract in mid August as when we went on contract in  
 (14) mid June  
 (15) Q Now there were times when you were able to - it appeared  
 (16) that the water was clean?  
 (17) A That is correct  
 (18) Q When you set your nets?  
 (19) A Yes  
 (20) Q And there were times were there not when in fact you  
 (21) were able to bring your nets up - I say your nets the nets  
 (22) that were on your boat  
 (23) A Yes  
 (24) Q And the nets remained clean and there were no oiled fish  
 (25) did that happen?

(1) Exhibit 1322 Is this a map of Sitkinak?  
 (2) A Yes it is  
 (3) Q And did you observe oil in this area?  
 (4) A Yes we did  
 (5) Q And would you tell the jury please what you observed  
 (6) there?  
 (7) A When we went out to Sitkinak area the anchorage is the  
 (8) Sitkinak Lagoon so that was the area we concentrated our  
 (9) efforts in We did beach surveys along the spit  
 (10) I guess of the areas we went this was the most  
 (11) heavily oiled area that we saw in terms of beach surveys  
 (12) There was oil on the outside of the spit there was oil on it  
 (13) inside of the spit  
 (14) Another time we beach surveyed here again there was high  
 (15) concentration of oil on the beach in both of these areas In  
 (16) terms of what kind of oil this is again what we saw again  
 (17) varying sizes  
 (18) Q You're referring to this Exhibit 1336?  
 (19) A That I'm mousse pattu  
 (20) Additionally in the water there was a stream of - always  
 (21) a stream of sheen quite heavy of what we would call a silver  
 (22) sheen which is denoting a higher concentration a heavier  
 (23) amount that extended into the lagoon And then out of the  
 (24) lagoon it would move in and out with the tide every day  
 (25) Q Now this lagoon there is usually a channel that goes

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(1) A There was no evidence of oil coming off the net  
 (2) Q Yes And what about the fish?  
 (3) A I guess I don't know if the fish were oiled or not  
 (4) Samples were taken and passed on  
 (5) Q But you did see oil on some occasions?  
 (6) A On the fish?  
 (7) Q Yes  
 (8) A Definitely coming out of the net  
 (9) Q And what about on other occasions did you get your - did  
 (10) the nets get oil with it?  
 (11) A Yes it did  
 (12) Q And you were seeking to tell the jury again you were  
 (13) seeking to do just an average setting of nets or were you  
 (14) looking for areas where it was supposed to be clean?  
 (15) A We were to run to traditional fish areas whether there was  
 (16) oil there or not we were to move to where salmon fishermen in  
 (17) Kodiak traditionally fish monitor or observe whether there is  
 (18) oil there and set the nets and determine whether or not -  
 (19) essentially if we could fish safely or not  
 (20) Q That was late on after this first two or three week  
 (21) period?  
 (22) A Yes  
 (23) Q And did you go to Sitkinak Island?  
 (24) A Yes I did  
 (25) Q And I have here what has been marked for identification as

(1) through Sitkinak Island?  
 (2) A That is correct At low water it's low and if high  
 (3) water it's open That's what this depicts  
 (4) Q Let me ask you another question In initially you  
 (5) mentioned this being heavily oiled Now this -  
 (6) Exhibit 1354 A is a map that's in evidence and it was  
 (7) prepared by a company called ICF Kaiser Engineering and it  
 (8) purports to be reports - call them reports of various surveys  
 (9) that were done of oiling And there's oiled shoreline shown  
 (10) under the name of ADF&G  
 (11) and the triangle shows VECO report  
 (12) Now I know that - you said that down here at Sitkinak  
 (13) this was heaviest oil but I notice on here that there is only  
 (14) a few little dots down here and this is not - not that much  
 (15) oil even in this area here that you patrolled - you're  
 (16) smiling  
 (17) MR CLOUGH Before the witness answers what is not a  
 (18) pending question I think I have an objection following that  
 (19) question on the basis that there is no establishment of any  
 (20) foundations  
 (21) THE COURT That's two objections so we'll let the  
 (22) question proceed  
 (23) BY MR STOLL  
 (24) Q So the question I've got is This map shows relatively  
 (25) little oiling down here and you're saying - but you're saying

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(1) that that was a lot of oil?  
 (2) A That is correct  
 (3) MR CLOUGH Excuse me Your Honor objection  
 (4) foundation because the question assumes facts not in  
 evidence  
 (5) about what the map does or does not show about oiling in other  
 (6) areas  
 (7) THE COURT Well he can make assumptions counsel as  
 (8) long as it is clear that they are assumptions If in fact he  
 (9) knows the coasts then you have to establish that  
 (10) MR STOLL That's what I was trying to do Your  
 (11) Honor Not too irritably apparently for Mr Clough  
 (12) BY MR STOLL  
 (13) Q But if you assume that there is - these little dots are  
 (14) ADF&G reports and the triangles are VECO reports and the red  
 (15) are other programs of oiling There is not as much of these  
 (16) little symbols down here on Sitkinak Island Do you see that?  
 (17) A That is correct There are not as many symbols there  
 (18) Q But you in your experience going up and down here  
 (19) what - how did this compare to these other areas up in here?  
 (20) A As I said earlier this area here on the spit and this  
 (21) inside beach here on the opposite side of the spit - I can  
 (22) how on this one if I need to - were the heaviest oiled I saw  
 (23) and no question about it  
 (24) Q Now -  
 (25) A I don't understand that

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(1) Q You can sit down We can turn off the screen  
 (2) In 1989 Mr Keplinger did your family continue to use the  
 (3) oil like it used to?  
 (4) A No  
 (5) Q And why not?  
 (6) A One of my sons got oiled on the beach and that was the end  
 (7) of it  
 (8) Q For that year?  
 (9) A Yes  
 (10) Q Your children - you said something about swimming?  
 (11) A That's correct  
 (12) Q Did they go swimming that year?  
 (13) A Not in the ocean  
 (14) Q And did they - did you go on any of these camping trips  
 (15) like you described with your family to beach areas that  
 (16) summer?  
 (17) A No we did not  
 (18) Q And did you do subsistence fishing that year?  
 (19) A Nope no subsistence fishing  
 (20) Q And is subsistence fishing incidentally important to you?  
 (21) A It supplement our food source yes  
 (22) Q And did you do shellfish any shellfish? You talked about  
 (23) clamming  
 (24) A No we didn't do any  
 (25) Q Have you resumed - you're now doing commercial fishing?  
 (26) A Yes I am

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(1) Q And have you - you talked about doing the clamming and  
 the  
 (2) shellfish before you know with the kids Do you - have you  
 (3) gone back to that?  
 (4) A No we have not  
 (5) Q Why is that?  
 (6) A I guess we're not sure that they are safe I have a wife  
 (7) that's very concerned about children's safety I would have to  
 (8) say that ultimate is the children's safety  
 (9) Q And in 1990 did you also observe oil in these areas?  
 (10) A No  
 (11) MR STOLL That's all I have  
 (12) CROSS EXAMINATION OF MATTHEW KEPLINGER  
 (13) BY MR CLOUGH  
 (14) Q Hi Mr Keplinger My name is John Clough Good morning  
 (15) sir fast approaching afternoon  
 (16) If I could step up and get PX1536 from you the mousse  
 (17) patty occasionally referred to as cow patties and I can see  
 (18) why  
 (19) A Yes  
 (20) Q You've been a commercial fisherman for many years right?  
 (21) A Yes I have  
 (22) Q Lots of commercial fishing vessels in the Kodiak area?  
 (23) A That's correct  
 (24) Q I just want to - that's what people in Kodiak do  
 (25) commercial fishing?

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(1) A Yes  
 (2) Q They use lubricating oil on their commercial fishing  
 (3) vessels?  
 (4) A Yes  
 (5) Q You do too?  
 (6) A Yes  
 (7) Q Can you take a good whiff of that and tell me if it might  
 (8) smell like lubricating oil to you?  
 (9) A Like grease?  
 (10) Q Lube oil yeah  
 (11) A Not particularly  
 (12) Q Have you ever in your experience in Kodiak seen lube oil  
 (13) or grease left on a beach when someone beached their boat  
 and  
 (14) was working on the engine?  
 (15) A No  
 (16) Q Now the test fishing program that you worked for you were  
 (17) on contract with ADF&G Fish & Game?  
 (18) A That is correct  
 (19) Q And you had really sort of two jobs in that program As I  
 (20) understand it you were one test fishing program itself was  
 (21) conducted offshore?  
 (22) A Up against the shoreline  
 (23) Q Is that what's called the near shore area?  
 (24) A Yes  
 (25) Q And then in addition on occasions you would actually get

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- (1) out of the boat I assume in a Zodiac or whatever and go to
- (2) the shoreline itself and do what you call a beach survey I
- (3) believe you testified
- (4) A Yes
- (5) Q And so you essentially the ADF&G crew which you were a
- (6) part of compiled two different sets of observations and data
- (7) one on the water testing that you did in the near shore area
- (8) and a second on the beach surveys in the intertidal isn't
- (9) that true?
- (10) A Yes
- (11) Q By the way you said - you mentioned a couple times that
- (12) you saw clean up crews on occasions at work?
- (13) A Yes
- (14) Q And at times you would see oil come up on a beach after a
- (15) clean up crew had departed?
- (16) A Yes
- (17) Q Mousse patties like that or smaller than that or whatever?
- (18) A Yes
- (19) Q Clean up crews worked throughout the summer of 1989
- (20) didn't
- (21) they?
- (22) A Yeah
- (23) Q In fact there was a whole bunch of clean up crews on
- (24) Kodiak weren't there?
- (25) A I know of the ones in my area
- (26) Q More than one in your area alone?

- (1) Q Who was the Fish & Game observer? This is the trained
- (2) observer that you testified about when Mr. Stoll was asking you
- (3) questions?
- (4) A That is correct
- (5) Q Who did you have out there from Fish & Game?
- (6) A His name was Gene and I don't know the last name
- (7) Q Might have been Hirschinger?
- (8) A Very possible
- (9) Q And he's the trained observer supplied to you by ADF&G to
- (10) make these observations?
- (11) A That is correct
- (12) Q Both for the oil in the water on the near shore area where
- (13) you were doing your net testing and those occasions on the
- (14) shore when you did your beach surveys he did the
- (15) observation?
- (16) A Yes
- (17) Q And he was the trained observer supplied by ADF&G?
- (18) A Yes
- (19) Q And who kept the data?
- (20) A Yes
- (21) Q And kept the results?
- (22) A Yes
- (23) Q And made the conclusions about your observations?
- (24) A Yes
- (25) Q Now as the captain you kept a log?
- (26) A That is correct

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- (1) A Based out of Old Harbor yeah
- (2) Q And the people from those clean up crews would actually on
- (3) occasion go back to the same beach more than one time
- (4) wouldn't they?
- (5) A I cannot answer that
- (6) Q Let me ask you this When you saw oil on a beach that had
- (7) been cleaned once before did you guys report that in?
- (8) A Yes we did
- (9) Q And do you know if based on your report a clean up crew
- (10) would be sent out to clean up again?
- (11) A No
- (12) Q So you don't know if that happened or not?
- (13) A No
- (14) Q Now you were the captain of the ship?
- (15) A Yes
- (16) Q And it's the El Capitan if I don't have you mixed up with
- (17) your counterpart Mr. Nault outside?
- (18) A That is correct
- (19) Q What's the boat like how big?
- (20) A 42 foot -
- (21) Q I'm sorry go ahead
- (22) A 42 foot scum
- (23) Q How many people did you have on it that summer sir?
- (24) A Myself my normal salmon crew of three and a Fish & Game
- (25) observer five

- (1) Q And you had your logbook and personal notes of what you
- (2) saw
- (3) and did during that time - when in June did you start them
- (4) sorry I forgot?
- (5) A June 20th
- (6) Q From roughly June 20th through mid August when your
- (7) contract with ADF&G came to an end?
- (8) A That is correct
- (9) Q And during that period of time I believe you testified -
- (10) regarding oil spill site 1354 A - that your area of
- (11) responsibility - responsibility was generally from Old Harbor
- (12) down to and including Sitkinik Harbor or Litoon?
- (13) A That is correct
- (14) Q And you maintained your personal notes of generally what
- (15) you saw and observed in that course of period of time didn't
- (16) you?
- (17) A Yes
- (18) Q In your own handwriting?
- (19) A Yes
- (20) MR CLOUGH If I may approach again Your Honor
- (21) BY MR CLOUGH
- (22) Q I have here - it's designated plaintiffs exhibit not
- (23) defense It was designated although they didn't use it
- (24) PX904 which I believe the witness will identify as his log
- (25) A That is correct
- (26) Q Mr. Kiplinger I'm going to be asking you some questions -

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(1) keep that up there. There are occasions no offense I can't  
 (2) read your handwriting. In any event you should be able to  
 (3) interpret and say what the words say there.  
 (4) A Okay.  
 (5) Q Now as I looked through - first of all these pages  
 (6) aren't numbered. You may or may not recall this is a Xerox  
 (7) copy. They are all dated so as we look to some particular  
 (8) pages I think you'll find the easiest way to check anything -  
 (9) I've got some excerpts I'd like to go through but if you want  
 (10) to check the context the easiest way will be to check the  
 (11) date because every single page has a date on it somewhere.  
 (12) A Okay.  
 (13) Q What I did at a rather ungodly hour last night was go  
 (14) through your log notes and try and identify about those times  
 (15) not when you were talking about the near shore testing with  
 (16) the - for the fish but on the occasions when you went on the  
 (17) shore and actually looked at what's on the shoreline in the  
 (18) intertidal area.  
 (19) A Yes.  
 (20) Q And what I've done here sir is pulled out every reference  
 (21) I could see -  
 (22) MR CLOUGH And Your Honor it's not as long as you  
 (23) might be afraid.  
 (24) BY MR CLOUGH  
 (25) Q - every reference that I could find to an actually - to

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(1) mousse patches on the beach light silver sheen in area  
 (2) samples taken  
 (3) Q That's what you saw when you were there?  
 (4) A That's correct.  
 (5) Q The next one page July 9th and it looks like you did a  
 (6) survey on Ataktalik Island?  
 (7) A Yes.  
 (8) Q What did you find on that one?  
 (9) A Beach recently cleaned by crew 50 to 75 bags on west side  
 (10) of beach some old small patches of mousse very few in the  
 (11) clean area. Rock/sand shoreline appeared wet five to six  
 (12) hours after high water. Dark wet looking bands appeared as  
 (13) streaks of old high tide marks.  
 (14) Q Basically you described this as a clean area. Those are  
 (15) your words?  
 (16) A That is correct.  
 (17) Q The next one I have here is on the 10th and this is about  
 (18) the eleventh page into your notes. You stopped in two places  
 (19) that day. First one I'm not sure. Can you tell if the first  
 (20) entry is an actual shoreline or is that something you did  
 (21) offshore?  
 (22) A That's near shore.  
 (23) Q So that's out in the water?  
 (24) A Yes.  
 (25) Q Later 8:00 p.m. Barling Bay?

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(1) your notes of in a tidel which survey that you did that you  
 (2) participated in. And what I'd like to do - I'm in the  
 (3) Elmo if I move this around.  
 (4) What I would like to do is put up your notes on the screen  
 (5) and you'll be able to see them on the small screen here as  
 (6) well. But put them on the screen so we can see what your  
 (7) observations were of the beaches that you surveyed that  
 (8) summer.  
 (9) during your work with ADF&G.  
 (10) Now the first one I was able to find was July 8th. It  
 (11) about the eighth page in there.  
 (12) MR CLOUGH I went and numbered my own copy so  
 (13) ladies and gentlemen of the jury if a page number shows up  
 (14) that's not part of original that's part of my chicken  
 (15) scratch.  
 (16) BY MR CLOUGH  
 (17) Q And I'm going to blow this up but you might want to try to  
 (18) get the page in front of you the July 8th entry and it has at  
 (19) 1600 a place called Cape Trinity.  
 (20) A That is correct.  
 (21) Q Referring to the plaintiffs map can you show us generally  
 (22) about where Cape Trinity is?  
 (23) A This area here (indicating).  
 (24) Q Now what do your notes have you seeing on Cape Trinity  
 (25) when you do your beach survey?  
 (26) A Did beach survey half mile beach quarter to half dollar

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(1) A Barling Bay.  
 (2) Q What do your notes say there?  
 (3) A Barling Bay - at stream stream mouth boomed off beaches  
 (4) are clean. Very light sheen present in the area.  
 (5) Q But the sheen is offshore. The beaches were clean right?  
 (6) A Behind the boom.  
 (7) Q Then the next day you went to Barling Bay again - and  
 (8) correct me if I'm wrong but it looks like what you wrote that  
 (9) day did extensive beach survey evening of July 10. This may  
 (10) have been referring me to what you did the night before no  
 (11) mousse beaches recently cleaned by Old Harbor crews that's  
 (12) what you wrote to summarize that survey is that correct?  
 (13) A That is correct.  
 (14) Q Then the next one I came across was on the 15th and I'm  
 (15) going to have to put this up. It's the very bottom one on this  
 (16) page. And it looks like you were at a place called - I'm  
 (17) going to defer to you -  
 (18) A Kaiugnak.  
 (19) Q And if I read it correctly you summarize the survey as  
 (20) 9:30 beach survey north shore 50 yards beach rocky beach  
 (21) is  
 (22) that VL for very light?  
 (23) A That is correct.  
 (24) Q Very light mousse on that?  
 (25) A Yes.  
 (26) Q The next following day July 16th place called Jap Bay?

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- (1) MR STOLL Your Honor I'm going to object to the  
 (2) characterization of Mr Clough of what his notes reflect It's  
 (3) what Mr Clough says he found that he wants an excerpt to  
 (4) say - I don't know that's what his notes say  
 (5) THE COURT That's a perspective objection  
 (6) MR STOLL He said this is the next thing your notes  
 (7) say about a clean beach  
 (8) BY MR CLOUGH  
 (9) Q The next - if you see one that I miss on a beach survey  
 (10) point it out please  
 (11) But the next one I was able to find that reflected a beach  
 (12) survey is this one on the 16th - and correct me if I'm  
 (13) wrong - on that day describing that beach survey you wrote  
 (14) anchored in Jap Bay two mile beach survey Jap Bay spit  
 (15) cleaned beach  
 (16) A That is correct  
 (17) Q Then on about the seventeenth page it is a page  
 (18) titled - looks like it's talking about a place called Newman  
 (19) Bay Is this also a place within your area?  
 (20) A Yes it was  
 (21) Q And this one you're going to have to explain to me  
 (22) because - I can read the words but I didn't understand what  
 (23) they meant Your notes reflect beach survey looks like during  
 (24) set?  
 (25) A Hold on

- (1) A Yes  
 (2) Q And basically throughout using the exhibit again  
 (3) throughout the summer you're sort of cruising back up and  
 down  
 (4) again?  
 (5) A Yeah  
 (6) Q Down and back up for the record meaning north and south?  
 (7) A North and south  
 (8) Q All right At Rolling Bay you did a beach survey Let me  
 (9) see if I understand your code there beach survey V.L. would  
 (10) that mean very light?  
 (11) A That is correct  
 (12) Q Mousse from one hill to -  
 (13) A Four  
 (14) Q - four inches in diameter And you surveyed two miles of  
 (15) the beach at 9 15 is that what your writing indicates?  
 (16) A Yes  
 (17) Q The next survey I was able to find in your notes is about  
 (18) the 22nd page in Unfortunately this page doesn't have a  
 (19) date I believe it's about the 20th of July Walters Creek?  
 (20) A Walters  
 (21) Q Did you find that page sir?  
 (22) A Yes I did  
 (23) Q And again if I'm now reading your handwriting right you  
 (24) described as beach recently cleaned by VECO crew?  
 (25) A Yes

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- (1) Q Top of it says Newman Bay primary set 12 45  
 (2) A What's the date on that?  
 (3) Q There is not a date on this particular page  
 (4) A The date before that?  
 (5) Q It should be right around the 17th I believe it is the  
 (6) 17th of July  
 (7) A Got it  
 (8) Q And your notes there say beach survey - is that word  
 (9) during?  
 (10) A During set  
 (11) Q One quarter mile of beach and I don't see any description  
 (12) of any oil Do you see a description of any oiling there that  
 (13) I missed?  
 (14) A No I do not  
 (15) Q On July 19th which was the next entry I could find in your  
 (16) notes of a beach survey you had in Rolling Bay?  
 (17) A Yes  
 (18) Q And this makes sense because you guys were moving  
 (19) constantly up and down the coast checking the near shore  
 waters  
 (20) and the intertidals in a variety of locations?  
 (21) A Yes  
 (22) Q Where is Rolling Bay here? Let's try and get some  
 (23) perspective here  
 (24) A Rolling Bay is here  
 (25) Q So you moved back up a little bit at this point?

- (1) Q Clean monitors what does that mean?  
 (2) A Monitors were placed in the water to pick up mousse that  
 (3) would be floating at or about mid-tide  
 (4) Q And they came up clear that day  
 (5) A At that particular day  
 (6) Q And then you did a beach survey at 3 15 in the afternoon?  
 (7) A Yes  
 (8) Q And according to your notes you surveyed hill a mile?  
 (9) A Yes  
 (10) Q Is there any evidence of you finding any oil in that  
 (11) survey?  
 (12) A Not in these notes  
 (13) Q The next one I have for you sir is on the 21st of July  
 (14) moving through your summer program here Looks like Natalia  
 (15) Bay?  
 (16) A Yes  
 (17) Q And you did a beach survey at 7 45?  
 (18) A Yes  
 (19) Q What do you have to describe the beach there?  
 (20) A Says clean beach  
 (21) Q The next one is at Old Kaguviak It's the 25th page in It  
 (22) would be on the 22nd of July At the very top is the words  
 (23) Kuvak set site and it's at the very bottom of the page  
 (24) A Yes  
 (25) Q And apparently did a beach survey there?

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- (1) A Yes  
 (2) Q And at 10 20 you surveyed half a mile?  
 (3) A Yes  
 (4) Q And you found some stuff?  
 (5) A Yes  
 (6) Q What did you find?  
 (7) A Frequent mousse both old and fresh - fresh and then the  
 (8) words last tide implying that it came in on the last tide  
 (9) Q So the tide had brought this into that beach?  
 (10) A New oil  
 (11) Q And you reported that to the ADF&G clean up folks?  
 (12) A That's correct  
 (13) Q And you don't know whether a clean up crew came and in  
 (14) fact cleaned it right up off that beach do you?  
 (15) A No I do not  
 (16) Q The next survey entry I've got is on the 26th of July  
 (17) I've got a question for you so I want to make sure it's your  
 (18) handwriting and if not I want to ask you whose it is  
 (19) A Troy Martin  
 (20) Q Who is Troy Martin?  
 (21) A Guy that's been fishing with me for a number of years  
 (22) Q Was he on the boat with you that summer?  
 (23) A Yes he was  
 (24) Q Was he working on keeping the logs of the observation that  
 (25) you and the crew were making?

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- (1) A At times  
 (2) Q And you recognize that as his handwriting?  
 (3) A Yes I do  
 (4) Q According to Mr Martin notes you made there's survey it  
 (5) number 702?  
 (6) A Yes  
 (7) Q Do you know what that number is?  
 (8) A I'd look - have to look at the ADF&G chart it's a salmon  
 (9) spawner  
 (10) Q So it's a salmon location?  
 (11) A Yes it is  
 (12) Q What did Mr Martin's - how did it describe that area  
 (13) survey can you read his handwriting?  
 (14) A No wind no way high tide jumpers all along beach  
 (15) towards southern point good buildup of fish  
 (16) Q So no description of any oiling there?  
 (17) A No  
 (18) Q When you say jumpers what do you mean?  
 (19) A Salmon  
 (20) Q Do you recall if on that beach there was oiling?  
 (21) A Been there time No I do not  
 (22) Q One of the purposes of the log note was trying to record  
 (23) things that you saw them in light?  
 (24) A My purpose of keeping this log was more for future  
 (25) fishing. In other words this was in area where I could record

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- (1) the amount of fish that was building up so if I wanted to fish  
 (2) there in the future I would know where to fish  
 (3) Q Exactly So what you did was you wrote down what you  
 (4) saw?  
 (5) A Yeah  
 (6) Q And you tried to be accurate?  
 (7) A With regards to fish primarily  
 (8) Q The next one I have is the one that you talked about at  
 (9) some length in your testimony and it's Sitkinak Lagoon on July  
 (10) 26th?  
 (11) A Yes  
 (12) Q Now is this your handwriting or Troy's?  
 (13) A This is Troy's  
 (14) Q And if you can read that go ahead This one you guys  
 (15) found some more stuff?  
 (16) A Outside beach east of spit and east of entrance to lagoon  
 (17) Distance covered two miles New tar - tar was another name -  
 (18) one to six inches thick three to 12 inches in diameter  
 (19) Frequent new mousse six to eight inches in diameter every five  
 (20) yards Four to ten meter band of silver shoen running on  
 (21) lagoon seen on beach Two oiled half eaten birds distance  
 (22) recovered one half mile Frequent new mousse found below  
 (23) high  
 (24) tide mark every 20 yards Two jumpers seen in the lagoon no  
 (25) buildup seen  
 (26) Q This is the one in your testimony you described in your  
 (27) testimony with Mr Stoll as the worst beach you'd seen that

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- (1) summer and heavily oiled?  
 (2) A Yes  
 (3) Q And certainly the words from Mr Martin describe a greater  
 (4) level of oiling Do they appear to describe a greater level of  
 (5) oiling than the other beaches we've talked about?  
 (6) A Yes  
 (7) Q Then at 31st looks like you're back at Barling Bay at the  
 (8) bottom of the page?  
 (9) A Yes  
 (10) Q And you notes or Troy's?  
 (11) A Troy's  
 (12) Q And can you tell us what Troy put down on the log for  
 (13) Barling Bay?  
 (14) A Beach survey taken clean beach  
 (15) Q Help me with the straits?  
 (16) A Sitkalidak Straits  
 (17) Q I can I think figure it out but I'm not going to try to  
 (18) put words in your mouth If you can figure it out great  
 (19) A Beach survey taken half mile south of Barling clean  
 (20) gravel beach  
 (21) Q Okay Then the next day you did a whole bunch of beach  
 (22) survey It's all on July 31st probably going to be on the  
 (23) next page It might be easier to follow along on the monitor  
 (24) because I've got the ones highlighted that we're going to look  
 (25) at

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- (1) Looks like beach survey northwest corner by small spit  
 (2) A Yes  
 (3) Q Any reference in these notes of any oiling on the shore  
 (4) here?  
 (5) A No  
 (6) Q Farther down you're going to have to help me again  
 (7) A Kaiagnak  
 (8) Q Beach survey inside beach by secondary one eight inch  
 (9) diameter splatter found week old mousse?  
 (10) A Yes  
 (11) Q Anything else other than that down there in that location  
 (12) for beach oiling?  
 (13) A No  
 (14) Q These places must be pretty close together I'm assuming  
 (15) if you got to them all in one day is that correct?  
 (16) A Yes  
 (17) Q What's the next one Kaiavak?  
 (18) A Yes  
 (19) Q And this one you found a little more - what does it have  
 (20) for there?  
 (21) A Recent but not fresh mousse four inch splatters every ten  
 (22) feet  
 (23) Q Was this reported into the clean up center by your ADF&G  
 (24) crew?  
 (25) A No

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- (1) Q Why not?  
 (2) A Because we did not report to ADF&G - or to a clean up  
 (3) center we reported to Alaska Department of Fish & Game  
 (4) Q Thank you for the correction  
 (5) Did you report this oil that you found on the Kaiavak Bay to  
 (6) ADF&G?  
 (7) A Yes we did  
 (8) Q Do you know if there was - a clean up crew was dispatched  
 (9) to that beach to clean it up?  
 (10) A No I don't  
 (11) Q Then on to - looks like you're back in Natalia Bay and  
 (12) this might be your handwriting again  
 (13) A Yes it is  
 (14) Q Beach survey 7 a.m. do you see that?  
 (15) MR STOLL What date are we on?  
 (16) BY MR CLOUGH  
 (17) Q Probably be easier for you to check the top of your page  
 (18) Looks like August 1st very upper left corner looks like  
 (19) bottom of an 8/1?  
 (20) A Yep got it  
 (21) Q And what did you write down to describe your beach survey  
 (22) that you did at Natalia Beach?  
 (23) A Beach survey 7 a.m. east shore halfway between the lagoon  
 (24) and the cape clean  
 (25) Q Then on the 8th of August which is the next time I found

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- (1) in your notes reference of a beach survey I believe this is  
 (2) your handwriting again here at Kaguyak?  
 (3) A Yes  
 (4) Q And at 10:30 you found some mousse pitfalls right?  
 (5) A Yes  
 (6) Q And at Three Saints Biv your beach survey you found a  
 (7) clean beach?  
 (8) A That is correct  
 (9) Q Now this is on the 9th of August it looks like you were  
 (10) back at Kaguyak 9th on the top at Natasha  
 (11) A Natalia  
 (12) Q Natalia thank you Found looking at the east shore you  
 (13) found some mousse on the shore right?  
 (14) A That's correct  
 (15) Q Excuse me ladies and gentlemen of the jury that I had one  
 (16) off can you see that at the very bottom Then somehow here I  
 (17) apologize the dates got a little out of order - you got that  
 (18) together Looks like on the 6th of August but you'll find  
 (19) it's sequential in your description you were at a place called  
 (20) Cape Trinity?  
 (21) A Yes  
 (22) Q Is that your handwriting?  
 (23) A Yes  
 (24) Q 10:00 a.m. for the beach survey there you found a clean  
 (25) beach?

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- (1) A That is correct  
 (2) Q Then we're almost done because we're almost at the end of  
 (3) your contact here Made it to Newman here the next day doing  
 (4) a beach survey?  
 (5) A Got it  
 (6) Q And at Newman Biv you found fresh mousse on the shore?  
 (7) A That is correct  
 (8) Q And this was also reported to ADF&G?  
 (9) A Yes  
 (10) Q And you don't know whether it was - was it  
 (11) dispatched up there to clean it up?  
 (12) A No  
 (13) Q Because there were still clean up crews working that time  
 (14) of year weren't there?  
 (15) A I would assume yes  
 (16) Q Then on the 12th you were out at Two Head?  
 (17) A Twoheaded  
 (18) Q Twoheaded thanks Is this yours or Troy's?  
 (19) A Mine  
 (20) Q Twoheaded Beach survey on the 12th Put a date in there  
 (21) I can't read the parentheses what does it say?  
 (22) A West side/inside  
 (23) Q So that describes where?  
 (24) A Where I was yes  
 (25) Q And it was 3 p.m.?

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(1) A Yes  
 (2) Q Do your notes describe any oiling on that beach survey?  
 (3) A No  
 (4) Q That was by the way among your log notes the last entry  
 (5) I was able to find of a beach survey as opposed to - I want to  
 (6) make it clear you did extensive on the water this near shore  
 (7) testing as well?  
 (8) A Yes  
 (9) Q And that was totally separate from your on shore survey  
 (10) that was on the actual lands?  
 (11) A No  
 (12) Q Earlier on - to keep them entirely separate was my  
 (13) mistake but earlier on you said that the ADF&G through your  
 (14) program was maintaining data for the near shore data and  
 (15) separately for the land for the beach survey work?  
 (16) A I don't know if I like the word separately but yes  
 (17) Q As part of it they were keeping track of both of those  
 (18) things?  
 (19) A That word I like They were keeping track of both  
 (20) Q You did certain types of tests on the water You did  
 (21) different types of tests on the intertidal for example in the  
 (22) water you wouldn't write down you know one mouse patty  
 every  
 (23) three yards seen floating rills you'd describe the amount  
 (24) of oil you found in a particular area?  
 (25) A Yes

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(1) Q And that was in the intertidal area?  
 (2) A Yes  
 (3) Q And the water work was done in the near shore area?  
 (4) A Yes  
 (5) Q Now it sound ed to you like it was Mr Hirschinger?  
 (6) A Yeah Now that you say it I'm almost certain  
 (7) Q It seem s to me looking at all of your notes in context  
 (8) th it clearly Sitkinak Lagoon was the worst thing you saw that  
 (9) summer?  
 (10) A Yes  
 (11) Q This is one of my -  
 (12) MR STOLL May we have a moment Your Honor? I  
 (13) haven't seen this document before  
 (14) THE COURT Yes  
 (15) MR STOLL I have a matter for the court with respect  
 (16) to this document  
 (17) THE COURT Come to the bench I'll see whether or not  
 (18) it is relevant to the jury  
 (19) (Bench conference off the record)  
 (20) THE COURT Okay  
 (21) BY MR CLOUGH  
 (22) Q Two final questions It was Mr Hirschinger's  
 (23) responsibility to actually transmit the observations He was  
 (24) the trained observer on the crew is that right?  
 (25) A That is correct

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(1) Q And it was his responsibility to collect the data and later  
 (2) transmit it to ADF&G?  
 (3) A I would do the transmitting He would do the collecting  
 (4) Q Are you personally familiar with the standards that  
 (5) Mr Hirschinger and ADF&G used to classify beach as heavily  
 (6) oiled moderately oiled lightly oiled or very lightly oiled?  
 (7) A Off the top of my head I can't remember the exact  
 (8) criteria At the time I had a copy yes  
 (9) Q Do you know of your own personal knowledge how  
 (10) Mr Hirschinger classified the Sitkinak Lagoon beach area  
 under  
 (11) those standards?  
 (12) A Not at this time no  
 (13) MR CLOUGH No further questions Your Honor  
 (14) MR STOLL I just have a couple questions  
 (15) MR STOLL Incidentally are you going to offer all  
 (16) his boat logs?  
 (17) THE COURT Are you? Do you want them in?  
 (18) MR STOLL Yeah we'll offer them  
 (19) (Exhibit 904 offered)  
 (20) THE COURT What is the number?  
 (21) MR STOLL Exhibit 904  
 (22) THE COURT 904 is admitted  
 (23) (Exhibit 904 received)  
 (24) REDIRECT EXAMINATION OF MATTHEW KEPLINGER  
 (25) BY MR STOLL

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- (1) A No  
 (2) Q You're not absolutely sure?  
 (3) A Yeah  
 (4) Q And is this - are you sure that the oil that you saw and  
 (5) the mousse that you saw that summer on these beaches either  
 (6) tar balls or what you described as mousse - was it different  
 (7) than lubricating oil that you've seen in the harbor?  
 (8) A Very different  
 (9) Q How was it different?  
 (10) A It ranged from dark black to gray. Had organics in it  
 (11) it - I don't know. Lubricating oils aren't black and gray  
 (12) they are green and red, you know that we use, or grease  
 (13) consistency is different. Lubricating oils are thin. This is  
 (14) heavy thick stuff. It's different.  
 (15) MR STOLL: Thank you very much.  
 (16) RE-CROSS EXAMINATION OF MATTHEW KEPLINGER  
 (17) BY MR CLOUGH  
 (18) Q Do you know if the ADF&G trained observer, Mr. Hirsching, or  
 (19) classified any of the beaches you surveyed that summer as  
 (20) heavily oiled?  
 (21) A It's been five years. To the best of my ability, I would  
 (22) assume that Sitkinak area.  
 (23) Q I don't want you to assume. I'm asking, if you know.  
 (24) A I cannot recall.  
 (25) Q Do you know if he classified any of the beaches that you

- (1) THE CLERK: And your occupation?  
 (2) A I'm a commercial fisherman.  
 (3) THE CLERK: Thank you.  
 (4) DIRECT EXAMINATION OF ANDRE J. NAULT  
 (5) BY MR STOLL  
 (6) Q Mr. Nault, how old are you?  
 (7) A 42. I think I was born in 1952. I'm never sure.  
 (8) Q And where do you live?  
 (9) A I live in Kodiak, Alaska.  
 (10) Q How long have you lived in Kodiak, Alaska?  
 (11) A I've lived there since 1964.  
 (12) Q Did you move there with your folks?  
 (13) A I came here with my father and my little brother, eleven.  
 (14) Q Are you married?  
 (15) A Yes.  
 (16) Q Do you have any children?  
 (17) A Two kids, a daughter and a son.  
 (18) Q And how long have you been a commercial fisherman?  
 (19) A Started in 1970.  
 (20) Q Have you continuously been a commercial fisherman since  
 (21) that time?  
 (22) A Yes.  
 (23) Q What do you fish for?  
 (24) A I fish for salmon, Tanner crab, Dungeness crab, codfish,  
 (25) halibut, black rockfish. Just about everything, actually that

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- (1) observed as anything other than lightly or very lightly oiled?  
 (2) A I cannot recall.  
 (3) MR CLOUGH: No further questions.  
 (4) THE COURT: You can step down. We're going to take a  
 (5) ten-minute break, just ten minutes.  
 (6) THE CLERK: Please rise. The court stands in recess.  
 (7) (Jury out at 11:40 a.m.)  
 (8) (Recess at 11:40 a.m. to 11:55 a.m.)  
 (9) (Jury in at 11:55 a.m.)  
 (10) THE CLERK: All rise. The court is now in session.  
 (11) session. Please be seated.  
 (12) MR STOLL: Your Honor, hope springs eternal. I'm  
 (13) going to try another short witness.  
 (14) THE COURT: How tall?  
 (15) MR STOLL: Five eleven. Called Mr. Nault, Andre.  
 (16) Nault.  
 (17) THE CLERK: Sir, could you attach the microphone to  
 (18) your jacket lapel and remain standing for the oath. Please  
 (19) raise your right hand.  
 (20) (The Witness Is Sworn)  
 (21) THE CLERK: Please be seated.  
 (22) Sir, for the record, can you state your full name?  
 (23) A My name is Andre James Nault.  
 (24) THE CLERK: And please spell your last name.  
 (25) A Nault.

- (1) we fish in Kodiak.  
 (2) Q Where do you fish in Kodiak?  
 (3) A All around the island and on the mainland from Cape  
 (4) Douglas  
 (5) down to close to Chignik.  
 (6) Q Now, by around the island, I'm showing you what's been  
 (7) marked as - admitted into evidence is 1354 A.  
 (8) A By the island, I mean Kodiak Archipelago.  
 (9) Q And the mainland, you're talking about this area of the  
 (10) peninsula?  
 (11) A Yes.  
 (12) Q Why do you live in Kodiak?  
 (13) A Well, I guess I just - when I was brought there, I got to  
 (14) appreciate all the good things that living on an island has to  
 (15) offer, and I've just chosen to stay there with my family and  
 (16) raise them there.  
 (17) I love the outdoors, and I like the type of a life style  
 (18) that we have on Kodiak. It's more of a small, close-knit group  
 (19) of communities around the island, and I love to hunt, I love to  
 (20) fish, and I love my job. I also want kind of want my kids to  
 (21) be able to see that kind of a life style, because it's fairly  
 (22) unique.  
 (23) Even in Alaska, come to Anchorage, I see it's a lot  
 (24) different here. School systems there, I believe, are real  
 (25) good. Just a great place to live. It's beautiful.  
 (26) Q Do you get - you and your family, do you - traditionally

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(1) have you gone out and used the - gone in the outdoors and used

(2) the beaches and so on?

(3) A Oh yeah it's a big part of life around Kodiak to use the beaches for all kinds of purposes. We even go swimming there in the summertime sometimes. Believe it or not it gets warm enough.

(4) We do a lot of sport fishing for all the salmon species.

(5) Avid deer hunting clam digging things like that. We just like to go to the beaches to walk around.

(6) Q In 1989 you were a commercial salmon fisherman is that correct?

(7) A Yes I was.

(8) Q Were you able to - you weren't able to commercial salmon fish that year?

(9) A No we didn't fish salmon in 1989.

(10) Q And would you - did there come a time when you went into a oil spill monitoring or survey system with the Alaska Department of Fish & Game?

(11) A Yes we did.

(12) Q Would you tell the jury please when you started your work in that regard?

(13) A We were hired - we first started our work about the first week in April and at first we weren't on spill monitoring with Fish & Game but we took some biologists out about the first week in April. We did that for about a week and a half and

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(1) us on the boat were directed to go out there and do some kind of profiling transects and animal counts and things like that.

(2) to kind of get a count of what kind of animals how many of what and everything like that was out there before any oil hit. If it were to hit they needed to know what they had to compare it to.

(3) Then after that we were assigned to put in the log booms and the other boom material in northern Afognak. What we were trying to accomplish there if the oil were to hit we were trying to keep the oil out of the estuary areas and out of the salmon streams and keep it from damaging those areas if it were to come there but also help direct it to a certain area where they could skim it or clean it up if it became necessary and so.

(4) Q So you put these booms down or some of the booms down before any of the oil got up there?

(5) A Yes we did.

(6) Q Since you put those booms up were you able then to successfully protect those shorelines up there at north end of Afognak?

(7) A I feel like we were able to slow some of it down basically. We were able to stop some of it clean up some of it but nowhere near totally.

(8) Q Why do you say that?

(9) A Well basically I would say because we were working with -

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then we went about the next month putting in log booms in conjunction with our other boats that were up on the north end of Afognak and so it would have been probably around the end of May that we started working in conjunction with Fish & Game and we were assigned to do a test there.

(1) Q Now when you say north end of Afognak that's this island here?

(2) A Yes.

(3) Q Part of the Afognak Borough and part of - not owned by the borough but it's part of the borough itself though is that right?

(4) A Yes it's included in the borough boundary.

(5) Q And then the village Afognak is Shuyak Island?

(6) A Yes.

(7) Q So your recollection that you were putting up boom and so on was on the north end of Afognak?

(8) A Yes northern side of northern Afognak.

(9) Q That's in here (indicating)?

(10) A Yes.

(11) Q And when you - could you describe to the jury in that first period of time from April and into May did you see oil?

(12) A Yes we did see oil but we didn't see it right away. In early April we didn't see it.

(13) Q You were putting out boom?

(14) A Yes. For that time we did with the biologists that we were with

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(1) number one we had never experienced anything like this before.

(2) so we really didn't know exactly what we were going to expect but we were just trying to kind of put in these booms to help stop any of the stuff.

(3) Basically what we had to work with were spruce logs that were banded together with steel cables as a first line of defense. The next thing that we put in place were some Typar curtains some sort of sorbent material that they use on road beds or something and somebody got the idea that maybe this stuff will stop oil. So we had massive quantities of this stuff that we were putting out in long lines.

(4) Then we had old fish nets that fishermen had donated. They fished - if you hung these absorbent pom poms on them maybe that will stop some of the oil. Then we had this hot dog light or 10 inch diameter shape absorbent boom. It's the type I see in conjunction with a small diesel spill in a boat harbor. It's not designed for ocean duty and it's long and probably 8 foot long pieces.

(5) So anyway we had all these different layers of defense one after another. And that's basically what we tried to put out there to stop it. We couldn't get the big ocean skirt boom. We got some of it but very little. That's the stuff that's actually designed to stop oil spills.

(6) Q But with all these different kinds of booms and pom poms and nets that people donated and so on you still weren't able

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(1) to stop all this oil?  
 (2) A No we weren't. The one instance that comes to mind, the  
 (3) most vividly for me was in Paul's Bay - Paul's Lake is one of  
 (4) our major red systems on the Alotnak area and we had that  
 (5) fairly heavily boomed off with all these different materials  
 (6) that I'm talking about. And we got a strong northwest wind for  
 (7) a couple days and even though we had those log booms - I  
 (8) believe the log boom in there was probably 1500 - 1800 feet  
 (9) long and it was anchored with 2,000 concrete blocks  
 (10) Even though we had that stuff in place, the northwest wind  
 (11) was strong enough that it moved the big concrete block and  
 (12) moved  
 (13) the anchor out of place. And as it did, it sort of ripped  
 (14) everything else out behind it and it sort of ended up piling  
 (15) up on the beach.  
 (16) As this was taking place, mousse and stuff was coming in  
 (17) with the current and the wind and whatnot. So it kind of  
 (18) hammered it into a big pile on the beach.  
 (19) Q Now then after a period - I think you said something  
 (20) about May then you did some survey work for the ADF&G  
 (21) Alaska  
 (22) Department of Fish & Game?  
 (23) A Yes I did.  
 (24) Q And tell the jury please what you did in that regard?  
 (25) A Okay. Basically what we were instructed to do there was  
 (26) to - we had a certain area of the island that was where we  
 (27) were supposed to go and all along the island we had certain

(1) way through each day. It took several days but we would work  
 (2) our way through our route and just pretend like we were  
 (3) fishermen and see what happened with the oil.  
 (4) Q Were these your own personal nets or were these old nets  
 (5) that were furnished to you?  
 (6) A These nets were provided to us to use. They were not our  
 (7) own nets.  
 (8) Q Were you willing to use your own nets?  
 (9) A No I wouldn't have used my net.  
 (10) Q Why is that?  
 (11) A It's a very expensive piece of equipment and I didn't know  
 (12) exactly what would happen to it if we got oil in it. And I  
 (13) figure if it got contaminated or something we would just be  
 (14) kind of out the net or something. So very expensive piece of  
 (15) equipment.  
 (16) Q Would you tell the jury - maybe you can walk down here  
 (17) with a microphone and show on this map where you started  
 (18) this  
 (19) program where you went to examine what your territory was in  
 (20) the  
 (21) beginning of May.  
 (22) A Beginning of May, the test fishery.  
 (23) Q When you started, yeah doing your trawl survey?  
 (24) A Yes. My area extended from - actually it had Chiniak  
 (25) Bay we started at Cape Chiniak down the east side through  
 (26) Uyak Bay through Kiliuda all around Sitka Island and this  
 (27) side of the island to Russian Harbor.

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(1) traditional hook hauling spots where the sciners always go to  
 (2) to make their sets and we were told to go there and make sets  
 (3) in a traditional manner just as though we were fishing and  
 (4) monitor - also we were to monitor what kind of oil we saw in  
 (5) the water.  
 (6) And another thing we were supposed to do if we couldn't do  
 (7) our test fishery which was supposed to be our primary job if  
 (8) the weather got bad or something like that we had a chance to  
 (9) go on beaches. We were to also go on beaches and do beach  
 (10) surveys over the kind of oil were on the different beaches.  
 (11) We had a trained person that worked for the Department of  
 (12) Fish & Game on the vessel with us and I also took some  
 (13) training myself to help us identify the types of oil that they  
 (14) wanted to talk about whether it was light very light  
 (15) moderate heavy.  
 (16) They had some criteria that they wanted us to be able to  
 (17) use so that they could know what we were talking about. And  
 (18) also they showed us how to fill out the logs and the forms.  
 (19) They instructed us in chain of custody sampling - we were  
 (20) issued chain of custody bottles and tape and locking boxes  
 (21) of cetera and a freezer to keep these samples in.  
 (22) We took samples of fish, samples of oil, samples of oily  
 (23) debris and materials and we were just basically instructed in  
 (24) the type of things they wanted us to do. And then we  
 (25) proceeded  
 (26) to go out there and we had a route and we would just work our

(1) Q How long did you cover that territory?  
 (2) A I can't remember exactly but I think it was probably about  
 (3) 20 to 30 days. I would just guess that I was doing that on my  
 (4) own. And then eventually the Department - or somebody put  
 (5) another boat out there.  
 (6) Q That was Mr. Keplinger's boat?  
 (7) A Yes. Mr. Keplinger came out there and I took from Old  
 (8) Harbor south and I took from Old Harbor north to just split it  
 (9) up. Because this is a pretty large area so it was a lot to  
 (10) cover.  
 (11) Q Incidentally let me ask you another question. A commercial  
 (12) fisherman - I think maybe you already answered that  
 (13) - you fish all over Kodiak Island?  
 (14) A Yes I do. Basically.  
 (15) Q I mean normally?  
 (16) A Some fleet is a mobile fleet. We don't usually stay in  
 (17) one place. We're looking for fish. If we don't catch them in  
 (18) one cove or one bay we move on.  
 (19) Q Try somewhere else?  
 (20) A We're constantly moving.  
 (21) Q Now let me ask you the question. All these samples and  
 (22) these chain of custody, you call them chain of custody jars and  
 (23) containers and all that stuff, what did you do with all that  
 (24) material?  
 (25) A What we would do when we would take a sample we would  
 (26) put

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(1) the sample in the jar and I put it in the locked box and  
 (2) put it in the freezer and we would videotape it as well as. We  
 (3) would record anything on a log. I guess you would say that was  
 (4) for the Department.  
 (5) Then approximately once every week or two they would either  
 (6) send a helicopter or airplane out to take those samples from  
 (7) us. And either myself or the observer on the boat were the  
 (8) only two people allowed on our boat to touch those samples  
 and  
 (9) we had to hand give them to a specified person that was coming  
 (10) out specifically to get those samples and the videotapes and  
 (11) they took them away. The Department of Fish & Game.  
 (12) Q You don't have any control over that material?  
 (13) A No sir.  
 (14) Q And did you -- did you turn in these logs? I'm not talking  
 (15) about your vessel log but your log that you -- if that's the  
 (16) right word. I don't know if it's the right word or not but the  
 (17) form that you filled out for the Department of Fish & Game.  
 (18) Did you turn that over? did you maintain that? did you keep  
 (19) that?  
 (20) A No. I didn't keep any of those. Those were all given to  
 (21) that same person who would pick up the samples and the  
 (22) videotapes. Also picked up all the paperwork so that was all  
 (23) given to them.  
 (24) Q So you don't have any control over those documents?  
 (25) A No. I don't.

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(1) Q And is that different from your vessel log incidentally?  
 (2) A Oh yeah. The vessel log is just kind of -- each mariner  
 (3) that's out on the ocean normally keeps a vessel log and you  
 (4) kind of put what you want to in there. No hard and fast rules  
 (5) put where you anchor where you're at what you see.  
 (6) Those are official documents that had to be -- we had to  
 (7) follow real specific rules and stuff with those. That's why  
 (8) the training before hand. That's why they had an official  
 (9) observer out there with us so these things had to be precise.  
 (10) Certain procedure had to be followed to the letter. Otherwise  
 (11) they figured it would cause problems later. I guess. So there  
 (12) was a lot of difference --  
 (13) Q Was this observer out there the entire time you were out  
 (14) there?  
 (15) A About the first four or five days that I was on the test  
 (16) fishery I didn't have an observer because they were in the  
 (17) process of still trying to get enough of them together to train  
 (18) them for -- I think there were like seven to ten of us on this  
 (19) test fishery in various places and they didn't have enough  
 (20) on the first four or five days I did the observing myself and  
 (21) the paperwork. But then like I told you I was a trained  
 (22) to do that.  
 (23) Q They gave you a training program before that?  
 (24) A They gave me the same training program they did as the  
 (25) observer.

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(1) Q How long did you continue -- after Mr. Keplinger took this  
 (2) other from Old Harbor south how long did you continue to do  
 (3) this northeasterly portion?  
 (4) A I believe it was probably the third week in August. I  
 (5) think when we were finished.  
 (6) Q Towards the end of August?  
 (7) A That's about the time frame, yes.  
 (8) Q Did you observe any oil when you were doing this during  
 (9) this period of time from late May until late August?  
 (10) A Yes. I did.  
 (11) Q Would you tell the jury please -- you can resume the  
 (12) witness stand.  
 (13) Could you describe to the jury what you saw in terms of  
 (14) oiling in that area?  
 (15) A Basically when we first went out on the test fishery we  
 (16) were told that there had been no oil sightings on the east side  
 (17) of Kodiak Island up until that point and when I got out there  
 (18) within three or four hours out of Kodiak I was starting to  
 (19) see long sheens, mousse, tide streaks. And we continued to see  
 (20) mousse, sheen and tide streaks mixed in with bird feathers and  
 (21) kelp for the entire time we were out there.  
 (22) Some days would be worse than others. Some days would look  
 (23) pretty good maybe it wasn't that bad. But basically the types  
 (24) of oil that I saw were pieces of mousse anything from like the  
 (25) size of your fingernail just these little smudgy blob looking

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(1) thing all the way up to dinner plate blobs of tuff. And  
 (2) sometimes there would be narrow bands of this. Sometimes  
 there  
 (3) would be real wide bands of it.  
 (4) It varied from day to day from place to place and  
 (5) depending on the conditions. It depended a lot on the wind  
 and  
 (6) the tide and what was going on the particular day. When we did  
 (7) do beach surveys we would see basically mousse on the  
 (8) beaches. There again it was like the same kind of size range  
 (9) anything from the size of a pea up to the size of a big plate  
 (10) or something. And it would normally always be mixed with kelp  
 (11) and bird feathers. For some reason it attracted the bird  
 (12) feathers thousands of them. I don't know why.  
 (13) Also you could see sheen bleeding off the beaches at  
 (14) times. It was like if the tide would deposit a bunch of the  
 (15) mousse on the beach then when the wind would blow offshore  
 and  
 (16) as the tide was falling you could see almost like windrows of  
 (17) sheen bleeding off. And the sheens were different types.  
 (18) Anything from just very light kind of a sheen -- we had  
 (19) different tests that we would do so that we could determine  
 (20) how we were supposed to -- what notation we were supposed to  
 (21) put in these official logs about what type of sheen it was.  
 (22) We would try soap tests and whatnot. And we could see this  
 (23) light sheen sometimes we would see almost like a silvery  
 (24) sheen just kind of thick. I don't really know how to describe  
 (25) it other than it was just silvery. Occasionally I saw kind of

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(1) a rainbow like sheen Usually that would be associated with  
 (2) when I would see the windrows coming off the beach Now and  
 (3) then you would see some rain blowing and occasionally we  
 were  
 (4) out cruising up and down the area we would see some rainbow  
 (5) sheen I didn't see as much of that as the other type just  
 (6) real silvery looking stuff Basically that's the types of oil  
 (7) I saw out there  
 (8) Q Now in your experience since 196 - whenever you started  
 (9) going out in the water or actually when you lived in Kodiak  
 (10) had you ever seen anything like this before in terms of the  
 (11) sheens these sheens Let's just take the sheens for example?  
 (12) A No never  
 (13) Q Had you ever seen any mousse what you described as  
 mousse  
 (14) or tar balls like that?  
 (15) A No I never have seen anything like that  
 (16) Q And just so - does this look at all like what you saw out  
 (17) there? This is Exhibit 1536  
 (18) A Yes This looks pretty typical of the oil that we were  
 (19) seeing around in the state that it seemed to be in when it was  
 (20) hitting Kodiak The only thing that looks different about  
 (21) that this is a clean piece and normally we would see a lot of  
 (22) bird feathers stuck to this and sometimes kelp and stuff like  
 (23) that Sometimes it would be a little browner but that smells  
 (24) and - I managed to get it on myself It smells and looks like  
 (25) what we were seeing yes

(1) Q How is that?  
 (2) A Well you surely wouldn't have wanted to be diving any  
 (3) claims on one of these beaches that had the oil We wouldn't  
 (4) have gone out and done the hiking on the beaches that we  
 (5) normally probably would have done Sometimes in the summer  
 (6) when I come in from a fishing trip we did like to go for hikes  
 (7) on the beaches and celebrate and go out to the beaches We  
 (8) wouldn't do anything like that  
 (9) And in the fall after going through the whole thing that  
 (10) summer the last thing I wanted to do was walk around on the  
 (11) beaches and go deer hunting like I normally always do I just  
 (12) kind of wanted to take a break from it all So in that  
 (13) respect yeah it changed the way we did things  
 (14) Q Was there still oil on the beaches in the fall?  
 (15) MR CLOUGH Objection foundation hasn't had any  
 (16) testimony he went out on the beaches in the fall  
 (17) BY MR STOLL  
 (18) Q Did you observe oil on the beaches in the fall?  
 (19) A Like I said I didn't go deer hunting that fall So the  
 (20) last of the oil I would personally have observed would have  
 (21) been my last time on the beach while I was still working on the  
 (22) test fishery  
 (23) Q To this day do you go clamming?  
 (24) A I personally don't go clamming anymore My family doesn't  
 (25) Q Do you think that your habits in terms of the habits that

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(1) Q Sorry  
 (2) A I hope I have the last of that on me  
 (3) Q Sorry  
 (4) When you talk about - now this purports to be an oil spot  
 (5) here It's on that little monitor there Is that - would you  
 (6) have classified that as a light or very light oiling is that  
 (7) what you're talking about?  
 (8) A I guess I'm not sure what you mean in  
 (9) Q Well if you saw something like that that spot that's near  
 (10) the beach that summer? Would you put that down in your oiling  
 (11) log?  
 (12) A I don't know as that would even go in the log Unless I  
 (13) could inspect it in person number one it would be hard for me  
 (14) to try to tell if that was oil or not  
 (15) Q Would you inspect something like that to determine if it  
 (16) was oil?  
 (17) A We probably would have walked on by that There was some  
 (18) serious oil on the beach I don't know what this is but no  
 (19) I'm talking about big globs of this stuff in the tide line all  
 (20) over the beach  
 (21) Q Did this oiling that you observed then on the beaches and  
 (22) in the water did this change at all your usage yours and your  
 (23) family's usage of the waters and the beaches of Kodiak in 1989?  
 (24) A During 1989 yes Oh definitely so

(1) you and your family had before of usage of the recreational  
 (2) areas have you observed whether those are common to other  
 (3) residents in Kodiak?  
 (4) MR CLOUGH Objection foundation I don't think a  
 (5) sufficient foundation has been laid for the witness to draw  
 (6) opinions about the populations of Kodiak  
 (7) MR STOLL I'll lay a foundation  
 (8) THE COURT Go ahead  
 (9) BY MR STOLL  
 (10) Q During the 30 years that you've lived in Kodiak have you  
 (11) observed how other people on Kodiak live?  
 (12) A I would say I have  
 (13) Q Do you go - have you used the beaches with your friends  
 (14) that you live with and work with on Kodiak?  
 (15) A Yes  
 (16) Q And have you - did you observe during the summer - the  
 (17) year 1989 how other residents of Kodiak used or didn't use the  
 (18) beaches and other areas of Kodiak?  
 (19) A Yes  
 (20) Q And did you notice any difference in how other residents of  
 (21) Kodiak used the beaches?  
 (22) MR CLOUGH Objection foundation Your Honor If he  
 (23) wants to talk about a particular person I don't have a  
 (24) problem But as to the entire Kodiak populous I don't think  
 (25) foundation has been laid

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- (1) THE COURT Your objection is overruled  
 (2) A Could you repeat the question please?  
 (3) BY MR STOLL  
 (4) Q Just did you observe during 1989 how other residents and  
 (5) families on Kodiak used or didn't use the beaches and swam  
 (6) things of that nature?  
 (7) A Yes And for the most part the residents of Kodiak didn't  
 (8) use the beaches like they had in the normal matter because  
 (9) they  
 (10) were - didn't want to get down there where the oil was and  
 (11) they didn't want to take the chance of having their children  
 (12) get into the oil and things like that  
 (13) Q Now did you - one of the areas that you covered was Ugak?  
 (14) A Yes  
 (15) Q I'm going to show you what has been marked for  
 (16) identification as plaintiffs Exhibit 1524 and is this a -  
 (17) this I'll tell you is a map that purports to be Ugak Bay and  
 (18) showing in green land holds of Kodiak Island Borough in Ugak  
 (19) Bay Are you familiar with this area?  
 (20) A Yes I am  
 (21) Q And did you observe any oiling of Ugak Bay?  
 (22) A Yes there was quite a bit of oiling throughout Ugak Bay in  
 (23) the water as well as on several of the beaches that we did  
 (24) visit  
 (25) Q You could come down and just describe the areas on the -  
 (26) where you went in Ugak Bay and if you observed any oiling in

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- (1) these - near or around any of these green parcels?  
 (2) A Basically a lot of the oiling that we saw was - what we  
 (3) would normally do - see a lot of these tide streaks and  
 (4) windrows along the beach and in the water like this  
 (5) Sometimes depending on the wind and the weather conditions  
 (6) it  
 (7) may be kind of long streaks of it going this way Other times  
 (8) it could be going in and out of the bay so it was never always  
 (9) in one spot or anything like that  
 (10) B: I specifically remember doing beach surveys along  
 (11) this area and going to here here and here and here and here  
 (12) and up in here (indicating) and I think I did over here but I  
 (13) can't remember for sure But I know I did go a lot in a lot  
 (14) of these areas along here and did beach surveys and we found  
 (15) oil in all the spots that we went to here The lesser amount up  
 (16) in there (indicating) but it seemed like the more out in this  
 (17) direction out here  
 (18) Q Just let the record show that he's identified all the green  
 (19) portions of those areas  
 (20) MR CLOUGH Mr Stoll I'm going to object Just to  
 (21) clarify for the record did he do any shoreline on the head of  
 (22) Ugak Bay parcel? Because he seemed to skip over that with his  
 (23) hand  
 (24) BY MR STOLL  
 (25) Q Did you ever go over here?  
 (26) A I don't recall myself or my crew going ashore here I

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- (1) can't remember for certain We did this for several months day  
 (2) after day after day so my memory might be a little hazy I do  
 (3) specifically remember going on this shoreline here here here  
 (4) and here (indicating)  
 (5) MR CLOUGH For the record that would be the  
 (6) southern shorelines in Ugak Bay  
 (7) BY MR STOLL  
 (8) Q And also in Hidden Basin?  
 (9) A Yes I remember going to shore in Hidden Basin  
 (10) Q In all those areas you found oil?  
 (11) A Yes sir I did  
 (12) Q Let me ask you this question Was there free floating oil  
 (13) in the middle of Ugak Bay?  
 (14) A At times we would see like I mentioned before we would  
 (15) see tide streaks with mousse and sheen floating I mean we  
 (16) would come across it I guess in the middle of Ugak and  
 (17) sometimes on the mouth and along the edges  
 (18) Q Now as long as you're down there let me show you what's  
 (19) been marked as plaintiffs Exhibit 1526 which is another parcel  
 (20) map for some other land holds of Kodiak Island Borough  
 (21) including in Shearwater Bay Did you go into Kiliuda Bay and  
 (22) Shearwater Bay?  
 (23) A Yes we did This was also part of our normal route that  
 (24) we were going through And we went through there numerous  
 (25) times<sup>1</sup>

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- (1) Q Did you observe oil there also?  
 (2) A Yes we did We observed oil in several locations on the  
 (3) beaches there as well as in the water  
 (4) Q Did you happen to go in the vicinity or on this parcel that  
 (5) is in green on Shearwater Bay?  
 (6) A I don't recall specifically going on this one green parcel  
 (7) between these red lines There again I was on an awful lot of  
 (8) beaches We were in this whole vicinity in this whole area I  
 (9) specifically remember being on this beach right here and this  
 (10) and one day my wife  
 (11) Q What was that like?  
 (12) A There was mousse there on that beach It wasn't a real  
 (13) heavy impact but there was - I mean according to our little  
 (14) criteria but there was definitely mousse all the way up to  
 (15) seven eight inch patties of it and we reported that And  
 (16) ended up a clean up crew came in and did some cleaning in  
 (17) there I remember going and doing another one and it seemed  
 (18) like there was more oil over there again  
 (19) Q Once the clean up crew got in there was everything okay  
 (20) for the rest of the summer?  
 (21) A In my experience and it was fairly limited as far as  
 (22) clean up crews because for one thing we didn't see too many  
 (23) clean up crews We kept wanting to see a lot of clean up  
 (24) crews but when they would come into an area and clean it up  
 (25) occasionally we had gone into the beaches sometimes  
 afterwards

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(1) to do another beach survey and we would find in some  
 (2) instances sometimes the beaches remained cleaned and  
 sometimes  
 (3) there were instances of the beach receding. I don't know  
 (4) exactly what you mean by fine.  
 (5) MR STOLL: That's all, thank you.  
 (6) Your Honor, we'll offer all of these exhibits which is  
 (7) 1526, 1524, and then with respect to the prior witness, 1522,  
 (8) and 1046.  
 (9) (Exhibits 1526, 1524, 1522 and 1046 offered)  
 (10) THE COURT: 746?  
 (11) MR STOLL: 1046.  
 (12) THE COURT: They are admitted.  
 (13) (Exhibits 1526, 1524, 1522 and 1046 received)  
 (14) MR CLOUGH: Your Honor, I apologize, I told  
 (15) Mr. Stoll obviously Mr. -  
 (16) THE COURT: All right, counsel, I didn't hear you.  
 (17) MR CLOUGH: This is a survey's map showing anchorage  
 (18) He didn't personally survey it. I told Mr. Stoll if we could  
 (19) confirm about the -  
 (20) THE COURT: If you have a problem with them, once you  
 (21) do that, once you make your investigations, let me know about  
 (22) it because I want them into the record, 1526, 1524, 1522 and  
 (23) 1024.  
 (24) MR CLOUGH: And I don't expect a problem.  
 (25) CROSS EXAMINATION OF ANDREJ NAULT

(1) been enough for you to classify under those ADF&G standards  
 (2) that beaches as being very lightly oiled?  
 (3) A: I think it probably would have been if we could have been  
 (4) able to determine that it was indeed oil.  
 (5) Q: Right. And I said assuming, for the purpose of the question,  
 (6) that it was oil?  
 (7) A: Yes. I would say that it would have been considered very  
 (8) light.  
 (9) Q: Now, here in Shearwater Bay, was it Ladder Island you were  
 (10) specifically talking about earlier during your testimony, do  
 (11) you recall being out on - being out and spotting some mousse  
 (12) patties?  
 (13) A: Yes. I was on Ladder Island and the beach right by it.  
 (14) Q: Was that your testimony where your boat reported that in  
 (15) that there was oil on the beach there?  
 (16) A: We would have reported - anytime we encountered oil in the  
 (17) water or on the beaches we reported it twice a day, every day.  
 (18) Yes.  
 (19) Q: And I believe you said in that instance, based on your  
 (20) report, a clean up crew was sent out there to pick up what you  
 (21) saw?  
 (22) A: I remember reporting that oil in - and I don't know if the  
 (23) clean up crew was specifically sent there in response to that  
 (24) one radio call or not. We made radio calls twice a day, every  
 (25) day for months on end in reporting this oil, and I do remember

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(1) BY MR CLOUGH  
 (2) Q: My name is John Clough. I'm here representing Exxon.  
 (3) Mr. Stoll has been showing this one several times here.  
 (4) This is - for the record, I believe it's DX13160, do you  
 (5) remember we talked about this, or you talked about this with  
 (6) Mr. Stoll on the screen just a moment ago?  
 (7) A: Yes.  
 (8) Q: Now this is obviously a very little bit of oil, is that  
 (9) it's oil, right?  
 (10) A: I would say so.  
 (11) Q: Now, for the purposes of what I'm - you told us how you  
 (12) were, at least back in 1989, pretty familiar with the standards  
 (13) that ADF&G was using for its surveying efforts, do you  
 (14) remember?  
 (15) A: Yeah. We had a criteria that we were supposed to be using.  
 (16) Q: Do you - assume for the purpose of the question, if you  
 (17) would, sir, that that is the remnants of a blob of oil there,  
 (18) okay?  
 (19) A: Uh, huh.  
 (20) Q: Do you recall if, under the standards you guys were  
 (21) applying that year, if in fact you had noticed it - I noticed  
 (22) you said you might not have noticed it as you walked past, but  
 (23) assuming you were walking on the beach and you spot it there,  
 (24) it is, and you look at it and say, yeah, it's remnants of oil,  
 (25) do you recall if, in fact, that little bit alone would have

(1) a clean up crew coming out and seeing them around the  
 (2) Shearwater Bay area, you know, so - but whether they were  
 sent  
 (3) in direct response to that or not, I couldn't tell you.  
 (4) Q: To your knowledge, did those clean up crews that were  
 (5) working out of places like Old Harbor, Ouzinkie, and other  
 (6) places on that side, weren't they working all summer long?  
 (7) A: I think they were. I'm not sure, but I think they were.  
 (8) Q: To your knowledge, some beaches were re-oiled, weren't  
 (9) they, with the tide? Mousse patties could come in and mouss  
 patties  
 (10) could go out, right?  
 (11) A: I would assume so.  
 (12) Q: And to your knowledge, weren't - in quite a few instances,  
 (13) wasn't a beach re-cleaned? When it got recoiled, it was  
 (14) re-cleaned?  
 (15) A: I'm really not too sure, because I wasn't involved in the  
 (16) clean up portion of it, other than when I was up on the north  
 (17) end and digging with the log booms. I saw clean up crews  
 moving  
 (18) around from time to time. What if specific instructions  
 (19) were as far as re-cleaning beaches, I couldn't say.  
 (20) Q: What moved these mousse patties around was the tide and the  
 (21) wave action. You described how they - they would literally  
 (22) float in with the tide, that's how something would get recoiled,  
 (23) right?  
 (24) A: Well, that could probably be one way, yes. The currents  
 (25) and the winds and whatnot could move these mousse patties

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(1) around. They could go off one beach, come back onto the same beach or go onto another beach. However, in my excursions on the outside of the island it was real obvious to me, being out there, that there was a lot of new oiling that was taking place all throughout the summer as well.

(2) Q We're saying the same thing, but just missing each other when I say "new oil," I don't mean there is a new oil spill, oil from the Exxon Valdez, but blobs of it being moved around by the tides and the waves.

(3) A Yes. But to take it a step further, there was oil coming from the north towards the eastern shore of Kodiak Island. Oil that had never been on a beach in Kodiak, it wasn't just getting lifted off and moved around within a bay, this was more oil coming down from the direction of the Sound.

(4) So I assume a beach could get recoiled with that stuff, as well as stuff floating in a beach.

(5) Q And the same with mousse patties?

(6) A I believe so.

(7) Q And I believe you said you observed clean up crews on a couple occasions?

(8) A Yes, I did.

(9) Q When you see them, they would have shovels and stuff, scoop it up, put it in a bag, and carry it off, right?

(10) A I guess so.

(11) Q You saw that?

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(1) A Yes, with them on the beach, with moving around and moving them back and forth. So yes, I remember they were in there cleaning up the mousse and the kelp. I never was a turtle on the beach with a clean up crew while they were doing it.

(2) Q Now you said I believe and correct me if I'm wrong, please, that the turtle thing you were doing was the primary work you were doing with ADF&G, is that right?

(3) A By that what I meant was that the - I felt that it was my primary purpose, to be able to fish, whether or not we could fish safely, put our nets in the water without contaminating our nets or the fish. I felt that that was our most important function. Now I don't ever recall ADF&G ever saying specifically, you know, this is your primary function, but they told us that the beach surveys were not to be what we spent our time doing. This other stuff, they wanted us to be concentrated on that and so that's how I came to that conclusion. That it seemed to be our primary purpose, was to be able to fish safely without oiling the turtles and the fish.

(4) Q I think you testified you would do the beach surveys when weather or other conditions would keep you from doing your main job of the turtle fishing, that is?

(5) A That's right.

(6) Q And you also talked to Mr. Stoll a lot about your captain's log that you kept, right?

(7) A Yes, we kept that.

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(1) Q And it's a pretty darn thick log in your own handwriting of your various observations, right?

(2) A Yes.

(3) Q And at times when you go on various beaches throughout - put the other map up here. Throughout your area of operations, and you saw mousse patties and tar balls on a beach, at least maybe not every occasion, but at times you wrote that down in your handwritten notes?

(4) A Yes, we did.

(5) Q And if we were to take everybody's times, we would find instances of you, in your handwritten notes, describing those instances of mousse patties and tar balls on the beaches?

(6) A Yes.

(7) Q And it's true that on quite a few occasions when you went on shore you didn't find anything like that?

(8) A There were times when we went ashore and we didn't find mousse and oil, but for the most part we did.

(9) Q If we were to take out your log notes and go through that for a whole month, wouldn't we find a number of occasions where you went ashore and we found clean beach or very little oiling?

(10) MR STOLL: Which log are you talking about?

(11) MR CLOUGH: His personal handwritten log.

(12) MR STOLL: The one that he kept for his boat or the one for ADF&G?

(13) BY MR CLOUGH:

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(1) Q Your personal log, your vessel was the -

(2) A Golden Nugget.

(3) Q Would you agree with me that the best records out there of the shoreline oiling that your crew saw would have been the ADF&G data collected by the trained observer working off your ship?

(4) A I would say that they would have been the record that would have been reliable, yes, because my notations were for my own personal use, to be able to know what we were doing.

(5) Q Now you talked about Ugak, in particular. Do you know where in Ugak - just bear with me, just a second.

(6) MR CLOUGH: Counsel, these were all previously provided to you.

(7) BY MR CLOUGH:

(8) Q Mr. Nault, I've got some photos taken in July of 1989 of some of the - let me clarify here. For you - in Ugak, you had testified I believe that most of your personal on the shore walking in this area was on what I'm calling the southern end of the Ugak Bay, with the exception of the stuff you did up here at Hidden Basin?

(9) A That's where I am specifically going. I know we did beach surveys on the south, too. I can't remember specifically where it was.

(10) Q And you were in Ugak Bay in July of 1989 -

(11) A Yes.

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(1) Q - on a number of occasions throughout the month?  
 (2) A Yes  
 (3) Q What I'd like to show you is just a very few photographs of  
 (4) that southern shore the areas along the southern shore of  
 (5) Ugak and from 1989 July?  
 (6) MR STOLL Hold it just a minute  
 (7) Your Honor I don't mind him showing photographs of Ugak  
 (8) Bay if the witness can identify them but I don't think it's  
 (9) appropriate for Mr. Clough - maybe these are taken in July of  
 (10) 1989 -  
 (11) THE COURT Have the witness identify them  
 (12) MR CLOUGH I will see if he can Your Honor  
 (13) THE COURT If you can Can you see the photograph?  
 (14) A It's on here now  
 (15) THE COURT Do you recognize it?  
 (16) MR CLOUGH I confused the technician can we have  
 (17) the monitors but not the Barco? Sorry Your Honor my  
 (18) mistake  
 (19) A I really can't tell specifically where it's at if that's  
 (20) where you want me to tell you  
 (21) BY MR CLOUGH  
 (22) Q For example is that Ugak Bay?  
 (23) A I can't even tell you that for sure I don't see any  
 (24) headlands or anything that I can easily recognize here  
 (25) Q Let me show you again without putting it on the main

(1) 1989?  
 (2) A Yes you could see this type of beach in there  
 (3) Q You could put this up for the jury as well as - with the  
 (4) court's permission  
 (5) Now you described seeing tar balls and globs of mousse on  
 (6) occasions correct on the beaches in Ugak?  
 (7) A Yes I did I saw both of those  
 (8) Q Looking back to the first photograph can you see the log  
 (9) in the front of that?  
 (10) A Yes  
 (11) Q And if we could turn off the Barco here please  
 (12) I'd like to ask you before we show this to the jury  
 (13) looking at the what you see on your screen there if that  
 (14) resembles some of the material you saw on the shoreline that  
 (15) summer on the shores of Ugak Bay  
 (16) A Would you repeat the question?  
 (17) Q Sure trying not to orally describe it to the jury that's  
 (18) why maybe I'm experiencing some difficulty here  
 (19) Do you see what that picture is intended to depict there on  
 (20) the log and I'm asking you did you see in this case - I  
 (21) don't know if you would call it a tar ball or a mousse patty -  
 (22) that looked like that did you see things that looked like that  
 (23) on the shores of Ugak Bay?  
 (24) A Yes We saw things occasionally that looked like that It  
 (25) looks like one that was melted in the sun or something on a

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(1) screen one more here See if you can recognize that  
 (2) A I'm not positive that I can identify this spot either  
 (3) Sort of looks like Gull Cape  
 (4) MR CLOUGH What I'd like to ask him are these  
 (5) representative of the types of shorelines he saw in Ugak Bay  
 (6) THE COURT He can answer  
 (7) A Yes  
 (8) MR CLOUGH With that Your Honor -  
 (9) THE COURT You can show him the pictures yes  
 (10) BY MR CLOUGH  
 (11) Q Looking to the photograph here - and I will have to  
 (12) identify to the back of it to get the exhibit number and  
 (13) correct the record later - but is this representative of the  
 (14) types of beach you saw in Ugak Bay in July of '89?  
 (15) A Most of the beaches on the east side of the island are a  
 (16) combination of sand and gravel beaches like that drifts I  
 (17) would say yes it's fairly representative of that type of  
 (18) beach  
 (19) Q I would like to show you another photograph  
 (20) If we can turn off the Barco for the first question here  
 (21) Looking to your screen sir this is the same question  
 (22) generally representative of the types of shorelines that you  
 (23) saw - the witness monitors is not on  
 (24) This is generally representative of some of the types of  
 (25) shorelines you saw on the southern side of Ugak back in July of

(1) log  
 (2) Q If we could publish that to the jury  
 (3) Now going back to the first photograph if you tell from  
 (4) this photograph other than the moussie patty we see on that  
 (5) log if you can see anything else that you can tell is a mousse  
 (6) patty or a tar ball in that photograph?  
 (7) A I can't tell from this photograph  
 (8) Q In fact the mousse patties and tar balls you saw were a  
 (9) variety of sizes weren't they?  
 (10) A Yes they were  
 (11) Q Some of them were quite small weren't they?  
 (12) A Yes they were  
 (13) Q If we could turn off the Barco  
 (14) Is this photograph representative of some of the smaller  
 (15) patches that are on your screen?  
 (16) A Excuse me?  
 (17) Q Is this photograph representative of some of the little  
 (18) patches?  
 (19) A Little patches of mousse?  
 (20) Q Mousse yes  
 (21) MR STOLL Your Honor he can show this one Let's  
 (22) speed this up a little bit  
 (23) THE COURT Besides that that's one on -  
 (24) A This would be a wet kelp on this rock  
 (25) BY MR CLOUGH

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(1) Q Assuming light oil?

(2) A Are you talking about this hinge thing in the middle?

(3) Q Put it this way did you see patches of mousse that small

(4) in Ugak Bay?

(5) A Yes occasionally we did

(6) Q To your knowledge when the clean up crews came across that

(7) they would scoop up the bunch of pebbles and put it in a bag

(8) and carry it away?

(9) A I would assume that's what they were doing but I don't

(10) know for sure

(11) Q Did you ever go up to the any of the heavily oiled beaches

(12) in Prince William Sound?

(13) A No sir

(14) Q Did you go up to Prince William Sound at all in 1989?

(15) A No sir I didn't

(16) Q So you're not in any position to compare heavy oiling that

(17) heavy oiling found in portions of Prince William Sound with the

(18) oiling you saw down in Kodiak right?

(19) A No sir

(20) Q As you're sitting here today sir do you recall how the

(21) ADF&G categorized the majority of the beaches that you

(22) surveyed

(23) that summer under their classification system?

(24) A I don't recall specifically no I mean we had all

(25) different types of impacts and what they did with all that

(26) material afterwards I don't know

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(1) Q Let me be more precise Do you recall whether for the

(2) beach survey that you and your crew did the trained ADF&G

(3) observer working with you classified the great majority of

(4) beaches surveyed by your crew as either lightly or very lightly

(5) oiled?

(6) A I couldn't tell you for sure I would say light to

(7) moderate kind of comes to mind But like I say there was

(8) many many different areas that we did and it went on for

(9) days so I can't tell you how ADF&G classified them or how the

(10) observer felt about the degree of oiling was a light

(11) to moderate according to their criteria

(12) Q From your recollection?

(13) A Yes that seems to be what I recall

(14) Q But as you testified they did have a very specific

(15) classification scheme?

(16) A Yes

(17) Q And they had a trained observer on your vessel to make the

(18) observations?

(19) A Yes

(20) Q And he did maintain data to a beach by beach shoreline

(21) basis?

(22) A Each time we went to shore yes we would write down the

(23) data for that particular shoreline

(24) Q And you would agree with me that those observations

(25) according to ADF&G criteria are the best existing treatment of

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(1) the amount of oiling observed by you and your crew that

(2) summer?

(3) A I would say that that was the best that they had to with

(4) their criteria yes Not that I necessarily agree with their

(5) criteria

(6) MR CLOUGH No further questions

(7) MR STOLL I just have a couple questions

(8) BY MR STOLL

(9) Q Mr Nault this observer by ADF&G you said something

(10) earlier in your direct testimony you got the same kind of

(11) training that that person got?

(12) A Yes basically I did

(13) Q How do you know that?

(14) A Because they told me that they were going to train these

(15) observers and it's the same stuff they gave to me I believe

(16) theirs was a little more extensive

(17) Q And you did these tests essentially all summer I mean

(18) for late May to late August for three months essentially to

(19) see if you could fish safely that was the idea behind this?

(20) A Yes This was an ongoing process It was seven days a

(21) week for months

(22) Q And you had a certain area Mr Kuplinger had an area

(23) there were other people doing other tests in Kodiak is that

(24) correct?

(25) A Yes I think there were seven to ten boats out there

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(1) Q Doing these tests to see if you could fish safely?

(2) A Yes

(3) Q And during the entire summer did ADF&G ever open any

(4) area

(5) area to salmon fishing?

(6) A To my knowledge they - I think that they opened the

(7) Alitak district to the set gillnet fleet only

(8) Q That was one small area -

(9) A Yes It's way up in the head of - it's up in Alitak Bay

(10) by Moser Bay It's way up inside

(11) Q What do you mean by way up inside?

(12) A If you have a map it's on the south end This is the

(13) Alitak Bay district down here and the area that they would

(14) have opened was this area up inside here

(15) Q Way inside this -

(16) A Yeah and I'm not exactly sure just exactly whether but

(17) it's the Olga Moser Bay area I believe that they allowed some

(18) fishing to take place there with the setnet boats the beach

(19) seiners beach gillnetters rather

(20) Q And that's the only place that you know of?

(21) A For a commercial harvest And then there was some type of

(22) a very limited thing that they allowed to happen on the inside

(23) at Kitoi Bay but that may have had something to do with the

(24) cost recovery of fish at Kitoi I'm not sure of it

(25) specifically but for the most part there was no commercial

(26) fish seine fishery in that part of the island or any part of

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(1) the island  
 (2) Q This one photo graph that Mr Clough used this stick of  
 (3) wood here with a little oil on it is that what you're talking  
 (4) about? Is that what - most of the oil that you saw that  
 (5) summer is that the kind of oiling that you were looking at?  
 (6) A No sir One tad of that would be of no concern to  
 (7) anyone We're talking about oil a lot of oil  
 (8) MR STOLL That's all  
 (9) RE-CROSS EXAMINATION OF ANDREJ NAULT  
 (10) BY MR CLOUGH  
 (11) Q The jury may not understand as well as you as well as some  
 (12) other people what is meant by a cost recovery fishery  
 (13) Correct me if I'm wrong what happens at the hatchery  
 (14) right offshore at the hatchery they fish for them and they  
 (15) then sell those fish don't they?  
 (16) A I guess so  
 (17) Q They sell them to the public to eat don't they?  
 (18) A I believe they had some kind of a deal with one of the  
 (19) canneries I think they had - the canneries had bid on the  
 (20) fish yes  
 (21) Q The cannery puts them in cans and gives them to people to  
 (22) eat right?  
 (23) A Yes  
 (24) Q And it's the money the cannery pays for those fish caught  
 (25) right there in those waters to feed people It's the money

(1) take?  
 (2) MR FORTIER She's going to extend over into  
 (3) tomorrow I'm sure  
 (4) THE COURT We've got a half hour I'm going to give  
 (5) the jury ten minutes that turns into 15 minutes so what would  
 (6) be the point of getting into 15 minutes of testimony? Do you  
 (7) want to go tomorrow?  
 (8) MR FORTIER Why don't we start tomorrow that's  
 (9) fine  
 (10) THE COURT Don't talk about the case with anyone  
 (11) including your fellow jurors and don't form any opinion on it  
 (12) until it's submitted to you for deliberation  
 (13) (Jury out at 1:00 p.m.)  
 (14) THE COURT Counsel anything to take up on the  
 (15) record?  
 (16) MR CLOUGH I'll defer to Mr Diamond I have  
 (17) nothing  
 (18) MR DIAMOND Your Honor with respect to  
 (19) Dr Johnson's testimony you remember on two occasions we  
 (20) have  
 (21) talked about the summary charts - summary matrices we sent  
 (22) over on Friday a list of references on those charts which the  
 (23) claims have been dropped According to most recent iterations  
 (24) they are still there I don't know whether counsel intends to  
 (25) remove them between now and tomorrow but if he doesn't we  
 (26) will  
 (27) be talking to you tomorrow morning about that

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(1) that they make from that that's used to pay the cost of the  
 (2) hatchery?  
 (3) A I think that's correct  
 (4) Q So obviously the cannery thought those fish were safe to  
 (5) eat?  
 (6) A Yeah those particular fish were caught inside of a log  
 (7) boom and a series of other booms with clean up vessels and  
 (8) other vessels out there in front of it then they were allowed  
 (9) a limited fishery  
 (10) Q They caught those and and how and and thousands of  
 (11) fish  
 (12) in that area didn't they?  
 (13) A I'm not sure what the catch was  
 (14) Q And finally during the entire summer of all the work you  
 (15) did with ADF&G to your knowledge did they categorize a  
 (16) single  
 (17) beach you surveyed as heavily oiled under their official  
 (18) standards?  
 (19) A I don't know  
 (20) MR CLOUGH No further questions  
 (21) THE COURT You can step down  
 (22) Counsel do you have another witness that you can put right  
 (23) on?  
 (24) MR STOLL I'm done with my witnesses for the day  
 (25) but Mr Fortier has witnesses  
 (26) MR FORTIER I'll need a few minutes to get set up?  
 (27) THE COURT How long is this next witness going to

(1) MR FORTIER We're working hard on getting them out  
 (2) Counsel did bring it to our attention that there were a few  
 (3) scattered through we're trying to address those issues  
 (4) THE COURT Just to get all our mind it's clear it  
 (5) could work at that by 4:30 today then none of us will worry  
 (6) Do your best counsel that's all that I can ask for  
 (7) MR PETUMENOS On the Check point my understanding  
 (8) is that it was faxed to Boyle & Gates office  
 (9) MR DIAMOND If they go to Boyle & Gates I'll never  
 (10) see them  
 (11) MR STOLL Your Honor I would like to bring one -  
 (12) THE COURT Is this what they call a matrix counsel?  
 (13) MR STOLL Your Honor tomorrow I believe the next  
 (14) two witnesses are archeological witnesses that have nothing to  
 (15) do with the case of my clients and would it be - could I be  
 (16) excused from the bench tomorrow  
 (17) THE COURT Many words spring to my lips but I'm not  
 (18) going to say any of them except yes  
 (19) MR STOLL Thank you Your Honor  
 (20) MR FORTIER Your Honor I have one more matter I  
 (21) was going to read in the green exhibits into the record last  
 (22) week or last Monday last Friday Could I do that now Your  
 (23) Honor?  
 (24) THE COURT Sure  
 (25) MR FORTIER Exhibit 1123 1125 through 1127 1131

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(1) 1132 1247 2 1247 4 1247 4 A 1247 5 1247 7 through - I m  
 (2) sorry  
 (3) MR OPPENHEIMER I m sorry I have to interrupt  
 (4) These were not on the list that we discussed  
 (5) MR FORTIER I believe these were the 1247 series  
 (6) MR OPPENHEIMER Yes but not those designations  
 (7) MR OPPENHEIMER Your Honor we have a list We ll  
 (8) compare it immediately first thing in the morning  
 (9) THE COURT If you give me a list I will just read  
 (10) them in  
 (11) MR OPPENHEIMER We will do that  
 (12) THE COURT Is there anything else?  
 (13) MR FORTIER Your Honor I don t believe so  
 (14) THE COURT Good we re in recess now  
 (15) (Proceedings recessed at 1 04 p m )

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- (1) STATE OF ALASKA )
- (2) Reporter s Certificate
- (3) DISTRICT OF ALASKA )
- (6) I Leonard J DiPaolo a Registered Professional
- (7) Reporter and Notary Public
- (8) DO HERBY CERTIFY
- (9) That the foregoing transcript contains a true and
- (10) accurate transcription of my shorthand notes of all requested
- (11) matters held in the foregoing captioned case
- (12) Further that the transcript was prepared by me
- (13) or under my direction
- (14) DATED this day
- (15) of 1994
- (16) LEONARD J DiPAOLO RPR
- (17) Notary Public for Alaska
- (18) My Commission Expires 2 3 96

Look See Concordance Report

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TOTAL OCCURRENCES 9,217
NOISE WORDS 385
TOTAL WORDS IN FILE 30,146

SINGLE FILE CONCORDANCE

CASE SENSITIVE

NOISE WORD LIST(S)
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(1) IN THE SUPERIOR COURT FOR THE STATE OF ALASKA  
 (2) THIRD JUDICIAL DISTRICT  
 (4) In re ) Case No 344-89-2533 Civil  
 ) Anchorage Alaska  
 (5) the EXXON VALDEZ ) Tuesday, July 26 1994  
 ) 8:40 a.m.  
 (6) )  
 (8) VOLUME 23 Pages 3544 through 3586  
 (10) TRANSCRIPT OF PROCEEDINGS (Continued)  
 (11) TRIAL BY JURY  
 (13) BEFORE THE HONORABLE BRIAN C. SHORTELL  
 Superior Court Judge

(16) APPEARANCES

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(1) PROCEEDINGS  
 (2) (Call to Order of the Court )  
 (3) (Jury out at 8 45 A M )  
 (4) THE CLERK Please rise  
 (5) THE COURT Counsel you wanted to see me out of the  
 (6) presence of the jury?  
 (7) MR FORTIER We did Your Honor We ll be putting on  
 (8) archaeologists today beginning today Dr Lora Johnson will be  
 (9) the first archaeologist so plaintiffs renew their request for  
 (10) the confidentiality jury instruction  
 (11) I think it was proposed as Jury Instruction 3 A  
 (12) THE COURT I have it here Hang on just a minute I  
 (13) have it Is that acceptable?  
 (14) MR DIAMOND No  
 (15) THE COURT You hurt my feelings counsel  
 (16) MR DIAMOND We discussed this early last week I  
 (17) believe when counsel first wanted this recognized and we  
 (18) explained that was our position that these site locations were  
 (19) not confidential and that part of our case was establishing  
 (20) that in fact most of the sites are well known - many of the  
 (21) sites are well known - the locations are well known and  
 (22) giving this instruction would in effect be directing a  
 (23) finding of fact to the jury on that contested factual issue  
 (24) So we strongly object to that jury instruction  
 (25) THE COURT What s your response counsel?

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(1) FOR THE DEFENDANTS

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Reported by:

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 907/258-7100

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(1) MR FORTIER My response Your Honor is that the  
 (2) confidentiality of this site is the law of the case There  
 (3) have been - every single document that is submitted to court  
 (4) with regard to archaeology is marked confidential pertains to  
 (5) archaeological sites pursuant to a discovery master order  
 (6) DM119 In addition to that both parties have carefully  
 (7) protected the confidentiality of the sites  
 (8) Finally the jury instruction that you have in front of  
 (9) you Your Honor is a proposed instruction that was a part of a  
 (10) packet that was agreed upon by plaintiffs and defendants when  
 (11) we were putting together the original jury instructions  
 (12) So you know for all those reasons it would seem to me  
 (13) it s compelling to have the confidentiality order or the  
 (14) confidentiality instruction  
 (15) We re concerned We re very concerned Your Honor about  
 (16) disclosing information concerning these sites without some sort  
 (17) of protection and you know frankly that s been the law of  
 (18) this case It s how it was proceeded It took us  
 (19) three and a half years to obtain records from Exxon because  
 (20) they insisted on the confidentiality of the sites including  
 (21) the sites that are owned by plaintiffs  
 (22) THE COURT Do you have a response counsel?  
 (23) MR DIAMOND Your Honor it s law of the case insofar  
 (24) as discovery is concerned We did not hold up production I  
 (25) guess we were concerned about disclosure of confidential

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- (1) information Production was held up because we were concerned
- (2) about plaintiffs would characterize our production documents to
- (3) them possibly created a violation that wouldn't otherwise
- (4) exist
- (5) We don't believe that site location information at least
- (6) in specific details are disclosed in this case that anyone
- (7) would be concerned It is a linchpin of our defense one of
- (8) them That there are lots of people out there that know the
- (9) locations of the sites There are lots of publications in
- (10) which they are reported and publicly available And this jury
- (11) is already under instructions to not discuss the case with
- (12) anybody
- (13) We have no objection to instruction at the conclusion of
- (14) the case that wouldn't prejudice our presentation our
- (15) arguments but we do have an objection to the timing of this
- (16) which is in effect an instruction what the defendants are
- (17) telling you about site information is incorrect that this is
- (18) confidential information it is not known it is closely held
- (19) that's highly prejudicial to our case
- (20) With respect to the jury instruction that was proposed I
- (21) think Mr Fortier is telling you half the story That was his
- (22) language that was sent over to one of our lawyers at the last
- (23) minute incorporating - trying to put together a packet of
- (24) preliminary jury instruction The lawyer that was doing that
- (25) was under the impression that this had been agreed to and that

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- (1) was as a result of conversation he had with Mr Fortier not as
- (2) a result of conversations with anybody that knows anything
- (3) about the archaeology side of our case
- (4) And it was never an agreement it was an accommodation of
- (5) Mr Fortier that we were discussing in presentation to the
- (6) court We never admitted to any such jury instruction and
- (7) strongly oppose it
- (8) THE COURT Counsel this - I think this instruction
- (9) has all the risks that Mr Diamond set out on the record
- (10) The other thing it is true this jury is under
- (11) instructions to not talk about the case so to the extent that
- (12) they might go out to the local grocery store and talk about
- (13) archaeological sites they have been instructed not to do
- (14) that
- (15) If this is appropriate in the case I'll give it but it's
- (16) not appropriate now I'll put this instruction number 3-A in
- (17) the court's exhibits Court's Exhibit 20
- (18) Counsel I have a list of exhibits here that I assume are
- (19) the list that you've agreed to that can be admitted
- (20) MR FORTIER You're referring to -
- (21) THE COURT Green exhibits
- (22) MR FORTIER Yes I believe those are - have been
- (23) agreed upon but I think there are several that Mr Oppenheimer
- (24) wishes to preserve his objection to
- (25) THE COURT Just tell me which ones they are I'll

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- (1) exclude them and I'll admit the others for now
- (2) MR OPPENHEIMER Your Honor if we could just
- (3) preserve our objection We've already argued that these are
- (4) the headline exhibits and we won't take the Court's time to
- (5) reargue those We would just - we are proposing no objection
- (6) to the others We would like to reserve for the record our
- (7) objection to those and they are 1247 76 1247 77 1247 78
- (8) THE COURT That's all?
- (9) MR OPPENHEIMER That's correct Your Honor
- (10) THE COURT So it's 76 to 78 right?
- (11) MR OPPENHEIMER Correct
- (12) THE COURT Then the clerks wanted me to read this
- (13) into the record
- (14) Plaintiffs Exhibit 1123 1125 to 1127 1131 1132 1247 2
- (15) 4 4a 5 1247 7 through 1247 9 1247 12 through 1247 19
- (16) 1247 26 27 30 34 through 39 (sic) 39 through 46 54 55
- (17) 58 60 through 62 65 71 72
- (18) MR OPPENHEIMER I believe it's 1247 77 through 80
- (19) THE COURT 79 would be the next number?
- (20) MR OPPENHEIMER No I believe I had 1247 77 through
- (21) 1247 80
- (22) THE COURT I thought you wanted 77 out
- (23) MR OPPENHEIMER I assume that would remain
- (24) unchanged These were the headline captions We didn't want
- (25) to take the Court's time

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- (1) THE COURT 1247 94 98 1250 through 1264a and
- (2) Defendants Exhibit 13221 9227 554a
- (3) MR OPPENHEIMER Correct Your Honor
- (4) THE COURT PX1139 15108 page what?
- (5) MR OPPENHEIMER NVC12774
- (6) THE COURT That's it?
- (7) MR OPPENHEIMER That's it Your Honor Thank you
- (8) THE COURT It wasn't 39 it was 37 1247 34 through
- (9) 1247 37 is corrected
- (10) Exhibits 1123 1125 thru 1127 1131 1132 1247 2 1247 4
- (11) 1247 4a 1247 5 1247 7 thru 1247 9 1247 12 thru 1247 19
- (12) 1247 26 1247 27 1247 30 1247 34 thru 1247 37 1247 39 thru
- (13) 1247 46 1247 54 1247 55 1247 58 1247 60 thru 1247 62
- (14) 1247 65 1247 71 1247-72 1247 77 thru 1247 80 1247 94
- (15) 1247 98 1250 thru 1264e 13221 9227 554a 1139 and 15108
- (16) (page NVC 12774) received)
- (17) MR DIAMOND Before you bring on the jury with
- (18) respect to Dr Johnson's testimony I do want to put on the
- (19) record an agreement with counsel
- (20) Plaintiffs anticipate showing a videotape 1287 which is
- (21) identified as an Exxon Cultural Resource Excerpt into that
- (22) tape has been edited a tape which was prepared by the Native
- (23) corporations that is not part of the Exxon Cultural Resources
- (24) Program
- (25) I understand there will be a statement on the record when

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(1) that segment is introduced that it is not an Exxon tape it is  
 (2) a tape prepared by the plaintiffs I just didn't want to jury  
 (3) to be left with a misimpression  
 (4) MR FORTIER That's correct I believe it is 1287a I  
 (5) believe  
 (6) (Jury in at 8:55 a.m.)  
 (7) THE COURT Good morning  
 (8) THE CLERK Ma'am can you stand up and can you attach  
 (9) the microphone?  
 (10) MR FORTIER Before you get started Madam Clerk the  
 (11) plaintiffs call Dr. Lora Johnson  
 (12) (The Witness Is Sworn)  
 (13) THE CLERK Please be seated Ma'am For the record  
 (14) can you state your full name?  
 (15) A My full name is Lora Lee Johnson  
 (16) THE CLERK Can you spell your last name?  
 (17) A J o h n s o n  
 (18) THE CLERK And your occupation?  
 (19) A I'm an archaeologist  
 (20) THE CLERK Thank you  
 (21) DIRECT EXAMINATION OF LORA LEE JOHNSON  
 (22) BY MR FORTIER  
 (23) Q Dr. Johnson how long have you been an archaeologist?  
 (24) A I've been an archaeologist since 1979  
 (25) Q Can you tell the jury a bit about your family history

(1) Archaeology and Art And my specialty there was classical  
 (2) archaeology and I received my doctorate in 1984  
 (3) During that time studies - I also had the opportunity to  
 (4) participate in archaeological explorations and other research  
 (5) connected with archaeology in the Mediterranean area I  
 worked  
 (6) at excavations in Italy and also in Greece and I did research  
 (7) for my doctoral dissertation in Turkey at sites located  
 (8) along - the sites in Turkey  
 (9) Also during that time I had an opportunity to work with  
 (10) archaeological collections at the Center for Old World  
 (11) Archaeology at Brown  
 (12) Let's see after my degree in 1984 I took a position with  
 (13) the American Philological Association in New York and this  
 (14) association is one of the learned societies in the United  
 (15) States It's directed toward classicists that teach at the  
 (16) universities and colleges in the United States and I was an  
 (17) executive assistant there It was an administrative position  
 (18) and what I did with that job was I worked closely with both the  
 (19) American Philological Association and the archaeological  
 (20) Institute of American in terms of planning meeting on an and/or  
 (21) base  
 (22) After this position I moved to Massachusetts where I  
 (23) taught at Clark University and I taught both classics and  
 (24) classic archaeology and art This brings us up to about 1988  
 (25) After this I basically made the decision whether to stay on

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(1) please your family background?  
 (2) A Well I think the best way to put it - is this too loud?  
 (3) Q We can hear you well Dr. Johnson that's great  
 (4) A Basically I'm here today both because I'm an archaeologist  
 (5) and also because I'm an Alaska Native of Chugach descent  
 (6) Let's see I suppose I should begin with I guess my family  
 (7) history  
 (8) Q Sure why don't you tell a bit about that  
 (9) A My family is from Prince William Sound my father's family  
 (10) is and his mother was from Nutchek which is a former village  
 (11) over on Hinchinbrook Island So I have family connections with  
 (12) the region and this is part of the reason why I have such  
 (13) concern for the heritage that we're going to be talking about  
 (14) today  
 (15) Q Go ahead  
 (16) A Basically I suppose I can talk about my educational  
 (17) background  
 (18) Q Why don't you tell us about your educational background  
 (19) A To begin with as an undergraduate at the University of  
 (20) Washington my primary focus was classics I received my  
 (21) degree my Bachelor's degree in 1978 in classics with a  
 (22) specialty in classical Greek  
 (23) Subsequent to that I went to Brown University in  
 (24) Providence Rhode Island and studied in the classics  
 (25) department but I actually studied at the Center for Old World

(1) the East Coast or to come back to the West Coast and Alaska  
 (2) and I decided at that time that I did want to return to the  
 (3) West Coast which is where I was from and basically look into  
 (4) the archaeology of this area in particular because of my  
 (5) interest in my own heritage in Prince William Sound  
 (6) After that between 1988 and present I have turned my  
 (7) attention to the archaeology of Prince William Sound This  
 (8) began with the oil spill in 1989 when I received a call about  
 (9) Chugach Alaska Corporation's concern for the heritage sites  
 (10) and I came up in April and I've been working up here since  
 (11) then  
 (12) In terms of my archaeological background in Prince William  
 (13) Sound it includes both the field work connected with oil  
 (14) spill the oil spill response activities that Chugach pursued  
 (15) It also includes field work connected with road construction on  
 (16) the south end of Montague Island excavations on Evans Island  
 (17) connected with the airport project  
 (18) It also includes excavations connected with repatriation of  
 (19) human remains in I believe three different locations in the  
 (20) Sound In addition to that I've done a fair amount of survey  
 (21) work for Chugach Alaska Corporation in connection with their  
 (22) historical sites Well actually in Prince William Sound and  
 (23) also Controller Bay located to the southeast  
 (24) I've also visited numerous sites in Prince William Sound  
 (25) and the Kenai Peninsula as well as - so I have sort of a

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- (1) general background in archaeology both in the old world and  
 (2) more recently now in Prince William Sound itself  
 (3) Q Let me ask you a few follow up questions if I could  
 (4) Dr Johnson  
 (5) You finished your doctoral dissertation I take it?  
 (6) A Yes in 1984  
 (7) Q Can you tell the jury what it was in?  
 (8) A It was on the Archaeological Form of Hellenistic and Roman  
 (9) Libraries It was an architectural dissertation - actually an  
 (10) archaeological dissertation because what I was interested in  
 (11) was the physical remains of these library buildings in the  
 (12) Greek world And I should say there are literary references  
 (13) that talk about libraries what - what I was interested in it  
 (14) was the actual physical remains and looking at these to see if  
 (15) you could identify these buildings as libraries strictly based  
 (16) on the architectural form the physical remains of the  
 (17) buildings So that's basically what my study was about  
 (18) Q How old were these buildings?  
 (19) A They ranged from the late 4th century B C to the 2nd  
 (20) century A D  
 (21) Q And then Dr Johnson I wanted to talk to you for a moment  
 (22) about moving back up to Alaska in April of 89  
 (23) A Yes  
 (24) Q You indicated that was on account of the oil spill and your  
 (25) concerns over the heritage sites of the Chugach?

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- (1) A Yes  
 (2) Q Can you tell us how long you worked in the area of oil  
 (3) spill response?  
 (4) A I began my work in Prince William Sound as I said in 1989  
 (5) and it was connected with the oil spill response that Chugach  
 (6) Alaska Corporation was organizing My general experience as  
 (7) I said has been in Prince William Sound Controller Bay and also  
 (8) the Kenai Peninsula between 1989 and present and included  
 (9) both  
 (10) the oil spill activities as well as survey work and some  
 (11) substantial excavation work  
 (12) Q In 1989 you visited some sites of the Chugach people?  
 (13) A Yes I did  
 (14) Q How many sites?  
 (15) A In 1989 I would suspect gosh a dozen or two  
 (16) Q Would those visitations be considered reconnaissance by  
 (17) archaeologists?  
 (18) A Yes  
 (19) Q In 1990 you also visited sites is that correct?  
 (20) A Yes  
 (21) Q And that was with regard to oil spill related activities?  
 (22) A Some of it was with regard to oil spill related  
 (23) activities The majority of it was just survey work connected  
 (24) with Chugach historical sites  
 (25) Q And approximately how many sites did you visit for the  
 purpose of surveying?

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- (1) A I would say a couple dozen  
 (2) Q You also mentioned Dr Johnson that you did some work  
 (3) with regard to an airport on Evans Island Can you tell the  
 (4) jury a bit about that work please?  
 (5) A Yes In 1993 we conducted an excavation at two sites on  
 (6) Evans Island One was an historical site and the other was  
 (7) possibly a prehistoric site They had been identified by  
 (8) previous surveys in the area and it was determined that there  
 (9) should be some more extensive investigations at these sites  
 (10) prior to construction of the road leading to the  
 (11) airport  
 (12) So basically what we did was excavated at both sites I  
 (13) believe we excavated five test pits or excavation units at one  
 (14) and it was something like 30 excavation units at the other  
 (15) Q That was for road construction by the state is that  
 (16) correct?  
 (17) A That's correct That report was submitted to the  
 (18) Department of Transportation public facilities  
 (19) Q That was at Chenega Bay Dr Johnson?  
 (20) A That's correct  
 (21) Q You've seen what you referred to as the airport since its  
 (22) construction correct?  
 (23) A I've seen it in the process of construction yes  
 (24) Q Is it an airport what we think about in Anchorage terms?  
 (25) A Basically as I saw it it's what you consider a rural

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- (1) airport It's like a dirt airport  
 (2) Q It's an airstrip?  
 (3) A Airstrip And the same thing with the road it's not  
 (4) lining a paved road it's your basic gravel road  
 (5) Q Besides your experiences with regard to the oil spill your  
 (6) work at Chenega Bay in 1993 can you tell the jury about some  
 (7) of your other work in Prince William Sound and the lower Kenai  
 (8) Peninsula over the past five years?  
 (9) A The work - some of the work that I've done as I  
 (10) mentioned was connected with repatriation so we did  
 excavate  
 (11) I believe it was three different locations basically pits for  
 (12) the reburial of human remains and these human remains had  
 been  
 (13) returned to the corporations as a result of NAGPA which is a  
 (14) recent law that Native American Graves and Protection -  
 (15) NAGPA Native American Graves -  
 (16) Q Graves repatriation?  
 (17) A Yeah So human remains have been returned to the  
 (18) corporation and it was the dealing of the Chugach that they  
 (19) wanted to re enter these remains at various locations So  
 (20) since they were archaeological sites I did go out to these  
 (21) sites to excavate them archaeologically in the event that we  
 (22) should encounter cultural remains so that is one type of work  
 (23) that I did  
 (24) I also participated in a test excavation at McArthur Pass  
 (25) and that was in conjunction with the Park Service

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(1) Then I've also done field work as I've mentioned before  
 (2) most recently in May and June of this year I also  
 (3) participated in field work both in the Kenai Peninsula and  
 (4) also in Prince William Sound  
 (5) Q Dr Johnson have you written any reports concerning your  
 (6) work?  
 (7) A Yes There are a number of reports that are a result of  
 (8) this field work They include reports for various field  
 (9) seasons 1989 in conjunction with Rita Miraglia she was  
 (10) another archaeologist working on the oil spill response team  
 (11) Another report is report of the field activities in 1990  
 (12) and this pertains mainly to the survey work of the historical  
 (13) sites and I believe that it also contains some of the  
 (14) excavations in terms of the repatriation  
 (15) Another is a report it's called the Palugavik repatriation  
 (16) report and this pertains to an excavation at that particular  
 (17) site  
 (18) Also the airport project Chugach Bay airport project  
 (19) There is a sizable report for that outlining what we did in  
 (20) terms of excavations and general investigations in the area  
 (21) I'm sure there are others I just can't think of them  
 (22) Q Do you belong to any professional organizations  
 (23) Dr Johnson?  
 (24) A I belong to two professional organizations connected with  
 (25) archaeology The first is the Archaeological Institute of

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(1) basically focus on the physical remains of past human activity  
 (2) and I think that's important to keep in mind We're looking at  
 (3) things this is the primary focus  
 (4) Archaeologists do many things in addition to this but I  
 (5) think that this is the common ground in terms of what  
 (6) archaeologists do In the Mediterranean for example my focus  
 (7) was on the physical remains of library buildings I was  
 (8) interested in trying to understand what they could tell us  
 (9) about library construction in the Mediterranean and from this  
 (10) obviously it would be how this fits into the social and  
 (11) cultural framework of that particular society  
 (12) Here in Alaska I look at other types of physical remains  
 (13) They may be prehistoric remains that tell us something about  
 (14) subsistence activities or perhaps about types of villages or  
 (15) types of settlements or activities at different locations It  
 (16) may be more substantial remains structural remains historical  
 (17) remains for example that tells us about activities during the  
 (18) historical period  
 (19) Q When did you get interested in archaeology Dr Johnson?  
 (20) A Well I think my primary interest was just in how one could  
 (21) look at these physical remains and be able to - well  
 (22) reconstruct the past in a sense That in a sense it's like a  
 (23) puzzle and when it comes right down to it it's just a lot of  
 (24) fun to do So I was interested in it because there was so much  
 (25) potential for learning about the past through archaeology that

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(1) America that I mentioned earlier in terms of coordinating with  
 (2) them when I worked for the APA the American Philological  
 (3) Association I've been a member of that organization since  
 (4) about 1984 It's a pretty large organization of about 50,000  
 (5) members and some of you may be familiar with its popular  
 (6) publication which is called Archaeology  
 (7) Another organization that I belong to is the Alaska  
 (8) Anthropological Association and I've been a member since  
 (9) 1991  
 (10) I'm also a member of an advisory board for the Burke Museum  
 (11) in Washington This is the state museum that's located in  
 (12) Seattle and basically what this advisory group does is try to  
 (13) work with the museum in terms of setting up exhibits The  
 (14) membership on this particular council or group includes  
 (15) members that represent indigenous peoples of the North Pacific Rim -  
 (16) excuse me - yeah the North Pacific Rim area  
 (17) The other organization that I should mention I'm a Trustee  
 (18) on the Chugach Heritage Foundation which is a non profit  
 (19) foundation of Chugach Alaska Corporation I've been a Trustee  
 (20) since about 1990 and this year they appointed me - or elected  
 (21) me whatever secretary/treasurer  
 (22) Q Can you tell me what an archaeologist does just in  
 (23) general?  
 (24) A Well basically archaeologists whether they are classic  
 (25) archaeologists or any other type of archaeologist they

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(1) it just - it just sort of happened naturally that I became  
 (2) interested in it  
 (3) Q Dr Johnson I think that you know a lot of folks  
 (4) probably included look at archaeology like Indiana Jones  
 (5) and Raiders of the Lost Ark and that sort of thing Can you  
 (6) explain how an archaeologist approaches an archaeology site?  
 (7) A Well it's quite a bit different than that  
 (8) Q Explain  
 (9) A Well there are different approaches obviously that - in  
 (10) terms of Prince William Sound I can talk about that pretty  
 (11) comfortably in terms of what I've done and what I've  
 (12) participated in  
 (13) One of the first steps is identifying locations of sites  
 (14) and usually this is done through - well there are different  
 (15) ways of doing this One of the approaches has been by talking  
 (16) to people You talk to people that know where the sites are  
 (17) and in Prince William Sound this is - this has a lot to do  
 (18) with the Native population in the area Back in the 30s when  
 (19) some of the earliest archaeologists came to the region one of  
 (20) the first things they did they would go out and talk to people  
 (21) in the villages and try to find out what they know about the  
 (22) location of these sites and the activities at these sites And  
 (23) people still continue to do the same thing whether it's  
 (24) talking to people directly or going to documents that are on  
 (25) file at either the state or other federal agencies that you

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- (1) first find out what s known about these areas And from there  
 (2) then you may go out and do additional investigations in these  
 (3) locations to find out what else can be seen just from the  
 (4) physical remains  
 (5) The other approach would be simply to go out and just do  
 (6) survey work in terms of locating the sites And this has also  
 (7) been somewhat effective in terms of locating sites that  
 (8) basically no one knows anything about and that there is no type  
 (9) of tradition connected to them  
 (10) Most of the sites in Prince William Sound actually have  
 (11) some tradition connected with them and it s now a matter of  
 (12) filling in the details and looking at the archaeological  
 (13) remains to enhance the story about what s happening or what  
 (14) has happened at these different sites  
 (15) MR DIAMOND Before we get too far down the record  
 (16) perhaps counsel can qualify the witness or tender her as an  
 (17) expert in the subjects that s she s now rendering an opinion  
 (18) on  
 (19) MR FORTIER I could Your Honor I was going to lay  
 (20) a bit more foundation  
 (21) THE COURT Go ahead  
 (22) BY MR FORTIER  
 (23) Q Dr Johnson you mentioned that you could go to a state  
 (24) agency and get records concerning a site Could you explain  
 (25) to  
 (26) the jury what you mean by that please?

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- (1) A Well the Office of History and Archaeology maintains a  
 (2) file on historical sites or heritage sites in Alaska and this  
 (3) is a particular file that is considered confidential and  
 (4) access is limited to archaeologists or professionals that have  
 (5) a particular reason in looking at the sites  
 (6) Working for Chugach Alaska Corporation or the villages  
 (7) there have been specific reasons why I ve been interested in  
 (8) them and so basically you go to the office and you tell them  
 (9) what sites you re interested in or what areas you re interested  
 (10) in and they provide the documents for you  
 (11) Other agencies also have documents and you can request  
 (12) them and as a professional archaeologist you would have  
 (13) access  
 (14) to them  
 (15) Q And are those other agency s records also confidential? Do  
 (16) you know Dr Johnson?  
 (17) A Yes I believe they are  
 (18) MR FORTIER Your Honor at this time I move to  
 (19) qualify Dr Johnson as a expert in the area of archaeology  
 (20) MR DIAMOND May I voir dire?  
 (21) THE COURT Yes  
 (22) VOIR DIRE EXAMINATION OF LORA LEE JOHNSON  
 (23) BY MR DIAMOND  
 (24) Q Good morning My name is Chuck Diamond We met briefly  
 (25) in  
 (26) Friday In an effort to educate myself I went and looked up  
 (27) some terms You re familiar with the discipline known as

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- (1) anthropology?  
 (2) A Yes  
 (3) Q That s the study of mankind?  
 (4) A Yes  
 (5) Q And I have been told that archaeology is a subset of  
 (6) anthropology  
 (7) A It is a subset of anthropology It s also a subset of  
 (8) classics  
 (9) Q Webster s defines archaeology as the scientific study of  
 (10) material remains of past human life Do you agree with that?  
 (11) A Yes  
 (12) Q Neither your undergraduate nor your graduate degrees are  
 (13) in  
 (14) anthropology are they?  
 (15) A No they are not  
 (16) Q And neither of them are in archaeology?  
 (17) A My doctorate is in classics with a specialty in classical  
 (18) archaeology  
 (19) Q But you got that doctorate from the University of - Brown  
 (20) University is that right?  
 (21) A That s correct  
 (22) Q And you got that in 1984?  
 (23) A That s correct  
 (24) Q That was issued by the department of classics was it not?  
 (25) A That s correct I studied at the Center for Old World  
 (26) Archaeology

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- (1) Q The classics department offers two Ph D groups does it  
 (2) not?  
 (3) A Pardon?  
 (4) Q It offers a Ph D in classics and it offers a Ph D in  
 (5) classical archaeology?  
 (6) A Brown University?  
 (7) Q Yes  
 (8) A They may now  
 (9) Q In 1984 didn t they offer two degrees?  
 (10) A Yes in fact I have a letter from the chairman at the time  
 (11) because I was concerned with that myself and he pointed out  
 (12) that at the time - at least according to this letter - at the  
 (13) time there was no additional degree and that in fact my  
 (14) degree was a degree in classical archaeology because  
 (15) basically  
 (16) my advisor was an archaeologist and I studied with  
 (17) archaeologists  
 (18) Q Many universities offer a straight degree in archaeology  
 (19) do they not?  
 (20) A Some do  
 (21) Q You hold no such degree?  
 (22) A No I do not  
 (23) Q Classics is the study of Roman and Greek civilization in  
 (24) the 5th century B C ?  
 (25) A It s much broader than that  
 (26) Q Well let s see how close I am It s the study of Roman

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- (1) and Greek civilizations?
- (2) A There are many aspects of it. In classics you have a wide
- (3) range from philologists that study literature to historians
- (4) that study history to archaeologists that study the physical
- (5) remains.
- (6) Q But it encompasses or the principal focus is on
- (7) Mediterranean communities around the 3rd century B.C.?
- (8) A It's not limited to the B.C. My advisor was a prehistorian
- (9) and his focus was on prehistorian peoples of Sicily and the
- (10) Mediterranean.
- (11) Q I'm right on geography?
- (12) A You're right on geography. It extends beyond the
- (13) Mediterranean. It encompasses all of Europe basically and
- (14) there are even some classicists that are talking about the
- (15) classical influence in America so they even go beyond.
- (16) Q But classics in the true sense is not limited to the study
- (17) of past human remains is it?
- (18) A No, classics is not.
- (19) Q And your studies as part of your Ph.D. program included
- (20) studies of Greek and Roman language?
- (21) A To a limited degree.
- (22) Q And literature?
- (23) A I don't believe I took any courses on literature, no.
- (24) Q You took courses on Greek and Roman culture?
- (25) A When I was a graduate student I believe my focus was on

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- (1) archaeology and art for the most part. I believe I took a
- (2) couple courses in Latin because as an undergraduate I hadn't
- (3) taken any Latin. I may have sat in on one or two other
- (4) courses but really my focus was on the archaeology.
- (5) Q I've been unable to put my hands on a 1984 Brown University
- (6) catalogue. I have a more recent one. The classics department
- (7) doesn't teach any courses on North American Native culture
- (8) does it?
- (9) A No, it does not.
- (10) Q And it doesn't teach any courses on North American Native
- (11) history, religion, art, philosophy, science or archaeology?
- (12) A No, it does not.
- (13) Q And you took no such courses as part of your graduate
- (14) studies is that correct?
- (15) A Not as part of my graduate studies. Well, actually I
- (16) probably should extend that. I have --
- (17) Q I'm talking about prior to getting your Ph.D.
- (18) A Prior to getting my Ph.D., no.
- (19) Q You told us that you did some -- what I view as Harrison
- (20) Ford Indiana Jones explorations?
- (21) A I did not do that myself, no.
- (22) Q You worked on archaeological excavations?
- (23) A Yes, I have.
- (24) Q And that was during the summer, the time you were getting
- (25) your Ph.D.?

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- (1) A I worked on excavations both back in -- what would it be --
- (2) 1978 and some other year after that I've also worked on
- (3) excavations '89, '90 and '93 in Alaska.
- (4) Q Prior to getting your Ph.D. degree you never worked on an
- (5) excavation involving Northern American Indian people?
- (6) A No.
- (7) Q And you never worked in Arctic or sub-Arctic excavation?
- (8) A No, I did not.
- (9) Q Your first job after getting your Ph.D. from Brown
- (10) University was learned society whose name I will not attempt
- (11) to pronounce but it's related to study of classics?
- (12) A Yes.
- (13) Q And you were an administrative assistant at that
- (14) organization?
- (15) A That's correct. My title was the executive assistant to
- (16) the secretary/treasurer.
- (17) Q That didn't involve Native American archaeology in any way
- (18) did it?
- (19) A No, it did not.
- (20) Q And then you held a teaching position at Clark University
- (21) from the summer of 1987 to the summer of 1988?
- (22) A Yes, I did.
- (23) Q And you taught courses in the Department of Foreign
- (24) Languages and Literature?
- (25) A I taught classes in the Department of Foreign Languages and

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- (1) Literature.
- (2) Q And also the Department of Visual and Performing Arts?
- (3) A That's correct.
- (4) Q Those courses that you taught had nothing to do with Native
- (5) American archaeology did they?
- (6) A No, they focused on classics and classical archaeology.
- (7) Q And then following the summer of 1988 you worked for a
- (8) printing company?
- (9) A Yes.
- (10) Q The Johnson Printing Company?
- (11) A Yes, that's our family.
- (12) Q It's true is it not that since coming back from the East
- (13) Coast you've gone back to school and taken introductory
- (14) archaeology courses at the University of Washington?
- (15) A Between I think it was 1989 there about and 1993 I've
- (16) taken approximately 80 courses -- excuse me 80 credits
- (17) quarterly credits in sciences -- math -- the sciences basically
- (18) chemistry, statistic, some math and the rest were in
- (19) anthropology and archaeology. I believe that's what it is.
- (20) And they included a few undergraduate courses that are
- (21) actually for the most part graduate courses.
- (22) Q And one such course was an introductory class in
- (23) archaeology?
- (24) A Yes.
- (25) Q And another such class you took after coming back and

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- (1) getting your Ph D was an introductory course in cultural  
 (2) anthropology is that correct?  
 (3) A As it turns out that was a graduate course  
 (4) Q You've never published in any learned journal or periodical  
 (5) on the subject of archaeology isn't that correct?  
 (6) A No I don't think I have  
 (7) Q You've never had any formal training have you or taken  
 (8) formal studies in Native American archaeology?  
 (9) A The closest that it would come - when I was at the - all  
 (10) right between 1989 about and 1993 I took courses at the  
 (11) University of Washington basically because of my work up  
 here  
 (12) that as a classical archaeologist I felt I needed to look into  
 (13) the discipline of anthropology to see what type of areas they  
 (14) were covering that I might be deficient on as an  
 (15) archaeologist  
 (16) So I basically tried to cover as broad of a range as I  
 (17) could and they included social cultural anthropology I was  
 (18) interested in the introductory course in archaeology just to  
 (19) see what it was they taught In fact it was rather boring  
 (20) from my point of view because we basically cover a lot of the  
 (21) same material in our general course work in classical  
 (22) archaeology as well It may be a different people but the  
 (23) methods and techniques are basically the same  
 (24) I also took other courses graduate courses in final  
 (25) analysis materials and tools - what else? Physical

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- (1) anthropology a number of other areas that would have direct  
 (2) application to archaeology in Prince William Sound In fact I  
 (3) did take a course it was a reading course at the University of  
 (4) Washington that I had spoken with the professor there and I  
 (5) wanted to focus on the Chugach region so it was a ten credit  
 (6) course focusing on the prehistory and history of Prince William  
 (7) Sound And as that turned out basically I organized the class  
 (8) because I knew more about the subject than she did And I  
 (9) basically gave her reading lists of what I thought I needed to  
 (10) cover and basically we read through these things together  
 (11) Q Do you have my question in mind? It was Prior to the oil  
 (12) spill you never took any formal course work and formal studies  
 (13) in Native American archaeology is that correct?  
 (14) A I thought I had answered that before yeah  
 (15) Q The answer to my question is that's true you never took  
 (16) such courses prior to the oil spill?  
 (17) A I believe as an undergraduate I might have taken - well  
 (18) no I guess I didn't no  
 (19) Q And then in 1989 you came up here to work on the  
 Chugach's  
 (20) oil spill response team?  
 (21) A That's correct  
 (22) Q At the time that was April of 1989?  
 (23) A That's correct -  
 (24) Q Incidentally your brother helped you get that job didn't  
 (25) he?

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- (1) A I got a call from my brother who is the cultural resource  
 (2) manager at Chugach Alaska Corporation He had been  
 involved in  
 (3) cultural resources throughout the 80s And in 1989 I did get  
 (4) a call from him because he had a lot of concern for the sites  
 (5) and he knew that as an archaeologist I might be able to help  
 (6) and address some of the concerns that the people of the region  
 (7) basically have  
 (8) And within a few days I came up because you know I  
 (9) became aware of the problems that there were  
 (10) Q So your brother was instrumental in getting you hired by  
 (11) Chugach isn't that right?  
 (12) A My brother again who is the cultural resource manager is  
 (13) the person that called and told me about the situation yes I  
 (14) did come up as a result of that  
 (15) Q And he helped you get hired?  
 (16) A Inasmuch as he's the person that called yes  
 (17) Q Did he hire you?  
 (18) A No he did not  
 (19) Q Prior to 1989 the only time you had lived in Alaska was  
 (20) over the course of a couple summers between 1984 and 1988?  
 (21) A Yes that's probably correct  
 (22) Q In April of 1989 Exxon was in the market looking for a  
 (23) number of archaeologists to staff its positions for its  
 (24) Cultural Resource Program isn't that right?  
 (25) A Yes

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- (1) Q Did you interview for any of those positions?  
 (2) A No I did not  
 (3) Q It's a true statement that you were not qualified to be  
 (4) hired by Exxon's Cultural Resource Program?  
 (5) A I believe that would be a correct statement at the time  
 (6) Q That's because they were operating under - Exxon was  
 (7) operating under permits with the Park Service that required all  
 (8) archaeologists doing permit work to meet the Secretary of  
 (9) Interior's requirements?  
 (10) A That was a decision that Exxon made yes  
 (11) Q And you did not meet the Secretary of Interior's  
 (12) requirements for being hired by the Exxon Cultural Resource  
 (13) Program?  
 (14) A I did not have field experience in Prince William Sound  
 (15) no  
 (16) Q You've never qualified as an expert in any court state or  
 (17) federal?  
 (18) A No this is the first time I've been in court  
 (19) Q Welcome  
 (20) A Well I actually was in court one other time for a brief  
 (21) moment but nothing like this  
 (22) Q And prior to this case you've never conducted an  
 (23) archaeological damage assessment?  
 (24) A No this is the first damage assessment  
 (25) Q You don't consider yourself to be an expert on Carbon

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- (1) dating or the effects of oil on carbon dating?
- (2) A I consider myself able to give a general opinion I don't consider myself a carbon 14 specialist
- (3) Q You've never had training in carbon 14 dating techniques?
- (4) A Just general background that one receives in undergraduate work
- (5) Q You've never had any courses in carbon 14 dating techniques
- (6) A Again it's from my reading
- (7) Q You don't profess to be an expert on physical effects of oil on archaeology resources is that true?
- (8) A In terms of the physical effects I guess I would in the sense that some of it is very obvious in terms of artifacts or sites being oiled So in that respect I think I'm qualified to say something about it
- (9) Q But you don't have a chemical background or science background?
- (10) A No
- (11) Q You don't have any background that would permit you to speak knowledgeably about the physical effects chemical and otherwise of oil on artifacts?
- (12) A In terms of erosion natural properties and so forth I have not studied that specifically However as an archaeologist you are concerned for those type of effects whether it's in Greece and the effects of pollution on

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- (1) architectural remains or situations like this and oil impact on sites
- (2) Q It is true Dr Johnson that your first real experience with Native American archaeology was after the 1989 oil spill?
- (3) A No that's not correct
- (4) Q It is true that your first employment as an archaeologist in any connection relating to Native American archaeology was after the oil spill?
- (5) A In terms of employment that is correct
- (6) Q And basically as we used to say in the Army your knowledge of Native American archaeology was acquired through OJT on the job training?
- (7) A No that's not correct My knowledge of Native American archaeology has a lot to do with my cultural background and the fact that my brother is the cultural resource manager and I'm an archaeologist and so over the years we have had talks about the importance of cultural sites I have done a lot of the reading even prior to the oil spill Back in the early 80s I had already read a number of publications that were available for the Prince William Sound area I just hadn't come up here and worked or looked that direction for actual employment I had jobs other where you know elsewhere and so I do have more of a background than just coming up in 1989 and going to work
- (8) Q But prior to coming up here in 1989 and going to work you

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- (1) really had no formal training in Native American archaeology isn't that right?
- (2) A I had training in archaeology
- (3) Q Native American archaeology Dr Johnson?
- (4) A I did not have training in the archaeology in Prince William Sound
- (5) Q And what you learned of the archaeology in Prince William Sound after the spill you learned principally through on-the-job training as a member of the Chugach oil spill response team?
- (6) A That was one area that helped
- (7) Q There were four archaeologists who were part of that team?
- (8) A Yes there were
- (9) Q You were the most highly credentialed?
- (10) A I had a doctorate
- (11) Q The first report that you issued next with damaged archaeological resources in the region was 1992 isn't that right?
- (12) A I did that's correct
- (13) Q And you jointly authored that with Dr Lobdell who we will hopefully be seeing later today?
- (14) A Yes
- (15) Q The Chenega Bay work that you talked about the airport work was done after that?
- (16) A Yes that was 1993

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- (1) Q You also mentioned you had some experience doing repatriations is that correct?
- (2) A That's correct
- (3) Q One such repatriation that you worked on was it Beluga?
- (4) A That is correct
- (5) Q And that was Forest Service property?
- (6) A That's a Chugach heritage site
- (7) Q That caused you to be the subject of professional criticism did it not?
- (8) A No I don't believe that one should characterize it that way
- (9) Q Wasn't there an investigation opened by the Forest Service on your potential violations of archaeological laws in connection with that?
- (10) A No there was no investigation
- (11) MR DIAMOND I have nothing further
- (12) May I approach the bench?
- (13) (Bench conference off the record)
- (14) THE COURT This is going to be a normal-sized break (Jury out at 9:35 a.m.)
- (15) THE COURT Yes counsel?
- (16) MR DIAMOND Your Honor we would oppose the qualifications of Dr Johnson as an expert on subjects of Prince William Sound archaeology such that she could render an opinion on damage to Native American Prince William Sound

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(1) archaeological sites Just because one goes to medical school  
 (2) doesn't make one an eye surgeon Because one gets a degree  
 in  
 (3) classical archaeology doesn't mean one can render opinions  
 (4) about different archaeological sites and resources that one  
 (5) encounters in ancient Greece and Rome There is a far cry  
 (6) between a - this is one of the most developed civilizations of  
 (7) antiquity of the hunter gatherer societies of Prince William  
 (8) Sound that this witness will be talking about By her own  
 (9) admissions she was not qualified in 1989 to work as an  
 (10) archaeologist professionally in connection with the oil spill  
 (11) response She's had virtually no subsequent formal training  
 (12) and the only significant professional experience postdates her  
 (13) damage assessment concerning these artifacts We submit  
 that  
 (14) Although Dr Johnson is not unquestionably qualified to render  
 (15) many opinions principally those deals with classical Greece  
 (16) and Rome she is not qualified to render an opinion as to these  
 (17) archaeological resources and the harm that may have been  
 done  
 (18) to these archaeological resources by virtue of the oil  
 (19) spill  
 (20) THE COURT Thank you  
 (21) MR FORTIER Your Honor Dr Johnson has testified  
 (22) that not only has she received a degree in archaeology from  
 (23) Brown University which is of course one of the Ivy League  
 (24) schools but Dr Brown (sic) has -  
 (25) THE COURT I should be impressed  
 (26) MR FORTIER Well just credentials there I always

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(1) went to small little schools the ones that let me in so I was  
 (2) impressed the minute I met Dr Johnson Not also that but  
 (3) she's worked in the field of archaeology in Prince William  
 (4) Sound for five years She has taken courses in archaeology  
 (5) I tendered her as an expert in the field of archaeology I  
 (6) don't believe that Mr Diamond has once indicated through  
 (7) evidence of any kind that there is a special field of Native  
 (8) archaeology much less Prince William Sound archaeology  
 (9) The question of whether or not Dr Johnson is qualified as  
 (10) an expert should be answered under Evidence Rule 702 does  
 he  
 (11) have more information than a regular person and could she  
 (12) shed  
 (13) light on important matters in this case can she provide expert  
 (14) opinion Dr Johnson can  
 (15) If you would like I could lay further foundation  
 (16) THE COURT That would be up to you but she's clearly  
 (17) involved in an expert opinion on archaeological matters so the  
 (18) objection is overruled  
 (19) Counsel I'd like to hear a little something about this  
 (20) investigation I really don't want testimony by lawyers that  
 (21) question was if in fact you have some occasion - if your  
 (22) intention is to go into some supposed violation of laws or  
 (23) regulations then you have to let me know beforehand Do not  
 (24) ask a question like that again without letting me know it's  
 (25) coming so I can screen it All right?  
 (26) MR DIAMOND I did not anticipate asking that

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(1) question until it was opened up on the direct  
 (2) MR FORTIER Your Honor if I can be heard on that  
 (3) subject  
 (4) I think that there is an order in this case The order was  
 (5) obtained by the defendants in the case dealing with casting  
 (6) aspersions on people without adequate foundation I'd make a  
 (7) motion at this time that the jury be instructed with regard to  
 (8) the question to disregard the question It was clearly out -  
 (9) I would submit to Your Honor that it violates the order  
 (10) The order is actually - the order is directed at  
 (11) plaintiffs and tells plaintiffs they can't ask questions  
 (12) concerning the possibility of violations of law In this case  
 (13) Your Honor I believe that that - that the incident to which  
 (14) Mr Diamond refers was actually sparked by a letter from  
 (15) defense counsel or from the defense with regard to some  
 (16) activities There is nothing in the record and there is  
 (17) absolutely no support for the assertion  
 (18) MR DIAMOND That last statement is simply not true  
 (19) I would be - I do not intend to get into this further on the  
 (20) cross examination of Dr Johnson but if counsel wants to make  
 (21) an issue of it - in fact he can actually - the repatriation  
 (22) that the witnesses testified to in an attempt to qualify  
 (23) herself as far as serving as an archaeologist and objected in  
 (24) writing that this was done without a permit and done in such a  
 (25) fashion as to jeopardize not protect archaeological

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(1) resources  
 (2) Again I would not have raised it but again for the fact  
 (3) that it was raised expressly in part of her statements why she  
 (4) was qualified But I have taken the Court's admonition to  
 (5) heart and will not try to do that without discussing it with you  
 (6) first  
 (7) THE COURT All right counsel You really want an  
 (8) instruction? It just - all it does is emphasize the question  
 (9) again Do you want me to give an instruction to disregard that  
 (10) question? I'll give it if you want me to  
 (11) MR FORTIER Your Honor I'd request the instruction  
 (12) be given  
 (13) THE COURT I'll do it when they come in If you  
 (14) change your mind counsel let me know before I start  
 (15) speaking  
 (16) THE CLERK Please rise This court stands in  
 (17) recess  
 (18) (Recess at 9:40 a.m. to 10:00 a.m.)  
 (19) (Jury in at 10:00 a.m.)  
 (20) THE CLERK Please rise This court now resumes in  
 (21) session Please be seated  
 (22) THE COURT Ladies and gentlemen you might recall  
 (23) that I sustained an objection just before you took a break  
 (24) I'd like you to understand something and I said this before  
 (25) but I want to emphasize it  
 (26) When a question is asked that has information in it and

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(1) the objection is sustained you re to disregard the question  
 (2) because the question itself if you took it into consideration  
 (3) might be something you wouldn't base a factual decision on  
 (4) The question is not evidence. Nothing the lawyers say in a  
 (5) case is evidence  
 (6) You re to disregard the question that was asked and I  
 (7) sustained the objection to  
 (8) Go ahead  
 (9) MR FORTIER Your Honor I renew my motion for  
 (10) Dr Johnson to be accepted as an expert in the area of  
 (11) archaeology  
 (12) THE COURT She's qualified to give expert opinion in  
 (13) that area and otherwise to give expert testimony in the area of  
 (14) archaeology  
 (15) DIRECT EXAMINATION OF LORA LEE JOHNSON (Resumed)  
 (16) BY MR FORTIER  
 (17) Q Dr Johnson can you explain to the jury what role oral  
 (18) history plays with regard to Prince William Sound archaeology?  
 (19) A Oral history has played a large role in the archaeology of  
 (20) Prince William Sound and the Kenai Peninsula as well I think  
 (21) it's probably best to kind of stay a step back in time back to  
 (22) the 1930s when the first archaeologist and anthropologists  
 (23) came  
 (24) to Prince William Sound And as I said a little earlier  
 (25) basically one of the steps that they took was to talk to Native  
 (26) inhabitants of the area and try to find out something about the

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(1) And I should point out in some cases the oral tradition may  
 (2) just give a general area for example - an island for  
 (3) example and that it was used heavily by a certain group of  
 (4) Natives and that he they basically used all the shoreline for  
 (5) different purposes There may be particular locations that are  
 (6) identified sometimes it's more general and in terms of  
 (7) archaeologists going out and verifying it sometimes it  
 (8) involves the archaeological survey work to identify locations  
 (9) that have been talked about but not physically located in terms  
 (10) of the oral tradition  
 (11) So I could give an example general example of like the  
 (12) south end of Chenega island there is oral tradition connected  
 (13) with a particular location that it was thought to be like  
 (14) settlement site a village site and there is a strong  
 (15) tradition for it  
 (16) Archaeologists over time the early investigations weren't  
 (17) able to locate it Later on further investigations identified  
 (18) subremains and even later additional investigations identified  
 (19) substantial prehistoric remains So it's like archaeologists a  
 (20) lot of time do look to the oral tradition for indicators where  
 (21) there may be past activities  
 (22) Q Dr Johnson you used several history terms history and  
 (23) prehistoric and Native American archaeology What is  
 (24) prehistoric what does that mean?  
 (25) A Well in Prince William Sound prehistoric is the time

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(1) location of sites the importance of sites different types of  
 (2) life style oral history Kaj Birket Smith who was an  
 (3) anthropologist collected a lot of stories from the Sound  
 (4) Fredrick D Lundberg collected a lot of information about site  
 (5) location and what he did with this then she took eight steps  
 (6) further and went out and investigated a lot of these locations  
 (7) to determine if there were actually physical remains at these  
 (8) different locations  
 (9) Oral tradition continues to play an important role in  
 (10) archaeology even beyond this Chugach Alaska Corporation  
 (11) has a  
 (12) lot of historical sites heritage sites and this is based on  
 (13) the oral tradition about these sites the importance of these  
 (14) different locations to the Natives of Sound It can be  
 (15) something as simple as a historic homestead or it could be  
 (16) something that has a much longer history a fish camp area that  
 (17) is known to have been used as far as people can remember  
 (18) And  
 (19) in fact archaeological investigations at these sites may show  
 (20) that it goes back even into prehistoric times  
 (21) What we're finding in terms of archaeology is this is often  
 (22) the case that location that have oral tradition connected  
 (23) with them often end up being sites where there is not only the  
 (24) historic but also prehistoric evidence you know past human  
 (25) activity there and it's generally considered sustained use by  
 (26) the Natives of the area or Chugach so there is a close oral  
 (27) tradition with the archaeological sites

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(1) before Russian contact So the middle of the 18th century  
 (2) Q Why is that Dr Johnson? Is that because there was no  
 (3) written language at the time?  
 (4) A Yeah Prior to Russian contact there was no written  
 (5) records of these former people  
 (6) Q So history refers to the time after western contact  
 (7) prehistory refers to the time before western contact?  
 (8) A That's correct I should also point out for even some of  
 (9) these historic times even the records are incomplete little  
 (10) hints of contact And even into the most recent historic times  
 (11) often you really do have to go to the archaeology to see what's  
 (12) going on that the written records are still incomplete  
 (13) So I think the best way to look at it is with historic  
 (14) times you have an additional - an additional lead you can  
 (15) turn to something else Whereas prehistoric times you have no  
 (16) other direction to turn but the archaeological remains  
 (17) Q When you talk about archaeological remains what do you  
 (18) mean Dr Johnson?  
 (19) A I mean physical remains that are located on the land  
 (20) Q Like an archaeological site?  
 (21) A Yes  
 (22) Q And that contains certain things?  
 (23) A Yes  
 (24) Q Can you tell the jury what it is that you as an  
 (25) archaeologist look for when you're examining an  
 (26) archaeological

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(1) site?  
 (2) A Well again the first step - the easiest step is you  
 (3) first go to an area - if there is something reported for an  
 (4) area you would go to the location and take a look for obvious  
 (5) cultural remains and these could be something as simple as a  
 (6) culturally modified tree and basically listed as a tree that  
 (7) has a scar on it That's clearly not natural It's clear that  
 (8) it was something that's cultural the shape of the scar or  
 (9) something like this may indicate that So it could be  
 (10) something like a culturally modified tree It could be a  
 (11) particular artifact or any artifact laying on the beach It  
 (12) can be more substantial in terms of midden deposits shells  
 (13) charcoal eroding from the beaches It could be house pits It  
 (14) could be any number of things  
 (15) Q Let's talk about some of those terms What's an artifact?  
 (16) A An artifact is basically - well basically you have to  
 (17) define what you mean by artifact There are a lot of  
 (18) different definitions and the one that I choose to use is an  
 (19) object that is clearly - well clearly shows some sort of  
 (20) cultural activity So an artifact could be like a stone tool  
 (21) generally something that's portable so culturally modified  
 (22) trees you wouldn't define as an artifact that would be more a  
 (23) feature because you can't pick it up and move it around but  
 (24) you can pick up an artifact because they show human  
 (25) activities

(1) presence of past human remains?  
 (2) A Yes Basically again a lot of it has to do with  
 (3) definitions that as an archaeologist walking along the  
 (4) shoreline in an area that's reported to be a location of a  
 (5) certain activity you would look for these - you might call  
 (6) them cultural indicators or artifacts It could be stone tools  
 (7) such as have been described here It could be culturally  
 (8) modified trees It could be depressions It could be any  
 (9) number of different types of evidence  
 (10) In terms of defining the site then usually you define the  
 (11) site based on the presence of these and the likelihood of  
 (12) there being additional cultural remains generally under the  
 (13) ground  
 (14) Q Now Dr Johnson in your work in Prince William Sound over  
 (15) the past five years have you learned whether or not the state  
 (16) has certain laws regarding the confidentiality of sites?  
 (17) A Yes  
 (18) Q Can you tell the jury about that?  
 (19) A Again it basically is the same situation that I described  
 (20) earlier in terms of documents that are held by the State The  
 (21) documents that refer to sites or site locations it's not just  
 (22) site location it's all of the information about the site  
 (23) These are held by the state and they are available for  
 (24) qualified archaeologists or qualified individuals that have an  
 (25) actual need for access to them

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(1) There is a wide range of what you mean by artifact and I  
 (2) think it's important to keep that in mind and clear of  
 (3) definitions  
 (4) Q Well let's just talk about a few artifacts that we may see  
 (5) through the course of the day Pictures - are hammer stones  
 (6) artifacts?  
 (7) A Yes  
 (8) Q What are hammer stones?  
 (9) A They are generally cobbles that have evidence of battering  
 (10) on either one of the ends or the side and they are different  
 (11) interpretations in terms of what they were used for But  
 (12) generally you only identify these rounded cobbles that have  
 (13) really clear indication of battering  
 (14) A lot of times in the course of surveying work you might  
 (15) come across some that might be but you generally don't  
 (16) identify them unless you can see it's not from natural causes  
 (17) Q Are arrowheads artifacts?  
 (18) A Yes  
 (19) Q Spear points are they artifacts?  
 (20) A Yes  
 (21) Q Now are those also clues that there is an archaeological  
 (22) site?  
 (23) A Yes  
 (24) Q Is that the sort of thing that archaeologists would look  
 (25) for in addition to the oral history to see this physical

(1) Q Now I'd like to bring you up to 1989 when you came up to  
 (2) Alaska and you began working in Prince William Sound I think  
 (3) you indicated you went to work for Chugach Alaska  
 Corporation?  
 (4) A That's correct  
 (5) Q In the course of your work with Chugach Alaska Corporation  
 (6) did you learn about the Cultural Resource Program as it existed  
 (7) before it began?  
 (8) A I was familiar with it prior to the oil spill During the  
 (9) 80s especially during the 1980 Chugach Alaska Corporation  
 (10) had been involved in a lot of survey work identifying locations  
 (11) of cultural sites or heritage sites in the area This had been  
 (12) an ongoing process - well for a decade at least  
 (13) In addition to that there was a focus on oral tradition  
 (14) and trying to record this and also make it more available for  
 (15) the Chugach Natives themselves It both involved recording  
 new  
 (16) oral histories finding out information connected with a lot of  
 (17) the sites that were being surveyed but it also involved  
 (18) bringing together information that had been recorded  
 elsewhere  
 (19) and making some of the stories a little more readily available  
 (20) just to everyone  
 (21) Q Did those stories lead the Chugach cultural history  
 (22) program or Cultural Resource Program if you know  
 (23) Dr Johnson to the location of sites?  
 (24) A In general they did yes That was a very important part  
 (25) of the survey work was the cultural resource management and

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(1) other land managers and other individuals worked in terms of  
 (2) talking with the Chugach Natives throughout the region and  
 (3) other people as well about the sites and the importance of the  
 (4) sites  
 (5) Q And do you know whether or not the Chugach Cultural  
 (6) Resource Program also involved investigation and protection of  
 (7) sites before the oil spill?  
 (8) A Yes it did There has always been a concern for the sites  
 (9) in terms of protection of them basically there was - well  
 (10) there was always a concern The question is always how do  
 you  
 (11) do it How do you preserve them the best way possible And  
 (12) one of the means at least in the past was basically don't  
 (13) talk about it and that's why we always make such a big issue  
 (14) of the confidentiality That was one of the key ways that we  
 (15) had addressed it well even over time  
 (16) If you don't talk about site locations and you don't give a  
 (17) lot of details about the different sites out there you might  
 (18) say there is less interest in them or less opportunity for  
 (19) somebody else to come in and do some sort of harm to a site  
 (20) Q So with the Chugach cultural resource program then  
 (21) Dr Johnson was confidentiality a method of protection of  
 (22) sites before the oil spill?  
 (23) A Yes it was just a method  
 (24) Q Now when you came up to Alaska in 1989 and began  
 working  
 (25) with Chugach concerning the oil spill did you also have an

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(1) opportunity to meet and discuss cultural resource programs  
 with  
 (2) the Village corporations?  
 (3) A Yes I've spoken with various individuals about just  
 (4) general approaches to protection of sites  
 (5) Q Can you tell the jury what your understanding is of the  
 (6) Chenega Corporation's Cultural Resource Program about the  
 oil  
 (7) spill?  
 (8) MR DIAMOND Object on the grounds it calls for  
 (9) hearsay and did not appear to be the basis for any opinion  
 (10) that's been offered or going to be offered  
 (11) THE COURT Counsel?  
 (12) MR FORTIER Your Honor she's an expert The  
 (13) opinion that she - I could make an offer of proof if I can  
 (14) approach the bench  
 (15) THE COURT No the objection is overruled If I see  
 (16) a problem I'll stop on it  
 (17) BY MR FORTIER  
 (18) Q Go ahead Dr Johnson  
 (19) A It might be better to talk about it in a general sense in  
 (20) terms of approaches and the idea of confidentiality What it  
 (21) is you have to kind of put it in perspective over time It's  
 (22) like there has always been a concern for these heritage sites  
 (23) on the part of the Natives because they are their heritage  
 (24) sites our my heritage site our heritage sites and there is  
 (25) this connection that it's a place that you know about

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(1) For the most part you pretty much leave it as it is you  
 (2) don't do a lot with it It's someplace that you may visit on  
 (3) occasion It may be a place that you just know about but you  
 (4) pretty much leave it alone  
 (5) In terms of Chenega for example there was an avoidance of  
 (6) any kind of impact to these sites it was like really leave  
 (7) them alone You know don't pick up artifacts don't do this  
 (8) type of thing Chugach Alaska Corporation over the course of  
 (9) time has changed this perspective slightly in that for  
 (10) example artifacts that might be readily visible if you feel  
 (11) that they were in danger there was the feeling that they  
 (12) should be collected  
 (13) So it's one of these that's sort of evolved over time  
 (14) That in general the idea is you don't want to collect things  
 (15) you don't want to change things you want to basically keep it  
 (16) intact as much as possible  
 (17) On the other time - on the other hand through the course  
 (18) of time that has become an awareness or increasing awareness  
 (19) that people are picking these things up and if you leave it  
 (20) out there someone may pick it up So you have to look at it  
 (21) over a broad period of time because back in the 30s and even  
 (22) before sometimes individuals would collect them and that was  
 (23) the form of preservation  
 (24) It's like more recently there is a lot more archaeological  
 (25) awareness From the scientific perspective you don't want to

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(1) collect them you want to leave them in place because they  
 (2) contain scientific information about the particular location  
 (3) So it ends up being kind of complex in that you want to have  
 (4) these sites basically stay intact as much as possible but you  
 (5) also want to protect them and there is an increasing awareness  
 (6) in terms of the scientific information  
 (7) Q So Dr Johnson just kind of using Chenega as an example  
 (8) before the oil spill Chenega had a policy of not carrying away  
 (9) things is that your understanding?  
 (10) A Yes  
 (11) Q And that was part of the oral tradition of the Chenega  
 (12) people?  
 (13) A That's the tradition I'm aware of yes  
 (14) Q Now with regard to these places - and again we'll just  
 (15) talk about Chenega for a moment - with regard to the places  
 (16) that the Chenega Corporation knows about - and let's focus on  
 (17) it's special places on its lands - can those places have names  
 (18) in the Native language?  
 (19) A Most of them did yes  
 (20) Q Now do you know whether or not Chenega Corporation  
 before  
 (21) the oil spill created a map of the sites on its lands?  
 (22) A I understand that they did that the oral tradition was  
 (23) pretty well known in terms of site locations and I understand  
 (24) that there was a map that was made prior to the oil spill yes  
 (25) Q And that oral tradition was pretty well known by whom

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- (1) Dr Johnson?
- (2) A Well this particular oral tradition was known by Chenega
- (3) Q By the Chenega people?
- (4) A Uh huh
- (5) Q Let's turn our attention down to Port Graham Corporation
- (6) In your involvement in this case from the time - let's just
- (7) take it from the time that you were hired by Chugach in 1989 to
- (8) this day Have you become familiar with the Cultural Resource
- (9) Program that the Port Graham Corporation had before the oil
- (10) spill?
- (11) A Well again this is why I talk about it in a general sense
- (12) is that again with my brother as the cultural resource
- (13) manager over the years he's had a lot of opportunity to talk
- (14) with elders throughout the region and just members of the
- (15) different villages and to get a real feel for what was
- (16) important to you know the different villages in terms of
- (17) protecting sites and I've heard a lot of this over the years
- (18) from him I have spoken at times with other members from the
- (19) villages in terms of the protection or their concern for sites
- (20) and basically it's in accordance where what I've heard all
- (21) along
- (22) Q With regard to Port Graham Corporation did you talk with
- (23) anybody connected with Port Graham?
- (24) A I have spoken with Pat Norman
- (25) Q And what is your understanding of the Port Graham

- (1) the impact of the oil and the oil spill but also what should
- (2) be done with the site And basically the direction that both I
- (3) recommended but also that they felt as well was that there
- (4) should be little done during the oil spill the actual oil
- (5) spill activities In other words keep it to a minimum in
- (6) terms of data recovery and so forth until this emergency
- (7) situation was over with and then look at what the situation is
- (8) and try to figure out what it is that you really want What it
- (9) is that might be of value to scientists and what would be an
- (10) appropriate type of response
- (11) Q Now Dr Johnson in your field of archaeology is
- (12) management of cultural resources important?
- (13) A Yes
- (14) Q Why?
- (15) A Well basically it's becoming more important over time
- (16) That sort of the earlier view that basically you knew where the
- (17) sites were and sort of left them alone or you might go visit
- (18) them or something like that but you pretty much left them
- (19) alone It's evolved because of the increasing archaeology and
- (20) the increase just in terms of knowledge about the sites
- (21) people's access to the sites and so that's when you really get
- (22) into the cultural management aspect that all of a sudden you
- (23) have to do something with these because if you don't there is
- (24) like an increasing threat of impacts to them
- (25) Q And Dr Johnson can you give the jury a broad overview of

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- (1) Corporation - did Pat tell you about the Port Graham
- (2) Corporation Cultural Resource Program?
- (3) A Well again it's just the sort of general approach to
- (4) sites that basically there are sites that are important you
- (5) know most of them are - virtually all of them are coastal
- (6) sites A lot of them have oral tradition connected with family
- (7) histories or just general information about sites on their
- (8) lands And basically it was like you know they were there and
- (9) you basically left them alone You didn't do a lot with them
- (10) Q Did you keep them confidential on Port Graham Corporation
- (11) land?
- (12) A You definitely didn't make them widely public I mean
- (13) there was talk I'm sure among the village about the sites
- (14) Q Now let's talk a moment about English Bay Corporation
- (15) You're generally familiar with English Bay Corporation Cultural
- (16) Resource Program as well?
- (17) A Again I'm familiar with it again just through
- (18) conversations primarily with my brother John Johnson
- (19) Q And later in the history of the oil spill did you have
- (20) some dealings with English Bay Corporation regarding one of
- (21) their sites?
- (22) A Yes I did
- (23) Q Okay
- (24) A And basically there was a lot of discussion about a
- (25) particular site on the Kenai Peninsula and concern over both

- (1) the history prehistory of the Chugach people?
- (2) A Well just in general that in Prince William Sound the
- (3) earliest dates go back about 6 000 years ago and from there up
- (4) to historic times There haven't been a lot of excavations in
- (5) Prince William Sound Some of the key ones were done back in
- (6) the 1930s There was another one done I believe it was in
- (7) 1989 thereabout And then there have been smaller test pits
- (8) and things like this put in by government agencies in terms of
- (9) some investigation that Chugach sites
- (10) So there is an increasing archaeological investigation in
- (11) the area primarily during the 1980s and near 1990s
- (12) Q Why was that?
- (13) A Part of it is just in the process of identifying Chugach
- (14) sites the Chugach Alaska Corporation sites that basically
- (15) there was the need to document the locations and in some
- (16) cases you might have a few physical remains again a few
- (17) culturally modified trees or indicators
- (18) The next step is often to do some testing to see if there
- (19) is subsurface deposits In some cases there might be shell
- (20) midden In other cases there may be nothing So you did this
- (21) type of testing to try to see what there might be at a
- (22) particular location
- (23) Q So Doctor you don't know is it correct then that
- (24) before the oil spill the archaeological investigations of
- (25) Prince William Sound were those primarily sponsored by

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(1) Chugach?  
 (2) A By Chugach and also some agencies in connection with the  
 (3) historical sites yes  
 (4) Well let me backtrack In terms of archaeological  
 (5) investigations back in the 30s the archaeologists and  
 (6) anthropologists that worked in the area they did quite a bit  
 (7) in terms of documenting the location of sites and they did do  
 (8) some excavation From about - well during the 80s there was  
 (9) an increased amount of survey work and in conjunction with  
 (10) this there was testing that was done primarily by agencies  
 (11) Chugach has also done some survey work themselves which  
 (12) is  
 (13) the step usually before the agencies in other words trying to  
 (14) locate the sites For the most part even Chugach has avoided  
 (15) doing testing as much as possible  
 (16) Q Now these studies were written in the 1930s Dr Johnson  
 (17) Are those in general circulation today?  
 (18) A The publications that I'm talking about are again  
 (19) Birket Smith and DeLaguna DeLaguna's work focused on the  
 (20) prehistoric archaeological sites As far as I know they are  
 (21) out of print  
 (22) Q Dr Johnson I'd like to turn now to when you came to  
 (23) Prince William Sound in 1989 You indicated that you received  
 (24) a call - excuse me - from your brother John That you  
 (25) understood that there was an oil spill and that you were asked  
 (26) to come to Alaska

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(1) know that for example a Forest Service archaeologist was out  
 (2) in the Sound I think around the 7th or so of April and to  
 (3) the extent that this is connected with the effort the  
 (4) archaeological effort I think you have - you know you have a  
 (5) movement toward a Cultural Resource Program here at the  
 (6) beginning of April  
 (7) The exact date that Exxon - the Exxon Cultural Resource  
 (8) Program was actually in operation I think probably dates  
 (9) around the middle of April I believe that their director had  
 (10) been out to the - one of the sites around the 13th of April  
 (11) and so it's moving this direction but I don't know - at this  
 (12) time I don't think there was anything formulated as a Cultural  
 (13) Resource Program and I'm not sure in terms of the actual dates  
 (14) of who got hired when and when it was called this  
 (15) Q Now Dr Johnson when you arrived in Valdez in - on April  
 (16) 13th or 14th of 1989 did you have any idea one way or the  
 (17) other about whether or not the oil spill would impact cultural  
 (18) resources?  
 (19) A Well upon arriving there you started to get a better idea  
 (20) of what was involved Prior to my coming there I guess it  
 (21) didn't really sink in in terms of what it meant in terms of the  
 (22) oil spill and the clean up activities It was more upon  
 (23) getting there when you realized that there were going to be  
 (24) hundreds and hundreds of people coming in and that you did  
 (25) have  
 (26) oil on the shorelines and that you were going to have clean up

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(1) A That's correct  
 (2) Q What did you do when you arrived in Prince William Sound -  
 (3) excuse me before you do that tell us when you arrived  
 (4) A I believe I got the call at the beginning of April and as  
 (5) I best remember it was on or around April 14th that I came  
 (6) up And basically what I did is I came to Anchorage and  
 (7) before I knew it I was on a flight down to Valdez and  
 (8) basically arrived there There was I believe one other  
 (9) person that was working for Chugach Alaska Corporation  
 (10) already  
 (11) in Valdez at the time so basically I met up with this  
 (12) individual and we went into some of the meetings that were  
 (13) going on in Valdez  
 (14) Q That was around April 12th?  
 (15) A No around the 14th  
 (16) Q At that time do you know whether or not clean up activities  
 (17) on the part of Exxon had started up yet?  
 (18) A Oh they had started going yes  
 (19) Q And do you know whether or not Exxon had a Cultural  
 (20) Resource Program in place on April 14th?  
 (21) A Right As I arrived it was in the process of being  
 (22) formulated That there had been discussion even with Chugach  
 (23) Alaska Corporation - well with the agencies and with Exxon in  
 (24) terms of formulating some sort of program It's hard to  
 (25) pinpoint when the actual date is Basically everybody has a  
 (26) different opinion as to when this program actually started I

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(1) activities out there and it became more apparent that it was a  
 (2) critical situation  
 (3) Q What do you mean by that it was a critical situation?  
 (4) How would the oil impact cultural resources?  
 (5) A Well it's basically what do you do There is a limited  
 (6) number of archaeologists when it comes down to it And as far  
 (7) as I know there were 20 or 25 archaeologists that worked for  
 (8) Exxon and there were some archaeologists that worked for  
 (9) State  
 (10) agencies and we had some archaeologists And just given the  
 (11) magnitude of the oil spill it's like what do you do What  
 (12) approach do you - what do you do  
 (13) Q So you were concerned about oil on the artifacts?  
 (14) A Yes  
 (15) Q Why?  
 (16) A Well just concerned with - well concerned with oil - I  
 (17) think the initial concern was more with the clean-up activities  
 (18) because the oil was already there It was like that was  
 (19) something you couldn't change It was more concern for the  
 (20) clean up activities and it's like now what's going to happen  
 (21) when you have all these people moving along the shoreline  
 (22) The oil itself as it became - I mean as time went on you  
 (23) realized that the oil had the impact that the sites were oiled  
 (24) artifacts on the site or in the site were oiled this type of  
 (25) thing But I think in Valdez at that time there is nothing you  
 (26) could do about it because it had happened What you were

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(1) really focusing on was what else is going to happen to the  
 (2) sites  
 (3) Q How would people – what was your concern about the  
 number  
 (4) of people on archaeological sites? Can you explain that to the  
 (5) jury why were you concerned?  
 (6) A Well it's one of those situations where it's like most  
 (7) people when they are – if they are out at a site it's  
 (8) like – I mean it's basically an issue like of human nature  
 (9) it's like some people when they walk around on an  
 (10) archaeological site won't cause any damage. They are very  
 (11) careful won't walk on some of the cultural beaches. Other  
 (12) people may be less sensitive to the site or the fragile  
 (13) quality of the site and walk around and cause some sort of  
 (14) surface damage.  
 (15) You also have the other extreme where like sometimes there  
 (16) is human temptation to pick things up because they are cool  
 (17) artifacts or it's a cool object or something that you've never  
 (18) seen before and take it home.  
 (19) You have another step where there is like people when they  
 (20) see this then they learn how to do it and basically pick up  
 (21) artifacts different places. And then you go the full extreme  
 (22) where you have actual pocketers. It's almost like a  
 profession.  
 (23) So there is a concern for the wide range of types of  
 (24) impacts and it's like how do you address this. It's like

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(1) Q Now you said we Dr Johnson who are you referring to?  
 (2) A Well one of the meetings that I was involved in was called  
 (3) the ISCC in Valdez and that refers to the Interagency  
 (4) Shoreline Clean up Committee. And what this was it was  
 (5) composed of agency personnel from say like Fish & Game  
 Fish  
 (6) & Wildlife ADEC any number of different agencies both state  
 (7) and federal. And then we were on there as – well private  
 (8) landholders. We had a position at the table you might say  
 (9) There were also some other individuals on the table  
 (10) representing I think fishermen's concerns and other things.  
 (11) So this particular group of people met on a daily basis in the  
 (12) morning to review like what it was that was happening and what  
 (13) different concerns were.  
 (14) Q And the we that you're referring to the landowners we  
 (15) is that Chugach Alaska oil spill response team?  
 (16) A Yes. And it might be myself or it might be one of the  
 (17) biologists. It varied over time.  
 (18) Q And this ISCC that was the Interagency Shoreline Clean up  
 (19) Committee?  
 (20) A That's correct.  
 (21) Q That was composed of agencies is that correct?  
 (22) A That's correct.  
 (23) Q And what was their job?  
 (24) A Again it was more or less to I suppose offer advice or  
 (25) voice some concerns that for example there might be work

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(1) ideally there wouldn't be all those people out there. It's  
 (2) like a deal you wouldn't have to worry about it you would just  
 (3) have to worry about general you know smaller situations that  
 (4) type of things. But with the numbers I think that was one of  
 (5) the main concerns.  
 (6) Q Dr Johnson did you also during this first few weeks that  
 (7) you were in Prince William Sound in Valdez have an  
 opportunity  
 (8) to go out to the areas that were being treated in Prince  
 (9) William Sound?  
 (10) A I went out to quite a few areas in 1989. Basically when I  
 (11) arrived in April I pretty much stayed through all of 1989 and  
 (12) was in Valdez. We had this oil spill response team and we had  
 (13) two archaeologists on the team and then there were two  
 (14) biologists and another person liaison.  
 (15) We also had two other offices one was in Homer and one was  
 (16) in Seward and so my focus really was on Prince William Sound  
 (17) So we did try to keep track of what was going on in other  
 (18) areas but in terms of familiarity with the oil spill itself I  
 (19) participated in various meetings that were going on and so a  
 (20) lot of times these meetings the participants would go out on  
 (21) trips to take a look at clean up techniques at different  
 (22) locations or just get a feel for it feel for the oiling and  
 the clean up.  
 (23) Q And you also did that?  
 (24) A Yes

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(1) orders that came through. And that was one of the focus that  
 (2) work orders would come from Exxon and Exxon participated as  
 (3) well in these meetings and basically all of the agencies and  
 (4) the landowners and some of the other parties on it would  
 (5) receive these work orders.  
 (6) And what the point was was that you were supposed to like  
 (7) you know basically look at how this might impact your  
 (8) particular group or your particular agencies. So for example  
 (9) like with Fish & Game if they knew the cleanup was going to be  
 (10) along a certain shoreline and there was an anadromous stream  
 (11) there might be certain restraints or to inform them that they  
 (12) need permits. It was sort of an inspectional type thing to  
 (13) talk things out.  
 (14) For the Native corporations what it was issues like upland  
 (15) access that when it came time to clean shorelines along Native  
 (16) lands that some of the concerns were with upland access so we  
 (17) would voice those kind of concerns.  
 (18) It was also a place where you learned things. For example  
 (19) different types of treatment that were proposed whether it was  
 (20) a certain type of manual cleanup or using machinery or  
 (21) bioremediation or any number of techniques.  
 (22) Q So these were Exxon work orders that you were reviewing?  
 (23) A Yes they were.  
 (24) Q Based upon your experience on the ISCC do you have any  
 (25) opinion whether or not Exxon was in charge of the cleanup?

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(1) A Yes I believe they were  
 (2) Q Now Dr Johnson can you tell us a bit about these work  
 (3) orders that you were reviewing from a let's say from a Native  
 (4) corporation standpoint as an archaeologist? What were you  
 (5) looking for and what were you seeing?  
 (6) A Well basically what these work orders included was like a  
 (7) cover sheet. Then there would be three additional sheets one  
 (8) that was prepared by a biologist one by a geomorphologist  
 and  
 (9) one by an archaeologist. And the individuals that prepared  
 (10) these were on this team that was called the SCAT team Exxon  
 (11) SCAT team. And they were generated and each sheet  
 contained  
 (12) information  
 (13) As an archaeologist I tend to flip back to the third sheet  
 (14) myself but I would look at all of them because of the general  
 (15) concerns for the corporations so what this third sheet would  
 (16) include is information about the reconnaissance situation that  
 (17) the Exxon Cultural Resource Program were conducting in the  
 (18) Sound  
 (19) Maybe take a step back. Sort of the system that was set  
 (20) up at least for archaeology was that you had a SCAT survey  
 (21) that this team of archaeologists biologists and  
 (22) geomorphologists would go out ideally before the clean up  
 (23) activities began and they would briefly or as quickly as  
 (24) possible do a reconnaissance survey of the shoreline and  
 (25) record whether there was oil and what kind of impacts that

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(1) might be to the biota or the cultural resources and this type  
 (2) of thing. Then it would come back and the agencies would  
 (3) review it and give recommendations or state their concerns  
 (4) So as an archaeologist I would look at these and I would  
 (5) first basically look at the quality of the survey what was  
 (6) known about cultural resources or archaeological sites in the  
 (7) area and try to make an evaluation myself as to what I thought  
 (8) might be a good idea or bad idea or usually it was what was  
 (9) the best of the worst  
 (10) So for example a segment may come back where we knew  
 (11) there was an archaeological site and we might make a  
 (12) recommendation that they not clean it because we didn't want  
 (13) people around the site. In the meeting what would happen is  
 (14) that other agencies would present their position. They might  
 (15) want it cleaned for some other reason so the meeting was a  
 (16) place where everybody could put their opinion in and basically  
 (17) you know the idea was to get a consensus but it didn't always  
 (18) work that way  
 (19) Basically what you would do sometimes is state what your  
 (20) concerns were. But in 1989 especially the idea there was you  
 (21) wanted to keep the clean up activities moving. Like you didn't  
 (22) want to be the one that held it up so you would state your  
 (23) concern and try to do the best you could but it's like you  
 (24) wanted the clean up activities to keep moving  
 (25) Q So the clean up activities was that taking precedence over

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(1) archaeology?  
 (2) A It took precedence over archaeology at times  
 (3) Q These work orders that you were reviewing Dr Johnson did  
 (4) those disclose to you at the time in 1989 whether or not  
 (5) there was cleanup before say the monitoring of an  
 (6) archaeological site or cleanup without monitoring  
 (7) archaeological sites?  
 (8) A Well you have to look at cleanup in the general sense  
 (9) even before the SCAT teams were in operation that you had  
 (10) certain clean up activities going on in terms of setting up  
 (11) booms and things like this different places. You also had  
 (12) like bird pick up crews or people going out and doing survey  
 (13) work. There were a lot of people out there even before these  
 (14) work orders started coming in. So you have this general  
 (15) activity. Then you also have specific clean up activity that  
 (16) followed certain work orders. And in some cases there were  
 (17) failings in that where there might be a monitor that was  
 (18) recommended to the site and in fact there was no monitor. So  
 (19) it depends  
 (20) Q Let's talk about this monitor recommended why would you  
 (21) recommend a monitor at a site?  
 (22) A Well as things evolved in 1989 there ended up being a  
 (23) couple different options in terms of sites that either would  
 (24) be what was called the standard constraint which was go  
 ahead  
 (25) and clean up the beach and let us know if you find something

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(1) Another one might be don't clean up the beach stay away from  
 (2) this site. And the other third major option was well we  
 (3) think we want to try cleaning it up but we definitely want a  
 (4) monitor there an archaeologist there. So if there is clear  
 (5) impact that's happening to the site we want that archaeologist  
 (6) to be able to stop things. In general at least Chugach Alaska  
 (7) Corporation always voiced concern for the standard constraint  
 (8) because of the quality of surveys that had been done prior to  
 (9) clean up activities. There was kind of this ongoing fear that  
 (10) sites were being missed or even sites that were known about  
 (11) that there wasn't sufficient information known about them to  
 (12) basically justify just letting clean up activities go  
 (13) But what ended up happening is again you have to look at  
 (14) what was happening in 1989 and that people wanted to  
 clean up  
 (15) activities to keep going. It's like we didn't want to stop  
 (16) things. Nobody wanted to stop things you wanted things to  
 (17) keep going. So it was like you chose one of these options is  
 (18) basically what it was. In some cases they were more complex  
 (19) again a site on the Kenai Peninsula where there were quite  
 (20) elaborate work orders in terms of the archaeological site  
 (21) Q Did it come to your attention during the course of 1989  
 (22) that sites owned by Chugach Chenega Port Graham or  
 English  
 (23) Bay Corporations had been let's say impacted on account of  
 (24) clean up activities in 1989?  
 (25) A Yes they were

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- (1) Q Can you explain to the jury in general what came to your  
(2) attention in 1989?
- (3) A Well there were different types of impacts from just the  
(4) general oiling. The oiling itself is considered an impact  
(5) Clean up activities without any kind of archaeologist  
(6) present - again it's a wide range that for example there  
(7) were some sites that were not fully documented until like 1990  
(8) where in 1989 there were clean up activities that occurred at  
(9) the site
- (10) So it's like you didn't know about it at the time but you  
(11) knew about it later and in fact there were impacts to the  
(12) site because you learned about the site in 1990 or fully  
(13) documented the site. I should say in 1990
- (14) In other cases there were - well other types of impacts  
(15) in terms of vandalism and this could be something like  
(16) graffiti or something written on some walls to - well  
(17) actually disturbance of a midden this type of thing different  
(18) types of impacts
- (19) Q Over the course of 1989 did it come to your attention that  
(20) certain treatment activities were also impacting archaeological  
(21) sites?
- (22) A Yeah Well clean up activities that - you have to think  
(23) of the range of clean up activities - basically anything  
(24) anybody does out there is going to impact it but in terms of  
(25) sort of more noticeable impacts like if you have hot water

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- (1) flushing - where you have hoses flooding the beach you have  
(2) changes in terms of the arrangement of sediments on the  
(3) beach
- (4) In terms of like the position of artifacts there some of these  
(5) may be washed down the beach. In other cases there may be  
(6) cleanup in the form of picking up tar mats or picking up oil  
(7) and in the process artifacts may be picked up. That's always a  
(8) concern. Let me think. Just kind of a wide range.
- (9) Also sometimes you might say kind of a what happened in  
(10) the field was you would have clean up activity on one beach  
(11) and it was sort of human nature to just kind of walk across the  
(12) uplands to the other people because it was a short walk across  
(13) as opposed to going around the entire shoreline and in some  
(14) cases there were like historical remains right on top. So we  
(15) had concerns in general about these kind of impacts and  
(16) whether you know they are intentional impacts or  
(17) unintentional. That wasn't even the point. It was more we  
(18) just didn't want disturbance to the sites. We wanted to keep  
(19) that to the minimum as much as possible
- (20) Q Dr Johnson you continued working in 1990 on oil  
(21) spill related issues?
- (22) A In 1990 the ISCC actually continued in a much altered  
(23) form. I believe it was located - well it was located as I  
(24) remember in Anchorage and I didn't attend many of the  
(25) meetings. I don't even know if they had many meetings that  
(26) year. What I did participate in was this group which was

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- (1) called CTAG. It was the - it was like a technical advisory  
(2) group and again it involved agencies or agencies  
(3) archaeologists and ours to again review different work orders  
(4) that came through in 1990
- (5) Q And those work orders were again from Exxon correct?
- (6) A Yes
- (7) Q And did you get out to the field in 1990 as well?
- (8) A Yes I did
- (9) Q Were you in Prince William Sound in 1990 in the field?
- (10) A Yes I was
- (11) Q Were you anywhere else besides Prince William Sound?
- (12) A Yes I was also down on the Kenai Peninsula
- (13) Q In the Kenai Fjords area?
- (14) A Yes
- (15) Q Whereabouts?
- (16) A I was at a site that was referred to as Seldovia 188
- (17) Q And that's English Bay site?
- (18) A That's correct
- (19) Q Now Dr Johnson after 1990 were you retained by any of  
(20) the Native corporations as an expert?
- (21) A Yes I believe it was 1992 that I was retained as an  
(22) expert
- (23) Q And who first retained you?
- (24) A Chugach Alaska corporation
- (25) Q And we've heard a little bit about that this morning. That

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- (1) was with regard to a report you'd written co-authored with  
(2) Dr Jack Lobdell?
- (3) A That is correct
- (4) Q And when you were retained by Chugach Alaska  
(5) Corporation
- (6) can you explain to the jury what the purpose of your retention  
(7) was what were your duties what were you supposed to do?
- (8) A Basically at that time what I was doing was trying to  
(9) document or review documents in terms of impacts and just  
(10) generally information about the sites themselves. In other  
(11) words - I think the best way to put it is what had happened  
(12) like in 1989 1990. There had been a lot of conversations and  
(13) discussions about the types of impacts and the sites
- (14) In 1992 I basically went back and pulled together a lot of  
(15) the paperwork pulled the paperwork together so that we could  
(16) say yes this is the particular site and this is what we know  
(17) about it. This is the type of oiling that occurred there
- (18) This is - well actually I think the focus was actually just  
(19) oil and sites. We didn't really get into individual cases of  
(20) other impacts at that time
- (21) Q Were you subsequently retained - were you later retained  
(22) by Chugach and Port Graham and English Bay Corporations?
- (23) A Yes I was
- (24) Q When was that?
- (25) A That was last fall
- (26) Q Can you tell the jury what you were retained to do by

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(1) Chugach Corporation and English Bay Corporation?  
 (2) A Again it was a similar sort of situations in that there  
 (3) had been a lot of discussion about the sites impacts and  
 (4) oiling up to them. But what my focus really was was pulling  
 (5) together some of the documentation that would identify what  
 (6) the type of site was what type of oil there was what type of  
 (7) impacts there was. But again the focus was really on the  
 (8) sites and oil in terms of a lot of specifics about other types  
 (9) of impacts that I don't believe I included a lot of specifics  
 (10) in the report. It was more general ones based on my reading  
 (11) since 1989.  
 (12) Q Dr Johnson in the course of your retentions by Chugach  
 (13) Alaska Corporation Chugach Corporation Port Graham  
 (14) Corporation and English Bay Corporation did you obtain  
 (15) records from the Exxon Valdez Cultural Resource Program?  
 (16) A In terms of - it might be good just to talk about the  
 (17) documents in general because actually I think probably it is  
 (18) going to go back to 1989 when as a member of the oil spill  
 (19) response team there were a lot of documents that we had  
 (20) access to. In the course of the summer at least we gained access to a  
 (21) lot of it and continued to receive documents I believe until  
 (22) the fall and these were the work orders and sometimes field  
 (23) notes connected with actual sites or field investigations. So  
 (24) we reviewed these and other reports or incident reports or  
 (25) whatever in 1989.

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(1) In 1990 it was the same situation. It was sort of the  
 (2) second go at these segments so there was another set of  
 (3) documents that came through and reports that had been  
 (4) published by Exxon or just a lot of other supporting  
 (5) documentation.  
 (6) Then let's see I think the next couple years or at least  
 (7) the next - '91 and '92 there were documents that came  
 (8) through but I didn't - as I recall right now I don't recall  
 (9) reviewing them on a regular basis. I may have seen some of  
 (10) them over time but it was then again in 1992 that I went back  
 (11) to look in at the documents again in more detail. And again  
 (12) these were some of the documents I had seen back in '89 and  
 (13) '90.  
 (14) And then the next wave of documents basically came in the  
 (15) fall of 1993 with the State production of documents and the  
 (16) Exxon production of documents. I think some may have been  
 (17) produced earlier but I didn't have access to them at the time.  
 (18) Q Now you mentioned some Exxon reports that you reviewed  
 (19) in  
 (20) 1989 1990?  
 (21) A Yes.  
 (22) Q Were one of those the Exxon Cultural Resource Program  
 (23) report  
 (24) for 1989?  
 (25) A Yes.  
 (26) Q Now based upon your subsequent review of documents  
 (27) which  
 (28) you've testified you obtained in 1993 and subsequently did you

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(1) find that the 1989 Exxon Valdez Cultural Resource Report was  
 (2) accurate?  
 (3) A Well even before reviewing those documents back in 1989  
 (4) we made comments on them and I had different objections or  
 (5) different concerns about how the report was presented in terms  
 (6) of what one called an incident or what was considered  
 (7) important. That there was a lot of discussion in terms of what  
 (8) there should be what should be included or how it should be  
 (9) presented and I didn't necessarily agree with what was  
 (10) reported.  
 (11) Q Dr Johnson did you arrive at any opinion as to whether or  
 (12) not cultural resources belonging to Chugach and the three  
 (13) Village corporations were impacted on account of the Exxon  
 (14) Valdez oil spill?  
 (15) A Yes they were.  
 (16) Q And in arriving at your opinion did you review photographs  
 (17) produced by Exxon in 1989 - or excuse me photographs that  
 (18) were taken by Exxon in 1989 and subsequently produced?  
 (19) A Yes I believe that the photographs were both 1989 and  
 (20) 1990. There was quite a few photographs and also videos a  
 (21) lot of videos that were made.  
 (22) Q And you've reviewed those?  
 (23) A Yes.  
 (24) Q And your opinion is based partially upon documents that  
 (25) were obtained from Exxon is that correct?

(1) A That's correct.  
 (2) Q Now you - I think you testified that in 1989 you observed  
 (3) certain methods of beach treatment?  
 (4) A Uh huh.  
 (5) Q Can you tell the methods of beach treatment that you  
 (6) personally observed in 1989?  
 (7) A Well again I saw pretty much the range of beach  
 (8) treatment. Some of it was sort of exhibitions in a sense but  
 (9) some of it was actual work activity. I saw basically  
 (10) everything from the manual pickup of oil using Sorbent pads,  
 (11) and this type of thing to flushing with these large hoses and  
 (12) so forth that basically the water runs down the beach and the  
 (13) idea is to wash it in the water so it can be collected in the  
 (14) water.  
 (15) Other times let's see - there were like some machinery  
 (16) that was used. There was like a machine called the Omni  
 (17) boom  
 (18) or something like this. There were a bunch of different ones  
 (19) water being sprayed on the shore from a boat whether it was  
 (20) with this Omni boom kind of thing or whether it was with  
 (21) hoses. I remember different times out in the Sound coming up  
 (22) to barges with people lined up on the barges with hoses so  
 (23) there were a lot of different techniques that were being used  
 (24) different approaches.  
 (25) Q Dr Johnson are you generally familiar with beach segment  
 (26) CR 4 5 6 in that area?

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(1) A One through five I am  
 (2) Q And you've examined certain pictures obtained by -  
 (3) obtained from Exxon with regard to those segments?  
 (4) A Yes  
 (5) Q That were taken in 1989?  
 (6) A Yes  
 (7) Q And you're satisfied that those pictures accurately  
 (8) reflect - they accurately depict the place in C -  
 (9) A Yes It's my understanding based on photo logs generated  
 (10) by Exxon  
 (11) Q I'd like to show you what's been marked as PX1295?  
 (12) MR DIAMOND Your Honor may have a minute to confer  
 (13) with counsel?  
 (14) (Discussion off the record )  
 (15) MR DIAMOND Your Honor we would object to the  
 (16) extent that the photographs do not depict activities on sites  
 (17) for which claims are being made that their introduction would  
 (18) exceed the Court's order in this regard  
 (19) I don't know what - we don't have and have not been  
 (20) previously furnished specific site locations for the  
 (21) photographs but we would ask that counsel be constrained on  
 (22) account of the orders you've established and not publish to the  
 (23) jury any photographs of areas that are not archaeological  
 (24) sites  
 (25) MR FORTIER Your Honor I don't think that that's

(1) including the hoses and workers You can see some of the  
 (2) bags  
 (3) of oiled debris in the background  
 (4) Q This is on a site did you say Dr Johnson?  
 (5) A Basically what I know is that the site is located in the  
 (6) segment And as far as I know based on conversations with the  
 (7) other archaeologists that have also worked at this site that  
 (8) it is in the area of the site That's my understanding  
 (9) Q And you've personally been to this site?  
 (10) A I've been to this site but not during cleanup  
 (11) Q I'm going to show you what's been marked as 1295 6 What  
 (12) is this Dr Johnson?  
 (13) A Again this is what I believe is called the Omni boom and  
 (14) again it's in the same segment that contains the site claimed  
 (15) by Chugach Alaska Corporation  
 (16) Q This is during clean up operations?  
 (17) A Yes And again this is based on the photo log that was  
 (18) produced by Exxon I wasn't personally there at the cleanup  
 (19) but I understand this is the correct location  
 (20) MR DIAMOND Your Honor I'll object on the grounds  
 (21) there is no foundation She wasn't there didn't observe these  
 (22) activities can't authenticate these photographs as being an  
 (23) accurate depiction  
 (24) They may be admissible but I don't know that they are  
 (25) admissible through this witness  
 (26) THE COURT Explain to me how you used the logs to

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(1) even necessary I don't intend to show sites other than those  
 (2) for which damages are actually being claimed  
 (3) THE COURT All right  
 (4) MR DIAMOND Your Honor we have a problem because  
 (5) these have been identified as Crafton 4 5 and 6 There is  
 (6) only one claim being made for Crafton He did a magician's  
 (7) slight of hand  
 (8) THE COURT Do you want me to excuse the jury and set  
 (9) some rules?  
 (10) MR FORTIER Your Honor -  
 (11) MR DIAMOND If it's not a problem If counsel is  
 (12) going to show these -  
 (13) THE COURT The problem is I don't want to be faced  
 (14) with a problem afterwards So to the extent you have to  
 (15) confer fine If there is a controversy let me know so I can  
 (16) excuse the jury  
 (17) MR DIAMOND Thank you  
 (18) BY MR FORTIER  
 (19) Q Dr Johnson can you identify what we're looking at?  
 (20) A First of all there are segments only one through five  
 (21) there is no six And in terms of what is on the screen here  
 (22) my understanding from the Exxon video log is that it is on the  
 (23) shoreline adjacent to one of the cultural sites or heritage  
 (24) sites that is claimed by the Chugach Alaska Corporation  
 (25) And basically what you see is clean up activities

(1) identify the locations that these pictures were taken?  
 (2) A Basically for these Exxon last fall produced a photo log  
 (3) with all the photographs and the photo log included segments  
 (4) Exxon shoreline segments It also included the HRS the Alaska  
 (5) Heritage Resource Survey information site logs and then a  
 (6) general description  
 (7) And basically what I would do is look at the location of a  
 (8) site in a segment this type of thing and basically look to  
 (9) those segments in terms of looking for what kind of  
 (10) photographs  
 (11) there were And in the particular case here I also talked  
 (12) with another archaeologist who knew about like the Omni boom  
 (13) operations the clean up activities and so forth in the area  
 (14) at the time because I wanted to make sure that they were not  
 (15) further north than the segment but they were actually located  
 (16) in the site location And she said that they were So it's  
 (17) based on the document Exxon documents and conversation  
 (18) with  
 (19) someone that actually was present there as far as I know  
 (20) THE COURT At the particular site?  
 (21) A At the particular site  
 (22) THE COURT Did you show the photographs to the  
 (23) person?  
 (24) A I didn't show these photographs but I know that there is  
 (25) some other photographs that they have that she had taken  
 (26) THE COURT Okay  
 (27) MR DIAMOND We would renew the objection that these

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(1) don't come in is admissions that it has to be in some sort of  
 (2) testimony that these accurately depict what they purport to  
 (3) represent. These are photographs because we produced  
 them  
 (4) and unquestionably to the extent the logging is right and we  
 (5) aren't questioning these various areas of clean up activity  
 (6) but there is a question whether the photographs depict what  
 was  
 (7) shown and we need somebody that was present at this site or  
 (8) that has admissible knowledge what happened at this site and  
 (9) this photograph of the activity. Otherwise it's sheer  
 (10) conjecture. For all we know the angle of this camera may  
 (11) distort it and there is no way we can cross examine this  
 (12) witness about any of this because she was not there.  
 (13) MR FORTIER Your Honor the pictures have been  
 (14) produced by Exxon the logs have been produced and I think  
 (15) it's under the 801 B admission  
 (16) THE COURT Send the jury out. It's time for a break  
 (17) anyway  
 (18) (Jury out at 11:00 a.m.)  
 (19) THE COURT I just want to understand your objection  
 (20) Mr. Diamond You have logs that give the location Exxon -  
 (21) Exxon has logs that give the location of various sites and  
 (22) specify the sites that the photographs were taken at, right?  
 (23) MR DIAMOND We are not questioning whether these  
 (24) photographs were taken of the sites depicted on the photo log,  
 (25) that is admitted. You can take as accepted that this is a

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(1) photograph of operations sometime in 1989 at Craighton 5  
 (2) Now our objection is there is an additional foundational  
 (3) requirement with respect to photographs and other visual  
 (4) material that the photograph or visual material accurately  
 (5) represent what is being depicted. In order to satisfy that  
 (6) you have enforced this throughout this trial you have required  
 (7) somebody who was at the site or somebody who could connect  
 it  
 (8) up and say I saw activities of this nature at a site and  
 (9) allow that testimony for relevant purposes but here we have  
 (10) neither. We don't know where this boom is in relation to the  
 (11) intertidal zone if in fact that's over State owned land  
 (12) privately owned land what's going on there what kind of water  
 (13) is coming out I mean is it stream? Is that dust? There  
 (14) are lots of ambiguities for which there ought to be a  
 (15) foundation laid and I'm not saying these are inadmissible I'm  
 (16) saying Mr. Fortier has not laid foundation sufficient to get  
 (17) these into evidence for the jury with this witness  
 (18) THE COURT All right the objection is overruled  
 (19) Sounds like you have a number of items you can cross examine  
 (20) on counsel  
 (21) MR DIAMOND You always say that when you overrule my  
 (22) objections  
 (23) THE COURT I always like to hear the rehearsal so I  
 (24) know what's coming later  
 (25) All right I'm going to take a break

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(1) THE CLERK Please rise. This court stands in  
 (2) recess  
 (3) (Recess 11:02 to 11:15 a.m.)  
 (4) (Jury in at 11:15 a.m.)  
 (5) THE CLERK Please rise. This court now resumes in  
 (6) session. Please be seated.  
 (7) BY MR FORTIER  
 (8) Q Dr. Johnson can you tell me what this is please?  
 (9) A Again this is basically an Omni boom which would be  
 (10) located in the water that is steam cleaning shoreline  
 (11) Q Is this in the neighborhood of a Chugach site?  
 (12) A Yes  
 (13) Q Is it on a Chugach site?  
 (14) A The Chugach site - it's part of the Chugach site yes  
 (15) MR DIAMOND May I interpose a late objection and  
 (16) move to strike the last answer without -  
 (17) THE COURT Sustained as to the stream cleaning  
 (18) MR DIAMOND - to whether this was on the Chugach  
 (19) site because all the witness has in front of her is the log  
 (20) and identification which simply says that there is a site on  
 (21) this segment of beach. Some of these beach segments are  
 miles  
 (22) long. This photograph doesn't depict it. She's got no  
 (23) foundation  
 (24) THE COURT Objection sustained. You can ask your  
 (25) question again

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(1) BY MR FORTIER  
 (2) Q Dr. Johnson with regard to the prior picture which I  
 (3) believe was 1295.6 you have been to that site?  
 (4) A Yes  
 (5) Q So you're familiar with it?  
 (6) A I'm familiar with the site. And as I said before based on  
 (7) conversations with the other archaeologist it's my  
 (8) understanding that the clean up activity including an Omni  
 (9) boom did take place where the site is - in the vicinity of  
 (10) the site  
 (11) Q Did you verify that through any reports or work orders?  
 (12) A Again in terms of - let's see I believe some of the  
 (13) videos also talk about an Omni boom present at the site  
 (14) Q Dr. Johnson based upon your review of the photo your  
 (15) knowledge of how that site looks did you satisfy yourself that  
 (16) the Omni boom was cleaning on the site?  
 (17) MR DIAMOND Object without foundation the only  
 (18) foundation is hearsay inadmissible hearsay as well as -  
 (19) THE COURT Objection is overruled  
 (20) THE WITNESS Could you repeat?  
 (21) BY MR FORTIER  
 (22) Q I asked whether or not based upon your own observations of  
 (23) the site your knowledge of the site a review of the  
 (24) documentation you satisfied yourself that the Omni boom  
 (25) cleaning activity was taking place on the site?

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- (1) A Yes that's what I think
- (2) Q Now Dr Johnson what I want to refer you to is 1295 7 on
- (3) the screen
- (4) A Yes Again based on the photo logs basically the same
- (5) type of evidence This is my understanding that this is
- (6) again the same site the same - probably the same - well it
- (7) is the same clean up activity and it includes the hoses and -
- (8) well various clean up workers
- (9) Q And this is again on the site?
- (10) A Yeah this is the same location
- (11) Q I'm showing you what's been marked as PX1295 8 What is
- (12) this Dr Johnson?
- (13) A This is also part of the site And what this is is a
- (14) shipwreck that was up lifted - well a ship that was uplifted
- (15) probably in - in my opinion it was a ship that was uplifted
- (16) during the 1964 earthquake and the area is the location of the
- (17) historic site
- (18) Q Based upon your experience your knowledge of the site
- (19) itself Dr Johnson where were we - where was the Omni boom
- (20) location?
- (21) A I believe that the Omni boom - the shoreline in front here
- (22) was heavily oiled and I believe that the clean up activities
- (23) occurred along the shoreline and further to the north
- (24) Q Do you know whether or not the gentleman standing on the
- (25) vessel is an Exxon employee?

- (1) A It's the same site yes
- (2) Q Dr Johnson I'm showing you what's been marked as
- (3) 1501 B
- (4) Can you tell the jury what this is please?
- (5) A Again it's the same clean up activities that we've talked
- (6) about
- (7) Q Based upon your review of the photo logs this is from 1989?
- (8) A Yes I believe it is yes
- (9) Q And this is activity that's been conducted on a Chugach
- (10) site correct?
- (11) A Yes I believe it is
- (12) Q Dr Johnson I'm reminded of a couple things I wanted to
- (13) ask you about with regard to this photograph I don't know if
- (14) I can zoom it in at all
- (15) Is there anything Doctor unique about this site? Is
- (16) there an area of this particular site that is of importance
- (17) for - does it have any human remains on it?
- (18) A Yes Actually the historical site does have human remains
- (19) Q Is there a grave marker on the site?
- (20) A Yes there is
- (21) Q Can you point that out?
- (22) A It's not in this particular photograph
- (23) Q Where is the grave marker in relationship to the where the
- (24) activity is taking place?
- (25) A It's located up uplands
- (26) Q I'm going to show you 1501 B again Doctor Is this the

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- (1) A I don't know with certainty but that's what I would
- (2) assume
- (3) Q Can I see 1295 10 please?
- (4) Can you tell the jury what we're seeing here Dr Johnson?
- (5) A This is clean up activities further to the south It
- (6) involves well clean up workers here and bags of oiled debris
- (7) and basically historical structures are in the uplands above
- (8) Q Based upon your knowledge of the site Dr Johnson do you
- (9) know whether or not the bags are on the site?
- (10) A Yes they are
- (11) Q And to the best of your knowledge those are bags filled
- (12) with oily debris?
- (13) A Yes that's what I would assume
- (14) Q What is this Dr Johnson?
- (15) A Again the same area there
- (16) Q With the bags on the site?
- (17) A Yes
- (18) Q And are those oil spill workers on the site?
- (19) A Yes I think that's - that's what I think
- (20) Q What I'd like to do now is - can I have the Elmo?
- (21) Dr Johnson I'm showing you what's been marked as 1501 A
- (22) Can you tell me what this scene represents?
- (23) A Again I think it's the location we were looking at before
- (24) earlier and the same clean up activities there
- (25) Q This is again the Chugach site?

- (1) same picture?
- (2) A Again I don't think the grave marker is visible
- (3) Q How far from where the activities are being conducted is
- (4) the grave marker?
- (5) A I'd have to calculate that
- (6) Q In rough figures?
- (7) A It's - basically it's my understanding that this activity
- (8) is occurring towards the north end of the site and the grave
- (9) marker I understand is toward the middle of the site It's a
- (10) pretty large one I don't know
- (11) Q Could I see - now Dr Johnson in addition to reviewing
- (12) pictures and photo logs with regard to Chugach sites you also
- (13) reviewed pictures photo logs and descriptions of the
- (14) activities that took place?
- (15) A That's correct
- (16) Q Did you review any of Chenequa?
- (17) A Yes I did
- (18) Q Are you generally familiar with Chenequa Island?
- (19) A Yes
- (20) Q And are you familiar with the Chenequa school?
- (21) A Yes
- (22) Q With the Old Chenequa Village?
- (23) A Yes I am
- (24) Q Did you find any photographs depicting the Chenequa Village
- (25) site?

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- (1) A Yes there are photographs  
 (2) Q And those are from the Exxon Cultural Resources Program?  
 (3) A That's correct  
 (4) Q And you matched those up with the photo log is that  
 (5) correct?  
 (6) A Yes the photo log identifies them  
 (7) Q If I can see 1295 1  
 (8) What is this Dr Johnson?  
 (9) A This is a view of the old Chenega site  
 (10) Q There is a date at the bottom of the photo do you see  
 (11) that?  
 (12) A Yes and it's August 22nd 1989  
 (13) Q Was this picture obtained from the Exxon Cultural Resource  
 (14) Program logs?  
 (15) A Yes I believe it was  
 (16) Q Now was there an incident that came to your attention with  
 (17) regard to the Chenega site?  
 (18) A Yes what I had heard was that there had been graffiti  
 (19) written on the wall of the school house on the inside  
 (20) Q Do you know whether or not that vandalism was connected  
 (21) with the oil spill?  
 (22) A It is thought that it was yes  
 (23) Q Have you seen records of the Exxon Cultural Resource  
 (24) Program indicating its vandalism was connected with the oil  
 (25) spill?

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- (1) A Yes  
 (2) MR DIAMOND I'm going to object Your Honor as  
 (3) certainly not the best evidence Has she seen written  
 (4) documents if there are such -  
 (5) THE COURT Objection sustained Jury is to disregard  
 (6) the question and the answer  
 (7) MR FORTIER I'll withdraw the question  
 (8) Could we see 1295 2 please?  
 (9) BY MR FORTIER  
 (10) Q Can you tell what we're looking at here?  
 (11) A Yes this is the graffiti that I referred to There are  
 (12) documents that record this graffiti and state that it occurred  
 (13) during the oil spill cleanup  
 (14) Q There is a date at the top of 4/9/89?  
 (15) A That's correct  
 (16) Q Were there activities occurring on 4/9/89 that you're aware  
 (17) of?  
 (18) A Yes I believe that there were pick up crews some sort of  
 (19) clean up activities going on in the area  
 (20) Q Now Dr Johnson you also discussed a site in the Klana  
 (21) Fjords owned by English Bay Corporation?  
 (22) A Yes  
 (23) Q You have personal knowledge of that site as well you were  
 (24) there?  
 (25) A Yes I have personal knowledge of the site

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- (1) Q Did you come across information pertaining to that site?  
 (2) A Yes I've actually reviewed quite a few documents about  
 (3) that particular site because I also participated in field work  
 (4) at the site  
 (5) Q I'm going to show you what's been marked as 1295 3  
 (6) Dr Johnson Dr Johnson do you recognize what is on the  
 (7) screen and can you tell the jury what it is?  
 (8) A Yes It's a test pit that was placed at the site What  
 (9) you see is a two by-two meter test pit and the area here  
 (10) towards the front of the screen is a one-meter area that was  
 (11) extended further - well to a greater depth  
 (12) Q What's on the bottom side?  
 (13) A Basically this test pit is located in the area of the  
 (14) asphalt pavement at the site  
 (15) Q So that's one huh?  
 (16) A Yes  
 (17) Q And Dr Johnson during your investigations did you  
 (18) obtain photographs of oiling and artifacts?  
 (19) A For this particular -  
 (20) Q Of oiled artifacts  
 (21) A In general?  
 (22) Q During the time that you were retained by the corporations?  
 (23) A I've seen pictures of oiled artifacts and oiling yes  
 (24) Q Did those come from the Exxon Valdez Cultural Resource  
 (25) Program?

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- (1) A Yes a lot of them did  
 (2) Q Can we show the jury 1295 14 please?  
 (3) What is this Dr Johnson?  
 (4) A I believe that is an oil lamp that was collected and is  
 (5) being cleaned The oil is being cleaned off of it  
 (6) Q And 1295 - I'm sorry  
 (7) Dr Johnson is this in your experience the way in which  
 (8) oil is cleaned off of oiled artifacts?  
 (9) A I actually have not cleaned oil off of artifacts before  
 (10) but this is obviously a method yes  
 (11) Q Do you know whether or not it's necessary to clean oil off  
 (12) of artifacts?  
 (13) A I would think that it would be advisable yes  
 (14) Q Can we go to 1295 15?  
 (15) What is this Dr Johnson?  
 (16) A I believe this is the same artifact prior to its being  
 (17) cleaned  
 (18) Q What is this called?  
 (19) A It's a stone lamp  
 (20) Q To your knowledge was that located in the Prince William  
 (21) Sound area?  
 (22) A Yes It's my understanding that this particular lamp was  
 (23) located at a Chugach Alaska Corporation site  
 (24) Q This is prior to its being cleaned?  
 (25) A Yes

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(1) Q Now Dr Johnson you mentioned something about uplands  
 (2) Can you tell me whether or not first of all the corporations  
 (3) had uplands trespass policy?  
 (4) A Yes there was In 1989 - let me think during the course  
 (5) of 1989 it became apparent that there was people going into the  
 (6) uplands Chenega Corporation I remember became very  
 (7) vocal  
 (8) about their concern about people going in the uplands and I  
 (9) believe they established that policy early on Chugach Alaska  
 (10) Corporation also generally had a policy about upland access  
 (11) And here I think we're talking mainly about clean up workers  
 (12) and just generally people out there There was a general  
 (13) concern about anybody up there but the focus was mainly on  
 (14) clean up workers and so there was a policy  
 (15) Q And that was to prevent clean up workers from going on the  
 (16) uplands is that correct?  
 (17) A Yes  
 (18) Q Do you know if the policy was enforced by Exxon?  
 (19) A There was stipulations -  
 (20) MR DIAMOND I'm going to object Your Honor as not  
 (21) being relevant - may I approach -  
 (22) THE COURT Sustained  
 (23) BY MR FORTIER  
 (24) Q Do you know if the policy was enforced?  
 (25) THE COURT Am I missing something here counsel?  
 (26) MR FORTIER I'm sorry Your Honor

(1) portion is above mean high tide?  
 (2) A Generally that is what I assume in most cases Basically  
 (3) yeah a portion of the site is in either location  
 (4) Q Let's take an example Dr Johnson Are you familiar with  
 (5) an area on the southwestern - or southeastern side of Chenega  
 (6) Island?  
 (7) A Yes  
 (8) Q Can you explain to the jury using that area as to how  
 (9) this idea of mean high tide above and below the mean high tide  
 (10) relates to coastal archaeological sites?  
 (11) A All right Basically what it comes down to is definitions  
 (12) in terms of intertidal area mean high tide all of this  
 (13) When - all right as an archaeologist talking about a site I  
 (14) look at the site from the perspective of an archaeologist and  
 (15) basically don't - basically ignore issues of ownership in  
 (16) terms of an archaeologist The site itself being a coastal  
 (17) site is located both in the uplands which is above this mean  
 (18) high tide line and in the intertidal area which is below the  
 (19) mean high tide line but the site you don't divide it into  
 (20) pieces it is one site  
 (21) At this particular location that we're talking about there  
 (22) are cultural remains that have been identified both in the  
 (23) intertidal area middle intertidal area below mean high tide  
 (24) and also cultural remains that have been identified above the  
 (25) mean high tide in the uplands

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(1) MR DIAMOND If you're missing the objection I'll  
 (2) make it again  
 (3) THE COURT There was an objection and I sustained  
 (4) it so you don't ask the same question again  
 (5) MR FORTIER I apologize Your Honor  
 (6) BY MR FORTIER  
 (7) Q Have you ever heard the term mean high tide Dr Johnson?  
 (8) A Yes I have  
 (9) Q Can you tell the jury what mean high tide means?  
 (10) A It basically is the average high tide I believe over an  
 (11) 18 year period That's what -  
 (12) Q Now Dr Johnson is mean high tide an important - is it  
 (13) important when you're working with corporation lands?  
 (14) A Yes it is  
 (15) Q Why?  
 (16) A It's important because of the issue of ownership in terms  
 (17) of upland ownership and the State claim to the intertidal area  
 (18) which is located below mean high tide  
 (19) Q Do you know whether or not mean high tide is above or  
 (20) below  
 (21) the intertidal area?  
 (22) A Well mean high tide by definition would be in the  
 (23) intertidal area  
 (24) Q Dr Johnson when you're working with coastal  
 (25) archaeological sites have you ever encountered situations  
 (26) where a portion of the site is below mean high tide and a

(1) What I think is important to understand we're usually  
 (2) talking about the obvious cultural remains indicators of a  
 (3) site so these are the things that are most visible And so  
 (4) based on these different features you try to interpret what  
 (5) the site is and what the potential is for subsurface deposits  
 (6) You have to test to be able to determine whether there are  
 (7) deposits there or not  
 (8) With this particular location there are peat deposits with  
 (9) organic artifacts in the intertidal area Again this is below  
 (10) mean high tide in the intertidal area of the site It is -  
 (11) quite likely that these remains continue up into the uplands  
 (12) above mean high tide It's quite likely that they do In  
 (13) addition there are some visible cultural features in the  
 (14) uplands itself There is a fish weir up there as well  
 (15) From the perspective of an archaeologist you are looking  
 (16) at the entire site you have to look at it in terms of the site  
 (17) and then impacts to the site natural impacts And what the  
 (18) impact is is the wave action that is starting to erode some of  
 (19) these peat deposits and erode portions of the site It's quite  
 (20) likely if one were to do testing in the uplands one would find  
 (21) a continuation of the deposits exposed in the intertidal area  
 (22) At quite a few other sites in the Sound this is in fact the  
 (23) case You have indications in the intertidal area sometimes  
 (24) you have indications in the uplands and based on these  
 (25) indications and subsurface testing you find that it covers this

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(1) overall area  
 (2) Q Dr Johnson in your review of the Exxon Cultural Resource  
 (3) Program materials did you locate examples of the site we were  
 (4) looking at - or you just talked about I m sorry?  
 (5) A Yes there are examples  
 (6) Q And did you prepare some videos based upon the Exxon  
 (7) Cultural Resource Program materials?  
 (8) A Yes we prepared a video  
 (9) Q Can you tell the jury - we've got - it's correct there  
 (10) are two videos?  
 (11) A Yes  
 (12) Q What I'd like you to do is discuss the first video Tell  
 (13) the jury what we're going to see  
 (14) A All right The first video as I recall includes three  
 (15) different sites The first one is SEL 188 located on Kenai  
 (16) Peninsula It is the location where we saw that test pit with  
 (17) the deeper test pit within it And what we're going to see  
 (18) there is basically the oiling at the site including pooled  
 (19) oil asphalt pavement This is narrated both by the Exxon  
 (20) Cultural Resource Director Chuck Mobley and also by an  
 (21) Exxon employee Mark Silbert I was present while the video was  
 (22) taken and during the course of the archaeological work that  
 (23) was conducted there  
 (24) Let's see the second site that we're going to look at is  
 (25) at the south end of Chenega Island What we're going to see

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(1) clean up work an oil lamp was found at the site and I believe  
 (2) it's this one here - clean-up activities stopped and they did  
 (3) notify Exxon archaeologists that they found it Exxon  
 (4) archaeologists came out to investigate the situation found a  
 (5) few additional artifacts collected these and clean up  
 (6) operations continued  
 (7) The following year then clean up operations also continued  
 (8) at the site and later on it became apparent that there were  
 (9) additional archaeological remains in - well at the site  
 (10) basically So those are the three different sites  
 (11) The first one it's focused basically on the site and the  
 (12) impact of oil and the pavement and pooled oil  
 (13) Maybe we should just go ahead and start  
 (14) Q Could we see 1289 A? I m sorry 1287 A  
 (15) And at the same time Dr Johnson if you want to stop the  
 (16) tape to narrate any part of it indicate that  
 (17) (Videotape played)  
 (18) A We're talking about this area up at the top What you see  
 (19) here is fucus This is vegetation We'll see the oil in a  
 (20) minute The oiling is going to be behind This is fucus in  
 (21) the front It's behind is where the oil is  
 (22) Q Dr Johnson if you would like perhaps you could walk  
 (23) around to the front of the screen here maybe even have a light  
 (24) pen Good we do  
 (25) Dr Johnson I think if you press this button

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(1) there is Exxon archaeologists visiting the site and this is -  
 (2) it's important The reason why we're looking at it it shows  
 (3) one of the approaches to investigating sites Basically he's  
 (4) going to look at the site because there is old tradition about  
 (5) the site that there was something there He goes out to the  
 (6) location and looks Fortunately he's a good archaeologist and  
 (7) that he indicates some of the limiting factors that basically  
 (8) prevent him from finding some of the cultural materials there  
 (9) He basically observes some of the most obvious features which  
 (10) is a culturally modified tree and I believe he reports a  
 (11) cobble that was found there during the previous field season  
 (12) This is followed by another segment which is not from the  
 (13) Exxon Cultural Resource Program videos It's actually a  
 (14) segment that was shot by someone at Chenega Village and it  
 (15) shows then artifacts that were subsequently identified at the  
 (16) site from that peat deposit that we're talking about In other  
 (17) words showing that in fact there is a significant site  
 (18) there And basically the more investigations that are done at  
 (19) some of these sites the more we're likely to learn about  
 (20) significant remains at the sites  
 (21) The third location on the first video is located on North  
 (22) Knight Island and basically what it shows are Exxon  
 (23) archaeologists Jim Gallison and Bob Butz again identifying  
 (24) artifacts at the site And it's sort of the process of  
 (25) identifying artifacts in that they - back in 1989 during the

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(1) A Basically this in here is the fucus and the oiling that  
 (2) we're talking about is behind We can go ahead and run the  
 (3) video  
 (4) This is looking at it at an angle This is the water down  
 (5) below the fucus in the intertidal area And up above is where  
 (6) that band of oil the asphalt pavement and band of oil is  
 (7) located This is the oiled area in here basically what the  
 (8) sequence is it's going from a broader view of the site to a  
 (9) narrower  
 (10) Now we're looking at the asphalt pavement and pooled oil  
 (11) And he'll show smaller pictures of this area where there is  
 (12) pooled oil  
 (13) Q Before we begin again Dr Johnson can you tell the jury  
 (14) is this site a significant site we're looking at now?  
 (15) A Yes it is It's actually a site that had been known in  
 (16) oral tradition and actually had appeared referenced by  
 (17) DeLaguna but had never been located during the 1989  
 (18) clean up  
 (19) activities  
 (20) The Exxon archaeologists during the course of their  
 (21) surveys did identify artifacts In the process further  
 (22) investigations were conducted and quite a few artifacts were  
 (23) found especially up in the upper intertidal area And I tried  
 (24) to show earlier that it appears that these are eroding from the  
 (25) cut bank in other words this bank up in here  
 (26) In 1990 investigations were also done at the site which

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(1) confirmed that there are subsurface deposits in the upland  
 (2) And basically this is what appears to be eroding. The  
 (3) artifacts are slowly working their way down the beach. That  
 (4) appears to be what's happening.  
 (5) Up in here - there were some smaller areas, some of them  
 (6) were larger. It just depended, basically in between the larger  
 (7) and smaller boulders, it sort of accumulated into those areas  
 (8) and seeped into the sediment.  
 (9) Q That was the oil?  
 (10) A That's the oil.  
 (11) I guess what I would indicate here in terms of the degree  
 (12) of oiling, it's like a lot of the pools were these small pools  
 (13) about this size, but they were all over the place, this entire  
 (14) area that is these small pools, and basically what separates  
 (15) them are the large boulders and small boulders, and asphalt  
 (16) pavement. It was like it was either pooled oil or asphalt  
 (17) pavement. It eventually became asphalt pavement.  
 (18) Basically it's like he's removing rocks from this area.  
 (19) Here is what he's showing, is that in fact the oil has  
 (20) penetrated, and once you remove rocks, that there is oil  
 (21) underneath these rocks as well.  
 (22) Maybe we'll stop it. So at that particular site, basically  
 (23) what we wanted to show was the oiling at the site. The test  
 (24) pit that we had seen before was done in this area of the  
 (25) asphalt pavement. And in fact, during the course of that

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(1) located out there. There are many, many other ones out there.  
 (2) as well.  
 (3) What is important about this particular site is that there  
 (4) is a historic cabin that is located in the uplands that helps  
 (5) to identify the site as a cultural site or a heritage site. It  
 (6) is a site that - well, it's one of Chugach Alaska  
 (7) Corporation's site and the historical cabin was known  
 (8) during the course of 1989 the site had a standard  
 (9) constraint in terms of clean up activities, and so basically  
 (10) clean up occurred there, and during the course of the cleanup  
 (11) they - one of the clean up workers did find a lamp and  
 (12) followed proper procedure in terms of notifying archaeologists  
 (13) that there was a lamp there. Based on this Exxon  
 (14) archaeologists did come out and take a look at the area of the  
 (15) location of the artifact and found a couple additional  
 (16) artifacts there. These were collected and then clean up  
 (17) activities continued.  
 (18) The following year, beginning of 1990, at the beginning of  
 (19) the field season, kind of kicking things off, this was one of  
 (20) the sites where they started clean up activities, and they did  
 (21) so without an archaeological monitor, even though that was  
 (22) now  
 (23) in the constraints. And subsequent to that - well, eventually  
 (24) it was stopped when they found out there was no monitor. I  
 (25) believe that it is stopped. And subsequent to that, many  
 (26) additional artifacts were also found at this location.

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(1) excavation, an artifact was recovered from below the asphalt  
 (2) pavement.  
 (3) Let's see. The other thing, also, that there was clean up  
 (4) that did occur at this site later on, and we have some concerns  
 (5) about the clean up activities there and the adequacy of the  
 (6) archaeological monitoring, but just general concerns about  
 (7) both  
 (8) the impact of the oil and the general clean up activities.  
 (9) The next site then -  
 (10) MR DIAMOND: Your Honor, before she goes on, could we  
 (11) get an identification by name of what site it was?  
 (12) A SEL 188.  
 (13) MR DIAMOND: Is that McArthur Pass?  
 (14) A Yes, it is.  
 (15) MR FORTIER: Your Honor, can we approach the bench  
 (16) for a minute?  
 (17) THE COURT: Sure.  
 (18) (Bench conference off the record)  
 (19) BY MR FORTIER:  
 (20) Q Dr. Johnson, what's the next area we're going to see?  
 (21) A The next area is a site that's located on the north end of  
 (22) Knight Island. It is a site that we had seen that artifact  
 (23) that was being cleaned. That is where it is from.  
 (24) What we're going to see here, basically, is just a number of  
 (25) different artifacts to give you an idea of types of prehistoric  
 (26) artifacts that were found. Or I should say actually that are

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(1) The concern that I have from the perspective of Chugach  
 (2) Alaska Corporation is that a lot of these sites, a lot of  
 (3) Chugach's sites contain both historic and prehistoric  
 (4) artifacts. Many of them are readily identified by the historic  
 (5) remains. Cabins are much easier to identify than some of these  
 (6) lithic materials in the intertidal areas or in the uplands  
 (7) whatever the case may be.  
 (8) Q Dr. Johnson, lithic material is?  
 (9) A Stone tools, this type of thing, what has always been a  
 (10) concern to us, very often with the constraint. The  
 (11) constraints were only for identified features such as the  
 (12) cabin, which they assume was in the uplands, so it was less  
 (13) likely to have impact. When, in fact, as an archaeologist, I'm  
 (14) concerned for the entire site and the knowledge that it is  
 (15) likely that where you have even historic remains that you're  
 (16) likely to have prehistoric remains as well, at least at many of  
 (17) the sites in the Chugach region. That there is - the oral  
 (18) tradition talks about many of these in terms of sustained  
 (19) Native use. We're not only interested in historic cabins that  
 (20) may date back to the 1920s or 30s, it's the location that's  
 (21) important, and this is one of the indicators that's important  
 (22) of the sustained use or Native use.  
 (23) Field work that I've conducted here in 1994 also supports  
 (24) this, in that many of the sites that we revisited where  
 (25) historical remains have been documented. We also  
 (26) documented

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(1) prehistoric remains in the forms of fire-cracked rock and  
 (2) also often prehistoric artifacts So this is an example of  
 (3) what can happen in terms of basically if you focus only on a  
 (4) certain cultural feature and don't focus on the site you're  
 (5) likely to miss very important components of the site  
 (6) I suppose we can just go There is a number of artifacts  
 (7) just to give you the idea of types of prehistoric artifacts  
 (8) that are encountered out there  
 (9) Q Dr Johnson where is this?  
 (10) A Excuse me talked about the wrong -- maybe we can stop it  
 (11) That is what you would be seeing after this one I got the  
 (12) order of them wrong I won't repeat that later on but let me  
 (13) give you a few words about this particular site  
 (14) The second site here is the one located at the south end of  
 (15) Chenege Island and what it is -- I talked about this one a  
 (16) little bit before in terms of the archaeologists coming and  
 (17) based on the oral tradition and the very limited documents for  
 (18) the site knowing that there was a reported site in the area  
 (19) But all that was reported was a culturally modified tree the  
 (20) scarred tree and I believe a battered cobble He arrives at  
 (21) high tide to do his inspection of the site and it's really  
 (22) significant to know that often when you inspect sites at high  
 (23) tide you're going to miss a lot because the area where the  
 (24) cultural remains are most visible in these coastal sites is  
 (25) often in the intertidal area

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(1) So he comes here he basically does not find much evidence  
 (2) for the site and fortunately he does indicate it's high tide  
 (3) and so at least you're alerted to that  
 (4) The second part of this then is the film clip that was  
 (5) prepared by Chenege Corporation The clip shows significant  
 (6) organic artifacts that come from the intertidal that were later  
 (7) collected by the State This is in August of 1990 so I guess  
 (8) we can take a look at this  
 (9) (Videotape played)  
 (10) You should also know that we did cut some of the video so  
 (11) you wouldn't be here for days but he does present the  
 (12) information that has been recorded about it in terms of it  
 (13) being a reported site and the thought that perhaps it had  
 (14) completely eroded away So he's aware of the site but  
 (15) basically continues That's what he does here This is the  
 (16) segment that it's Chenege's video this is not a video shot by  
 (17) Exxon  
 (18) Q Before we go into this could I ask Dr Johnson was the  
 (19) first video showed 8/22/89?  
 (20) A Yes I believe it was  
 (21) Q Was that the time that the Exxon archaeologist was there?  
 (22) A Yes that's what he indicated  
 (23) Q Dr Johnson do you know anything about the cleaning  
 (24) history of that site in 1989?  
 (25) A Well I believe that in terms of archaeological

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(1) investigations that there was an investigation earlier in the  
 (2) season the initial SCAT survey As I understand it this  
 (3) survey that has Bob Betz narrating it it was like a  
 (4) post-season clean-up inspection of the site From what I can  
 (5) tell here that the clean up of the site included you know  
 (6) collecting oiled fucus this type of thing In terms of other  
 (7) clean up activities I'd have to look back to the documents  
 (8) Q Do you know whether or not the clean up activities took  
 (9) place with or without a monitor?  
 (10) MR DIAMOND Your Honor I'll object as not being  
 (11) relevant  
 (12) THE COURT What's the relevance, counsel?  
 (13) MR FORTIER Your Honor the relevance is that this  
 (14) was identified as a site subsequently -- cleanup took place  
 (15) before the -- before it was identified as a site If clean up  
 (16) took place prior to the time it was identified as a site then  
 (17) it is likely that there was impact to the cultural resources in  
 (18) the area  
 (19) THE COURT The objection is overruled  
 (20) MR DIAMOND May we approach just for a moment?  
 (21) (Sidebar out of the presence of the jury)  
 (22) MR DIAMOND Mr Fortier has been very careful to  
 (23) avoid thus far issuing of fault  
 (24) THE COURT That was an excellently phrased answer to  
 (25) my question

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(1) MR DIAMOND This in our view steps over the line  
 (2) whether we were at fault in not having a monitor out there  
 (3) We're not -- it's beside the point The question is he's not  
 (4) going to talk about any specifics about a monitor whether it  
 (5) was at this location or any other location because we deposited  
 (6) her on the subject So just throwing out the fact that there  
 (7) was not a monitor present and clean up was done on a site  
 (8) subsequently determined to be archaeologically significant  
 (9) simply addresses questions of fault and I don't think the  
 (10) Court wants to open up that door because then we have to put  
 (11) on a defense which we were not planning on doing  
 (12) MR FORTIER We're not using it for the purpose of  
 (13) fault this is strictly ability -- we want to show the impacts  
 (14) to each of the sites on account of the oil spill There was  
 (15) the oil and there was the cleanup there was not monitoring  
 (16) while there was a clean up and it was under a work order then  
 (17) there is a likely impact and I'm laying a foundation for that  
 (18) part of it now  
 (19) THE COURT The objection is overruled counsel  
 (20) (Sidebar concluded)  
 (21) BY MR FORTIER  
 (22) Q Dr Johnson the question was whether or not you know if  
 (23) the site was monitored while it was being cleaned in 1989  
 (24) A In 1989 no I don't believe it was  
 (25) Q Go ahead

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- (1) A So basically this last clip here of this particular site
- (2) shows artifacts that were identified in the peat deposit
- (3) eroding peat deposit in the intertidal area And these are
- (4) actually really pretty important wooden artifacts because
- (5) often you don't have that type of preservation at these sites
- (6) And so basically this is just to show you a selection of the
- (7) different artifacts that were collected by the State
- (8) Some of these are artifacts as well This particular
- (9) grommet sort of like a little rope material is what it is
- (10) here wooden piece here And then some other stone artifacts
- (11) over here
- (12) We can go ahead and run it
- (13) Q If we could Dr Johnson what's the significance of wooden
- (14) artifacts in connection with the oil spill?
- (15) A Well in terms of artifacts that - I guess in terms of
- (16) preservation of artifacts themselves I would probably have
- (17) more concern for the contact of oil with wooden artifacts than
- (18) stone artifacts The stone artifacts you can clean using the
- (19) soap and water or these kind of cleansing agents The wood
- (20) also I suspect you could clean but I think you might run into
- (21) more problems with this
- (22) Q Why is that?
- (23) A Just permeability of the wood itself
- (24) Q Would the oil have any impact if you know on radio carbon
- (25) data?

- (1) A Yes
- (2) Q Do you know whether it was surveyed before it was treated?
- (3) A Yes I believe it was surveyed
- (4) Q By an Exxon archaeologist?
- (5) A Yes
- (6) Q Do you know whether or not the Exxon archaeologist located
- (7) cultural materials at the time it was surveyed before it was
- (8) first treated?
- (9) A Basically what happened I think a lot especially in 1989
- (10) is that cultural remains that had been identified in documents
- (11) such as the cabin here or you know other things documented
- (12) that they would go out and verify that they were at the
- (13) particular location
- (14) They would also conduct a general survey but what was
- (15) somewhat unfortunate is that a lot of these surveys were
- (16) conducted very rapidly because they were connected - or
- (17) conducted in conjunction with both the biologist and the oil
- (18) geomorphologist and you have to think of it as kind of rapid
- (19) reconnaissance because they want to get these work orders in
- (20) so
- (21) the cleanup can keep moving
- (22) So on one hand I wouldn't want to criticize the work of the
- (23) archaeologists because they were doing the best they could
- (24) under certain circumstances but in terms of the quality of the
- (25) survey it's at best considered a reconnaissance survey And

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- (1) MR DIAMOND Objection beyond the scope -
- (2) THE COURT Objection sustained
- (3) BY MR FORTIER
- (4) Q Go ahead
- (5) A Basically we can take a look at some of the artifacts
- (6) Some of these like slick blades and adzes and so forth These
- (7) green stone adzes another one with adzes
- (8) Q What are adzes?
- (9) A Basically they are generally like woodworking tools is what
- (10) it is Probably some hammer stone in here as well as these
- (11) That's the end of that particular site
- (12) This is the next site that I already kind of went through
- (13) This one in terms of identifying artifacts and it's just to
- (14) give you another view of types of artifacts that were found or
- (15) are found at a site
- (16) Q This is another site that was beach treated?
- (17) A Yes
- (18) Q With or without a monitor?
- (19) A The initial clean up activities was without a monitor
- (20) Then after that there was a monitor that was recommended but
- (21) there was no monitor It was - it was an error on that part
- (22) and I'm not sure if additional clean up activities occur
- (23) thereafter or not but if they did they probably are with a
- (24) monitor
- (25) Q Do you know whether it was cleaned up in 1989?

- (1) Basically we cut this down as much as possible but there
- (2) were other artifacts that they went through but we can go
- (3) ahead
- (4) (Videotape played)
- (5) That's just water here just for clarification
- (6) I think we can probably stop now
- (7) Q Okay Now this KN 104 site was that after the clean up
- (8) activities took place that this filming was taking place?
- (9) A Yes
- (10) Q Was it - was that 1990?
- (11) A Yes
- (12) Q So it had been cleaned twice then?
- (13) A That's my understanding yes
- (14) Q Do you know what the oiling conditions were the first time
- (15) that beach was cleaned?
- (16) A I believe that it was either moderate or heavy
- (17) THE COURT Take a break
- (18) THE CLERK Please rise This court stands in
- (19) recess
- (20) (Jury out at 12 20 p m)
- (21) (Recess at 12 20 p m to 12 35 p m)
- (22) (Jury in at 12 35 p m)
- (23) THE CLERK All rise Please be seated
- (24) BY MR FORTIER
- (25) Q Dr Johnson you have also brought along another video?

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(1) A Yes  
 (2) Q Can you please explain to the jury what that is?  
 (3) A The second video is a video showing a fourth site and  
 (4) impacts that occurred during 1989 This one it's a burial  
 (5) cave That is midden deposits and it - it's been documented  
 (6) that there was vandalism at this site Again this is Exxon  
 (7) Cultural Resource Program video footage  
 (8) Q And is this a site on Chugach properties?  
 (9) A Yes This is one of Chugach Alaska Corporation's sites  
 (10) Q Can you give us the segment number?  
 (11) A I don't recall at this moment  
 (12) Q Do you remember the SHPO number?  
 (13) A Yes SEW 004 is the primary number There are other  
 (14) numbers associated with it as well  
 (15) (Videotape Played)  
 (16) BY MR FORTIER  
 (17) Q What's midden Dr Johnson?  
 (18) A It's actually an accumulation of debris Here it includes  
 (19) a lot of animal bones shell some charcoal some wood this  
 (20) type of thing  
 (21) Q How does it fit into an archaeological site?  
 (22) A Well in this particular location it's accumulated through  
 (23) various subsistence activities through the use of these animals  
 (24) or shells and basically it's a garbage heap  
 (25) Q Any idea how old it is?

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(1) areas where we haven't had disturbance And there is some  
 (2) areas left there that haven't been disturbed that there is  
 (3) tremendous potential for saying something significant about the  
 (4) site in terms of the past activities  
 (5) So it's still a significant site The impact to it is very  
 (6) unfortunate It's like - as an archaeologist I hope  
 (7) something can be done in terms of scientific data recovery in  
 (8) terms of the site at some point  
 (9) Q Dr Johnson in your review of the field notes and records  
 (10) of the cultural resource program the Exxon Cultural Resource  
 (11) Program did you also prepare selected examples of sites - of  
 (12) site disturbances?  
 (13) A Yes I believe there is an exhibit  
 (14) Q Can I have the Elmo please?  
 (15) What I'd like to do Dr Johnson is show you what's been  
 (16) marked as 1289-B and just talk about a few of the sites  
 (17) At the top of the - the name of this chart by the way is?  
 (18) A Selected Examples of Vandalism Disturbance Impacts to  
 (19) Segments and Sites Taken From the SCAT Archaeological Field  
 (20) Notebooks And what this means is the field boxes are the  
 (21) source of information and this is information that was  
 (22) recorded in them  
 (23) I would point out that many of these - most of these are  
 (24) archaeological sites Some of them refer to just general  
 (25) segments that are owned by the corporations but it was felt

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(1) A I don't know off the top of my head here  
 (2) The voices that you hear the one speaking is Bob Betz who  
 (3) is one of Exxon's archaeologists And the teller here in this  
 (4) red coat is another Exxon archaeologist Jim Gallison  
 (5) Actually I should also point out that prior to the oil  
 (6) spill there was impact to this cave What we're interested in  
 (7) here today is the impact that occurred during 1989 and that's  
 (8) what they are going to focus on I think that's the end  
 (9) There are only a couple things I would say about that In  
 (10) terms of impact to the site as I mentioned before there was  
 (11) impact prior to the oil spill and there has been a concern on  
 (12) the part of Chugach Alaska Corporation about vandalism  
 (13) vandalism at this site  
 (14) In early 1989 I also happened to go out to this site I  
 (15) believe it was May and then again in early June and between  
 (16) the two visits that I was there I also was able to document  
 (17) disturbance at the site So it appears that there was several  
 (18) occurrences throughout 1989 based on my own personal  
 (19) experience  
 (20) at the cave and then also these subsequent videos and  
 (21) documentation that Exxon produced  
 (22) The other thing I think that it's important to note is he  
 (23) mentioned the sign that was driven into the midden itself and  
 (24) that apparently it went down to a depth of about five feet  
 (25) That's what I would expect somewhere between five and six  
 (26) feet That if you have very deep cultural deposits here and in

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(1) that it was important to put all of this information in there  
 (2) because it represents different types of impacts  
 (3) I'd also note that these different exhibits here don't  
 (4) reflect all of the impacts that are recorded in these  
 (5) particular documents or any other documents that there were  
 (6) many more cases that we could have sighted These are just  
 (7) sort of a selection of different types of impacts - well I  
 (8) guess you could take a look at it yourself  
 (9) The first one there with the CR 2 SEW 004 is actually the  
 (10) site we were looking at The first reference there refers to  
 (11) archaeologists collecting artifacts from the burial caves In  
 (12) fact it was both our archaeologists when we went out to the  
 (13) site that did collect a couple artifacts that were on the  
 (14) surface and there was concern that they would be collected  
 (15) during the clean up activities  
 (16) Now based on the other information it's like I feel that  
 (17) even more strongly because it's evident that there were people  
 (18) out there in the cave doing something  
 (19) The rest of that reference refers to evidence of digging in  
 (20) the midden We also have evidence documented in the video  
 (21) and  
 (22) photographs as well other segments down the list refer to  
 (23) different sites The AHRs number that you see in the second  
 (24) column refers to the Alaska Heritage Resource Survey site  
 (25) number So those that have a number in there are in fact  
 (26) archaeological sites Historical archaeological sites the

(1) segment numbers refer to the Exxon shoreline segment number  
 (2) and this correlated to clean up activities or oil this type of  
 (3) thing  
 (4) Q And you got a number of examples Dr Johnson in this  
 (5) chart?  
 (6) A Yeah There are a number of different examples  
 (7) Q And you also attach backup for each of those?  
 (8) A Yes there is backup for these  
 (9) Q Dr Johnson I'd like to show you what has been marked as  
 (10) plaintiffs exhibit 1290 B What is this?  
 (11) A It's titled Selected Examples of Impact of Oil Selected  
 (12) From SCAT or Archaeological Field Notes Again the SCAT  
 (13) archaeological field notes that refers to the Exxon Cultural  
 (14) Resource books and these were differences that were found in  
 (15) these field notes referring to different types of oiling along  
 (16) the shoreline  
 (17) And again in the second column with the AHRS number that  
 (18) refers to the particular site number as it's listed in the  
 (19) State system There are also a few that have just general  
 (20) comments For example the KN 134 to 136 is shoreline - or is  
 (21) area that does not necessarily contain an archaeological site  
 (22) it's just shoreline that belongs to the corporation  
 (23) Q Then these are records from the field notes that  
 (24) demonstrate the degree of oiling?  
 (25) A Yes Again the same as with the other this is by no

(1) A Well the first lamp was collected after the first  
 (2) treatment and other artifacts were identified after two at  
 (3) least two treatments  
 (4) Q And the comment there Doctor?  
 (5) A The beach in 1989 was heavily oiled and nearly impossible  
 (6) to see surface sediments Oil is in the form of asphalt  
 (7) coating tar patties and discontinuous deposits into the  
 (8) substrate  
 (9) Q Now what happens - were you able to make any  
 (10) determinations as to whether or not when oil obstructs or makes  
 (11) it difficult to see artifacts whether or not artifacts can be  
 (12) accidentally picked up and bagged?  
 (13) A Oh definitely Both in terms of identifying artifacts in  
 (14) an oiled area it's my own thinking that's probably why many of  
 (15) the sites were missed out there in 1989 In addition to that  
 (16) the cleanup activities where you are collecting oiled  
 (17) sediments unless you have an archaeologist sitting there with  
 (18) each person it's quite possible to miss them And again this  
 (19) comes from the experience at the SEL 188 in the Kenai  
 Peninsula  
 (20) where we had done this test pit And when we were going  
 (21) through the asphalt pavement the various materials we were  
 (22) collecting it was even hard for us as archaeologists to figure  
 (23) out what we were doing and whether we were even collecting  
 (24) artifacts or missing them  
 (25) Basically the conclusion was that you need to clean the

(1) means inclusive Reports that I had written before for Chugach  
 (2) Alaska Corporation and the villages I had gone through and  
 (3) pulled together additional information This is coming  
 (4) basically from the field notes so it just happens to be  
 (5) another set of data that I used to look at oiling or impacts to  
 (6) the site  
 (7) Q I'd like to refer you to just a couple of these if I  
 (8) could Dr Johnson One of them is SL 1 SEW 241?  
 (9) A Uh huh  
 (10) Q What is that?  
 (11) A This is actually a folks farm site that has substantial  
 (12) historic remains There are cabin remains boardwalks pilings  
 (13) in the intertidal area There are also prehistoric artifacts  
 (14) and fire cracked rock that have been identified in the  
 (15) intertidal area Also culturally modified trees  
 (16) Q Now Dr Johnson in your review on the impact of oil were  
 (17) you able to determine whether or not heavy oiling obstructed or  
 (18) made it more difficult to see surface artifacts?  
 (19) A Well in the course of a survey it definitely would  
 (20) obstruct visibility  
 (21) Q What I'd like to do Doctor is refer you to this site  
 (22) KN 104 which I believe is the site that we saw in the video  
 (23) A That's correct  
 (24) Q That was where the stone lamps were collected after several  
 (25) treatments?

(1) sediments to see what was - what was in this asphalt pavement  
 (2) Q Refer you down to MR 01 Now Doctor that was the site of  
 (3) the Kenai Fjords on the English Bay land?  
 (4) A Yes This is the site I was just referring to  
 (5) Q Did you understand that - you've got a comment down two  
 (6) only to see?  
 (7) A Yeah  
 (8) Q And you were also there?  
 (9) A Yes Again what it is I think it was pretty well  
 (10) recognized by most archaeologists that the area that had the  
 (11) oiling on it that it was quite likely that you would miss  
 (12) artifacts if you were to walk over it Many of those that were  
 (13) identified were identified either the subsequent year or in  
 (14) the upper intertidal zone  
 (15) Q Doctor for this one I'd like to show you the second page  
 (16) as well There is another reference to the site in the Kenai  
 (17) Fjords owned by English Bay Corporation SEL 188?  
 (18) A Yes And again this is a reference that I mentioned that  
 (19) I actually had some problems with the clean up activities at  
 (20) the site and concern for the ability for - of an archaeologist  
 (21) to monitor all clean up activities Basically I think it's  
 (22) pretty easy to assume that artifacts were missed at - well  
 (23) during the clean up procedure As far as I know there were  
 (24) not very many archaeologists there and in fact there may have  
 (25) been only one archaeologist there when the cleanup occurred

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- (1) Q In your reading of the field notes and so on your general  
(2) knowledge of how the beach treatment was conducted in 1989  
(3) excuse me 1990 in that area in the Kenai Fjords area  
(4) SEL 188 do you know what the reference is to rely on  
(5) nozzleman  
(6) to watch for possible artifacts?  
(7) A What I think this refers to in general is the standard  
(8) constraint that was in place for most of the sites out there  
(9) What that referred to is that there was an - like an  
(10) educational program that Exxon tried to develop where they  
(11) would identify types of artifacts that the clean up workers  
(12) might encounter during cleanup And the idea was that they  
(13) would rely on the workers to inform their supervisors or  
(14) whatever should they come across it And I think what this  
(15) refers to is that especially given the fact that it was a  
(16) known site by this time that the nozzleman and other workers  
(17) there were expected to help look out for artifacts or  
(18) whatever  
(19) The problems that would be faced would be whether they  
(20) would identify artifacts in the oiled debris It's like some  
(21) of the more obvious ones might be identified perhaps but  
(22) when  
(23) you're looking at a site like this SEL 188 you're also  
(24) talking about a lot of slate debris a lot of small pieces that  
(25) may not look like much to most people but may be important in  
(26) terms of identifying lithic techniques how they made tools at  
(27) the site or what was happening at the site

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- (1) So there is a concern in terms of placing too much of a  
(2) reliance on the workers to be able to identify artifacts  
(3) There is also the problem that we had in terms of handing out  
(4) leaflets this informational packet picture identifying the  
(5) key artifacts just because of our fear of the loss of these  
(6) artifacts you know by clean up workers or other people as  
(7) well  
(8) Q Now Dr Johnson do you know what the reference to the  
(9) nozzleman is? Is that the guy at the front of the hose?  
(10) A Yes I believe it  
(11) Q To your knowledge were they relying on the nozzleman to  
(12) watch out for the artifacts?  
(13) A Yes I believe that's what this refers to  
(14) Q Dr Johnson did you also select examples of clean up  
(15) activities on segments and sites before there was a SCAT  
(16) survey  
(17) or without a monitor?  
(18) A I believe there are references to that  
(19) Q And SCAT stands for the Shoreline Clean up Assessment  
(20) Team?  
(21) A That's correct  
(22) Q And that was part of the Cultural Resources Program  
(23) Exxon's program?  
(24) A Yes  
(25) Q I'd like to show you 1291 B You've got several  
(26) references general references there Doctor one of which is  
(27) SCAT assessments not being done before cleanup

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- (1) A Uh huh  
(2) Q Dated 6/3/89?  
(3) A Uh-huh  
(4) Q That was two months into the cleanup?  
(5) A Yes  
(6) Q And why did you think that was important?  
(7) A Well part of the thing is that one of the reliances that  
(8) the Cultural Resource Program had was that - well the idea  
(9) was that if they did the initial survey out there that they  
(10) would identify where the sites were at and be able to protect  
(11) them through either the standard constraint monitoring or  
(12) avoidance So it's significant that in some areas that was  
(13) clean up activities that occurred where we didn't even have  
(14) that minimal reconnaissance to be able to identify whether  
(15) there were sites there or not So there was clean-up activity  
(16) that occurred out there even before these teams got out  
(17) there Most notably it would be like bird pick-up crews or  
(18) boom tenders setting up the booms other people collecting -  
(19) doing manual pickup this type of thing I mean it's a pretty  
(20) complex system in terms of types of cleanups and you know  
(21) types of constraints that might be connected with it But from  
(22) my own experience there was a lot of clean up activity that  
(23) occurred out there either prior to SCAT assessments or in  
(24) areas where there might not have been SCAT assessments  
(25) Q Did you form an opinion as to whether or not such

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- (1) activities - in other words treatment exercises being  
(2) performed during the assessments or prior to the assessments  
(3) impacted cultural areas?  
(4) A I would think that they would yes  
(5) Q Doctor in your research did you locate examples in the  
(6) field notes found during or after beach treatment exercises?  
(7) A Yes I believe there are a number  
(8) Q I'm going to show you an exhibit that's been marked as  
(9) 315 B just ask you about a couple of them There's a notation  
(10) here WB 3 SEL 179?  
(11) A Uh-huh  
(12) Q Whose lands are those?  
(13) A I believe those are Port Graham Corporation lands  
(14) Q There is a reference to activities in 1989 that was  
(15) resurveyed Do you see that?  
(16) A Uh huh  
(17) Q Then further down in June of 1990 there were additional  
(18) items found?  
(19) A Yes I think during the course of the clean up activities  
(20) as I always come back to that the initial reconnaissance  
(21) survey didn't identify everything out there and so during the  
(22) course of the clean up itself there were materials that were  
(23) found either by clean up workers or subsequently by Exxon  
(24) archaeologists or other archaeologists in the area And I  
(25) would think that you know in my opinion that sites that

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- (1) didn't have adequate protection are likely to have been  
 (2) impacted by the numbers of workers out there  
 (3) Q Also Doctor I point out to you that with regard to  
 (4) KN 104 that was the lamp site we looked at before?  
 (5) A Yes  
 (6) Q There is a notation 7/23/89 with regard to a lamp?  
 (7) A That is the lamp I referred to earlier I can see here we  
 (8) didn't get all of the numbers in Like the KN 104 103 it's  
 (9) the same - this is one of the site designations for the site  
 (10) Again there are several different site designations  
 (11) Q And that's Northern Knight Island?  
 (12) A Yes  
 (13) Q Which is Chugach lands?  
 (14) A Yes  
 (15) Q Doctor did you find examples of visits to these  
 (16) archaeological sites by persons other than Exxon  
 (17) archaeologists?  
 (18) A Yes there were  
 (19) Q I show you what's been marked as 1317 B Is that what  
 (20) we're speaking towards?  
 (21) A Well there were - the first entry refers to Exxon  
 (22) archaeologists at the site Basically this refers to just  
 (23) types of people that would - that would go to these different  
 (24) sites Other ones this one SL 01 I've mentioned this one  
 (25) before as well that there were trails this type of thing

- (1) there were likely sites missed and there was vandalism?  
 (2) A Yes I believe I did  
 (3) Q Doctor I've got on display here page 6 of the memorandum  
 (4) under SCAT survey had you ever heard the phrase emergency  
 (5) circumstances?  
 (6) A In 1989 that's what it was It was - you had that  
 (7) feeling throughout the summer of 1989 and it was only towards  
 (8) the end when it was actually in the process of demobilization  
 (9) that I felt that it wasn't quite the emergency circumstance  
 (10) anymore  
 (11) Q And did you find that the Exxon Cultural Resource Program  
 (12) admitted it had conducted cursory reconnaissance in 1989?  
 (13) MR DIAMOND Your Honor I'm going to object on  
 (14) grounds previously stated Also this refers to a site that's  
 (15) been withdrawn by the plaintiffs and they are no longer  
 (16) claiming for this  
 (17) THE COURT Counsel?  
 (18) MR FORTIER Your Honor the paragraph is in broad  
 (19) general form It refers to a cursory reconnaissance conducted  
 (20) under emergency circumstances in 1989 and the fact that there  
 (21) were sites that were likely missed it has nothing to do with  
 (22) sites that we're not claiming for  
 (23) THE COURT Let me just read it This doesn't refer  
 (24) to a particular site does it Mr Diamond?  
 (25) MR DIAMOND KN 110

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- (1) You could see where people are walked across Again it just  
 (2) kind of goes down the list  
 (3) Q Now Doctor in addition to the sites that you have  
 (4) identified and 1316 - 1289 1290 1291 1315 and 137 on the  
 (5) summary sheets were there other examples that you found  
 (6) Doctor?  
 (7) A Yes As I mentioned these primarily come from the field  
 (8) notes of the Exxon archaeologists and there are other sources  
 (9) of information about impacts as well as -  
 (10) Q Doctor in your investigation of the likelihood of impacts  
 (11) to cultural sites did you also examine internal memos of the  
 (12) Exxon Cultural Resources Program?  
 (13) A Some yes  
 (14) Q I'm going to show you a 12 page memo if I could Doctor  
 (15) and ask you to identify it Can you tell the jury what that  
 (16) is?  
 (17) A Basically it's a memo from Jim Haggarty and Chuck Mobley  
 (18) At that time they were co-directors of the Exxon Cultural  
 (19) Resource Program and it's written to Andy Teal and he was the  
 (20) supervisor of the SCAT team and it refers to the Cultural  
 (21) Resource Program Status Report and the 1990 plan and it's  
 (22) dated  
 (23) January 13th 1990  
 (24) Q Thank you Doctor  
 (25) Now Doctor in this memorandum dated January 13th 1990  
 (26) which is Exhibit 1297 did you find admissions by Exxon that

- (1) MR FORTIER Your Honor this particular passage does  
 (2) not refer to it  
 (3) MR DIAMOND May I show you the original?  
 (4) THE COURT Sure  
 (5) MR DIAMOND They have redacted it  
 (6) (Bench conference off the record)  
 (7) BY MR FORTIER  
 (8) Q So Dr Johnson did you find admissions by Exxon that they  
 (9) undoubtedly missed sites?  
 (10) A Yes  
 (11) Q Refer you to page 7 - or page 6 I'll highlight that  
 (12) undoubtedly missed sites and the statement that it was cursory  
 (13) reconnaissance in nature  
 (14) A Yes  
 (15) Q Now by the end of 1989 early 1990 you had made known to  
 (16) Exxon the concerns of the Native corporations with regard to  
 (17) vandalism or other site disturbances hadn't you?  
 (18) A Yes We had expressed our concern toward it  
 (19) Q In your examination did you ever come across - in your  
 (20) research into the Cultural Resources Program did you come  
 (21) across statements by Exxon that it had considered surveillance  
 (22) cameras being placed at high risk areas?  
 (23) A Yes that was something that was considered  
 (24) Q I'll show you page 9 the last part of the document or  
 (25) last part of the site vandalism issue The statement an option

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(1) to consider is a possibility of placing surveillance cameras at  
 (2) high risk sites Do you see that?  
 (3) A Uh huh  
 (4) Q Now Dr Johnson did you notice a difference between field  
 (5) notes as they were collected in 1989 and as they were  
 (6) subsequently put together in 1990 with regard to the Cultural  
 (7) Resources Program?  
 (8) A Yes There was a difference in the field notes In 1989  
 (9) it was part of - I mean it was under an emergency situation  
 (10) and archaeologists basically went out and did the  
 (11) reconnaissance survey and pretty much wrote down what they  
 (12) saw  
 (13) or what they thought they saw this type of thing  
 (14) In 1990 you could see a change in the type of things that  
 (15) were recorded that in some cases it seemed like it was more  
 (16) limited in terms of what they would write There was also  
 (17) something more in terms of like damage assessment going on  
 (18) in  
 (19) terms of looking at certain impacts or whatever and explaining  
 (20) them as like sea otter activity or some other type of  
 (21) activity as opposed to vandalism or other types of impacts  
 (22) And as an archaeologist I think it is important to note  
 (23) different impacts and to be careful to justify what your  
 (24) opinions are that type of thing - So I saw a difference in  
 (25) terms of 1989 1990  
 (26) Q Did you find that Exxon considered expanding its program  
 (27) into other areas of site monitor?

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(1) A In terms of other areas of site monitoring?  
 (2) Q Expanding the scope of monitoring  
 (3) A Well there were different types of monitoring that had been  
 (4) considered I went through the basic three which was the  
 (5) standard constraint which is basically if you see something  
 (6) give us a call The next one which is the monitoring where  
 (7) you would have an archaeologist there And the third where  
 (8) you  
 (9) would do avoidance Other different options came up in terms  
 (10) of inspection of sites whether it was over the telephone or  
 (11) whether it was an archaeologist going out to take a look at the  
 (12) site right before the cleanup was to occur And I think what is  
 (13) important there is to realize those are what the options were  
 (14) From my own perspective they weren't really great options  
 (15) but that's what the options were and so you know there were  
 (16) some changes different types of monitoring I suppose  
 (17) Q Doctor what I'd like to point out to you again on the  
 (18) Exhibit 1297 the internal memorandum from Drs Haggarty and  
 (19) Mobley to Mr Teal the statement we should consider  
 (20) expanding  
 (21) the scope of the monitoring programs - program to include  
 (22) other means of site protection  
 (23) A Uh huh  
 (24) Q And continuing on would benefit Exxon in both the short  
 (25) and the long term by preempting their concerns and allowing  
 (26) the Exxon Vilder Cultural Resource Program to retain control  
 (27) over the compliance effort Do you see that?

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(1) A Yes  
 (2) Q Now go ahead  
 (3) MR DIAMOND Your Honor I would object as  
 (4) irrelevant doesn't go to any damages  
 (5) THE COURT The objection is overruled as it goes the  
 (6) first sentence Let's take that first We should consider -  
 (7) it's overruled as to that I'm having a tough time dealing  
 (8) with the second  
 (9) BY MR FORTIER  
 (10) Q Dr Johnson - could I lay some foundation Doctor?  
 (11) A Well let's -  
 (12) Q Beg your pardon?  
 (13) THE COURT Have her testify about the first  
 (14) statement and I'll get to the objection in a second all  
 (15) right?  
 (16) BY MR FORTIER  
 (17) Q Dr Johnson as to the first statement we should consider  
 (18) expanding the scope of the monitoring program to include  
 (19) other  
 (20) means of site protection?  
 (21) A Yes That was considered and I think I covered some of  
 (22) the types of expansion in terms of inspection of sites That's  
 (23) what comes to mind  
 (24) Q Was there anything else you found?  
 (25) THE COURT Hold on I think we're referring to the  
 (26) second passage The objection is sustained as to the second

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(1) passage  
 (2) BY MR FORTIER  
 (3) Q Dr Johnson did you also identify with regard to Chugach  
 (4) Alaska Corporation and each of the Village corporations the  
 (5) impacts of oil upon - impacts of oil and the treatment effort  
 (6) upon certain of their sites?  
 (7) A Yes  
 (8) Q Let me show you what's been marked first as plaintiffs  
 (9) exhibit 1538 Can you tell us what this is Doctor?  
 (10) A Yes It's some charts similar to the other ones that focus  
 (11) on the different types of impact here primarily oil impact to  
 (12) different sites different Chugach Alaska Corporation sites  
 (13) Basically this is similar to what I had done in earlier  
 (14) reports but it was put in the format of a chart and other  
 (15) materials were added to it since 1992  
 (16) Q Doctor at the bottom of the chart you've got marked  
 (17) Confidential Pursuant to Archaeological Site Protective  
 (18) Order  
 (19) A Yes  
 (20) Q And below that you've got an abbreviation key for the jury?  
 (21) A Yes What these different documents refer to are documents  
 (22) that were generated by Exxon and by the State I believe  
 (23) that's what it's limited to I think that's what it's limited  
 (24) to There may be some correspondence for example or  
 (25) Chugach  
 (26) Alaska Corporation assessments but it's - it's the parties

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(1) that were involved  
 (2) Q Doctor you've prepared similar charts for each of the  
 (3) Village corporations as well?  
 (4) A Yes There are charts that were prepared And again it  
 (5) follows the work that I had done back in 1993 in terms of  
 (6) recording oil impacts and site information and additional  
 (7) material was added to this  
 (8) Again with these charts just as with the charts I  
 (9) mentioned before they don't - they are not - they don't  
 (10) include everything that's out there it's just a number of  
 (11) different documents that were more readily available  
 (12) Q 1366 A is Chenega Corporation?  
 (13) A Yes  
 (14) Q And you also included backup with that?  
 (15) A Yes the backup is included as well  
 (16) MR FORTIER To save time Judge I'll just approach  
 (17) the witness and have her identify  
 (18) BY MR FORTIER  
 (19) Q Dr Johnson is 1366 charts you prepared for English Bay  
 (20) Corporation?  
 (21) A Yes these are the same charts  
 (22) Q With similar backup?  
 (23) A Yes  
 (24) Q And 1366 C Doctor?  
 (25) A Yes

(1) he used to come up with a program to address these damages  
 (2) As an archaeologist I feel that the program that we came  
 (3) up with addresses this most directly in that for each site we  
 (4) looked at it on a site by site basis and said what do we need  
 (5) to do or what do we feel needs to be done as archaeologists  
 (6) because of the impacts and also because of the loss of  
 (7) confidentiality And basically the answer was always well we  
 (8) feel that there needs to be investigations at the site  
 (9) sufficient to recover the archaeological context of the site  
 (10) And so for each site that's what is the basis for each plan  
 (11) on a site by site basis is the recovery of archaeological  
 (12) context  
 (13) Q Now there were sites on Native corporation lands that you  
 (14) felt were impacted is that correct?  
 (15) A Yes  
 (16) Q And there were sites on Native corporations lands that  
 (17) Native corporations are not making a claim for is that  
 (18) correct?  
 (19) A Yes there are  
 (20) Q With regard to the methodology itself Dr Johnson did you  
 (21) approach it in terms of what you described earlier how an  
 (22) archaeologist does things? First of all you go and look at  
 (23) it?  
 (24) A Yes Basically the approach was first what do we know  
 (25) about these particular sites? What kind of information do we

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(1) Q That relates to -  
 (2) A Port Graham  
 (3) Q - Port Graham Corporation?  
 (4) Doctor were the sites harmed on account of the oil spill?  
 (5) A Yes  
 (6) Q Tell the jury how  
 (7) A They were impacted by oil They were impacted by clean up  
 (8) workers by the clean up activities themselves And most  
 (9) importantly I think from the perspective of the Native  
 (10) corporations they were impacted by a loss of confidentiality  
 (11) Q Have you proposed a methodology for fixing - for  
 (12) identifying the impacts?  
 (13) A For identifying impacts?  
 (14) Q I'm sorry for mitigating for fixing the impacts  
 (15) A Yes I have worked with Jack Lobdell We have worked  
 (16) together in terms of coming up with a mitigation plan  
 (17) Q Can you tell the jury what your program entails?  
 (18) A Basically what it is is the program - the way it worked  
 (19) we looked at sites down the list basically and first tried to  
 (20) determine whether we felt that they had been impacted by the  
 (21) oil oil spill activities and oil impact workers  
 (22) From there after we determined that we felt that they  
 (23) had - and again it was primarily based on documentation in  
 (24) terms of field notes or field reports this type of thing  
 (25) Basically we looked at a range of different methods that could

(1) either know personally or through documentation basically  
 what  
 (2) is known Then basically the sites that are on the list are  
 (3) those that we felt were impacted either through oiling through  
 (4) clean up activities or vandalism in some cases that we saw  
 (5) earlier From there then again just looking out on a  
 (6) site by site basis in terms of what would need to be done And  
 (7) basically I guess the perspective is you can't change what's  
 (8) happened I mean that was always my perspective you can't  
 (9) change the fact that there is it out here or whatever or  
 (10) that even clean up activities occurred  
 (11) In terms of the site what you can do is do something to  
 (12) address the change in the status of the site and basically as  
 (13) an archaeologist I recommended the recovery of data and  
 (14) specifically the archaeological context  
 (15) Q And Dr Johnson did you have charts or maps prepared for  
 (16) those sites for which each of the corporations is actually  
 (17) claiming damages?  
 (18) A There are maps that were prepared yes And I believe that  
 (19) Chugach Alaska Corporation maps there is a couple other sites  
 (20) that didn't make it onto the map but they showed general site  
 (21) locations  
 (22) Q For sites that damages are actually being claimed you've  
 (23) made a determination then in consultation with the Village  
 (24) Corporations and with Chugach that those sites would be  
 placed  
 (25) on a map?

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- (1) A Yes they were placed on a map  
 (2) Q Could you join me down here for a moment Dr Johnson?  
 (3) Dr Johnson you got to take your gear with you  
 (4) Dr Johnson I'm going to show you first what has been  
 (5) marked as 1167 A Can you tell the jury what this is please?  
 (6) A It's a map that shows approximate locations of most of the  
 (7) sites claimed here by Chugach Alaska Corporation  
 (8) Q And those sites are on the mainland?  
 (9) A Knight Island Disk Island LaTouche Island Some of those  
 (10) that I mentioned that are missing there is one up here in the  
 (11) south end of Culross Island another one located up in here I  
 (12) think we saw that there were three more that didn't make it on  
 (13) the map  
 (14) Q And again the map is also marked -  
 (15) A Green Island Marked that it's confidential  
 (16) Q And Dr Johnson could you tell me what 1110 A is please?  
 (17) A It is a map identifying sites claimed by Chenega  
 (18) Corporation here on Knight Island Chenega Island the  
 (19) mainland  
 (20) up here and also Evans Island  
 (21) Q I don't know if the jury way back there can see this or  
 (22) not There is magenta There is a red color -  
 (23) A Yeah In addition I focused on the sites  
 (24) In addition to that what is represented here is oiling  
 (25) Q And for each of these sites both in the Chugach and the  
 (26) Chenega you've identified prepared - that's what we looked it was

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- (1) the summary of impacts as to each site?  
 (2) A Yes that those are the impacts  
 (3) Q And Dr Johnson can you identify what Exhibit 1128 is  
 (4) please?  
 (5) A Yes It's a map of the lower Kenai Peninsula showing sites  
 (6) claimed by both Port Graham and English Bay Corporation  
 (7) Q This area down here is the lower Kenai Peninsula down in  
 (8) the lower part of the map?  
 (9) A Yes  
 (10) Q Do you know whether or not who owns this area in here?  
 (11) A I believe that's Port Graham  
 (12) Q Windy Bay Rocky Bay area?  
 (13) A Yeah  
 (14) Q Up here do you know who owns this area?  
 (15) A No when you start getting into parcels, I know generally  
 (16) but I believe that's English Bay  
 (17) Q Dr Johnson with regard to this area is this what's known  
 (18) as Kenai Fjord?  
 (19) A Yes it is  
 (20) Q And do you know Dr Johnson whether or not lands in this  
 (21) area have been irrevocably elected under the Oil Pollution Act  
 (22) of 1990?  
 (23) MR DIAMOND Objection no foundation  
 (24) THE COURT Objection sustained  
 (25) BY MR FORTIER

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- (1) Q Have you done an investigation - can I ask her Judge?  
 (2) THE COURT I'm sure it can be established another  
 (3) way counsel don't do it with this witness  
 (4) MR FORTIER I have no further questions  
 (5) THE COURT We are at the end of the trial day  
 (6) MR DIAMOND I have four minutes  
 (7) THE COURT I'll let the jury go Don't talk about  
 (8) the case with anybody don't form or express an opinion on it  
 (9) until it's submitted to you for deliberation We'll see you  
 (10) tomorrow at 8:30  
 (11) (Jury out at 1:26 p.m.)  
 (12) THE COURT Anything to take up counsel?  
 (13) MR PETUMENOS I have a small matter very small  
 (14) matter As a trial as progressed I've begun to feel safer and  
 (15) safer in here and there is a metal detector out in the front  
 (16) and it's not being manned  
 (17) THE COURT I know I told them that they didn't have  
 (18) to do that it's up there for sort of a presence Counsel I  
 (19) consult with security they wanted it there it's going to stay  
 (20) there  
 (21) MR PETUMENOS Okay  
 (22) MR DIAMOND I had a short matter but a large matter  
 (23) as long as I have a captive audience I was going to advise  
 (24) the court that today is my 13th wedding anniversary and  
 (25) although 13 is typically associated with unlucky in my case

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- (1) it's been very very lucky  
 (2) THE COURT Do you want to have an evidentiary hearing  
 (3) on that Mrs Counsel?  
 (4) MR DIAMOND Are you directing that at Ms Smith?  
 (5) MR FORTIER Judge I'd like to take up a - I have a  
 (6) few more questions I'd like to take up with counsel  
 (7) THE COURT Talk to counsel see if he screams with  
 (8) pain  
 (9) MR DIAMOND A few more questions tomorrow?  
 (10) MR FORTIER Yes  
 (11) THE COURT Is there anything else for me to take up  
 (12) this afternoon at all?  
 (13) MR DIAMOND No  
 (14) THE CLERK This court stands in recess  
 (15) (Recessed at 1:30 p.m.)

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- (1) STATE OF ALASKA )
- ( ) Reporter s Certificat
- (3) DISTRICT OF ALASKA )
- (6) I Leonard J DiPaolo a Registered Professional
- (7) Reporter and Notary Public
- (8) DO HERBY CERTIFY
- (9) That the foregoing transcript contains a true and
- (10) accurate transcription of my shorthand notes of all requested
- (11) matters held in the foregoing captioned case
- ( ) Further that the transcript was prepared by me
- (13) or under my direction
- (14) DATED this day
- (15) of 1994
- (-1) LEONARD J DiPAOLO RPR
- Notary Public for Alaska
- ( ) My Commission Expires 2 3 96

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(1) IN THE SUPERIOR COURT FOR THE STATE OF ALASKA  
 (2) THIRD JUDICIAL DISTRICT  
 (4) In re ) Case No JAN 89 2533 Civil  
 ) Anchorage Alaska  
 (5) the EXXON VALDFZ ) Wednesday July 27 1994  
 ) 8 45 a m  
 (6) )  
 (9) VOLUME 24 Pages 3687 through 3864  
 (10) TRANSCRIPT OF PROCEEDINGS (Continued)  
 (11) TRIAL BY JURY  
 (13) BEFORE THE HONORABLE BRIAN C. SHORTELL  
 Superior Court Judge  
 (16) APPEARANCES  
 (17) FOR THE PLAINTIFF  
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(1) PROCEEDINGS  
 (2) (Jury in at 8 45 a m  
 (3) (Call to Order of the Court)  
 (4) THE CLERK All rise Please be seated  
 (5) THE COURT Good morning counsel  
 (6) MR FORTIER Thank you Good morning Your Honor I  
 (7) had a few more questions Your Honor  
 (8) THE COURT Fine  
 (9) DIRECT EXAMINATION OF LORA L. JOHNSON Ph D  
 (Resumed)  
 (10) BY MR FORTIER  
 (11) Q Dr Johnson one of the maps that we looked at was 1167 A  
 (12) You'll note that some of the triangles - this is for the  
 (13) Chugach Alaska Corporation - the triangles are on property  
 (14) that is not green  
 (15) A Yes that's correct  
 (16) Q It's these triangles in there Can you tell the jury why  
 (17) that is?  
 (18) A Those are sites that are selected by Chugach Alaska  
 (19) Corporation under the Alaska Native Claims Settlement Act  
 (20) They are also generally referred to as 14H 1 site  
 (21) Q They are referred to as 14H-1 sites and they have been  
 (22) selected by Chugach Alaska Corporation?  
 (23) A Yes  
 (24) Q Under 14 H of ANCSA?  
 (25) A Yes

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(11) FOR THE DEFENDANTS  
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(1) Q What is that Dr Johnson?  
 (2) A It provides the opportunity for the regional corporation to  
 (3) select heritage sites All of the sites that are indicated on  
 (4) the maps are sites that are - that have been determined  
 (5) eligible  
 (6) Q That's all of the sites that have been noted on the white  
 (7) here for Chugach?  
 (8) A Yes that's correct  
 (9) MR DIAMOND Your Honor I'm going to interpose a  
 (10) late objection and move to strike the answer based on hearsay  
 (11) The sites according to witness are eligible There is no  
 (12) foundation for that what her basis for that statement is is  
 (13) she expressing a legal opinion or stating a fact that someone  
 (14) related to her?  
 (15) MR FORTIER She's stating an opinion as an expert  
 (16) witness that's been retained by a Native corporation to perform  
 (17) archaeology work Your Honor  
 (18) MR DIAMOND The objection -  
 (19) THE COURT The objection is sustained The question  
 (20) and answer are stricken  
 (21) MR FORTIER Can I lay some foundation Your Honor?  
 (22) THE COURT Yes  
 (23) BY MR FORTIER  
 (24) Q Were you retained by Chugach Alaska Corporation to assist  
 (25) in it's 14H 1 process?

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- (1) A Yes I have been  
 (2) Q In the process of performing Chugach Alaska 14H 1 work  
 (3) were you - what did you do?  
 (4) A I acted primarily as an archaeologist investigating sites  
 (5) this - investigating the sites excuse me  
 (6) THE COURT Could you approach the bench counsel?  
 (7) Maybe we can save a little time here  
 (8) MR DIAMOND I don't think so  
 (9) THE COURT Hope springs eternal  
 (10) (Bench conference off the record)  
 (11) BY MR FORTIER  
 (12) Q Dr Johnson you mentioned - yesterday you talked about  
 (13) the remediation program the program to fix - that the  
 (14) impacts - that you told us about that you recognized from the  
 (15) oil spill You talked about the reconnaissance work that would  
 (16) be necessary the survey work You talked about the  
 (17) remediation the excavation work You talked about the  
 (18) curation work In the writing of ethnographic or writing of  
 (19) reports Was there any other component of the program?  
 (20) A Yes There is one additional component and that is site  
 (21) monitoring for the length of time that it takes to address all  
 (22) of the sites So in other words I can't recall off the top  
 (23) of my head what the total number of years is but it would be  
 (24) for the duration of that period until the sites have been  
 (25) addressed

- (1) Q Can you tell the jury what your understanding is of the  
 (2) Windy Bay incident?  
 (3) A What my understanding is -  
 (4) MR DIAMOND Foundation please Objection no  
 (5) foundation This is hearsay  
 (6) BY MR FORTIER  
 (7) Q Dr Johnson how did you hear of the Windy Bay incident?  
 (8) A In 1989 in my capacity as a member of the oil spill  
 (9) response team we had the opportunity to review numerous  
 (10) documents And also speaking with members of the oil spill  
 (11) response team that were located while outside of Prince William  
 (12) Sound  
 (13) Q Your review of these documents was that in the ordinary  
 (14) course of your business as part of the oil spill response  
 (15) team? In other words is that what you were hired to do was  
 (16) to review documents?  
 (17) A That's correct  
 (18) Q And were these documents from the Exxon Cultural  
 (19) Resources  
 (20) Program?  
 (21) A Yes they were  
 (22) Q Were they State documents?  
 (23) A I believe that some of them were State and some of them  
 (24) were Exxon documents  
 (25) Q And they were both received by you - by the OSRT the oil  
 spill response team as part of its job of - with regard to

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- (1) Q Why are you recommending site monitoring?  
 (2) A Basically to just keep track of what is happening at these  
 (3) sites between now and when it becomes possible to address  
 (4) them  
 (5) archaeologically Basically we can't address all of them next  
 (6) year that type of thing or the year after because of the  
 (7) number of sites And so it's basically set up to monitor for  
 (8) potential impacts In particular vandalism  
 (9) Q One of the impacts you identified yesterday Dr Johnson  
 (10) was loss of confidentiality Does the monitoring component of  
 (11) your recommendation have anything to do with the loss of  
 (12) confidentiality of those sites on account of the oil spill?  
 (13) A Yes It does It basically - a lot of these sites one of  
 (14) the basics for recommending the entire program is because of  
 (15) this issue of confidentiality and the monitoring program is an  
 (16) attempt to keep track of what is happening at these sites  
 (17) because of fears of vandalism or concerns for vandalism  
 (18) because  
 (19) of this loss of confidentiality  
 (20) Q This loss of confidentiality in your opinion was on  
 (21) account of the oil spill is that correct?  
 (22) A Yes I believe it is  
 (23) Q Now Dr Johnson one of the areas that we discussed  
 (24) yesterday was an area of Port Graham land called Windy Bay?  
 (25) A Yes  
 (26) Q Have you ever heard of the Windy Bay incident?  
 (27) A Yes

- (1) the oil spill is that correct?  
 (2) A That's correct  
 (3) Q And from those documents did you gain an understanding of  
 (4) the Windy Bay incident?  
 (5) A Yes I did  
 (6) Q Besides the documents that you reviewed did you also  
 (7) look - or did you also speak with anybody concerning what's  
 (8) been known as the Windy Bay incident?  
 (9) A Yes I spoke with Pat Norman  
 (10) Q Why did you speak with Pat Norman?  
 (11) A Because I wanted to get sort of the other overall  
 (12) perspective on what had happened at Windy Bay  
 (13) Q When you spoke with Mr Norman - who is Mr Norman?  
 (14) A He is the President of Port Graham Corporation  
 (15) Q When you spoke with Mr Norman was that in your capacity  
 (16) as a consultant with regard to archaeology for Port Graham  
 (17) Corporation?  
 (18) A That's correct  
 (19) Q Did you gain an understanding in your conversations with  
 (20) Mr Norman about what's been known as the Windy Bay  
 (21) incident?  
 (22) A Yes I did  
 (23) Q And besides looking at documents and speaking with  
 (24) Mr Norman did you go to Windy Bay?  
 (25) A Yes I did  
 (26) Q When were you in Windy Bay?

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- (1) A It was in May of this year I can't recall the exact date  
 (2) but somewhere around the 23rd somewhere in there 27th  
 (3) Q Now you've also read the 1989 Exxon Valdez Cultural  
 (4) Resource book?  
 (5) A I've read large parts of it  
 (6) Q Did you read the portion of the report pertaining to the  
 (7) Windy Bay incident?  
 (8) A Yes I have  
 (9) Q Based upon your review of documents in 1989 your review  
 (10) of  
 (11) the Exxon Valdez Cultural Resource Program documents that  
 (12) you've referred to over the course of the past day the 1989  
 (13) report and your conversations with Mr Norman did you form  
 (14) an  
 (15) opinion as to what occurred at Windy Bay?  
 (16) A Yes I did basically  
 (17) MR DIAMOND Your Honor before an answer is given  
 (18) I'd like to interpose an objection it's blatant hearsay  
 (19) THE COURT Yes it is  
 (20) MR PETUMENOS May I have an opportunity to approach  
 (21) the bench?  
 (22) THE COURT It might not be hearsay if it's for  
 (23) another purpose other than the matter asserted but it doesn't  
 (24) sound like it is  
 (25) (Sidebar out of the hearing of the jury )  
 (26) MR PETUMENOS Judge we are entitled to support the  
 (27) opinion of the witness on the loss of confidentiality and the

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- (1) damage to the sites and you were earlier restrictive on your  
 (2) proof to incidents that occurred on our property We are  
 (3) entitled to put some basis and foundation of hearsay or not for  
 (4) the expert's opinion on this  
 (5) She believes that the confidentiality of the sites have  
 (6) been breached and damaged Exxon's whole thesis in this  
 (7) thing  
 (8) is there is hardly any incidents there is hardly any support  
 (9) for this and speculating and so forth and we've been  
 (10) restricted just to this particular property  
 (11) If we were further restricted but not being permitted to  
 (12) put the basis for the opinion on the property that we own then  
 (13) the opinion is going to be out there standing like there is no  
 (14) support for it  
 (15) THE COURT Counsel look the question seemed to be  
 (16) directed at what happened at Windy Bay I don't know what  
 (17) happened at Windy Bay Somebody might have hit somebody  
 (18) with a  
 (19) shovel  
 (20) MR PETUMENOS I understand the problem  
 (21) MR FORTIER There is another part of the problem  
 (22) We expect that Exxon in its proof will say there are only two  
 (23) incidents of vandalism reported in the oil spill areas  
 (24) MR PETUMENOS He needs to know what the incident in  
 (25) Windy Bay was  
 (26) MR FORTIER The incident in Windy Bay we contend  
 (27) was the oil spill workers trying to protect artifacts at Windy

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- (1) Bay in the upland Exxon takes a position with these same  
 (2) people who are vandalizing sites  
 (3) THE COURT Their own people?  
 (4) MR FORTIER Yeah  
 (5) THE COURT So this is all directed at the question of  
 (6) whether or not there has been a loss of confidentiality is  
 (7) that it?  
 (8) MR FORTIER It's directed at the question of whether  
 (9) or not there has been a loss of confidentiality and whether or  
 (10) not there was harm  
 (11) THE COURT You know I just get the feeling that the  
 (12) witness is going to answer somehow differently than the lawyers  
 (13) are talking so I better send the jury out  
 (14) (Sidebar concluded )  
 (15) THE COURT I have to send you out for a minute  
 (16) (Jury out at 8 59 a m )  
 (17) THE COURT Mr Fortier you can ask your questions  
 (18) and I want to hear what the witness has to say  
 (19) BY MR FORTIER  
 (20) Q Dr Johnson from the reports you received in 1989 what  
 (21) did you understand the Windy Bay incident was all about?  
 (22) A Basically from the reports in 1989 It talked about the  
 (23) collection of artifacts at Windy Bay by oil spill workers from  
 (24) Port Graham  
 (25) Q And from those reports was there any conclusion reached as

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- (1) to whether the artifacts were collected?  
 (2) A In terms of - basically what it comes down to is from my  
 (3) review of those documents I don't think it was clear where  
 (4) exactly on the beach they were collected from and that's -  
 (5) from the documents I don't think it was clear  
 (6) Q So from the documents there was a substantial question in  
 (7) your mind as to whether or not the artifacts were collected  
 (8) above or below mean high tide?  
 (9) A Yes  
 (10) Q Can you tell us what the Exxon Cultural Resource Program  
 (11) report states - states what the location is or what the Windy  
 (12) Bay incident was?  
 (13) A I'm trying to think back I haven't looked at that just  
 (14) recently but as I recall it refers to the artifacts being  
 (15) collected on the beach I think is what it says I'd have to  
 (16) look at the documents but -  
 (17) Q Do you know if it calls it a vandalism incident?  
 (18) A Yes I believe it does refer to that  
 (19) Q One of only two incidents of vandalism in the entire oil  
 (20) spill area?  
 (21) A That's correct  
 (22) Q Now you spoke about this matter with Mr Norman as well?  
 (23) A Yes I did  
 (24) Q When you spoke about the matter with Mr Norman what was  
 (25) your understanding?

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- (1) A My understanding is that the artifacts were collected from  
 (2) above mean high tide in other words corporation lands  
 (3) Q Did Mr Norman explain to you why the artifacts were  
 (4) collected?  
 (5) A He explained and I had actually had a general  
 (6) understanding of it even in 1989 that they were collected  
 (7) because they feared that they would be basically picked up by  
 (8) oil spill workers  
 (9) Q So they feared a loss of confidentiality?  
 (10) A Yes  
 (11) Q Did Mr Norman explain to you why he was fearful of the  
 (12) artifacts being picked up by other oil spill workers?  
 (13) A Yes because there were oil spill workers in the area at  
 (14) the time I believe that they were like boom tenders or  
 (15) setting up booms this type of thing  
 (16) Q Tell us what Mr Norman explained about - about the oil  
 (17) spill boom workers in the vicinity of the artifacts?  
 (18) A Yeah Basically it was that there was upland access that  
 (19) they were on the site I think that there was a general  
 (20) concern for people collecting artifacts  
 (21) Q Can you tell us what Pat Norman described about the  
 (22) location of the boom as in relation to the midden?  
 (23) A I believe it was very close by  
 (24) Q Do you recall now you've also - do you know David  
 McMahan  
 (25) is?

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- (1) A Yes  
 (2) Q Who is David McMahan?  
 (3) A State archaeologist  
 (4) Q Do you know whether or not David McMahan was in Windy  
 Bay  
 (5) in 1989?  
 (6) A Yes he was  
 (7) Q Was one of the reports you read by David McMahan?  
 (8) A Yes it was  
 (9) Q And have you recently read Mr McMahan's deposition  
 (10) concerning the Windy Bay incident?  
 (11) A Yes I have  
 (12) Q Can you tell us what your understanding is?  
 (13) A My understanding is he's not clear where the artifacts were  
 (14) collected That he doesn't know  
 (15) Q He's not clear on where they were collected -  
 (16) A In terms of upland versus intertidal that's correct  
 (17) Q So Dr Johnson based upon your review of the documents  
 in  
 (18) 1989 your discussions with Mr Norman and your review of the  
 (19) deposition of Mr McMahan do you have an opinion as to  
 whether  
 (20) or not the collection of artifacts by the Windy Bay - or by  
 (21) the Port Graham crew in 1989 constitutes an incident of  
 (22) vandalism?  
 (23) A I don't believe that it does no  
 (24) Q And based upon your review of the documents and your  
 (25) discussion with Mr Norman do you have an understanding as  
 to

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- (1) whether or not what Port Graham workers did at Windy Bay was  
 (2) acceptable under the Port Graham Cultural Resources  
 Program?  
 (3) A I believe under their general program in terms of  
 (4) protecting artifacts by collecting them that it was consistent  
 (5) with the program  
 (6) Q And based upon your understanding of other oil spill boom  
 (7) workers in the area that weren't related to Port Graham do you  
 (8) think it was consistent with wise cultural resource management  
 (9) in general?  
 (10) A Well it's one of those situations where as an  
 (11) archaeologist you know I would do more in addition I can  
 (12) understand the collection of artifacts out of fear of theft and  
 (13) vandalism because archaeologists do this as well so it's one  
 (14) of these where it's always good if you can document locations  
 (15) and things like that And this is what I would recommend  
 (16) but I can understand the collection of artifacts under those  
 (17) circumstances  
 (18) MR FORTIER That's my offer of proof Your Honor  
 (19) MR DIAMOND May I inquire a little further?  
 (20) THE COURT Briefly I don't want to hold long  
 (21) stories it stands or falls on its own  
 (22) MR DIAMOND I can argue it This is second and  
 (23) third degree hearsay ultimately culminating in an opinion as  
 (24) to whether something was an act of vandalism or not This  
 (25) witness is not qualified as an expert in terms of site

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- (1) reconstruction to determine whether the crime the State  
 (2) charged was committed It proves that an act of vandalism  
 (3) didn't happen did not happen and I don't see how it could  
 (4) help the case  
 (5) If you would like me to bring out the facts of this  
 (6) witness -  
 (7) THE COURT Is it your intention to bring out the  
 (8) facts with this witness in your defense case?  
 (9) MR DIAMOND No  
 (10) THE COURT No?  
 (11) MR DIAMOND No There is one fact that I was going  
 (12) to elicit and that is concerning Mr Norman as to who the  
 (13) witness mentioned yesterday not with respect to this incident  
 (14) but just generally Mr Norman  
 (15) THE COURT To the extent that she's an  
 (16) archaeologist - and confidentiality is an important issue with  
 (17) archaeologists in particular the archaeologists in this  
 (18) area - it appears to me that she has taken into account all of  
 (19) the paper generated what the people - what she's gleaned  
 (20) about the particular site to show that there may have been a  
 (21) loss of confidentiality about some artifacts in that area  
 (22) I mean that appears to me to be something she could give a  
 (23) legitimate opinion on But to make - for her to make a  
 (24) distinction between people who were collectors for valid  
 (25) purposes and people who were thieves that appears to me to be

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- (1) simply a factual matter not expert testimony  
 (2) And besides it doesn't seem to be a contested issue here  
 (3) at least from what I glean from defense counsel The problem  
 (4) with the offer of proof is that it's hearsay mingled with -  
 (5) it's hearsay that is the basis for opinion mingled with hearsay  
 (6) that's inadmissible and counsel I am having a problem  
 (7) figuring out whether you understand the difference  
 (8) I don't want to go in there and edit your testimony but  
 (9) testimony that deals with the incident as it relates to a loss  
 (10) of confidentiality appears to me to be admissible She has an  
 (11) opinion about that and then a threat in the future  
 (12) But testimony about the motivation of people who are  
 (13) picking up artifacts on that beach should come from those  
 (14) people not from her  
 (15) MR DIAMOND Your Honor on that basis we would  
 (16) object It's simply not relevant What happened on that  
 (17) beach it has nothing to do with loss of confidentiality This  
 (18) was a clean up site I'll give you my offer of proof in  
 (19) response  
 (20) THE COURT If it's on a clean up site and it has  
 (21) artifacts on it and the artifacts according to her stretch  
 (22) up into the uplands then it's certainly an issue whether or  
 (23) not that site and the surrounding area which may have been  
 (24) confidential in the past are no longer confidential and  
 (25) therefore need protection right?

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- (1) MR DIAMOND That's not disputed It is not  
 (2) disputed In 1989 there were artifacts on the beach at the  
 (3) Windy Bay site It's not disputed that Mr Norman collected  
 (4) them And if the witness wants to testify that she had  
 (5) secondhand knowledge of that and that supports an opinion of  
 (6) hers how the oil spill workers may now know about sites that  
 (7) they didn't know about before I think as you've just said is  
 (8) entirely permissible  
 (9) For her to go beyond that and get involved in the  
 (10) controversy that existed in 1989 - and apparently plaintiffs  
 (11) want to recreate in this courtroom today as to whether  
 (12) Mr Norman was acting legally or lawfully seems to me to be  
 (13) totally irrelevant proves not their case but proves our case  
 (14) with this not being an incident of vandalism  
 (15) But if you want to get into that -  
 (16) THE COURT Wait a minute I think I agree with you  
 (17) Sometimes I try to think what I say and what you say and I'm  
 (18) trying to figure out whether we've got a controversy here I  
 (19) don't think I disagree with you  
 (20) The act of vandalism whether or not it was an act of  
 (21) vandalism is not the issue here The issue is loss of  
 (22) confidentiality  
 (23) MR DIAMOND So long as we're not getting into what  
 (24) he did and what they said and how this was characterized our  
 (25) objection would be limited to one of relevance

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- (1) THE COURT Thank you  
 (2) MR PETUMENOS Can I have a moment Your Honor?  
 (3) THE COURT Do you have anything else counsel?  
 (4) MR FORTIER Well I don't think I do Your Honor  
 (5) THE COURT I'm concerned that you don't go - you  
 (6) don't make this into a controversy that doesn't have to be  
 (7) explored in this particular courtroom So to the extent that  
 (8) she talks about Windy Bay and what happened there as a  
 support  
 (9) for her opinion if that's what she's doing that  
 (10) confidentiality may be lost there and therefore protection is  
 (11) needed She's entitled to testify to that Is that what you  
 (12) intend to do?  
 (13) MR FORTIER That's what I want to do  
 (14) THE COURT Be very careful counsel I'll come down  
 (15) on you like a load of bricks if you go beyond that  
 (16) MR FORTIER I will Your Honor  
 (17) (Jury in at 9 12 a m)  
 (18) THE COURT The jury is present counsel Go ahead  
 (19) BY MR FORTIER  
 (20) Q Dr Johnson with regard to the Windy Bay incident do you  
 (21) know whether or not artifacts based upon your review of the  
 (22) documents and so on whether or not there were artifacts  
 known  
 (23) to exist in the Windy Bay area?  
 (24) A I believe that artifacts - that is a site that was known  
 (25) in the area

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- (1) Q And based upon your discussion with Port Graham did you  
 (2) arrive at an opinion as to whether or not the site was a known  
 (3) site to Port Graham Corporation?  
 (4) A Yes  
 (5) Q Was it?  
 (6) A Yes  
 (7) Q And based upon your review of the documents in your  
 (8) discussions with Mr Norman did you arrive at an opinion as to  
 (9) whether or not there were other clean up workers besides Port  
 (10) Graham personnel in the area in 1989?  
 (11) A Yes  
 (12) Q So Dr Johnson did you arrive at an opinion as to whether  
 (13) or not there was a feared loss of confidentiality given those  
 (14) factors?  
 (15) A Yes  
 (16) Q What is your opinion?  
 (17) A That there was a fear of loss of confidentiality  
 (18) MR FORTIER Judge I've got to get some photographs  
 (19) in  
 (20) THE COURT All right go ahead  
 (21) MR FORTIER Just a few more  
 (22) BY MR FORTIER  
 (23) Q Dr Johnson I'm going to show you what's been marked as  
 (24) 1387 and if you could just identify what the photograph is for  
 (25) the record please?

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- (1) A Yes It s artifacts Stone tool that is located at Panhat  
 (2) Point  
 (3) Q Was this a photograph that you took?  
 (4) A Yes it is  
 (5) Q When did you take it?  
 (6) A The spring of this year  
 (7) Q Does the photograph accurately reflect what you observed at  
 (8) the site?  
 (9) A Yes it does Actually the photograph has a date on it as  
 (10) well It s June 28th 1994  
 (11) Q And this is Panhat Point?  
 (12) A Yes  
 (13) Q Now I m going to show you Dr Johnson what s been  
 marked  
 (14) as plaintiffs exhibit 1288 and I m just going to refer to the  
 (15) last three photos in 1388 (sic) I think you ve identified  
 (16) everything else besides the last three photos?  
 (17) MR DIAMOND Counsel can you identify those by  
 (18) number  
 (19) MR FORTIER Yes 1288 58 1288 57 and 1288 59  
 (20) THE COURT 1288 or 1388 counsel?  
 (21) MR FORTIER 1288 Your Honor  
 (22) A Yes These are photographs that were taken by Rita  
 (23) Miraglia who was also on the oil spill response team and they  
 (24) are photographs of the south end of Crafton Island Picture of  
 (25) Omni boom and things like that

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- (1) BY MR FORTIER  
 (2) Q Were the photographs taken under your direction?  
 (3) A Not particularly under my direction She basically went  
 (4) and took them herself  
 (5) Q She was working under your supervision correct?  
 (6) A No actually we were working together  
 (7) Q You were both on the oil spill response team?  
 (8) A That s correct  
 (9) Q And they were taken during that period of time?  
 (10) A That s correct  
 (11) Q And those show scenes at Crafton Island?  
 (12) A Yes  
 (13) Q Which is the Chugach site?  
 (14) A Yes This particular location yes the Chugach site we  
 (15) were talking about yesterday  
 (16) Q And finally Dr Johnson I wanted to show you a series of  
 (17) eight pictures They are marked 1295 1 2 -3 5 -8 6  
 (18) 7 10 14 11 15 16 20 and 17 And can you just  
 (19) tell us where the pictures were obtained?  
 (20) A Yes The pictures were taken - let me just double check  
 (21) Yes these were all photographs that came from the Exxon  
 (22) Cultural Resource Program  
 (23) Q Again these were pictures you obtained through the  
 (24) discovery process?  
 (25) A That s correct

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- (1) Q And the pictures were labeled by the Exxon Valdez Cultural  
 (2) Resource Program?  
 (3) A Yes that s correct  
 (4) Q Dr Johnson I d like to show you a series of photographs  
 (5) that are in general 1296 as an exhibit They have got a  
 (6) series of dash numbers to them Now can you tell us where  
 (7) these photographs came from?  
 (8) A These also come from the Exxon Cultural Resource Program  
 (9) Q From - okay And again they were all labeled?  
 (10) A They were identified on the photo log  
 (11) Q And they have labels on the back of them?  
 (12) A Yes they do  
 (13) Q And those are based upon information from the Exxon  
 Valdez  
 (14) photo log?  
 (15) A That s correct  
 (16) Q Did you attempt to make the labels as accurate as the photo  
 (17) log to reflect the information?  
 (18) A I believe they are accurate  
 (19) MR FORTIER No further questions Your Honor  
 (20) THE COURT Okay counsel  
 (21) MR DIAMOND Your Honor it s so sudden it will take  
 (22) me a minute to regroup  
 (23) THE COURT Sure  
 (24) CROSS EXAMINATION OF LORAL JOHNSON Ph D  
 (25) BY MR DIAMOND

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- (1) Q Good morning again Dr Johnson  
 (2) A Good morning  
 (3) Q I d like to talk to you this morning about some specific  
 (4) sites that you ve looked at and that you ve determined with  
 (5) Dr Lobdell were harmed as a result of the oil spill  
 (6) According to documents that your counsel produced there  
 (7) are 44 places in number is that right?  
 (8) A I believe that s generally correct I don t know the exact  
 (9) number  
 (10) Q And you ve looked at them on behalf of Chenega  
 Corporation  
 (11) correct?  
 (12) A Yes  
 (13) Q And English Bay Port Graham and Chugach?  
 (14) A That s correct  
 (15) Q Tatitlek and Eyak don t have any archaeological claims that  
 (16) you re involved in is that right?  
 (17) A Those are sites that I looked at  
 (18) Q Plaintiffs 1292  
 (19) Dr Johnson I have on the screen what s been marked as  
 (20) plaintiffs 1292 It s entitled Chenega Corporation  
 (21) Archaeological Damages Summary Do you see that on your  
 (22) monitor?  
 (23) A Yes  
 (24) Q Are those all places at which you found harm to  
 (25) archaeological resources?

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- (1) A Yes they are  
 (2) Q And next to each one if we take the first one Evans  
 (3) Island there is an amount my bad eyesight says about  
 (4) 115 000  
 (5) A That s correct  
 (6) Q And you and Dr Lobdell jointly determined that the damage  
 (7) to the archaeological resources at Evans Island was in your  
 (8) opinion worth \$115 000?  
 (9) MR PETUMENOS I have an objection I think this is  
 (10) beyond the scope of direct This material was to be addressed  
 (11) by the next witness  
 (12) THE COURT Not yet counsel The objection is  
 (13) overruled  
 (14) BY MR DIAMOND  
 (15) Q Correct?  
 (16) A Could you repeat the question?  
 (17) Q Yes You and Dr Lobdell jointly determined that the  
 (18) damages or the compensation that should be paid to Chenega  
 (19) Corporation for harm done to archaeological resources at the  
 (20) Evans Island site was \$115 000 and change isn t that right?  
 (21) A Yes This is - the number is an outcome of our damage  
 (22) assessment yes  
 (23) Q You told us yesterday that in your view an appropriate  
 (24) remedy for harm done to archaeological resources by the spill  
 (25) was a program of remediation?

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- (1) A Yes  
 (2) Q Is that right?  
 (3) A That s correct  
 (4) Q And that includes site surveying going out and doing  
 (5) Indiana Jones type work digging curating what s found  
 (6) publishing results is that right?  
 (7) A I don t think that accurately categorizes -  
 (8) Q Those are some of the things you would do?  
 (9) A We wouldn t do any Indiana Jones type archaeology I think  
 (10) what this addresses and I think it s important to understand  
 (11) what the program we outlined We re interested in the  
 (12) archaeological context the recovery of archaeological context  
 (13) In some cases it may involve excavation in fact many cases  
 (14) it does In some cases it simply involves testing Other  
 (15) cases it involved epigraphic research There is a wide range  
 (16) of activities  
 (17) Q You went on a site by site basis a place by place basis  
 (18) and looked at what you thought ought to be done to address  
 (19) harms that you found resulted from the spill correct?  
 (20) A Yes What we did was we looked at the group of sites in  
 (21) the area the oil impact area and first identify whether we  
 (22) felt there was harm to the sites After that we basically  
 (23) came up with the program that we did for each of the sites  
 (24) Q And then you went back and you basically calculated a price  
 (25) tag to do the work that you thought was appropriate for that

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- (1) site?  
 (2) A Yes that s -  
 (3) Q That s how we come up with \$115 167 for Evans Island isn t  
 (4) that right?  
 (5) A Yes it is  
 (6) Q I d like to talk to you this morning about some of these  
 (7) sites and what s out there and what harms you found resulted  
 (8) from the spill and your damage analysis and I d like to spend  
 (9) some time doing that  
 (10) Let s begin with - back to Evans Island Let s pick the  
 (11) second of the Chenega sites Granite Bay  
 (12) A Yes  
 (13) Q Just for the benefit of the jury I m going to show you  
 (14) what s been marked as plaintiffs 1167 A This is a Chugach  
 (15) map It s got the eastern - I m sorry western Prince William  
 (16) Sound Can you just point out roughly where Granite Bay is?  
 (17) A I believe it s up in this area up here (indicating)  
 (18) Q Can you be more specific than that?  
 (19) A Not without additional identification  
 (20) Q Do you know where it is in relationship to Eshamy Bay?  
 (21) A I believe it s south  
 (22) Q Do you know how far south?  
 (23) A Not off the top of my head no  
 (24) Q Do you know how far north or south of the tip of Chenega  
 (25) Island it is?

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- (1) A Not off the top of my head  
 (2) Q Because you ve never been there have you?  
 (3) A No I have not  
 (4) Q It s a true statement Is it not Dr Johnson that you  
 (5) were - the sum total of your knowledge of the archaeological  
 (6) and cultural resources at Granite Bay come from your review of  
 (7) secondary materials?  
 (8) A Yes It comes from the review of documents  
 (9) Q And one of those documents that you mentioned for us  
 (10) yesterday was a state document AHRS document?  
 (11) A Yes  
 (12) Q In determining harm caused by the spill to these various  
 (13) sites you relied on the state AHRS documents to determine  
 (14) what was out there?  
 (15) A When it s available that s one of the documents I  
 (16) consulted yes  
 (17) Q I m going to put on the screen Defendants Exhibit 16142 13  
 (18) with counsel s consent I know this is a little bit hard to  
 (19) read Let me zoom in on the top portion of the document Can  
 (20) you see that Dr Johnson?  
 (21) A Yes I can  
 (22) Q This is entitled Alaska Heritage Resources Survey This is  
 (23) the document that the State prepares with respect to all  
 (24) archaeological places and resources in the state?  
 (25) A Not all places that are heritage sites are in this but

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- (1) there is an attempt to incorporate that information yes  
 (2) Q And what the State does among other things is collect and  
 (3) collate all the information available as to what is at that  
 (4) site based on reports by others as well as its own  
 (5) inspections?  
 (6) A Basically what these forms do is try to summarize you  
 (7) might say highlights of what's there in terms of being  
 (8) complete They are not always complete and in some cases  
 they  
 (9) are not totally accurate  
 (10) Q Let's take a look at what the State says is at the Granite  
 (11) Bay site if we can  
 (12) According to this there are the remains of two tent frame  
 (13) structures  
 (14) A Yes  
 (15) Q Five 55 gallon drums inside the tent structures are a set  
 (16) of rusted bed springs and a rusted shovel And there is also  
 (17) a bar And it also makes reference to a pile of lumber with  
 (18) round nails several iron bars Are you aware of any other  
 (19) resources at the Granite Bay site?  
 (20) A Yes If you continue down to culturally modified trees  
 (21) Q I'm sorry yes let's talk about culturally modified trees  
 (22) for a second Those are known in the trade as CMTs?  
 (23) A That's correct  
 (24) Q And a culturally modified tree is any tree which shows any  
 (25) marks that might have been caused by humans?

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- (1) A They generally refer to a certain types of marks  
 (2) Q But marks that you could attribute to human action as  
 (3) opposed to animal action?  
 (4) A Yes that's correct or other natural forms  
 (5) Q And you would also consider a culturally modified tree to  
 (6) be a stump?  
 (7) A Sometimes they are included Very often there is a  
 (8) distinction made between stumps When I record CMTs I  
 (9) generally refer to those with the scars on the trunk and  
 (10) identify stumps separately  
 (11) Q You can't assume that every CMT on site is a sign of human  
 (12) habitation is that right?  
 (13) A No You wouldn't assume it's habitation no  
 (14) Q The materials that are listed here the manufactured  
 (15) materials you have no reason to believe that they have any  
 (16) Native origin or Native connection?  
 (17) A It depends on the interpretation In other words they may  
 (18) be western objects but the site itself may have been - or  
 (19) appears to have been occupied or may have been occupied by  
 (20) Natives It depends  
 (21) Q But you don't know that?  
 (22) A No that's part of what the research would be  
 (23) Q But sitting here today you don't know that there is any  
 (24) Native connection between these manufactured items and any  
 (25) habitation that took place at Granite Bay?

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- (1) A That's correct  
 (2) Q All of the materials listed on this AHRS form are in the  
 (3) uplands are they not?  
 (4) A The features or the items that are identified here in the  
 (5) AHRS form I believe are all in the uplands  
 (6) Q The oiling at Granite Bay didn't reach the uplands did it?  
 (7) A I don't recall I'd have to look at the forms to see the  
 (8) distribution  
 (9) Q Do you have any reason to believe that oil from the Exxon  
 (10) Valdez spill proceeded uphill beyond the beach area in Granite  
 (11) Bay and reached the uplands?  
 (12) A There are a lot of documents that indicate there is oiling  
 (13) above mean high tide  
 (14) Q Do you have any reason to believe that that happened to  
 (15) Granite Bay?  
 (16) A Again I would have to look at the individual documents  
 (17) Q Sitting here today you can't tell us that?  
 (18) A Not off the top of my head  
 (19) Q It's a fair statement though that you're not aware of any  
 (20) oiling of any of these materials listed on the AHRS form isn't  
 (21) that right?  
 (22) A I'm not aware of specific oiling of these no  
 (23) Q You have no reason to believe do you that any of these  
 (24) items were trampled or disturbed or otherwise affected in any  
 (25) way by clean up workers during the 1989 1990 cleanup?

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- (1) A I don't know specifically that these were  
 (2) Q You have no basis to say that that happened?  
 (3) A I have not been at the site and I don't recall specific  
 (4) reports of you know human impact here  
 (5) Q In coming up with a damage figure for this site you  
 (6) reviewed all the available documentation have you not?  
 (7) A No I have not reviewed all of it I reviewed as much as I  
 (8) could  
 (9) Q There are things pertaining to Granite Bay that you have  
 (10) not reviewed?  
 (11) A It's quite possible  
 (12) Q But you can't say that's true sitting here today?  
 (13) A I'm not sure what you're saying  
 (14) Q Are you aware of anything out there that would give us more  
 (15) information as to the effects of the oil spill or the cleanup  
 (16) of the cultural resources at Granite Bay?  
 (17) A There is documentation of the oiling and I believe that's  
 (18) some of the exhibits that we've offered before I can't  
 (19) think - I don't know on a site by site basis off the top of  
 (20) my head the degree of oiling in each site  
 (21) Q My question is Are you aware of anything that would  
 (22) pertain to the effects of the spill or the cleanup on the site  
 (23) that you did not review?  
 (24) A No I think if I had reviewed it I would be aware of  
 (25) it

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- (1) Q It s true is it not coming up with your analysis of harm  
 (2) to archaeological sites you attempted to review all relevant  
 (3) information that you could put your hands on is that right?  
 (4) A As much as we could yes  
 (5) Q And in none of that documentation have you seen any  
 (6) reference whatsoever to any disturbances by clean up workers  
 of  
 (7) the cultural resource workers at Granite Bay?  
 (8) A As I sit here today I don t recall specific instances In  
 (9) general during my review of the documents I did come across  
 (10) different instances that did not even make it into our charts  
 (11) and so it s quite possible that there is something referring to  
 (12) this I don t remember - I don t recall  
 (13) Q Are you telling the jury that you are aware of any  
 (14) disturbances by clean up workers to the artifacts or  
 (15) archaeological resources at Granite Bay?  
 (16) A What I m saying is that in the course of reviewing  
 (17) documents basically we looked at the different types of  
 (18) documents whether it was degrees of oiling or clean up  
 (19) activities We did not go through and make detailed lists of  
 (20) every type of impact that we came across on a site-by site  
 (21) basis We tried to gather this information for the exhibits  
 (22) but it does not include all of the information out there so  
 (23) for this particular site I m not aware of particular cases of  
 (24) impact for this one  
 (25) Q So you can t tell us anything happened at this site in 1989

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- (1) or 1990?  
 (2) A I would say that it was oiled  
 (3) Q You can t tell us if anything happened to these  
 (4) archaeological resources Isn t that right?  
 (5) A I think a distinction needs to be made between the physical  
 (6) remains that are listed in the AHRs report -  
 (7) Q That s what I m talking about You can t tell us that in  
 (8) 1989 or 1990 there was any impact to these physical resources?  
 (9) A Again what I want to make clear is we make a distinction  
 (10) between the site and what I would consider like clear  
 (11) indicators of the activity at the site These particular  
 (12) items I m not aware if any particular one of these was oiled  
 (13) however the site itself I believe was  
 (14) Q At the shoreline?  
 (15) A Yes  
 (16) Q In your review of the documentation it is true is it not  
 (17) that you have seen no indication whatsoever that after the  
 (18) cleanup there was any subsequent vandalism at the site?  
 (19) A Again I m not aware of specific instances of vandalism  
 (20) here no  
 (21) Q At this site?  
 (22) A No  
 (23) Q You ve come up with a damage assessment for Granite Bay  
 (24) have you not?  
 (25) A Yes Jack Lobdell and myself reviewed this

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- (1) Q PX1268 page 22  
 (2) MR PETUMENOS May we approach the bench?  
 (3) THE COURT Yes  
 (4) (Bench conference off the record)  
 (5) BY MR DIAMOND  
 (6) Q Dr Johnson you recognize that document don t you?  
 (7) A Yes I do  
 (8) Q As hard as it is to read this is the damage calculation  
 (9) that you and Dr Lobdell jointly came up with for Granite Bay  
 (10) is it not?  
 (11) A Yes it is  
 (12) Q There are three parts to this -The top part is a  
 (13) computation of the cost for archaeologists time working on  
 (14) this site under your program is it not?  
 (15) A What it is is - it lists the investigators the number of  
 (16) hours and then the estimated cost for those yes  
 (17) Q We ll get to that I just want to - if I can break this  
 (18) up into three parts The part above the red line is your  
 (19) estimate of the number of hours of archaeologists time it  
 (20) would take to do this project is that correct?  
 (21) A Yes it is  
 (22) Q And then in the middle there are all the incidental costs  
 (23) for analysis research et cetera?  
 (24) A Yes that s correct  
 (25) Q And then on the bottom you ve come up with a figure that

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- (1) you adjust for inflation given the fact that you won t be able  
 (2) to do all these sites in one year?  
 (3) A Yes that s correct  
 (4) Q Zoom in on the top part of this if we can  
 (5) Now Dr Johnson your analysis of the work that needs to  
 (6) be done on the Granite Bay site includes 40 hours of time of a  
 (7) principal investigator?  
 (8) A That s correct  
 (9) Q A principal investigator would be a senior archaeologist?  
 (10) A Yes it would be the person in charge  
 (11) Q Someone such as yourself?  
 (12) A Yes  
 (13) Q And you ve also determined that in order to do the  
 (14) requisite survey inspection testing and excavation work at  
 (15) Granite Bay you would require the assistance of a field  
 (16) archaeologist?  
 (17) A Yes  
 (18) Q And a field ethnohistorian?  
 (19) A That s correct  
 (20) Q And a support worker?  
 (21) A That s correct  
 (22) Q And you ve given your- a contingency for specialists here  
 (23) as well?  
 (24) A That s correct  
 (25) Q And you ve come up with - basically that s 160 hours of

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- (1) time -  
 (2) A That is correct  
 (3) Q - plus analysis Analysis would be outside of the field?  
 (4) A Yes that is  
 (5) Q So 360 hours each for the principal investigator and the  
 (6) lab technician?  
 (7) A That s correct  
 (8) Q For a subtotal of \$57 000 and change?  
 (9) A That s correct  
 (10) Q We can work through the second portion of this In  
 (11) addition to the 50 some odd thousand dollars for direct  
 (12) archaeological costs labor costs to analyze these sites  
 (13) you ve also come up with miscellaneous expenses such as  
 (14) laboratory and office space computer time photographic field  
 (15) communications totaling another \$33 000?  
 (16) A That s correct  
 (17) Q Tying into inflation your total estimate comes up to  
 (18) \$113 300?  
 (19) A Yes that s correct  
 (20) Q Dr Johnson you ve explained to us a couple rationales for  
 (21) undertaking work at a site like Granite Bay One I understand  
 (22) is a concern that there is - a concern for potential future  
 (23) vandalism  
 (24) A That s correct  
 (25) Q That as a result of the oil spill clean up workers went to

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- (1) from the site?  
 (2) A It s my opinion that it s a thing that should be done yes  
 (3) Q So this program in your mind makes sense as an  
 (4) appropriate response to the potential that there would be  
 (5) future site vandalism whether malicious or not?  
 (6) A It s even a little bit broader than that It has to do  
 (7) with both the presence of oil - basically from my  
 (8) perspective is prior to the oil spill there was a certain  
 (9) state After the oil spill there was a different state  
 (10) Q I didn t mean to suggest that was the only one but a  
 (11) principal reason for this program is to extract the science  
 (12) the history the information that can be defined from these  
 (13) resources before somebody shows up and damages them?  
 (14) A Basically the idea is we feel that one needs to recover  
 (15) the archaeological context  
 (16) Q You ve used that term That means the available  
 (17) information that could be defined from both the resources and  
 (18) their relationship to one another is that right?  
 (19) A That s correct and their situation  
 (20) Q Indulge me - a hypothetical  
 (21) Let s assume that there was no threat of future vandalism  
 (22) Let s assume that we could erect a fence an electrified fence  
 (23) around Granite Bay There was no concern on your part of  
 (24) anyone coming back returning to Granite Bay in any way  
 (25) disturbing these resources all right?

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- (1) Granite Bay and they have acquired information that they didn t  
 (2) previously possess and there is concern that one day they may  
 (3) come back and vandalize or loot the site?  
 (4) A Actually I think it s a little broader than that It  
 (5) includes vandalism but other types of impacts as well In  
 (6) other words it involves this idea of loss of confidentiality  
 (7) and that people in the future may be coming back not  
 (8) specifically to vandalize the site but coming back to take a  
 (9) look at it and maybe in the process pick up something which  
 (10) would then be vandal- - I mean there are different levels of  
 (11) vandalism  
 (12) Q But your concern is that because people have information  
 (13) that they didn t possess prior to 1989 they may one day return  
 (14) and disturb a site that would otherwise have gone undisturbed  
 (15) is that right?  
 (16) A Yes It s my opinion with the number of oil spill workers  
 (17) in the area there are a lot more people that know about sites  
 (18) yes  
 (19) Q Incidentally you don t know how many oil spill workers  
 (20) were in Granite Bay do you?  
 (21) A Not specifically at Granite Bay no  
 (22) Q And your theory in proposing a plan of site surveying  
 (23) exploration excavation is that before it s too late before  
 (24) any of these materials fall prey to folks that might return in  
 (25) the future it is necessary to extract the available science

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- (1) What would be the justification in your mind of having  
 (2) Exxon spend \$113 000 to conduct archaeological research at  
 (3) Granite Bay?  
 (4) A Well I guess my perspective on that is that the  
 (5) construction of a metal fence is a form of mitigation I mean  
 (6) there are different ways you can address this change from  
 (7) pre oil spill to post oil spill The method that we have taken  
 (8) in terms of looking at site context the archaeological  
 (9) context that is one approach and from the perspective of  
 (10) science it s a valuable approach So it s sort of  
 (11) replacing - I don t know how to put it I m trying to think  
 (12) how to put this So I guess what it is is with the question  
 (13) with the fence is that that in itself -  
 (14) Q That would take care of the problem for you wouldn t it?  
 (15) A No  
 (16) Q No Let s assume that such a fence was erected let s just  
 (17) assume it exists or that the memories of everybody who went to  
 (18) Granite Bay in 1989 were obliterated so they are no longer a  
 (19) threat to these resources What harms caused by the spill in  
 (20) your mind would be fixed by undertaking the \$113 000  
 (21) program  
 (22) of archaeological restoration that you propose?  
 (23) A What it comes down to again is the threat of vandalism is  
 (24) not the only impact  
 (25) Q Let s assume that away What harms would that program fix  
 (26) that were caused by the spill?

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- (1) A What we re assuming is that it was not oiled and that it  
 (2) was not cleaned up that there was not -  
 (3) Q No I m not assuming that  
 (4) A Well I guess what I m saying is that those are the other  
 (5) impacts and so you can t - it s not the same  
 (6) Q Well you ve told us about your opinion that the cleaning  
 (7) of these beaches the use of washing and the like may well  
 (8) have dislodged archaeological resources may well have  
 pushed  
 (9) them down the beach may well have put them out at the sea  
 (10) Doing \$113 000 of archaeological research at Granite Bay is not  
 (11) going to bring them back will it?  
 (12) A No As a matter of fact any type - no matter what we do  
 (13) we can never restore it to the pre spill condition that s  
 (14) correct  
 (15) Q And you are also concerned or have expressed the opinion  
 (16) that another impact of the oil spill was the possibility - I  
 (17) guess you would say probability that clean up workers may  
 have  
 (18) inadvertently picked up a artifact thrown it into a debris  
 (19) bag barged down to Seattle and sitting in a landfill will  
 (20) never be recovered Your program of \$113 000 of  
 archaeological  
 (21) research is not going to restore that artifact to it s place  
 (22) will it?  
 (23) A Basically you can never restore it to the pre spill  
 (24) condition that is absolutely true  
 (25) Q And if an artifact was pilfered doing the research you

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- (1) propose isn t going to fix that will it?  
 (2) A Basically what it is it is a method of mitigation  
 (3) Q It s not going to fix the fact that an artifact that was  
 (4) once on the site is no longer there?  
 (5) A It s not going to return it to pre spill conditions no  
 (6) Q Isn t it true that your sense that that program ought to be  
 (7) taken at Granite Bay and 43 other places if we put aside a  
 (8) fear of future vandalism as just sort of a notion it s fair  
 (9) that Exxon do something because of potential impacts to  
 (10) artifacts?  
 (11) A Again it s not simply the fear of future impacts it s  
 (12) this change from pre spill conditions to post spill conditions  
 (13) Q Tell the jury specifically what will this program of  
 (14) archaeological research fix that got broken during the spill?  
 (15) A What got broken was the oiling of sites and the clean up  
 (16) activities that caused impact to sites the loss of  
 (17) confidentiality and it s like you can t fix that You can t  
 (18) change that It s like all you can do is basically come up  
 (19) with an answer which is at best - I mean it s not the best  
 (20) answer The best answer is that the oil spill didn t occur  
 (21) Q Well if artifacts got oiled your program of research  
 (22) isn t going to fix that right?  
 (23) A No they were oiled  
 (24) Q And they probably - if they have been recovered they have  
 (25) been cleaned isn t that right?

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- (1) A I would hope that if they have been recovered to date they  
 (2) have been depending on the situation  
 (3) Q They have been curated They are sitting in some  
 (4) collection somewhere?  
 (5) A It s my understanding artifacts collected during the oil  
 (6) spill are being curated yes  
 (7) Q So your program of archaeological exploration for Granite  
 (8) Bay and other places is not intended to fix any oiling of  
 (9) artifacts that may have happened in 1989?  
 (10) A Again I would say that doesn t really characterize what  
 (11) we re doing Again I keep coming back to this because this is  
 (12) what I see as the point We can t restore it to pre spill  
 (13) conditions and basically all you can do is look at it in terms  
 (14) of what should one do? What can one do because things have  
 (15) changed?  
 (16) Q Isn t it true Dr Johnson that putting aside loss of  
 (17) confidentiality and the threat of future vandalism your  
 (18) program of archaeological research at Granite Bay and 43 other  
 (19) places is not a remedy for any of the harms done by the spill  
 (20) or the cleanup?  
 (21) A Again -  
 (22) Q It s not going to fix them?  
 (23) A Again basically there is no remedy I mean in that  
 (24) perspective but this is the answer we recommend as  
 (25) archaeologists

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- (1) Q As archaeologists?  
 (2) A That s correct  
 (3) Q To the best of your knowledge - I think you may have told  
 (4) us this - none of the oil spill workers who were at Granite  
 (5) Bay in 1989 have returned have they?  
 (6) A I don t know if they have or not  
 (7) Q You have no evidence that they have isn t that right?  
 (8) A That s correct  
 (9) Q And isn t it the sheerest speculation on your part that any  
 (10) will?  
 (11) A No I don t think it s just sheer speculation  
 (12) Q What do you base it on?  
 (13) A It is based on the change in terms of what is known about  
 (14) sites and the number of people that were in the oil spill area  
 (15) the fact that there were similarly 10 000 in Prince William  
 (16) Sound and the overall clean up area in 1989 This change in  
 (17) terms of what people know about sites site locations I can t  
 (18) say specifically they are going to come back to Granite Bay  
 (19) but I think that there is a high likelihood that people will be  
 (20) coming back to different sites  
 (21) Q You haven t done any research on the question of whether  
 (22) spill workers have or are likely to return to sites that they  
 (23) cleaned to spoil them vandalize them or otherwise disturb  
 (24) them?  
 (25) A I have not specifically conducted a study no

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- (1) Q And you have not read any such studies have you?  
 (2) A I m trying to think of those that might exist There have  
 (3) been studies on vandalism that I believe Jack Lobdell knows  
 (4) quite a bit about this not myself  
 (5) Q You haven t read any studies concerning Prince William  
 (6) Sound the cleanup and the prospect of future vandalism right?  
 (7) A I think that what would be fair to say is that I have read  
 (8) various documents in the course of the years and many of  
 these  
 (9) have expressed concern for people returning to sites  
 (10) Q I m talking about scientific reputable studies published in  
 (11) reputable journals you haven t read any of those have you?  
 (12) A No I have not  
 (13) Q No one has done any research on that have they?  
 (14) A I do not know  
 (15) Q So you re basically telling us there is a threat of future  
 (16) vandalism based on your own common sense correct?  
 (17) A It s In part my common sense but also I believe it s  
 (18) through my review of just all the documents - well that I ve  
 (19) gone through and various opinions about the likelihood of  
 (20) future vandalism Also there are reports about vandalism  
 (21) and again I believe that Jack Lobdell will speak a little  
 (22) more on this  
 (23) Q Doesn t common sense tell you that if an oil spill worker  
 (24) was going to return to Granite Bay to take artifacts or  
 (25) otherwise disturb the location he or she would have done that

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- (1) in the first five years?  
 (2) A Not necessarily  
 (3) MR DIAMOND Your Honor I have not been keeping  
 (4) track of time  
 (5) THE COURT It s been about an hour so - but the  
 (6) jury was going in and out so I was going to let it go You  
 (7) can call it  
 (8) MR DIAMOND I can call time out myself?  
 (9) THE COURT Yes  
 (10) BY MR DIAMOND  
 (11) Q Let me ask you about another Chugach site Evans Island I  
 (12) think we actually have a map - did I say Chugach? This is  
 (13) a - I said Chugach This is a Chenega site Do you know  
 (14) where this one is?  
 (15) A Yes I do  
 (16) Q You ve not been to this site have you?  
 (17) A I believe that I ve been along the shoreline I don t  
 (18) believe that we landed at that particular location  
 (19) Q You have not inspected the archaeological artifacts  
 (20) remains resources at this location have you?  
 (21) A No I don t believe no  
 (22) Q So all of your knowledge about the artifacts at this Evans  
 (23) Island location is based on documents you ve read?  
 (24) A Yes documents I ve read And I m trying to think I may  
 (25) have spoken with another archaeologist about it but primarily

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- (1) the documents yes  
 (2) Q I m going to put on the screen defendants 15335 I ll  
 (3) give you a minute This is a Dr Lobdell s 1992 report  
 (4) Waiting for counsel s approval  
 (5) You recognize this as Jack Lobdell s 1992 report?  
 (6) A Yes  
 (7) Q And you ve reviewed this have you not?  
 (8) A Yes I have  
 (9) Q If we could turn to the page that has the number 300259  
 (10) that deals with Evans Island Blow it up  
 (11) This is the portion of Dr Lobdell s report that summarizes  
 (12) the archaeological resources at this location and I point out  
 (13) to you that Dr Lobdell mentions historic site existing of  
 (14) milled lumber with nails CMTs including saw cut tree stumps  
 (15) Are you aware of any other archaeological resources at this  
 (16) location?  
 (17) A I believe it is considered an historic site It may have  
 (18) been Phippen one of the Exxon archaeologists I don t  
 (19) remember exactly who it was that did a survey of this area and  
 (20) I think he thought that there was very high potential for  
 (21) additional cultural remains in the area  
 (22) Q Potential?  
 (23) A Yes  
 (24) Q My question is Are you aware of any other known  
 (25) archaeological or cultural materials?

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- (1) A I believe that these are the physical remains that have  
 (2) been identified basically the obvious physical remains that  
 (3) have been identified  
 (4) Q So the answer to my question is yes you re not aware of  
 (5) any others?  
 (6) A I would have to look back As I sit here right now I m  
 (7) not aware of any We may have covered the additional ones  
 (8) based on AHRs forms Actually I m not sure if this one even  
 (9) has an AHRs form  
 (10) Q This is your moment in the sun do you want to consult  
 (11) anything? Do you have a cheat sheet we could hand you?  
 (12) A No Actually I think that basically this is what I  
 (13) understand is there in terms of the milled lumber with the wire  
 (14) nails and culturally modified trees That s fine And also  
 (15) cut stumps  
 (16) Q To your knowledge none of the materials - the wood with  
 (17) nails or the culturally modified trees - relate to Native as  
 (18) opposed to non Native activities?  
 (19) A Actually I would suspect that with the culturally modified  
 (20) trees here and other locations that there is a high probability  
 (21) that it did pertain to Native activities yes  
 (22) Q You don t know that do you?  
 (23) A There is a pretty good indication that many of the CMTs are  
 (24) related to Native activity  
 (25) Q These?

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- (1) A I haven't seen these particularly cultured modified trees  
 (2) to --  
 (3) Q So you can't tell us that they relate to any Native  
 (4) activity?  
 (5) A No, but I think there is a high probability that they do  
 (6) Q You have no knowledge of any oil getting on these  
 (7) materials?  
 (8) A I don't believe that the particular milled lumber or trees  
 (9) or cut stumps have oil on them  
 (10) Q It is true, Dr. Johnson, that you have no knowledge  
 (11) whatsoever of any damage done to these resources during the  
 (12) course of the cleanup?  
 (13) A Again, to these specific items, I'm not particularly aware  
 (14) of any damages, no.  
 (15) Q It is true, is it not, Dr. Johnson, that you're not aware  
 (16) of any damage done to the actual physical location where these  
 (17) items are located?  
 (18) A I believe that the site was oiled.  
 (19) Q At the location of the milled lumber with nails?  
 (20) A At the site location, yes.  
 (21) Q Isn't it true you have no knowledge of oil getting on any  
 (22) of the materials?  
 (23) A Again, I think what's important to point out is the  
 (24) distinction between remains, such as this milled lumber, wire  
 (25) nails, culturally modified trees or sawed stumps, what I call

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- (1) indicators of the site, these are the things that are readily  
 (2) visible and the site itself.  
 (3) And again, from my experience, in terms of documentation  
 (4) of sites, it's that you often go through a step process, and  
 (5) going back to Kake Cove, one of the sites we were talking about  
 (6) yesterday, it was first identified in terms of a culturally  
 (7) modified tree and a battered cobble, which is similar to this  
 (8) in terms of a few remains.  
 (9) The next step eventually is you do survey work to see if  
 (10) in fact there was additional materials out there. I have seen  
 (11) other historical sites where they have only recorded few  
 (12) physical remains, but in fact there is a lot more to the site  
 (13) than just three objects that are reported either in the AHRS  
 (14) forms or in summaries that archaeologists write up, that  
 (15) basically these are usually records of field works which are  
 (16) basically notes.  
 (17) So in terms of what the site consists of versus you might  
 (18) say the identifiers of the site, there is a difference.  
 (19) Q This may be one of those, what do they call them,  
 (20) tautologies, question with his own answer, you have no  
 (21) knowledge, do you, of any buried cultural or archaeological  
 (22) materials at Evans Island that have not been unearthed yet?  
 (23) A As I believe -- I don't believe I've been to the site.  
 (24) However, from my experience as an archaeologist, when one  
 (25) finds physical remains such as this, this is a high probability that

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- (1) there will be something below to the surface.  
 (2) Q But you don't know that?  
 (3) A I don't know that would certainly be the case, but it's  
 (4) definitely a possibility.  
 (5) Q The best you could give us is an educated guess?  
 (6) A No, I think it would be a professional opinion.  
 (7) Q Isn't it also possible that there is nothing else on Evans  
 (8) Island?  
 (9) A At this particular location?  
 (10) Q Yeah.  
 (11) A This is what has been identified to date.  
 (12) Q So it's possible that there are no subsurface, no buried  
 (13) artifacts anywhere near the shoreline?  
 (14) A Again, based on my own experience of survey sites such as  
 (15) this, I have surveyed a -- quite a few where there were only a  
 (16) few indicators, and even without doing subsurface testing  
 (17) ourselves, there were times when we were able to look at  
 (18) exposed banks and, in fact, find subsurface deposits or find more  
 (19) extensive physical remains even on the surface. And very  
 (20) often, especially with historical sites, you have moss covering  
 (21) a lot of the remains, and so that's -- you know, that would be  
 (22) part of what the program would be -- would entail, would be  
 (23) looking at this.  
 (24) Q You have no reason to believe that there are any artifacts  
 (25) scattered along the site around the milled lumber or CMTs that

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- (1) has not already been discovered?  
 (2) A No, I think there is a high likelihood there will be.  
 (3) Q That's a guess on your part, you can't tell the jury there  
 (4) will be?  
 (5) A I don't believe it's a guess. I think it's my professional  
 (6) opinion that there is a high probability.  
 (7) Q High probability. And with respect to any of those  
 (8) artifacts, you can't tell the jury that any of them were oiled  
 (9) isn't that right?  
 (10) A I would say that that's correct.  
 (11) Q So you can't tell us that anything that may be out there  
 (12) that you don't know about for sure, but think that there is a  
 (13) high probability may exist, was damaged by the oil?  
 (14) A Again, we have to go back to the differences --  
 (15) Q Can you answer my question before you go back?  
 (16) MR FORTIER, Your Honor, I object, counsel's  
 (17) arguing --  
 (18) THE COURT, Let's hear the question, counsel, start  
 (19) all over again. Give the question and let her answer the  
 (20) question.  
 (21) BY MR. DIAMOND.  
 (22) Q With respect to any artifacts that may still be lying  
 (23) around the surface at this Evans Island location, isn't it  
 (24) correct, Dr. Johnson, that you can't tell us that any of them  
 (25) were harmed by oil?

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- (1) A Again you re referring to artifacts that have been  
 (2) identified?  
 (3) Q No You just told us there is a high probability that  
 (4) there may well be artifacts laying on the surface in the  
 (5) vicinity of these CMTs and boards with nails With respect to  
 (6) any that may be there you don t know whether any were  
 harmed  
 (7) by Exxon Valdez oil isn t that a true statement?  
 (8) A I guess I would say no  
 (9) Q You know that there are artifacts out there and that they  
 (10) were harmed by the Exxon Valdez oil?  
 (11) A No I guess what I m saying - maybe I am getting confused  
 (12) with what you re saying but I understand that first - what I  
 (13) was saying before is that I believe that there is a high  
 (14) probability that there are additional remains out there in  
 (15) addition to what has been listed here And of those there is  
 (16) a - it s quite possible that there are artifacts that are in  
 (17) the intertidal area that were oiled  
 (18) Q And it s equally plausible that if there are such  
 (19) artifacts that they weren t oiled isn t that right?  
 (20) A If they - well again I d have to look at what the degree  
 (21) of oiling was at this particular location  
 (22) Q Assuming this was a lightly oiled spot it s equally  
 (23) plausible that those artifacts were not oiled?  
 (24) A Again it s quite possible that specific artifacts were  
 (25) not but again my focus as an archaeologist is on the entire

- (1) A Basically what I m saying I believe I was talking about  
 (2) subsurface testing in terms of that but it would apply to even  
 (3) survey work but generally from my experience in terms of  
 going  
 (4) out I tend to find more than what has been reported and so  
 (5) from my own perspective I would expect to find something in  
 (6) addition to what s listed here  
 (7) BY MR DIAMOND  
 (8) Q Isn t it a true statement that even when there are cultural  
 (9) resources which suggest something until you start digging you  
 (10) don t know whether there is going to be anything in the  
 (11) subsurface?  
 (12) A No that s not true I -  
 (13) Q Didn t you testify to that yesterday?  
 (14) MR FORTIER She didn t finish  
 (15) A No And if I did I wasn t correct because there are  
 (16) different ways of determining subsurface deposits Testing is  
 (17) an approach In terms of field work that I conducted one can  
 (18) also look at exposed banks and see subsurface deposits but  
 (19) testing in terms of the extent of the site in the uplands yes  
 (20) once you re up in the uplands and have a vegetated cover you  
 (21) would need to dig yes  
 (22) BY MR DIAMOND  
 (23) Q You haven t done any digging at Evans Island to test this  
 (24) hypothesis?  
 (25) A That s correct

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- (1) site not just specific artifacts So the site would be oiled  
 (2) Q The answer to my question is You don t know and you can t  
 (3) tell us whether there are any artifacts out there that were  
 (4) harmed by Exxon Valdez oil?  
 (5) A I can t say without a doubt there are no  
 (6) Q All you can say is that there is a probability of them at  
 (7) best?  
 (8) A Yes  
 (9) Q Don t you have to do some testing in order to know?  
 (10) A Testing to know whether they were oiled or not?  
 (11) Q In order to know whether there are any archaeological  
 (12) resources along a shoreline don t you have to go out and  
 (13) investigate first and do some testing?  
 (14) A Well first the evidence that we have right now shows that  
 (15) there are cultural remains there  
 (16) Q But as to whether there are any additional that may be in  
 (17) the shoreline that have not yet been discovered isn t it true  
 (18) that you don t know until you go out and do some testing?  
 (19) A One would have to go out and take a look yes  
 (20) Q Didn t you tell us yesterday that sometimes you come up  
 (21) empty handed?  
 (22) A At times you do  
 (23) Q And until -  
 (24) MR FORTIER Can she finish  
 (25) THE COURT Go ahead and finish

- (1) Q You haven t done any digging to test this hypothesis at any  
 (2) of your 44 locations true?  
 (3) A No I did not do subsurface testing with the exception of  
 (4) McArthur Pass  
 (5) Q And that was as part of the joint Exxon effort to remediate  
 (6) that site?  
 (7) A Yes the National Park Service and Chugach worked in the  
 (8) uplands and Exxon worked in the intertidal area  
 (9) MR DIAMOND Your Honor this would be a good time  
 (10) THE CLERK Please rise This court stands in  
 (11) recess  
 (12) (Jury out at 10 15 a m )  
 (13) (Recess from 10 15 a m to 10 28 a m )  
 (14) (Jury in at 10 28 a m )  
 (15) THE CLERK Please rise This court now resumes in  
 (16) session Please be seated  
 (17) BY MR DIAMOND  
 (18) Q Dr Johnson when we broke we were talking about Evans  
 (19) Island one of the Chenega sites Refresh everybody s  
 (20) recollection This is the site with the milled lumber and wire  
 (21) nails culturally modified trees and saw cut tree stumps You  
 (22) did a damage analysis of this site as well as did you not?  
 (23) A Yes in conjunction with Jack Lobdell  
 (24) Q And let me place before you plaintiffs Exhibit 1542 page  
 (25) 15819 That s your damage analysis for Evans Island?

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- (1) A Yes that s our damage analysis uh huh  
 (2) Q And you are quantifying the costs of the study program that  
 (3) you think is appropriate for Evans Island as what roughly 160  
 (4) hours of archaeologists and ethnohistorian time 360 hours of  
 (5) analysis for a total of \$57 500 roughly?  
 (6) A That s correct  
 (7) Q And then your program would also entail support costs  
 (8) amounting to another 35 000?  
 (9) A That s correct  
 (10) Q So the total you are seeking for the site which consists  
 (11) of some milled lumber wire nail culturally modified trees and  
 (12) saw cut tree stumps is \$115 000?  
 (13) A Again the 115 is for the site yes  
 (14) Q If you could turn to the third Chenega Corporation site  
 (15) Guguak Bay are you familiar with that?  
 (16) A Yes  
 (17) Q That s based on your readings?  
 (18) A Yes  
 (19) Q Never been to this site either?  
 (20) A No I haven t  
 (21) Q There are really two sites are there not or two finds at  
 (22) Guguak bay?  
 (23) A Basically there are two AHRS numbers assigned to cultural  
 (24) remains in the area  
 (25) MR DIAMOND Counsel I m going to put up DX10597

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- (1) diagram of Guguak Bay It s hard to read but let me blow up  
 (2) this section  
 (3) MR FORTIER Before you do that could we approach  
 (4) the bench?  
 (5) (Bench conference off the record)  
 (6) MR DIAMOND Your Honor I cannot do that it s  
 (7) technically impossible  
 (8) THE COURT There is always a simple solution to a  
 (9) problem counsel  
 (10) MR DIAMOND Can we put that back up please?  
 (11) BY MR DIAMOND  
 (12) Q This is a rough depiction of the Guguak Bay area is it  
 (13) not?  
 (14) A That s correct  
 (15) Q And there are two separate AHRS listings for Guguak Bay  
 (16) are there not?  
 (17) A That s correct  
 (18) Q And that s because the cultural resources were found at two  
 (19) locations correct?  
 (20) A Basically yeah two  
 (21) Q And as far as you are concerned there is no connection  
 (22) between the two though?  
 (23) A It s very unlikely  
 (24) Q Let s take a look at this location here first northernmost  
 (25) island The archaeological resources at this portion of Guguak

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- (1) Island exist of a metal pulley that was found in the intertidal  
 (2) zone  
 (3) A That s correct  
 (4) Q That s the only thing that s ever been found there is that  
 (5) correct?  
 (6) A That s correct  
 (7) Q Can we put up 10600-83? 10600-83  
 (8) This is a photograph of that pulley is it not  
 (9) Dr Johnson?  
 (10) A Yes it s been collected  
 (11) Q You ve seen photographs of this before?  
 (12) A That s correct  
 (13) Q And this is the only known archaeological or cultural  
 (14) resource ever discovered at the northern island at the Guguak  
 (15) Bay site?  
 (16) A This is the - yeah this is a cultural remain that s been  
 (17) collected from the site  
 (18) Q You don t have the foggiest notion where this came from do  
 (19) you?  
 (20) A From the north end of the island  
 (21) Q You don t have the foggiest notion how it got there?  
 (22) A No  
 (23) Q It was just found lying in the intertidal zone wasn t it?  
 (24) A That s correct  
 (25) Q You have no idea of the origin of this metal pulley? 7<sup>W</sup>

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- (1) A No I haven t really done any investigation  
 (2) Q And you have no knowledge of any connection it might have  
 (3) to Native activities?  
 (4) A That s correct  
 (5) Q You don t even know how old it is?  
 (6) A That s correct Historic  
 (7) Q Historic means more than 50 years?  
 (8) A That s correct  
 (9) Q How do you know that it s historic?  
 (10) A I would assume both by the corrosion the type of pulley it  
 (11) is in general and also the fact that it s listed in the AHRS  
 (12) system that it is historic  
 (13) Q You assume based on the fact that the State included it in  
 (14) survey forms?  
 (15) A Yes  
 (16) Q You re not an expert on pulleys?  
 (17) A That s correct  
 (18) Q This pulley was recovered from the intertidal zone where it  
 (19) was found?  
 (20) A That s correct  
 (21) Q And it s now at the University of Fairbanks museum?  
 (22) A I believe that s where it is  
 (23) Q All cleaned off if it ever was oiled?  
 (24) A I would assume that it was but  
 (25) Q DX16142 11 I d like to talk about the cultural resources

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- (1) found at the other island the southernmost island This is an
- (2) AHRs form is it not?
- (3) A Yes it is
- (4) Q And it indicates Guguak hearth?
- (5) A That s correct
- (6) Q The form says this site exists of a probable hearth
- (7) located above a seal haulout and it gave a measurement and
- (8) then it says exists of rocks on two sides and the base of a
- (9) large hemlock as the third site Do you see that?
- (10) A Yes
- (11) Q You re not aware of any other archaeological or cultural
- (12) resources found on the southern island in the Guguak Bay
- (13) area?
- (14) A This is what has been identified there
- (15) Q You have no knowledge of anything else?
- (16) A I have no specific knowledge of other cultural resources
- (17) that have been reported or documented no
- (18) Q You ve seen photographs of the hearth haven t you?
- (19) A Yes
- (20) Q There is some doubt in your mind as to whether it s
- (21) actually a hearth?
- (22) A It appears as though it is
- (23) Q Are you sure?
- (24) A I d have to - as I said I haven t been to the site I
- (25) would go out to the site and take a look I could probably
- (26) give a better opinion

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- (1) Q You gave deposition testimony in this case did you not?
- (2) A Yes I did
- (3) Q And you were asked about this hearth were you not?
- (4) A I believe I was yes
- (5) Q Page 146 - can I get a copy of that I m going to show
- (6) you page 146 of your deposition of December 6 1993 and
- (7) direct
- (8) your attention to lines 14 through 18 Do you recall giving
- (9) deposition testimony in this case?
- (10) A Yes
- (11) Q Do you recall that you were sworn and told that the answers
- (12) you gave were under penalty of perjury? Counsel for the Native
- (13) corporation was in attendance?
- (14) A Yes
- (15) Q Were you not asked And when you state on page 19 that
- (16) there is the presence of a probable hearth does that indicate
- (17) that there is some doubt as to whether an actual hearth exists
- (18) or not?
- (19) Answer Yes The wording probable hearth is taken from
- (20) the AHRs site report
- (21) Did you not give that answer?
- (22) A Yes
- (23) Q So you don t know whether this is an actual hearth or not?
- (24) A No It s listed as a probable hearth
- (25) Q And you have no information as to who might have - a
- (26) hearth that s just a ring of rocks or an assembling of rocks

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- (1) inside one would make a fire?
- (2) A Yes it s usually slabs
- (3) Q Kayakers and campers make hearths don t they?
- (4) A I don t believe they make them quite like this
- (5) Q Isn t it true you have no reason to say that this hearth
- (6) could not have been built by some kayaker or fisherman in the
- (7) area?
- (8) A I cannot prove that it was not but based on the setting
- (9) and the probable hearth again that it is a probable hearth of
- (10) historic - from historic times I think that s what it s
- (11) thought to be
- (12) Q Dr Johnson it could have been built by some kayakers or
- (13) fishermen in the area correct?
- (14) A I believe with its setting and the lack of like recent
- (15) campfire at the area I believe that that must be what the
- (16) setting is Again I would need to take a look at it in the
- (17) field to make a distinction between a definite hearth a
- (18) probable hearth and not a hearth
- (19) Q Page 698 of Dr Johnson s deposition lines 9 through 14
- (20) I m going to place in front of you page 698 of your deposition
- (21) and direct your attention on lines 9 through 14 Did you not
- (22) state as part of an answer but you re right that it could be
- (23) connected with you know fishermen or kayakers or something
- (24) else
- (25) Question So right now in your mind it s not clear one

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- (1) way or another
- (2) Answer That s correct
- (3) You gave those answers did you not?
- (4) A Can I take just a second to look at the context sir?
- (5) Q You certainly can So the jury can see what we re all
- (6) reading those were your answers were they not?
- (7) A That s correct
- (8) Q Do you want to change your sworn testimony?
- (9) A Well basically it s pretty much the same as what I m
- (10) saying here That based on the AHRs form that the hearth has
- (11) been - or these stones out there have been identified as a
- (12) probable hearth What was discussed is it is - you know it
- (13) is a possibility that it could be something that was done by
- (14) kayakers at some point in the past
- (15) Again when I think about it I go back to the original
- (16) identification of it as a probable hearth suggesting that it
- (17) is historic Again because of its entry in the AHRs system
- (18) but I can t swear that the possibility that it s you know
- (19) made by kayakers I can t swear that that is definitely not a
- (20) possibility
- (21) Q Thank you DX1268 824 please 1268 824
- (22) Dr Johnson this is the program of archaeological
- (23) exploration excavation et cetera that you did for Guguak Bay
- (24) jointly with Dr Lobdell is it not?
- (25) A That s correct

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- (1) Q This one is a little less expensive Your budget for the  
 (2) principal archaeological investigator and so forth is -  
 (3) together with the analysis is \$36 800?  
 (4) A That s correct  
 (5) Q And your total for doing exploration and excavation of this  
 (6) site which contains - once contained a pulley and a possible  
 (7) hearth is \$83 000?  
 (8) A I think what needs to be explained is what this refers to  
 (9) The dollar amount is -  
 (10) Q That s all I asked The dollar amount right is it not?  
 (11) A The dollar amount is right but it does not pertain to  
 (12) investigation simply of the pulley and the hearth itself It  
 (13) pertains to the recovering archaeological context of the site  
 (14) associated with these features  
 (15) Q Dr Johnson isn t it the case that you are not aware of  
 (16) any other archaeological resources or cultural resources at  
 (17) either of the two locations?  
 (18) A At the specific locations this is what has been reported  
 (19) I think what s important to understand is that there are also  
 (20) culturally modified trees that have been identified in the  
 (21) vicinity specifically to the east And so based on the  
 (22) presence of these culturally modified trees and the presence of  
 (23) this probable hearth it is felt that there is likely to be -  
 (24) well that there is a site there and this is what this  
 (25) addresses

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- (1) In terms of the damage calculations and basically what s  
 (2) important to understand we re looking at it in terms of what  
 (3) type of field work we feel or what type of investigations we  
 (4) feel is necessary again to recover the archaeological  
 (5) context Our focus in this particular case was on the probable  
 (6) hearth also with the presence of these culturally modified  
 (7) trees in the vicinity this together suggests that we need to  
 (8) look at it in terms of what type of activities were occurring  
 (9) at the location of the hearth  
 (10) It s quite possible that investigations will also - we ll  
 (11) become aware of additional cultural features in particular  
 (12) other culturally modified trees in the area possibly also  
 (13) subsurface deposits The pulley itself basically was  
 (14) associated with this area because it was found in the area and  
 (15) it s in the general geographic area  
 (16) The reason why I included this as a cultural feature  
 (17) associated with the areas that I m not sure whether it s -  
 (18) comes from the shipwreck or whether it represents historic  
 (19) activity in the area and I think in terms of the  
 (20) investigations one needs to consider both the probable hearth  
 (21) and these culturally modified trees in the vicinity which  
 (22) suggest Native activity But one also needs to consider this  
 (23) pulley which suggests industrial - historical industrial  
 (24) activity in the area  
 (25) So when we re listing these different AHRS site

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- (1) designations we re listing them just to provide as much  
 (2) information as we can about the identified cultural features in  
 (3) the area The investigations are based on the presence of  
 (4) these but also on the probability based on my and Jack s  
 (5) opinion that these indicators indicate that there is a site  
 (6) there  
 (7) So in terms of the damage assessment for this particular  
 (8) site we re looking at a week s worth of work in the field and  
 (9) analysis of this which would include studies into where - what  
 (10) this pulley is associated with if it is from a shipwreck or  
 (11) whether there was historical activity in the area we re  
 (12) looking at trying to identify what prehistoric activity there  
 (13) might have been and what historic activity there might have  
 (14) been in the area  
 (15) So in answer to your question yes this damage assessment  
 (16) does pertain to the pulley and the hearth but it s a little  
 (17) bit more complex than simply those two identified cultural  
 (18) remains And in fact with the pulley since it has been  
 (19) recovered it s like we would obviously be going back out to  
 (20) the location this general area looking for historical  
 (21) remains as well as prehistoric remains as well  
 (22) Q Dr Johnson did you rehearse that answer with counsel for  
 (23) the Native corporations during our break?  
 (24) A No I did not  
 (25) Q You discussed it with them didn t you?

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- (1) A No I did not  
 (2) Q You have no knowledge knowledge of the existence of any  
 (3) other cultural resources in this area Isn t that right?  
 (4) A As I mentioned there are culturally modified trees in the  
 (5) area  
 (6) Q Other than culturally modified trees in the area you have  
 (7) no knowledge of any cultural or historical resources in this  
 (8) area correct?  
 (9) A Based on archaeological evidence there is more tradition  
 (10) about Native activity in the area  
 (11) Q Let s see if you can answer my question for the jury Do  
 (12) you know whether there is anything else of archaeological or  
 (13) cultural significance?  
 (14) A Again in terms of the physical features these are the  
 (15) physical features that I m aware of  
 (16) Q And there are no others that you know of correct?  
 (17) A There are no others that I know have been documented no  
 (18) Q And you have not done any digging or other exploration in  
 (19) search of any others correct?  
 (20) A That s correct  
 (21) Q You want Exxon to pay for that correct?  
 (22) A What we are looking at in terms of the assessment again  
 (23) goes back to - it s the whole process The pre spill  
 (24) condition versus post spill condition This is a program that  
 (25) we are recommending in terms of data recovery so in that

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- (1) respect yes we are
- (2) Q To find out whether there is anything else out there
- (3) correct?
- (4) A Basically what we re looking at is identifying and
- (5) documenting the archaeological context of this site yes
- (6) Q Let s go to some Chugach sites?
- (7) MR McCALLION What was that again?
- (8) MR DIAMOND 1544
- (9) MR McCALLION Was this on your predesignated
- (10) cross examination list?
- (11) MR DIAMOND I think it s on yours
- (12) BY MR DIAMOND
- (13) Q Dr Johnson to show you what we ve marked as plaintiffs
- (14) 1544 this is a list of Chugach Alaska Corporation sites is it
- (15) not?
- (16) A Yes it is
- (17) Q And next to each is the amount of dollars that you
- (18) calculated would be necessary to conduct what you view as
- (19) appropriate archaeological research at each?
- (20) A Yes
- (21) Q Let s talk about Culross Island south which is the fourth
- (22) one and which you ve estimated expenses of about \$243 000
- (23) I ll show you PX12084-43 photograph?
- (24) MR McCALLION That s plaintiffs exhibit
- (25) MR DIAMOND That s - I don t know the number PX or

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- (1) Culross Island south this is one of the things you relied on?
- (2) A This is one of the documents I relied on yes
- (3) Q And this site consists of the following resource does it
- (4) not CMTs 12 tree stumps and fire cracked rock that may be of
- (5) modern origin?
- (6) A The site at the south end of Culross Island based on
- (7) documentation and conversation with Bureau of Indian Affairs
- (8) archaeologists I understand the site has both an historic
- (9) component and prehistoric component It includes fire cracked
- (10) rock I believe it also includes prehistoric artifacts and
- (11) then there is also an historical component
- (12) Q With respect to the features that are out there the AHRS
- (13) survey report lists them all at least all those that are
- (14) known?
- (15) A No I don t believe it does
- (16) Q What additional archaeological features are you aware of
- (17) that are not listed in the AHRS survey report?
- (18) A I believe there are additional historic remains that are
- (19) not recorded and in fact this may not include - I mean
- (20) there is reference to fire cracked rock but I may not actually
- (21) refer to the fire cracked rock that were found in the area
- (22) Q Do you think there is additional fire cracked rock that is
- (23) not listed on this report?
- (24) A Basically what it is there are two different locations for
- (25) this particular site One of them is primarily an historic

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- (1) DX
- (2) MR FORTIER Must be a DX number
- (3) Your Honor we object showing a photograph that was not on
- (4) any predesignation list that we received
- (5) MR DIAMOND I think we -
- (6) THE COURT I m not going to go through this
- (7) counsel You can show the photograph
- (8) BY MR DIAMOND
- (9) Q Dr Johnson do you recognize this as a photograph of the
- (10) Culross Island south area?
- (11) A I do not recognize it no
- (12) Q Is that because you ve never been to this location either?
- (13) A I have been to the area just south of Culross Island and
- (14) I ve had the opportunity to look at the site from the south so
- (15) I m familiar with site locations from that perspective
- (16) Q You ve just never seen it from that vantage point?
- (17) A Yes I m not sure which vantage point this is
- (18) Q You ve never physically inspected the site have you?
- (19) A That s correct
- (20) Q And your information about what s out there in Culross
- (21) Island south is based on other people s accounts correct?
- (22) A Yes on documents
- (23) MR DIAMOND DX1614 13 AHRS report
- (24) BY MR DIAMOND
- (25) Q Dr Johnson you re familiar with this AHRS form the

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- (1) site and the second is prehistoric The AHRS documentation
- (2) does not always provide all of the information for these
- (3) sites My information for this one comes both from the AHRS
- (4) information and also through conversations with Bureau of
- (5) Indian Affairs archaeologists
- (6) Q The Native corporations are not making any claim to any
- (7) harm to any other AHRS site location in Culross south are
- (8) they?~
- (9) A There is not others currently identified
- (10) Q You are aware of another location on Culross Island that
- (11) contains fire cracked rock?
- (12) A Yes it s actually a small islet just south
- (13) Q On the mainland of Culross Island or on the mainland you
- (14) are not aware of any other cultural resources?
- (15) A I think it s best to explain this The site that Chugach
- (16) Alaska Corporation has identified as a site includes both the
- (17) location that is described here that s on the mainland It
- (18) also includes the islet just to the south which also includes
- (19) prehistoric remains So one of the words of caution is that
- (20) the Alaska heritage resource surveys does not always include
- (21) all of the information that is available partly because it s a
- (22) working process in terms of documenting it It kind of comes
- (23) in spurts so this does represent some of the cultural remains
- (24) that are known to be located in the area but in addition to
- (25) that there is additional remains

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- (1) Q What are the prehistoric remains on the other land mass  
 (2) that you referred?  
 (3) A I believe that it is fire cracked rock and prehistoric  
 (4) artifacts that have been identified on this site location  
 (5) There may also be culturally modified trees  
 (6) Q Other than those fire cracked rocks and artifacts and  
 (7) what's listed here on the Alaska Heritage Resource Survey form  
 (8) are you aware of any other features or resources at this  
 (9) location?  
 (10) A Again I believe that there are also culturally modified  
 (11) trees as mentioned here but also in the other site as well  
 (12) Q All of the cultural modified trees at the Seward 060 site  
 (13) are in the upland are they not?  
 (14) A Yes I believe that they are  
 (15) Q And there is no indication that any of those were oiled?  
 (16) A I don't know I don't believe that they were  
 (17) Q You're not aware of any vandalism to this site during the  
 (18) course of the Exxon Valdez oil spill cleanup?  
 (19) A I'm not aware of specific cases of vandalism no  
 (20) Q And you have no knowledge of any vandalism taking place at  
 (21) this site in the last five years?  
 (22) A I'm not aware of specific cases of vandalism no  
 (23) Q Are you aware of any general cases of vandalism at this  
 (24) site?  
 (25) A Again I think the distinction should be made between

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- (1) vandalism and impacts It's like there is a concern for  
 (2) impacts to it  
 (3) Q Are you aware of any disturbances to this site that have  
 (4) taken place since the end of the cleanup?  
 (5) A I am not aware of specific impacts no  
 (6) Q You've calculated an appropriate amount of expenditures for  
 (7) this site as well?  
 (8) A Yes we did for this site  
 (9) Q DX16157 My triggerman made a mistake I'll blow up this  
 (10) and you can read it better  
 (11) MR FORTIER Your Honor I'll just note an  
 (12) objection This is another document that wasn't designated  
 (13) It's outside -  
 (14) THE COURT I'm going to explore the issue on the next  
 (15) break We'll see what was designated and what wasn't This  
 (16) case has got to flow a little bit and I can't take these  
 (17) things at the bench every time somebody THINKS a document  
 (18) wasn't designated  
 (19) BY MR DIAMOND  
 (20) Q Your analysis of this site suggests this is a bigger  
 (21) project than the ones we've looked at before?  
 (22) A Yes  
 (23) Q You've estimated \$120,500 for archaeologists' time doing  
 (24) this research work?  
 (25) A Yes that is what the dollar amount is

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- (1) Q And your total for this site as I said before is roughly  
 (2) a quarter of a million dollars?  
 (3) A That's correct  
 (4) Q Do you know Danger Island?  
 (5) A Yes  
 (6) Q What's at Danger Island?  
 (7) A There are historic remains  
 (8) Q What remains?  
 (9) A Structural remains as I understand it What the site is  
 (10) it is a Chugach site heritage site and it's known as a  
 (11) location that in the past people from Chenega would have gone  
 (12) to And the reason why they went there was to select a certain  
 (13) kind of seaweed this type of thing and so it's known that  
 (14) there is some sort of - it's a location of some sort of  
 (15) activity and that there would have been some sort of temporary  
 (16) settlement in the least at this location The physical remains  
 (17) for it that have been documented to date are structural  
 (18) remains  
 (19) Q Can you be any more specific than just saying structural  
 (20) remains?  
 (21) A No I'm afraid that I can't  
 (22) Q DX16141 56 counsel Put on the screen a description  
 (23) according to AHRS report of Danger Island did you see that?  
 (24) A Yes  
 (25) Q The known resources at this location consist of a log and

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- (1) board ruin correct?  
 (2) A Yes  
 (3) Q And a possible smokehouse?  
 (4) A That's correct  
 (5) Q And a collapsed cabin?  
 (6) A That's correct  
 (7) Q And to your knowledge all of these resources are in the  
 (8) uplands are they not?  
 (9) A My understanding is that these are in the uplands  
 (10) Q And these were not oiled?  
 (11) A I don't believe that these particular remains were oiled  
 (12) Q You have no indications of any disturbances during the  
 (13) course of the cleanup at this location?  
 (14) A I believe that the island itself was heavily oiled and so  
 (15) in terms of disturbance that clean up activity that occurred  
 (16) would have been had some sort of impact  
 (17) Q Are you aware of any disturbances during the course of the  
 (18) cleanup to these specific cultural archaeological resources?  
 (19) A Not to these listed here no  
 (20) Q To your knowledge no clean up workers have returned to  
 (21) the  
 (22) Danger Island site in the past five years?  
 (23) A I don't know that they have no  
 (24) Q You have no information to that effect?  
 (25) A No I do not  
 (25) Q Your analysis of this site suggests that appropriate

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- (1) exploration excavation documenting et cetera would require
- (2) 250 hours for two archaeologists and ethnohistorian and support
- (3) workers Does that look about right?
- (4) A That sounds about right
- (5) Q 520 hours of analysis correct?
- (6) A I'd have to look at our forms
- (7) Q Elmo please
- (8) And you're requesting \$117,000 for that?
- (9) A Yes
- (10) Q Rua Cove do you know that one?
- (11) A Yes I do
- (12) Q That's a Chugach site?
- (13) A That's correct
- (14) Q You were there in 1990 were you not?
- (15) MR DIAMOND Counsel I want to show 10600
- (16) photograph number 87
- (17) BY MR DIAMOND
- (18) Q Does that appear to be a photograph of the Rua Cove area?
- (19) A It appears to be an aerial photograph
- (20) Q DX 16141 44 survey report Elmo please
- (21) Dr Johnson the known archaeological features at this site
- (22) include a wood frame cabin correct?
- (23) A Yes
- (24) Q That's in the woods?
- (25) A That's correct

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- (1) Q The remains of three tent frames correct?
- (2) A That's correct
- (3) Q And a road extending to the valley?
- (4) A That's correct
- (5) Q And remains of two collapsed frame structures at the end of
- (6) a rail - roadway?
- (7) A Yes these are some of the structural remains that have
- (8) been documented
- (9) Q And there is a tailing pile?
- (10) A Yes
- (11) Q Former mining activities in the area?
- (12) A Yes that's correct
- (13) Q All of the known archaeological resources at the Rua Cove
- (14) area are in the uplands are they not?
- (15) A The cultural resources that have been documented in that
- (16) particular area on the AHRS form are in the uplands yes
- (17) Q And you have no information of direct oil impacts to any of
- (18) these resources?
- (19) A Not to these listed here
- (20) Q There wasn't a clean up activity at Rua Cove was there?
- (21) A It was heavily oiled I would have to look back in the
- (22) documents
- (23) MR DIAMOND Counsel attached to PX1538 - it's a
- (24) document bearing Native corporation 105492 It's a 6/1 6/2
- (25) report of Rua Cove

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- (1) BY MR DIAMOND
- (2) Q Dr Johnson is this one of the documents that you relied
- (3) on in formulating your opinions in this case?
- (4) A Yes it is
- (5) Q You've seen documents in this form before?
- (6) A Yes I have
- (7) Q And these were oiling reports?
- (8) A These are oiling reports
- (9) Q Prepared by whom?
- (10) A This one here is by a fella named McDonald
- (11) Q Working for?
- (12) A I believe for Exxon
- (13) Q According to this report next to degree of oiling it's
- (14) marked light or no oil observed at Rua Cove Are you mistaken
- (15) about the degree of oiling in Rua Cove?
- (16) A Could I take a look at the date on this one?
- (17) Q Certainly can Dated 6/1 and 6/2 I'll point out on the
- (18) bottom of the form it says Insufficient oiling to justify
- (19) cleanup
- (20) A All right There is a cove Rua Cove that was heavily
- (21) oiled and this is the area that has access to the historical
- (22) site The cove itself was heavily oiled I would need to look
- (23) back at the documents to see if perhaps I did make a mistake or
- (24) if this is for some other segment beyond the oiled area
- (25) Q No this is KN 213 That's Rua Cove isn't it?

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- (1) A I don't know off the top of my head no
- (2) Q It could be an error though?
- (3) A It could be
- (4) Q In any event Dr Johnson you're not aware of any direct
- (5) oil impacts to any of the resources that are previously
- (6) discussed in the AHRS form?
- (7) A The features that were identified in the form I'm not
- (8) aware that they were oiled no
- (9) Q And whether or not there was a cleanup at this location
- (10) you're not aware of any disturbance to the location during the
- (11) course of cleanup?
- (12) A Again in terms of cleanup at the site I believe that
- (13) there were clean up activities in the area In terms of having
- (14) specific knowledge of impacts I do not have that
- (15) Q Direct impacts of the oil spill or the cleanup to the best
- (16) of your knowledge to the wood frame house or the cabin in the
- (17) woods or the remains of the three tents?
- (18) A To my knowledge there was no direct oiling of these
- (19) features In terms of impacts to the site I do not have
- (20) personal knowledge
- (21) Q You're not aware of any clean up workers going into the
- (22) uplands and disturbing these features?
- (23) A No I'm not
- (24) Q And in the five years since the oil spill it is true that
- (25) you have no information concerning any oil spill worker coming

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- (1) back and disturbing this site?
- (2) A I have no specific knowledge of it no
- (3) Q Your estimate of the necessary archaeological work for this
- (4) site is close to \$200 000?
- (5) A That s correct
- (6) Q Are you familiar with the Short Arm shipwreck?
- (7) A Yes I am
- (8) Q That s one of the Chugach sites which claim is being made
- (9) in this case?
- (10) A Yes it is
- (11) Q Have you been to that site personally?
- (12) A I have been along the shoreline yes
- (13) Q Have you seen the cultural or archaeological features that
- (14) are at that site?
- (15) A I believe I ve seen the shipwreck yes
- (16) Q DX10600 129 Is this a photograph of the Short Arm
- (17) shipwreck taken?
- (18) A It looks like it is yes
- (19) Q And the only known resources archaeological or cultural or
- (20) historic at this site consist of that piece of ship s hull
- (21) that floated in from somewhere?
- (22) A That s what s currently identified yes
- (23) Q And a piece of furniture found on the beach?
- (24) A Yes
- (25) Q And a rusty old ship s anchor? Would you like to see the

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- (1) A HRS form?
- (2) A I believe you
- (3) Q Do you have any idea where the ship hull came from?
- (4) A No I do not
- (5) Q It s generally believed to have been blown in during the
- (6) storm?
- (7) A Yes
- (8) Q That wouldn t be an indication to you of any Native
- (9) activity on this site would it?
- (10) A What it is is that - the focus is on the shipwreck itself
- (11) that s correct
- (12) Q Are you of the opinion that there are additional cultural
- (13) or archaeological resources at this site because a piece of
- (14) battle of the ship blew in during the storm?
- (15) A No the cultural resources would be associated with that
- (16) ship Apart from that no
- (17) Q You re not aware of any though?
- (18) A I m not aware of any no
- (19) Q The ship itself was not oiled Isn t that correct?
- (20) A I don t believe that it was but I don t know for sure
- (21) Q Well this was located at a place where there was no oil
- (22) correct?
- (23) A I would have to look back Short Arm there may have been
- (24) some oiling tar balls and so forth
- (25) Q Exhibit 16230 Kirk Wilson s cultural resource evaluation

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- (1) form on KN 206 that s Short Arm shipwreck is that right?
- (2) A That sounds about right
- (3) Q I ll show you this document This is page 2 This is one
- (4) of the documents you relied on in formulating your opinions in
- (5) this case?
- (6) A This is one of the documents I relied on in terms of
- (7) formulating my opinions on the cultural resources It also
- (8) provides some information about oiling but in terms of the
- (9) degree of oiling I would turn to the shoreline oil evaluation
- (10) that is another sheet in this packet
- (11) Q I ll direct your attention to the cultural resources
- (12) evaluation cover page I direct your attention to the last
- (13) sentence which reads It is located where there is no oil and
- (14) no additional restrictions beyond the norm should be
- (15) necessary Do you see that?
- (16) MR FORTIER Can I get an exhibit number?
- (17) MR DIAMOND Same exhibit 16230
- (18) BY MR DIAMOND
- (19) Q Did you see that?
- (20) A Yes I do
- (21) Q Do you want to revise your opinion about oiling of the bow
- (22) pieces and the ship s hull?
- (23) A Again what I said before is that I don t know specifically
- (24) that the hull was oiled What I said was that I believed that
- (25) there may have been some oiling in this area especially in the

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- (1) form of like mousse balls this type of thing
- (2) Q You re not aware of any human disturbance to this site
- (3) during the course of the cleanup?
- (4) A I m not aware of specific instances no
- (5) Q And in the five years since the oil spill you have no
- (6) information about any oil spill worker returning to the Short
- (7) Arm shipwreck site and disturbing the site?
- (8) A Again I do not have specific information about that
- (9) Q Your estimate for the necessary -
- (10) A It s the last one Short Arm
- (11) Q Thank you \$69 000?
- (12) A That s correct
- (13) Q Disk Island burial cave are you familiar with that site?
- (14) A I am familiar with that site yes
- (15) Q That s a site that you have personally been to?
- (16) A Yes it is
- (17) Q It is a burial cave containing a midden and other
- (18) artifacts?
- (19) A That s correct
- (20) Q The cave itself is located 225 feet up in the air Isn t
- (21) it?
- (22) A I believe that s what I estimated
- (23) Q Didn t get oiled did it?
- (24) A The site itself was not directly oiled In terms of people
- (25) walking up into the uplands it s quite possible that oil was

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- (1) tracked up
- (2) Q Anything is possible You have no information of anybody
- (3) tracking oil up into the cave?
- (4) A I have no specific information about that
- (5) Q In fact you have no information about any clean up workers
- (6) going into the cave during the course of the oil spill cleanup?
- (7) A I believe that there was some concern about it
- (8) Q I m sure that there may have been concern
- (9) A I believe that the Forest Service did have concern about
- (10) that this specific site
- (11) Q You re not aware of any evidence of vandalism or
- (12) disturbance to this site subsequent to the oil spill?
- (13) A With the exception of that one concern I m not aware of
- (14) any other specific instance no
- (15) Q The one report that you received from the Forest Service?
- (16) A Yes it was through the review of documents that came
- (17) across it
- (18) Q That did not document any actual harm to any cultural
- (19) resource in the cave?
- (20) A As I recall it was a brief reference to it and I haven t
- (21) been able to follow that
- (22) Q You ve done an estimate of the necessary archaeological
- (23) work for this site as well?
- (24) A That s correct
- (25) Q And that includes over almost 2 000 hours of field work by

- (1) sound right?
- (2) A It s quite possible that s what it is
- (3) Q Do you want to take a look at the AHRS?
- (4) A That might help
- (5) Q 16141 18 This site consists of according to this report
- (6) a tent frame a fish smoking area three anchor cables for
- (7) floating fish traps and four pitch cut trees Do you have any
- (8) information about any other cultural or archaeological
- (9) resources at this location?
- (10) A I m not able to speak about them now but it s quite
- (11) possible that there are additional features that are known
- (12) Q You don t know of any though?
- (13) A Not as I sit here right now
- (14) Q Can we show you anything that might help you?
- (15) A Well see there are other documents in addition to the
- (16) AHRS form that provides information about the sites I know
- (17) that there is a historical site of the corporation and that
- (18) there are substantial remains there and it is clearly
- (19) connected with Native activity
- (20) Q Have you had access to all those documents before you
- (21) testified today?
- (22) A I have spoken with different people and have had access to
- (23) some documents
- (24) Q And you ve reviewed all the documents you can get your
- (25) hands on?

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- (1) four archaeologists an anthropologist and a support worker?
- (2) A That s correct
- (3) Q And over 3 000 hours of analysis?
- (4) A That s correct
- (5) Q And your total estimate for Disk Island is \$711 000?
- (6) A That s correct
- (7) THE COURT Mr Diamond we re going to take a break
- (8) pretty soon You pick the time
- (9) MR DIAMOND Let me ask her a question about one
- (10) short one
- (11) THE COURT Sure go ahead
- (12) BY MR DIAMOND
- (13) Q Marsha Bay fish camp is a Chugach site?
- (14) A That s correct
- (15) Q Put a photo on the Barco It s DX 10600 158
- (16) Do you recognize this as a picture of the Marsha Bay fish
- (17) camp?
- (18) A Not specifically
- (19) Q Let s give you another view This is 57 Do you recognize
- (20) that?
- (21) A Again not specifically I know that there are structural
- (22) remains at this site I haven t been to the site
- (23) Q This site consists of - It s - the known resources at
- (24) this site consist of a tent frame a fire pit a wood pile
- (25) drying rack three anchor cables and four CMTs Does that

- (1) A No
- (2) Q No?
- (3) A I haven t had time to review everything that I would like
- (4) to review
- (5) Q So the investigation you made in this case is not as
- (6) thorough as you would have liked to have made?
- (7) A When it comes down to it the site itself I feel
- (8) comfortable with what I know about the site in terms of there
- (9) being structural remains and its importance
- (10) And in terms of the details we did consider these that
- (11) were listed in the AHRS form when we discussed the damage
- (12) assessment so I do feel comfortable with what is here
- (13) But I guess what I m saying It s quite likely that there
- (14) are additional features but this is what was taken into
- (15) account
- (16) Q What documents could we show you that might refresh your
- (17) recollection?
- (18) A I m trying to think I believe some of this actually was
- (19) through conversations with John Johnson my brother who is
- (20) the
- (21) cultural resource manager for Chugach
- (22) Q I can t show you conversations
- (23) You don t recall any specific archaeological or cultural
- (24) resources he may have mentioned to you at this site?
- (25) A Not off the top of my head
- (26) Q So sitting here today this is the sum and total of your

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- (1) knowledge about what features and resources are at Marsha Bay
- (2) fish camp?
- (3) A Yes
- (4) Q You re not aware of any of these things the tent frame the fish smoking area the anchor cables the pitch cut trees coming into contact with oil?
- (7) A I m not aware that they did
- (8) Q And you re not aware of any disturbances of clean up workers during 1989 of these resources?
- (9) workers during 1989 of these resources?
- (10) A I m not aware of specific instances no
- (11) Q And you have no information of any clean up workers returning to this location in the last five years?
- (12) returning to this location in the last five years?
- (13) A That s correct
- (14) Q Your estimate for this is approximately \$80 000?
- (15) A That sounds about right
- (16) MR DIAMOND Good time for a break
- (17) THE COURT Let the jury out Go ahead
- (18) (Jury out at 11 28 a m )
- (19) THE COURT Counsel the jury is not present Let s resolve this problem of the designated exhibits all right so I don t have you approaching the bench all the time and I don t have to rebuff somebody in the presence of the jury
- (20) resolve this problem of the designated exhibits all right so
- (21) I don t have you approaching the bench all the time and I don t have to rebuff somebody in the presence of the jury
- (22) don t have to rebuff somebody in the presence of the jury
- (23) The question is whether or not some of these documents were predesignated I want to find out about the two that there
- (24) predesignated I want to find out about the two that there
- (25) were controversy about and see whether they were designated

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- (1) then we can go on to the Barco question
- (2) MR DIAMOND Can we take that up at the other end of this recess because we have asked for those documents to be brought to court and we don t have that
- (3) this recess because we have asked for those documents to be brought to court and we don t have that
- (4) brought to court and we don t have that
- (5) THE COURT You don t have your designations?
- (6) MR DIAMOND Correct
- (7) THE COURT Ten minutes then
- (8) MR FORTIER The point of it is if the rules change I want to bring it to the Court s attention that the rules have changed so that you know we don t get tagged with it either
- (9) I want to bring it to the Court s attention that the rules have changed so that you know we don t get tagged with it either
- (10) changed so that you know we don t get tagged with it either
- (11) If they want to change the rules it s just a matter of let s change the rules
- (12) change the rules
- (13) MR DIAMOND We re not changing any rules we believe and hopefully I can show Mr Fortier to satisfaction that all of these documents were on the designation list
- (14) believe and hopefully I can show Mr Fortier to satisfaction that all of these documents were on the designation list
- (15) that all of these documents were on the designation list
- (16) MR PETUMENOS Judge I don t think plaintiffs want to make an issue or huge objection
- (17) MR PETUMENOS Judge I don t think plaintiffs want to make an issue or huge objection
- (18) THE COURT When repeated objections are made it is an issue and I feel it is my duty to resolve the issue so everybody knows what s going on otherwise we have what in essence are veiled accusations which of course will be responded to by the other side taking the jury s attention away from the evidence they are supposed to be listening to That s why I was resolving it now So I ll resolve it at the end of this break
- (19) an issue and I feel it is my duty to resolve the issue so
- (20) everybody knows what s going on otherwise we have what in essence are veiled accusations which of course will be responded to by the other side taking the jury s attention away from the evidence they are supposed to be listening to That s why I was resolving it now So I ll resolve it at the end of this break
- (21) essence are veiled accusations which of course will be responded to by the other side taking the jury s attention away from the evidence they are supposed to be listening to That s why I was resolving it now So I ll resolve it at the end of this break
- (22) responded to by the other side taking the jury s attention away from the evidence they are supposed to be listening to That s why I was resolving it now So I ll resolve it at the end of this break
- (23) from the evidence they are supposed to be listening to That s why I was resolving it now So I ll resolve it at the end of this break
- (24) why I was resolving it now So I ll resolve it at the end of this break
- (25) this break

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- (1) (Recess at 11 28 a m to 11 45 a m )
- (2) THE CLERK Please be seated
- (3) THE COURT Counsel we re on the record The jury is not present so tell me about the designations please
- (4) not present so tell me about the designations please
- (5) counsel
- (6) MR DIAMOND Your Honor an objection was raised to 1542 plaintiffs 1542 These are the remediation reports that Dr Johnson did with Dr Lobdell What we designated several days ago - seven days ago when Dr Johnson was first scheduled to testify - were the remediation reports identified as PX1268 for villages and 1266a for Chugach And I ll approach and show you what these are
- (7) 1542 plaintiffs 1542 These are the remediation reports that Dr Johnson did with Dr Lobdell What we designated several days ago - seven days ago when Dr Johnson was first scheduled to testify - were the remediation reports identified as PX1268 for villages and 1266a for Chugach And I ll approach and show you what these are
- (8) Dr Johnson did with Dr Lobdell What we designated several days ago - seven days ago when Dr Johnson was first scheduled to testify - were the remediation reports identified as PX1268 for villages and 1266a for Chugach And I ll approach and show you what these are
- (9) days ago - seven days ago when Dr Johnson was first scheduled to testify - were the remediation reports identified as PX1268 for villages and 1266a for Chugach And I ll approach and show you what these are
- (10) scheduled to testify - were the remediation reports identified as PX1268 for villages and 1266a for Chugach And I ll approach and show you what these are
- (11) as PX1268 for villages and 1266a for Chugach And I ll approach and show you what these are
- (12) approach and show you what these are
- (13) These are on our designation for Dr Johnson After we filed those - I m sorry after we filed that designation plaintiffs recompiled the same information as plaintiffs 1542 and rather than use the outdated version of that the plaintiffs had assembled what I had been using today as the current 1542 The pages are the same
- (14) filed those - I m sorry after we filed that designation plaintiffs recompiled the same information as plaintiffs 1542 and rather than use the outdated version of that the plaintiffs had assembled what I had been using today as the current 1542 The pages are the same
- (15) plaintiffs recompiled the same information as plaintiffs 1542 and rather than use the outdated version of that the plaintiffs had assembled what I had been using today as the current 1542 The pages are the same
- (16) and rather than use the outdated version of that the plaintiffs had assembled what I had been using today as the current 1542 The pages are the same
- (17) plaintiffs had assembled what I had been using today as the current 1542 The pages are the same
- (18) current 1542 The pages are the same
- (19) THE COURT The pages you were using are the same?
- (20) MR DIAMOND Yeah they are the same
- (21) With respect to the photographs they are all in the series of 10600 slides 1 through 175 and these too were on the predesignation list
- (22) of 10600 slides 1 through 175 and these too were on the predesignation list
- (23) predesignation list
- (24) THE COURT Give me that again so that I understand what your position is
- (25) what your position is

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- (1) MR DIAMOND We predesignated these documents The only difference is I ve been using plaintiffs current version 1542 as opposed to the version that existed at the time we predesignated exhibits for use in cross examination but the documents are the same We designated the documents
- (2) only difference is I ve been using plaintiffs current version 1542 as opposed to the version that existed at the time we predesignated exhibits for use in cross examination but the documents are the same We designated the documents
- (3) 1542 as opposed to the version that existed at the time we predesignated exhibits for use in cross examination but the documents are the same We designated the documents
- (4) predesignated exhibits for use in cross examination but the documents are the same We designated the documents
- (5) documents are the same We designated the documents
- (6) THE COURT I knew that What about DX10600
- (7) MR DIAMOND All the photographs we were using were part of 10600
- (8) part of 10600
- (9) THE COURT So you did designate them
- (10) MR DIAMOND Yes
- (11) THE COURT Okay counsel what if anything Mr Diamond said has been incorrect
- (12) Mr Diamond said has been incorrect
- (13) MR FORTIER We didn t object I don t think Your Honor to the 10600 series As far as the -
- (14) Honor to the 10600 series As far as the -
- (15) THE COURT The photograph
- (16) MR FORTIER Beg pardon?
- (17) THE COURT You didn t object to the use of the photograph?
- (18) photograph?
- (19) MR FORTIER I don t believe we objected to the use of any photographs that had been previously designated Your Honor
- (20) of any photographs that had been previously designated Your Honor
- (21) Honor
- (22) THE COURT Which photograph was it?
- (23) MR DIAMOND Here is the photograph they objected to Maybe I misspoke I may have been 16000?
- (24) to Maybe I misspoke I may have been 16000?
- (25) THE COURT 12084-43 right

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(1) MR DIAMOND 12084?  
 (2) THE COURT I just - tell me - I can't remember what  
 (3) specific location the photograph was of Counsel would know  
 (4) what we're talking about So he can remember whether or not  
 he  
 (5) objected  
 (6) MR FORTIER It was Culross Your Honor  
 (7) THE COURT And there was an objection?  
 (8) MR FORTIER Yes there was  
 (9) THE COURT And it was on the basis that it wasn't  
 (10) previously designated right?  
 (11) MR FORTIER That's true Your Honor I don't have  
 (12) it on the list I had been relying upon Perhaps that was error  
 (13) on my part Your Honor  
 (14) THE COURT So the objection was mistaken your  
 (15) objection as to that was mistaken correct?  
 (16) MR FORTIER Well Your Honor if he claims it's on a  
 (17) list of pre-designated documents  
 (18) THE COURT Counsel I see it on the list  
 (19) MR FORTIER Well then it was a mistake Your  
 (20) Honor  
 (21) THE COURT That's what I'm talking about You can  
 (22) jump up and object and it takes five minutes to discuss and I  
 (23) have to explore it and it doesn't help your case So you were  
 (24) mistaken and you've admitted your mistake but be careful of  
 (25) accusing counsel in the future when in fact you're dead

(1) don't make me explore these things and take the jury's  
 (2) attention They are gone once we are up here at the bench and  
 (3) then they have to get back and focus It's not good for either  
 (4) one of you So try to resolve these problems a little more  
 (5) efficiently than this okay and we will go on to better  
 (6) things  
 (7) MR DIAMOND May we approach and take up one thing?  
 (8) THE COURT Absolutely not  
 (9) MR DIAMOND I do have an area of inquiry  
 (10) THE COURT Yes  
 (11) MR DIAMOND I would like to do that without the  
 (12) presence of the witness  
 (13) THE COURT Now please take these ever-changing  
 (14) documents back  
 (15) MR DIAMOND OPA 90 this touches on archaeological  
 (16) claims in the following way Some of the Port Graham - some  
 (17) of the English Bay archaeological sites are in the Kenai Fjords  
 (18) National Park The Park Service will not permit - and this  
 (19) witness knows that - will not permit English Bay to do any  
 (20) archaeological restoration any digging any kind of work  
 (21) whatsoever without a permit without it being done under the  
 (22) supervision of the Park Service I would like to raise that in  
 (23) connection with the site that we were discussing with her  
 (24) because it bears upon the relationship of any harm and what  
 (25) they are asking for in that they are asking costs for an

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(1) wrong  
 (2) MR FORTIER I apologize Your Honor  
 (3) THE COURT Let's talk about 1542 or 12468 1266a  
 (4) MR FORTIER 1542 is a Lobdell exhibit I believe  
 (5) The objection was simply that - I didn't know where it came  
 (6) from It wasn't on the Lora Johnson cross list so it kind of  
 (7) came in under Lobdell You know again Your Honor it  
 appears  
 (8) that I was mistaken and I apologize for that I think that  
 (9) counsel's explanation makes perfect sense  
 (10) THE COURT Counsel was it on the Lora Johnson?  
 (11) MR DIAMOND The predecessor version was on the Lora  
 (12) Johnson They consolidated into a new plaintiffs exhibit We  
 (13) have been using the preliminary one rather than the old one  
 (14) What I put on the screen was part of what we pre-designated  
 (15) THE COURT So counsel's confusion is not  
 (16) unpredictable you can see where he would be confused right?  
 (17) MR DIAMOND Yes but I can see why he was confused  
 (18) documents keep changing in this case on both sides and I will  
 (19) not fault Mr Fortier for not keeping track of his own  
 (20) documents I sometimes have the same problem  
 (21) THE COURT Now what I want you to do when an  
 (22) objection occurs to you which - when I was a trial lawyer an  
 (23) objection occurred to me with every question but I didn't make  
 (24) the objection because sometimes that's counterproductive  
 (25) Check your documents ask counsel don't approach the  
 bench

(1) archaeological dig and can't perform That seems somewhat  
 (2) relevant  
 (3) THE COURT If they get a permit they can do it  
 (4) MR DIAMOND If the Park Service were to approve it  
 (5) Although I want to bring out if they get this money there is no  
 (6) foregone conclusion that they would be able to do it  
 (7) MR FORTIER Your Honor I guess our response is  
 (8) several  
 (9) First of all there is the OPA 90 itself which conveys all  
 (10) right title and interest to all the damages to the land to  
 (11) the Native corporation So maybe all we need is a judicial  
 (12) interpretation or a judicial notice of that particular act  
 (13) In addition we previously briefed the question of a  
 (14) settlement known as the Luthan (ph) settlement between the  
 (15) federal and state governments and English Bay Corporation  
 with  
 (16) regard to archaeological remediation work in the Kenai Fjords  
 (17) and that settlement agreement claims that they have a right to  
 (18) claim for all damages for archaeological sites including  
 (19) remediation work  
 (20) THE COURT Yes but the question is Are they going  
 (21) to have to go through a permitting process in order to do that  
 (22) work with the federal government?  
 (23) MR FORTIER Well - and Your Honor there I think  
 (24) the question I suppose does it make any difference whether or  
 (25) not they have to There is as a matter of law an assignment

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- (1) of those rights  
 (2) THE COURT Can the federal government tell them no  
 (3) you can't do this?  
 (4) MR FORTIER The federal government - I guess Your  
 (5) Honor the federal government could give a permit assuming  
 the  
 (6) land doesn't get interim conveyed in the meantime And if you  
 (7) have to go to the federal government for a permit it may take  
 (8) awhile Whether or not the federal government can prohibit  
 (9) them from doing it - from doing it I guess turns on the  
 (10) regulations themselves but it's a matter of time They are  
 (11) going to get the land And besides that they have already got  
 (12) the claim  
 (13) THE COURT It's land within the park right?  
 (14) MR FORTIER Well it's lands that are now within a  
 (15) park They selected the land and then the park was made  
 They  
 (16) selected the land in the early 70s The park was made in 1980  
 (17) as part of ANILCA  
 (18) THE COURT If it's lands within the park isn't it  
 (19) still subject to park regulation?  
 (20) MR FORTIER It is  
 (21) THE COURT So don't they have to go through a  
 (22) permitting process in order to be able to do this work?  
 (23) MR FORTIER Right now they would  
 (24) THE COURT If that land is conveyed would they still  
 (25) have to do it

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- (1) MR FORTIER No no if the land is conveyed under  
 (2) federal law it's their land It's outside of the park It's  
 (3) no longer an inholding within the park  
 (4) THE COURT Is that true?  
 (5) MR DIAMOND I believe we believe that's the case  
 (6) Once it leaves ownership of the federal government it won't be  
 (7) part of the park  
 (8) THE COURT So if they get the land then they get to  
 (9) do the work  
 (10) MR DIAMOND If they get the land but that's an if  
 (11) Right now they are asking for damages today They are asking  
 (12) for damages to conduct work that they can't do today without  
 (13) permission of the federal government  
 (14) THE COURT I don't see it as a major issue How long  
 (15) do you intend to spend on this?  
 (16) MR DIAMOND Two questions probably  
 (17) THE COURT You can do it  
 (18) Anything else?  
 (19) MR DIAMOND No  
 (20) MR FORTIER Well Your Honor if he gets to ask  
 (21) questions about that then do I get to ask questions about the  
 (22) other part of it? In other words the assignment of all the  
 (23) interests OPA 90? It's theirs You didn't let me ask  
 (24) Dr Johnson those questions  
 (25) THE COURT Do you get to ask questions - Is there an

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- (1) expectation that this land will be conveyed and that at that  
 (2) point there will be no restrictions on this sort of remediation  
 (3) work?  
 (4) MR FORTIER Yes  
 (5) THE COURT Yes you do  
 (6) MR FORTIER Thank you  
 (7) Let's bring them in  
 (8) (Jury in at 11 58 a m )  
 (9) THE COURT The jury is present  
 (10) BY MR DIAMOND  
 (11) Q Dr Johnson I want to ask you about one Port Graham site  
 (12) and then I'll move on to other things  
 (13) Northwestern Lagoon this is the largest single budgeted  
 (14) archaeological work that you and Dr Lobdell formulated Isn't  
 (15) that right?  
 (16) A That's correct  
 (17) Q You are seeking over seven and a half million dollars of  
 (18) Exxon's money to conduct archaeological research in this area?  
 (19) A Yes Port Graham is  
 (20) Q You know the Port Graham site - I'm sorry the  
 (21) Northwestern Lagoon site?  
 (22) A Yes I do  
 (23) Q DX12084 photograph is - can you identify this as an  
 (24) aerial view of the Northwest Lagoon?  
 (25) A I've seen other photographs that showed different

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- (1) perspectives I'm familiar with other photographs  
 (2) Q From this perspective you can't tell whether you're  
 (3) looking at Northwest Lagoon?  
 (4) A Not without absolute certainty  
 (5) Q What's your best judgment? Doesn't it look like it?  
 (6) A My best judgment is basically caution I trust that you  
 (7) wouldn't show another photograph but I'm just used to talking  
 (8) about other photographs that I have seen  
 (9) Q You have not visited the site until just a month before  
 (10) last?  
 (11) A That's correct  
 (12) Q And you had done all of your seven and a half million  
 (13) dollars in calculations without setting foot on that claim?  
 (14) A That's correct  
 (15) Q The site consists of a heavily forested area I will  
 (16) represent this to you but you're not sure There are a number  
 (17) of cultural and archaeological features in the forested area?  
 (18) A That's correct  
 (19) Q It consists among other things of a log cabin in the  
 (20) uplands?  
 (21) A That's correct  
 (22) Q And CMTs?  
 (23) A That's correct  
 (24) Q And numerous upland housepits?  
 (25) A That's correct

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- (1) Q Housepits are important to archaeologists because they are  
 (2) sites of what people suspect were former residences?  
 (3) A Yes  
 (4) Q And there is an expectation if you dig into a housepit  
 (5) people being pack rats that they are – probably would have  
 (6) packed the subsurface soil with remnants of their prior  
 (7) habitation?  
 (8) A It occurs at times  
 (9) Q That s a long way of saying there is probably stuff under  
 (10) housepits?  
 (11) A Generally – I mean it depends on housepits Some of them  
 (12) have a substantial amount others don t  
 (13) Q And there is also other cache pits in the uplands?  
 (14) A Yes  
 (15) Q This is viewed as a potentially valuable source of  
 (16) archaeological information for the area is it not?  
 (17) A Yes it s been a very important site for archaeology  
 (18) Q But the site was never oiled was it?  
 (19) A The site itself I believe there was some oiling in the  
 (20) area yes  
 (21) Q Are you sure about that?  
 (22) A I believe that s the case  
 (23) Q Seven and a half million dollar question Are you sure  
 (24) that there was oiling on this site?  
 (25) A I believe that there was yes

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- (1) Q I m going to show you some documents that you have  
 (2) previously seen I m sure The first is Exhibit 16130 which  
 (3) is a – do we have a cover sheet?  
 (4) MR DIAMOND Counsel do you have that?  
 (5) BY MR DIAMOND  
 (6) Q This is a fax cover sheet Dr Johnson from Mr Fortier s  
 (7) firm to Jack Lobdell attaching Mr Zollers notes Mr Zollers  
 (8) was a member of the Chugach OSRT?  
 (9) A That s correct  
 (10) Q He was a colleague of yours in investigating sites in 1989?  
 (11) A I don t believe that we ever had the opportunity to go out  
 (12) together but he was an archaeologist  
 (13) Q He was doing the same thing you were doing?  
 (14) A Yes In general  
 (15) Q And this says Mr Zollers notes followed You have  
 (16) reviewed – is it Pete Zollers?  
 (17) A Yes It is  
 (18) Q You ve reviewed Mr Zollers notes in connection with  
 (19) coming up with opinions in this case have you not?  
 (20) A I have reviewed some of his notes in 1989 I believe it  
 (21) was – I reviewed you know most of his notes as well  
 (22) Q Can we put up the page for Harris Bay This is a page of  
 (23) those notes You ve seen these before have you not?  
 (24) A Yes  
 (25) Q And the site that we ve been discussing Northwest Lagoon

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- (1) is along Harris Bay?  
 (2) A Yes it is  
 (3) Q Is that right?  
 (4) A Yes  
 (5) Q And this in fact identifies the site here as Northwest  
 (6) Lagoon/ does it not?  
 (7) A Yes  
 (8) Q I want to direct your attention to the bottom of the page  
 (9) Mr Zollers writes – try this again No oil was seen on our  
 (10) extensive survey Did you take that into account in  
 (11) formulating the opinion that Northwestern Lagoon was oiled?  
 (12) A Yes I did  
 (13) Q But you rejected it in favor of other information?  
 (14) A Yes I believe that there was other information that  
 (15) indicated that there was oiling  
 (16) Q Let me show you another document which is part of  
 DX16139  
 (17) it s entitled Chugach Alaska Corporation Cultural Resource  
 (18) Survey  
 (19) Zoom in on this in the upper right hand corner  
 (20) This is a Cultural Resource Survey report for Northwest  
 (21) Lagoon done by Mr Zollers is it not?  
 (22) A Yes it is  
 (23) Q And this was a form that was regularly filled out by the  
 (24) OSRT people?  $\frac{1}{2}$   
 (25) A I wouldn t say regularly More sporadically as opposed to

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- (1) regularly  
 (2) Q But it was a form that was in use by Chugach OSRT to  
 (3) document the condition of archaeological sites?  
 (4) A Yes it was available for use yes  
 (5) Q Direct your attention what Mr Zollers writes Under oil  
 (6) condition of shoreline he writes no oil spotted Does this  
 (7) change your view as to whether Northwest Lagoon was ever  
 (8) touched by oil?  
 (9) A What it indicates to me is that he did not observe oil  
 (10) that Pete Zollers did not but I believe there is other  
 (11) documents  
 (12) Q Well there are some other documents Dr Johnson I m  
 (13) going to show you what s part of DX16062 It s the National  
 (14) Park Service assessment of Northwest Lagoon You looked at  
 (15) National Park Service documents in reaching your opinions as  
 (16) well?  
 (17) A Yes I believe I did  
 (18) Q Put this on the Barco  
 (19) Try this one more time I note – you recognize the form  
 (20) of this document Dr Johnson?  
 (21) A Yes I do  
 (22) Q And this is an archaeological clearance form that was in  
 (23) use by the Park Service in 1989?  
 (24) A I believe that s the case  
 (25) Q And this refers to the Northwest Lagoon right here do you

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- (1) see that?
- (2) A Yes I do
- (3) Q The second page of the document is a paragraph entitled
- (4) Effects of the Oil Spill on Resource Do you see that no
- (5) event as of 26 May 1989?
- (6) A Yes I do
- (7) Q Does that change your opinion as to whether Northwest
- (8) Lagoon was oiled or not?
- (9) A Again I believe that I did see some reference to oiling
- (10) Q Well I think you did too but I think you looked at the
- (11) wrong thing
- (12) A I think probably in the reports that I have written the
- (13) damage assessment that I wrote for the villages in October I
- (14) believe would indicate whether I had indicated there was
- (15) oiling there or not
- (16) Q Let me show you another document which is part of 16062
- (17) It's a handwritten form which I think you'll be able to
- (18) recognize
- (19) Back this out a little bit
- (20) Do you recognize this form?
- (21) A Yes I do
- (22) Q And this was a form that was in use also during the course
- (23) of the oil spill to record oil sites and locations?
- (24) A Yes that's correct
- (25) Q A document that Mr Fortier told us about yesterday 1366a

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- (1) which is a schedule of all of the sites in this case with
- (2) selected site documentation - I'll approach if I may and show
- (3) you this
- (4) Referring to page 17 of this document under Northwest
- (5) Lagoon Harris Bay you have segment HA 1 is that correct?
- (6) A Yes that's correct
- (7) Q And then you have with respect to oiling information a
- (8) reference to SOE What does that refer to?
- (9) A That would refer to this particular document
- (10) Q So your evidence of oiling as recording on the summary of
- (11) the site documentation comes from the document that we have
- (12) on
- (13) the screen?
- (14) A It appears to yes
- (15) Q And in fact is that a document on the screen that we have
- (16) looked at that does show oiling light oiling in the splash
- (17) zone 20 percent of the segment correct?
- (18) A That's what the form indicates yes
- (19) Q And then there is some tar formation correct?
- (20) A Yes
- (21) Q And then drift debris oil yes in the upper tidal zone
- (22) correct?
- (23) A That's correct
- (24) Q That all corresponds to Exhibit 1366a do you want to
- (25) check? You would think it would?
- (26) A If this was the form I took it off I would expect it

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- (1) would
- (2) Q And this was the course of your information that Northwest
- (3) Lagoon was oiled?
- (4) A I believe that the segment that's identified there is the
- (5) HA 1 It appears to be yes
- (6) Q Well we'll see HA 1 which is the sand beach and it
- (7) says on the east side of Harris Peninsula right that's what
- (8) you're considering Northwest Lagoon?
- (9) A I could have made a mistake if that's what I did
- (10) Q Mr Leppo will help me I'm going to show you what's been
- (11) identified as DX16108 Could you come down for a second?
- (12) Harris Peninsula correct?
- (13) A That's correct
- (14) Q This oiling form relates to the east side of Harris
- (15) Peninsula I always have trouble with that but that's this
- (16) one
- (17) A Yes that's correct
- (18) Q So HA 1 would be on this side of the peninsula correct?
- (19) A Yes
- (20) Q And lo and behold here is segment HA 1 correct?
- (21) A Yes it appears to be an error
- (22) Q That's not Northwest Lagoon is it?
- (23) A No it wouldn't be
- (24) Q You made a seven and a half million dollar mistake didn't
- (25) you?

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- (1) A In terms of the reporting of oil yes
- (2) Q Thank you No oil no clean up right?
- (3) A I don't know
- (4) Q Well you didn't have any experience in 1989 of an Exxon
- (5) Valdez oil clean up crew going to an unoiled beach?
- (6) A I believe there were areas where there was little or no oil
- (7) reported where there were clean up activities
- (8) Q You have no information Dr Johnson to believe that any
- (9) clean up workers went out to Northwest Lagoon?
- (10) A I believe that there is something in documentation about
- (11) concern for clean up activities at Northwestern Lagoon
- (12) Q Dr Johnson I'm going to refer to page 318 of your
- (13) deposition line 16 through 24 Do you have that?
- (14) A Actually I put them back on your desk
- (15) Q Isn't it true Dr Johnson - if you can take a look at
- (16) that - that at least at the time of your deposition you had no
- (17) information about the effects of the clean up activities on the
- (18) Northwest Lagoon?
- (19) A At the time of my deposition I did not say that I was
- (20) aware of any
- (21) Q Do you doubt for a moment now that we've looked at this
- (22) documentation that Northwest Lagoon was unoiled?
- (23) A Excuse me?
- (24) Q Do you have any doubt now that we've looked at the
- (25) documentation that Northwest Lagoon was not touched by oil?

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- (1) A No I still have - I don't know  
 (2) Q Well let me show you the oiling map that plaintiffs have  
 (3) put in evidence in this case Perhaps you ought to come down  
 (4) again I'm going to show you what's been marked as 1128a  
 (5) This is a map that plaintiffs have prepared in conjunction with  
 (6) ICF showing oiled shoreline and unoiled but surveyed  
 (7) shorelines Can you point out where the Northwest Lagoon site  
 (8) is on this map?  
 (9) A Yes It's right here (indicating)  
 (10) Q You don't see any red or purple or magenta?  
 (11) A No you see the blue line  
 (12) Q Blue means claimed to have been surveyed with no oiling  
 (13) found by at least one survey group?  
 (14) A Yes no oiling found by at least one survey group  
 (15) Q You're not aware of any disturbance to this site by any  
 (16) clean up workers or others in five years since the cleanup  
 (17) ended?  
 (18) A I'm not aware of specific impacts no  
 (19) Q And you were out there just two months ago and so no  
 (20) evidence of any recent vandalism?  
 (21) A I was out there yes in May and I did not observe any  
 (22) Again we were not out looking for disturbances  
 (23) Q I'm done with sites Let's talk about some of the pictures  
 (24) you showed us yesterday - -  
 (25) You showed us some pictures of Crafton Island south and the

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- (1) clean up work that were being conducted at that site  
 (2) A Yes  
 (3) Q Do you remember the big Omni booms?  
 (4) A That's correct  
 (5) Q I'll have Mr. Leppo put up on the screen that plaintiffs  
 (6) identified as 12956 that we were shown yesterday Do you  
 (7) remember this?  
 (8) A Yes I do  
 (9) Q You rendered the opinion to us yesterday that this depicts  
 (10) activity which in your view occurred at an archaeological  
 (11) site?  
 (12) A That's correct  
 (13) Q In reaching the opinion - In reaching that opinion you  
 (14) had to reach a conclusion as to where along the coastline this  
 (15) photograph was taken?  
 (16) A Basically the way I reached that opinion is that the site  
 (17) is located - I believe it's in CR 5 and that it is known that  
 (18) clean up activities including this Omni boom took place in  
 (19) this segment in the location of the site I believe that this  
 (20) is the case but I couldn't - I can't prove it based on the  
 (21) photograph  
 (22) It's based on this plus a series of other photographs and  
 (23) basically what it is there is additional photographs that show  
 (24) the boom in operation and with conversations with the  
 (25) individual that took those photographs I believe that the Omni

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- (1) boom was in operation at the location of the site  
 (2) Q Well the photographs that counsel showed us - and  
 perhaps  
 (3) Mr. Fortier can dig it out of his box - it was dated August 9  
 (4) 1989 correct?  
 (5) A I don't recall  
 (6) MR DIAMOND Counsel do you have that  
 (7) MR FORTIER We're looking for it  
 (8) BY MR DIAMOND  
 (9) Q While they are looking for that Jim Gallison you know Jim  
 (10) Gallison?  
 (11) A Yes I do  
 (12) Q He was an Exxon archaeologist?  
 (13) A Yes he was  
 (14) Q And we actually saw at least a piece of him in your  
 (15) videotape of the Crafton Island cave?  
 (16) A Yes that's correct  
 (17) Q Mr. Gallison like all of the other Exxon archaeologists  
 (18) compiled very detailed field notes of what they did did he  
 (19) not?  
 (20) A He did take field notes yes  
 (21) Q And you've had access to those field notes?  
 (22) A We've had access to the field notes yes recently  
 (23) Q You've also had access to the maps that Mr. Gallison drew  
 (24) as part of his field notes?  
 (25) A I don't recall them offhand but yes

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- (1) Q Let me show you on the Barco a map of Crafton Island south  
 (2) that purports to be prepared by J. Gallison and Pete Phippen  
 (3) You remember Pete Phippen?  
 (4) A Yes Pete Phippen Yes I do  
 (5) Q The date of this is July 26th It got cut off in the  
 (6) xeroxing apparently  
 (7) Is this an accurate depiction of Seward 248 according to  
 (8) AHRS designation?  
 (9) A The site is located in the southern quarter of the - yes  
 (10) it is  
 (11) Q And it's right in this area over here correct down here?  
 (12) A And it continues up  
 (13) Q And it continues up to this cove here?  
 (14) A Keep going  
 (15) Q How far up does it go?  
 (16) A It continues further As far as I know it continues up to  
 (17) at least a little bit further north  
 (18) Q Well these are numbered can you read the numbers?  
 There  
 (19) Is an eight here there is a nine  
 (20) A I believe that it continues up to at least eight  
 (21) Q That's your definition of the site correct?  
 (22) A That's my understanding of what the site is yes  
 (23) Q Well I take it archaeologists disagree on what constitutes  
 (24) a site and site boundaries?  
 (25) A There have been different definitions of site boundaries

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- (1) Q According to this map prepared by Mr Gallison Seward 248  
 (2) was in this area right here?  
 (3) A Excuse me I do stand corrected with the SEW 248 I m  
 (4) talking - when I m talking about this site I m talking about  
 (5) Chugach Alaska Corporation site which includes several HRS  
 (6) numbers  
 (7) Q Well I m talking about the photograph which you said  
 (8) yesterday depicted clean up work by an Omni boom spraying  
 high  
 (9) pressure hoses in the vicinity of Seward 248  
 (10) A No I believe I said they were operating in the vicinity of  
 (11) the Chugach heritage site  
 (12) MR FORTIER Counsel I do have the photograph  
 (13) BY MR DIAMOND  
 (14) Q I ll show you the photograph that we were shown yesterday  
 (15) 1295-6 It has it posted on the back number 33 Seward 248  
 (16) That s the designation of an official Alaska heritage resource?  
 (17) A Yes that is  
 (18) Q Are you telling us that you no longer are of the opinion  
 (19) that the Omni boom that we see in this photograph was being  
 (20) operated very close to 248?  
 (21) A What I m saying is in terms of the notes on the back of  
 (22) those with this site and other sites I might only refer to  
 (23) one AHRS number That is I believe the number that refers to  
 (24) the homesite itself But there are several other AHRS numbers  
 (25) associated with it

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- (1) Chugach Alaska Corporation has a site located in this  
 (2) area Within that area there are various AHRS numbers  
 assigned  
 (3) to different cultural remains When I refer to the Omni boom  
 (4) in the vicinity of the 248 that is incorrect What I m  
 (5) referring to is that it s in the vicinity of the Chugach Alaska  
 (6) Corporation site which encompasses 248 and these other site  
 (7) designations  
 (8) Q Well there is only one other site designation in the  
 (9) southern portion of the Crafton Island that we re looking at  
 (10) Isn t that right?  
 (11) A No I believe there are several  
 (12) Q Let me show you what is marked as 248 AHRS number 248  
 (13) consists of five houses two sheds an outbuilding outhouse  
 (14) boardwalk dock three boats in deteriorated condition It  
 (15) goes on to say it was first settled by non Native for use as a  
 (16) fox farm and then purchased in the 40s by Frenchie Allen  
 (17) Shankey (ph) That comports with your knowledge?  
 (18) A Yes it does  
 (19) Q And there is also Seward 474 which is a kayak?  
 (20) A That s correct  
 (21) Q That s no longer there correct?  
 (22) A It has been collected that s correct  
 (23) Q It s now in a museum or being curated?  
 (24) A Yes it is  
 (25) Q When you testified yesterday about the operation of the

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- (1) Omni boom you didn t mean to suggest that it was being  
 (2) operated down here at the bottom of the cove close to -  
 (3) A What I understand in terms of the operation of the boom  
 (4) was that it was operating I believe - could you slide this up  
 (5) just a little bit so I get the number correct?  
 (6) Q Sure  
 (7) A A little more That it was operating somewhere to the  
 (8) south of number nine  
 (9) Q How far to the south?  
 (10) A I believe that it was operating in this little bay  
 (11) (indicating)  
 (12) Q Were you of the opinion or did you reach the opinion that  
 (13) in any way Exxon was operating that equipment or its contractor  
 (14) was operating that equipment in a manner that was not being  
 (15) reasonably - was not being reasonably prudent in light of  
 (16) archaeological materials in the vicinity?  
 (17) A I believe that they were operating it under standard  
 (18) procedure in terms of the operation of the boom In terms of  
 (19) potential impact on cultural remains I would have a concern  
 (20) Q Have you reviewed Mr Gallison s field notes for the  
 (21) period?  
 (22) A Not recently but I have  
 (23) MR DIAMOND You ve seen these in one form or  
 (24) another This is DX16243 This has not been previously  
 (25) produced to counsel in this form although they have the field

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- (1) notes Do you want to see it  
 (2) MR FORTIER That s fine  
 (3) BY MR DIAMOND  
 (4) Q Have you reviewed Mr Gallison s field notes?  
 (5) A As I said I have reviewed at least some of them  
 (6) Q Don t Mr Gallison s notes for the clean up area emphasize  
 (7) concern for archaeological artifacts in the area?  
 (8) A I don t recall specifically but I believe -  
 (9) Q Do you have any doubt -  
 (10) A No I don t have any doubt that he would have concern  
 (11) Q He would have mapped the entire area before any cleanup  
 (12) took place wouldn t he?  
 (13) A No  
 (14) Q He wouldn t have?  
 (15) A No  
 (16) Q Didn t he in this case?  
 (17) A He may have mapped some of the remains associated with  
 (18) SEW 248 but I don t believe that he mapped the entire site  
 (19) the entire Chugach Alaska Corporation site  
 (20) Q Didn t he map the site where clean up work was taking  
 (21) place?  
 (22) A I would have to look  
 (23) Q Take a look at page 37 of his field notes under July 30th  
 (24) 1989 You re on page 37?  
 (25) A Yes I am

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- (1) Q And in the second paragraph didn't Mr Gallison say Spent  
 (2) the remainder of the day with Pete mapping the beach front in  
 (3) location of kayak That's number 9 on our map?  
 (4) A Yes I'm sure that he did map this area  
 (5) Q And he also says We made a sketch map of the kayak and  
 (6) surrounding terrain?  
 (7) A That's correct  
 (8) Q That's before the date of the photograph of the clean up  
 (9) operations that you showed us?  
 (10) A All right  
 (11) Q Isn't that right?  
 (12) A I don't recall the dates  
 (13) Q It says 8/9/89  
 (14) A All right  
 (15) Q So more than a week before he was out there mapping  
 wasn't  
 (16) he?  
 (17) A Yes he was  
 (18) Q Take a look at pages 53 54 And I won't go through every  
 (19) page of everything Mr Gallison did in this area but doesn't  
 (20) he say at the bottom of page 53 and the top of page 54 he  
 (21) returned to the cove area located in the lower one third of the  
 (22) island and placed flagging tape around the burial marking as  
 (23) per requested by Chuck Mobley Incidentally Mr Mobley was  
 (24) director of Exxon CRP?  
 (25) A That's correct

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- (1) Q And burial area was closed off by flagging tape ten meters  
 (2) across the front north and three meters out from the cliff  
 (3) base?  
 (4) A Yes that's what it says  
 (5) Q In your expert opinion that does show concern for  
 (6) archaeological features in the area does it not?  
 (7) A Yes it does  
 (8) Q Take a look at page 96 This is his entry I'll skip  
 (9) ahead more than a week to August 9 1989 This is the date of  
 (10) your photograph Take a look at - two-thirds down there is a  
 (11) sentence beginning "travel to CR 5"  
 (12) A All right  
 (13) Q And doesn't this reflect that on the day of the clean up  
 (14) operations depicted in your photograph he traveled to CR 5  
 (15) kayak at 0800 Omni 8 work in progress below the site during  
 (16) tide Made surface inspection of the beach front already  
 (17) washed  
 (18) A Yes  
 (19) Q That shows concern for the archaeological resources in the  
 (20) area doesn't it?  
 (21) A Yes it does  
 (22) Q In fact it's your understanding that it was Mr Gallison  
 (23) who took these pictures that show us the clean up activities of  
 (24) the beach?  
 (25) A Yes that's probably the case

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- (1) Q Take a look at page 99 Still on August 9 reflect CR 5  
 (2) surface inspection of the washed beach deposits revealed  
 (3) several pieces of rusted sheet metal fragments parens eight  
 (4) round wire nails parens two a boat engine part parens two  
 (5) handle of fiberglass fishing pole and rope fragments All  
 (6) materials discovered are recent historic drift garbage no  
 (7) artifacts or features were exposed during the wash of the  
 (8) Omni 8 that are associated with the fox pen location on kayak  
 (9) site?  
 (10) A Yes I do  
 (11) Q In your opinion doesn't that in effect manifest concern  
 (12) for the archaeological resources in the area?  
 (13) A What I think it indicates is that he does have concern for  
 (14) them I don't doubt Jim Gallison's concern  
 (15) Q Doesn't it - let me strike that  
 (16) Let me ask you first go back to the map up here he said  
 (17) the Omni 8 was north of the kayak The kayak is depicted as  
 (18) number nine on our map up at the top dot that is yellow We  
 (19) talked yesterday about the grave marker which is number four  
 (20) and if I zoom back here is a scale on this map in meters  
 (21) Hundred meters is roughly a football field meter is roughly a  
 (22) yard  
 (23) A Yeah the football field was the problem  
 (24) Q Sorry?  
 (25) A Yeah

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- (1) Q According to this map the Omni 8 that we saw in operation  
 (2) in your photograph was probably one and a half to two football  
 (3) fields away from the grave markers?  
 (4) A Yes  
 (5) Q You also showed us pictures of further clean up operations  
 (6) in this area see if I can do this without taking them out of  
 (7) the cover Do you remember these?  
 (8) A Yes I do  
 (9) Q Another one?  
 (10) A Yes  
 (11) Q This was also in CR 5?  
 (12) A Yes  
 (13) Q Dig out copies for Mr Fortier But those were later in  
 (14) the week around the 12th of August were they not?  
 (15) A That's -  
 (16) Q Several days after the Omni boom picture correct?  
 (17) A I don't recall the specific dates but that's probably  
 (18) correct  
 (19) Q Take a look at page 120 of Mr Gallison's notes which talk  
 (20) about that operation First sentence three lines down  
 (21) Mr Gallison writes This activity like before transported  
 (22) gravel at smaller size charts downslope below tide zone No  
 (23) new material I.e. recent modern beach trash observed on  
 (24) freshly washed deposit  
 (25) It goes on and talks about the hose activity There is a

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- (1) sentence hose and deluge that s where they swamp the beach?  
 (2) A Yes  
 (3) Q Hoses and deluge are in places across the southern end of  
 (4) the cove extending from southwest corner to ten meters past  
 (5) burial marker Hoses and equipment and crew are well away  
 from  
 (6) flagged off areas That reflects concern on the part of  
 (7) Mr Gallison does it not in your mind that the importance  
 (8) and the sensitivity of these archaeological resources?  
 (9) A It reflects his concern for the burial marker yes  
 (10) Q Let s go north on Crafton Island up to the burial cave Do  
 (11) you remember you showed us pictures of that?  
 (12) Could we put up just to remind the jury what we re talking  
 (13) about PX1288 2  
 (14) This is a photograph of the Crafton Island burial cave is  
 (15) it not Dr Johnson?  
 (16) A Yes it is  
 (17) Q There was a reference to bones in the videotape - and I  
 (18) know the jury hasn t seen them - Mr Fortier showed you some  
 (19) photographs this morning of bones in the burial cave Are  
 (20) there bones -  
 (21) A I m trying to think back to this morning  
 (22) Q Long time ago  
 (23) A Yeah I don t remember  
 (24) Q Well let me cut through it It s a fact is it not that  
 (25) over 20 years ago the Forest Service removed all of the human

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- (1) remains in Crafton Island burial cave?  
 (2) A It s not a fact  
 (3) Q Not true?  
 (4) A I don t believe they have removed all of the human  
 (5) remains They may have removed all of the visible remains  
 (6) Q But you re saying some may be buried deep down in the  
 (7) midden?  
 (8) A It s quite likely that there are  
 (9) Q The photographs of modern day photographs should any  
 be  
 (10) offered into evidence of Crafton Island at least as recently  
 (11) that you ve been there don t show any human remains do  
 they?  
 (12) A No I don t believe they do At least none that have been  
 (13) identified as such  
 (14) Q Let s go back to the human remains question Isn t it the  
 (15) case that human remains have been removed from the site?  
 (16) A That s correct  
 (17) Q Those that were on the surface?  
 (18) A I believe some on the surface and possibly some that were  
 (19) subsurface  
 (20) Q And that was done by an archaeologist?  
 (21) A I believe it was  
 (22) Q McAster M c A s t e r?  
 (23) A Yes  
 (24) Q In 1969?  
 (25) A Yes that s what s reported

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- (1) Q You said there were concerns about vandalism of Crafton  
 (2) Island burial cave in 1989 Crafton Island burial cave has a  
 (3) long history of being vandalized hasn t it?  
 (4) A It has been vandalized prior to 1989 yes  
 (5) Q It s visible you can see it from the water?  
 (6) A It is visible yes  
 (7) Q And in fact Chugach Alaska Corporation in the - in 1988  
 (8) requested the help of the Forest Service in protecting the  
 (9) site?  
 (10) A That s correct  
 (11) Q And your brother was instrumental in urging the Forest  
 (12) Service to do more than they were doing to protect the site?  
 (13) A Yes there was a high concern for the site  
 (14) Q You re aware from documents that you ve reviewed that  
 (15) there is a long history of pot holding by fishermen at this  
 (16) site?  
 (17) A It s clear that there has been vandalism at this site prior  
 (18) to 1989 yes  
 (19) Q The 1989 vandalism that you suspect may have taken place  
 (20) no one was ever caught for that were they?  
 (21) A No As far as I know they were not  
 (22) Q And no one was ever identified as having been responsible  
 (23) for that vandalism?  
 (24) A I don t believe no  
 (25) Q You have no way of knowing whether the people who were

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- (1) involved - if in fact they were people - were in any way  
 (2) connected with the oil spill?  
 (3) A Again I am not aware - I don t believe so - let s - I m  
 (4) not aware of anyone specifically being identified in terms of  
 (5) the vandalism whether oil spill worker or not  
 (6) Q And in fact the vandalism or digging that you saw in that  
 (7) cave during the summer of 1989 might well have been animals  
 (8) digging?  
 (9) A I don t think so  
 (10) Q Aren t you uncertain whether the digging that you observed  
 (11) personally with Rita Miraglia was human or animal?  
 (12) A I have seen animal digging and I ve seen at least  
 (13) photographs - well I know what it looks like in terms of -  
 (14) well excavation and the areas that I saw in terms of  
 (15) disturbance appeared to be disturbance not by animals but  
 (16) likely to be by humans  
 (17) Q Are you sure?  
 (18) A Not absolutely  
 (19) Q You weren t able to determine whether it was animal or  
 (20) human origin Isn t that right?  
 (21) A At the time I didn t indicate one way or the other no  
 (22) Q At the time you weren t able to determine whether it was  
 (23) animals or people who were doing the digging?  
 (24) A At the time I was just noting disturbance that s correct  
 (25) Q It is - it s a known fact that otters do dig in coastal

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- (1) caves like this?
- (2) A They do in middens yes
- (3) Q That s a problem that archaeology preservationists have to deal with?
- (4) A Yes it is
- (5) Q You showed us a videotape of - I believe it was a 1990 videotape of McArthur Pass Do you remember that?
- (6) A Yes I do
- (7) Q And you showed us pictures of pooled oil deposits that had congeal between the rocks?
- (8) A Yes
- (9) Q Just so that the jury can remember I m going to ask that we - do we have a video clip of that I m going to put up a piece of a clip that we showed yesterday Our editors didn t include a visual of pooled oil I don t know why they didn t but this is a visual of McArthur Pass that you talked about yesterday
- (10) A That s correct
- (11) Q There was a reason there was still a lot of oil there in 1990 isn t there?
- (12) A Yes there is
- (13) Q And that s because no clean up work was done in 1989?
- (14) A That s correct There was not -
- (15) Q A decision was made jointly by Exxon the Coast Guard the Park Service personnel and the landowner your client to

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- (1) Exxon also undertook very significant archaeological research at this site?
- (2) A Research was conducted at the site yes
- (3) Q You re aware that the entire intertidal zone the entire beach area was gridded meter square grids were created and the
- (4) cleanup was done very carefully so as to preserve and protect any archaeological material?
- (5) A It was squared off in grids In terms of the ability to preserve and protect all archaeological materials in the area there is a question
- (6) Q Well extraordinary concern was taken wasn t it?
- (7) A There were efforts given yes I absolutely degree
- (8) Q I have a photograph which is the cover of book marked DX15293 and I ll put it on the Barco You ve seen this photograph It doesn t translate well to the screen but you ve seen this before?
- (9) A Yes
- (10) Q You re very familiar with the book I ve just referred to?
- (11) A Yes I m familiar with the publication
- (12) Q This photograph depicts does it not the gridding that was done of the intertidal zone and the removal of oil?
- (13) A Yes it does
- (14) MR DIAMOND Your Honor could I pass this around because it s hard to see?
- (15) BY MR DIAMOND

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- (1) postpone clean up so that it wasn t done on a rush basis?
- (2) A That s correct
- (3) Q And in 1990 people returned to that site to figure out how best to clean it?
- (4) A That s correct
- (5) Q And one of the concerns was this is an area the inland area is known to contain significant archaeological remains?
- (6) A That s correct
- (7) Q And nobody wanted to inadvertently disturb any?
- (8) A There were a lot of concerns how not to disturb the cultural materials in the intertidal area as well as the uplands yes
- (9) Q So the cleanup was postponed for a year?
- (10) A That s correct
- (11) Q To give people an opportunity to reflect and think and plan about how best to do it and not endanger cultural material?
- (12) A That s correct
- (13) Q You were in fact part of that process were you not?
- (14) A Yes I was
- (15) Q Therefore you have personal knowledge about how the cleanup was conducted in 1990?
- (16) A I wasn t present during the cleanup no
- (17) Q You ve read information about that?
- (18) A Yes I have
- (19) Q As part of the cleanup isn t it true Dr Johnson that

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- (1) Q The cleanup that we ve just discussed was only part of what the Exxon archaeologists and others did at that site in 1990 and again in 1991?
- (2) A In terms of archaeological work?
- (3) Q Yes
- (4) A Yes that s correct
- (5) Q All of the artifacts that could be identified in the intertidal zone were collected and cleaned?
- (6) A Artifacts that were identified were collected
- (7) Q And there were artifact collections undertaken in the uplands?
- (8) A Yes a test pit was excavated
- (9) Q And as part of the process all recovered archaeological resources were curated somewhere?
- (10) A Yes that s correct
- (11) Q Subsurface testing was done in the spring and summer of 1990?
- (12) A Yes that s correct
- (13) Q Radio carbon dating was done of samples taken from those tests?
- (14) A Yes radio carbon samples were taken in the uplands
- (15) Q And Exxon archaeologists prepared detailed stratigraphic profiling you ve seen those?
- (16) A In terms of the upland excavation it was the Park Service and myself

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- (1) Q And all of this culminated in more than a 200 page
- (2) publication that the jury is currently looking at?
- (3) A That s correct
- (4) Q Despite all of that Dr Johnson here is 1294 McArthur
- (5) Pass still appears on your list of sites?
- (6) A That s correct
- (7) Q And you ve allocated over \$850 000 for further research in
- (8) this area?
- (9) A That s correct
- (10) Q One thing I want to do while we re on the subject of
- (11) McArthur Pass before you put it on This is DX 10600-9 This
- (12) is a little clearer photograph than the one you get from the
- (13) video Does this look like McArthur Pass?
- (14) A Yes it does
- (15) Q You can see markings on this rocks down at the lower end
- (16) of the shoreline are darker in color than the ones up at the
- (17) top Is that as you would interpret this because these are wet
- (18) and these are dried?
- (19) A The area - let s see - this area down in here there is
- (20) fucus along in here The asphalt pavement I believe that we
- (21) were looking at yesterday is just beyond the photograph this
- (22) direction
- (23) Q I call your attention to the markings on the tree stumps
- (24) that are here Those are tide markings are they not?
- (25) A Yes

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- (1) Q And you can trace those on various of the tree stumps that
- (2) are on the shoreline?
- (3) A Yes
- (4) Q And that represents the high water mark correct?
- (5) A Yes It does
- (6) Q So you could look at this photograph and basically - and
- (7) I ll do it very roughly If you disagree with this you can
- (8) tell me Just by virtue of the different colorations you can
- (9) sort of draw a line as to where the tide comes Is that about,
- (10) right or would you make it lower?
- (11) A Its looks like it should be lower
- (12) Q Let s do it again
- (13) A Probably better to do it at an angle so you have the
- (14) perspective
- (15) Q Sort of like this?
- (16) A I was thinking if you started with the line in the front
- (17) and go there -
- (18) Q I ll let you do it Do you want to pick up your light
- (19) pen? You can just pick up your light pen there and Joel will
- (20) turn the color on for you and just use it as if it were a
- (21) magic marker Hold it against the screen Isn t that amazing
- (22) where would the tide be?
- (23) A Its in this direction (indicating)
- (24) Q Why don t you change the color bar? Draw where you think
- (25) the high tide mark is going back into the recess of the picture

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- (1) toward that way?
- (2) A It extends beyond the edge of the photograph
- (3) Q How about toward the center of the photograph?
- (4) A The clean rocks appear to be somewhere along this line in
- (5) here (indicating)
- (6) MR DIAMOND Joel can I have this back?
- (7) BY MR DIAMOND
- (8) Q So you would agree with me that all of this area in here is
- (9) below the high tide is that correct?
- (10) A Yes I believe that s the case
- (11) Q The Native corporations don t own this do they?
- (12) A They own - they do not own the intertidal area
- (13) Q It s owned by the State of Alaska?
- (14) A That s correct
- (15) Q It s owned by all of us who live here?
- (16) A That s correct
- (17) Q And in fact any artifacts that are found in the area that
- (18) I ve drawn are not the property of Native corporations are
- (19) they?
- (20) A I believe that they were the property of the State but
- (21) that the Native Cultural Group has an interest in them
- (22) Q Undoubtedly they have an interest in them but this is
- (23) State land Is it not?
- (24) A That s my understanding
- (25) Q And before you dig or explore in this area you need to go

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- (1) to the State and get a permit?
- (2) A That s correct
- (3) Q And you can t even remove an artifact off the beach without
- (4) a State permit is that right?
- (5) A I believe that one needs a State permit
- (6) Q Regardless whether you re a Chenegan or non Native?
- (7) A I believe that s the case
- (8) Q I was going to go over the charts that were introduced
- (9) yesterday
- (10) Do we have 1290-B? You can take it off the screen the
- (11) Barco
- (12) Do you remember this chart Dr Johnson?
- (13) A Yes I do
- (14) Q You ve identified this as selected examples of impact of
- (15) oil?
- (16) A Yes
- (17) Q Was this intended to convey impacts of oil on actual
- (18) archaeological artifacts or resources?
- (19) A It was intended to indicate oil on archaeological sites
- (20) Q That wasn t my question Was it intended to indicate areas
- (21) of field notes where you found a reference to oiling of
- (22) archaeological materials?
- (23) A Archaeological sites yes
- (24) Q You re saying sites including all of the surrounding area?
- (25) A Yes that is the definition of site

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- (1) Q So we should not take from this chart the message that each  
 (2) one of these locations any known cultural resources got  
 (3) oiled?  
 (4) A That's correct. And again that is in terms of the  
 (5) documentation of known cultural features. The sites in my  
 (6) opinion were oiled.  
 (7) Q I'm not going to ask you about all of these. I intended  
 (8) to but I don't want to belabor matters. But there is a  
 (9) reference doesn't have a segment. AHR's reference to VECO  
 video  
 (10) re Toxicity of oil. Let me show you what's attached as 1290b  
 (11) as a report of - this is somebody's log notes?  
 (12) A That's correct.  
 (13) Q And what it actually says is 5/25/89 spent the morning  
 (14) in safety and health training lecture and short videos through  
 (15) VECO dangers of toxicity of oil equipment to bears. That  
 (16) doesn't have anything to do with archaeology does it?  
 (17) A No it has to do with toxicity of oil.  
 (18) Q Toxicity of oil archaeological resources?  
 (19) A No the charts were meant to indicate oil the focus is on  
 (20) oil and most of those refer to archaeological sites but not all  
 (21) of them.  
 (22) Q So the jury should not take your chart as an indication  
 (23) that wherever you have an entry there is a corresponding entry  
 (24) of field notes to oiling of archaeological resources?  
 (25) A For example - that's correct. For example the KN 134

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- (1) 35 and 36 those refer to oiling but not specifically  
 (2) oiling of an archaeological site. Where you see the AHR's  
 (3) number that refers to an oiling of a site.  
 (4) Q In fact if we looked at KN 134 135 and 136 we would find  
 (5) references to the field parks smelling or seeing oil or oily  
 (6) debris but in fact in reach of those instances field arts  
 (7) noted that there were no cultural resources found is that  
 (8) right?  
 (9) A I believe in this some of these cases that they have  
 (10) noted something but the focus here was not on oiling of  
 (11) archaeological sites it was oiling of shorelines.  
 (12) Q I'll show you the first page of 1289b which you also  
 (13) talked about yesterday. This is a chart you prepared which is  
 (14) entitled Selected Examples of Vandalism Disturbances and  
 (15) Impacts. And again I'm going to skip over some of these.  
 (16) You've attached the backup to all these entries and copies that  
 (17) will go to the jury?  
 (18) A Yes I believe.  
 (19) Q So they can read them themselves?  
 (20) A That's the idea.  
 (21) Q Take a look at Crafton Island 2 the July 26th 1980 field  
 (22) notes says graffiti - Crafton Island 02 that's the burial  
 (23) cave isn't it?  
 (24) A Yes this is the - yes.  
 (25) Q And this says graffiti using oil on rocks vertical oil

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- (1) drive hi mom Guns & Roses and smiling face?  
 (2) A Yes.  
 (3) Q You didn't mean to suggest that the field archaeologist  
 (4) observed graffiti in the burial cave?  
 (5) A No I believe that was not the case. That's why the field  
 (6) notes are attached so they can see what it refers to.  
 (7) Q In fact he didn't get to the Crafton Island burial cave  
 (8) until the next day isn't that right?  
 (9) A I don't know the specific dates.  
 (10) Q Don't you think this is a little misleading?  
 (11) A No it's not meant to be misleading. It's meant to  
 (12) indicate instances of vandalism and disturbance and the  
 (13) graffiti itself is the disturbance. Whether it's in the cave  
 (14) or some other location it doesn't matter. What is important  
 (15) here actually is that it's in the segment CR 2.  
 (16) Q Segment CR 2 is the location of the burial cave?  
 (17) A That's correct. Maybe just for clarification that what  
 (18) those are they are references and rather than drawing more in  
 (19) terms of conclusions it was felt that these are selected  
 (20) examples. Some of them I'm able to explain without any  
 (21) problem that type of thing. Other ones they are just  
 (22) references. And the key thing there is remember the idea of  
 (23) the graffiti.  
 (24) Q They are references to graffiti but not graffiti on  
 (25) archaeological significant resources necessarily?

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- (1) A Not necessarily that's correct.  
 (2) Q Or they are evidence of digging but not necessarily  
 (3) evidence of human digging?  
 (4) A I believe I indicated in that one that it could have been  
 (5) animal disturbance.  
 (6) Q And it's evidence of oiling but not evidence of  
 (7) necessarily of oiling of archaeological resources?  
 (8) A It is oiling of archaeological sites. It may not be  
 (9) specific oiling of identified artifacts.  
 (10) Q Let's talk about secrecy very important in your analysis  
 (11) loss of secrecy. We've already talked about Crafton Island  
 (12) burial cave that's long been a place where there has been  
 (13) vandalism?  
 (14) A Vandalism has been -  
 (15) Q Long before the spill?  
 (16) A I don't know the exact dates when it became an issue.  
 (17) Q The Chenega Village pictures that you showed us yesterday  
 (18) that's also been an area of pre spill vandalism?  
 (19) A I'm actually not personally aware of pre spill vandalism.  
 (20) Photographs suggest that there are or that there is I know  
 (21) that the site itself was heavily damaged during the earthquake  
 (22) and tsunami.  
 (23) Q Let me show you 160082. It's hard to tell on this Barco  
 (24) but it's an August '89 photograph that was done up. Do you  
 (25) recognize this as the Chenega Village schoolhouse?

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- (1) A I believe it's one of the structures there yes
- (2) Q The incident that gave rise to the Chenega problem was
- (3) graffiti painted on the wall?
- (4) A Yes
- (5) Q Somebody pulled the ceiling down on the Chenega Village
- (6) schoolhouse long before the oil spill didn't they?
- (7) A It is collapsing yes
- (8) Q 17 Somebody kicked holes in the walls of the Chenega
- (9) Village schoolhouse long before the oil spill didn't they?
- (10) A There is definitely - looks like vandalism to me
- (11) Q Let's go back to the picture that you showed us There are
- (12) various references in this photographs to pre spill vandalism
- (13) aren't there? Tim was there in August of '85?
- (14) A That's correct
- (15) Q What's the date of this '87?
- (16) A Is that what it is? I'll take your word for it
- (17) Q The incident of vandalism that was investigated in
- (18) connection with the spill was this one Exxon and a
- (19) description of what Exxon can do with themselves?
- (20) A I believe it included more than that In addition this
- (21) Robert 21 '89 all of that in the dark
- (22) Q This area here?
- (23) A That area there and to the left both areas
- (24) Q Robert P and Mike and Joe the guys from Ventura they
- (25) were never connected with the cleanup were they?

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- (1) A I don't know if they were or not
- (2) Q And the fella who left his name Robert April 9 1989 he
- (3) was never identified as being connected with the cleanup was
- (4) he?
- (5) A No We had asked for any type of incident reports and
- (6) asked to see if some of these names could be traced and we
- (7) never did receive any reports on that
- (8) Q Location of many of the sites to which you had quantified
- (9) damages is not really secret is it?
- (10) A This particular location?
- (11) Q No Chenega Villages in - I'm just talking generally?
- (12) A Chenega Village is known
- (13) Q Well here is a copy of a book that's been marked 15513 1
- (14) and I hope Judge Shortell won't make me file it as an exhibit
- (15) because this was checked out of the Anchorage Public Library
- (16) that is DeLaguna's book You're familiar with this?
- (17) A Yes
- (18) Q And this is generally available in any metropolitan or
- (19) university library?
- (20) A Actually it's in many collections I have gone to many
- (21) collections where it's been stolen or is missing
- (22) Q Vandals they are everywhere
- (23) DeLaguna I just went through briefly and pulled out
- (24) references to some of the sites we've talked about in this
- (25) case but we talked about Culross Island DeLaguna talks
- about

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- (1) Culross Island doesn't she?
- (2) A Yes she does And in fact I think the AHRs forms refers
- (3) to it
- (4) Q And she included in her books various maps of where things
- (5) were?
- (6) A Yes she does
- (7) Q Let's turn to pages 30 through 31 There is a reference to
- (8) Chenega Village here?
- (9) A That's correct
- (10) Q Kake Cove Kake Cove is the place you showed us video
- from
- (11) where the archaeologists came after the tide had come in and
- (12) there were garbage bags piled on the shore side?
- (13) A That's correct
- (14) Q Kake Cove is discussed in DeLaguna's book as well?
- (15) A That's correct
- (16) Q And there is a claim for Kake Cove?
- (17) A Yes there is
- (18) Q Middle Bay that's one of the claims?
- (19) A Yes it is
- (20) Q Point Helen is one of the claims?
- (21) A That's correct
- (22) Q Sawmill Bay?
- (23) A Yes
- (24) Q Mummy Island?
- (25) A Yes it is

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- (1) Q Panhat Point?
- (2) A Yes it is
- (3) Q All these are depicted on DeLaguna's map aren't they?
- (4) A I believe that most of them are
- (5) Q She also talks about lots of settlements can't make it any
- (6) wider Yalik Bay there is an archaeological claim for Yalik
- (7) Bay?
- (8) A That's correct
- (9) Q McArthur Pass?
- (10) A That's correct
- (11) Q An Ayaliak Bay?
- (12) A I'd have to check on that one
- (13) Q Koyuktoik Dogfish Bay there is a claim?
- (14) A Yes
- (15) Q They are all discussed in DeLaguna's book?
- (16) A They are mentioned yes
- (17) Q Are you familiar with Paradise of The North available at
- (18) Captain Cook bookstore?
- (19) A Actually I've never seen it before
- (20) Q Exhibit number 15512 do you recognize that as a picture of
- (21) the Chenega Village schoolhouse?
- (22) A Yes I do
- (23) Q Adjacent to that do you recognize that as a picture of -
- (24) Gail Evanoff and her husband Larry?
- (25) A That's correct

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- (1) Q Cruising Guide to the Prince William Sound do you know  
 (2) this one?  
 (3) A Yes I do  
 (4) Q This has got various references to sites that we've  
 (5) discussed yesterday and today?  
 (6) A It has references to some of the sites yes  
 (7) Q We talked about or at least we began talking about 14H 1  
 (8) claims 14H 1 claims are claims that a regional corporation  
 (9) can make for land on which there are significant historical or  
 (10) cemetery places?  
 (11) A Yes  
 (12) Q You're familiar with a process by which a regional  
 (13) corporation like Chenega Alaska has to go through in selecting  
 (14) a 14H 1 site?  
 (15) MR FORTIER That's Chugach Alaska  
 (16) MR DIAMOND I'm sorry?  
 (17) A I'm familiar with part of the process  
 (18) BY MR DIAMOND  
 (19) Q And you've looked at the regulations on that?  
 (20) MR PETUMENOS Objection  
 (21) THE COURT Is it the same objection I dealt with  
 (22) earlier?  
 (23) MR PETUMENOS I thought the plaintiffs were  
 (24) precluded from going into this area  
 (25) THE COURT If it's not the same question come on

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- (1) up  
 (2) (Sidebar held out of the hearing of the jury)  
 (3) MR FORTIER The issue this morning -  
 (4) THE COURT We had whether or not they could get -  
 (5) MR DIAMOND No I've dropped that issue sensitivity  
 (6) to Mr Fortier in as much as this is something else  
 (7) THE COURT Hold on let me read it  
 (8) MR PETUMENOS I don't know where he's going  
 (9) THE COURT So is the objection still -  
 (10) MR PETUMENOS May not be  
 (11) MR FORTIER Your Honor I think I asked almost an  
 (12) identical question this morning the objection was sustained on  
 (13) it  
 (14) MR DIAMOND Question was whether he heard expert  
 (15) testimony I could have objected on a foundation based this  
 (16) is simply the procedure that you mentioned of Chugach Alaska  
 (17) THE COURT What?  
 (18) MR DIAMOND It was a published paper  
 (19) THE COURT Okay  
 (20) MR PETUMENOS I'll see where it goes  
 (21) (Sidebar concluded)  
 (22) BY MR DIAMOND  
 (23) Q Dr Johnson there are regulations that are promulgated  
 (24) before a corporation like CAC before they could select lands of  
 (25) archaeological or historical significance?

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- (1) A Yes there are  
 (2) Q Let me show you a portion 43 CFR section 2653 5 which  
 (3) deals with that process This says In making the  
 (4) application - and I'll represent to you it's 14H 1 - the  
 (5) regional corporation should identify accurately and with  
 (6) sufficient specificity the size and location of the site for  
 (7) which the application is made as an existing cemetery site or  
 (8) historical place to enable the BLM to segregate the proper  
 (9) lands You're familiar with that?  
 (10) A That's what it says  
 (11) Q You're familiar that CAC has to go through that process to  
 (12) make it a 14H 1 selection which it has done in the past?  
 (13) A Yes that's the process  
 (14) Q And is it not also part of the process that notice of the  
 (15) filing of such applications specifying the regional  
 (16) corporation the size and location of the segregated lands  
 (17) encompassing the site for which application has been made a  
 (18) data filing and the day by which any protest shall be made  
 (19) shall be published once in the Federal Register and in one or  
 (20) more newspapers of general circulation in Alaska once a week  
 (21) for three consecutive weeks  
 (22) You're familiar with that?  
 (23) A No actually I'm not familiar with that  
 (24) Q If in fact Chugach Alaska Corporation has to publish in  
 (25) the paper the location of all of its 14H 1 sites don't you

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- (1) think that most people who are curious would be able to go find  
 (2) out where their sites are?  
 (3) A It is definitely a concern in terms of confidentiality  
 (4) yes  
 (5) Q Show you a blowup of a map which Mr Leppo will hold up  
 (6) for  
 (7) me This is defendant's 16197  
 (8) MR FORTIER This is a freebie  
 (9) MR DIAMOND This is a new exhibit  
 (10) MR FORTIER I haven't seen this before Your Honor  
 (11) THE COURT Okay  
 (12) MR PETUMENOS I haven't seen it either because  
 (13) Mr Fortier is standing in front of it  
 (14) BY MR DIAMOND  
 (15) Q This is a township map from the United States Bureau of  
 (16) Land Management You've seen these before haven't you?  
 (17) A Yes Actually I don't know if I've seen it  
 (18) Q Let me show you this one if my walking poster board will  
 (19) follow me  
 (20) This is a township management map which in fact shows  
 (21) Chugach Alaska selections You've seen these before?  
 (22) A I have seen these  
 (23) Q And right in this box here - if you could turn it towards  
 (24) the jury - there is an AA12591 That refers to part of  
 (25) Chugach Alaska selections of historical places does it not?  
 (26) A Yes it does

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- (1) Q That s the number of an application that was filed by CAC?
- (2) A That s correct
- (3) Q And this is fairly small this is measured in chains but
- (4) that s about what a quarter mile square if that?
- (5) A Yeah if that
- (6) Q This is the site of the Disk Island burial cave that we
- (7) talked about earlier today isn t it?
- (8) A Yes it is
- (9) Q In reaching the conclusion that the spill compromised
- (10) confidentiality did you take into account whether or not maps
- (11) such as this are publicly available for the asking at the
- (12) Bureau of Land Management?
- (13) A Yes and there is a concern about this
- (14) Q You can walk into the BLM and get this map just for asking
- (15) can t you?
- (16) A I ve never done it so I don t know 1294 these are
- (17) the -
- (18) Q 1294 these are the English Bay sites?
- (19) A That s correct
- (20) Q None are burial caves?
- (21) A No I don t see anything
- (22) Q None are known to have any human remains?
- (23) A I don t believe human remains have been documented at the
- (24) sites
- (25) Q You have no knowledge of any vandalism during the spill by

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- (1) clean up workers at any of these sites?
- (2) A I do not have specific knowledge of it no
- (3) Q Now five years later you still have no knowledge of any
- (4) vandalism by returning clean up workers at any of these sites?
- (5) A Not that I can recall at this time
- (6) Q And the best of your knowledge no clean up worker has
- (7) ever
- (8) returned to spoil any of these locations?
- (9) A I don t know that they have no
- (10) Q Same answer as to Port Graham?
- (11) A Again I m not aware of it
- (12) Q With the exception of Old Chenega Village which we just
- (13) talked about same answers for the Chenega Corporation sites?
- (14) A In terms of - could you repeat the question?
- (15) Q The question was you have no knowledge of vandalism
- (16) during
- (17) the course of the cleanup by clean up workers at any of these
- (18) sites with the exception of the old Chenega Village?
- (19) A I m not aware of it no
- (20) Q And you have no knowledge five years later that any
- (21) clean up workers has ever returned to spoil or otherwise
- (22) vandalize any of these sites?
- (23) A I have not documented it no
- (24) Q Finally Dr Johnson you consider yourself a social
- (25) scientist do you not?
- (26) A No I consider myself an archeologist
- (27) Q Archaeology is a branch of social sciences?

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- (1) A It s both in the social sciences and humanities
- (2) Q You re a researcher are you not?
- (3) A That s correct
- (4) Q And as a researcher would you agree with me that people
- (5) who are doing research in the social sciences ought not to have
- (6) an interest in that which they are doing research about a
- (7) pecuniary interest?
- (8) A I didn t understand
- (9) MR DIAMOND Your Honor may I approach for just a
- (10) second?
- (11) (Bench conference off the record )
- (12) BY MR DIAMOND
- (13) Q Dr Johnson the question that I asked you perhaps
- (14) inartfully don t you agree with me that someone who is doing
- (15) research in an area of the social sciences or the sciences for
- (16) that matter ought not to have any kind of pecuniary monetary
- (17) financial interest in the outcome of the research?
- (18) A I would say that basically my research is based on my own
- (19) evaluation of what the evidence is
- (20) Q Let me ask you my question My question is Don t you
- (21) think that the integrity of research might be looked at
- (22) differently if the person doing it has a - stood to gain in
- (23) some way directly or indirectly from the research that he or
- (24) she is doing?
- (25) A I think it depends on a case by case basis

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- (1) Q Wouldn t you look at SCATs and research done on drug
- (2) safety
- (3) by a scientist who had an ownership in the drug he was testing?
- (4) A I guess I would look first at the qualifications of the
- (5) individual
- (6) Q Something that might affect your appraisal evaluation
- (7) consideration of the findings wouldn t it?
- (8) A Not necessarily
- (9) Q It s something you would want to know in evaluating the
- (10) findings isn t it?
- (11) A In reference to myself being a shareholder -
- (12) Q I m not referencing that Generally isn t that something
- (13) you would be interested in knowing whether the person doing
- (14) research has a financial interest?
- (15) A Yes
- (16) Q And you just volunteered that you are a shareholder of
- (17) Chugach Alaska Corporation are you not?
- (18) A That s correct
- (19) Q And so are your brothers?
- (20) A That s correct
- (21) Q And so are your sisters?
- (22) A That s correct
- (23) Q And so are your cousins?
- (24) A That s correct
- (25) Q And you have cousins who have shareholders - that are
- (26) shareholders in the Chenega Village?

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- (1) A Very distant
- (2) MR DIAMOND Thank you No further questions
- (3) THE COURT Counsel I ve given you a choice you can
- (4) start now or in the morning
- (5) MR FORTIER Why don t we start tomorrow morning
- (6) It s been a long day
- (7) THE COURT I ll let the jury go
- (8) Don t talk about the case with your fellow jurors Don t
- (9) form or express any opinion until it s submitted to you for
- (10) deliberation We ll see you tomorrow morning
- (11) (Jury out at 1 25 p m )
- (12) THE COURT Counsel anything to take up on the
- (13) record?
- (14) MR DIAMOND May I be absolved of filing the original
- (15) of 15513 Can it be returned to library at the end of these
- (16) proceedings?
- (17) THE COURT No you ll just have to pay a fine
- (18) MR DIAMOND Well my friend who has the library card
- (19) is going to be chagrined about that
- (20) THE COURT Well you used the term loosely Yes
- (21) you re absolved
- (22) MR FORTIER The only other matter to take up I
- (23) wanted to bring to the Court s attention that we did file an
- (24) OPA 90 reply
- (25) THE COURT I ve got them all here

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- (1) MR PETUMENOS I have an application - and can the
- (2) witness stand down Judge?
- (3) THE COURT Sure
- (4) MR PETUMENOS It would be my - I m going to be
- (5) referring to the motion and order in limine that this court
- (6) entered with respect to the archaeological matters that were
- (7) addressed in court here in the past two days And to put it in
- (8) context I will - I think we had two issues that related to -
- (9) in my way of background we had filed a motion in limine with
- (10) respect to real estate inquiry generally of other oil spills
- (11) and the Court has sort of a reserved ruling on it You denied
- (12) it at the time You wanted to see how the proof developed with
- (13) respect to expert opinion on the impact of oil spills with
- (14) regard to other real property but you granted at least for
- (15) the present the motion in limine on impacts or vandalism
- (16) things like that on archaeological sites in the same oil
- (17) spill
- (18) I think also pending how the evidence developed at least
- (19) pretrial you denied it Excuse me you granted Exxon s and
- (20) denied ours I believe that the way that the cross examination
- (21) has developed in this case in which the expert has been
- (22) challenged in her expert opinion based upon a rigorous
- (23) cross examination that she doesn t know of individual specific
- (24) incidents on this site - on that site within the lands owned
- (25) by the Native corporations but in fact does know about

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- (1) incidents to that effect within the oil spill area And there
- (2) are some very well documented incidents to that effect within
- (3) the oil spill area that I believe any archeologist who is
- (4) working in this area this is not an uncommon situation
- (5) whether you re building a road or a development or an oil well
- (6) whatever you re doing that s the sort of thing that an
- (7) archeologist considers makes the order in limine unfair
- (8) It seems to me that the nature of the cross examination has
- (9) opened up for evidence what the archaeologists do know about
- (10) vandalism within the oil spill area within Prince William
- (11) Sound
- (12) THE COURT What do they know?
- (13) MR PETUMENOS My understanding is that we had a very
- (14) extensive chart that related to incidents of vandalism and so
- (15) forth on sites that were owned by the governments for
- (16) example
- (17) within the area where these sorts of things happened
- (18) THE COURT And you wanted to use it with this
- (19) witness?
- (20) MR PETUMENOS And I would renew the offer to use it
- (21) on redirect or with the next witness
- (22) THE COURT Which witness the main -
- (23) MR PETUMENOS I m sorry
- (24) THE COURT Which witness I need to know which
- (25) witness
- (26) MR PETUMENOS On the specific offer I d have to

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- (1) defer to Mr Fortier
- (2) MR FORTIER I think it would probably be Dr Johnson
- (3) for a little bit but I also know that Dr Lobdell has examined
- (4) the charts as well It s actually Dr Lobdell -
- (5) THE COURT Do you have a copy of the chart? I d like
- (6) to see it
- (7) MR FORTIER Of your order?
- (8) THE COURT No I want to see the chart
- (9) MR PETUMENOS The chart in its form before we cut it
- (10) back?
- (11) MR FORTIER No I didn t bring it with me today but
- (12) what I did was -
- (13) THE COURT How many instances of vandalism were
- (14) there?
- (15) MR FORTIER Pardon?
- (16) THE COURT How many instances of vandalism were
- (17) there?
- (18) MR FORTIER I can think of four or five off the top
- (19) of my head
- (20) THE COURT And so let s just assume there were four
- (21) or five instances of vandalism and the specifics circumstances
- (22) are going to be described
- (23) MR FORTIER The circumstances from the field notes
- (24) would be described yeah
- (25) THE COURT Do you have the field notes?

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- (1) MR FORTIER I don t have them with me no Your  
 (2) Honor  
 (3) THE COURT Mr Diamond?  
 (4) MR DIAMOND The basis for our objection this just  
 (5) opens up a huge door because the - most of the examples that  
 (6) were on the chart that we objected to were over in Kodiak  
 (7) Kodiak Most of the sites can be reached by car or by  
 (8) vehicle It's very different We did not want to have to  
 (9) start trying a half dozen sites what happened there who did  
 (10) what to whom was it similar to Prince William Sound sites  
 (11) which is very remote as you ve seen were they different It  
 (12) just opened up a whole can of worms and you agreed with us  
 (13) that  
 (14) we didn t want to have to try all that We re dealt here with  
 (15) approximately 50 sites that s more than a representative  
 (16) sample of these sites There is testimony that there has been  
 (17) vandalism at these sites I m not denying that there was  
 (18) testimony about Crafton Island burial cave and Chenega  
 (19) Village but if they get into this we re going to get into  
 (20) this and we re going to end up trying a whole lot of lawsuit  
 (21) based on hearsay documents I don t think that s something  
 (22) you  
 (23) want to open up  
 (24) THE COURT What s the question counsel? There are  
 (25) many things I don t want that I have to listen to but that  
 (26) doesn t mean I can preclude them  
 (27) MR DIAMOND I understand that You ve already

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- (1) precluded this testimony on the same argument  
 (2) THE COURT I did as a perspective matter but when  
 (3) counsel cross examines they run the risk of the door opening  
 (4) partially You see I have to deal with those in terms of an  
 (5) offer of proof and I hear from you - and this better be  
 (6) true - that this witness can say yes I know of four or five  
 (7) instances of vandalism that weren t on the property that these  
 (8) corporations owned but were post spill instances of vandalism  
 (9) and that is I take it to show that vandalism in the future  
 (10) might be a problem  
 (11) MR FORTIER No actually Your Honor the offer -  
 (12) she would say that the charts demonstrate instances of  
 (13) vandalism during the oil spill The approach -  
 (14) THE COURT Hang on If she knows about four or five  
 (15) instances of vandalism she can testify to that She can t  
 (16) testify to the great cosmic scheme of vandalism that s  
 (17) described in some chart that shows 50 instances That s why I  
 (18) asked for offers of proof counsel I got to know what the  
 (19) witness is going to say Bring her in here let s hear what  
 (20) she has to say  
 (21) MR DIAMOND Based on our pretrial proceedings I can  
 (22) tell you what we re dealing with for the most part are  
 (23) incidents that took place while there were clean up workers  
 (24) around The whole issue here is post clean up vandalism not  
 (25) vandalism committed during the course of -

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- (1) THE COURT Counsel what do you think the best  
 (2) evidence is of the testimony coming in is what the lawyers say  
 (3) or what the witness says?  
 (4) MR DIAMOND Probably what the witness says after the  
 (5) lawyers talk to her  
 (6) THE COURT That s why I want to get her in here now  
 (7) before she s talked to by the lawyers  
 (8) MR McCALLION Your Honor I believe she went  
 (9) downstairs  
 (10) THE COURT I ll take a break I want to hear from  
 (11) her and I don t want anybody to be talking to her I want to  
 (12) hear it straight out of her mouth without preparation  
 (13) THE CLERK Please rise This court stands in  
 (14) recess  
 (15) (Recess at 1 30 p m to 1 40 p m )  
 (16) THE CLERK Please rise This court now resumes  
 (17) THE COURT Counsel we re on the record and the jury  
 (18) is not present  
 (19) To the extent that you want to question counsel about the  
 (20) area we discussed you re welcome to do so if counsel was  
 (21) here  
 (22) MR DIAMOND We have no further questions  
 (23) MR PETUMENOS I can try I can see if I can find  
 (24) them Hold on Judge  
 (25) MS SMITH Your Honor while we re sitting here  
 (26) maybe I should let the record reflect Chuck and I have only

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- (1) been married for 11 years but for him it seems like 13  
 (2) THE COURT I knew there would have to be a  
 (3) qualification and should be corrected for the record  
 (4) MR DIAMOND There goes my credibility  
 (5) THE COURT Time flies when you re having fun  
 (6) MR PETUMENOS Without prejudice to Mr Fortier s  
 (7) question do you want me to start?  
 (8) THE COURT Sure  
 (9) VOIR DIRE EXAMINATION OF LORA L JOHNSON Ph D  
 (10) BY MR PETUMENOS  
 (11) Q Dr Lobdell (sic) when you looked at all the field notes  
 (12) do you remember looking at field notes relating to incidents  
 (13) that occurred on other than Native corporation land?  
 (14) A Yes I m Johnson  
 (15) Q Doctor -  
 (16) A Yes I do  
 (17) Q What sorts of things were you looking for when you were not  
 (18) restricted to Native corporation land?  
 (19) A Basically just looking for incidents in terms of impact of  
 (20) vandalism whatever  
 (21) Q When you form your opinion that there has been impacts  
 (22) based upon a loss of confidentiality is part of the basis of  
 (23) that opinion what you observed within the oil spill area on  
 (24) these lands that are not Native corporation land?  
 (25) A Yes it is

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- (1) Q Could you tell the Judge in general terms what you found  
 (2) how many such incidents where they were things like that?  
 (3) A There were quite a few incidents on lands that we re not  
 (4) claiming here today Do we want specifics in terms of what  
 (5) kind of -  
 (6) Q Well can give the Judge an approximately idea of how many  
 (7) with reference to the fields notes that could pertain to these  
 (8) in general? - -  
 (9) A I m trying to think how many things we took out There  
 (10) were quite a few  
 (11) THE COURT Were they all in the area that you re  
 (12) talking about Prince William Sound?  
 (13) A Most of them were There were a few that were - primarily  
 (14) Prince William Sound I believe maybe a few the Kenai  
 (15) Peninsula and then there were additional ones down at Kodiak  
 (16) THE COURT Can you give me just some approximation of  
 (17) how many you saw in Prince William Sound?  
 (18) A In terms of the references themselves there is many more  
 (19) references the number of incidents What I m thinking of is I  
 (20) know there is like a couple clear cases of vandalism that type  
 (21) of thing There are other miscellaneous types of impacts  
 (22) THE COURT Tell me what those are as opposed to  
 (23) vandalism  
 (24) A It would be like walking over the site and oil spill  
 (25) workers in the uplands and these type of general things at

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- (1) location of sites  
 (2) THE COURT But you think there were only a couple of  
 (3) incidents of vandalism on land that wasn t owned or claimed by  
 (4) the plaintiffs here? -  
 (5) A Like documented What comes to my mind is there is one  
 (6) real clear case of documented vandalism on a site that  
 (7) plaintiffs aren t claiming  
 (8) THE COURT Where was that?  
 (9) A It was at Knight Island It was the Knight Island burial  
 (10) cave  
 (11) THE COURT Do you remember specifically what the  
 (12) other one was?  
 (13) A I m trying to think here I believe that there was another  
 (14) one another cave I better just stick with that one in terms  
 (15) of what I remember  
 (16) THE COURT Go ahead  
 (17) MR PETUMENOS I m sorry I didn t mean to interrupt  
 (18) BY MR PETUMENOS  
 (19) Q We caught you kind of cold on this but you had looked at  
 (20) the notes and researched this and there are notes that you have  
 (21) made back at the office?  
 (22) A Yes  
 (23) Q Was there an incident that you recall on Afognak?  
 (24) A Yes  
 (25) Q And was the Afognak area - this incident took place

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- (1) accessible by road and a lot of people that could drive to it  
 (2) or was it a remote area?  
 (3) A I believe it was a remote area  
 (4) Q Tell the Judge what you know about that incident  
 (5) A The incident that I m thinking of from that area had to do  
 (6) with bird pick up crews the bird pick up crews and picking up  
 (7) oiled debris and artifacts this type of thing  
 (8) And there was also another incident down there in terms of  
 (9) boat tenders and possible connections with vandalism this type  
 (10) of thing down in that area What it is I am kind of caught  
 (11) cold because I ve been trying to stay away from all those so I  
 (12) don t talk about it and I really have put a lot of it out of  
 (13) my mind That there are some real key you might say hot spots  
 (14) that there was clear that there was impacts There is more  
 (15) general references to kind of - well more general types of  
 (16) impacts  
 (17) MR PETUMENOS I defer to the late arriving  
 (18) Mr Fortier  
 (19) MR FORTIER I did find the unamended list of sites  
 (20) and there were 117 examples  
 (21) THE COURT Go ahead and show it  
 (22) VOIR DIRE EXAMINATION OF LORA L JOHNSON Ph D  
 (23) BY MR FORTIER  
 (24) Q Dr Johnson I m going to show you what was marked as  
 (25) 1289 Actually there is 120 there Does that refresh your

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- (1) memory?  
 (2) A Yes  
 (3) Q Can you tell the Court what the title of the document is?  
 (4) A Again It s the same title as one of the other exhibits  
 (5) It s called Selected Examples of Vandalism Disturbance  
 Impacts  
 (6) to Segment Sites Taken from the SCAT Archaeological Field  
 (7) Notebooks Same title it was just edited  
 (8) Q And are there sites listed there throughout Prince William  
 (9) Sound?  
 (10) A Well the sites that are on the exhibits currently are on  
 (11) here In addition to that there are other references to  
 (12) possible vandalism pot holding duck pipe (ph) bird crews  
 (13) the removal of human remains this type of thing There is  
 (14) many additional types of impact  
 (15) Q And there is also references to such activities on sites  
 (16) along the Gulf of Alaska including Cook Inlet or Lower Cook  
 (17) Inlet and the Kenai Fjords?  
 (18) A Yes Kenai Fjords It s Prince William Sound It s the  
 (19) same spill area basically but primarily Prince William Sound  
 (20) the Kenai Peninsula and the Kodiak area  
 (21) Q And Dr Johnson in the preparation of those - of those  
 (22) particular sites excuse me In the preparation of the sheets  
 (23) themselves did you examine field notes?  
 (24) A Yes I did  
 (25) Q Why did you do that?

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- (1) A Well it was basically in the course of even 1989 1990  
 (2) going through all of these that the different incidents or  
 (3) concerns came to mind both on sites that we ultimately - or  
 (4) that the plaintiffs ultimately claimed damages on But  
 (5) throughout the oil spill we were concerned about impacts to all  
 (6) sites and that did affect my own opinion in terms of possible  
 (7) impacts  
 (8) Q Why were you concerned about impacts to all sites?  
 (9) A Well because you get a better feeling for what's happening  
 (10) in the area It wasn't just limited to our particular sites  
 (11) you know It's like the cleanup occurred throughout the oil  
 (12) spill area and you see different documentation for different  
 (13) areas and you get kind of a different perspective than you  
 (14) would in terms of just looking at our subset of sites  
 (15) basically  
 (16) Q So you began with the big picture in order to figure out  
 (17) what people should be worried about with regard to their  
 (18) individual sites would that be fair?  
 (19) A That's correct  
 (20) Q And you didn't necessarily rely upon the field notes for  
 (21) the truth of the matter asserted so much as to find out what  
 (22) was going on throughout the oil impacted area during the oil  
 (23) spill clean up would that be fair to say?  
 (24) A Yes And part of the concern is just numbers of different  
 (25) possible incidents that are reported here that from an

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- (1) archaeologist's point of view you're still only looking at a  
 (2) small number of these types of things that are occurring You  
 (3) don't often get people to admit to doing things so these are  
 (4) observations and clues in terms of what appears to be  
 (5) happening  
 (6) out there  
 (7) Q Those are the ones that made it into the books?  
 (8) A That's correct  
 (9) Q And in addition Dr Johnson you also were concerned  
 (10) about number of visits to sites by persons other than  
 (11) archaeologists?  
 (12) A That's correct  
 (13) Q And that again is throughout the oil spill area?  
 (14) A Yes that's correct  
 (15) Q And why was that?  
 (16) A Again it has to do with the confidentiality issue and just  
 (17) people's awareness of sites that you know it's impossible to  
 (18) prevent everyone from going But on the other hand it is  
 (19) possible to minimize the number of people that get firsthand  
 (20) knowledge about some of these sites  
 (21) Q Did you find that the archaeologists were also trying to  
 (22) track the number of people going into the uplands and in fact  
 (23) did experiments to determine it at certain sites?  
 (24) A There were also experiments in terms of an artifact  
 (25) collection experiment where fake artifacts were put out to see  
 whether they would be collected or not There is a general

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- (1) concern  
 (2) Q And these fake artifacts were at sites other than what the  
 (3) plaintiffs are claiming damage for?  
 (4) A Yes that's correct  
 (5) Q What happened to the artifacts?  
 (6) A Some of them were recovered by archaeologists when they  
 (7) went back Other ones were not found for whatever reason  
 (8) Q Let me hand you a chart that's marked as 1317 selected  
 (9) examples visits to segments by persons other than  
 (10) archaeologists and refer you to an experiment that took place  
 (11) at KN 209 on August 5 1990 Can you tell us what that's  
 (12) about?  
 (13) A Okay This is one of the sites that has human remains  
 (14) there is burials there and it refers to KN 209 The comment  
 (15) here is experiment concerning graves and that the crew kept  
 (16) going on to the back area that basically with this one of the  
 (17) concerns was people going up into the uplands at the location  
 (18) of these graves and for the regional corporation and the  
 (19) Village corporations I think there is probably a greater  
 (20) sensitivity to the issue of human remains And what ended up  
 (21) happening is it became apparent that clean up personnel were  
 (22) going up into the uplands  
 (23) Q Did that - in your opinion when you found these things  
 (24) did it cause you to be concerned about whether or not visits  
 (25) resulted in disturbances or vandalism?

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- (1) A Well in some cases it's just not possible to document you  
 (2) know actual occurrences of vandalism but the fact that there  
 (3) is at least one case where it's really clear that a clean up  
 (4) crew member did vandalize a site and take human remains that  
 (5) it makes one concerned about other sites as well  
 (6) Q And did you also examine sites other than those for which  
 (7) damages are being made - excuse me look at field notes other  
 (8) than for those which examples are now being made concerning  
 (9) what happens when a site is cleaned without being monitored  
 (10) for  
 (11) survey?  
 (12) A Yes there were other sites that this occurred at  
 (13) Q Did you find that there were artifacts that were put into  
 (14) bags and nothing was ever checked?  
 (15) A Yes I believe there is a reference to that  
 (16) Q And is that why you looked at these other sites?  
 (17) A Well in general we had concerns for the issue of  
 (18) monitors if they weren't present because of these general  
 (19) concerns Basically what it comes down to is during the course  
 (20) of 1989 and after that our concerns and you might say  
 (21) actions in some ways was a result of the kind of overall  
 (22) picture of what was happening  
 (23) Q I'm going to hand you what's been marked as 1315  
 (24) Dr Johnson selected examples from archaeologists field  
 (25) notes  
 found during or after clean up  
 Now again when you looked at the field notes you were

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- (1) looking at the field notes in order to obtain an example of the  
 (2) sorts of impacts to sites and not necessarily for the truth of  
 (3) the matter asserted is that correct?  
 (4) A Could you repeat that one more time?  
 (5) Q Sure You were looking at the field notes to find out what  
 (6) sorts of things could happen to sites?  
 (7) A That s correct  
 (8) Q You didn t necessarily take the field notes as the God s  
 (9) honest truth of what happened?  
 (10) A That s correct  
 (11) Q And that caused you to believe that there were additional  
 (12) impacts to the sites that you re claiming - that your clients  
 (13) are claiming damages for now?  
 (14) A Yes sort of the occurrence of these kind of impacts some  
 (15) of which are clearly impacts and others suggest impacts were  
 (16) part of what influenced my opinions yes  
 (17) Q Did you also look for clean up activities on segments  
 (18) before monitoring to find out whether or not there were impacts  
 (19) to the sites such as artifacts being picked up and put in bags?  
 (20) A The question is whether -  
 (21) Q What sort of impacts - did you look at the field notes in  
 (22) order to determine whether there would being impacts to sites  
 (23) being cleaned without survey or monitor?  
 (24) A Yes And actually the survey - that was always a concern  
 (25) that while you know in many cases that the survey itself also

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- (1) missed artifacts In cases where there was no survey at all  
 (2) those were probably greater concern -  
 (3) Q Did you find examples of artifacts being picked up in  
 (4) screening for - through the artifacts when they were already  
 (5) in bags?  
 (6) A Yes I believe there are  
 (7) Q Let me show you what s been marked as 1291 which is  
 about  
 (8) 17 examples of those activities When you reviewed the field  
 (9) notes and you found these kinds of things in them Dr Johnson  
 (10) did you arrive at any conclusions as to what impact clean up  
 (11) effort would have on the archaeological sites of your clients?  
 (12) A Yes I do have a concern for the clean up activities  
 (13) Q That would be another example of some sort of impact?  
 (14) A Yes  
 (15) MR FORTIER I have no further questions Your Honor  
 (16) THE COURT Do you have any questions counsel?  
 (17) MR DIAMOND Very briefly Your Honor  
 (18) VOIR DIRE EXAMINATION OF LORA L JOHNSON Ph D  
 (19) BY MR DIAMOND  
 (20) Q With respect to Kenai and Prince William Sound the only  
 (21) incidents of vandalism that you have knowledge are Knight  
 (22) Island burial cave and Crafton Island?  
 (23) A Those are the ones that come to mind  
 (24) Q You don t know of any others?  
 (25) A In terms of vandalism the graffiti at Chenega is also

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- (1) considered vandalism Basically what it comes down to at what  
 (2) point can you call it vandalism and what point do you call it  
 (3) impacts because the - another one that comes to mind is the  
 (4) south - actually just forgot to mention it the south end of  
 (5) Crafton Island one For example persons there there was  
 (6) part of a board that was broken off and it was documented that  
 (7) it had changed position since the last time archaeologists were  
 (8) there and put back in place While that probably is not  
 (9) vandalism it is an impact and there are other cases of this  
 (10) Q So of the four actual or possible acts of vandalism on  
 (11) Prince William Sound and Kenai that you gleaned from all your  
 (12) reading three of those are on Native owned property?  
 (13) A No I believe that other issues of vandalism - there are  
 (14) other ones as well In particular Afognak comes to my mind  
 (15) Q I m talking about Prince William Sound and Kenai  
 (16) A I m sorry  
 (17) Q Three of the four that you have knowledge firsthand  
 (18) secondhand or thirdhand are on Native owned properties?  
 (19) A In terms of are these properties that we are claiming  
 (20) damages on is that the - is that what the question is?  
 (21) Q Yes  
 (22) A Some of these we are not claiming claims  
 (23) Q Knight Island?  
 (24) A That s correct  
 (25) Q The other three are on properties which you re claiming

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- (1) damages Crafton Chenega and South Crafton?  
 (2) A Yes we are claiming damages for those  
 (3) Q You have no firsthand knowledge of vandalism on Kodiak  
 (4) isn t that right?  
 (5) A I have no firsthand knowledge no  
 (6) Q And you haven t been deposed in this case on any vandalism  
 (7) in Kodiak?  
 (8) A No I haven t  
 (9) Q Kodiak is a lot different in terms of - at least Afognak  
 (10) is different in terms of dissemination of site location  
 (11) information?  
 (12) A There is a great problem down there yes  
 (13) Q Well in fact that Native corporation has in fact -  
 (14) well tourism advertised site locations?  
 (15) A I m not personally aware of their just advertising for  
 (16) tourism It probably depends on the site by site cases as to  
 (17) whether you want to do that or not I don t know  
 (18) Q Hasn t that gone on out in Kodiak?  
 (19) A I don t know I know that they have had volunteers come in  
 (20) and work on excavations In terms of inviting people in in  
 (21) terms of -  
 (22) Q How about the Dig Afognak Program?  
 (23) A That s what I m referring to  
 (24) Q Come to Afognak and dig you mean archaeology  
 resources?  
 (25) That s a program that s promoted to tourism?

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- (1) MR PETUMENOS Object to the offer of proof She  
 (2) indicated she is aware of an incident of oil spill workers if  
 (3) he wants to conduct the cross later I don't know if the  
 (4) evidence is admissible as to the weight  
 (5) THE COURT Objection is overruled  
 (6) BY MR DIAMOND  
 (7) Q The pending question is you're aware of the Dig Afognak  
 (8) Program as being something that the folks in Kodiak have done  
 (9) to promote tourism?  
 (10) A I'm aware of the - this program What I have heard about  
 (11) it has been from Rick Knecht who I believe is running the  
 (12) program and I guess I saw it as a program where they were  
 (13) inviting volunteers to come in and work at the site with  
 (14) archaeologists  
 (15) Q That doesn't happen in Prince William Sound and Kenai to  
 (16) the best your knowledge?  
 (17) A I don't believe that it has  
 (18) Q In your professional opinion if there is cleanup  
 (19) undertaken without monitoring on one particular site that  
 (20) doesn't mean on some other particular site that cleanup was  
 (21) done without monitoring?  
 (22) A There was an attempt to record where monitoring was taking  
 (23) place  
 (24) Q I understand that but the question is Would you infer  
 (25) from the fact that cleanup took place without a monitor on one

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- (1) particular location that it happened on another specific  
 (2) parcel?  
 (3) A I guess what I would say is that if I was aware that it had  
 (4) happened I would think that it was possible that it occurred  
 (5) in other locations as well  
 (6) Q Do you think that an upland trespass in one location means  
 (7) that an upland trespass took place and harmed some other  
 (8) specific sites?  
 (9) A I would think that it's quite likely  
 (10) Q Do you think that refuse disposal at one particular  
 (11) location means that refuse was disposed of over archaeological  
 (12) sites at another location?  
 (13) A I would think that's a possibility  
 (14) Q If it happened at one place probably means it happened at  
 (15) someplace else?  
 (16) A It could happen  
 (17) Q Holes dug at one site means it could have happened at  
 (18) another specific place?  
 (19) A Yes In terms it could increase the possibility in other  
 (20) locations as well  
 (21) MR DIAMOND Nothing further  
 (22) THE COURT Do the parties want to be heard?  
 (23) MR PETUMENOS Just very briefly I would point to  
 (24) the Court a couple of evidence rules  
 (25) THE COURT Do you have a copy of the pretrial order I

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- (1) issued?  
 (2) MR PETUMENOS I probably do yes I've been  
 (3) carrying it in every day and finally -  
 (4) THE COURT Surprised you don't have this on a Barco  
 (5) counsel  
 (6) MR FORTIER Try 76  
 (7) MR PETUMENOS What's the number?  
 (8) MR FORTIER I think it's 76  
 (9) MR PETUMENOS Right I have it  
 (10) MR FORTIER I remember Judge Shortell's orders  
 (11) MR PETUMENOS But I bring them to court  
 (12) THE COURT That's what I thought it said All right  
 (13) I've heard - I don't need argument I've heard the offer of  
 (14) proof It's clear to me that this area has been opened up  
 (15) It's clear to me that the testimony and the offer of proof is  
 (16) admissible  
 (17) MR DIAMOND Your Honor that's equally true with  
 (18) respect to Afognak because we have had no opportunity to  
 (19) inquire into these areas  
 (20) THE COURT With respect to Afognak?  
 (21) MR DIAMOND Yes  
 (22) THE COURT If the plaintiffs choose to put that  
 (23) evidence on it is Yes it is  
 (24) MR DIAMOND I raise that simply because we will have  
 (25) no opportunity to conduct discovery Our most recent

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- (1) deposition was taken after the entry of this order I also  
 (2) imagine we're going to have to amend our witness list to bring  
 (3) on people who are knowledgeable because we're going to get  
 (4) into  
 (5) a swearing contest firsthand information versus secondhand  
 (6) information  
 (7) THE COURT We'll see I suspect that all these dire  
 (8) possibilities aren't going to occur  
 (9) MR PETUMENOS Judge I had some exhibits to move in  
 (10) Monday I think it's late can I do that tomorrow?  
 (11) THE COURT Absolutely  
 (12) Are we done here?  
 (13) MR McCALLION Your Honor during Dr Johnson's  
 (14) cross examination there was some questioning as to whether  
 (15) the  
 (16) Natives had an interest in archaeological artifacts on  
 (17) State owned lands in other words below mean high tide  
 (18) Dr Johnson testified that she did believe they had an  
 (19) interest It's our view that it's really a matter of law and  
 (20) would be appropriate for a judicial notice with regard to a  
 (21) specific Alaska statute which deals with the rights of Natives  
 (22) to artifacts -  
 (23) THE COURT What does it say?  
 (24) MR McCALLION I'm referring to 41 35 020a of the  
 (25) Alaska Historic Preservation Act  
 (26) THE COURT So tell me what their rights are counsel  
 (27) MR McCALLION Well I'll read the paragraph if I

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- (1) may The State reserves to itself title to all historic  
 (2) prehistoric and archaeological resources situated on land  
 owned  
 (3) or controlled by the State including tideland and submerged  
 (4) lands and reserves to itself the exclusive right of field  
 (5) archaeology on State owned or controlled land However  
 (6) nothing in 41 35 010 and it cites the statute diminishes the  
 (7) cultural rights and responsibilities or persons of aboriginal  
 (8) descent or infringes upon their right of possession and use of  
 (9) those resources that may be considered of historic prehistoric  
 (10) or archaeological value  
 (11) THE COURT So what do you think that means  
 (12) MR McCALLION That much akin and analogous to the  
 (13) Native corporations littoral or riparian rights with regard to  
 (14) State owned land below mean high tide In the archaeologica  
 (15) area as well Trial and ministerial (ph) could apply but this  
 (16) specific statute within the bundle of rights the Native  
 (17) corporations have there is in addition to these common law and  
 (18) littoral rights some statutory basis for an interest in  
 (19) archaeological sites and artifacts below mean high tide Now  
 (20) it may well be that Natives would have to approach the state  
 (21) and get a license but it s our view that they do have a  
 (22) property interest which is cognizable under the law and the  
 (23) court could take notice of that  
 (24) THE COURT You mean as opposed to having her testify  
 (25) what rights that she thinks she had is what s in the statute

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- (1) MR McCALLION That s essentially it I believe she  
 (2) was alluding to the statute and it seems to us to be a matter  
 (3) of law although inquiry might be made as to her  
 understanding  
 (4) but ultimately it s a matter of law  
 (5) THE COURT Counsel?  
 (6) MR DIAMOND We would have no objection trying extra  
 (7) additional notice I would look to - look at the statute and  
 (8) investigate what we believe the meaning is  
 (9) THE COURT The question because it s raised at the  
 (10) time I m assuming that counsel may want to deal with it with  
 (11) the witness tomorrow morning and I don t want to have to go  
 (12) out of the presence of the jury at that time to determine what  
 (13) I allow and don t allow It sounds to me like she could refer  
 (14) to that statute and say this is what I meant There is an  
 (15) interest a valid a Native corporation interest in artifacts  
 (16) as far as even below the mean high tide  
 (17) MR DIAMOND I think that it s probably inappropriate  
 (18) for a lay witness to start telling the jury what the law is we  
 (19) got in problem with Dr Green doing that I think you ought to  
 (20) be the one doing that so we are in agreement this is what the  
 (21) law is otherwise we re end up in the OPA 90 situation  
 (22) THE COURT You agree counsel I should be the one to  
 (23) do it?  
 (24) MR McCALLION Your Honor I believe that would be  
 (25) appropriate for the witness since she works in the area to

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- (1) give her understanding but that ultimately would be a matter  
 (2) of law  
 (3) THE COURT I guess I should make my question  
 (4) specific Do you intend to elicit it from her?  
 (5) MR McCALLION Yes in terms of her understanding  
 (6) THE COURT You may do so Is there anything else?  
 (7) MR DIAMOND With respect to these new entries that  
 (8) we re going to have to deal with on recross tomorrow we don t  
 (9) have back up for this and obviously we re going to need to  
 (10) look at it before we cross  
 (11) THE COURT You mean the actual field notes?  
 (12) MR DIAMOND Well the field notes that go with all  
 (13) these corresponding entries  
 (14) THE COURT I m sure you can get that  
 (15) MR DIAMOND Direct counsel to get that to us by 5  
 (16) for anything they are going to use so we can have an  
 (17) opportunity to read it  
 (18) MR FORTIER We ll sure try We gave it to them two  
 (19) months ago  
 (20) THE COURT We ve been through this When you give  
 (21) them a pile like this it s not the same thing as giving them  
 (22) specific things that makes it plain to me that I should order  
 (23) it I order that the backup material be provided for counsel  
 (24) by 5 00  
 (25) MR FORTIER Ms Mikko is here

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- (1) THE COURT Was it specifically provided attached to  
 (2) the particular -  
 (3) MS MIKKO As I recall yes and in either case it  
 (4) would be impossible to provide it by 5 00  
 (5) THE COURT How about 5 10?  
 (6) MS MIKKO It s four volumes of documents  
 (7) THE COURT It can t be four volumes of documents  
 (8) attached to those particular slips of paper those particular  
 (9) field notes  
 (10) MS MIKKO The unedited is that correct  
 (11) THE COURT That s exactly what I m talking about If  
 (12) she s going to be referring to those particular sheets of  
 (13) paper then they refer to field notes which would be specific  
 (14) to each entry That s what I m ordering it s got to be done  
 (15) by 5 Is there anything else?  
 (16) MR McCALLION Your Honor on the issue we just  
 (17) discussed with plaintiffs trial memorandum with the statutes  
 (18) but I read it into the record I could hand up to the Court a  
 (19) shorted trial memorandum on the aboriginal rights on the  
 (20) artifacts  
 (21) THE COURT You can file it serve it on counsel and  
 (22) counsel can have an opportunity to reply if there is any reply  
 (23) necessary Anything else?  
 (24) MR DIAMOND No  
 (25) (Proceedings recessed at 2 12 p m )

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- (1) STATE OF ALASKA )
- (2) Reporter s Certificate
- (3) DISTRICT OF ALASKA )
- (6) I Leonard J DiPaolo a Registered Professional
- (7) Reporter and Notary Public
- (8) DO HERBY CERTIFY
- (9) That the foregoing transcript contains a true and
- (10) accurate transcription of my shorthand notes of all requested
- (11) matters held in the foregoing captioned case
- (12) Further that the transcript was prepared by me
- (13) or under my direction
- (14) DATED this day
- (15) of 1994
- (21) LEONARD J DIPAOLO RPR  
Notary Public for Alaska
- (22) My Commission Expires 2 3 96

Look-See Concordance Report

UNIQUE WORDS 2,427
TOTAL OCCURRENCES 11,601
NOISE WORDS 385
TOTAL WORDS IN FILE 35,751

SINGLE FILE CONCORDANCE

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