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[Shoreline evaluations, 1990].

CI-01 – CU-21

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SHORELINE EVALUATION

SEGMENT ST/ CI-001 SUBDIVISION A (1 OF 2) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5R Seabird colony (5/1 to 9/1)
5T All Bald Eagle nests (3/1 to 6/1)
5T Active Bald Eagle nests (3/1 to 9/1)
3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and seal lion molting (8/15 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: Rebecca Dan O'Neil DATE: 5/18/90

OILING CATEGORIZATION:

Wide 99 m: Medium 306 m: Narrow 47 m: V.Light 109 m: No Oil 433 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u>X</u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u>X</u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u>X</u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u>X</u> Tarmat Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: Recommended treatment includes: 1) Manual pickup of tar patties where shown on attached sketch map. Approval of USFWS regarding eagle nest and seabird colony required before working. Work between 7/1 and 8/15 due to pinniped constraints.

TAG COMMENTS: BIOREMEDIATE (CUSTOMER) AS REQUIRED FOLLOWING
TARMAT REMOVAL

TAG APPROVAL DATE: 5/17/90.

ADEC Art Weimer Art Weimer

EXXON ANDY TGA Andy TGA

NOAA Gary Petros Gary Petros

USCG GA. REITER GA. Reiter

FOSC: M L DATE: 6 June 90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 1C Salmon fry nursery area (4/31 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D Esther Hatchery release (4/15 to 6/15)
1E Main Bay Hatchery release (4/20 to 6/15)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- 1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M Herring spawning (4/1 to 6/15)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- ✓ 30, 3Q Harbor seal and sea lion pupping (5/15 to 7/1)
Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
ADF&G Don Calkins 267-2403
- ✓ 5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Roth 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (6/1 to 9/15)
6V Anchorages (6/1 to 9/15)
6W Forest Service cabins (6/1 to 9/15)
6X Lodge (6/1 to 9/15)
6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
7H1 Finfish harvesting
7H2 Deer harvesting (8/15 to 2/28)
7H3 Invertebrate harvesting
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

SEGMENT ST/ C I-1 SUBDIVISION: A DATE 29 April 1990

USCG NOAA
NAME Miles D. Hayes SIGNATURE M D Hayes

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS
The continuous to broken asphalt pavement, which is 280m x 5/10m, should be treated by:
1) turning over oiled cobble with motorized equipment
2) Wash area with cold water (as needed)
3) Bioremediate
The sediment is probably too coarse to apply "rock washing" technique

ADEC
NAME Russell Kunibe SIGNATURE Russell Kunibe

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS
There is an extensive runway asphalt mat at the top of the wave cft platform. The oiled area was 288 m. long and 3m to 10m wide. The mat was in a boulder, rubble, rubble area just above the beach platform.
Recommended treatment: Manual pick up and break up of the asphalt and mousse. The use of cold water high pressure flushing to further break up the asphalt. The flushing should be done in conjunction with manually turning over the small boulders. Snow blowers should be used to pick up any liberated oil.
- For break up a large rubber tired piece of heavy equipment may be appropriate.
- Bioremediate after the completion of the break up with water.

LAND MANAGER
NAME PAT NORMAN SIGNATURE Pat Norman

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS
manual pick up of Asphalt and mousse patches also cold water ^{or warm} flushing to break up the majority of the oil remaining in C1-1 A subdivision. manual pick up will be very time consuming in this area, thats why I recommend cold or warm water flushing to break up and collect the oil.

SHORELINE OILING SUMMARY

REVISION NO 04-13-90

OG N. BIGGAR USGG MILES HAYES SEGMENT ST/ HI-001
 BIO DAN RAIDER LAND REP Gerry Nugent (F.W.) SUBDIVISION A (1 OF 2)
 EXXON JOHN DEAN ADEC RUSSELL KUNIGS TIME 6:50 to 10:15
 TEAM NO 17 TIDE LEVEL +2 to -3 DATE 4/26/90
 EST SUBDIVISION LENGTH 1175 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION E to W
 SURFACE SEDIMENTS R 5 % B 55 % C 15 % P 15 % G 10 % S 0 % M 0 % V 0 %
 SLOPE Lang 100 % Hang 0 % Vert 0 % WAVE EXPOSURE ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH W 75 m M 213 m N 14 m VL 150 m NO 723 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	IC	IS	IP	IR	SL	BR	RW	GI	SL	DR	TL	LR	SU	U	M	L
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN																
MOUSSE																
PATTIES		X	O	Z												
TARBALLS																
FILM																
NO OIL													X	X		X

PAVEMENT H F S — sq m by — cmPATTIES/TARBALLS 56 BAGSNEAR SHORE SHEEN? NO BR RW (SL) TL

OILED DEBRIS	AMOUNT			DID YOU COLLECT DEBRIS?
	SM	MD	LG	
Logs				YES ☐ NO ☒
Vegetation				
Trash				
Debris				
				TYPE <u>—</u>
				#BAGS <u>—</u>

Photographs

Roll No 4Frames 27-29

SUBSURFACE OIL

PIT NO	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CL)	BELOW		OIL / FILM COLOR								PIT ZONE	A N A	SHEEN (Y/N)	SURFACE SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UC	SL	BR	RW	GI	SL	DR	TL	LR				
1	40					X	.		X									X			g, 1590p
2	64					X	.		X									X			pg/s
3	28					X	.		X									X			S.g.p
							.														
							.														
							.														

COMMENTS

The oil on this beach is concentrated in a fat mat between the base of the beach angle and (commonly) a planned bedrock (see profile in sketch map). The surface sediments in this area include angular boulders (small), cobbles and pebbles and granules. The mat is preserved between and underneath the larger clasts. The mat has a dull black firm outer surface, and is a dark brown "binder" of the surface and subsurface materials. The western end of the continuous mat is

REVIEWED — DATE —

SUBSURFACE OIL (CONTINUED)

[illegible]

COMMENTS

Covered by seaweed, and therefore may extend for a longer distance to the west, than is shown on the figure.

At low tide, the water is far to the north due to the extensive wave cut platform developed offshore of the beach.

The segment of the beach that trends SE is high energy with 100' 1/2 diameter boulders thrown into the depth logs in the storm berm.

REVIEWED _____ DATE _____

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03-77-70

Segment ST / CT001 Subdivision A Date (mo / day / yr) 4 / 26 / 90Time (24 hr) 7:00 Biologist DANIEL RAIDER

(A) Substrate type and % of segments:

(1) Bedrock (2) Boulder (3) Cobble (4) Pebble (5) Sand (6) Silt

(B) Overall % cover of biota (% of segment): Dense 65 Moderate 10 Low 25
→ to none

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:

Roll No. 4Frames 24-29

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

MYTILUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

(NOT PRESENT)

GASTROPODS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

FUCUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments:

- see attached sheet for wildlife listings

Large intertidal area; very sensitive organisms; minimize foot traffic and keep the oil from entering M72 + L72 when using clean up techniques

Ecological Considerations:

SR

3N, 0, P, Q

(Needs to be added to data base)

WILDLIFE OBSERVATIONS - CI 001 A

<u>Name</u>	<u>amount</u>	<u>Comments</u>
1) Bald Eagle	2 (a pair)	Near nest
2) Song Sparrow	10±	Males singing
3) Cormorant sp.	4	
4) Black Oyster Catcher	2	
5) Common Raven	3	
6) Hermit Thrush	3	(First Siting)
7) Varied Thrush	10±	Feeding at high tide
8) Glaucous-Winged Gull	21	
9) Harbor Seal	1	

DANIEL RAIDER

TEAM 17 26 APRIL 1990

This Subdivision Consists of a very extensive wave ... bedrock platform with intermittent boulders and rich, dense tidal pools for its entire length. The tidal pools occur in great abundance and are located from the Upper Mid Intertidal Zone to the Lower Intertidal Zone. The total subdivision has been broken into two biological areas (refer to map) and will be commented on here.

AREA 1

- Moderate to Dense Fucus on bedrock in MIZ + LTZ
- Dense Littorina sitkana in MIZ; moderate new settlement (recruitment) in MIZ on bedrock and boulders
- Tidal pools densely matted with Laminaria spp. and Ulva spp. (particularly U. marginata). etc.
- The tidal pools here tend to be larger and deeper than that found in the next section - area 2. Consequently there is a greater abundance of kelps and red algae, as well as Zostera marina.

AREA 2

- Found here is an area, roughly 100 meters by 30 meters of dense Littorina sitkana, mostly adults and juveniles. They tend to stay within the pools themselves.

Bio Comments CI-001A 2 of 3
and on the kelp washed up in the MTZ (Nereocystis
on dry rocks and within pools (for feeding)

- Evidence of *L. sitkana* embedded in wide, long band of mousse/pavement; dead
- Sparse Semi-balanus cariosus on bedrock and boulders in MTZ; one 30 meter section of moderate to dense population (adults) on bedrock + boulders but overall count will remain sparse.
- Green filamentous algae is distributed profusely throughout these pools, which tend to be small and tightly packed in as compared to those tidal pools found in Area 1.
- Dense mat of brown algae (*Nereocystis*, *Alaria* sp., *Ulva*, *Porphyra* sp., *Halosaccaria glandiformis*, *Costaria* spp., etc.) in LTZ.

Both of these sets of tidal pools are very extensive and productive and warrant careful observation, monitoring and protection during potential clean-up of extensive pavement/mousse in Upper MTZ. Efforts should be taken to contain oil from entering MTZ and especially LTZ if break up and spreading of oil takes place during clean up. In addition, I believe the faster the clean up takes place (i.e. the more intensive) the oil will leave the area quicker. Not acting on the oil?

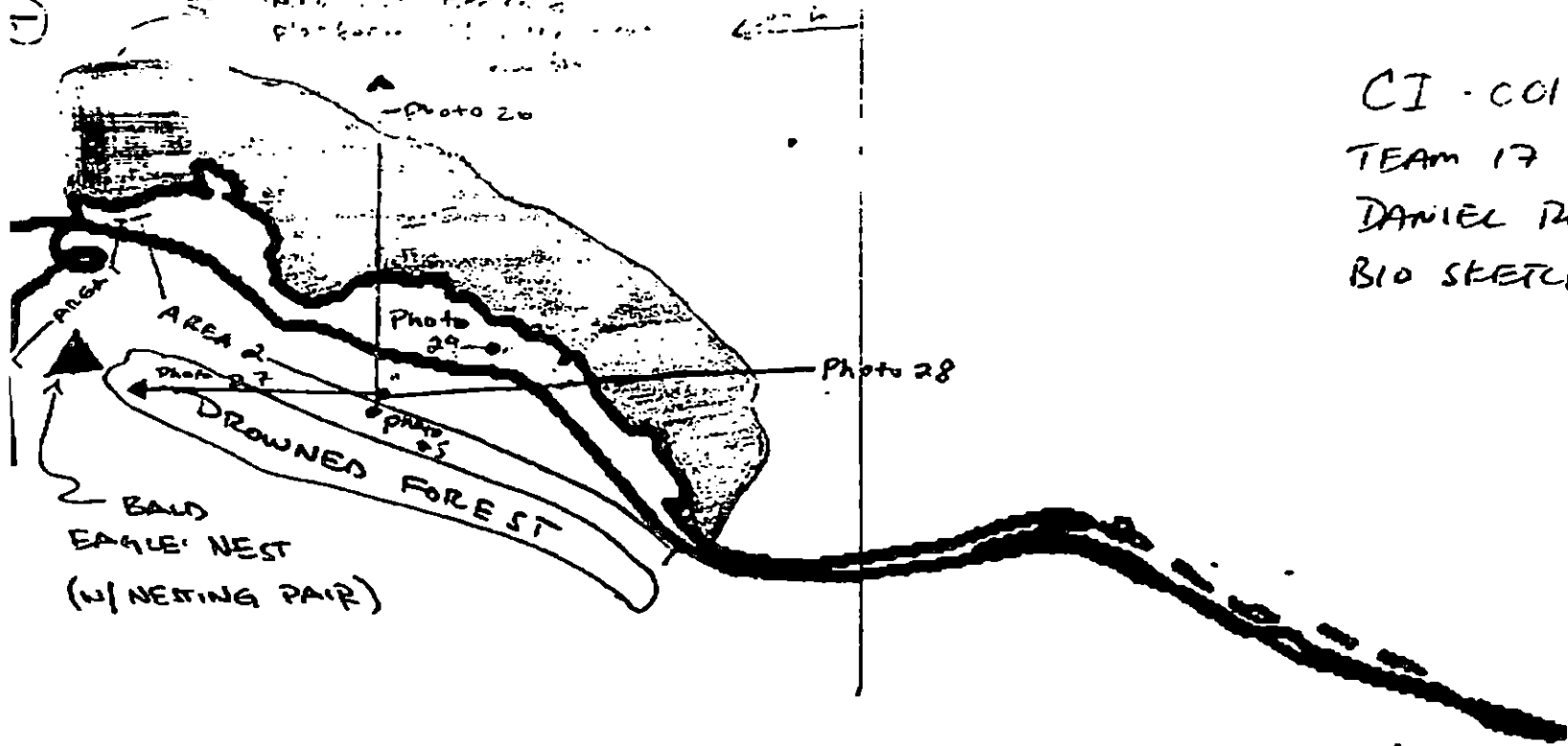
Bro Comments CI-001A 3 of 3

will simply allow it to remain in the fuel chain for a longer period of time. The decision must be made whether or not the impact from clean up will be large, but over a short period, or in smaller intervals for a much longer period of time. I believe that the former, a short intensive clean-up, will allow for a quicker, healthier recovery.

Note: There is an active bald eagle nest here, as indicated on provided Bro sketch map and should be included on data base.

Also note the drowned forest just above the storm berm / high tide line. It is extensive and runs almost the entire Subdivision.

1



CI - CCI A

TEAM 17 26 APRIL 1990

DANIEL RAIDER

BIO SKETCH

SEE NEXT PAGE
FOR DETAIL

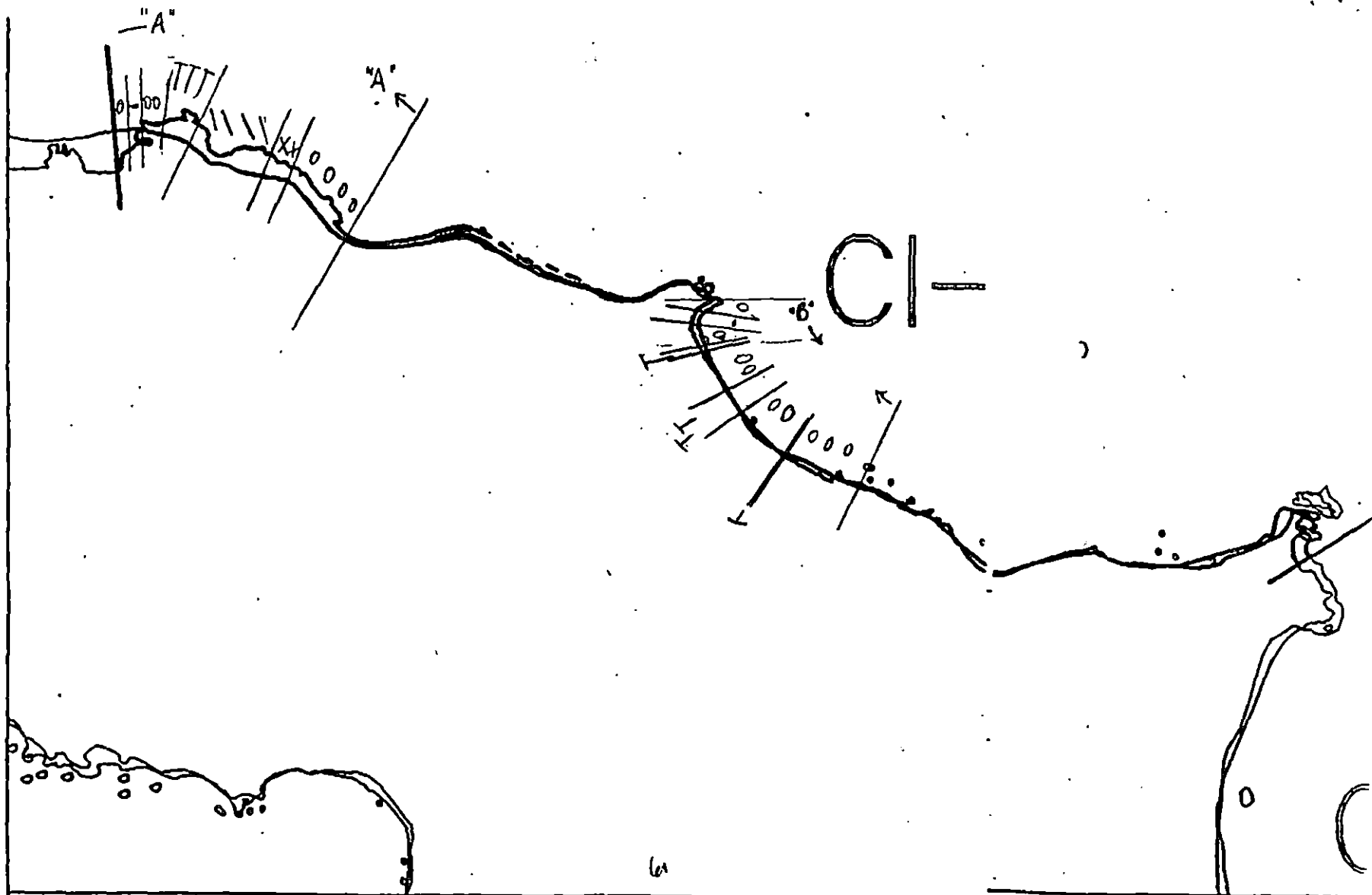
C-

XXXX Wide
// // Medium

CI - 1

Map Key. KEN-GI-10

XXXX Wide
//// Medium



XXXX Wide
 //// Medium
 --- Narrow
 TTTT Very Light

CI-1

Approx. Segment Length: 6303m

0 500 1000

Map Key: KEN-CI-1a
 Name: N. BIGGAR
 Date: 4/28/90

XXXX Wide
 //// Medium
 --- Narrow
 TTTT Very Light

Approx.

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT CI-001 SUBDIVISION A (1 of 2)

WORK WINDOW	
Manual Pickup Tarmat Removal	WORK 7/1 to 8/15
Bioremediation	WORK 7/1 to 7/31

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5R	Seabird Colony	NO CONSTRAINT. Work site is more than 800m from seabird colony.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.
3N,O,P,Q	Harbor Seal & Sea Lion Pupping and Molting	Closed to manual pickup, and tarmat removal prior to 7/1 and after 8/15. Closed to bioremediation prior to 7/1 and after 7/31.

OTHER ECOLOGICAL CONSIDERATIONS

Do not apply bioremediation to specific areas where seals are observed to haulout. Do not chase or harass seals or sea lions, and do not approach pups under any circumstances. When working on or near haulouts, complete the job as quickly as possible with minimum personnel, equipment, noise and disturbance. Keep boats and personnel as far from actual haulouts as is practical to do the work specified. Minimize air traffic near haulouts, maintain elevation as is practical, and avoid repeated overflights of the same haulout areas. Avoid any unnecessary disturbance or damage to unloiled biota and substrate.

FOSC

Date

6-19-90

Prepared by

Date

6/16/90

SHORELINE EVALUATION

SEGMENT ST/ CI-001 SUBDIVISION B (2 OF 2) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5R Seabird colony (5/1 to 9/1)

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)

30, 3Q Harbor seal and seal lion molting (8/15 to 9/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

SHPO SIGNATURE: Rachel Joan Dale DATE: 5/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 51 m: V.Light 149 m: No Oil 834 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

~~GL X~~ No Treatment Recommended
Treatment Recommended

GP X Manual Pickup
Bioremediation
Tarmat Removal

_____ Snare/Absorbent Booms
 _____ Oil Snares (pom poms)
 _____ Absorbents (pads, rolls, etc)
 _____ Spot Washing: _____ Wands
 _____ Beach Cleaner
 _____ Other (see comments)

COMMENTS:

TAG COMMENTS: _____

TAG APPROVAL DATE: 2/23/90.

ADEC ART WEINER Art Weiner

EXXON *ADDY 1547* ~~1547~~

NOAA Bu/Wescott Bldg West

USCG G.A. RENTER G.A. Renter

FOSC: M L DATE: 6 June 90

clean mouse as indicated on 06 map
in conjunction with cleanup on CI 001A.

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
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- 1C Salmon fry nursery area (4/31 to 7/31)
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- 2M Herring spawning (4/1 to 6/15)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
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AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
ADF&G Don Calkins 267-2403
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- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
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ADF&G Tom Roth 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (8/1 to 9/15)
6V Anchorages (8/1 to 9/15)
6W Forest Service cabins (8/1 to 9/15)
6X Lodge (8/1 to 9/15)
6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
7H Finfish harvesting
7I Deer harvesting (8/15 to 2/28)
U Invertebrate harvesting
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2350

FIELD SHORELINE COMMENT SHEET

②

SEGMENT ST/CI-001

SUBDIVISION:

B

DATE 4/28/01

NOAASIGNATURE

Miles. D. Hayes

[Signature]

[] -

☒ - Treatment suggested

The only oiling is mouse between the boulders in the easternmost part of the segment. Because this is a subsistence area where plants are collected, the mouse should be removed by manual pickup.

☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

There was mouse in fault between the boulder at the N. end of this subdivision.

Recommended treatment: Manual pick up of the mouse.

LAND MANAGER

NAME Patrick Norman

SIGNATURE

[Signature]☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Spot washing and some manual pickup will improve the appearance of this area. The majority is under large boulders on the west end of this segment.

SHORELINE OILING SUMMARY

REVISION NO. 24-1-79

OG NORMA BIGGAR ^{NOAA} USCG MILES HAYES SEGMENT ST/ CI-001
 BIO DAN RAIDER LAND REP PAT NORMAN SUBDIVISION B (2 OF 2)
 EXXON JOHN DEAN ADEC RUSSELL KUNIG TIME 10:30 to 11:30
 TEAM NO. 17 TIDE LEVEL -4 to -3 DATE 4/26/90
 EST. SUBDIVISION LENGTH: 950 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 5 % B 10 % C 10 % P 20 % G 20 % S 35 % M - % V - %
 SLOPE Lang 90 % Hang 10 % Vert - % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W - m M - m N 20 m VL 125 m NO 805 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	1C	1B	1P	1S	2	3	4	5	6	7	8	9	SU	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER				X		X							X			
COAT			X	X		X							X			
STAIN																
MOUSSE				X		X								X		
PATTIES																
TARBALLS																
FILM																
NO OIL														X	X	

PAVEMENT H F S - sq. m by -PATTIES / TARBALLS 30 BAGSNEAR SHORE SHEEN? ☒ NO BR RW SL TI

OILED DEBRIS	AMOUNT			DID YOU COLLECT DEBRIS?
	SM	MD	LG	
Logs				YES ☐ NO ☒
Vegetation				
Trash				
Debris				
				TYPE <u>-</u>
				#BAGS <u>-</u>

Photographs:

Roll No. 4Frames 33

SUBSURFACE OIL

PIT NO	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SHEEN (Y/N)	▼	SURFACE SUBSURFACE SEDIMENTS	
		OP	OR	OL	OF	NO		UO	VO	100% OP	100% OR	100% OL	100% OF	100% NO	100% UO	100% VO	SU	U	M	L						
1	52					X	.		X									X								P-3/C-P
2	30					X	.		X									X								P-2
3	61					X	.		X									X								P-P/P-P/P-P
4	45					X	.		X										X							P-P-P/P-P-P
							.																			
							.																			

COMMENTS

Oil was observed only in boulder talus on North of segment, in the form of mousse patties between and under boulders; one in a drip line and spatter on the rock itself, also on the N end of the segment. Very local spatter was seen on boulders in the phyllitic rock (S half of beach) - see sketch.

The beach is another classic crescent beach with relatively high wave exposure. The rock talus where the mousse patties occur consists of large (6 1/2 m - diameter) boulders.

REVIEWED BA DATE 1 MAY 90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/72 70

Segment ST / CI-001 Subdivision B Date (mo / day / yr) 4/26/90 (2)

Time (24 hr) 10:45 Biologist DANIEL RAIDER

(A) Substrate type and % of segments:
(1) Bedrock (2) Boulder (3) Cobble (4) Pebble (5) Sand (6) Silt

(B) Overall % cover of biota (% of segment): Dense 1 Moderate 1 Low 98
↳ to none

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs: Roll No. ST-17-4

Frames 30-31

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

MYTILUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

GASTROPODS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

FUCUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments:

- Glaucous-winged Gull - 6

- Common murrelets - 4

Ecological Considerations: site provided for a very small area of the total beach but is the most sensitive area.

SR

1, 2, 3, 4

SEGMENT S 2-001

SUBDIVISION 3

DATE 4 / 26 90

CHECKLIST

N Arrow
 Approx. Scale
 Segrib's Body
 Of Dist.
 Width
 Length
 % Cover
 Substrate Character
 Est. MW/LVL
 SSI
 Profile Location(s)
 Profile(s)
 Pin Location(s)
 Photo Location(s)

LEGEND

PA - No Substitution On

2 

PM - Subsequent CQ

CTAC
Confidential Distribution

CT/B

Broken Christianity

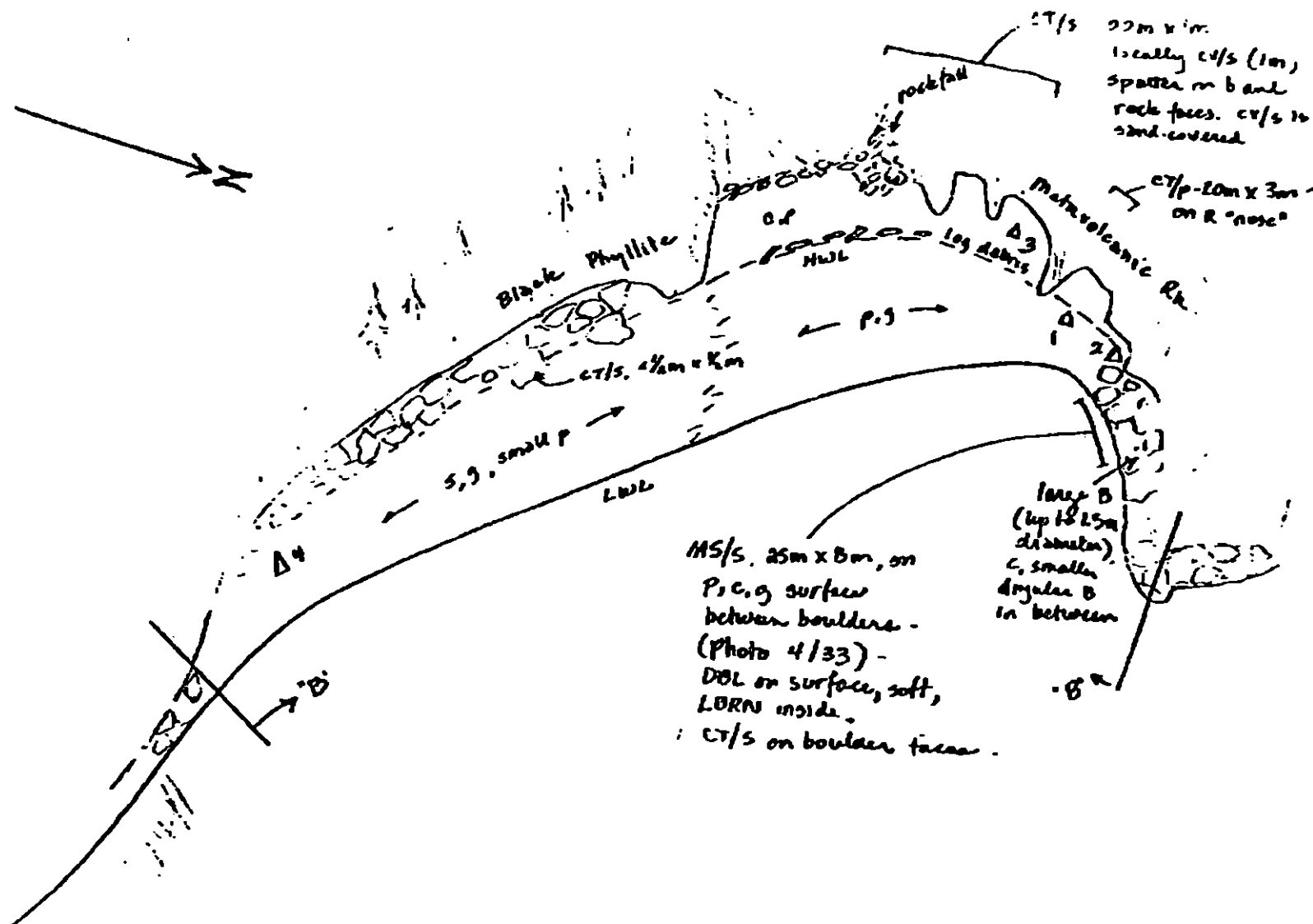
CT/P

Product Distribution

CT/S
Selected Distribution

224
Old Vegetation

Photo location, direction,
and number



4

THE NEW ORLEANS OBSERVER

Oil Character Length (m) AP 0 PO 0 CV 0 CT 120 ST 0 MS 0 PT 90 TB 0 FL 0 NO 20

BIO COMMENTS

- This a high energy beach with biota concentrated on bedrock in Western part of segment; little to no biota present along Pebbles/Sand/Cobbles in MTZ + UTZ.

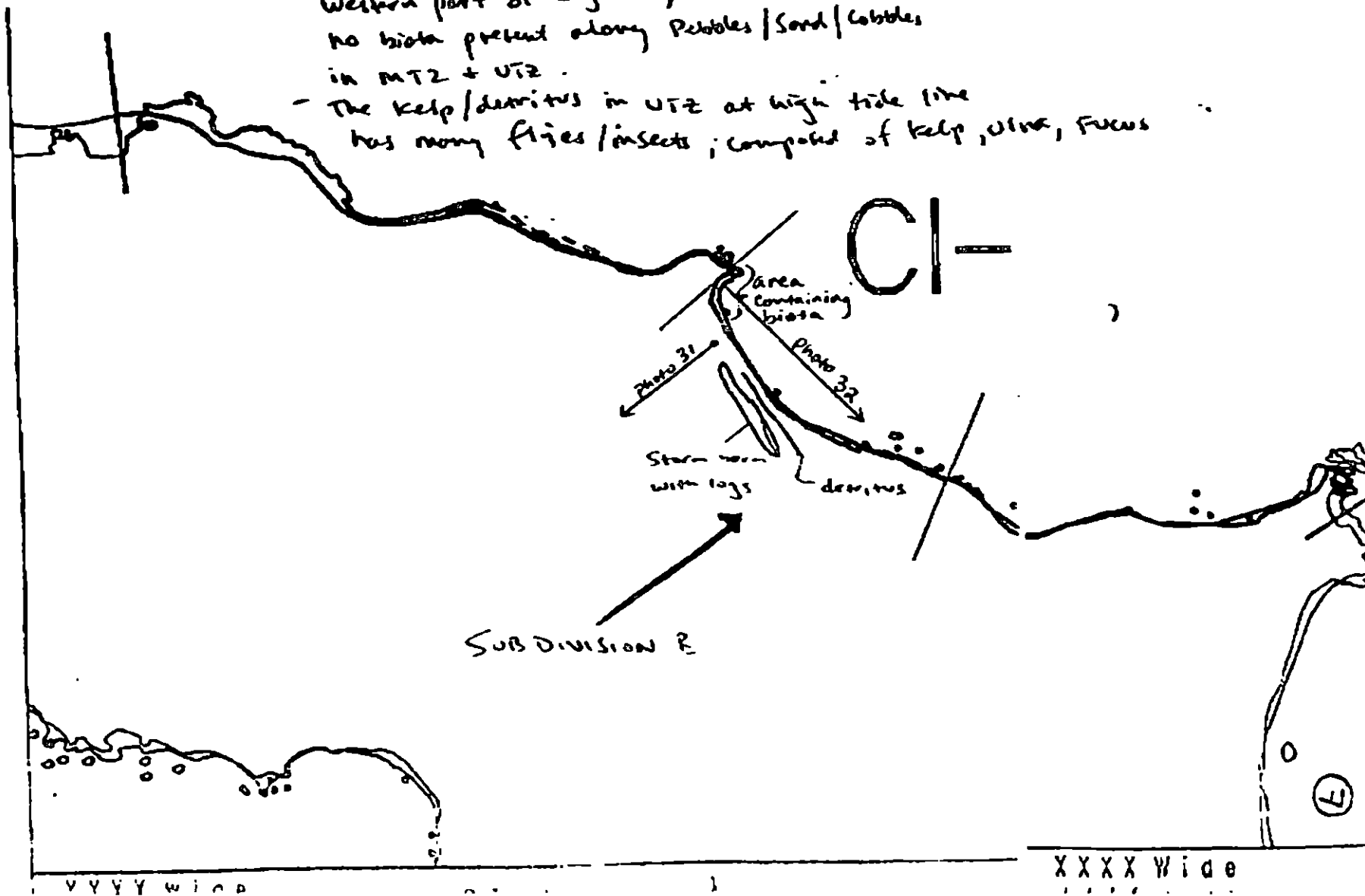
- The kelp/detritus in UTZ at high tide line has many flies/insects; composed of kelp, ulva, fucus

CI-001B

TEAM 17 26 APRIL 1990

DANIEL RAINER

BIO SKETCH



ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT CI-001 SUBDIVISION B (2 of 2)

WORK WINDOW	
Manual Pickup	WORK 7/1 - 8/15

ARCHAEOLOGICAL STANDARD CONSTRAINT

Cultural Resource Evaluation Required

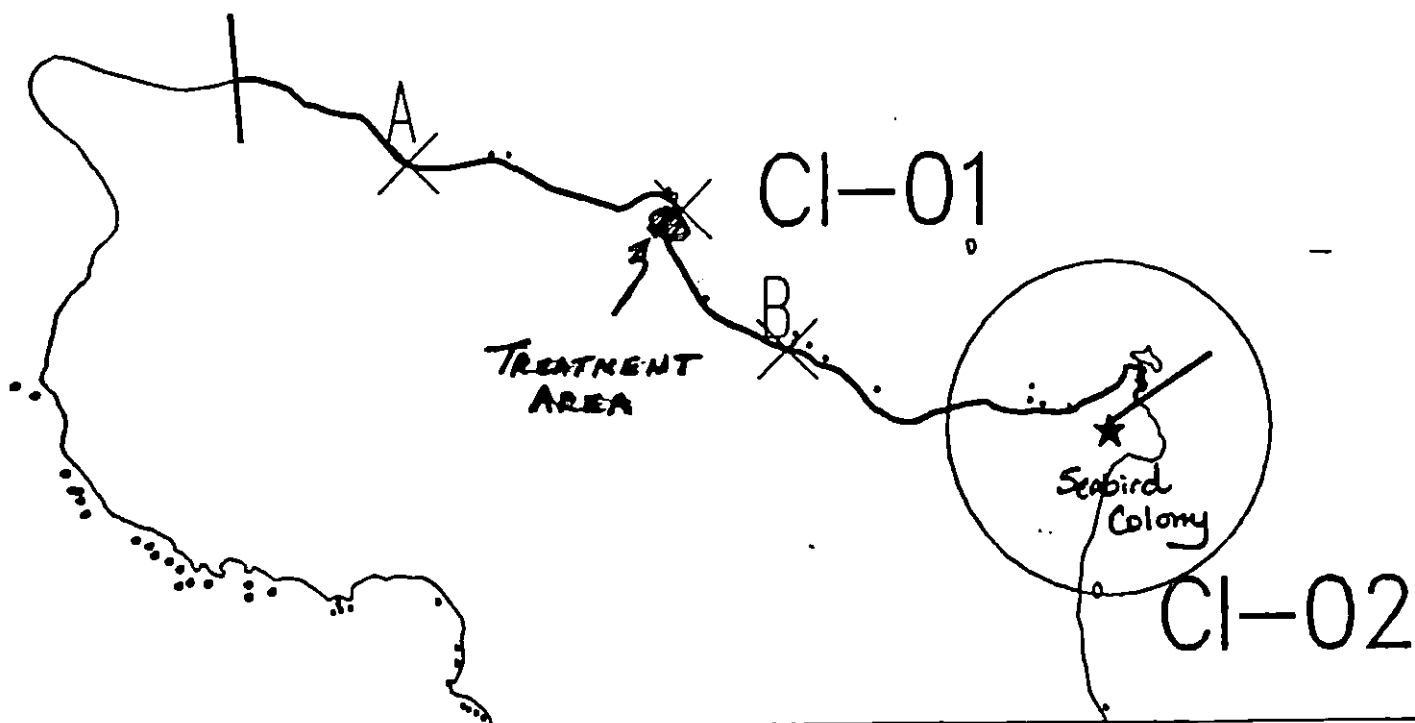
APPLICABLE ECOLOGICAL TIME CONSTRAINTS

3N,O,P,Q	Harbor Seal & Sea Lion Pupping and Molting	Closed to manual pickup prior to 7/1 and after 8/15.
5R	Seabird Colony	NO CONSTRAINT. Work site is more than 800m from seabird colony.

OTHER ECOLOGICAL CONSIDERATIONS

Do not apply bioremediation to specific areas where seals are observed to haulout. Do not chase or harass seals or sea lions, and do not approach pups under any circumstances. When working on or near haulouts, complete the job as quickly as possible with minimum personnel, equipment, noise and disturbance. Keep boats and personnel as far from actual haulouts as is practical to do the work specified. Minimize air traffic near haulouts, maintain elevation as is practical, and avoid repeated overflights of the same haulout areas. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

FOSC D.D. Rome Date 6/24/90
Prepared by J.P. Phillips Date 6/22/90



Exxon Company, USA
Map Key: KEN-CI-1



ECOLOGY MAP
SEGMENT CI-1
SUBDIVISION B (2 of 2)
METERS

★	Seabird Colony
△	Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ CL-01 SUBDIVISION A (1 OF 1) DATE 4/23/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
5R Seabird colony (5/1 to 9/1) within 400m on Now Island
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
See attached Ecological Constraint Sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

SHPO SIGNATURE: Charles E. Hines DATE: 5/2/90

OILING CATEGORIZATION:

Wide_0_m: Medium_0_m: Narrow_13_m: V.Light_994_m: No Oil_609_m
Subsurface Oil Observed: Yes_X No_____ Maximum Depth_18_cm

RECOMMENDATIONS:

☒ No Treatment Recommended	☐ Snare/Absorbent Booms
☐ Treatment Recommended	☐ Oil Snares (pom poms)
☐ Manual Pickup	☐ Absorbents (pads, rolls, etc)
☐ Bioremediation	☐ Spot Washing: ☐ Wands
☐ Tarmat Removal	☐ Beach Cleaner
	☐ Other (see comments)

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 5/2/90.
 ADEC Art Wexler Art Wexler
 EXXON ANDY ETZ Andy Etz
 NOAA Gary Pollock Gary Pollock
 USCG KENNETH KEANE Kenneth Keane

FOSC: W L DATE: 5-12-80

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)

1B Salmon stream mouth - spawning (7/10 to 8/31)

No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: ADF&G John Morison 267-2324

1C Salmon fry nursery area (4/31 to 7/31)

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D Esther Hatchery release (4/15 to 6/1)

1E Main Bay Hatchery release (4/20 to 6/10)

1F Sawmill Bay Hatchery release (4/15 to 6/1)

1G Cannery Creek Hatchery release (4/21 to 6/1)

1H Remote release site

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.

AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214

1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511

1I Gill net area (5/7 to 8/31)

1J Purse seine area (7/20 to 9/30)

1K Purse seine hook-off (7/20 to 9/30)

1L Set net sites (5/11 to 7/25)

Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

2M Herring spawning (4/1 to 6/15)

Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unopened intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)

3O, 3Q Harbor seal and sea lion molting (5/15 to 9/15)

Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235

ADF&G Don Calkins 267-2403

5R Seabird colony (5/1 to 9/1)

Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S Shorebird/waterfowl concentration (4/1 to 5/15)

Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

ADF&G Tom Roth 267-2208

5T All Bald Eagle nests (3/1 to 6/1)

Active Bald Eagle nests (3/1 to 9/1)

Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U Recreation: Tent sites (5/1 to 9/15)

6V Anchorages (5/1 to 9/15)

6W Forest Service cabins (5/1 to 9/15)

6X Lodge (5/1 to 9/15)

6Y Special use destination

7Z Subsistence area: Salmon harvesting (5/1 to 9/30)

6H Finfish harvesting

7H Deer harvesting (8/15 to 2/28)

7J Invertebrate harvesting

Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.

AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ CL-1 SUBDIVISION: A DATE 04/23/90

NAME STEPHEN STURM SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

THE ONLY SIGNIFICANT OIL FOUND IN THIS SEGMENT WAS IN A SMALL, COBBLE-VEGGERED POCKET BEACH, SURROUNDED BY ROCKY HEADLANDS ON THE NORTH SIDE OF THE NORTHERN-MOST CLARK ISLAND. COAT PATCHES OF WEATHERED TAR AND ASPHALT AS WELL AS SMALL AREAS OF OIL PENETRATED INTO THE UNDERLYING SUBSTRATE. LOCATION OF OIL IS PREDOMINANTLY IN ROCK CREVASSES, BETWEEN BOULDERS AND DEPRESSIONS AT, AND ABOVE MEAN HIGH TIDE. THESE LOCATIONS WOULD ONLY BE NOTED BY AND OBSERVED BY AN INDIVIDUAL(S) TRAINED IN THESE MATTERS. CONSIDERING THE BIOLOGICAL DIVERSITY AND DENSITY (SEE NOTES) WITHIN THIS AREA AND THERE BEING NO OBVIOUS EFFECT OF REMAINING OIL ON THE BIOTA I RECOMMEND THAT THIS AREA NOT BE TREATED - AND LET NATURAL WEATHER RUN ITS COURSE.

NAME Wesley Ghormley SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

- HAND Removal OF tar balls FROM locations 1-4 on both islands. In addition Mousse in crack at location 4 needs to be removed using hand crowel & sorbant pads.
- Location #3 has an area 2x4M with subsurface oil that could be ^{w.g.} removed with hand tools (shovels). Additional wiping/scraping might be necessary on remaining coat/cover in same location.

- Also Active eagle nest is located on South island -

LAND MANAGER

NAME Ray Burger ADNR SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

- Concur with ADEL as outlined above, stressing removal of coat @ Loc. #3.
- Islands have pocket beaches for easy landing & rock platforms on shoreline are well suited for watching the numerous wildlife in the vicinity.

SHORELINE OILING SUMMARY

REVISION NO. 04/13/88

OG K. DEBUSSCHE ^{NOAA} STEPHEN STURM SEGMENT ST/C-1
 IO D. REED LAND REP Ray Burger SUBDIVISION F (1 OF 1)
 EXXON T. DIFZ ADEC Wesley G. Hume TIME 15:10 to 18:25
 TEAM NO. 9 TIDE LEVEL 4-1 DATE 4/23/90
 EST. SUBDIVISION LENGTH: 2563 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 90 % B 5 % C 3 % P 1 % G 1 % S 0 % M 0 % V 0 %
 SLOPE: Long 5 % Hang 60 % Vert 35 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 7 m VL 1756 m NO 800 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	R	B	C	P	1	2	3	4	5	SU	U	M	U
ASPHALT PAVEMENT													
POOLED													
COVER				X	X						X		
COAT	0		V	X	X						X		
STAIN													
MOUSSE				X					X		X		
PATTIES				X					X		X		
RBALLS				X	X						X		
FILM													
NO OIL										X	X	X	

PAVEMENT H F S 0 sq. m by 0 cmPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐TYPE POM POM S/Gals#BAGS 1

Photographs:

Roll No. ST-9-3Frames 22, 23

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	▽	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OP	NO		UO	UC	1	2	3	4	5	SU	U	M	U				
9 1	30	X					15-18	X	X						X					H	-	B-CAP/SAP

COMMENTS

SEGMENT IS DOMINATED BY HIGH ANGLE & VERTICAL BED ROCK WITH SOME POCKET BEDROCK.

MOST OF THE SEGMENT HAS VERY LIGHT OILING (COAT/TARBALL).
 MOST SIGNIFICANT OILING IS JUST EAST OF LOC ② ON GIS MAP

→ COAT/C (2X4H) ON B&C } WITH SUBSURFACE OIL

→ COVER/S " " }

→ COAT/C (3X0.75M) ON R-FR ①

- NOTE IN LOC ② ASPHALT PAVEMENT OF 25 CM IN D & 3 CM THICK W/ 9 MOVES
 REVIEWED YCW DATE 4/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / CL-1 Subdivision A Date (mo / day / yr) 04/23/90
 Time (24 hr) 1615-1820 Biologist D. REED

- (A) Substrate type and % of segments:
 (1) Bedrock 40 (2) Boulder 5 (3) Cobble 3 (4) Pebble 1 (5) Sand 1 (6) Silt —
- (B) Overall % cover of biota (% of segment): Dense 40 Moderate 40 Low 20
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X) . new settlement (3)

Photographs:
 Roll No. ST-9-3

Frames 22, 23

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

MYTILUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

GASTROPODS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

FUCUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments:

2 SEA OTTERS, HIGH DENSITY OF SEA OTTER FORAGING PITS IN MID AND LOW ZONES, SEA OTTER HAIL OUT AREA, 1 BOLD EAGLE AND NEST. 1 HARBOUR SEAL, 5 HARBOR GUIN DUCKS,

Ecological Considerations:

DENSE MUSSEL BEDS IN COBBLE and PEBBLE IN THE MID ZONE OF NARROW OILED BEACH ON NORTH SIDE OF NORTH ISLAND. HIGH DENSITY OF SEA OTTER FORAGING PITS IN THIS AREA AS WELL. EXCESSIVE FOOT TRAFFIC IN THIS AREA COULD CAUSE ADVERSE (SHORT TERM?) EFFECTS TO MUSSEL POPULATIONS AND SEA OTTER

SUBDIVISION 1DATE 4/23/90ST-C 1-A
(Location #3)

N

CHECKLIST

- ☐ M Area
☐ Approx. Scale
☐ Seg/Sub Entry
☐ Oil Dist.
☐ Width
☐ Length
☐ % Cover
☐ Substrate Character
☐ Est. HWA/LWL
☐ SSL
☐ Profile Location(s)
☐ Profile(s)
☐ PR Location(s)
☐ Photo Location(s)

LEGEND

1 Δ
 No Subsurface Oil

2 Δ
 Subsurface Oil

CT/C
 Continuous Distribution

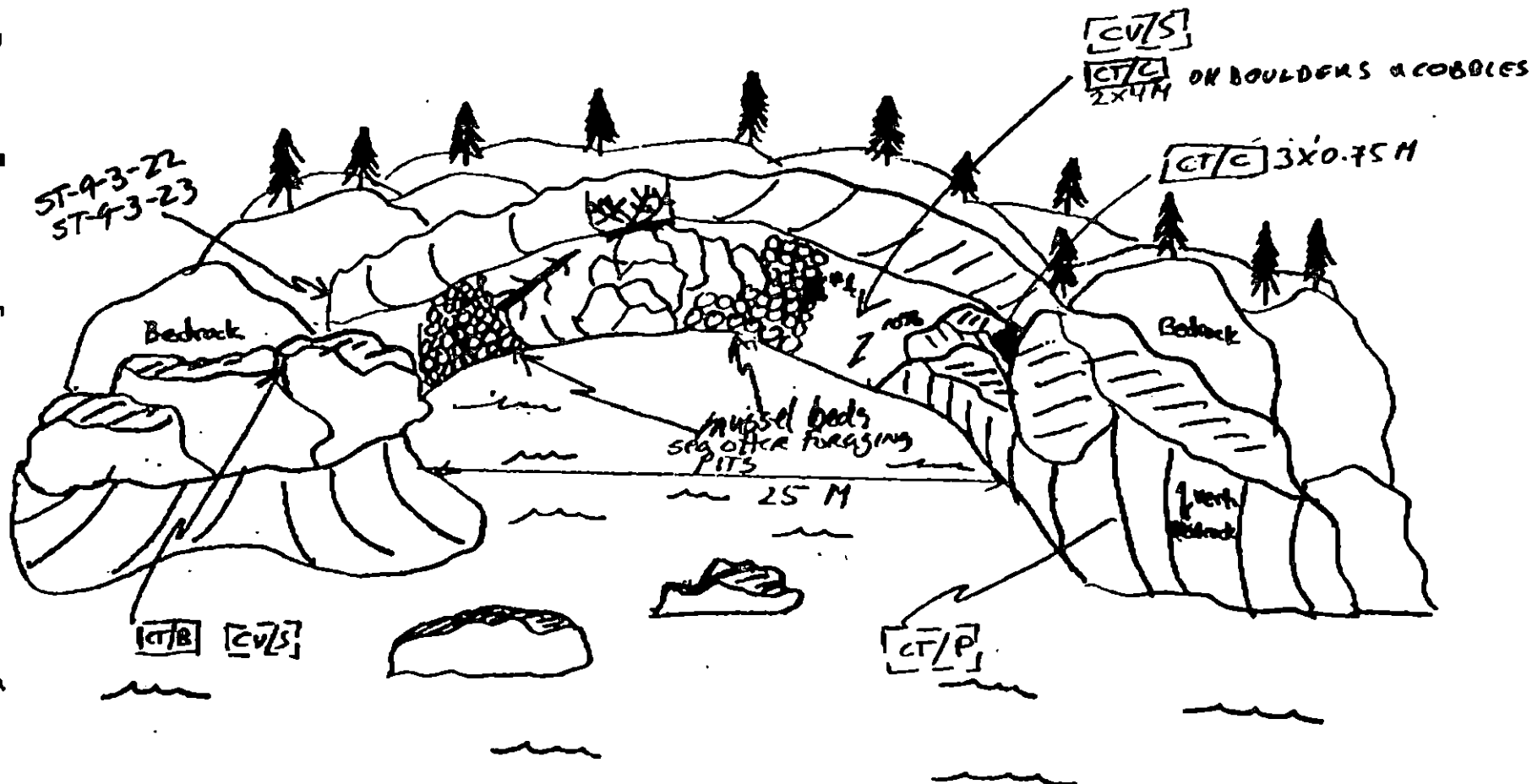
CT/B
 Broken Distribution

CT/P
 Patchy Distribution

CT/S
 Streaked Distribution

eee
 Red Vegetation

1 →
 Photo location, direction,
 and number



Character Length (m): AP 0 PO 0 CV 3 CT 30 ST 0 MS 0 PT 0 TB 0 FL 0 NO 0

ST-CL-1-A
(2543A)

1998 High grade
Bedrock Shale
The shale has surface
extending from top
of spools to 300
m/s.

Recommended bio-mediation
of 100-23 by

EXXON REP 22

Squirrel

28
am. Is

Rocky

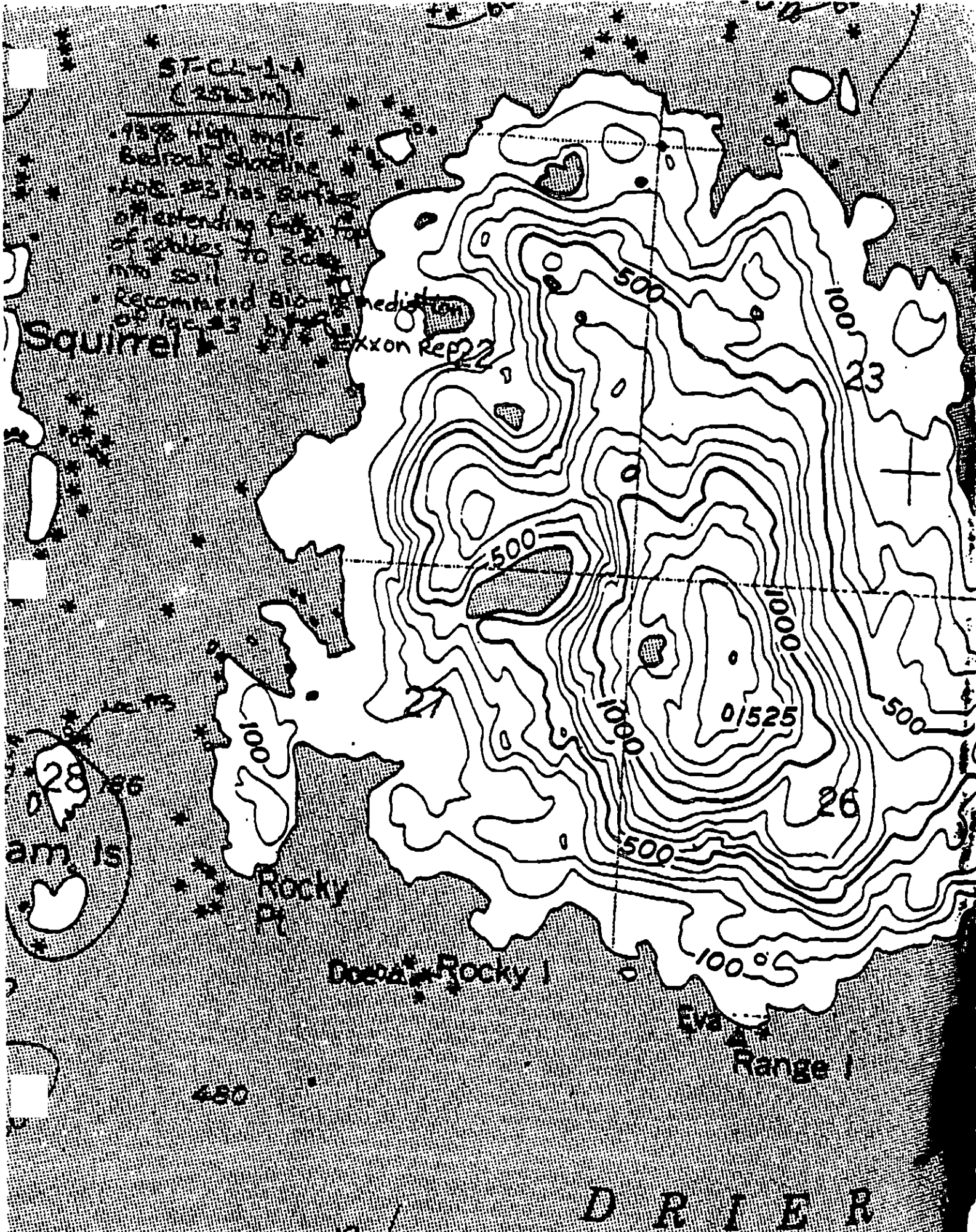
Donat Rocky I

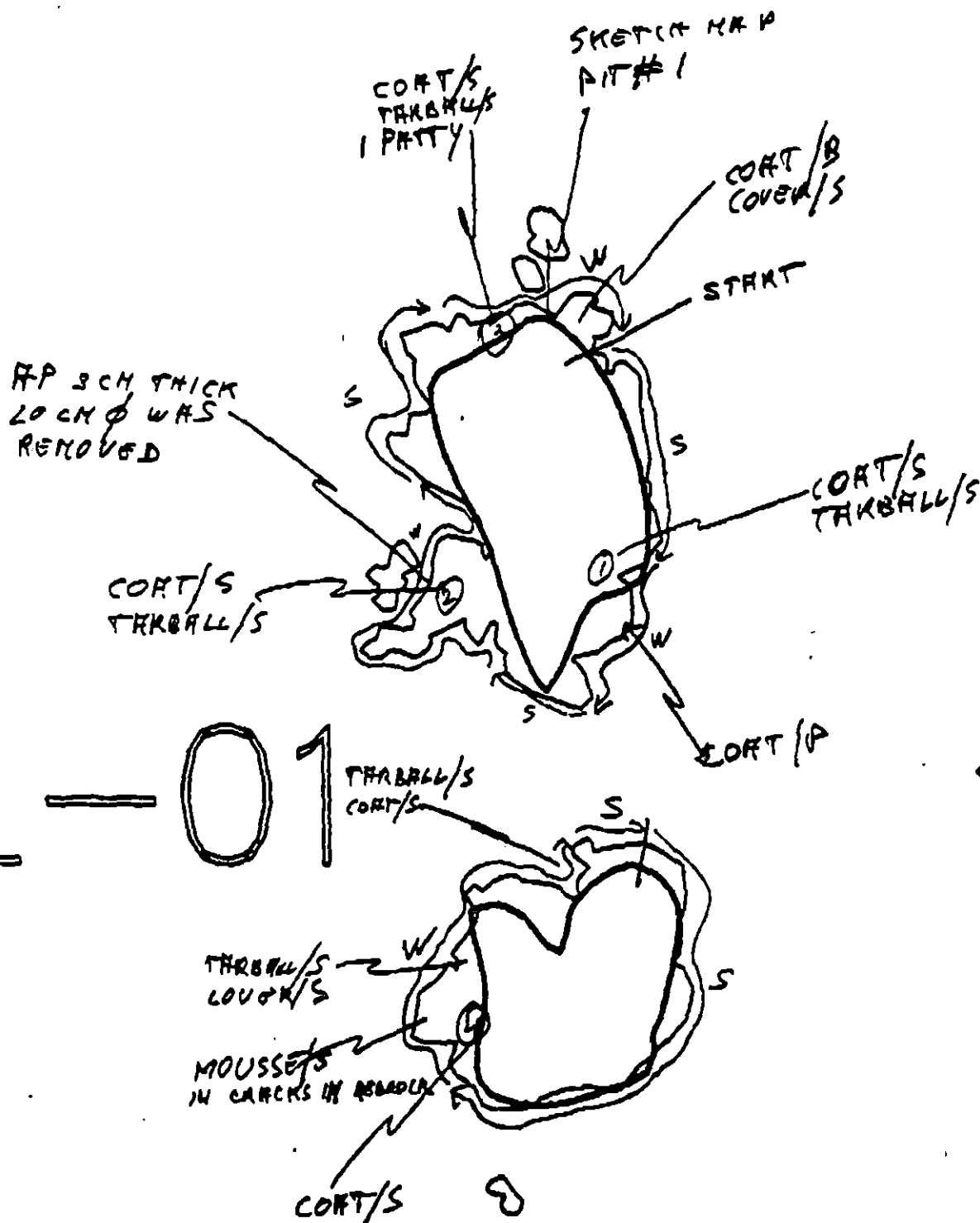
Eva

Range I

450

D R I E R





XX Wide
/// Medium
--- Narrow
TTTT Very Light

ST-CL-1-R

ADEC Segment Length: 2563m

Map Key: PWS-80

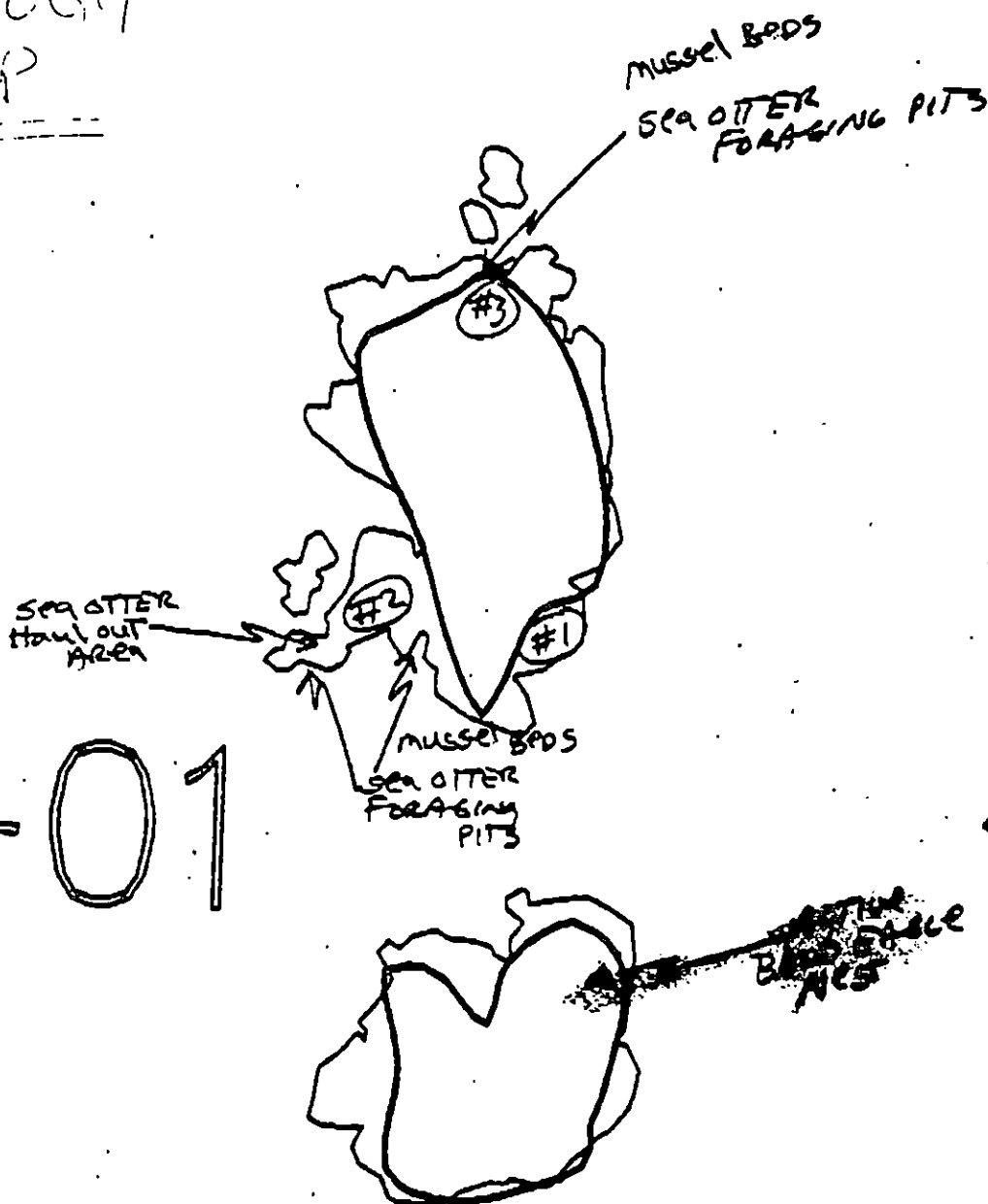
Name: K. DERUSSCHER

Date: 4/23/90

CCCLGGY

MIMP

CL-01



XX Wide
 /// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ST-CL-1-A

ADEC Segment Length: 1616m



Map Key: PWS-60

Name: DAN REED

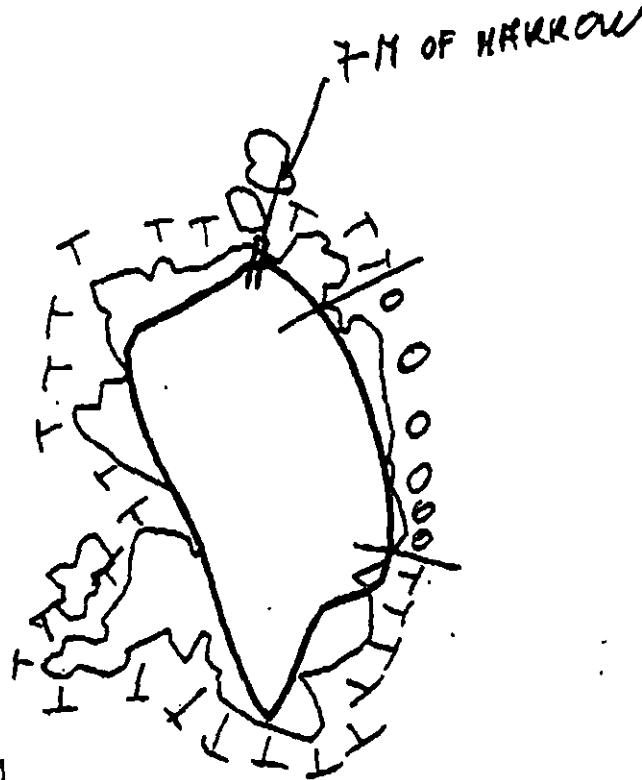
Date: 04/23/90

APR-24-1990 14:23 FROM ALBERTA TIDE

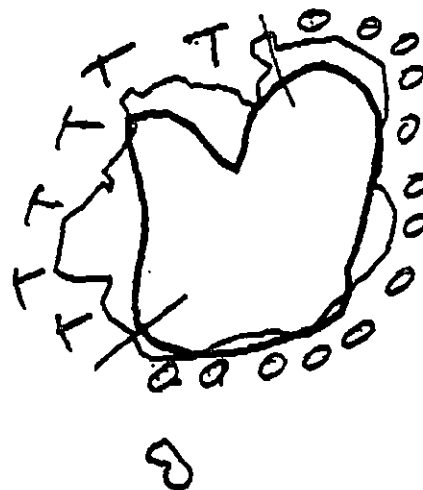
TO

EXXON SCAT ANC P.09

OIL MAP



L-01



XX Wide

/// Medium

--- Narrow

TTT Very Light

ST-CL-1-A

ADEC Segment Length: 2563

Map Key: PWS-60

Name: K. DEBUSSCHERE

Date: 4/23/90

SHORELINE EVALUATION

SEGMENT ST/ CP-01 SUBDIVISION A (1 OF 1) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 224-30-14770, 14780, 14790.

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)

1B Salmon stream mouth - spawning (7/10 to 8/31)

6W Recreation: Forest Service cabins (6/1 to 9/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

SHPO SIGNATURE: Charles E. Hines DATE: 5/2/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 40 m: V.Light 344 m: No Oil 10383 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

~~2~~ No Treatment Recommended

 Snare/Absorbent Booms

☒ Treatment Recommended

Oil Snares (pom poms)

Manual Pickup

 Absorbents (pads, rolls, etc)

Bioremediation

Spot Washing: _____ **Wands** _____

 Tarmat: Breakup

Beach Cleaner

Removal

 Other (see comments)

COMMENTS: MANUAL PICKUP OF ASPHALT, TAR PATTIES & TAR BALLS

TAG COMMENTS: _____

TAG APPROVAL DATE: 4/25/98

ADEC Acetaminophen Sulfonamides

EXXON *ANY TANK CARD*

NOAA Joseph Elbert - Phila

USCG Kenneth K. King

FOSC: W L DATE: 5-9-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A	Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B	Salmon stream mouth - spawning (7/10 to 8/31) No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
1C	Salmon fry nursery area (4/31 to 7/31)
1D	Esther Hatchery release (4/15 to 6/1)
1E	Main Bay Hatchery release (4/20 to 5/10)
1F	Sawmill Bay Hatchery release (4/15 to 6/1)
1G	Cannery Creek Hatchery release (4/21 to 6/1)
1H	Remote release site
1I	Gill net area (5/7 to 8/31)
1J	Purse seine area (7/20 to 9/30)
1K	Purse seine hook-off (7/20 to 9/30)
1L	Set net sites (6/11 to 7/25) For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
2M	Herring spawning (4/1 to 6/15) Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
3N, 3P 3O, 3Q	Harbor seal and sea lion pupping (5/15 to 7/1) Harbor seal and sea lion molting (8/15 to 9/15) Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
5R	Seabird colony (5/1 to 9/1) Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal. 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
5S	Shorebird/waterfowl concentration (4/1 to 5/15) Restrict all activity to essential minimum, especially air traffic.
5T	All Bald Eagle nests (3/1 to 6/1) Active Bald Eagle nests (3/1 to 9/1) Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
6U	Recreation: Tent sites (5/1 to 9/15)
6V	Anchorage (5/1 to 9/15)
6W	Forest Service cabins (5/1 to 9/15)
6X	Lodge (5/1 to 9/15)
6Y	Special use destination
7Z	Subsistence area: Salmon harvesting (5/1 to 9/30)
7HH	Finfish harvesting
7I	Deer harvesting (8/15 to 2/28)
7JJ	Invertebrate harvesting For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ CP-01 SUBDIVISION: A-1 of 1 DATE 04/09/91

USCG

NAME David S. Thomas SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME Clara J. Crosby SIGNATURE Clara J. Crosby

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Manual removal of Asphalt - Especially AP/13 -
1x5m

LAND MANAGER

NAME MARSHA MARTIN/DNR SIGNATURE Marsha Martin

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Suggest - Removal of asphalt pavement
NEAR pits 4 & 5.
Note the locations of oil splattered logs

SHORELINE OILING SUMMARY

REVISION NO. 03/22/89

OG Rick GILLIE ✓ USCG bm 1 Thomas SEGMENT ST/ CP-01
 BIO DAVE LOHIE LAND REP Marsha Martin SUBDIVISION A-1 of 1
 EXXON FRANK boy ADEC Clara Crosby (ADNR) TIME 16:44 to 20:00
 TEAM NO.: 13 TIDE LEVEL: +6 16 +1 DATE 04/09/90
 EST. SUBDIVISION LENGTH: 12.497 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☐ Rock Snow
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 50 % B 30 % C 10 % P 7 % G 0 % S 0 % M 8 % V 3 %
 SLOPE: Long 30 % Hang 50 % Vert 20 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 5 m VL 25 m NO 12.467 m

SURFACE OIL

CHARACTER	DISTRIBUTION					OIL / FILM COLOR							IMPACTED ZONES				
	C	R	P	B	W	Y	OR	GR	BR	BL	PK	OT	SU	U	M	U	
ASPHALT PAVEMENT		X												X			
POOLED																	
COVER																	
COAT				X					X					X			
STAIN																	
MOUSSE																	
PATTIES				X			X							X			
TARBALLS				X					X					X			
FILM																	
NO OIL													X		X	X	

PAVEMENT: H F (S) 1 sq. m by 5 cmPATTIES / TARBALLS 0.5 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	X		
Vegetation			
Trash			
Debris	X		

DEBRIS COLLECTED
☐ YES ☒ NOTYPE N/A#BAGS N/A

Photographs:

Roll No. ST-13-3Frames 31-34

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR							PIT ZONE				A N A	SUBSURFACE SEDIMENTS	
		OP	OR	OL	OF	NO		VO	UC	20-30	30-40	40-50	50-60	60-70	70-80	SU	U	M	U				
1	30					X	-										X						P
2	40					X	-										X						P, G
3	35					X	-											X					G, P
4	20					X	-										X						G
5	45					X	-										X						G, J
6	25					X	-										X						P

COMMENTS

- ① CT/S, TB/S extremely rare. One area of AP/B (at pits 4, 5)
 ② North half of segment is Rock/Boulder with extremely rare CT/S.
 ③ Only small lengths (<5m each) of Very light oil.

ST/CP-01

SOUTH PORTWYN

SKETCH MAP #1

00 Rich FILLIE
SEGMENT ST/ CP-01
SUBDIVISION A-1 of 1

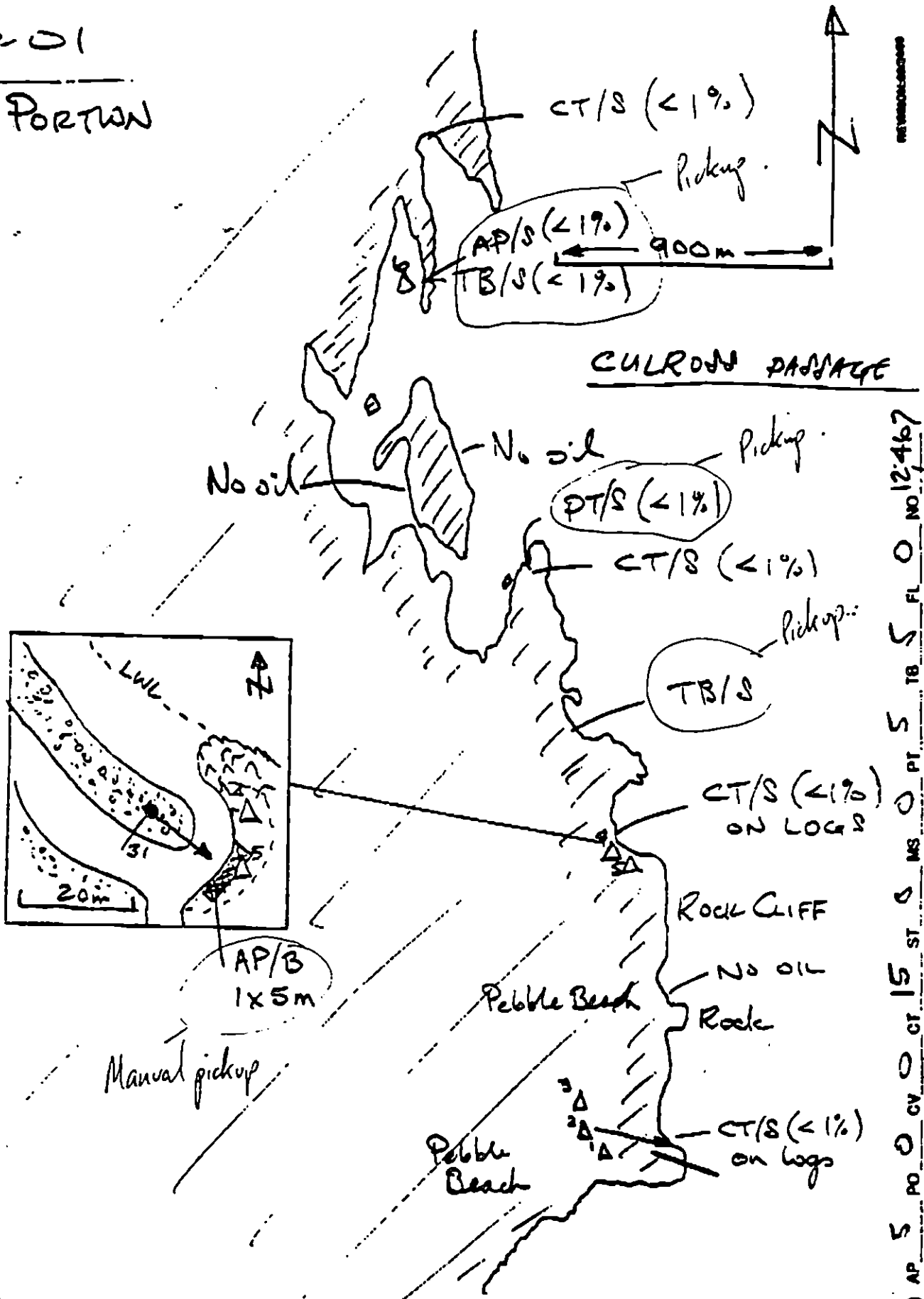
DATE 04, 09/90

CHECKLIST

- ☒ Area
- ☒ Approx. Scale
- ☒ Sep/Sub Entry
- ☒ Oil Dir.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ E & W H/W L/W
- ☒ SSI
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ P/L Location(s)
- ☒ Photo Location(s)

LEGEND

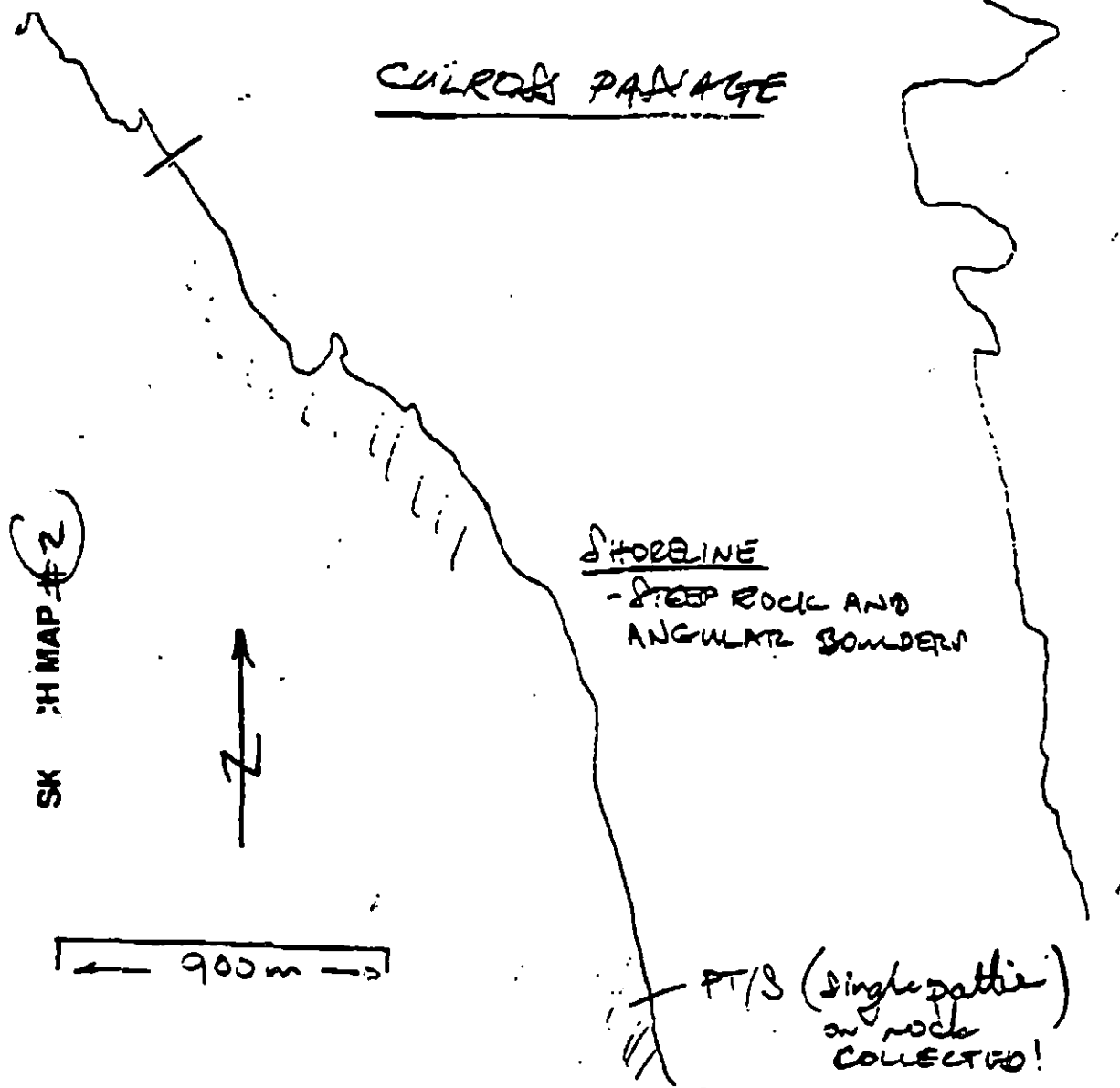
- 1 Δ - No Subsurface Oil
- 2 Δ - Subsurface Oil
- CT/C - Continuous Distribution
- CT/B - Broken Distribution
- CT/P - Patchy Distribution
- CT/S - Splashed Distribution
- Oil Vegetation
- Photo location, direction, and number



Oil Character Length (m) AP 5 PO 0 CV 0 CT 15 ST 0 MS 0 PT 5 TB 5 FL 0 NO 12467

ST/CP-01

North-Portion



↓ SOUTH PORTION (SKETCH MAP #1)

00 Rick FILE

SEGMENT ST/ CP 01

SUBDIVISION A-1 of 1

DATE 04/09/90

CHECKLIST

- ☒ No Areas
- ☒ Approx. Scale
- ☒ Spacing/Bar
- ☒ On Dist.
- ☒ When
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HMM/LWL
- ☒ SSI
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Pt Location(s)
- ☒ Photo Location(s)

LEGEND

1 Δ

PI - No Subsurface Or

2 Δ

PI - Subsurface Or

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Spotted Distribution

Other Vegetation

1 ●

Photo location, direction, and number



SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST/CP001 Subdivision A Date (mo / day / yr) 4-10-90

Time (24 hr) 6:30 Biologist David Lutz

(A) Substrate type and % of segments:
(1) Bedrock 50 (2) Boulder 20 (3) Cobble 10 (4) Pebble 7 (5) Sand (6) Silt 3

(B) Overall % cover of biota (% of segment): Dense 45 Moderate 35 Low 20

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (O)

Photographs:
Roll No. ST-13-3

Frames 31-34

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

MYTILUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

GASTROPODS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

FUCUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments:

See page 2

Ecological Considerations:

W - no comment

Shoreline Ecological Summary

COTL

Segment ST-CP001

Subdivision A

4-10-90

Ecologist: David Lohse

1. present in low intertidal: -Halosaccion, Enteromorpha, Scytosiphon, Katharina tunicata, Ulva, Coralline algae, Pycnopodia, Pollinia egg cases

mid intertidal: Ulva, Enteromorpha, Cladophora, Halosaccion, Scytosiphon, Sculpin, Pycnopodia, Anthopleura, Nuella, Pagurus, Nuella egg cases

2. Stellar jays, cormorants, many water fowl/shore birds, ducks, 2 river otter, 2 seals, and 2 mature bald eagles sited in area

3. Lynx tracks spotted above high tide line

4. Catches of byssal ~~threads~~ threads prevalent on mid-intertidal bedrock.

5. Jense benthic settlement occurred in this segment. Both cyprids and recruits present in large numbers in the low and mid-intertidal.

Present in lower densities in the high intertidal

6. Otter ~~carcass~~ carcass found above high tide line. No oil observed

7. Four running streams found in this segment. Streams #1 and #4 had some oil present. No oil was observed near stream #2. Stream #3 was not surveyed. No information was given on whether or not any ecologically sensitive streams were present in this segment. However, a salmon fishing regulatory sign was spotted near streams #3 and #4 (in Picturesque Cove).

8. Tilled vegetation was found in two areas (see 06 data).

CP-T

↑
PWS
618

Stream
#4

ST/CP-01 =
SUBDIVISION A-1 of 1
South Porton

Stream
#3

Stream
#2

Stream
#1

Cl

T (5m)

T (5m)

T (5m)

T (5m)

--- (5m)

T (5m)

XXX Wide

/// Medium

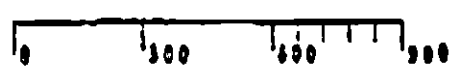
--- Narrow

TTTT Very Light

OOOO NA 0:1

CP-1

ADEC Segment Length: 10787m



Map Key: PWS-610

Name: _____

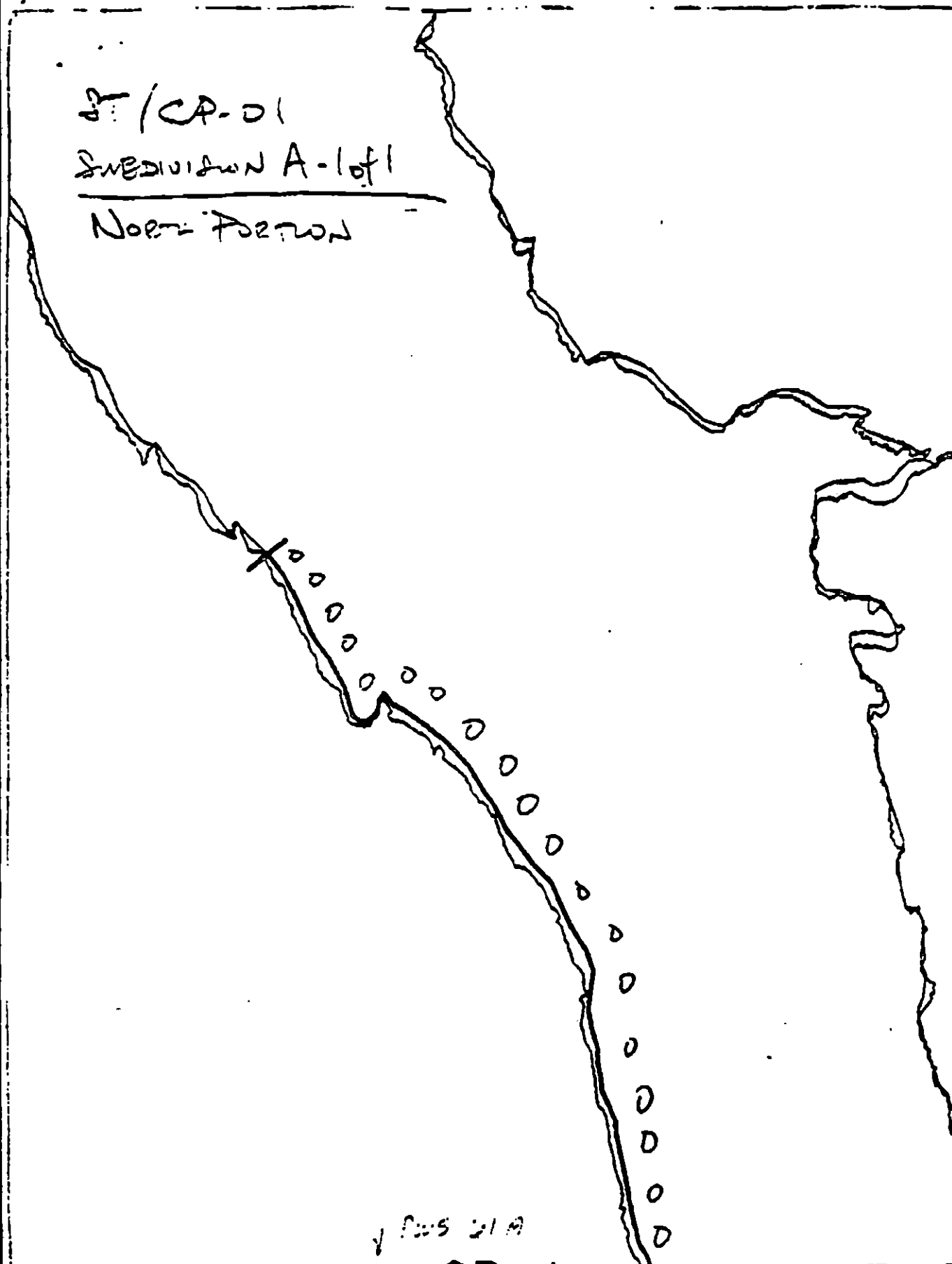
Date: _____

Data Entered: _____

ST/CP-01

SWEDISH A-1 of 1

North Portion



√ PWS 21A

XXX Wide
 /// Medium
 --- Narrow

TTTT Very Light

CP-1

ADEC Segment Length: 10767m

0 500 1000 1500



Map Key: PWS-61b

Name: _____

Date: _____

SHORELINE EVALUATION

SEGMENT ST/ CR-01 SUBDIVISION A (1 OF 1) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1E	Main Bay Hatchery release (4/20 to 6/10)
1L	Set net sites (6/11 to 7/25)
3N,3P	Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q	Harbor seal and sea lion molting (8/15 to 9/15)
6U	Recreation: Tent sites (6/1 to 9/15)
6W	Recreation: Forest Service cabins (6/1 to 9/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

SHPO SIGNATURE: [Signature] DATE: 4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 467 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 15+ cm

RECOMMENDATIONS:

☐ No Treatment Recommended	☐ Snare/Absorbent Booms
☒ Treatment Recommended	☐ Oil Snares (pom poms)
☐ Manual Pickup	☐ Absorbents (pads, rolls, etc)
☒ Bioremediation	☐ Spot Washing: _____ Wands
☐ Tarmat: _____ Removal	☐ Beach Cleaner
	☐ Other (see comments)

COMMENTS: Recommended treatment includes bioremediation of surface and subsurface oil in area shown on attached sketch map. Work should be conducted between 7/25 and 8/15 based on set net, hatchery and pinned constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: 4/25/90.

ADEC Art Wogner Art Wogner

EXXON ANDY TALKER

NOAA Joseph Talbot & Crew

USCG KENNETH KENAC (Kenneth Kenac)

FOSC: DATE: 5-3-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
 1D Esther Hatchery release (4/15 to 6/1)
 1E Main Bay Hatchery release (4/20 to 6/10)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 1I Gill net area (6/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (6/11 to 7/25)
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
 Restrict boat traffic to essential minimum. Avoid damage to unholed intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (6/1 to 9/15)
 6V Anchorages (6/1 to 9/15)
 6W Forest Service cabins (6/1 to 9/15)
 6X Lodge (6/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7H-I Finfish harvesting
 7I Deer harvesting (8/15 to 2/28)
 7J Invertebrate harvesting
 For Codes 7Z through 7J contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ CR-1 SUBDIVISION: A (ENTIRE SEGMENT) DATE 4/6/90

USCG
NAME GARY OTT SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED COMMENTS ☐ TREATMENT SUGGESTED

ADEC
NAME MICHAEL EBEL SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED COMMENTS ☐ TREATMENT SUGGESTED

CR-1-A : Broken and patchy coats with splashes of coat and stain were found here in the UTZ. Oil film was ranging from dark black through dark brown in only 1 of the 8 pits dug and it was not determinable from what depth of the 15c pit (#5) the film was emanating from. All of the above contaminants were located in the UTZ along this low energy shoreline. Any treatment would do more biological harm than gain in aesthetics.

LAND MANAGER - USDA FOREST SERVICE
NAME DON BREITINGER SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED COMMENTS ☐ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY

REVISED 10-01-82

OG Randy McBride USCGC NOAA Gary Off SEGMENT ST/ CR-1
 BIO Lewis Sherman LAND REP U.S.F.S. On Brother SUBDIVISION A
 EXXON Leonard Holst ADEC Michael Fabel TIME 15:20 to 16:45
 TEAM NO.: 12 TIDE LEVEL: +5' to +2' DATE 4/16/90
 EST. SUBDIVISION LENGTH: 482 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow 51°F
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: Back to South
 SURFACE SEDIMENTS: R 40 % B 40 % C 5 % P 10 % G 4 % S 1 % M 0 % V 0 %
 SLOPE: Long 15 % Hang 80 % Vert 5 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 482 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	10	20	30	40	50	60	70	80	90	SW	SE	NE	NW
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT		●	○	X	X	X	X	X	X	X	X	X	X
STAIN				X	X	X	X	X	X	X	X	X	X
MOUSSE													
PATTIES													
TARBALLS													
FILM				X	X	X	X	X	X	X	X	X	X
NO OIL										X	X	X	X

PAVEMENT: H F S NA sq. m by NA crPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

Roll No. ST-12-4Frames 21-22-23-24

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UD	UC	50	60	70	80	90	SW	SE	NE	NW		
1	45					X	—	X							X					P, G, S
2	30					X	—	X								X				P, G, S
3	37					X	—	X							X					B, C, P
4	30					X	—	X							X					C, P, G
5	15				X		0-15	X		X	●	+			X					B, C, P, G
6	25					X	—	X							X					P, G, P

COMMENTS CR-1-A is dominated by high angle rock cliffs and boulders w/ little fine sediments. Wave exposure is low to medium since the segment lies on the ~~rock~~ protected side of the island. However, winds from the N/NW have the greatest amount of fetch and would produce high wave-energy condition along the entire segment. These waves will wash the rocks + sediments very efficiently through the year. The ~~rock~~ is characterized by a coat (<1mm) ~~with~~ broken (50-80% coverage), patchy (10-49%), and splashed (<10%) distributions.

Page 1 of 2

continued on next page

REVIEWED DLDATE 4/10/90

PAGE 2 of 2

SHORELINE OILING SUMMARY (PAGE 2 of 2)

REVISION 06/23/90

SEGMENT ST/ CR-1 SUBDIVISION A

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR	PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UC		SU	US	MS	U		
7	30					X	.		X						X	CPG
8	20					X	.		X						X	BCPG
							.									
							.									
							.									
							.									
							.									
							.									
							.									
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							.									

COMMENTS

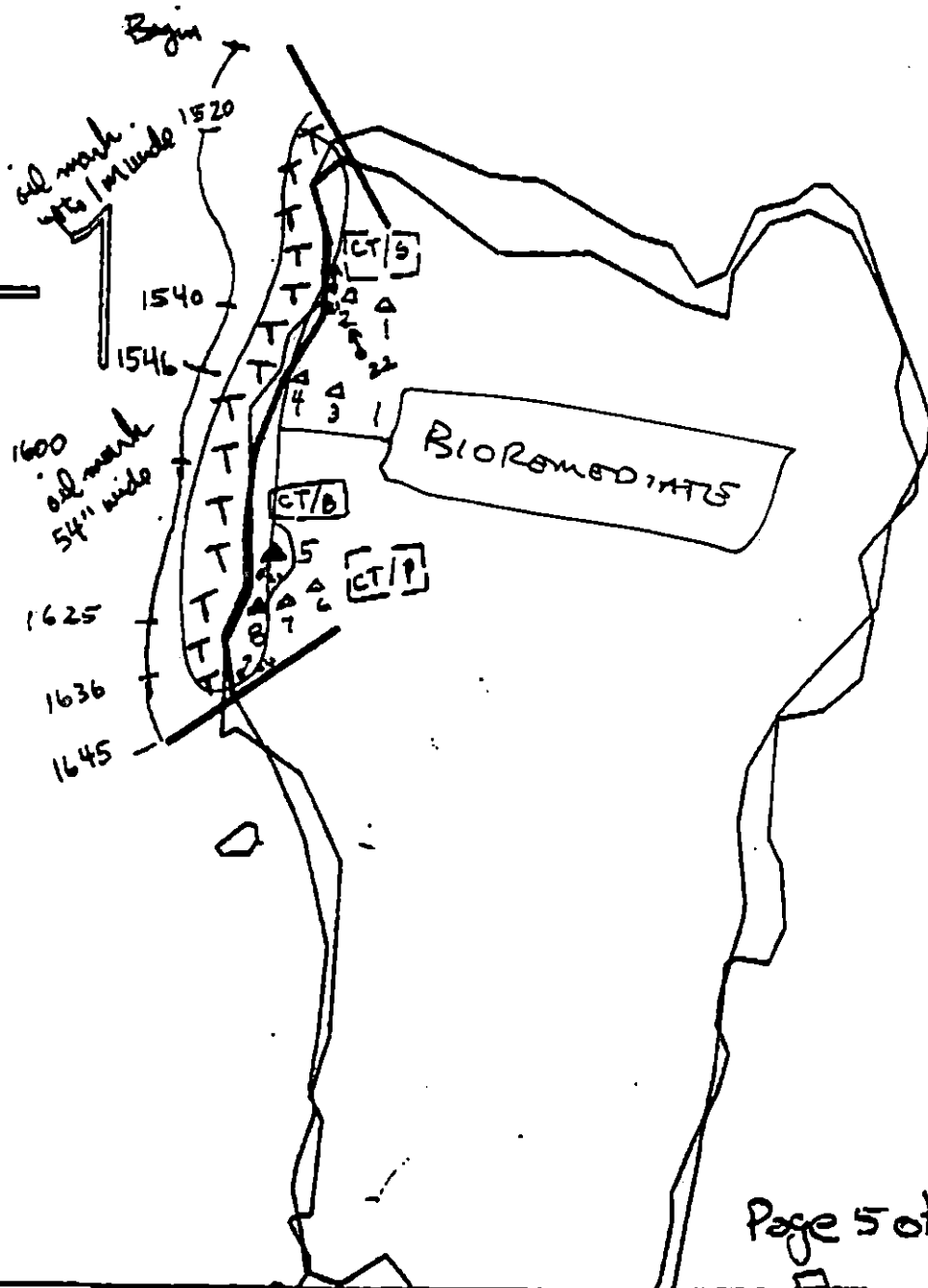
Overall, there was no subsurface oiling except pit #5 showed some rainbow, silver, and translucent sheen. CR-1-A is categorized as very light oiling.

Randy McBride
Geomorphologist
4/6/90

REVIEWED DIL DATE 4/10/90

PAGE 3 OF 25

CR-1



Page 5 of 20

XXX Wide

/// Medium

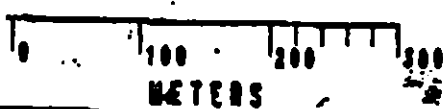
--- Narrow

TTTT Very Light

0000 No Oil

CR-1

ADEC Segment Length: 467m



Map Key: PWS-62

Name: Randy McBride

Date: 4/6/90

Date Entered:

Time (24 hr) 1515-1700 Biologist SHARMAN(A) Substrate type and % of segments: SUBDIV
(1) Bedrock 40 (2) Boulder 40 (3) Cobble 5 (4) Pebble 10 (5) Sand 5 (6) Silt 5 ^{+ granules}(B) Overall % cover of biota (% of segment): Dense Moderate X Low
SUBDIV

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:
Roll No. ST-12-4Frames 21-24

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

MYTILUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

GASTROPODS (ALICOLA, LITTORINA, LIMAEAE)

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

FUCUS

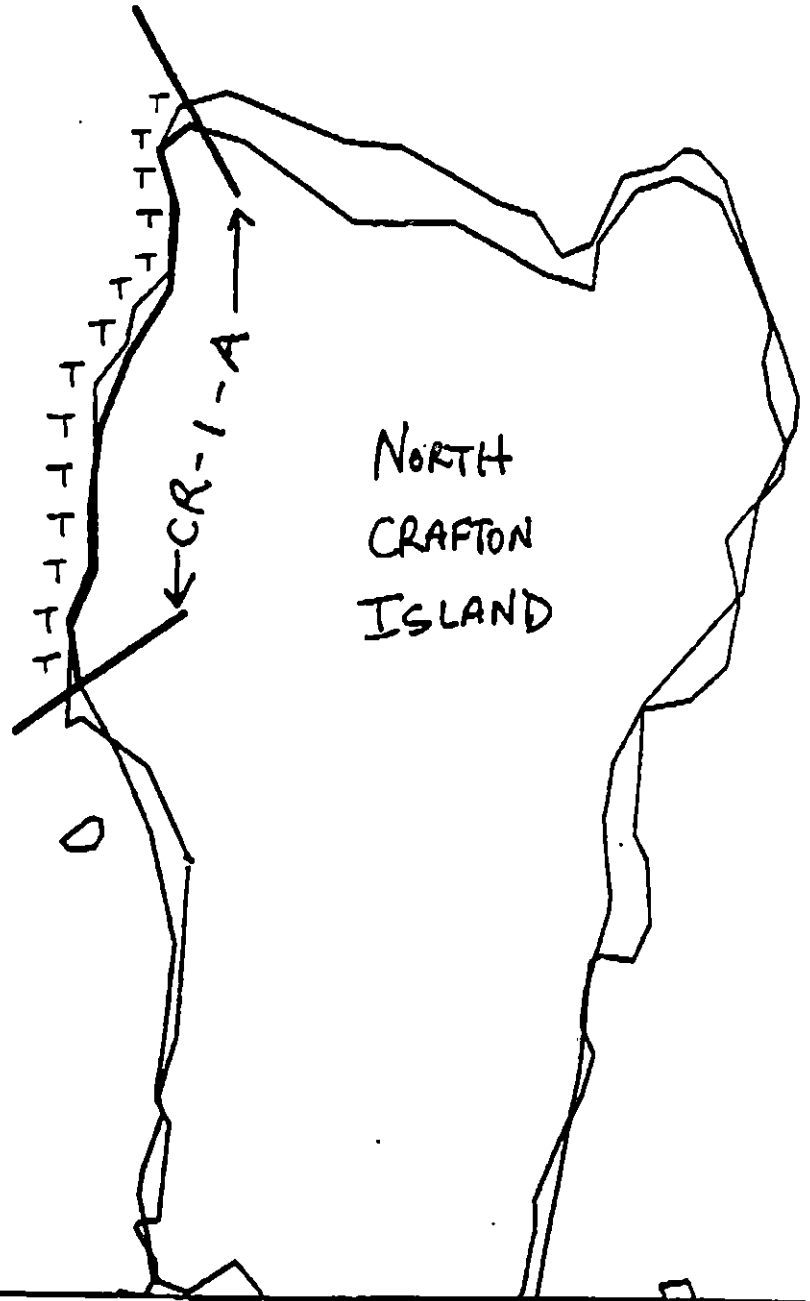
Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments: 1 subadult eagle, 1 loon (? sp.). This subdivision is high exposure - Corbula are extremely clean of biota as well as oil. Within the ten bands of bedrock boulders and large boulders there is a 30% adult barnacle mortality (vs. ~5% outside band); abundant scars within the band could be the result of oiling mortality or from high pressure spraying during treatment. Spots have been noted on scars about three bands. But new biota on the shell. LTB tidepools are very diverse and productive. Intertidal generally appears Ecological Considerations: normal and healthy.

According to the Priorities and Windows table, this segment is assigned an environmental ranked priority of 1 (work window 7/25 > 8/15 - could be revised by USFWS). Identified constraints are use of the area as a Main Bay Hatchery release site (code 1E; constraints 1 and 2; treatment priority 2) and as haulout site for principal pupping and molting (codes 3N, P, Q; Constraint 5; treatment priority 1). Of particular importance are the offshore/offshore rocks + islets, and exposed rocky points. This is critical habitat sound-wide, and these animals are extremely sensitive during that time to human disturbance. LTB tidepools are very sensitive to trampling.

CR-1



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

CR-1

ADEC Segment Length: 467m



Map Key: PWS-62

Name: Randy McBride

Date: 4/6/90

Date Entered:

Page 4 of 28

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT CR-1 SUBDIVISION A (1 of 1)

WORK WINDOW

Bioremediation

WORK 6/4 - 6/7

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

- | | | |
|------------|--|--|
| 1E | Main Bay Hatchery Release | Subdivision open to bioremediation 6/4 to 6/8 per verbal authorization from Larry Peltz/ADF&G to Tom Monihan/Exxon on 5/24/90. No constraint to bioremediation after 6/15. |
| 1I | Gill Net Area | Closed to bioremediation after 6/7. |
| 1L | Set Net Sites | Closed to bioremediation from 6/11 to 7/25. |
| 3NP
3OQ | Harbor Seal and Sea Lion
Pupping and Mating | NO TIME CONSTRAINT. Authorized per memorandum dated 5/14/90 from Kathryn Frost/ADF&G to Mark Kuwada/ADF&G. |

OTHER ECOLOGICAL CONSIDERATIONS

Do not apply bioremediation to specific areas where seals are observed to haulout. Do not chase or harass seals or sea lions, and do not approach pups under any circumstances. When working on or near haulouts, complete the job as quickly as possible with minimum personnel, equipment, noise and disturbance. Keep boats and personnel as far from actual haulouts as is practical to do the work specified. Minimize air traffic near haulouts, maintain elevation as is practical, and avoid repeated overflights of the same haulout areas. Avoid any unnecessary disturbance or damage to uncollected biota and substrate.

TAG APPROVAL DATE 6/04/90.
ADEC Ray Morris
EXXON ANDY TEAR
NOAA Joseph C. Fulkert
USCG G.A. J. J. J.

FOSC

DATE

Prepared By:

Date

6/2/90

CR-1

TREATMENT AREA

CR-2

CR-5

▲ 22

CR-3



Exxon Company, USA
Map Key: PWS-CR-1
May 11, 1990



ECOLOGY MAP
SEGMENT CR-1
SUBDIVISION A (1 of 4)

METERS

0 329 659

- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1080 feet

SHORELINE EVALUATION

SEGMENT ST/ CR-02 SUBDIVISION A (1 OF 3) DATE 4/5/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1E Main Bay Hatchery release (4/20 to 5/10)
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Avoid offshore rocks and islets.

SHPO SIGNATURE: Charles E. J. J. J. DATE: 4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 634 m: No Oil 185 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

<u>X</u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u> </u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u> </u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u> </u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u> </u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> Removal	<u> </u> Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/25/90
ADEC Art Weiler
EXXON Arny G. G.
NOAA Joseph C. Talbot
USCG Kenneth H. H.

FOSC: W. H. L. DATE: 5-3-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A	Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B	Salmon stream mouth - spawning (7/10 to 8/31) No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
1C	Salmon fry nursery area (4/31 to 7/31)
1D	Esther Hatchery release (4/15 to 6/1)
1E	Main Bay Hatchery release (4/20 to 5/10)
1F	Sawmill Bay Hatchery release (4/15 to 6/1)
1G	Cannery Creek Hatchery release (4/21 to 6/1)
1H	Remote release site
1I	Gill net area (5/7 to 8/31)
1J	Purse seine area (7/20 to 9/30)
1K	Purse seine hook-off (7/20 to 9/30)
1L	Set net sites (6/11 to 7/25) For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
2M	Herring spawning (4/1 to 6/15) Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
3N, 3P 3O, 3Q	Harbor seal and sea lion pupping (5/15 to 7/1) Harbor seal and sea lion molting (8/15 to 9/15) Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
5R	Seabird colony (5/1 to 9/1) Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
5S	Shorebird/waterfowl concentration (4/1 to 5/15) Restrict all activity to essential minimum, especially air traffic.
5T	All Bald Eagle nests (3/1 to 6/1) Active Bald Eagle nests (3/1 to 9/1) Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
6U	Recreation: Tent sites (8/1 to 9/15)
6V	Anchorage (8/1 to 9/15)
6W	Forest Service cabins (8/1 to 9/15)
6X	Lodge (8/1 to 9/15)
6Y	Special use destination
7Z	Subsistence area: Salmon harvesting (5/1 to 9/30)
7HH	Finfish harvesting
7II	Deer harvesting (8/15 to 2/28)
7JJ	Invertebrate harvesting For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ CR-2 SUBDIVISION: A (B&C SEPARATE) DATE 4/6/90

USCG

NAME GARY OTT

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME MICHAEL EBEL

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

→ CR-2-A: This subdivision ~~was~~ consisted mostly of bedrock cliffs with high angle talus slopes. The oiling found was within the UTZ and weathered to a thin coat and cover — mostly splashes with occasional patches. No subsurface oil was found in any of the 5 pits. The high exposure to the shoreline will continue washing it away.

LAND MANAGER - USDA FOREST SERVICE

NAME DON BREITINGER

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY

REVISION NO. 02/20/90

OG Randy McBride NBAA Gary Ott SEGMENT ST/ CR-2
 BIO Lewis Shorman LAND REP Don Breitingen SUBDIVISION A
 EXXON Leonard Herbst ADEC Mike E. Red TIME 14:15 to 15:30
 TEAM NO.: 12 TIDE LEVEL: +5.5 to +3.0 DATE 4/5/90 Temp. 37°F
 EST. SUBDIVISION LENGTH: 1071 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: south to north
 SURFACE SEDIMENTS: R 20 % B 20 % C 30 % P 20 % G 5 % S 5 % M 0 % V 0 %
 SLOPE: Long 15 % Hang 55 % Vert 30 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VI 762 m NO 309 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	E	N	S	W	1	2	3	4	SW	W	SE	U
ASPHALT PAVEMENT												
POOLED												
COVER						X				X		
COAT						X				X		
STAIN												
MOUSSE												
PATTIES												
TARBALLS												
FILM												
NO OIL										X		X

PAVEMENT: H F S _____ sq. m by _____ cm

PATTIES / TARBALLS _____ BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

Roll No. No picturesFrames No pictures

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW	OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OF	OR	OL	OF	NO			1	2	3	4	5	SW	W	SE	U		
1	45					X	—	X						X					CPG
2	30					X	—	X						X					CP
3	50					X	—	X						X					PGS
4	22					X	—	X						X					CGS
5	30					X	—	X						X					CGS

COMMENTS

CR-2 - A is dominated by very light oiling with some areas containing no oiling (see computer map). The light oiling is characterized by coats and covers. The coat (<1 mm thick) has a patchy and splashed distribution. The cover (>1 mm thick) has only a splashed distribution. All the oil is a dark brown color located mostly in the upper intertidal zone. No oil was found along the supratidal or lower intertidal zone. The subdivision was dominated by high angle rock cliffs (continued on next page)

REVIEWED DPL DATE 4/10/90

Page 8 of 28

continued Shoreline Oiling Summary (CR-2-A)

with boulders and large cobbles interspersed w/ finer-grained pocket beaches. Overall, wave exposure along CR-2-A is high due to the large fetch across the northern end of Knight Island passage. As a result, a large amount of natural washing ^{and flushing} will take place through the year from ^{a combination of} high wave energy and the large tidal range ($10-14'$ $\sim 4m$).

Randy McBride
Oil Geomorphologist

page 2 of 2

- (A) Substrate type and % of segments: SUBDIV.
 (1) Bedrock 20 (2) Boulder 20 (3) Cobble 30 (4) Pebble 20 (5) Sand 10 (6) Silt 0
 (B) Overall % cover of biota (% of segment): Dense 0 Moderate X Low 0
 (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)
 Photographs: Roll No. ST-12-4
 Frames NONE

BARNACLES

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

MYTILUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

GASTROPODS (ANCELA, LITTORINA, LYMAETE)

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

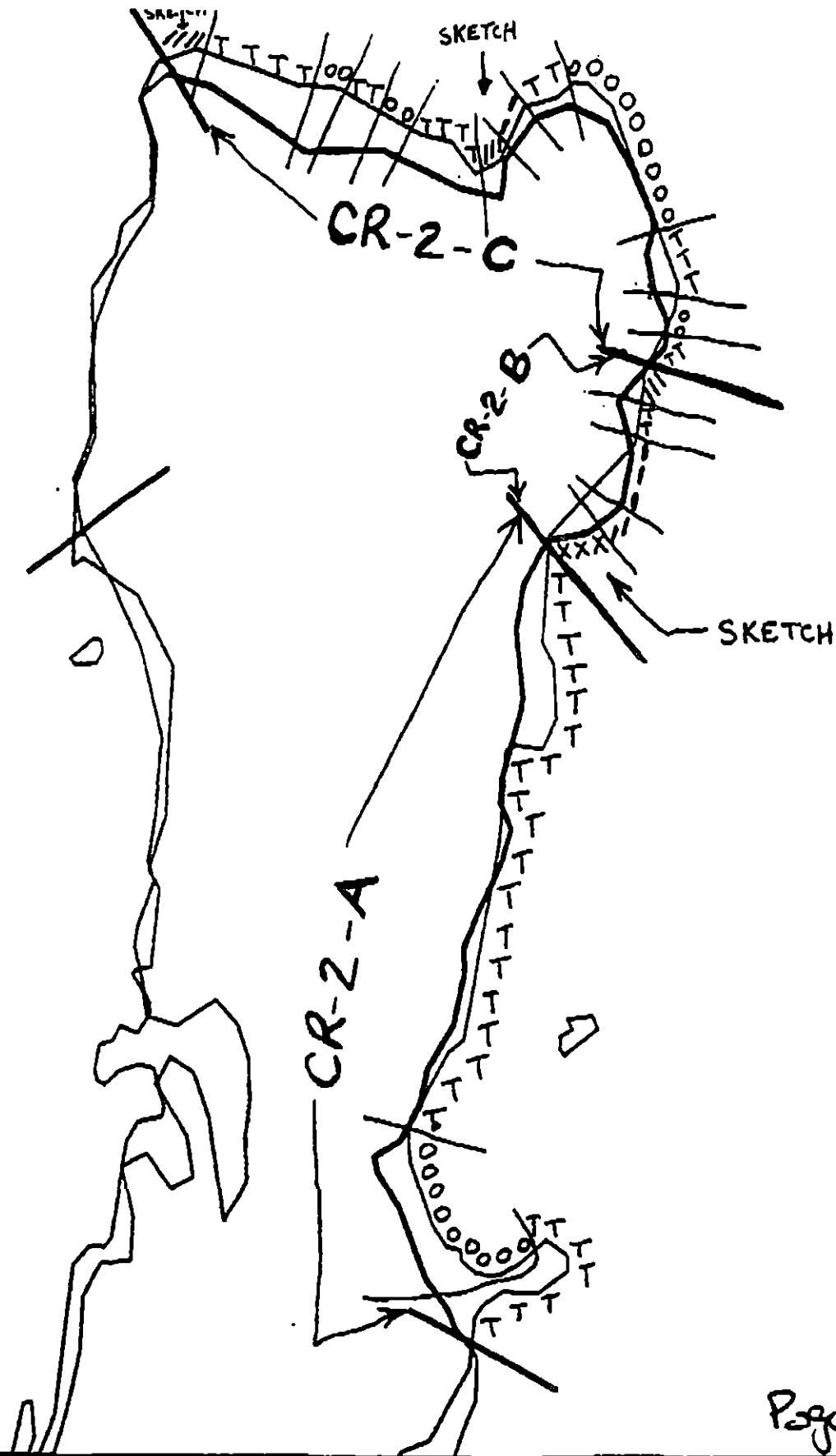
FUCUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

Wildlife Observations/ General Comments: 1 pelagic cormorant, 3 pairs Harlequin ducks, 4 mergansers, 6 cormorants, 1 black oystercatcher. Despite disturbance, scattered patches and bands of weathered talus cover on LITZ boulders and bedrock exposures, the intertidal community appears normal and healthy.

Ecological Considerations:

According to the Priorities and Windows table, this segment is assigned an environmentally ranked priority of 1 (work window 7/1 - 8/15). Primary identified sensitivities are use of the area as a Main Bay Habitat release site (code 1E) and as a haulout site for pinnipeds (code 3N, P, O, Q) - constraints 1+2; treatment priority 2. Of particular importance are the offshore/pelagic rocks + islets, and exposed rocky points. This is critical habitat for seabirds, and these animals are extremely sensitive during these times to human disturbance. LITZ tidepools are very sensitive to trampling.



Page 10 of 26

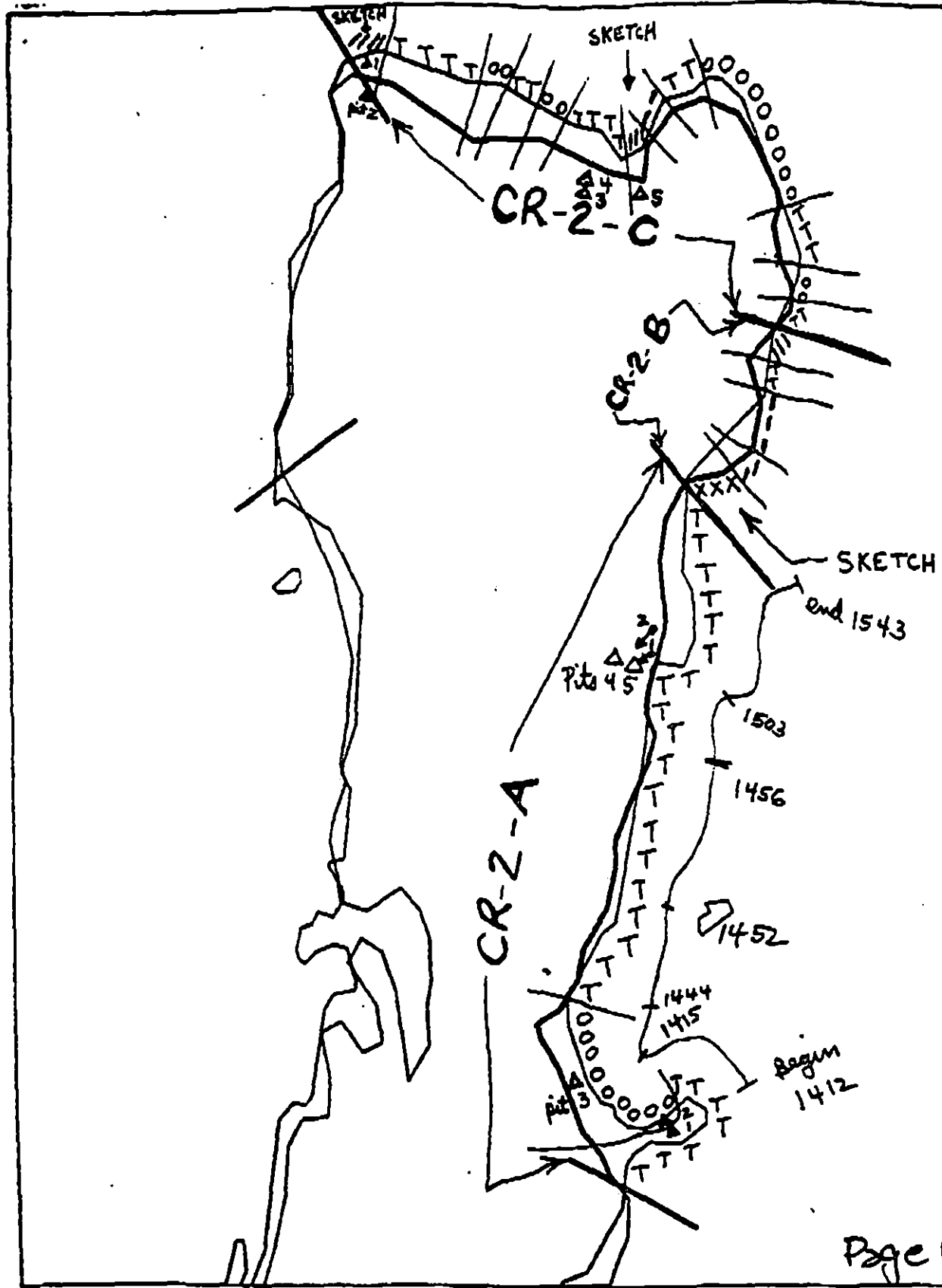
XXXX Wide
 //// Medium
 --- Narrow
 TTTT Very Light
 0000 No Oil

CR-2

ADEC Segment Length: 1782m



Map Key: PWS-830
 Name: Randy McBride
 Date: 4/6/90
 Data Entered:



Page 11 of 26

XXXX Wide
 //// Medium
 --- Narrow
 TTTT Very Light
 0000 No Oil

CR-2

ADEC Segment Length: 1782m

0 100 200 300 METERS



Map Key: PWS-63a
 Name: Randy McBride
 Date: 4/6/90
 Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ CR-02 SUBDIVISION B (2 OF 3) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1E Main Bay Hatchery release (4/20 to 6/10)
3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE [Signature] DATE: 4/28/90

OILING CATEGORIZATION:

Wide 44 m: Medium 75 m: Narrow 64 m: V. Light 36 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 20 cm

RECOMMENDATIONS:

X No Treatment Recommended Snare/Absorbent Booms
 Treatment Recommended Oil Snares (pom poms)
 Manual Pickup Absorbents (pads, rolls, etc)
 Bioremediation Spot Washing: Wands
 Tarmat: Breakup Beach Cleaner
 Removal Other (see comments)

COMMENTS: Recommended treatment includes 1) manual breakup and removal of tarmat, 2) manual pick up of pooled oil, oiled debris, and trash, 3) bioremediation of surface and subsurface oil in areas shown on attached sketch map. Work should be conducted between 7/1 and 8/15 based on pinned constraints, after approval of ADF&G concerning Main Bay Hatchery release dates. Contact Larry Peltz (ADF&G) at 424-3214 for specific dates.

TAG COMMENTS: MANUAL TULLING IN AREA OF PITS 10+11 PRIOR TO BIO

4/26/90 DUE TO SITE SENSITIVITIES NTR IS THE PREFERRED APPROACH

TAG APPROVAL DATE: 4/25/90

ADEC Art Weimer

EXXON Away Tech

NOAA Joseph Kilgus

USCG Kenneth Ketter

FOSC: [Signature] DATE: 5-12-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A	Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B	Salmon stream mouth - spawning (7/10 to 8/31) No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
1C	Salmon fry nursery area (4/31 to 7/31)
1D	Esther Hatchery release (4/15 to 6/1)
1E	Main Bay Hatchery release (4/20 to 6/10)
1F	Sawmill Bay Hatchery release (4/15 to 6/1)
1G	Cannery Creek Hatchery release (4/21 to 6/1)
1H	Remote release site
1I	Gill net area (5/7 to 8/31)
1J	Purse seine area (7/20 to 9/30)
1K	Purse seine hook-off (7/20 to 9/30)
1L	Set net sites (6/11 to 7/25) For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
2M	Herring spawning (4/1 to 6/15) Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
3N, 3P 3O, 3Q	Harbor seal and sea lion pupping (5/15 to 7/1) Harbor seal and sea lion molting (8/15 to 9/15) Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
5R	Seabird colony (5/1 to 9/1) Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
5S	Shorebird/waterfowl concentration (4/1 to 5/15) Restrict all activity to essential minimum, especially air traffic.
5T	All Bald Eagle nests (3/1 to 6/1) Active Bald Eagle nests (3/1 to 9/1) Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
6U	Recreation: Tent sites (5/1 to 9/15)
6V	Anchorage (5/1 to 9/15)
6W	Forest Service cabins (6/1 to 9/15)
6X	Lodge (5/1 to 9/15)
6Y	Special use destination
7Z	Subsistence area: Salmon harvesting (5/1 to 9/30)
7HH	Finfish harvesting
7I	Deer harvesting (8/15 to 2/28)
7JJ	Invertebrate harvesting For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / C.R. - 2 SUBDIVISION: B (A & B SEPARATE) DATE 4/6/90

USCG NAME GARY CTT SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED COMMENTS ☐ TREATMENT SUGGESTED

ADEC NAME MICHAEL EBEL SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ? ☐ TREATMENT SUGGESTED COMMENTS

C.R. - 2 - B: This subdivision along a high-energy shoreline had bedrock outcrops that provided a "shadow zone" for oil accumulation. Asphalt pavement patches were present but minimal, totaling an area of $\approx 1 \text{ m}^2$. Pooled oil gray from shiny black to gray was located in the MTZ in a subsurface lens from 5-10 cm thick. The lens tapered up toward the surface in the MTZ (lower) and graded to no oil in the UTZ. The approximate area of the lens is $6 \text{ m} \times \approx 15 \text{ m}$. A small pool (isolated) was located in the UTZ with dark brown residual oil in a layer from 15-20 cm deep in an area $\approx 1.5 \text{ m}^2$. Oil films were detected around both areas for lenses from 2-5 cm. Scattered surface covers and coats of wax present in.

LAND MANAGER USDA FOREST SERVICE NAME DON BREITINGER SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED COMMENTS ☐ TREATMENT SUGGESTED

→ Mike Ebel (cont): effective, then this area would qualify for its use

SHORELINE OILING SUMMARY

REVISION NO. 00/00/00

OG Randy McBride 1990 NOAA Galveston SEGMENT ST/ CR-2
 BIO Lewis Shatman LAND REP USFS Don Brinkley SUBDIVISION B
 EXXON Leonard Herbst ADEC Michael Ebel TIME 7:15 to 08:00
 TEAM NO.: 12 TIDE LEVEL: 3.1' to 4.9' DATE 4/6/90 TEM 31°F
 EST. SUBDIVISION LENGTH: 245 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: South to North
 SURFACE SEDIMENTS: R 15 % B 20 % C 35 % P 20 % G 5 % S 5 % M 0 % V 0 %
 SLOPE: Long 45 % Hang 45 % Vert 10 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 34 m M 51 m N 114 m VL 46 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION					OIL / FILM COLOR					IMPACTED ZONES			
	R	B	C	P	G	S	M	V	W	N	W	M	U	
ASPHALT PAVEMENT				X					X		X			
POOLED				X					X		X			
COVER	0	0	+	X					X		X			
COAT				X		X			X		X	+		
STAIN														
MOUSSE														
PATTIES														
TARBALLS														
FILM														
NO OIL									X				X	

PAVEMENT: H 8 1 sq. m by 3 cr.PATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash	X		
Debris			

DEBRIS COLLECTED
☒ YES ☐ NOTYPE 50 lb bag
boom
#BAGS 1

Photographs:

Roll No. ST-12-4Frames 1 - 13

SUBSURFACE OIL Pits start w/ # 6

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS		
		OF	OR	OL	OF	NO		BO	BC	1/2 B	3/4 B	1/2 O	3/4 O	1/2 U	3/4 U	W	U	W	U				
Pits start w/ # 6.																							
6	25		X				15-20		X								X						C, G, P, S
7	30				X		18-20		X								X						C, P, G, S
8	22					X	—-—		X								X						P, G, S
9	25					X	—-—		X								X						G, S ^{detrital organics}
10	20	X			X		5-10		X				X					X					B, C, G, P, S

COMMENTS CR-2-B is dominated by several finer-grained
 packed beaches interspersed w/ ^{some} higher angle bedrock w/
 boulders and large cobbles. Overall, wave exposure along
 CR-2-B is high due to the large amount of fetch across
 the northern end of Knight Island passage.

REVISION 02-2005

SUBSURFACE OIL (CONTINUED)

[illegible]

COMMENTS (continued from previous page)

CR-2-A is characterized by wide, medium, narrow, and very light ^{surface} oiling. The wide oiling is described in the sketch map. Significant amounts of subsurface oil ^{were} ~~was~~ found in pits #6, #10, and #11 (located on sketch). These pits are located in the middle and upper intertidal zones. The medium, narrow, and very light oiling was characterized mainly by covers and coats. The ~~coat~~ coats are splashed in distribution and the covers are continuous, broken, patchy, and splashed in distribution. The combination of high wave energy/exposure and tidal processes will naturally wash this subdivision effectively throughout the year.

Randy McBride

REVIEWED _____ DATE _____

Segment ST / CR-2 Subdivision B Date (mo / day / yr) 4/4/90Time (24 hr) 0710-0755 Biologist SHARMAN

Page 17 of 25

(A) Substrate type and % of segments: SUBDIV.
(1) Bedrock 15 (2) Boulder 20 (3) Cobble 35 (4) Pebble 20 (5) Sand 10 (6) Silt 0(B) Overall % cover of biota (% of segment): Dense 0 Moderate X Low 0
SUBDIV.

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:

Roll No. ST-12-4Frames 1-13

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

MYTILUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

GASTROPODS (ANCELA, LITTORINA, LIMAEYS)

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

FUCUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

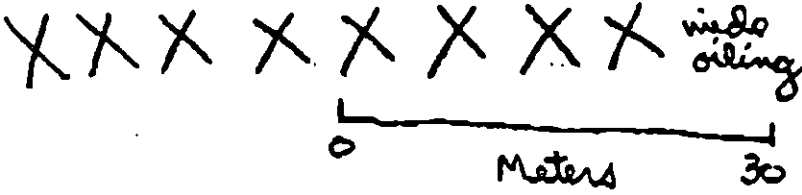
NOT PRESENT

Wildlife Observations/ General Comments: Fox sparrow, deer tracks in supratidal, 4 adult seals. The intertidal epifaunal community appears normal and healthy. There is significant subsurface oiling of substrate, however it primarily confined to relatively small areas in the LTB. These oiled substrates are free of macrofauna, although not conspicuously more so than in similar un-oiled areas. The oil-saturated substrate is a health risk in organisms (likely from ingestion of ingested material). LTB bedrock tidepools are as rich and productive as would be expected in the area.

Ecological Considerations:

Please see this section for CR-2-A. Environmental Priority 1. Sensitivity codes 1E, 3N, P, O, Q. Diving must not be disturbed during their critical pupping/mating periods. They are extremely vulnerable to human disturbance. LTB tidepools are very sensitive to trampling.

of an oilspill (edgum, coralline algae, anemones, etc.). There has been no barnacle settlement directly onto oiled rock surfaces (although commonly on adjacent un-oiled surfaces). Mortality of adult barnacles is ~ 50% within the oiled band and ~ 10% outside the oiled band.



CHECKLIST

☒ N Answer
☒ Approx. Size
☒ Sub Entry
☐ Oil Dial
☐ Width
☐ Length
☐ % Cover
☒ Schedule Change
☒ Est. NAME/LVL
☐ SSJ
☐ Profile Location
☐ Profile(s)
☐ Pts Location(s)
☐ Photo Location(s)

! Δ
Flt - No Subsurface Oil

Fig. 5. Substrate Oil

8/13

11

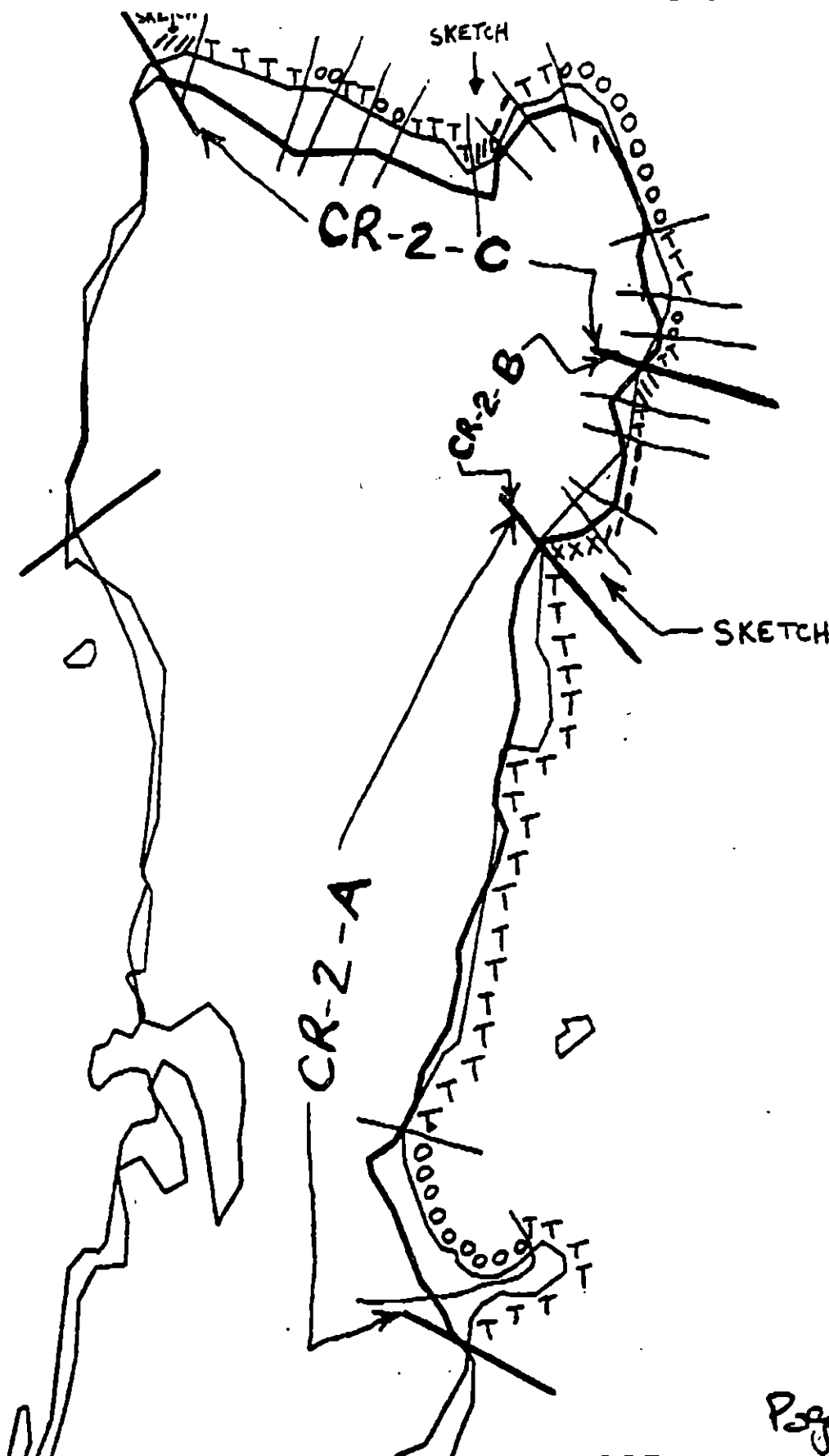
Product Distribution

٢٨٤

2

quantity

ON Character Length² (in): AP 1 PO 15 CV 34 CT 6 ST 6 MS PT FL NO

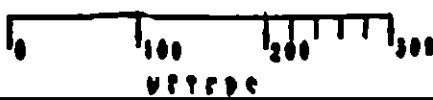


Page 10 of 26

XXXX Wide
 //// Medium
 --- Narrow
 TTTT Very Light
 0000 No Oil

CR-2

ADEC Segment Length: 1782m



Map Key: PWS-830

Name: Pandy McBride

Date: 4/6/90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT CR-2 SUBDIVISION C (3 of 3)

WORK WINDOW	
Manual Pickup	OPEN
Spot Washing	OPEN
Bioremediation	WORK 6/4 - 6/7

ARCHAEOLOGICAL MONITOR REQUIRED ON SITE.

>>> PHONE 564-3274 (Anchorage) OR 229-1508 (24 hrs.) <<<

NO ACCESS OR TREATMENT SOUTH OF THE LIGHT DUE TO RESOURCE SENSITIVITY

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1E	Main Bay Hatchery Release	Subdivision open to bioremediation 6/4 to 6/8 per verbal authorization from Larry Peltz/ADF&G to Tom Monihan/Exxon on 5/24/90. No constraint to bioremediation after 6/15. No constraint to manual pickup and spot washing.
1I	Gill Net Area	Closed to bioremediation after 6/7. No constraint to manual pickup and spot washing.
3N,P 3O,Q	Harbor Seal & Sea Lion Pupping and Molting	NO TIME CONSTRAINT. Authorized per memorandum dated 5/14/90 from Kathryn Frost/ADF&G to Mark Kuwada/ADF&G.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates an active nest in Segment CR-2. The work area is more than 400m from the active nest.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 6/7. Do not apply bioremediation to specific areas where seals are observed to haulout. Do not chase or harass seals or sea lions, and do not approach pups under any circumstances. When working on or near haulouts, complete the job as quickly as possible with minimum personnel, equipment, noise and disturbance. Keep boats and personnel as far from actual haulouts as is practical to do the work specified. Minimize air traffic near haulouts, maintain elevation as is practical, and avoid repeated overflights of the same haulout areas. Avoid any unnecessary disturbance or damage to uncollected biota and substrate.

TAG APPROVAL DATE 6/04/90
ADEC Roy Monahan
EXXON Andy Peltz
NOAA Jason Tuller
USCG CA. Butler

FOSC

Date

6/5/90

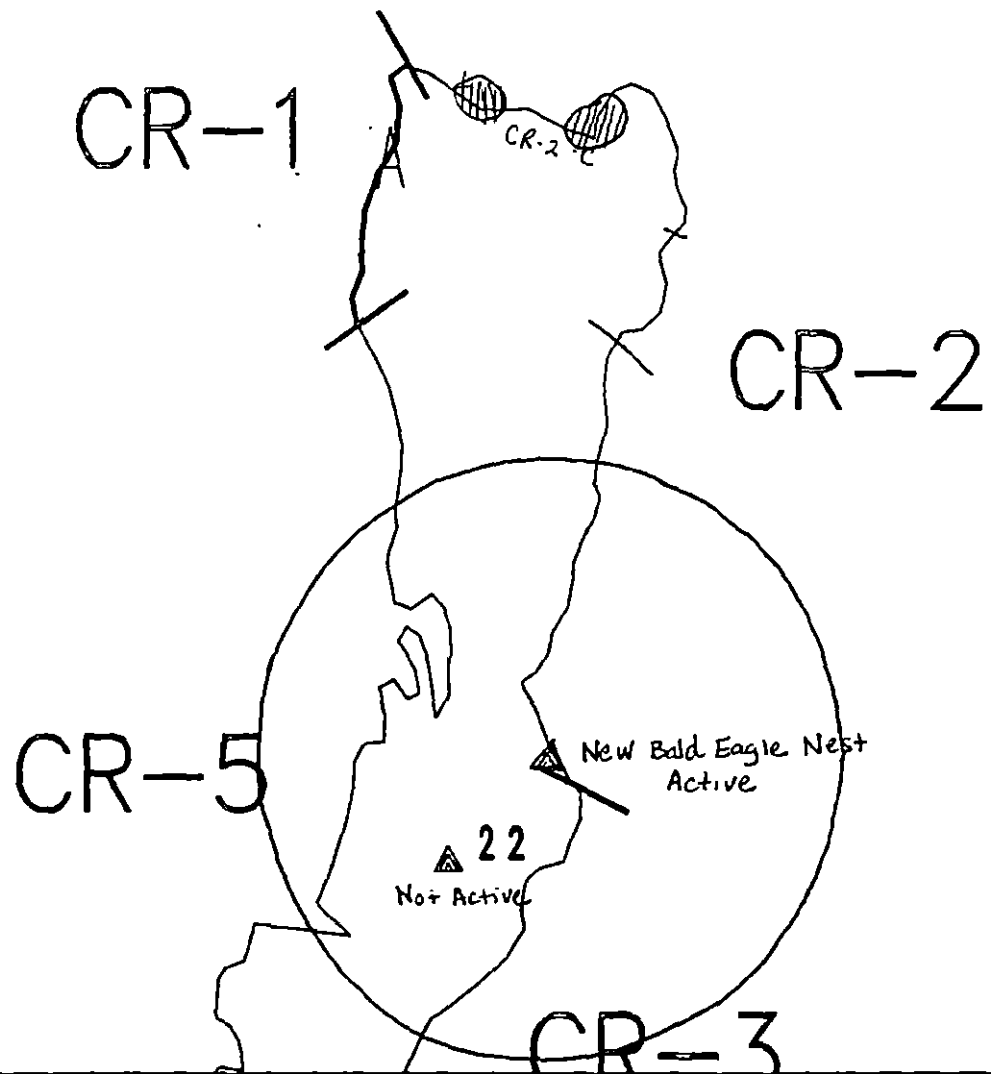
Prepared by

Andie Monahan

Date

6/14/90

* Based on USFWS 6/1/90 map
showing ^{ACTIVE} eagle nests.



Exxon Company, USA
Map Key: PWS-CR-1
May 11, 1990



ECOLOGY MAP
SEGMENT CR-2
SUBDIVISION C (3 of 3)
METERS

0 329 659

★ Seabird Colony
▲ Eagle Nest

1 inch = 1080 feet

SHORELINE EVALUATION

SEGMENT ST/ CR-03 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1E Main Bay Hatchery release (4/20 to 5/10)
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
5T All bald eagle nests (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)
6Y Recreation: Special use destination
See attached Ecological Constraint Sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Treatment, if required, should be completed prior to 5/15 or between 7/1 and 8/15 unless otherwise approved by ADF&G and/or USFWS.

SHPO SIGNATURE: Charles E. Holmes DATE: 4/17/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 742 m: No Oil 101 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

<u>X</u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u> </u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u> </u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u> </u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u> </u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> Removal	<u> </u> Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90
ADEC ART Weimer Det Weimer
EXXON TRUDY TEAL FOSC: DATE: 4-22-90
NOAA Burt Wescott
USCG KENNETH KENNEDY

PWS ECOLOGICAL CONSTRAINTS

1A	Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B	Salmon stream mouth - spawning (7/10 to 8/31) No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
1C	Salmon fry nursery area (4/31 to 7/31)
1D	Esther Hatchery release (4/15 to 6/1)
1E	Main Bay Hatchery release (4/20 to 5/10)
1F	Sawmill Bay Hatchery release (4/20 to 5/10)
1G	Cannery Creek Hatchery release (4/21 to 6/1)
1H	Remote release site
1I	Gill net area (6/7 to 8/31)
1J	Purse seine area (7/21 to 9/30)
1K	Purse seine hook-off (7/20 to 9/30)
1L	Set net sites (6/11 to 7/25) For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
2M	Herring spawning (4/1 to 6/15) Restrict boat traffic to essential minimum. Avoid damage to unopened intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
3N, 3P 3O, 3Q	Harbor seal and sea lion pupping (5/15 to 7/1) Harbor seal and sea lion molting (8/15 to 9/15) Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
5R	Seabird colony (5/1 to 9/1) Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
5S	Shorebird/waterfowl concentration (4/1 to 5/15) Restrict all activity to essential minimum, especially air traffic.
5T	All Bald Eagle nests (3/1 to 8/1) Active Bald Eagle nests (3/1 to 9/1) Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
6U	Recreation: Tent sites (6/1 to 9/15)
6V	Anchorage (6/1 to 9/15)
6W	Forest Service cabins (6/1 to 9/15)
6X	Lodge (6/1 to 9/15)
6Y	Special use destination
7Z	Subsistence area: Salmon harvesting (5/1 to 9/30)
7HH	Finfish harvesting
7II	Deer harvesting (8/15 to 2/28)
7JJ	Invertebrate harvesting For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

SHORELINE OILING SUMMARY

REVISION NO. 08/23/91

OG Randy McBride ~~NOAA~~ NOAA: Gary Ott SEGMENT ST/ CR-3
 BIO Lewis Sharman LAND REP USFS: Dan Brattinger SUBDIVISION A
 EXXON Leonard Herbst ADEC Mike Ebel TIME 19:00 to 20:11
 TEAM NO.: 12 TIDE LEVEL: 3.9' to 5.95' DATE 4/4/90
 EST. SUBDIVISION LENGTH: 817 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: South to North
 SURFACE SEDIMENTS: R 32% B 15% C 35% P 10% G 5% S 5% M 5% V 5%
 SLOPE: Long 5% Hang 55% Ven 40% WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W m M m N m VL 685 m NO 132 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	E	N	P	S	1	2	3	4	5	SU	U	M	V
ASPHALT PAVEMENT													
POOLED													
COVER		X						X			X		
COAT			O	X				X			X	O	
STAIN			X		X						X		
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL										X			X

PAVEMENT: H F S sq. m by cPATTIES / TARBALLS BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE #BAGS

Photographs:

Roll No. ST-12-3Frames 35-36

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	1	2	3	4	5	SU	U	M	V		
1	35					X	—		X							X				S
2	30					X	—		X							X				P.S
3	17					X	—		X								X			C.P.S
4	50					X	—		X							X				C.P.S
5	34					X	—		X							X				C.P.G

Randy McBride, Oil Geomorphologist

COMMENTS

CR-3-A is dominated by very light oiling (oil marks at MHW w/ pine needles) or no oiling. The oil marks are located predominately along the upper intertidal zone and are characterized by a dark brown coat (<1 mm thick) that are patchy (10-49%) or sporadic (<10%) in distribution. Due to the combination of very light oiling and high wave exposure of Knight Island passage, no cleanup is recommended. No subsurface oil found.

Page 1 of

REVIEWED

DATE 4.11.90

ZZOF ZF

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / CR-3 SUBDIVISION: A (^{ENTIRE}_{SEGMENT}) DATE 4/4/90

USCG
NAME GARY OTT SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

ADEC
NAME MICHAEL J. EBEL SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

CR-3-A: This segment had patches, splashes and stains near the high water mark in the MTF. This intermittent oiling was mostly < 1 mm thick and degraded to a dark brown coat. With the high exposure to this shoreline no treatment is recommended.

LAND MANAGER - U.S.D.A. FOREST SERVICE
NAME DAVID J. BREITINGER SIGNATURE [Signature] 4/4/90

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/79

Segment ST / CR-3 Subdivision A Date (mo / day / yr) 4/4/90Time (24 hr) 1855-2010 Biologist SHARMAN(A) Substrate type and % of ~~segment~~ SUBDIV. ^{+ granules}
(1) Bedrock 30 (2) Boulder 15 (3) Cobble 35 (4) Pebble 10 (5) Sand 10 (6) Silt (B) Overall % cover of biota (% of ~~segment~~ SUBDIV.): Dense Moderate X Low

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X) , new settlement (3)

Photographs:
Roll No. ST-12-3Frames 35, 36

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

MYTILUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

GASTROPODS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

FUCUS

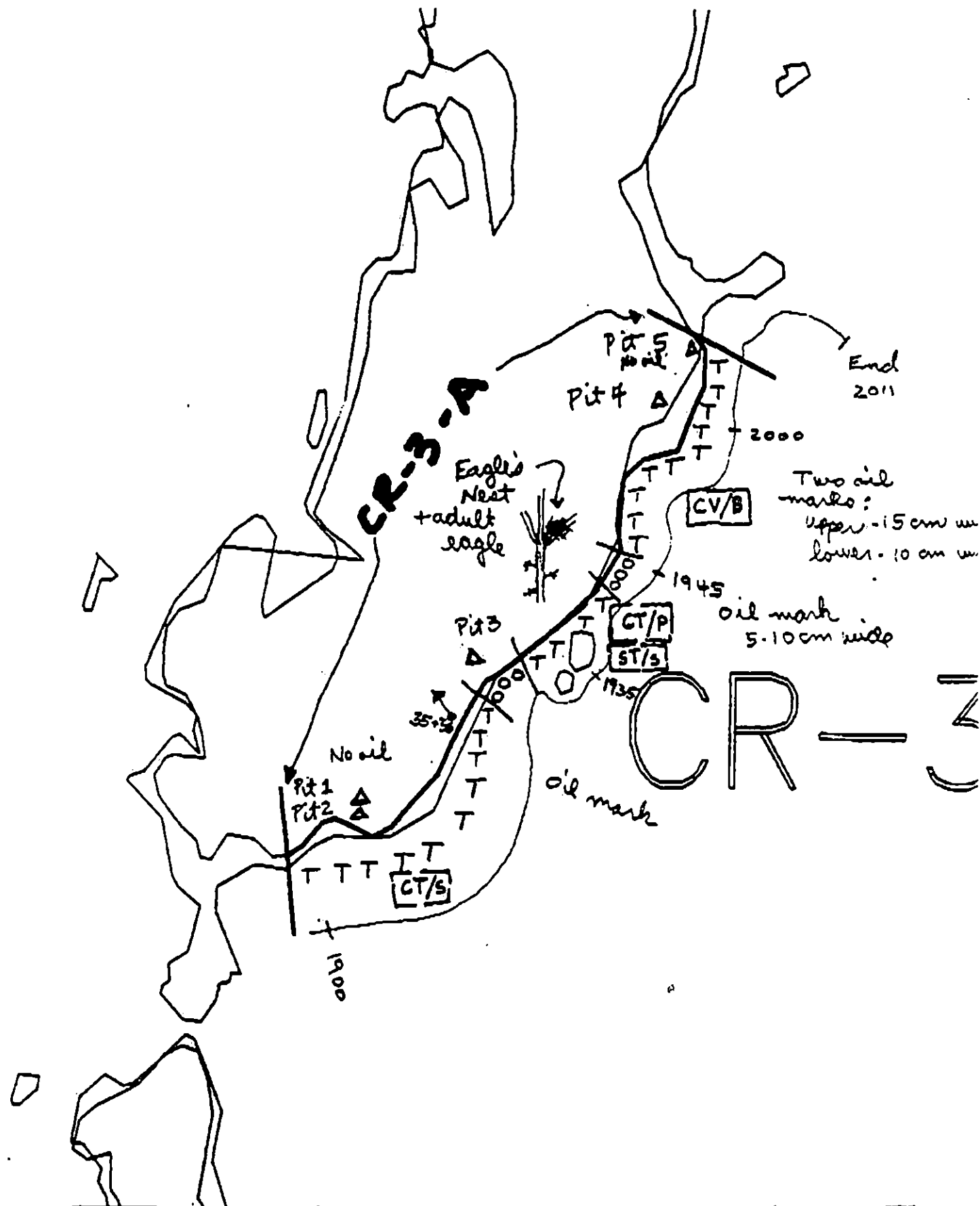
Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments: 1 sea otter, 1 pair herring gulls, 1 adult eagle. Lots of drift from yesterday's storm, unsorted. Did not observe LTB. Thin tan band 20cm wide on vertical bedrock visible in LTB - approx. 50% farwade mortality vs. 20% mortality outside of band. No settlement (post-spill) within tan band. Otherwise, apparently normal & healthy intertidal community.

Ecological Considerations:

The Priorities and Windows table assigns an environmental priority of 1 to this segment, primarily because of the area's use as a Main Bay Hatching release site (code 1E, constraint 1,2) + probably mostly because of its importance to pinniped pupping and molting (codes 3N,P,O,Q; constraint 5). For each, a treatment priority of 1 is indicated. This segment is very similar to CR-4 in that the exposed bedrock points and the nearshore rock inlets offer excellent habitat for sea lion pupping and molting. These activities are extremely susceptible to disruption by human disturbance.



XXXX Wide
 /// Medium
 --- Narrow
 TTTT Very Light
 0000 No Oil

CR-3

ADEC Segment Length: 843m



Map Key: PWS-64
 Name: Randy McBride
 Date: 4/4/90
 Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ CR-04 SUBDIVISION A (1 OF 3) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1E Main Bay Hatchery release (4/20 to 5/10)

1L Set net sites (6/11 to 7/25)

3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)

30,3Q Harbor seal and sea lion molting (8/15 to 9/15)

6U Recreation: Tent sites (6/1 to 9/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

SHPO SIGNATURE: Paula E. Hume DATE: 4/28/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 1095 m: No Oil 0 m
Subsurface Oil Observed: Yes _____ No ☒ Maximum Depth _____

RECOMMENDATIONS:

X No Treatment Recommended

Treatment Recommended

Manual Pickup

Bioremediation

Tarmat: Breakup

Removal

Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

Spot Washing: Wands

Beach Cleaner

 Other (see comments)

COMMENTS: _____

TAG COMMENTS:_____

TAG APPROVAL DATE: 4/26/90.

ADEC John Ascher 10/4/83

EXXON *ANY TAZ* *Real*

NOAA Gary Petrac

USCG

FOSC: DATE: 3-9-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A	Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B	Salmon stream mouth - spawning (7/10 to 8/31) No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
1C	Salmon fry nursery area (4/31 to 7/31)
1D	Esther Hatchery release (4/15 to 6/1)
1E	Main Bay Hatchery release (4/20 to 5/10)
1F	Sawmill Bay Hatchery release (4/15 to 6/1)
1G	Cannery Creek Hatchery release (4/21 to 6/1)
1H	Remote release site
1I	Gill net area (6/7 to 8/31)
1J	Purse seine area (7/20 to 9/30)
1K	Purse seine hook-off (7/20 to 9/30)
1L	Set net sites (5/11 to 7/25) For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
2M	Herring spawning (4/1 to 6/15) Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
3N, 3P 3O, 3Q	Harbor seal and sea lion pupping (5/15 to 7/1) Harbor seal and sea lion molting (6/15 to 9/15) Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
5R	Seabird colony (5/1 to 9/1) Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
5S	Shorebird/waterfowl concentration (4/1 to 5/15) Restrict all activity to essential minimum, especially air traffic.
5T	All Bald Eagle nests (3/1 to 6/1) Active Bald Eagle nests (3/1 to 9/1) Restrict air traffic to essential minimum. No personnel within 400m. 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
6U	Recreation --- First sites (5/1 to 9/15)
6V	Anchorage (5/1 to 9/15)
6W	Forest Service cabins (5/1 to 9/15)
6X	Lodge (5/1 to 9/15)
6Y	Special use destination
7Z	Subsistence area: Salmon harvesting (5/1 to 9/30)
7HH	Finfish harvesting
7H	Deer harvesting (8/15 to 2/28)
7JJ	Invertebrate harvesting For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / CR-4 SUBDIVISION: A (B & C SEPARATE) DATE 4/4/90

USCG

NAME GARY OTT

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME MICHAEL J. EBEL

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

CR-4-A

A discontinuous coat located in the UT# of this highly exposed shoreline was found to be ≤ 1 mm in 95% of the subdivision where the contamination existed. Very occasional spots were found with weathered brown tar in cracks and interstices some > 1 cm; most ≤ 3 mm. The shoreline is being well washed.

LAND MANAGER - U.S.D.A. FOREST SERVICE

NAME DON J. BREITINGER

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

14 OF 27

SHORELINE OILING SUMMARY

REVISION NO. 04/84

OG Ready MC Bird 0000 NOAA Gary Ott SEGMENT ST/ CR-4
 BIO Lewis Sht m n LAND REP U.S. ES. Don Brelinger SUBDIVISION A
 EXXON Lewis Herbert ADEC Michael Bbel TIME 15:17 to 17:40
 TEAM NO.: 12 TIDE LEVEL: 2' to 1.8' DATE 4/4/90
 EST. SUBDIVISION LENGTH: 973 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☒ Snow 4/2°
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: South to North
 SURFACE SEDIMENTS: R 35 % B 10 % C 30 % P 10 % G 10 % S 5 % M 0 % V 0 %
 SLOPE: Long 20 % Hang 50 % Vert 30 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 973 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	E	S	P	R	1	2	3	4	W	M	N	U
ASPHALT PAVEMENT												
POOLED				X								X
COVER				X								X
COAT	X	X	X	X	X	X	X	X	X	X	X	X
STAIN												
MOUSSE												
PATTIES												
TARBALLS												
FILM				X	X						X	
NO OIL												

PAVEMENT: H F S 0 sq. m by 0 cPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash	X		
Debris			

DEBRIS COLLECTED
☒ YES ☐ NOTYPE Absorbent
boom
#BAGS 0

Photographs:

Roll No. ST-12-3Frames 16-27

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm-oz)	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		NO	UC	1	2	3	4	W	M	N	U		
4	52					X	---	X						X					P, G, S
1	45					X	---	X						X					P, G, S
2	40					X	---	X							X				G, S
3	30					X	---	X							X				G, S
5	45					X	---	X						X					C, R, G, S
6	46					X	---	X						X					C, P

COMMENTS

CR-4-A was ^{is} dominated by oil marks located along the upper intertidal zone. The oil marks are characterized by a coat (<1mm thick) which have ~~be~~ broken, patchy, and sporadic distributions. Overall, CR-4-A is exposed to high wave energy as a result of the amount of fetch across Knight Island passage. (continued on next page).

Page 1 of 2

REVIEWED

DLC

DATE 4/8/90

8 of 27

SHORELINE OILING SUMMARY (PAGE 2 of 2)

REVISION 03/23/88

SEGMENT ST/ CR-4 SUBDIVISION A

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UC	1/4"	1/2"	3/4"	1"	1 1/2"	2"	SU	M	E	U		
7	25					X	----		X									X			C, P, G, S
8	35					X	..		X								X				G, S
							.														
							.														
							.														
							.														
							.														
							.														
							.														
							.														
							.														
							.														
							.														
							.														
							.														

COMMENTS

Therefore, waves will continually wash this segment through the year.

Randy McBride
oil geomorphologist

REVIEWED

(21/25)

DATE



00 Ra - McBride

SEGMENT ST/ CR-4

SUBDIVISION A

DATE 4/4/90

CHECKLIST

- ☒ M Area
- ☒ Approx. Scale
- ☒ Seg/Sub Entry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ ECL H/W/L/V/L
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Photo Location(s)
- ☒ Photo Location(s)

LEGEND

- 1 Δ
- PT - No Subsurface Oil
- 2 Δ
- PT - Subsurface Oil
- CT/C
- Continuous Distribution
- CT/B
- Broken Distribution
- CT/P
- Patchy Distribution
- CT/S
- Splashed Distribution

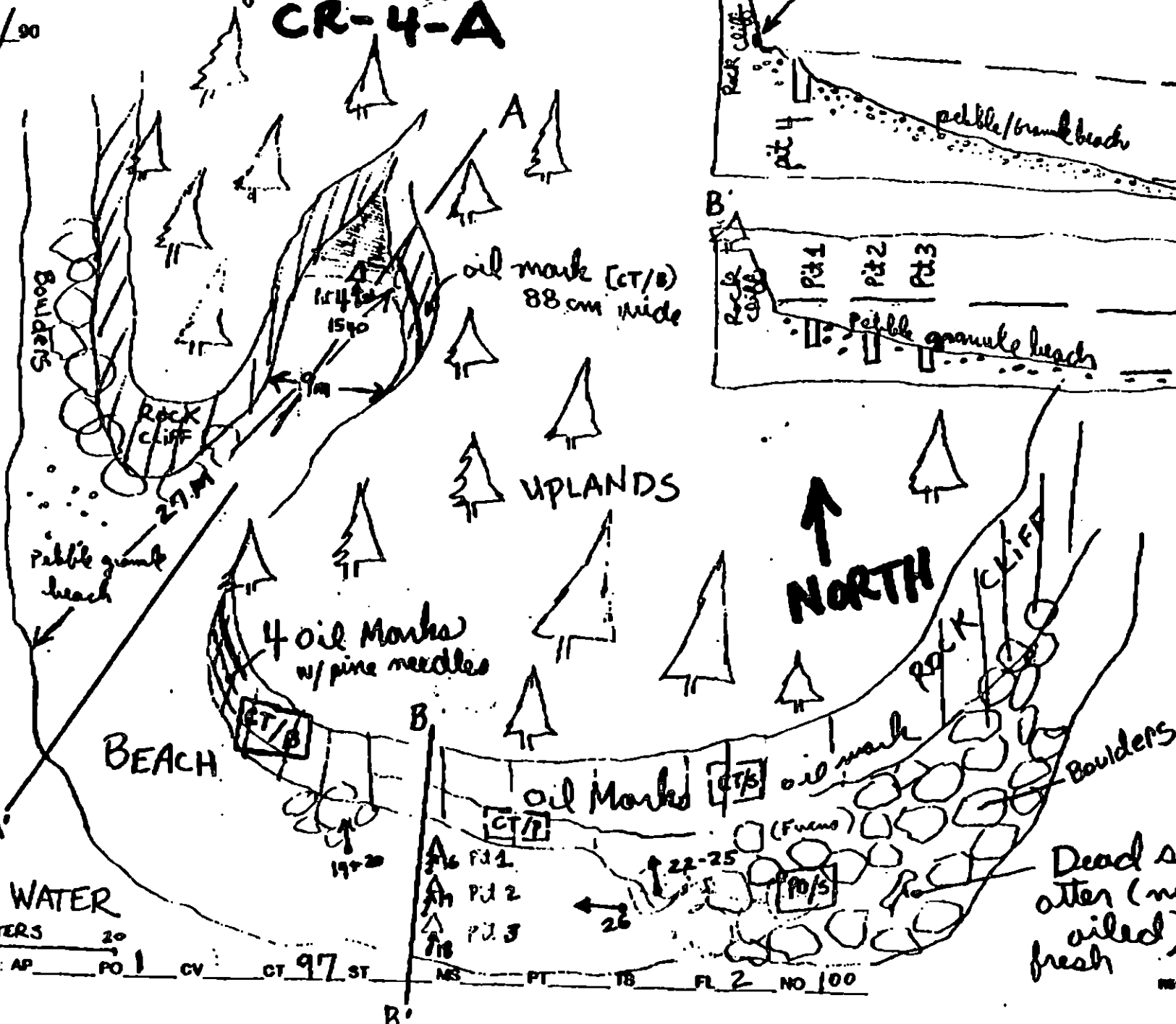
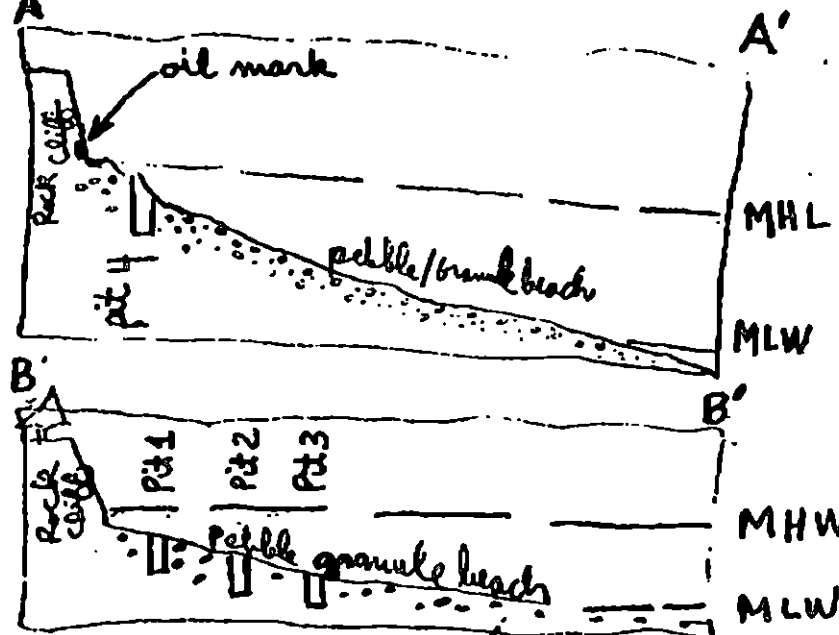
Oiled Vegetation

Photo location, direction, and number

Southwest end of
Crafton Island
CR-4-A

ETCH MAP A

PROFILES



Oil Character Length (m): AP PO 1 CV CT 97 ST MS PT TB FL 2 NO 100

05/000000000000

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / CA-4 Subdivision A Date (mo / day / yr) 4/4/90Time (24 hr) 1515-1740 Biologist SHARMANSUBDIV.(A) Substrate type and % of segment: (1) Bedrock 35 (2) Boulder 10 (3) Cobble 30 (4) Pebble 10 (5) Sand 15 (6) Silt 0 ^{+gravel}(B) Overall % cover of biota (% of segment): Dense 0 Moderate X Low 0SUBDIV.

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:

Roll No. ST-12-3Frames 16-27

BARNACLES

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

MYTILUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

GASTROPODS (NAUCELLA, LITTORINA, LIMPETS)

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

FUCUS

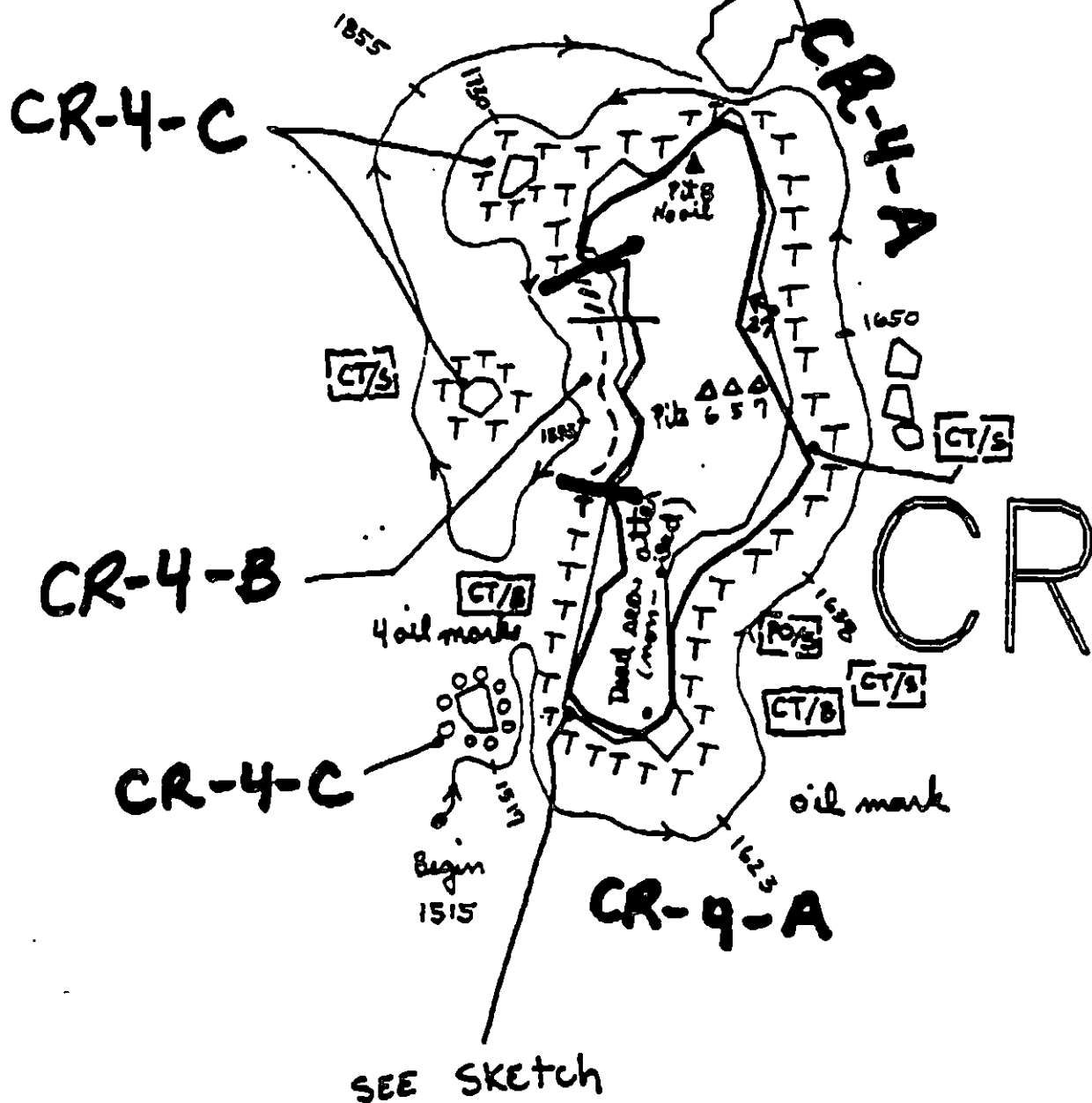
Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

Wildlife Observations/ General Comments: 2 cormorants, 4 pairs harbor seal, 1 glaucous-winged gull, 1 pair adult eagle. Rocks at the S. end support a very productive intertidal community, with locally dense barnacles and mussel patches. In the L.T.E. of the surveyed beach portion, mussels are holding the surface pebbles together. There is a UT weathered top land on the rock walls. I have not yet seen post-spill barnacle spat settled on any tarred surfaces. There are patches of previously-oiled Fucus within this band, most of which is not as healthy as other Fucus. Ecological Considerations: nearby, but much of which seems to be recovering (growing). See photos.

The Priorities and Windows table assigns this segment an environmentally ranked priority of 1, due to the area's use as a Main Bay Petchery release site (code 1E) and for pinniped pupping and molting activities (Codes 3N, O, P, Q). Constraints range from 1-5, with treatment priority 1-2. The rocky islets and points surrounding the "big island" of this segment are clearly of great value to pinnipeds for pupping + molting - this area must be protected from shoreline-treatment-type human intrusion during the critical period (essentially mid-May into September). The seals and sea lions have not yet arrived. We saw not a single individual during our 7 hours in the immediate area.

General Comments (cont.): In general, the intertidal community here appears to be normal and healthy except for areas within the discontinuous tar band at the MHW line. Fittoria are avoiding this surface, as are newly settling barnacle spat. Where Fucus extends that high locally, however, impacted plants seem to be largely recovering. We found one dead scud in the L.T.Z. among beach at the S.E. end of the island. No apparent oil, animal waste or adult dead within the past few days, no visible wounds, cause of death unknown. Where bedrock extends into the L.T.Z. (common), there are locally moderate to dense areas of Fucus and Rhodospira in the lower mid-intertidal zone. Tidepools common in L.T.Z. bedrock - no oil algae, and typical high diversity and productivity (Kittaria, Sargassum, Halimnion, algal turf spp., Anthopleura, etc. - several coralline algal spp. including crustacea forms such as Lithothamnion as well as branching articulated spp.). Locally in the L.T.Z. barnacle spat are in moderate densities. Lots of drift from yesterday's storm - unsorted. One river str. sent in the immediate supralittoral contained mussel fragments & large amphipods. I saw these beaches last summer, and am impressed with the amount of natural clearing that has taken place over the winter - particularly on the E. side.

Knight Island Passage



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

CR-4

ADEC Segment Length: 1332m



Map Key: PWS-85

Name: Randy McBride

Date: 4/4/90

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ CR-04 SUBDIVISION B (2 OF 3) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1E Main Bay Hatchery release (4/20 to 6/10)
1L Set net sites (6/11 to 7/25)
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
6U Recreation: Tent sites (6/1 to 9/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

SHPO SIGNATURE: Charles F. Hume

DATE: 4/29/90

OILING CATEGORIZATION:

Wide 0 m: Medium 76 m: Narrow 162 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 8 cm

RECOMMENDATIONS:

<u>X</u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u> </u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u> </u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u> </u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u> </u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> Removal	<u> </u> Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/26/90
ADEC JOHN BAUER
EXXON ANDY GEL
NOAA GARY PETER
USCG KENNETH KIANI

FOSC: WJL

DATE: 5-9-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A	Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B	Salmon stream mouth - spawning (7/10 to 8/31) No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
1C	Salmon fry nursery area (4/31 to 7/31)
1D	Esther Hatchery release (4/15 to 6/1)
1E	Main Bay Hatchery release (4/20 to 5/10)
1F	Sawmill Bay Hatchery release (4/15 to 6/1)
1G	Cannery Creek Hatchery release (4/21 to 6/1)
1H	Remote release site
1I	Gill net area (5/7 to 8/31)
1J	Purse seine area (7/20 to 9/30)
1K	Purse seine hook-off (7/20 to 9/30)
1L	Set net area (8/11 to 7/20) For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
2M	Herring spawning (4/1 to 6/15) Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
3A, 3P 3Q, 3R	Harbor seal and sea lion pupping (5/15 to 7/1) Harbor seal and sea lion mating (5/15 to 9/15) Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
5R	Seabird colony (5/1 to 9/1) Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
5S	Shorebird/waterfowl concentration (4/1 to 5/15) Restrict all activity to essential minimum, especially air traffic.
5T	All Bald Eagle nests (3/1 to 6/1) Active Bald Eagle nests (3/1 to 9/1) Restrict air traffic to essential minimum. No personnel within 400m. 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
6U	Remediation site (5/1 to 9/15)
6V	Anchorage (5/1 to 9/15)
6W	Forest Service cabins (5/1 to 9/15)
6X	Lodge (5/1 to 9/15)
6Y	Special use destination
7Z	Subsistence area: Salmon harvesting (5/1 to 9/30)
7HH	Finfish harvesting
7H	Deer harvesting (8/15 to 2/28)
7JJ	Invertebrate harvesting For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / CR-4 SUBDIVISION: B (A & C SEPARATE) DATE 4/4/90

USCG
NAME GARY OTT SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC
NAME MICHAEL J. EBEL SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

CR-4-B: A small area of asphalt (loose to friable) was found along the North bedrock periphery here. Due to the small area we chopped up the patches and dug out the small subsurface extent. The remainder of the segment had V.L. occasional covers, and coats. We viewed a light rainwater sheen in the lower MTZ but no subsurface oil was present (UL 0.1m). Overall we performed the manual treatment for this area — nothing further recommended.

LAND MANAGER - U.S.D.A. FOREST SERVICE

NAME DON J. BREITINGER SIGNATURE [Signature] 4/4/90

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY

REVISION NO. 02/25/90

OG RANDY McBRIDE ^{NORTH} USCG GARY OTT SEGMENT ST/ CR-4
 BIO LEWIS SHARMAN LAND REP USES DON BREITINGER SUBDIVISION B
 EXXON LEONARD HENST ADEC MIKE EDEL TIME 17:41 to 18:42
 TEAM NO.: 12 TIDE LEVEL: +2 to +3.25 DATE 4/4/90
 EST. SUBDIVISION LENGTH: 202 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow 42° F
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: NORTH to SOUTH
 SURFACE SEDIMENTS: R 25 % B 15 % C 35 % P 20 % G 5 % S % M % V %
 SLOPE: Long 30 % Hang 45 % Vert 25 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W m M 65 m N 137 m V m NO m

SURFACE OIL

CHARACTER	DISTRIBUTION					OIL / FILM COLOR					IMPACTED ZONES				
	N	E	S	W	DL	BU	UC				BU	UC			
ASPHALT PAVEMENT			X	+	DL						X	O			
POOLED			X								X				
COVER			X								X				
COAT			X	+	DL						X	O			
STAIN															
MOUSSE															
PATTIES															
TARBALLS															
FILM				OK		O					X	O			
NO OIL											X				

PAVEMENT: H 15 sq m by 4 cmPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	X		
Vegetation			
Trash	X		
Debris	DL		

DEBRIS COLLECTED
☒ YES ☐ NOTYPE plastic bottle
#BAGS absorbent foam

Photographs:

Roll No. 57-12-3Frames 28-33

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-DM)	BELOW	OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO			BU	UC				BU	UC				
1	23			X	O		5-8	X						X					BCP
2	25					X	—	X						X					BCP
3	33					X	—	X						X					GS
4	17					X	—	X						X					GS
5	15					X	CANNOT DETERMINE	X				X		X					CPG

COMMENTS CR-4-B is characterized by a pocket beach w/ lots of jagged bedrock cropping out in the upper ^{intertidal} and supratidal zone. The medium oiling is found predominately along the northern portion of the pocket beach. The medium oiling is characterized by asphalt pavement, pooled, cover, and coat oiling that is patchy or splashed in distribution. The area is exposed to low wave energy but we broke up the oiled area using shovels so the oil could be washed by tidal processes.

Page 1 of 2
 REVIEWED DL DATE 4/8/90
7.7/25

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / CR-4 Subdivision B Date (mo / day / yr) 4/4/90

Time (24 hr) 1740-1830 Biologist SHARMAN

(A) Substrate type and % of segments:
 (1) Bedrock 25 (2) Boulder 15 (3) Cobble 35 (4) Pebble 20 (5) Sand 5 (6) Silt 0

(B) Overall % cover of biota (% of segment): Dense 0 Moderate X Low 0

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (O)
 Photographs: Roll No. ST-12-3

Frames 28-33

BARNACLES

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

MYTILUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

GASTROPODS (NACELLA, LITTORINA, LIMPETS)

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

FUCUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

Wildlife Observations/ General Comments: 1 pair Harlequin ducks, 3 pairs surf scoters, 1 crow, 1 screech owl in UTE, see other gulls, 1 pair Steller's jays. 1-m ter band (thicker than normal) in UTE - rock walls & boulders. No barnacle settlement on ter surface, no littorinids, 75% barnacle mortality (ca. 10-20% elsewhere). In lower UTE, locally moderate Rhodospira cover along with Fucus (on cobble/pebble as well as larger grain size). Fucus growing on surface of pebbles are actually attached to subsurface cobble.

Ecological Considerations:

Please see this section for subdivision CR-4-A. Primary sensitivity codes are 1E, +3N, 0, P, 4. Particularly big is the critical sensitivity re. pinniped pooping and molting on the jetty rock promontories.

00 Randy McBride

SEGMENT ST/ CR-4

SUBDIVISION B

DATE 4, 4 90

CHECKLIST

- ☒ Area
- ☒ Approx. Scale
- ☒ Seg/Sub Entry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HW/LWL
- ☒ Profile Location(s)
- ☒ Photo Location(s)
- ☒ Photo Location(s)

LEGEND

1 Δ
PR - No Subsurface Oil

2 Δ
PR - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Spotted Distribution

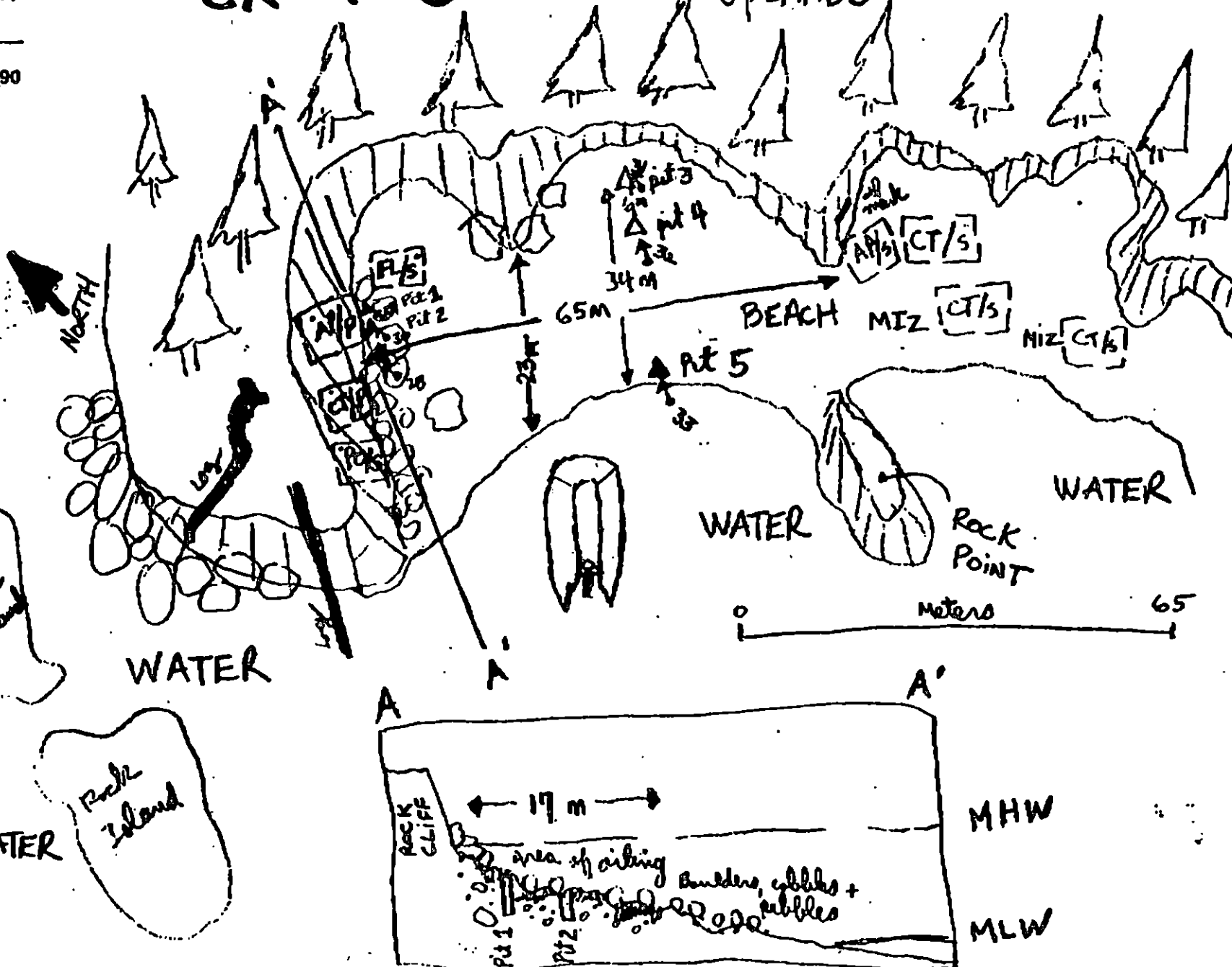
Off Vegetation

Photo location, direction, and number

CR-4-B

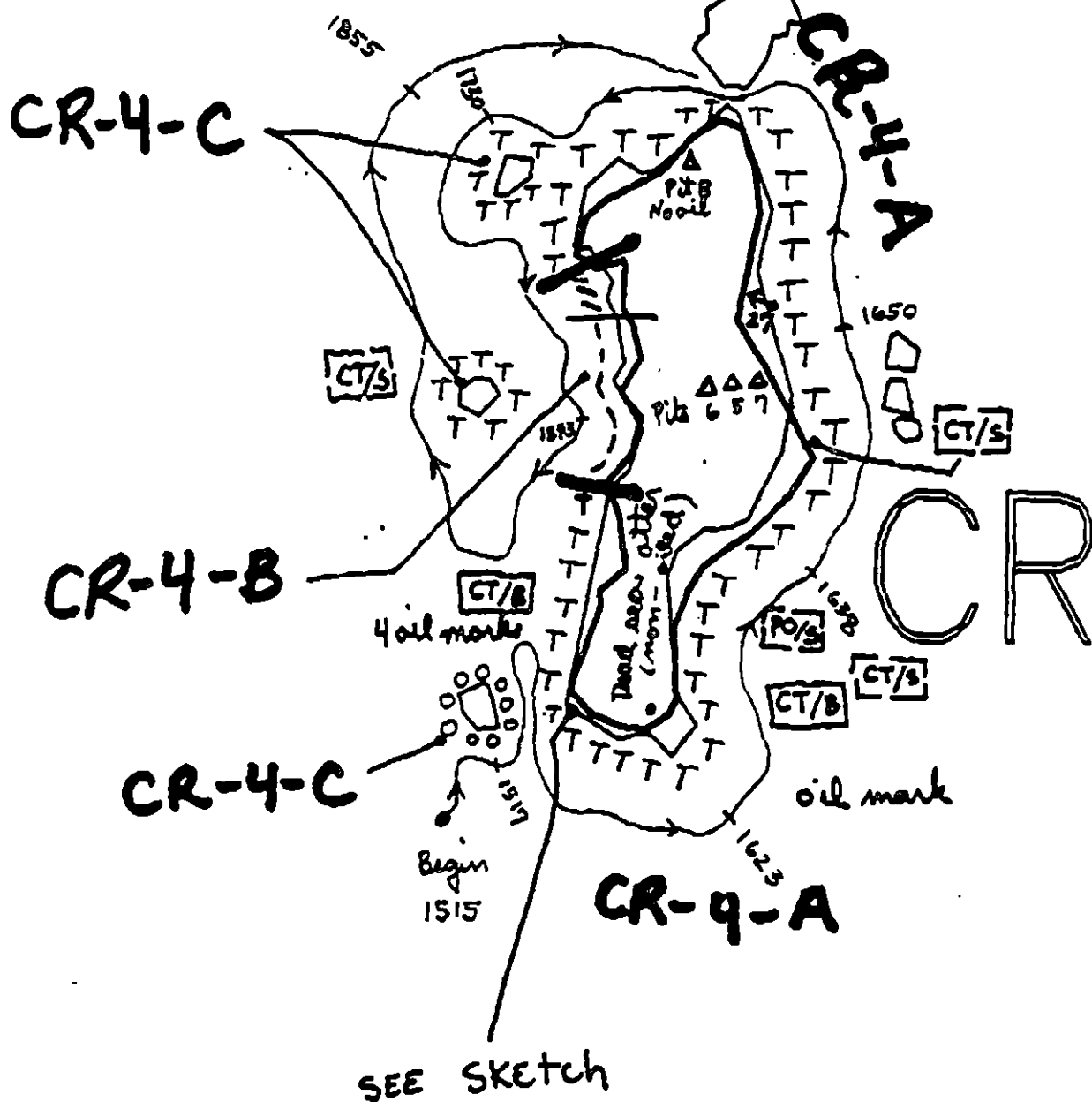
SKETCH MAP

UPLANDS



Oil Character (Length (m): AP 20 PO 10 CV 65 CT 65 ST MS PT TB FL NO

Knight Island Passage



XXXX Wide
 /// Medium
 --- Narrow
 TTTT Very Light
 OOOO No Oil

CR-4-B

ADEC Segment Length: 1332m

0 100 200 300
 METERS

Map Key: PWS-65

Name: Randy McBride

Date: 4/4/90

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ CR-04 SUBDIVISION C (3 OF 3) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1E Main Bay Hatchery release (4/20 to 5/10)
1L Set net sites (6/11 to 7/25)
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
6U Recreation: Tent sites (6/1 to 9/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

SHPO SIGNATURE: [Signature]

DATE: 4/28/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 208 m: No Oil 118 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

☒ No Treatment Recommended	☐ Snare/Absorbent Booms
☐ Treatment Recommended	☐ Oil Snares (pom poms)
☐ Manual Pickup	☐ Absorbents (pads, rolls, etc)
☐ Bioremediation	☐ Spot Washing: <u> </u> Wands
☐ Tarmat: ☐ Breakup	☐ Beach Cleaner
☐ Removal	☐ Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/26/90

ADEC JOHN BAUER
EXXON [Signature]
NOAA Gary Petrac
USCG KENNETH KEANE

FOSC: [Signature]

DATE: 5-9-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
1D Esther Hatchery release (4/15 to 6/1)
1E Main Bay Hatchery release (4/20 to 5/10)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (5/11 to 7/28)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to unopened intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- ~~24, 2P~~
~~28, 30~~ Harbor seal and sea lion pupping (5/15 to 7/1)
Harbor seal and sea lion molting (5/15 to 8/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 400m. 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: ~~Site sites (5/7 to 9/15)~~
6V Anchorages (5/1 to 9/15)
6W Forest Service cabins (6/1 to 9/15)
6X Lodge (5/1 to 9/15)
6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
7HH Finfish harvesting
7H Deer harvesting (8/15 to 2/28)
7JJ Invertebrate harvesting
For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / CR-4 SUBDIVISION: C (A & B SEPARATE) DATE 4/4/90

USCG
NAME GARY OTT SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC
NAME MICHAEL J. EBEL SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

CR-4-C The occasional coats and stems observed here were dried and weathered, mostly ≤ 1 mm thick, and found on $\leq 10\%$ of the shoreline. No treatment recommended.

LAND MANAGER - U.S.D.A. FOREST SERVICE

NAME DON J. BREITINGER SIGNATURE [Signature] 4/4/90

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

210F27

SHORELINE OILING SUMMARY

REVISION NO. 001000

OG Randy McBride ~~USFS~~ NOAA: Gary Ott SEGMENT ST/ CR-4
BIO Lewis Sherman LAND REP/ USFS: Don Bretinger SUBDIVISION C
EXXON Leonard Herbst ADEC Mike Ebel TIME 18:45 to 18:58
TEAM NO.: 12 TIDE LEVEL: 3.75' to 3.9' DATE 4/14/90
EST. SUBDIVISION LENGTH: 221 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow 12° E
UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: South to North
SURFACE SEDIMENTS: R 90 % B 5 % C 5 % P 0 % G 0 % S 0 % M 0 % V 0 %
SLOPE: Lang 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 221 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	A	B	P	R	1	2	3	4	S	M	N	U
ASPHALT PAVEMENT												
POOLED												
COVER												
COAT					X	X	X	X		X	X	
STAIN					X	X	X	X		X	X	
MOUSSE												
PATTIES												
TARBALLS												
FILM												
NO OIL										X		X

PAVEMENT: H F S 0 sq. m by 0 cm

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

Roll No. ST-12-3

Frames 35-36

SUBSURFACE OIL - No pits - Predominately bedrock

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OE	NO		DO	NO	1	2	3	4	S	M	N	U		

COMMENTS

CR-4-C is dominated by very light and no oiling. The very light oiling is characterized by a coat (<1 mm thick) that is sporadic or occurs in splashes over <10% of the oiled area. This oil is dried and appears to pose no environmental threat.

Page 1 of 1

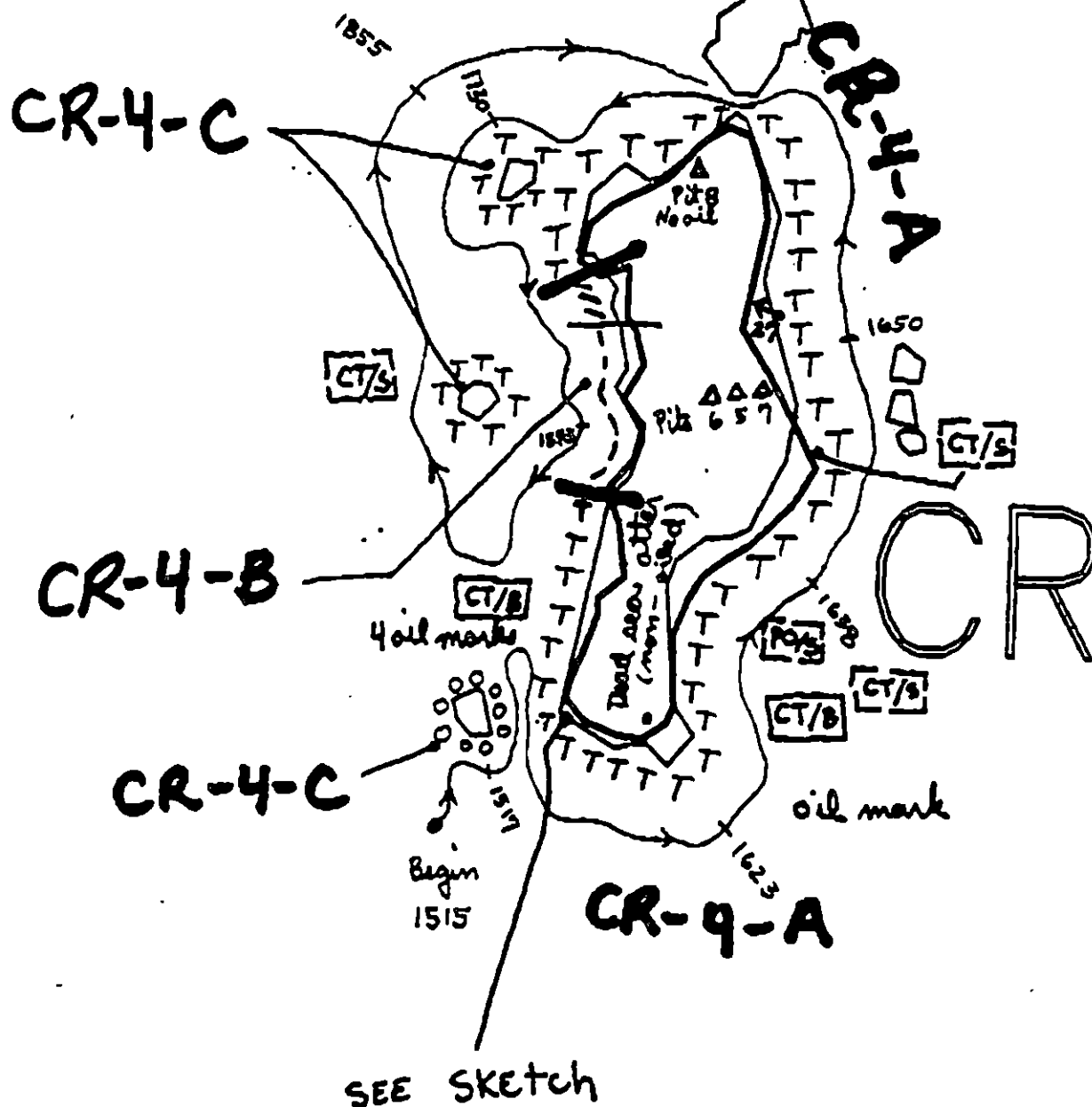
REVIEWED

DATE

2/25

Randy McBride Oil geomorphologist RCF

Knight Island Passage



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

CR-4

ADEC Segment Length: 1332m



Map Key: PWS-65

Name: Randy McBride

Date: 4/4/90

Date Entered:

SHORELINE ECOLOGICAL SUMMARY

REVISION: 10/12

Segment ST / CR-4 Subdivision C Date (mo / day / yr) 7/7/90

Time (24 hr) 1840-1855 Biologist SHARMA

(A) Substrate type and % of segment: SUBDIV.
(1) Bedrock 90 (2) Boulder 5 (3) Cobble 3 (4) Pebble 1 (5) Sand 1 (6) Silt 1

(B) Overall % cover of biota (% of segment): Dense Moderate X Low

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs: Roll No. ST-12-3

Frames 34

BARNACLES

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

MYTILUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

GASTROPODS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

FUCUS

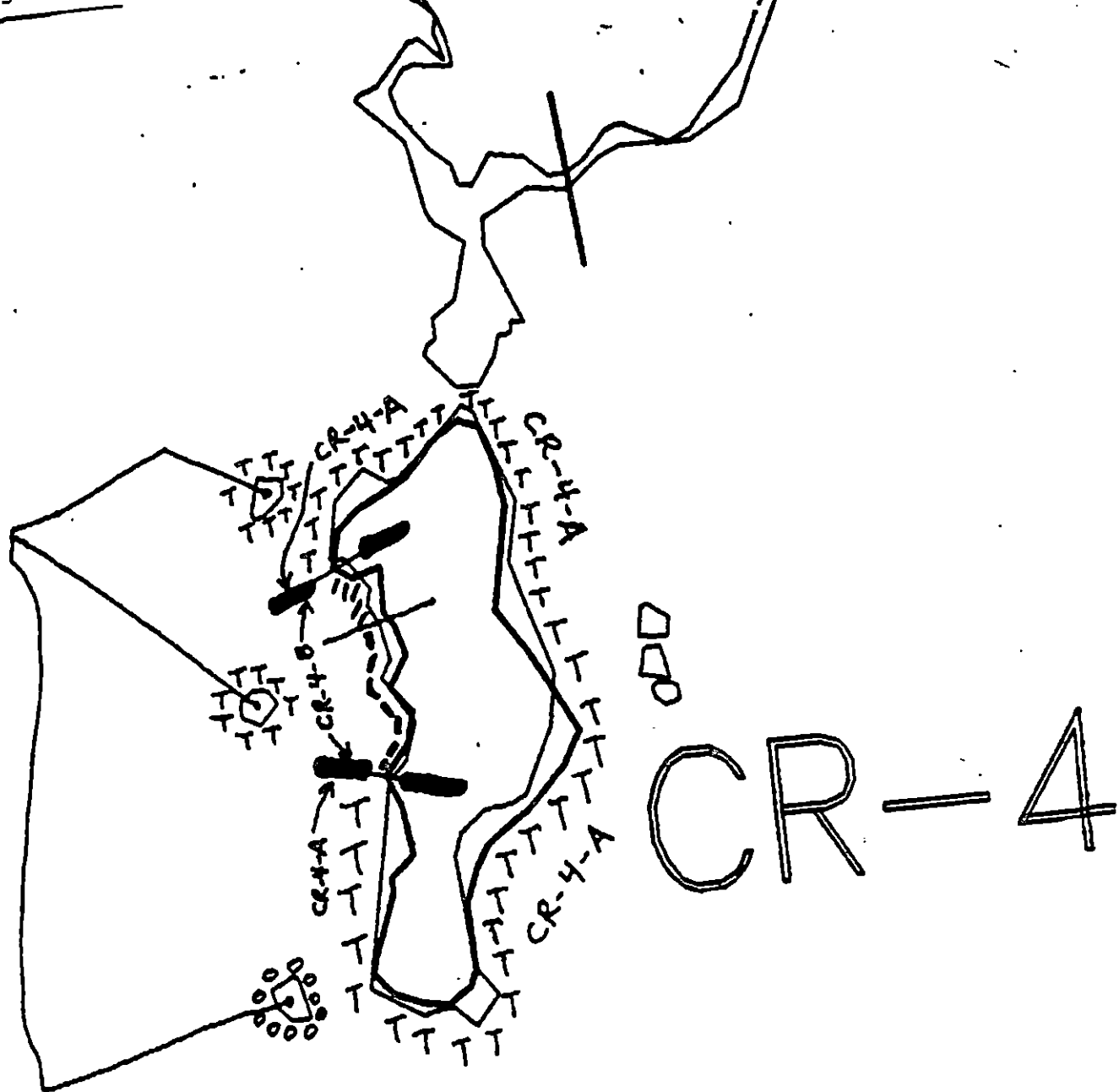
Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

Wildlife Observations/ General Comments: 1 sea otter, 2 pr. *Hydrobia* snails, 1 adult eagle, 1 crow. Tidal zone is mostly bedrock, generally smooth except for discontinuous isolated weathered rock patches usually on or near top in MTD at highest elevations. Barnacles and *Fucus* recruitment locally moderate in MTD. Did not get a very good look at L.T.s. Mostly moderate growth of *Rhodospira* and *Sargassum* in MTD. Intertidal community appears

Ecological Considerations: normal + healthy, given annual scouring by pinniped herbivores.

Please see this section for subdivision C4-4-A. Primary sensitivity codes are 1E, + 3W, 0, P, Q. Particularly low is the critical sensitivity re. pinniped pupping and molting. This is the subdivision for those sensitivities because this subdivision is made up of the tracks nearshore + offshore rock islets + pinnacles surrounding the main CR-4 islet. Pinnipeds have not yet arrived - saw none.

CR-4-C



XXXX Wide
//// Medium
--- Narrow
TTTT Very Light
0000 No Oil

CR-4

ADEC Segment Length: 1332m



Map Key: PWS-85
Name: Randy McBride
Date: 4/4/90
Date Entered:

(25/25)

SHORELINE EVALUATION

SEGMENT ST/ CR-05 SUBDIVISION A (1 OF 5) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1E Main Bay Hatchery release (4/20 to 5/10)
1L Set net sites (6/11 to 7/25)
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
6Y Recreation: Special use destination
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Do not trample, disturb, or bioremediate unoiled biota.

SHPO SIGNATURE: Charles J. Jones DATE: 4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 388 m: Narrow 89 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 24 cm

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u>X</u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u>X</u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u>X</u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u> </u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> Removal	<u> </u> Other (see comments)

COMMENTS: Recommend bioremediation of pocket beach indicated on sketch map. Work should be conducted between 7/2 and 8/14 due to above listed constraints.

MANUAL PICKUP OF SMALL PATCHES OF POOLED OIL/ASPHALT INDICATED ON SKETCH PRIOR TO B.O.

TAG COMMENTS: _____

TAG APPROVAL DATE: 4/24/90
ADEC ART WEINER
EXXON ANDY GALT
NOAA Joseph Talbot
USCG M. J. HALL

FOSC: DATE: 5-3-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
 1D Esther Hatchery release (4/15 to 6/1)
 1E Main Bay Hatchery release (4/20 to 5/10)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 1I Gill net area (6/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (6/11 to 7/25)
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
 Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (6/1 to 9/15)
 6V Anchorages (6/1 to 9/15)
 6W Forest Service cabins (6/1 to 9/15)
 6X Lodge (6/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7HH Finfish harvesting
 7H Deer harvesting (8/15 to 2/28)
 7JJ Invertebrate harvesting
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

DRAFT

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ CR5 SUBDIVISION: A DATE 4/8/90

USCG

NAME GARY OTT

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

OIL OBSERVED AT THIS LOCATION IS STABLE.

ADEC

NAME MICHAEL J. EBEL

SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

**A* *clt patches were broken up* *Two areas warrant comment on this subdivision both have accompanying CR-5-A: sketch maps. On the west end of this segment surface asphalt spots were found in a zone 14m² x 4cm thick. This same area was underlaid by 1/2 pooled oil (shiny to dark black) from 0-15cm into the substrate ~ 2m Wide x 7m L. A broken coat was found nearby on the bedrock. On the east end of the subdivision splashes of cover and patches along with a broken coat were found on the boulder talus and cliff face respectively. Peripheral splashes of cover and coat arced around the UTZ surrounding the beach face. Pit #15 showed dark brown oil mostly filling the pore spaces. This narrow strip across the UTZ had little extension up or down the side from 0-30 cm +. The narrow strip across the UTZ had little extension up or down the side from 0-30 cm +. This narrow strip across the UTZ had little extension up or down the side from 0-30 cm +.*

LAND MANAGER - USDA FOREST SERVICE

NAME DON BREITINGER

SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

*Recommend bio remediation on subdivision A.
(entire subdivision)*

SHORELINE OILING SUMMARY

REVISION NO. 05/22/91

OG RANDY MCBRIDE NOAA GARY OTT SEGMENT ST/ CR-5
 BIO LEWIS SHARMAN LAND REP KFS DON BREITINGER SUBDIVISION A
 EXXON LEONARD HERSTADEC MICHAEL EBEL TIME 17:00 to 19:45
 TEAM NO.: 12 TIDE LEVEL: +2.5' to +0.5' DATE 4/6/90
 EST. SUBDIVISION LENGTH: 572 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: NORTH to SOUTH
 SURFACE SEDIMENTS: R 25 % B 45 % C 20 % P 6 % G 3 % S 1 % M 0 % V 0 %
 SLOPE: Long 25 % Hang 50 % Vert 25 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 472 m N 100 m VL 0 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION					OIL / FILM COLOR					IMPACTED ZONES			
	R	B	P	C	NO	BU	UC	ST	OT	SL	BU	UC	ME	U
ASPHALT PAVEMENT														
POOLED														
COVER														
COAT														
STAIN														
MOUSSE														
PATTIES														
TARBALLS														
FILM														
NO OIL														

PAVEMENT: H (F)S 14 sq. m by 4 crPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED ☒ YES ☐ NOTYPE POM POM#BAGS 1

Photographs:

Roll No. ST-12-4Frames 25-37

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CH)	BELOW	OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO			BU	UC	ST	OT	SL	BU	UC	ME	U		
1	12						0-10	X						X					B,C,P,G,S PHOTO 25
2	20	X					0-15	X						X					B,C,P,G PHOTOS 28+29
3	14		X				5-12	?						X					B,C,P,G
4	10					X	- - -	X						X					B,C,P,G
5	20				X		.	X				X				X			C,P,G
6	37				X		.	.				X				X			C,P,G,S,S

COMMENTS CR-5-A is dominated by coats of oiling w/ continuous, patchy, and broken distributions. There is also some sporadic distribution of AP, PO, and CV. This area lies on the back or protected side of Crafton Island and is a ^{shaded} to a limited fetch. As a result, wave activity is restricted causing less wave washing available for natural oil cleaning.

SEGMENT ST/ CR5 SUBDIVISION A

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS						
		OP	OR	OL	OF	NO		UO	UC	SBL OR	DDL RW	GY SL	DMH TL	LBR	SU	U	M	U											
7	13	X					0 - 10																	B,C,P,G,S					
8	10					X	- - -		X									X							B,C,P,S				
9	12				X		5 - 10		X				•	X				X	•							C,P,G,S surface	oil		
10	15				X		5 - 12		X		X							X								B,C,P,S surface	oil		
11	15				X		5 - 12		X		X		•					X	•								B,C,P,S surface	oil	
12	17				X		5 - 15		X	X	•							X	•								B,C,P,S		
13	30				X		15 - 24		X					X						X								B,C,P,S	
14	10				X		5 - 8		X	X								X										B,C,P,S	
15	26	•	X				0 - 20	X						•	X			X	•									B,C,P,G,S	PHOTO 34
16	50	?			X		30 - 50	?							X			X	?									B,C,P,G,S	PHOTO 36
							.																						
							.																						
							.																						
							.																						

COMMENTS

REVIEWED _____ DATE _____

DATE 4 / 7 90

CHECKLIST

- ☒ N-Arrow
- ☒ Approx. Scale
- ☒ Sep/Sub Bndry
- ☒ Low Dial.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☒ Substrate Character
- ☒ Est. HWL/LWL
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Pit Location(s)
- ☒ Photo Location(s)

LEGEND

- Plt - No Subsurface Oil**

- 2 ▲
Pit - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

Oiled Vegetation

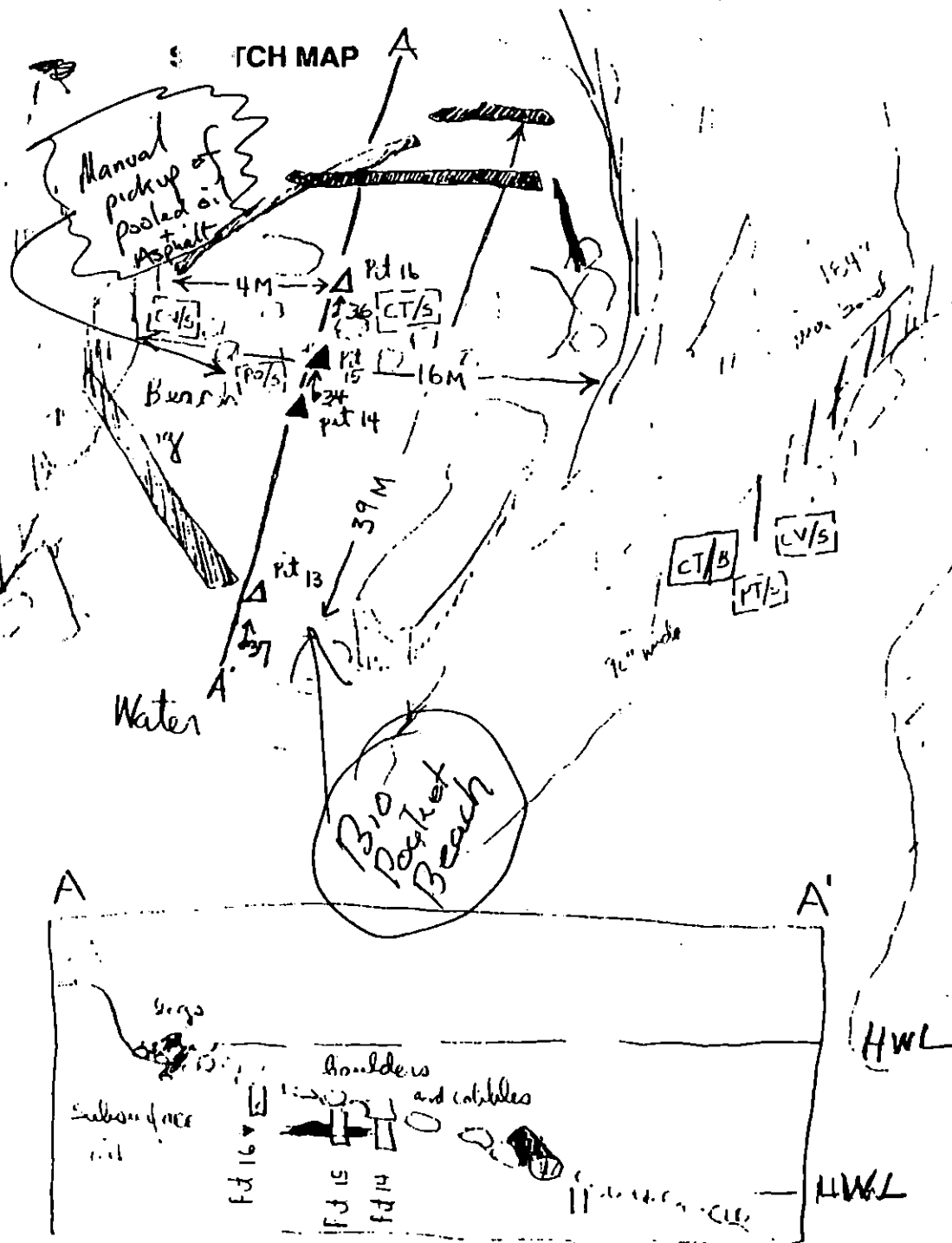
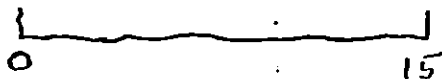
1 

Photo location, direction,
and number

0745 - 0815

NORTH

Meters



Oil Character Length (m): AP _____ PO 16 CV 16 CT 16 ST _____ MS _____ PT _____ TB _____ FL _____ NO _____

REVISION: 03/24/99

OG Row McBride
 SEGMENT ST/ CR-5
 SUBDIVISION A
 DATE 4 / 6 90

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Sep/Sub Bndry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HWL/LWL
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Pjt. Location(s)
- ☒ Photo Location(s)

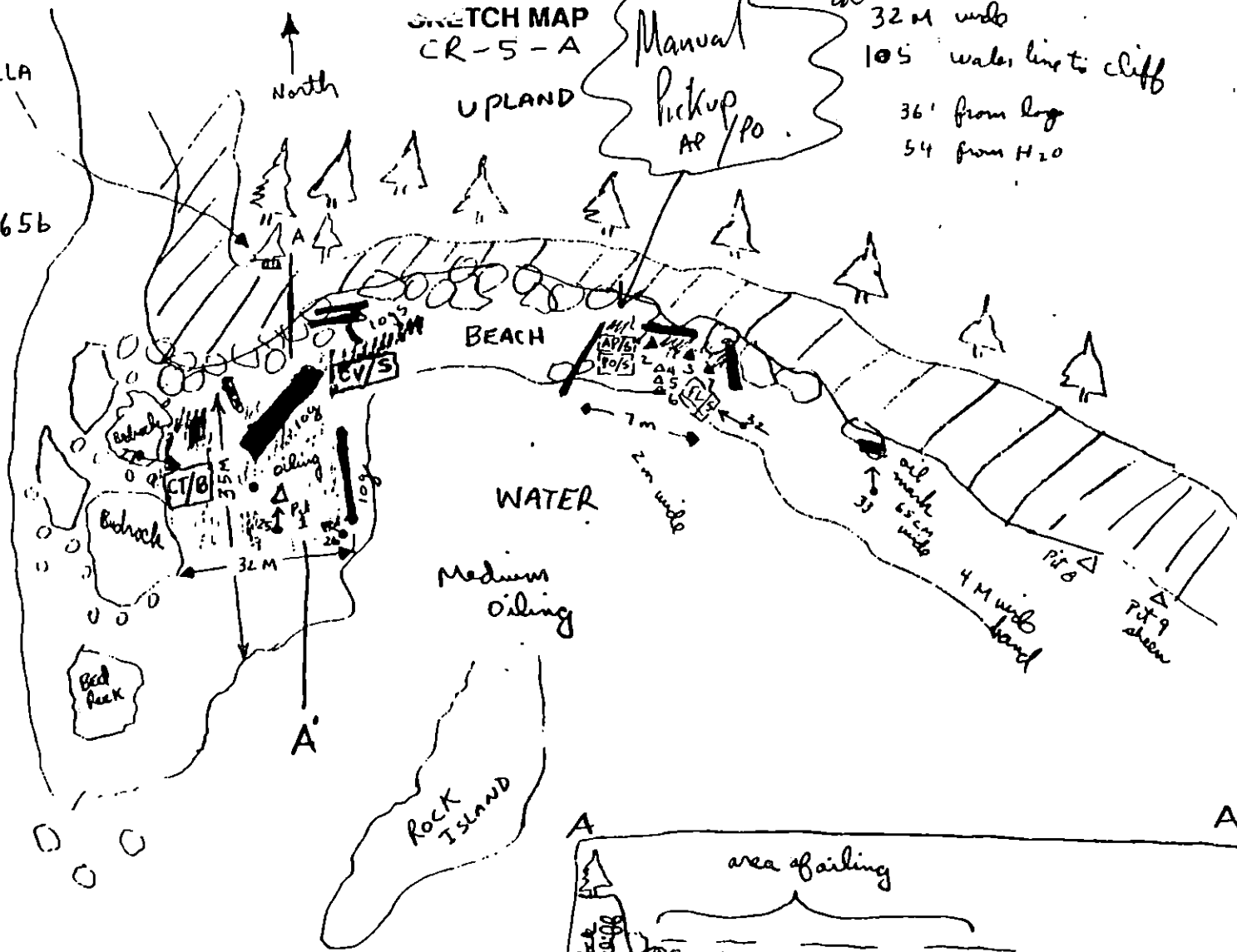
LEGEND

- 1 Δ
Pit - No Subsurface Oil
- 2 Δ
Pit - Subsurface Oil
- CT/C
Continuous Distribution
- CT/B
Broken Distribution
- CT/P
Patchy Distribution
- CT/S
Splashed Distribution
- Oiled Vegetation
- Photo location, direction, and number

258°
 7.2' west of Tag 65b

Water

Sign
 CERCLA



SKETCH MAP
 CR-5-A
 UPLAND

Manual
 Pickup
 AP/PO

32 m wide
 105' water line to cliff
 36' from log
 54' from H₂O

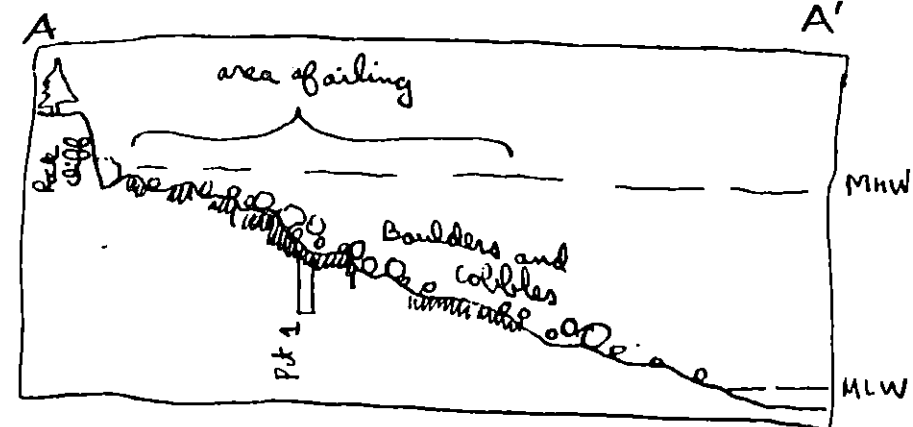
BEACH

WATER

Medium
 Oiling

Rock
 Island

0 30
 Meters



Oil Character Length (m): AP 7 PO 7 CV 38 CT 32 ST MS PT TB FL 7 NO 30

SHORELINE ECOLOGICAL SUMMARY (Page 1 of 2)

REVISION: 02/22/9

Segment ST / CR-5 Subdivision A Date (mo / day / yr) 4 / 6 / 90Time (24 hr) 1700-1745 Biologist SHARMAN(A) Substrate type and % of segments: SUBDIV.
(1) Bedrock 25 (2) Boulder 45 (3) Cobble 20 (4) Pebble 6 (5) Sand 4 (6) Silt ^{+ granules}(B) Overall % cover of biota (% of segment): Dense Moderate X Low
SUBDIV.

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:
Roll No. ST-12-4Frames 25, 26, 27

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

MYTILUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

GASTROPODS (ANCELLA, LITTORIANA, LYMAETA)

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

FUCUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments: 1 eagle, 2 magpies. 1 *Aurelia* jellyfish in the water - first I've seen this year. Normal and healthy intertidal zone except for UTE tide band where no organisms have recruited since the spill. There has been significant barnacle mortality within this band, and some mussel mortality as well (where mussels extended up to that zone). However, not only have 40-70% of the barnacles survived, but so have some mussels - some now covered with 2mm of wellhead tar. The LTE is particularly diverse and productive. (cont.)

Ecological Considerations:

According to the Priorities and Windows table, this segment is assigned an environmentally ranked priority of 1 (work window 7/25 - 8/15, possibly to be revised by USFWS). Ecological sensitivities include use as a Main Bay Hatchery release site (Code 1E) and as haulouts for pinniped pupping and molting (codes 3N, P, O, Q). Treatment priorities 1 and 2. All of Crafton Island (including all 5 subdivisions within this particular segment) is critical habitat (the exposed rocky points and headlands, and especially the nearshore/offshore tidal rocks and islets) for pinniped pupping and molting. These animals have notoriously low tolerance thresholds to human disturbance during those periods. Certainly, this should be very seriously considered if any shoreline treatment is contemplated. In addition there is an undervalued great amount of exceedingly diverse and productive low intertidal habitat (cont.)

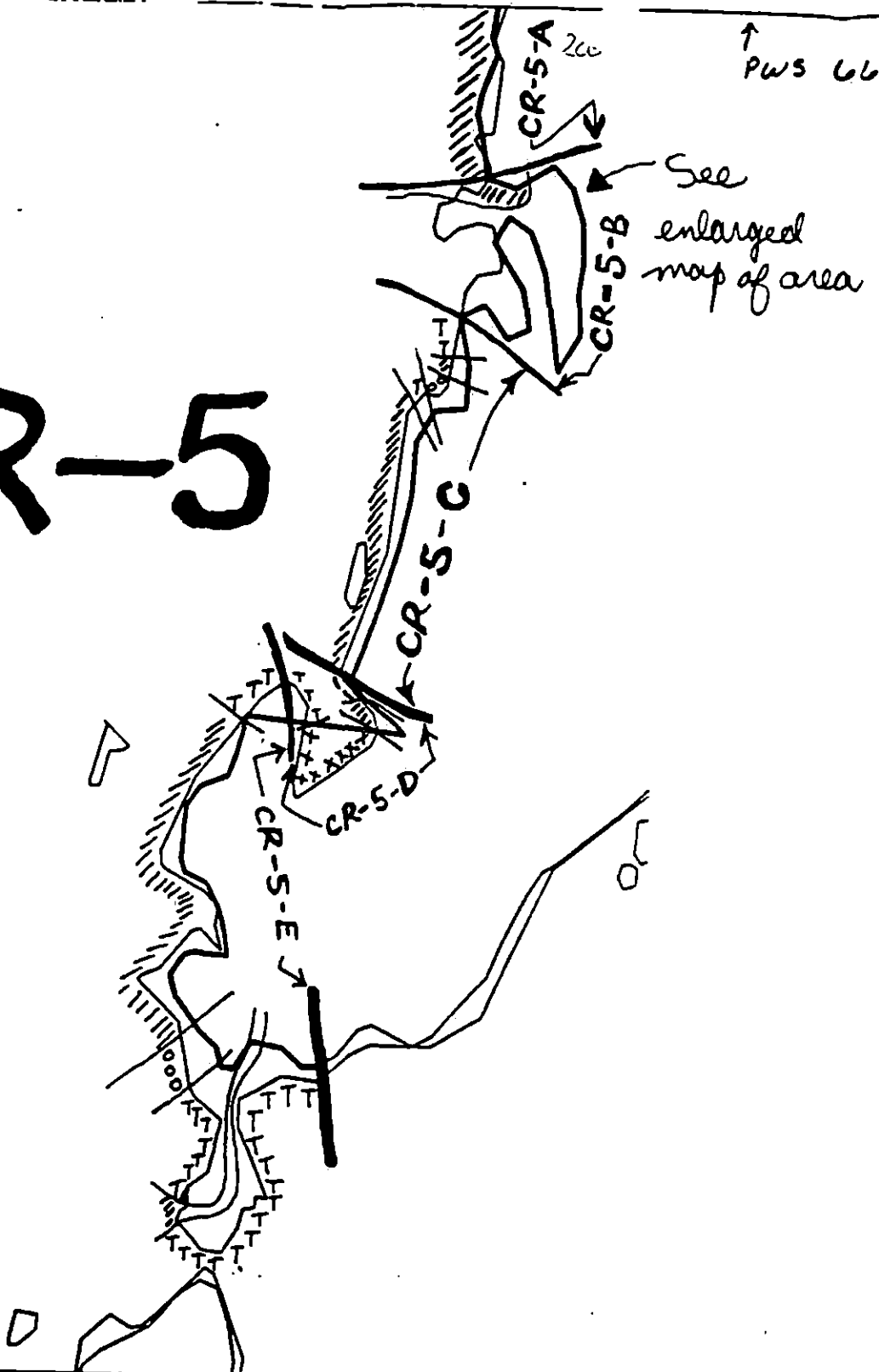
4/6/90

Shoreline Ecological Summary (cont.) Sharman
(Page 2 of 2)

General Comments (cont.): there is, in profusion, the classic collection of coralline algae, sea stars (Pycnopodia, Dermasterias, Leptasterias), Anthopleura, hydroids, bryozoans, snails, foliose red algae, turfs, etc.

Ecological Considerations (cont.): that is not (and apparently was not) oiled. These are some of the richest intertidal communities I have seen in all of the Prince William Sound spill area. Such communities are quite sensitive to trampling and other physical disturbance.

CR-5



CR-5

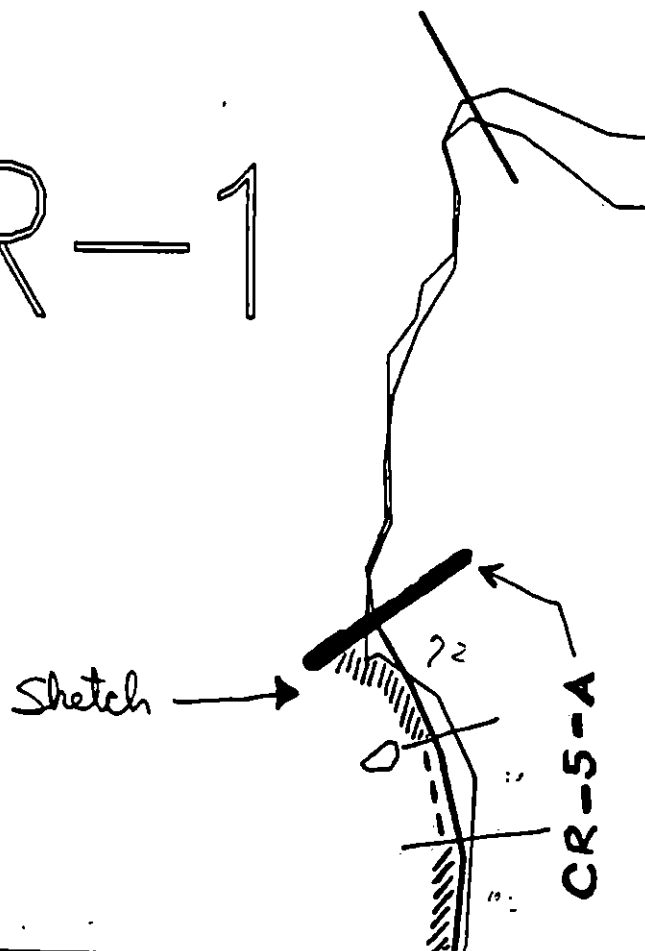
Map Key: PWS-66a

Name: Randy McBride

Date: 4/9/90

Date Entered:

CR-1



XXXX Wide

//// Medium

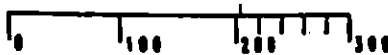
---- Narrow

TTTT Very Light

0000 No Oil

CR-5

ADEC Segment Length: 2390m



Map Key: PWS-66b

Name: Randy McBride

Date: 4/9/90

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT CR-5 SUBDIVISION A (1 of 5)

WORK WINDOW

Manual Pickup More Than 400m From Active Nest	OPEN
Manual Pickup Less Than 400m From Active Nest	CLOSED
Bioremediation More Than 400m From Active Nest	WORK 6/4 TO 6/7
Bioremediation Less Than 400m From Active Nest	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1E	Main Bay Hatchery Release	No constraint to manual pickup. Subdivision open to bioremediation 6/4 to 6/8 per verbal authorization from Larry Peltz/ADF&G to Tom Monihan/Exxon on 5/24/90. No constraint to bioremediation after 6/15.
1I	Gill Net Area	No constraint to manual pickup. Closed to bioremediation after 6/7.
1L	Set Net Sites	No constraint to manual pickup. Closed to bioremediation between 6/11 and 7/25.
3N,O,P,Q	Harbor Seal and Sea Lion Pupping and Molting Area	NO TIME CONSTRAINT. Authorized per memorandum dated 5/14/90 from Kathryn Frost/ADF&G to Mark Kuwada/ADF&G.
5T	Bald Eagle Nest	USFWS 6/1/90 map indicates an active nest in Segment CR-5. Area inside buffer zone closed to manual pickup and bioremediation. No constraint outside the buffer zone.

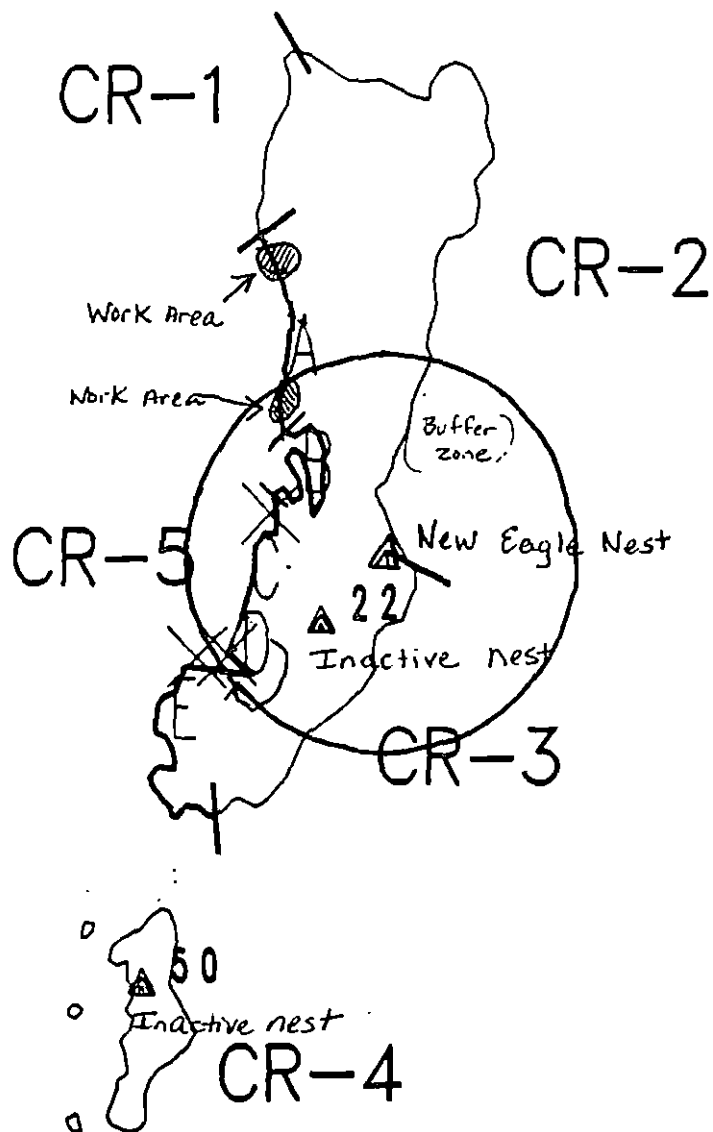
OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum. When set net sites are present restrict beach operations to essential minimum from 6/11 to 7/25. Do not apply bioremediation to specific areas where seals are observed to haulout. Do not chase or harass seals or sea lions, and do not approach pups under any circumstances. When working on or near haulouts, complete the job as quickly as possible with minimum personnel, equipment, noise and disturbance. Keep boats and personnel as far from actual haulouts as is practical to do the work specified. Minimize air traffic near haulouts, maintain elevation as is practical, and avoid repeated overflights of the same haulout areas. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from active nests. Do not trample, disturb or bioremediate unrolled blots.

TAG ADDENDUM DATE 6/04/90
ADEC Ray Menas
EXXON John Kelly
NOAA John Kelly
USCG John Kelly
FOSC John Kelly DATE 6/5/90

Prepared by: Andra Meyer Date: 6-3-90

4



Incorporates information from
USFWS 6/1/90 Bald Eagle
Active Nest map.

EB-1



Exxon Company, USA

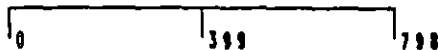
Map Key: PWS-CR-5

May 11, 1990



ECOLOGY MAP SEGMENT CR-5 SUBDIVISION A (1 of 5)

METERS



- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1309 feet

SHORELINE EVALUATION

SEGMENT ST/ CR-05 SUBDIVISION B (2 OF 5) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1E Main Bay Hatchery release (4/20 to 5/10)

1L Set net sites (6/11 to 7/25)

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)

30,3Q Harbor seal and sea lion molting (8/15 to 9/15)

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Do not trample, disturb, or bioremediate unoiled biota.

SHPO SIGNATURE: Charles J. Holmes DATE: 4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 258 m: Narrow 161 m: V.Light 208 m: No Oil 97 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 35+cm

RECOMMENDATIONS:

 No Treatment Recommended

<u>X</u>	<u>Treatment Recommended</u>
1	1
2	1
3	1
4	1
5	1
6	1
7	1
8	1
9	1
10	1
11	1
12	1
13	1
14	1
15	1
16	1
17	1
18	1
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97	1
98	1
99	1
100	1

X Manual Pickup

X Bioremediation

X Tarmat: Breakup

X Removal

Snare/Absorbent Booms

Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

Spot Washing: Wands

Beach Cleaner

 X Other (see comments)

COMMENTS: Recommend removal of tarmats and manual pick up of patties, and bioremediation with manual tilling/raking of southeastern corner (see sketch map). Work should be conducted between 7/26 and 8/14 due to above listed constraints.

TAG COMMENTS:

TAG APPROVAL DATE:

ADEC Art Weener Art Weener

EXXON *Arroyo LEA* *Real*

NOAA Joseph Talbott - JCTB

USCG M. J. HALL ~~ATT~~

FOSC: 1 5 DATE: 5-3-90

DATE: 5-3-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
- 1D Esther Hatchery release (4/15 to 6/1)
- 1E Main Bay Hatchery release (4/20 to 5/10)
- 1F Sawmill Bay Hatchery release (4/15 to 6/1)
- 1G Cannery Creek Hatchery release (4/21 to 6/1)
- 1H Remote release site
- 1I Gill net area (6/7 to 8/31)
- 1J Purse seine area (7/20 to 9/30)
- 1K Purse seine hook-off (7/20 to 9/30)
- 1L Set net sites (6/11 to 7/25)
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
 Restrict boat traffic to essential minimum. Avoid damage to unholed intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (6/1 to 9/15)
- 6V Anchorages (6/1 to 9/15)
- 6W Forest Service cabins (6/1 to 9/15)
- 6X Lodge (6/1 to 9/15)
- 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
- 7HH Finfish harvesting
- 7H Deer harvesting (8/15 to 2/28)
- 7JJ Invertebrate harvesting
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

DRAFTSEGMENT ST / CR5 SUBDIVISION: B DATE 4/8/90**USCG**

NAME

GARY OTT

SIGNATURE

[Signature]☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

THIS SUBDIVISION HAS BEEN PREVIOUSLY IDENTIFIED AS NOAA WINTER MONITORING SITES #11 AND #12. OIL OBSERVED AT THIS LOCATION IS STABLE IN A LOW ENERGY PROTECTED ENVIRONMENT. ANY MECHANICAL TREATMENT DESIGNED TO BREAK UP ASPHALT LIKE PATCHES WOULD NOT NECESSARILY INCREASE NATURAL REMOVAL ACTIONS.

ANY FUTURE ACTIONS ON THIS MONITORING SITE SHOULD BE CAREFULLY CONSIDERED BASED ON OVERALL FUTURE MONITORING PLANS. — END COMMENTS —

ADEC

NAME

MICHAEL J EBEL

SIGNATURE

[Signature]☐ NO TREATMENT RECOMMENDED ?☐ TREATMENT SUGGESTED

COMMENTS

CR-5-B: NOAA study sites #11 & #12 are the 2 sides that bound sketch map #2. This area had a total of 12 pits to determine if the bands of asphalt had subsurface components in the middle of the beach face. The peripheral asphaltting is $\approx 130 \text{ m}^2 \times 5 \text{ cm}$ (thickest part). Patches of pooled surface ~~DBL~~ - DBR oiling with scattered covers and broken coats were observed. The 11 pits indicated mostly no oil with 5 showing films from shiny BL - DBR. The 12th pit referred to earlier #21, had SBL oil saturating pore spaces from 0-15 cm +. It was here that an oil trap probably bounded along the base of the south west ~~rock~~ bedrock cliff. We all agreed not to dig in the areas below or within a close proximity to the NOAA signs, (cont. separate sheet)

LAND MANAGER USOA - FOREST SERVICE

NAME

DON BREITINGER

SIGNATURE

[Signature]4/8/90☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Break up asphalt patches in upper tidal area

Page 1 of 2

that is to say, a few meters from the sides of the signs and then downward to the water's edge (supposing this to be their transect locations across the beach face). Without knowing the future plans for this site we tried to disturb it as little as possible. When more is known about the nature of this study site an explanation could release it to further inspection in the peripheral zones (bounded by bedrock cliffs) if necessary. Again, this being where the pit #21 (15cm deep) revealed shiny-dark black oil to depths.

Surface patches of film and splotches of the same, grading from DBL-DBR were observed, as were $\approx$ 4 bags of patties and tarballs. If this study is to end tomorrow, I would recommend breaking up the surface asphalt, collecting the patties and tarballs (what can be found in one sweep of the beach, and doing so with a minimum crew of manual laborers. This area would probably meet ~~State~~ criteria for use of bioremediation as a treatment method.

— Area #1 (from sketch map #1): Nine pits were dug into this part of the subdivision. The area formed a small lagoon with a very fragile ecology. A continuous band of tar coating was found along the Eastern bank along with scattered cover, and patchy film. Oiled (tarred) drift and logs were South of this tar band. Scattered coats, covers and films led us to the SW side of the lagoon to a small stream with a sheer rap. Pit #9 dug next to the stream channel yielded SBL-DBR oil saturating pore spaces in sed. Also pit #1 had residual SBL-DBR oil near the channel of the tidal inlet. Most other scattered pits revealed oil films from light color to shiny black. Because of the soft mud and other sensitive parts of this lagoon area I recommend no treatment, and the

Michael Ebel

SHORELINE OILING SUMMARY

REVISION NO. 02/22/98

OG Randy Mc Bride USCG No A A Gary Off SEGMENT ST/ CR-5
 BIO Lewis Sherman LAND REP USFS Don Bretherton SUBDIVISION B 12-15
 EXXON Lex and Harbst ADEC Michael Ebel TIME 07:30 to 08:30
 TEAM NO.: 12 TIDE LEVEL: 5.5' to 6.5' DATE 4/7/90
 EST. SUBDIVISION LENGTH: 256 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: North to South
 SURFACE SEDIMENTS: R 25 % B 25 % C 30 % P 10 % G 8 % S 2 % M 0 % V 0 %
 SLOPE: Long 90 % Hang 10 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 240 m N 6 m VL 5 m NO 5 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	C	B	P	S	NO	SP	OR	OL	OF	SU	U	M	L
ASPHALT PAVEMENT			X	X					X		X		
POOLED			X	O		X			O		X		
COVER				X				X			X		
COAT	I	X	•	D		X		O	I		X		
STAIN													
MOUSSE													
PATTIES				X				X			X		
TARBALLS													
FILM			X	O		O		X			X		
NO OIL										X		X	X

PAVEMENT: H (F) (S) 130 sq. m by 5 cmPATTIES / TARBALLS 4 BAGSNEAR SHORE SHEEN? ~~BR~~ BR (FW) (SL) TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	X		
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☒ YES ☐ NOTYPE tire/plastic for wrap#BAGS 4

Photographs:

Roll No. ST-12-5Frames 1-26

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR							PIT ZONE				A N A	SUBSURFACE SEDIMENTS	
		OF	OR	OL	OF	NO		VO	UC	SL BR	OL TR	OL SL	OR TL	OR LT	SU	U	M	U					
1	35		O		X		15-35	X		•	X		O			X							BCPG
2	20					X	.		X							X							BCPG
3	27				X		Correct 15-22		X				X			X							BCPGS
4	35					X	.		X							X							GS
5	35					X	.		X						X								PG
6	27				X		24-27	X				X				X							PG

COMMENTS CR-5-B is an irregular shoreline with a large perched lagoon, cone to the north, with another smaller cone adjacent to the perched lagoon to the south. The perched lagoon (sketch map #1) consists of fine sediments with medium, narrow, very light, and no oiling. The oiling character is dominated by coats and covers with continuous, patchy, and speckled distributions. Most of the oil is dark brown and found in the upper intertidal zone. Sheen was found ~~in~~ in the nearshore, and surface, and subsurface and was rainbow and silver in color. (continued)

Shoreline Oiling Summary

The southern cove has two NOAA study sites, which include #11 and #12. Both surface and subsurface oiling was found. Surface oiling included splashed distributions of asphalt pavement, PO, PT, + CT. Asphalt pavement also occurs in patchy distributions. All the ^{surface} oiling was found in the upper intertidal zone ^{and} was predominately dark brown in color. The subsurface oiling consisted of a lot of translucent, silver, rainbow, and brown sheen. No saturated layers were found. The lower half of the pits contained a large amount of detrital organic material (lt. brown).
The detrital organic material looks like oil.

Overall, these coves/lagoons are very well protected from wave activity. Therefore, virtually no natural washing from waves will take place.

SEGMENT ST/ CR-5 SUBDIVISION B

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SL BR	DL RW	OL RW	DL TL	DL TL	DL TL	DL TL	DL TL	SU	U	M	U		
7	30				X		16-17		X				X				X						GPS <i>detrital/organics</i>
8	30				X		5-14		X				X					X					PGS <i>organics</i>
9	23	X	•		Δ		5-12		X	Δ	+		X	•			X						CDG <i>organics</i>
10	23				X		14-15		X	X	O		•				X						CPGS <i>organics</i>
11	25				X		19-20		X			X					X						CPGS <i>organics</i>
12	37				X		22-23		X			X					X						PGS <i>Thick organic High layer</i>
13	26				?		25-26	?					?				X						CPGS <i>organics pool</i>
14	34				X				X			X					X						BCPGS <i>organics</i>
15	25				X				X								X						PGS <i>organic High</i>
16	23				X				X								X						CPGS <i>some organics</i>
17	32				X				X									X					CPGS <i>organic pool</i>
18	25				X				X									X					CPGS <i>organic pool</i>
19	30				X				X									X					CPGS <i>organic pool</i>
20	28				X				X											X			CPGS

COMMENTS

page 3 of 4

REVIEWED _____ DATE _____

REVISION 02-2-10

[illegible]

COMMENTS

page 4 of 4

REVIEWED _____ DATE _____

OG Rands "Bide"

SEGMENT ST/ un-5

SUBDIVISION B

DATE 4 / 7 90

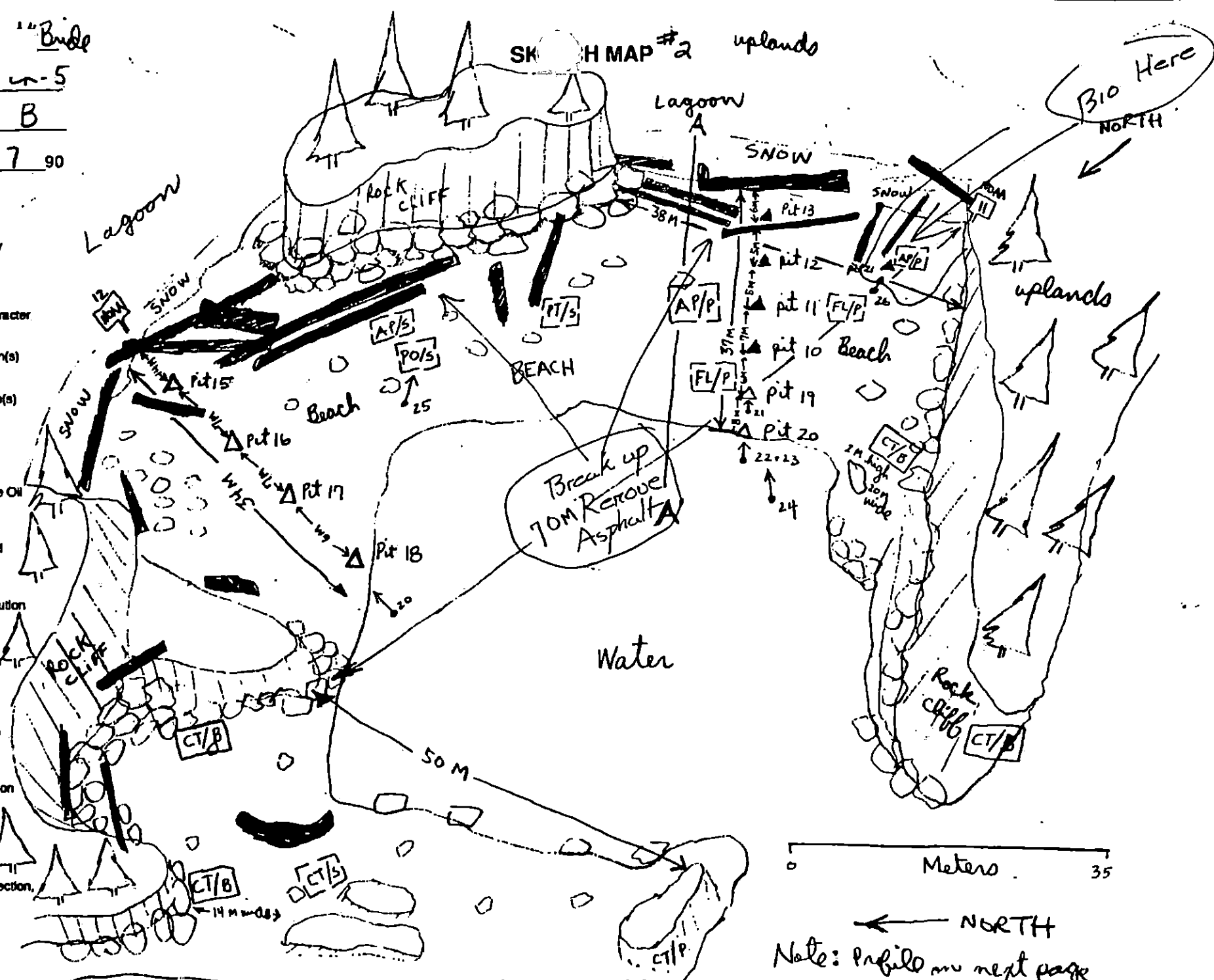
CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Bdg/Sub Bndry
- ☒ CO Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Egl. HWL/LWL
- ☒ LSL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Pit Location(s)
- ☒ Photo Location(s)

LEGEND

- 1 ▲
Pit - No Subsurface Oil
- 2 ▲
Pit - Subsurface Oil
- CT/C
Continuous Distribution
- CT/B
Broken Distribution
- CT/P
Patchy Distribution
- CT/S
Splashed Distribution
- Oiled Vegetation
- 1 ●
Photo location, direction, and number

Oil Character Length (m): AP 20 PO 8 CV CT 2.46 ST MS PT 4 TB FL 10 NO 20



0 Meters 35

← NORTH
Note: Profile on next page

REVISION: 9/24/90

OG Randy 4/1/90

SEGMENT 5

SUBDIVISION B

DATE 4/1/90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bndry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWL/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

1 ▲

Pit - No Subsurface Oil

2 ▲

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

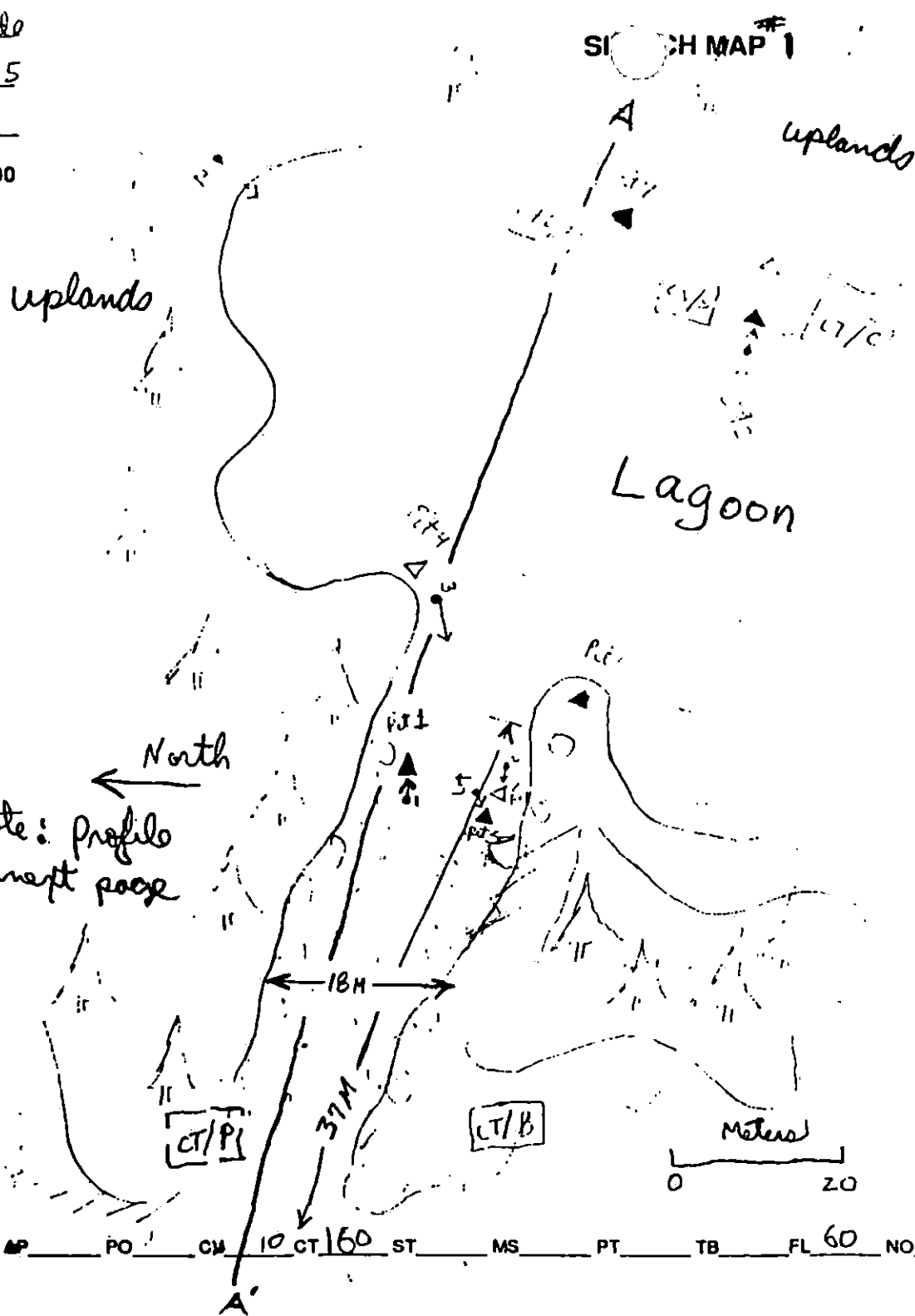
CT/S

Splashed Distribution

Oiled Vegetation

1 ●

Photo location, direction,
and number



Oil Character Length (m): AP PO CM 10 CT 160 ST MS PT TB FL 60 NO 90

REVISION: 03/24/90

OG Row, McBride

S CH MAP # 12

SEGMENT ST/ CR-5

SUBDIVISION B

DATE 4, 7 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bndry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWL/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☒ Profile(s)
- ☐ PII Location(s)
- ☐ Photo Location(s)

LEGEND

1 ▲

PII - No Subsurface Oil

2 ▲

PII - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

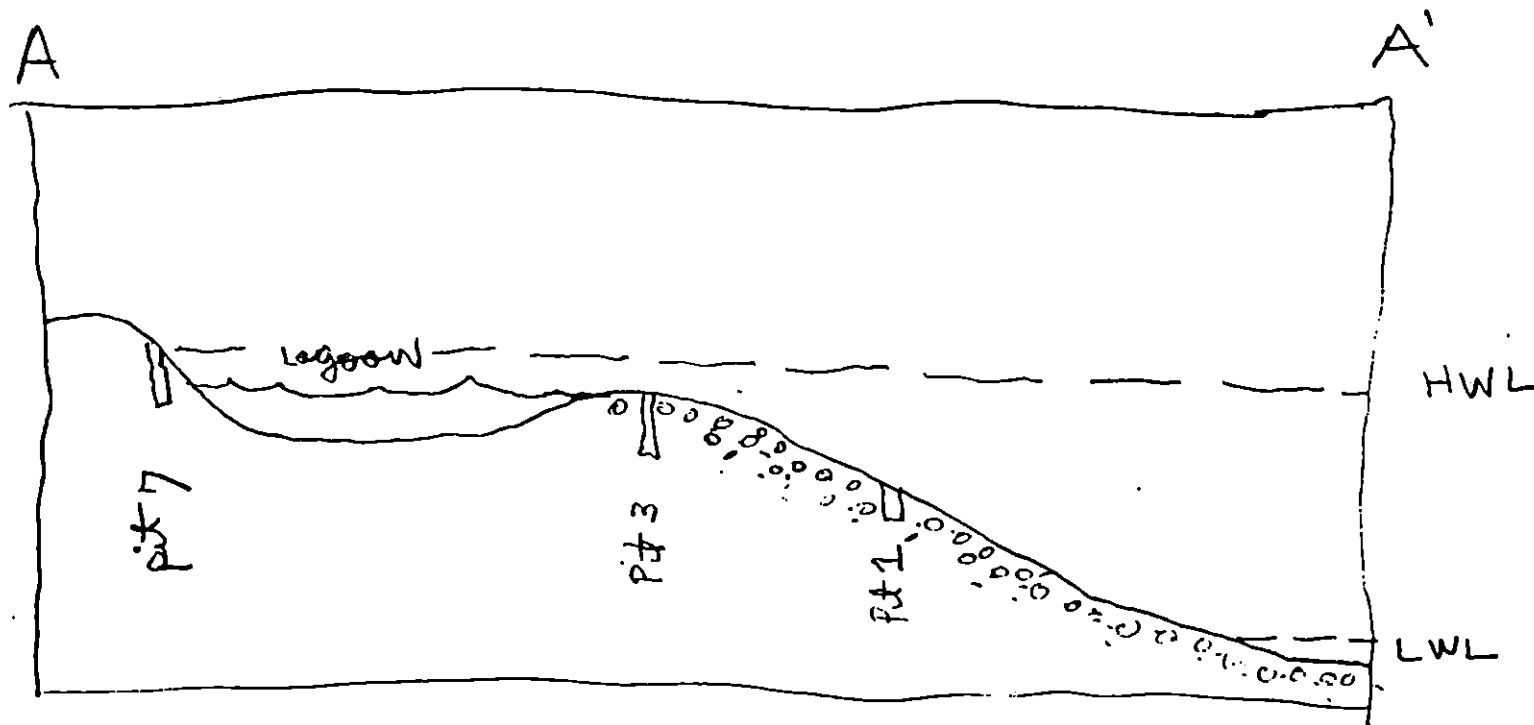
CT/S

Splashed Distribution

Oiled Vegetation

1 ➡

Photo location, direction,
and number



Oil Character Length (m): AP _____ PO _____ CV _____ CT _____ ST _____ MS _____ PT _____ TB _____ FL _____ NO _____

REVISION: 03/24/98

OG Ran. McEnder

SKETCH MAP #22

SEGMENT ST/ CR-5

SUBDIVISION B

DATE 4, 7 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bndry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWL/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ

Pit - No Subsurface Oil

2 Δ

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

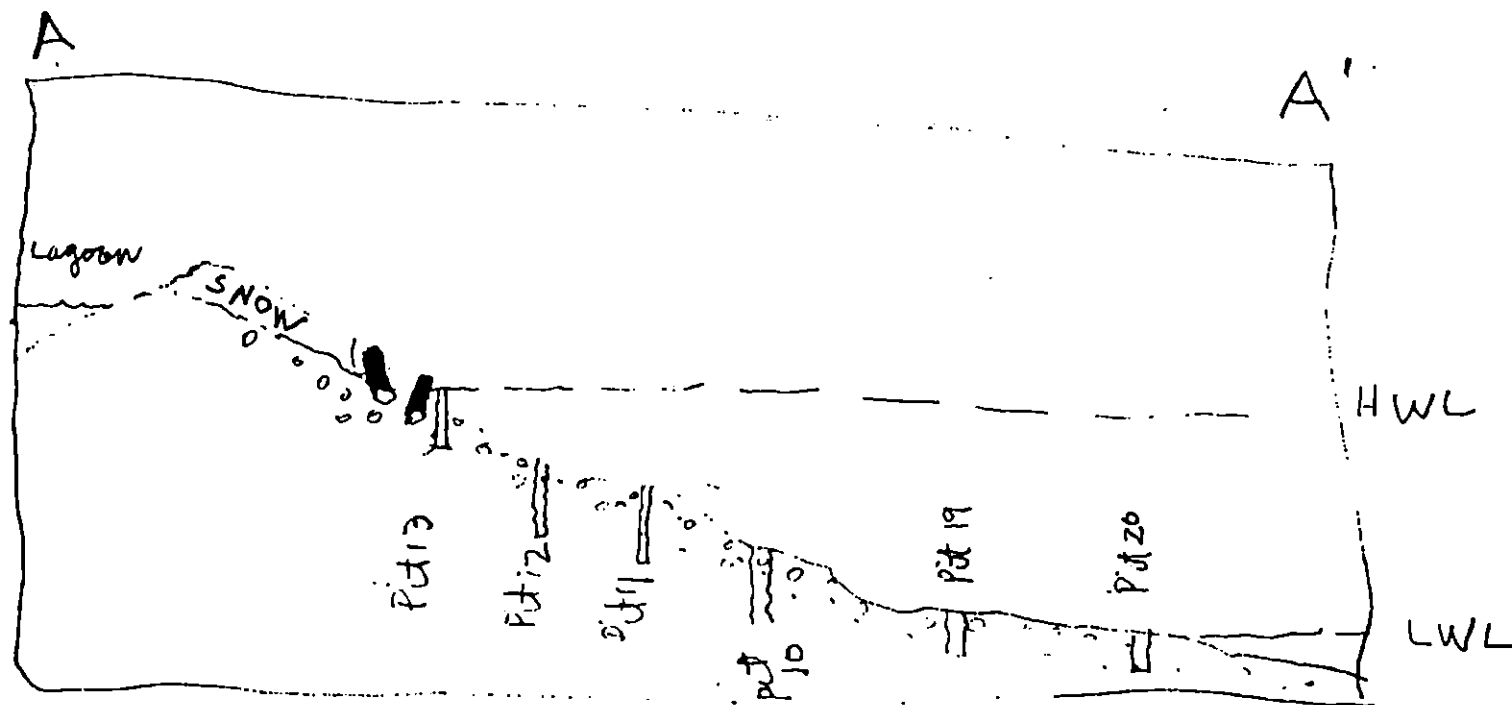
CT/S

Splashed Distribution

Oiled Vegetation

1 $\Rightarrow$

Photo location, direction,
and number



Oil Character Length (m): AP _____ PO _____ CV _____ CT _____ ST _____ MS _____ PT _____ TB _____ FL _____ NO _____

REVISION: 03/24/90

SHORELINE ECOLOGICAL SUMMARY (Page 1 of 2)

REVISION: 03/22/90

Segment ST / CR-5 Subdivision B Date (mo / day / yr) 4 / 7 / 90Time (24 hr) 0715-0930 Biologist SHARMAN(A) Substrate type and % of segments: SUBDIV. ^{+ granules}
(1) Bedrock 25 (2) Boulder 25 (3) Cobble 30 (4) Pebble 10 (5) Sand 10 (6) Silt(B) Overall % cover of biota (% of segment): Dense Moderate X Low
SUBDIV.

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs: Roll No. ST-12-5Frames 1 - 26

BARNACLES

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

MYTILUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

GASTROPODS (NUCELLA, LITTORIANA, LIMPAETS)

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

FUCUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

Wildlife Observations/ General Comments: 2 mink, 1 deer swimming across from the mainland, 2 adult eagles, 2 pairs goldeneyes, 4 gulls (probably glaucous-winged), Steller's jay, 1 osprey, 1 deer track, 2 sea otter skeletons (gnawed) - one was juvenile animal, one was unusually old - cause of death unknown. Lower intertidal zone outside the tidal settlement lagoon is normally rich and productive. Sub-boulder community includes pricklypores, (cont.)

Ecological Considerations:

Please see this section from subdivision CR-5-A. Environmental Priority 1, primarily because of pinup pupping/melting habitat on points, headlands, and nearshore/offshore islets (sensitivity codes 1E, 3N, P, O, Q). Very high sensitivity to disturbance. For this subdivision the lagoon proper is likely of very great value to an abundance and variety of birds and mammals. Like all such lagoon habitats, this one is probably easily physically disturbed. It appears to remain productive, and to be recovering nicely from last year's oiling. The site is quite vulnerable to both outright disturbance of wildlife by human activity, and also (probably more importantly) to physical disturbance of the habitat structure caused by erosion and sedimentation.

4/7/90

Shoreline Ecological Summary (cont.)
(Page 2 of 2)

Sharman

General Comments (cont.): Pagurus, Spirobrion, Nucella and Fittorina eggs, small anemones, bryozoans, unidentified fish (?) eggs. Fewer algae include ulvalae, red foliose forms, Sargassum, Halosaccus. Extending up into the MTE are Rhodospira, Petrocalia-type crusts, and a very abundant brown/red filamentous complex. As we have observed before, there has been no settlement of post-spill intertidal organisms on the tar band across boulders and stretches of bedrock. Barnacles, mussels, Fucus, limpets, etc. are recruiting onto adjacent surfaces, however. These beaches were apparently pressure-washed. Many of the larger barnacles have been removed (leaving scars) recently, (in the past 2 y) from locations where they would normally be quite protected from mechanical disturbance (back side of large boulders, in cracks, away from scouring by cobbles + pebbles, etc.). Other birds: 1 raven, 1 unidentified gull.

This subdivision includes a protected tidal saltchuck lagoon. The above summary and tabular data on page 1 refer to the marine beachface in front of the lagoon (not the shore or "banks" of the lagoon proper, but rather the W-facing beach outside the lagoon). The tidal lagoon is likely of considerable importance to shorebirds and ducks, and hence their predators. Pink salmon may possibly spawn in the lagoon entrance channel, albeit (probably) ultimately unsuccessfully. Center channel was unrolled; N. side of the channel at the oil line (MHW) has some oil (seen on water in pit) down to 30cm where the organic slurry is. S. side of channel at the same level is unrolled. There was an abundance of deer tracks around the margins of the lagoon. The W. margin of the lagoon is already colonizing with Fucus sporophytes (fine-grained unconsolidated but reasonably stable sediments - protected from wavewash). At the extreme S. end of the lagoon, where a small stream enters, the bank sediments appear to be oil saturated (probably in combination with organics washed in from the surrounding uplands), with slimes very easily mobilized by disturbance (walking).

Ecological Considerations (cont.):

Such physical disturbance from trampling ^{and} disturbance of sediments by some treatment activities could very well be long-lasting and of considerable cumulative impact.

CR-1

Sketch →

CR-5-A

↓ PWS 66A

XXXX Wide

//// Medium

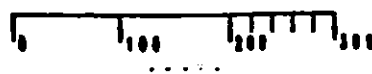
---- Narrow

TTTT Very Light

0000 No Oil

CR-5

ADEC Segment Length: 2390m



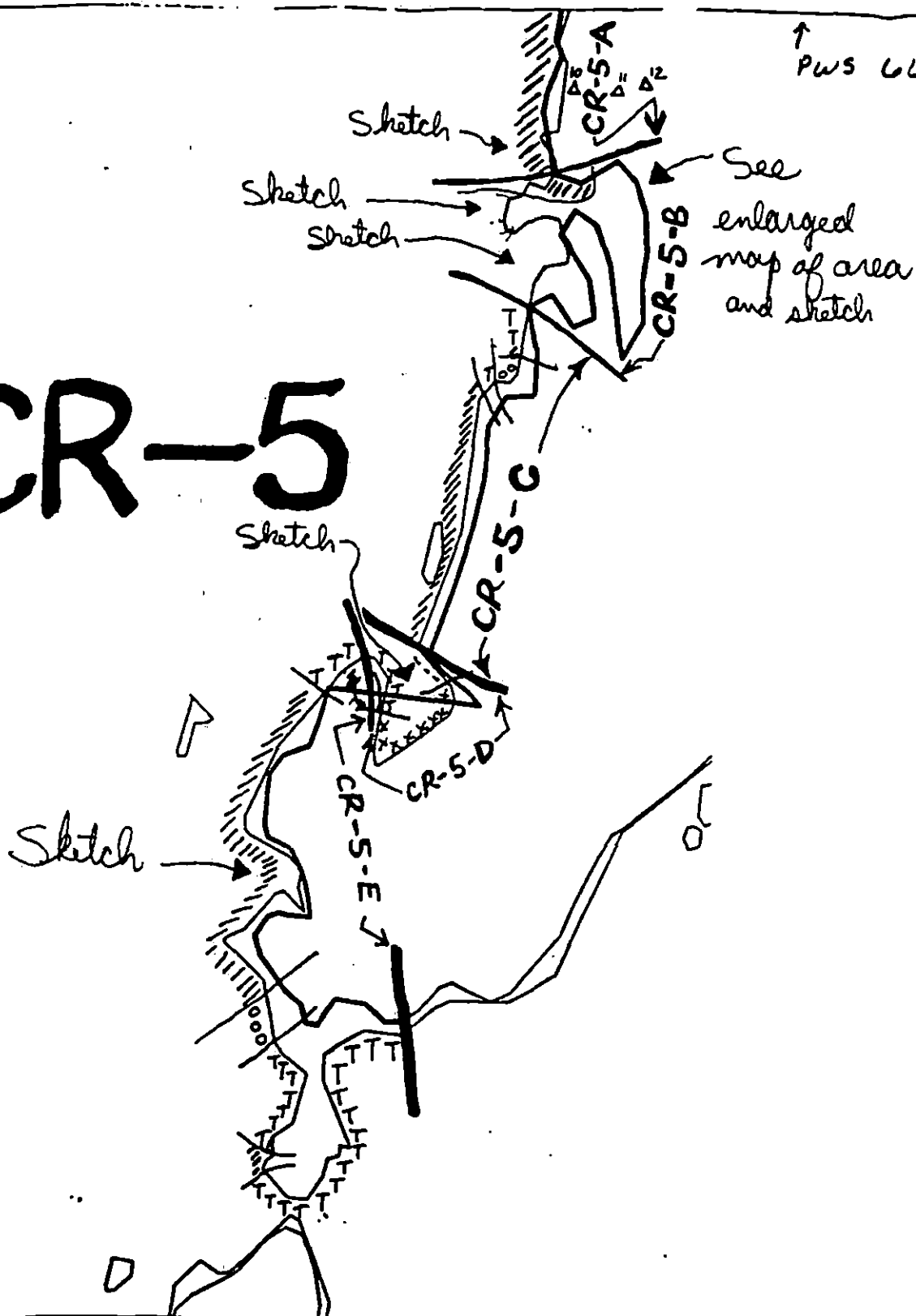
Map Key: PWS-66b

Name: Randy MB

Date: 4/9/90

Date Entered:

CR-5



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

CR-5

ADEC Segment Length: 2390m



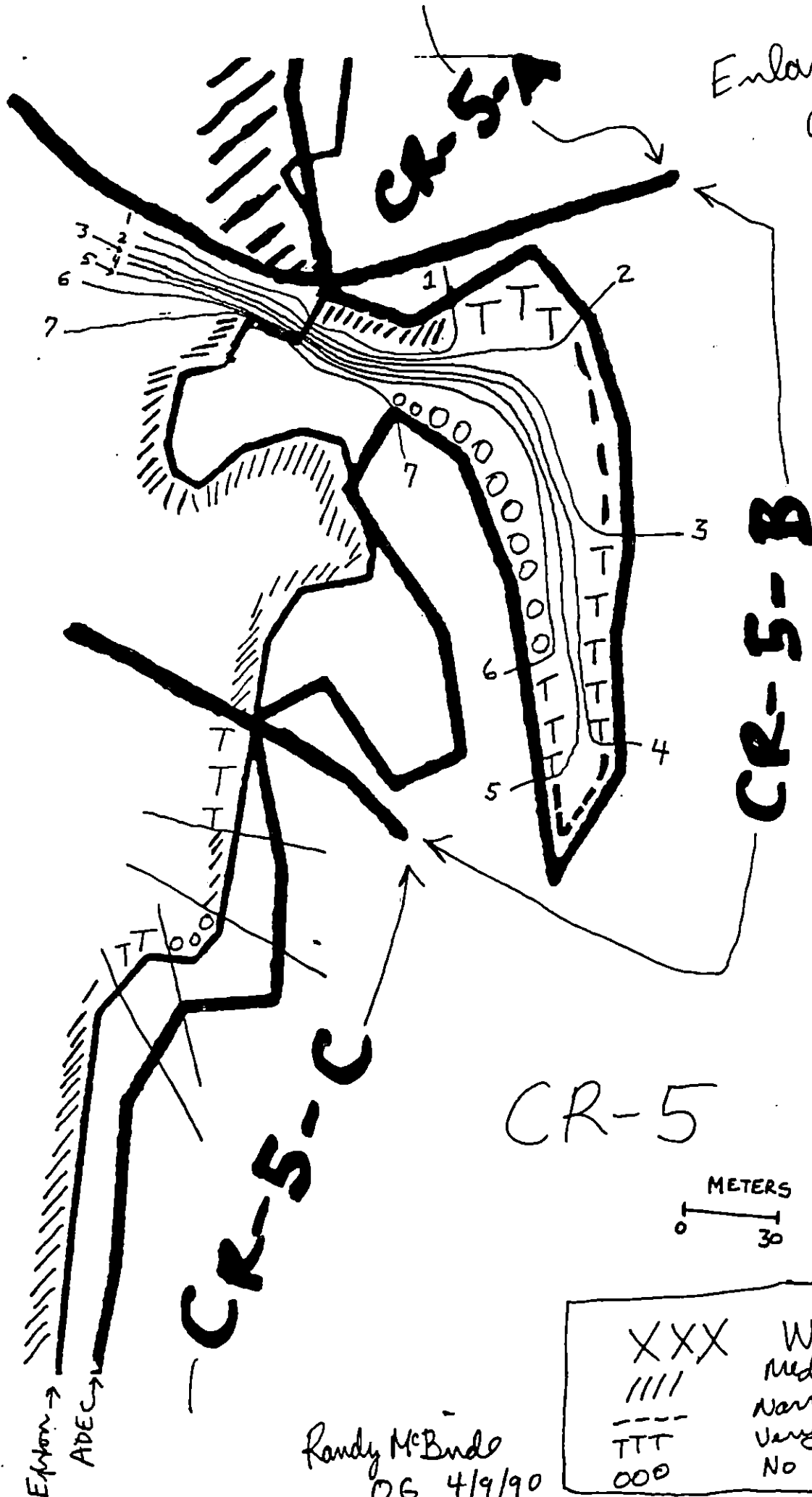
Map Key: PWS-66a

Name: Randy McBride

Date: 4/9/90

Date Entered:

Enlarged Map
of CR-5-B



CR-5-B

CR-5

CR-5-C

METERS
0 30

XXX	Wide
////	Medium
----	Narrow
TTT	Very Light
OOO	No Oil

Randy McBride
OG 4/9/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT CR-5 SUBDIVISION B (2 of 5)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation Manual Tilling/Raking	WORK 6/4 - 6/7

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

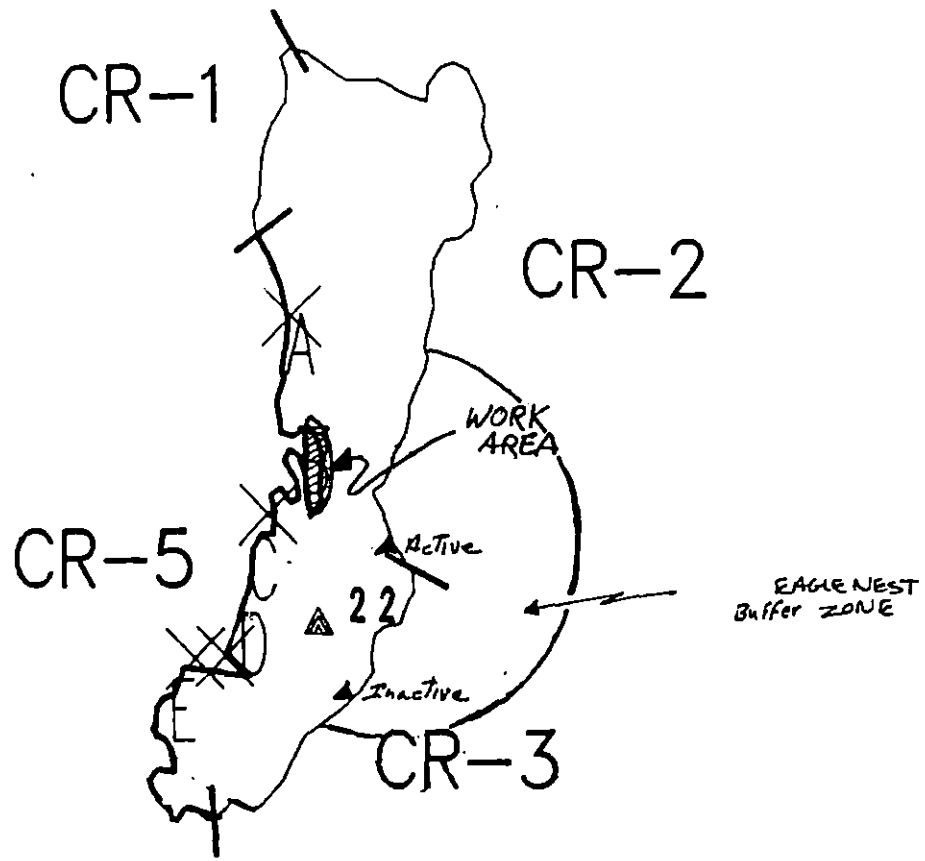
APPLICABLE ECOLOGICAL TIME CONSTRAINTS

- 1E Main Bay Hatchery Release No constraint to manual pickup and tarmat removal. Subdivision open to bioremediation and manual tilling 6/4 to 6/8 per verbal authorization from Larry Peltz/ADF&G to Tom Monihan/Exxon on 5/24/90. No constraint to bioremediation after 6/15.
- 1I Gill Net Area No constraint to manual pickup and tarmat removal. Closed to bioremediation and manual tilling after 6/7.
- 1L Set Net Sites No constraint to manual pickup and tarmat removal. Closed to bioremediation and manual tilling from 6/11 to 7/25.
- 3N,O Harbor Seal and Sea Lion
3P,Q Pupping and Molting NO TIME CONSTRAINT. Authorized per memorandum dated 5/14/90 from Kathryn Frost/ADF&G to Mark Kuwada/ADF&G.
- 5T Bald Eagle Nest NO CONSTRAINT. USFWS bald eagle impact assessments were conducted on 5/10/90 and 5/27/90 by Mike Lockhart. Subdivision B is outside the buffer zones established for active nests by USFWS.

OTHER ECOLOGICAL CONSIDERATIONS

Approach Subdivision only from the west. Aircraft maintain 400m horizontal and 300m vertical distance from active nests. Restrict boat and air traffic and all disturbance to essential minimum after 6/7. Do not apply bioremediation to specific areas where seals are observed to haulout. Do not chase or harass seals or sea lions, and do not approach pups under any circumstances. When working on or near haulouts, complete the job as quickly as possible with minimum personnel, equipment, noise and disturbance. Keep boats and personnel as far from actual haulouts as is practical to do the work specified. Minimize air traffic near haulouts, maintain elevation as is practical, and avoid repeated overflights of the same haulout areas. Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

TAG ADDENDUM DATE 6/04/90
ADEC Ray Morris
EXXON AWP
NOAA Joseph Ballant
USCG G.A. Britten
FOSC [Signature] DATE 6/5/90
Prepared by: [Signature] Date: 6/4/90



*Incorporates information from
USFWS bald eagle surveys
5/10 & 5/27/90 + 6/1/90*

EB-1



Exxon Company, USA
Map Key: PMS-CR-5
May 11, 1990



ECOLOGY MAP
SEGMENT CR-5
SUBDIVISION B (2 of 5)
METERS
0 399 798

- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1309 feet

SHORELINE EVALUATION

SEGMENT ST/ CR-05 SUBDIVISION C (3 OF 5) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1E Main Bay Hatchery release (4/20 to 5/10)
1L Set net sites (6/11 to 7/25)
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
6Y Recreation: Special use destination
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Do not trample, disturb, or bioremediate unoiled biota.

SHPO SIGNATURE: Charles J. Hines DATE: 4/25/90

OILING CATEGORIZATION:

Wide_0_m: Medium_262_m: Narrow_0_m: V.Light_65_m: No Oil_75_m
Subsurface Oil Observed: Yes_X No Maximum Depth_17+cm

RECOMMENDATIONS:

☒ No Treatment Recommended	☐ Snare/Absorbent Booms
☐ Treatment Recommended	☐ Oil Snares (pom poms)
☐ Manual Pickup	☐ Absorbents (pads, rolls, etc)
☐ Bioremediation	☐ Spot Washing: ☐ Wands
☐ Tarmat: ☐ Breakup	☐ Beach Cleaner
☐ Removal	☐ Other (see comments)

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 9/24/90
 ADEC ART WEINER Art Weinerman
 EXXON ANDY TEAL Andy Teal
 NOAA Joseph Talbott J. Talbott
 USCG M. J. HALL M. J. Hall

FOSC: W L DATE: 5-3-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
- 1D Esther Hatchery release (4/15 to 6/1)
- 1E Main Bay Hatchery release (4/20 to 5/10)
- 1F Seward Bay Hatchery release (4/15 to 6/1)
- 1G Cannery Creek Hatchery release (4/21 to 6/1)
- 1H Remote release site
- 1I Gill net area (6/7 to 8/31)
- 1J Purse seine area (7/20 to 9/30)
- 1K Purse seine hook-off (7/20 to 9/30)
- 1L Set net sites (6/11 to 7/25)
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
 Restrict boat traffic to essential minimum. Avoid damage to unopened intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (6/1 to 9/15)
- 6V Anchorages (6/1 to 9/15)
- 6W Forest Service cabins (6/1 to 9/15)
- 6X Lodge (6/1 to 9/15)
- 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
- 7HH Finfish harvesting
- 7H Deer harvesting (8/15 to 2/28)
- 7JJ Invertebrate harvesting
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / CR5 SUBDIVISION: C DATE 4/8/90

USCG

NAME GARY OTT

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

OIL OBSERVED AT THIS LOCATION IS STABLE.

ADEC

NAME MICHAEL J. EBEL

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

CR-5-C : Occasional splashes and fewer patches of pooled oil (dark brown) were found mostly below the scattered cover and patchy to broken coats — all within the UTZ. Scattered and patchy surface film were also found in this zone with a dark black color. Pit # 4 was dug into a pooled patch revealing DBL residual oil from 5-17cm in depth. Two satellite pits, #3 & #5 were dug on either side of it and showed no oil, Pit #6 was further south of Pit #5 and indicated a grey film. It did not appear to have a subsurface component. No treatment recommended here.

LAND MANAGER - USDA FOREST SERVICE

NAME DON BREITINGER

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY

REVISION NO. 05/22/9

OG Randy McBride USCG NO AA Gary OH SEGMENT ST/ CR-5 ✓
 BIO Lewis Sherman LAND REP USFS Don Breitinger SUBDIVISION C (3055)
 EXXON Leonard Herbst ADEC Michael Ebel TIME 17:48 to 19:00
 TEAM NO.: 12 TIDE LEVEL: 0.9' to 0.5' DATE 04/07/90
 EST. SUBDIVISION LENGTH: 406 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: North to South
 SURFACE SEDIMENTS: R 30 % B 30 % C 25 % P 10 % G 3 % S 2 % M 0 % V 0 %
 SLOPE: Long 15 % Hang 70 % Vert 15 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 316 m N 0 m VL 60 m NO 30 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	R	B	P	S	1	2	3	4	SU	U	M	V
ASPHALT PAVEMENT												
POOLED			•	X				•X		•X		
COVER				X				X		X		
COAT		X	O					Xo		Xo		
STAIN												
MOUSSE												
PATTIES												
TARBALLS												
FILM			•	X	X•					•X		
NO OIL									X	X	X	X

PAVEMENT: H F S 0 sq. m by 0 cPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED

☐ YES ☒ NOTYPE 0#BAGS 0

Photographs:

Roll No. ST-12-5Frames 27-29

SUBSURFACE OIL

* Sheen on water in pit 6, origin uncertain ✓

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CH)	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		DO	UC	1	2	3	4	SU	U	M	V		
1	32					X	•		X					X					P, G
2	27					X	•		X					X					P, G, S
3	16					X	•		X					X					B, C, P
4	17		O		X		5-17	X		X	O			X					B, C, P
5	27					X	•		X					X					C, P, G, S
* 6	25				X		•			X				X					B, C, G, P

COMMENTS CR-5-C was dominated by high angle rock with boulders and cobbles with only one pocket beach of fine-grained ~~water~~ sediments. The ~~major~~ major oiling is coat with broken and patchy distributions. Some pooled oil was found with patchy and splashed distributions. All the oil was found in the upper intertidal zone and was dark brown in color. Fetch is restricted so wave activity is low. Little natural washing from waves will occur along this subdivision.

REVIEWED 7W DATE 4/12/90

SHORELINE ECOLOGICAL SUMMARY (Page 1 of 2)

REVISION: 03/22/90

Segment ST / CR-5 Subdivision C Date (mo / day / yr) 4/7/90Time (24 hr) 1600-1800 Biologist SHARMA(A) Substrate type and % of segments: SUBDIV.
(1) Bedrock 30 (2) Boulder 30 (3) Cobble 25 (4) Pebble 10 (5) Sand 5 (6) Silt (B) Overall % cover of biota (% of segment): Dense Moderate X Low
SUBDIV.

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:
Roll No. ST-12-5Frames 27, 28, 29

BARNACLES

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

MYTILUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

GASTROPODS (ANCELLA, LITTORINA, LIMAEYS)

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

FUCUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

Wildlife Observations/ General Comments: 1 adult eagle, 4 magpies, 1 pair harlequin ducks, 1 pair pigeon guillemots. The LT is very rich, particularly the boulder substrates. The sub-boulder community includes the typical assemblage of pricklebacks, bryozoans, spiracles, barnacles, and Littorina and Anceella (both large and small). There is also the usual low diversity of algae on rock surfaces. In general, the overall intertidal (cont.)

Ecological Considerations:

Please see the section for subdivision CR-5-A. Environmental Priority 1, primarily because of principal plucking/mulching habitat on points, headlands, and nearshore/offshore islets (sensitivity codes IE, 3N, P, O, Q). Very high sensitivity to disturbance by human activity, during the critical periods.

4/7/90

Shorman

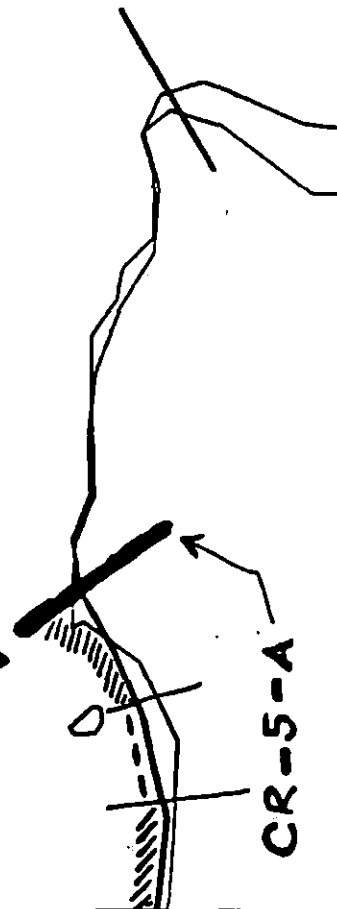
General Comments (cont.):

1173

Community appears normally diverse and productive except within the weathered oil band persisting on some bedrock/boulder surfaces (mostly vertical) where $\approx 60\%$ adult barnacle mortality has occurred, vs. $\approx 10\%$ on adjacent uncoiled surfaces. Also in the upper and mid-intertidal areas it is apparent that pressure washing was applied last summer - up to 90% of the larger barnacles have been knocked off in places, leaving bare areas. These individuals have been removed from surfaces normally very well protected from disturbance by wave wash and cobble scour. Additionally, there are a few patches of Fucus that have apparently been damaged by either previous oiling (no oil now) or possibly hot water from treatment operations. It is difficult to say whether these plants will survive. They lack new growth thus far. Fucus recruitment is occurring in rare isolated patches, not in the areas of the damaged mature plants (these plants may actually be dead).

CR-1

Sketch



CR-5-A

↓ PWS 66A

XXXX Wide

//// Medium

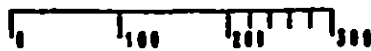
---- Narrow

TTTT Very Light

0000 No Oil

CR-5

ADEC Segment Length: 2390m



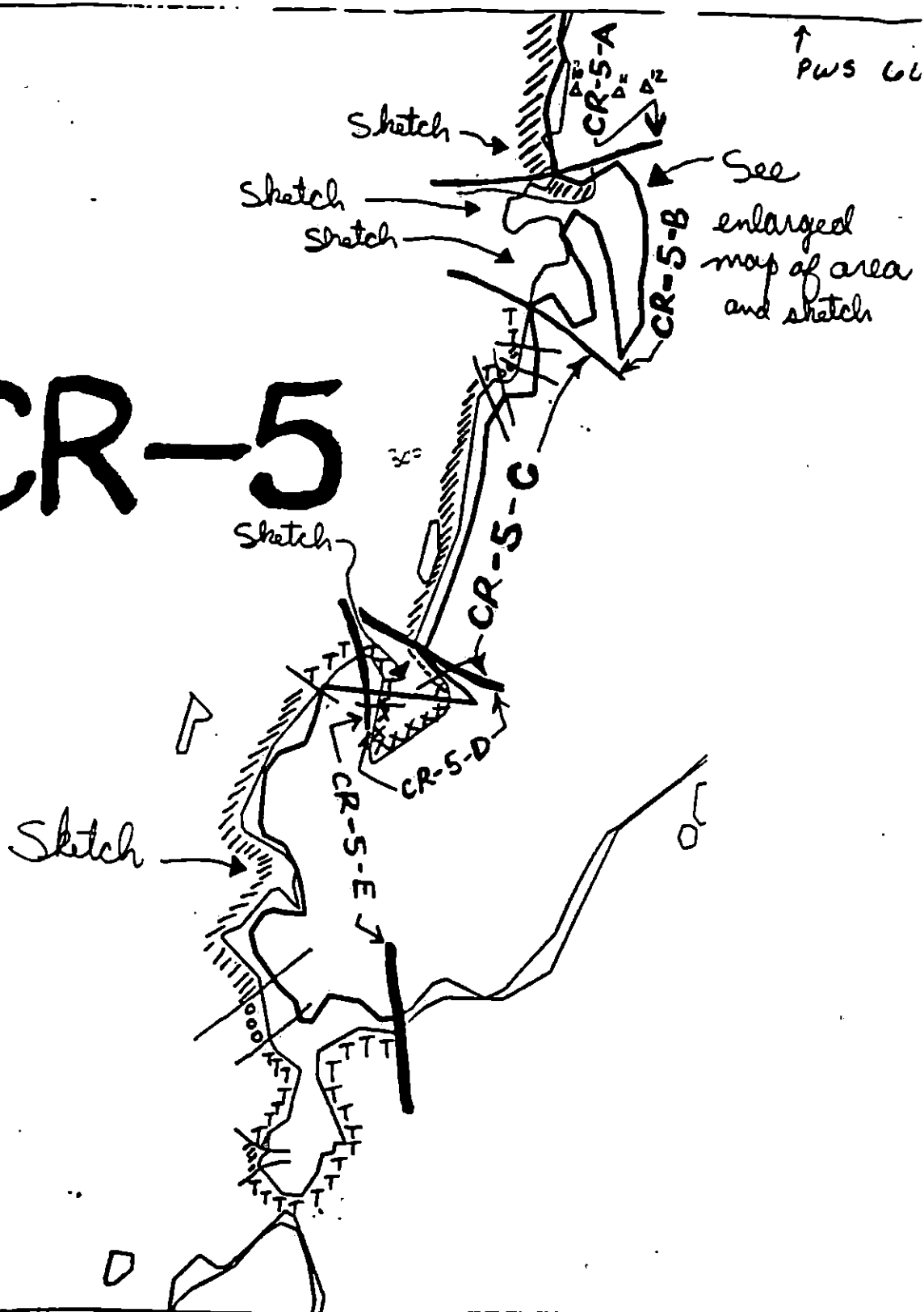
Map Key: PWS-66A

Name: Randy McBr

Date: 4/9/90

Date Entered:

CR-5



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

CR-5

ADEC Segment Length: 2390m



Map Key: PWS-86a

Name: Randy McBride

Date: 4/9/90

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ CR-05 SUBDIVISION D (4 OF 5) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1E Main Bay Hatchery release (4/20 to 6/10)
1L Set net sites (6/11 to 7/25)
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Do not trample, disturb, or bioremediate unoiled biota.

SHPO SIGNATURE: [Signature] DATE: 4/25/90

OILING CATEGORIZATION:

Wide 146m: Medium 0 m: Narrow 35 m: V.Light 24 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 40+cm

RECOMMENDATIONS:

☒ No Treatment Recommended	☐ Snare/Absorbent Booms
☒ Treatment Recommended	☐ Oil Snares (pom poms)
☐ Manual Pickup	☐ Absorbents (pads, rolls, etc)
☒ Bioremediation	☐ Spot Washing: <u> </u> Wands
☐ Tarmat: <u> </u> Breakup	☐ Beach Cleaner
☐ <u> </u> Removal	☐ Other (see comments)

COMMENTS: Recommend that bioremediation be conducted in areas shown on sketch map. Work should be conducted between 7/26 and 8/14 due to above listed constraints. NOTE that USCG/NOAA and ADEC representatives recommend no treatment.

TAG COMMENTS: DUE TO THE CULTURAL + ENVIRONMENTAL SENSITIVITIES AND THE REQUEST BY CTAG FOR NO BIOREMEDIATION - NTR IS RECOMMENDED

TAG APPROVAL DATE: 4/24/90

ADEC ART WENGER
EXXON ANDY TEAL
NOAA Joseph Talbot
USCG M. J. HALL

FOSC: [Signature] DATE: 5-8-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
 1D Esther Hatchery release (4/15 to 6/1)
 1E Main Bay Hatchery release (4/20 to 5/10)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 1I Gill net area (6/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (6/11 to 7/25)
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
 Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1);
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 8/1)
 Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (8/1 to 9/15)
 6V Anchorages (8/1 to 9/15)
 6W Forest Service cabins (8/1 to 9/15)
 6X Lodge (8/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7HH Finfish harvesting
 7H Deer harvesting (8/15 to 2/28)
 7JJ Invertebrate harvesting
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ CR5 SUBDIVISION: D DATE 4/9/90

NOAA
USCG
NAME

GARY OTT

SIGNATURE

[Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

OBSERVED OIL IN THIS LOW ENERGY LAGOON IS ON TOP OF SEDIMENTS AND IS STABLE. NATURAL FLUSHING ACTIONS WILL BE SUFFICIENT WAS OBSERVED. ANY MECHANICAL REMOVAL OR MECHANICAL FLUSHING ACTIVITIES MIGHT DRIVE OIL INTO SEDIMENTS RESULTING IN A NEGATIVE OVERALL IMPACT TO THIS DELICATE ENVIRONMENT. ACTIVE BIOLOGICAL ACTIVITIES OBSERVED WOULD NOT NECESSARILY BE IMPROVED BY "BIOREMEDIATION" TREATMENTS.

ACCORDINGLY, NO TREATMENT IS RECOMMENDED.

END COMMENT

ADEC

NAME MICHAEL J. EBEL

SIGNATURE

[Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

CR-5-D: Scattered asphalt (small splashes), patties, pooled oil and stain were found widely distributed around the circumference of this rather constructed pocket cove/lagoon. Broken distributions of cover, coat, and film (like the above mentioned) were mostly found in the UTS, with the exception of surface films extending down through the LTS. Fifteen subsurface pits convinced me how fragile this ecological niche really was. Because of the high level of organics (which should have been a classification determinant on OG forms for at least 3 reasons), clay and the matrix construction of this very low energy beach face, it was very difficult to determine.

LAND MANAGER - USDA FOREST SERVICE

NAME DON BREITINGER

SIGNATURE

[Signature]

4/10/90

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Recommend bioremediation on those areas within CR5 - subdivision D that would receive the most benefit from the application.

CR-5-D

the exact locations in the substrate from which films/sheets or oil in pore spaces would seep into the test pits. No doubt, organics act as a blotter to hold oil, and when disturbed, release oil. Therefore, the gut feeling that I have in view of the whole subdivision is that we are dealing largely with a light surface oiling that is broad in distribution, but mostly found in the upper. - MTZ. With ~~the~~ numerous lenses of clays and organics it seems doubtful that subsurface depth would be a component of the state of oiling for most of the segment. However, an oiled lens appeared to be emanating from a depth of 20-25 cm that is common to at least 3 pits (#~~6~~ 6, 7, & 8) in a concentration that exceeds that of film. Likely, this would be the general area of highest amount of oil below the surface.

I noticed numerous clambeds with shells covering them, the clams were alive; also, there were several places discovered where after flipping over rocks, worms were seen crawling through black sticky oil (this should be looked into for an indicator species to the biota). What does all this mean? From our measurements alone we sunk small pits everywhere our feet contacted the muddy surface (especially in the LITZ - MTZ). I see creatures living in oil and a protected interface between two kinds of environments. I feel this area would only be further scarred by any additional presence. No treatment or further impact recommended. Michael J. Elie 4/10/90
ADEC

SHORELINE OILING SUMMARY

REVISION NO. 06/22/90

OG Randy McBride USCG NOAA Gary Off SEGMENT STI CR-5
 BIO Leah Sherman LAND REP USFS Jon J. Bieringer SUBDIVISION D (4 of 5)
 EXXON Leonard Herbst ADEC Michael Ebel TIME 07:48 to 11:30
 TEAM NO.: 12 TIDE LEVEL: -0.5' to +7' DATE 04/09/90
 EST. SUBDIVISION LENGTH: 300 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: South to North
 SURFACE SEDIMENTS: R 20 % B 15 % C 35 % P 20 % G 6 % S 4 % M 0 % V 0 %
 SLOPE: Long 15 % Hang 75 % Vert 10 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 210 m M 0 m N 60 m VL 60 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	S	P	B	SP	BP	CP	GP	SP	BP	CP	GP	SU	U	M	U
ASPHALT PAVEMENT				X					X					X		
POOLED				.					.					.		
COVER		X		O	X				X					X		
COAT		X	.	O	X				X					X		
STAIN				X+	X				X					X+		
MOUSSE																
PATTIES				X					X					X		
TARBALLS																
FILM	X	.		▲	X	.			X	.			X	+	▲	+
NO OIL																

PAVEMENT: H (F) (S) 20 sq. m by 4 cmPATTIES / TARBALLS Broke patties up BAGS

NEAR SHORE SHEEN? NO BR (RW) (SL) (TL)

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs		X	
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE 0#BAGS 0

Photographs:

Roll No. ST-12-6Frames 5-37

SUBSURFACE OIL * Sheen on water in pits 1-5, origin uncertain

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CH)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UC	UC	SP	BP	CP	GP	SP	BP	CP	GP	SU	U	M	U		
1	30				X	.	Can not determine	X		X	.										X		B, C, P, G #5
2	37				X		Can not determine	X		X											X		C, P, G #8
3	28				X		Can not determine	X		X											X		B, C, P, G #9
4	35				X	.	Can not determine	X	.	X											X		B, C, P, G #12+13
5	35				X	.	Can not determine	X		X	.										X		B, C, P, G #16
6	25			X	.	+	5-25	X		.	+									X			B, C, P, G #17+18

COMMENTS Oiling is acute in this very protected cove. Virtually all wave activity is absent. No natural ~~flush~~ wave washing ~~into~~ takes place. Area is also sensitive due to: archeology sites.

SHORELINE OILING SUMMARY (PAGE 2 of 2)

REVISION 03/22/90

SEGMENT ST/ CR-5 SUBDIVISION D

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR X (OF) oil droplets on surface								PIT ZONE				A N A	SUBSURFACE SEDIMENTS	
		OP	OR	OL	OF	RO		UO	UC	SR	BR	DBL	HW	GY	SL	DBL	TL	LR	SU	U	M			U
7	30		X?		X		5-30	X		•	+	X?						•	X	+				B, C, P, G ^{organics} photo #19+21
8	40		X?		X		25-40	X		•	0	+						•	X	+				C, P, G ^{organic rich} photo #21+22
9	25				0		22-25	0	0		0						0							G, S ^{organics} photo #24
10	29			0	•	Δ	19-29	0			0	•	Δ					X						B, C, P, G ^{photo #29}
11	30			?	•	X	24-30	?		•	X?							X	0					B, C, P, G, S ^{photos} 30-31-32
12	40				X		25-35		X			X								X				B, C, P, G, S ^{photos} 34+35 clay 36
13	37				•	X	30-37	X		•	X							X	•					B, C, P, G, S ^{photo #37}
14	35					X	.		X									X						C, P, G, S
15	25				X		5-10	X					X				X							B, C, P, G, S
							.																	
							.																	
							.																	
							.																	
							.																	

COMMENTS

REVIEWED

JW

DATE

4/12/90

OG Randall McBride

SEGMENT: R-5

SUBDIVISION D

DATE 4/9/90

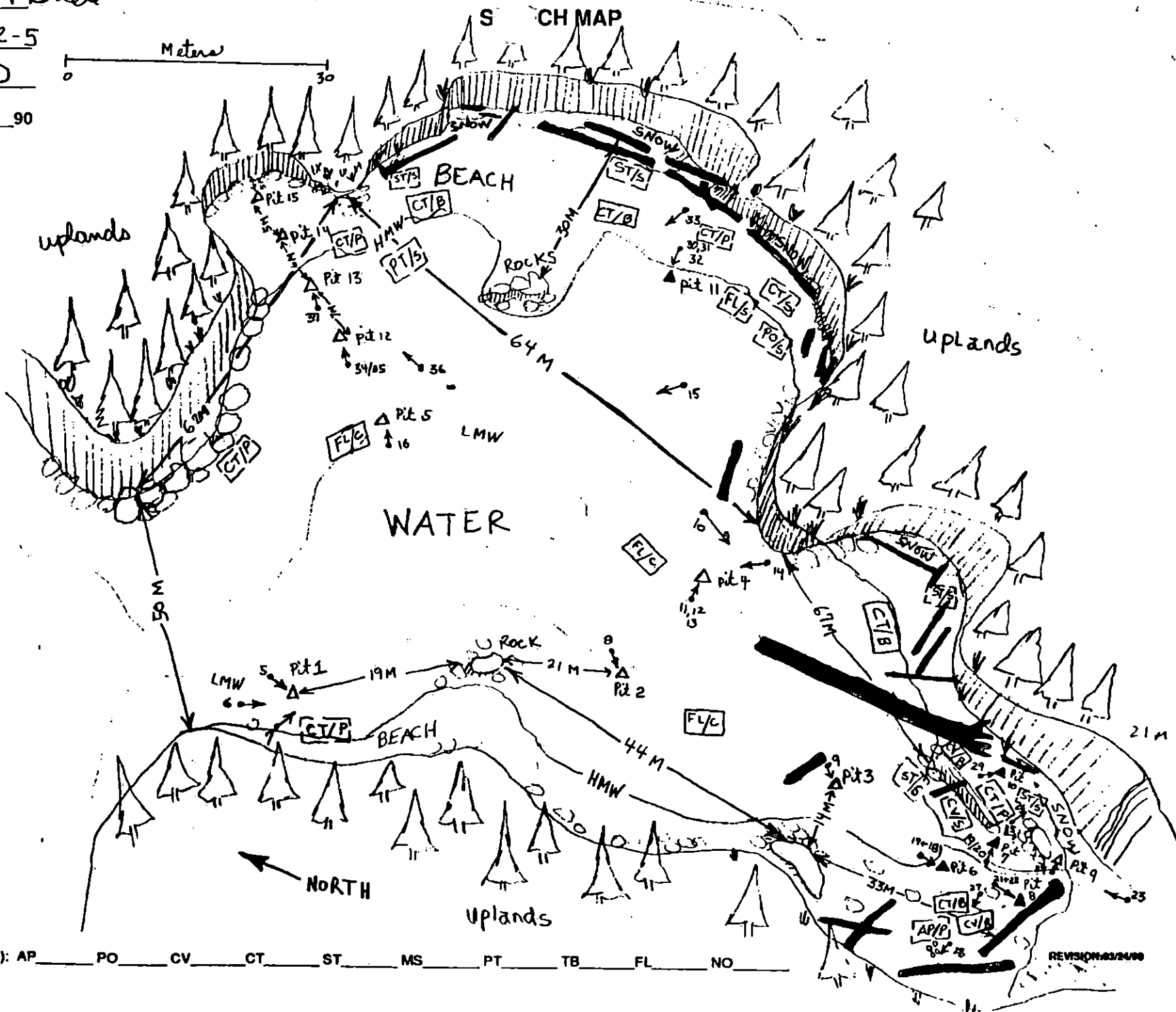
CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bndry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWL/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

- 1 Pit - No Subsurface Oil
- 2 Pit - Subsurface Oil
- Continuous Distribution
- Broken Distribution
- Patchy Distribution
- Splashed Distribution
- Oiled Vegetation:
- 1 Photo location, direction, and number

Oil Character Length (m): AP PO CV CT ST MS PT TB FL NO



REVISION: 03/24/00

OG _____

SEGMENT S, _____

SUBDIVISION _____

DATE ____ / ____ 90

CHECKLIST

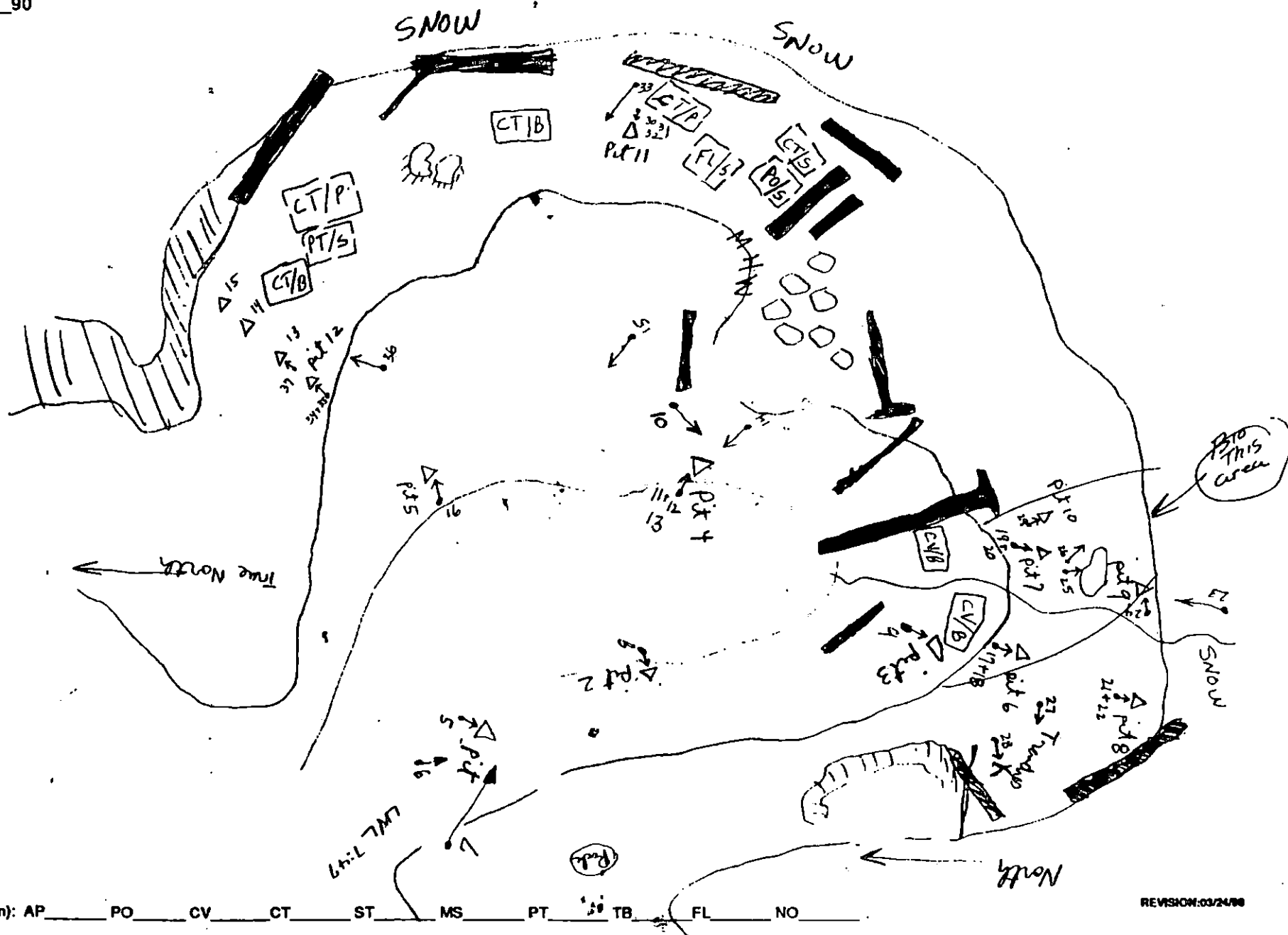
- ___ N Arrow
- ___ Approx. Scale
- ___ Seg/Sub Bndry
- ___ Oil Dist.
- ___ Width
- ___ Length
- ___ % Cover
- ___ Substrate Character
- ___ Est. HWL/LWL
- ___ SSL
- ___ Profile Location(s)
- ___ Profile(s)
- ___ Pit Location(s)
- ___ Photo Location(s)

LEGEND

- 1 Δ
Pit - No Subsurface Oil
- 2 $\blacktriangle$
Pit - Subsurface Oil
- CT/C
Continuous Distribution
- CT/B
Broken Distribution
- CT/P
Patchy Distribution
- CT/S
Splashed Distribution
- Oiled Vegetation
- 1 $\rightarrow$
Photo location, direction, and number

Oil Character Length (m): AP _____ PO _____ CV _____ CT _____ ST _____ MS _____ PT _____ TB _____ FL _____ NO _____

S CH MAP



REVISION: 03/24/90

SHORELINE ECOLOGICAL SUMMARY (Page 1 of 2)

REVISION: 03/22/90

Segment ST / CR-5 Subdivision D Date (mo / day / yr) 4/9/90Time (24 hr) 1430-2015 Biologist SHARMAN(A) Substrate type and % of segments: SUBDIV.(1) Bedrock 20 (2) Boulder 15 (3) Cobble 35 (4) Pebble 20 (5) Sand 10 (6) Silt ^{+ granules}(B) Overall % cover of biota (% of segment): Dense Moderate X Low
SUBDIV.

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (O)

Photographs: Roll No. ST-12-6Frames 5-37

BARNACLES

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2				
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

MYTILUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2				
3	3	3	3	3	3	3	3	3				
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

GASTROPODS (NUCELLA, LITTORINA, LYMAETA)

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2				
3	3	3	3	3	3	3	3	3				
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

FUCUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2						
3	3	3	3	3	3	3	3	3				
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

Wildlife Observations/ General Comments: The above summary describes the lagoon itself, as do the following comments. Wildlife observed: unidentified hawk, flock of Chibchodas foraging through forest margin, 1 rail, unidentified gull flocks and bones in supratidal (prayed upon debris, 2 no oil). Echinus sp. sponges found in exploratory pits - appear active and healthy in LTZ cobble/sandy/muddy sediments, ditto for clams (Protothaca) - and no smell of oil in tissues. (Cont.)

Ecological Considerations:

Please see this section for subdivision CR-5-A. Environmental Priority 1, primarily because of pinniped pupping/melting habitat on points, headlands, and nearshore/offshore islets (sensitivity codes 1E, 3N, P, O, Q). Very high sensitivity to disturbance by human activity during the critical periods. The lagoon is a protected embayment surrounded by a complex low-angle beach with boulder/bedrock outcrops/cobbles, and a LTZ dominated by fine sediments (sandy mud) in a cobble matrix, richly organic. I suggest this area is quite important to birds and terrestrial mammals, somewhat

General Comments (cont.):

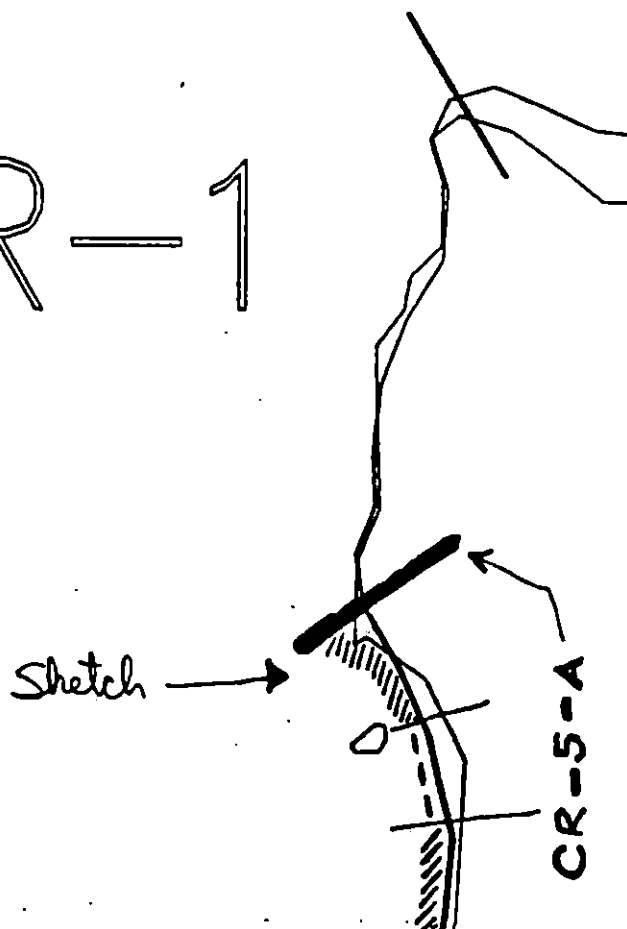
Bands of ulvas (5-10m wide) extend down through the intertidal zone where freshwater seeps come out of the beach. This inner lagoon appears to have been pressure washed last summer - large barnacles knocked off rocks (which should have been otherwise protected).

Ecological Considerations (cont.):

similarly to the more terrestrial enclosed brackish lagoon of CR-5-B. Again, the wildlife could be easily displaced by human activity. But probably most important is the potential for physically disturbing and substantially altering the relatively "delicate" protected lagoon sediments, likely profoundly affecting the biological community. Despite "significant" oiling back in this pocket, and an outlook for a more long-term period for natural removal, the local biota appears to be structural and functioning normally. Subsurface infauna (clams & worms) seem to be normal and healthy; there are no conspicuous absences from the community. Between last spring (oil spill), last summer (treatment), and this spring (assessment), this area has received a great deal more disturbance than it deserves. It is probable that further "assistance", to the extent that it involves intense human activity and/or physical disturbance, would result in net damage rather than improvement.

(by human trampling and other physical disturbance)

CR-1

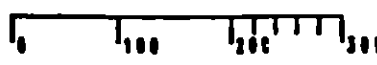


↓ PWS 66A

XXXX Wide
 //// Medium
 ---- Narrow
 TTTT Very Light
 OOOO No Oil

CR-5

ADEC Segment Length: 2390m



Map Key: PWS-66b
 Name: Randy McBue
 Date: 4/9/90
 Date Entered:

CR-5

Sketch

Sketch

- See
enlarged
map of area
and sketch

CR-5-C

CH

CR-5

✓ E

CR-5

XXXX Wide

/// Medium

----- N O T R O W

TTTT Very Light

0000 No Oil

ADEC Segment Length: 2390m

METERS

Map Key: PWS-660

Name: Randy McBride

Date: 4/9/90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ CR-05 SUBDIVISION E (5 OF 5) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1E Main Bay Hatchery release (4/20 to 5/10)
1L Set net sites (6/11 to 7/25)
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
6Y Recreation: Special use destination
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Do not trample, disturb, or bioremediate unoiled biota.

SHPO SIGNATURE: [Signature] DATE: 4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 418 m: Narrow 0 m: V.Light 155 m: No Oil 49 m
Subsurface Oil Observed: Yes X No Maximum Depth 35+cm

RECOMMENDATIONS:

☐ No Treatment Recommended	☐ Snare/Absorbent Booms
☒ Treatment Recommended	☐ Oil Snares (pom poms)
☒ Manual Pickup	☐ Absorbents (pads, rolls, etc)
☐ Bioremediation	☐ Spot Washing: <u> </u> Wands
☐ Tarmat: <u> </u> Breakup	☐ <u> </u> Beach Cleaner
☐ <u> </u> Removal	☐ Other (see comments)

COMMENTS: Recommend removal of snare boom from pocket cove indicated on sketch map.

CHECK FOR REMAINING ASPHALT PATCHES AND REMOVE

TAG COMMENTS:

TAG APPROVAL DATE: 4/24/90

ADEC Art Weiner

EXXON Andy Katz

NOAA Joseph Talbot

USCG Mr. J. Hall

FOSC: [Signature] DATE: 5-3-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
 1D Esther Hatchery release (4/15 to 6/1)
 1E Main Bay Hatchery release (4/20 to 5/10)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 1I Gill net area (6/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (6/11 to 7/25)
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
 Restrict boat traffic to essential minimum. Avoid damage to unopened intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (6/1 to 9/15)
 6V Anchorages (6/1 to 9/15)
 6W Forest Service cabins (6/1 to 9/15)
 6X Lodge (6/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7HH Finfish harvesting
 7II Deer harvesting (8/15 to 2/28)
 7JJ Invertebrate harvesting
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / CR5 SUBDIVISION: E DATE 4/8/90

USCG

NAME GARY OTT

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Remove SNARE BOON IF POSSIBLE.

OIL OBSERVED AT THIS LOCATION IS STABLE.

NO MECHANICAL TREATMENT WOULD NECESSARILY INCREASE REMOVAL ACTION. ✓

ADEC

NAME MICHAEL J. EBEL

SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

? ☐ TREATMENT SUGGESTED

CR-5-E: This pocket core was found to have 2 asphalt patches totaling 3m² x 4cm on the surface of the UTZ (we broke them up). Splotches of pooled oil and ^{cover} were also present with occasional patches of cover, and a broken band of coat interspersed with splashes of stain. Three of the 13 pits dug had any significant oiling (shin black - dark black) however, the tapered lens went from 5cm below the surface to 25cm below within 5m of lateral distance, while the lens maintained a thickness of 3-5cm. This area would probably qualify (by the State's criteria) for bioremediation. No other treatment should be considered.

LAND MANAGER - USDA FOREST SERVICE

NAME DON BREITINGER

SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Remove frozen snare
pom-pom boom on
upper beach area.

SHORELINE OILING SUMMARY

REVISION NO. 02/22/90

OG RANDY MCBRIDE NOAA GARY OTT SEGMENT ST/ CR-5
 BIO LEWIS SHARMAN LAND REPUSES DON BREITINGER SUBDIVISION E (S of S)
 EXXON LEONARD HERBST ADEC MICHAEL EBEL TIME 13:48 to 14:00 4/7/90
 TEAM NO.: 12 TIDE LEVEL: +1.7' to +1.6' 4/7/90 DATE 4/7/90
 EST. SUBDIVISION LENGTH: 1058 m 2.2' ☒ Surf ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: North to south
 SURFACE SEDIMENTS: R 40 % B 20 % C 15 % P 15 % G 5 % S 5 % M 0 % V 0 %
 SLOPE: Long 30 % Hang 50 % Vert 20 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 643 m N 0 m VL 340 m NO 75 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	B	P	R	SP	BP	OT	ST	SL	BU	U	M	U	U	U	U
ASPHALT PAVEMENT			X								X					
POOLED				X							X					
COVER			O	X				X			X					
COAT	X	Δ	+		+			X			X	+				
STAIN			X		X						X					
MOUSSE																
PATTIES																
TARBALLS																
FILM	X		•		X						•	X				
NO OIL										X					X	

PAVEMENT: H F (S) 3 sq. m by 4 cm

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? NO BR (RW) SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	X		
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☒ YES ☐ NOTYPE from from clothing
#BAGS

Photographs:

Roll No. ST-12-5 and ST-12-6
30-36 1-4
Frames

SUBSURFACE OIL * Sheen on water in pit, origin uncertain (Pits 24, & 13)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CH)	BELOW		OIL / FILM COLOR								PIT ZONE	A N A	SUBSURFACE SEDIMENTS
		OF	OR	OL	OF	NO		UO	UC	SP	BP	OT	ST	SL	BU	U	M	U		
1	17					X	-		X							X				B, C, P, G, S
* 2	17				X		CANNOT DETERMINE		X	X						X				B, C NEARSHORE SHEEN AND OIL DEPOSITS
3	17				X		15-17		X	X	•							X		CP GS
* 4	18				X		CANNOT DETERMINE		X				X				X			CP GS
5	20		•		X		5-8		X	X	•					X				CP GS
6	21		•		X		5-8		X	X	•					X				CP GS some organics

COMMENTS

CR-5-E is characterized by high angle bedrock with boulders and cobbles along the northern portion of the subdivision. The northern portion is dominated mainly by medium silt. The southern portion is dominated low angle beaches that are characterized by small cobbles, pebbles, and granules. The southern portion is categorized predominately by very light silt with some narrow and no silt areas. (continued)

SEGMENT ST/ CR-5 SUBDIVISION E

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS	
		OP	OR	OL	OF	RO		UD	UC	SOB	BR	DBL	BN	GY	SL	DRK	TL	LR	SU	U	M			L
7	33					X	— — —		X									X						PCS organic poor
8	30		X			X	20 - 25	X	X	+	X	•						+	X					CPGS
9	37					X	— — —		X										X					PGS
10	40				•	X	25 - 35		X			X	•							X				CGPS ST-12-6 photo 3+4
11	25					X	— — —		X											X				CGPS organic rich
12	25					X	— — —		X										X					GPS
13	15				X		CANNOT DETERMINE		X				X					X						BC PGS
							.																	
							.																	
							.																	
							.																	
							.																	
							.																	
							.																	
							.																	
							.																	

COMMENTS

overall, the subdivision lies on the protected side of Crafton Island and ~~has a~~ is exposed to small ~~amounts~~ distances of fetch. These small ^{fetch} distances restrict wave activity causing little natural wave energy to rework and move the beach area.

REVIEWED 7W DATE 4/12/90

OG R A M. E. D. C.

SEGMENT ST/ CR-5

SUBDIVISION E

DATE 4 / 8 90

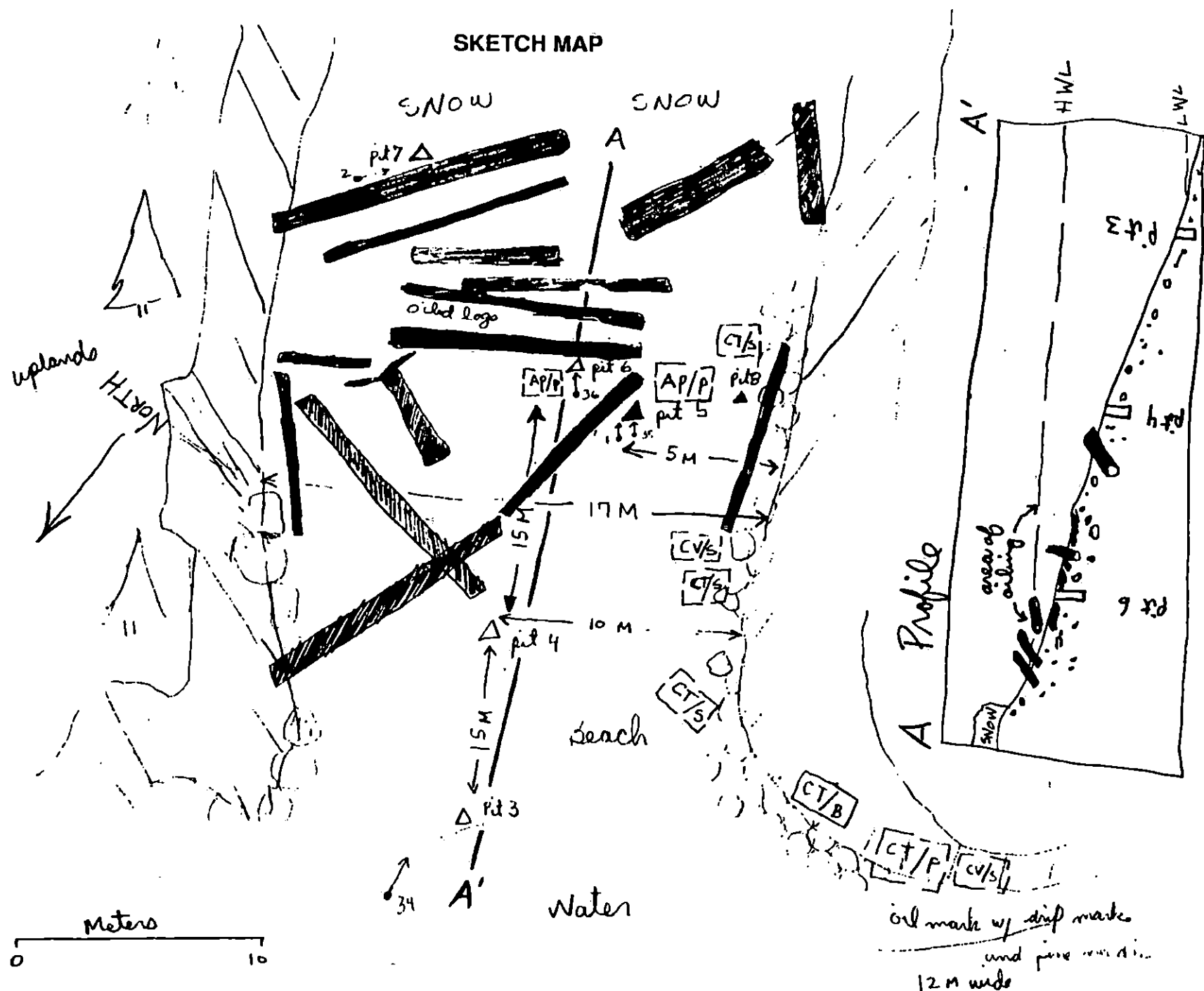
CHECKLIST

- ☒ Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Bndry
- ☒ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWL/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

- 1 Δ
Pit - No Subsurface Oil
- 2 Δ
Pit - Subsurface Oil
- $\boxed{CT/C}$
Continuous Distribution
- $\boxed{CT/B}$
Broken Distribution
- $\boxed{CT/P}$
Patchy Distribution
- $\boxed{CT/S}$
Splashed Distribution
- Oiled Vegetation
- Photo location, direction, and number

SKETCH MAP



Oil Character Length (m): AP 16 PO CV 15 CT 140 ST MS PT TB FL NO

REVISION: 93/24/98

SHORELINE ECOLOGICAL SUMMARY (Page 1 of 2)

REVISION: 03/22/90

Segment ST / CR-5 Subdivision E Date (mo / day / yr) 4/8/90Time (24 hr) 0845-0945 Biologist SHARMAN(A) Substrate type and % of segments: SUBDIV.
(1) Bedrock 40 (2) Boulder 20 (3) Cobble 15 (4) Pebble 15 (5) Sand 10 (6) Silt ^{+ granules}(B) Overall % cover of biota (% of segment): Dense Moderate X Low
SUBDIV.

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:
Roll No. ST-12-5 / ST-12-6
Frames 30-36 / 1-4

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

MYTILUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

GASTROPODS (ANCELLA, LITTORINA, LIMAEAE)

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

FUCUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments: 1 sea otter, 1 river otter, 1 adult eagle, 3 magpies.
 In general, the overall intertidal community is normally diverse and productive. No
 particular comments. Adult barnacle mortality (based upon empty bracts and larval
 scars) is 10-20% in this subdivision (no evidence of any relationship to oiling).
 Additional wildlife: 1 harbor seal, 4 adult eagles, 5 surf Scoters, sea turtles and other marine
 Ecological Considerations: in STB. Several small (3cm) unidentified jellyfish - not harmful. (cont.)
 Please see this section for subdivision CR-5-A. Environmental Priority 1,
 primarily because of pinniped pupping/moulting habitat on points, headlands, and
 nearshore/offshore islets (sensitivity codes 1E, 3N, P, O, A). Very high sensitivity to
 disturbance by human activity during the critical periods.

General Comments (cont.):

This subdivision is similar to subdivision CR-5-C. A diverse and productive LTZ with abundant small (≈ 25 cm diameter) Mytilus and also occasional Dermasterias. Leptasterias (some brooding) are beneath boulders, with barnacle spat, Ampelodesma, and abundant amphipods. Seymouria and Rhodomela grade up into the Fucus zone. As in CR-5-C, there is evidence, from barnacle basal scars and damaged mussel beds (which should have been otherwise protected from natural disturbance agents), of pressure washing last summer.

CR-1

Sketch →

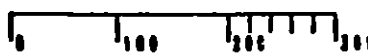
CR-5-A

↓ PWS 66A

XXXX Wide
//// Medium
--- Narrow
TTTT Very Light
OOOO No Oil

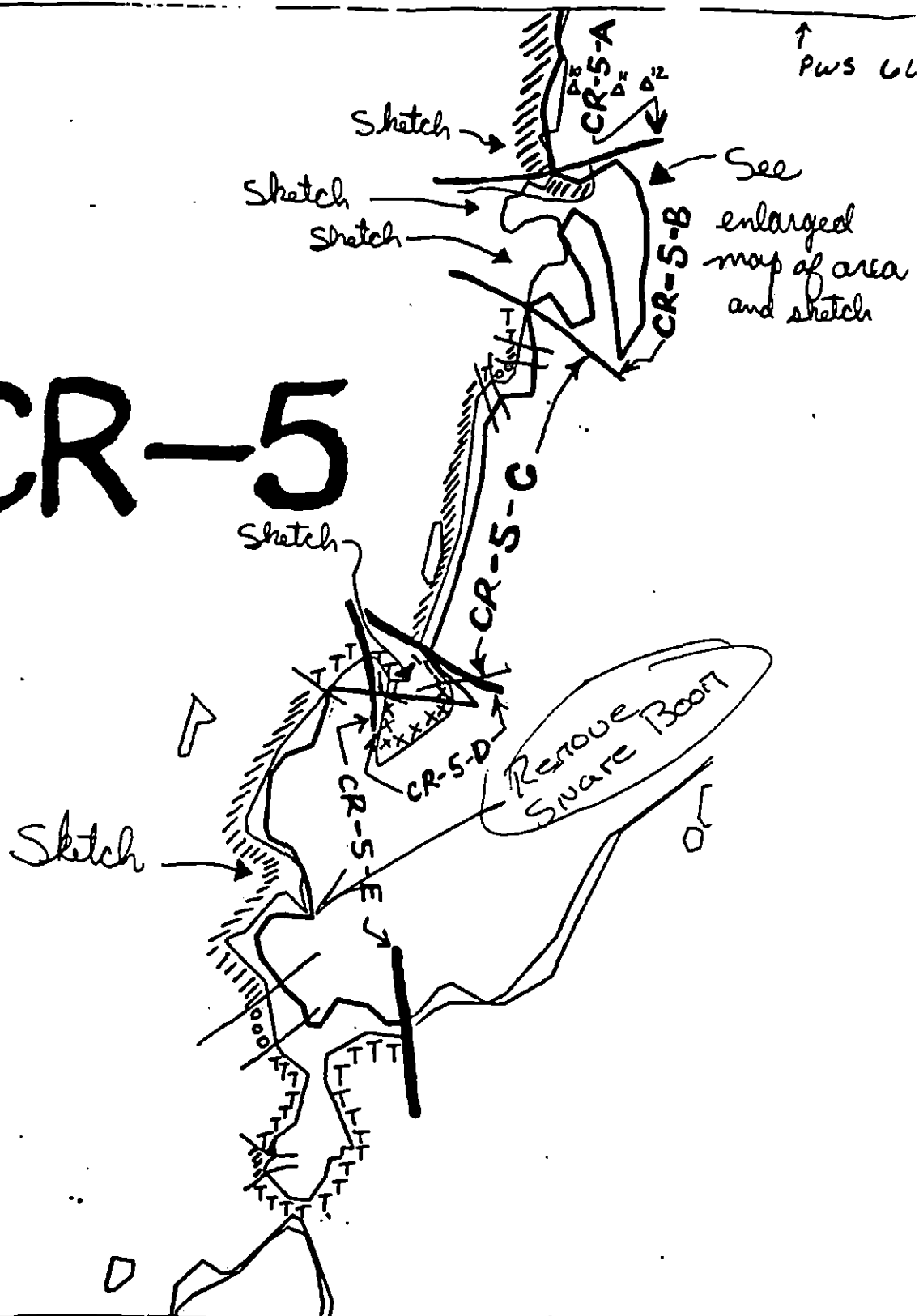
CR-5

ADEC Segment Length: 2390m



Map Key: PWS-66b
Name: Randy McBue
Date: 4/9/90
Date Entered:

CR-5



XXXX Wide
 /// Medium
 --- Narrow
 TTTT Very Light
 0000 No Oil

CR-5

ADEC Segment Length: 2390m



Map Key: PWS-66a
 Name: Randy McBride
 Date: 4/9/90
 Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ CS-01 SUBDIVISION A (1 OF 1) DATE 4/27/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
1C Salmon fry nursery area (4/31 to 7/31)
1J Purse seine area (7/1 to 8/31)
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
7JJ Subsistence area: Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: J. David M. McKinnon DATE: 5/8/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 416 m: No Oil 4897 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

<u>X</u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u> </u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u> </u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u> </u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u> </u> Tarmat Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 5/8/90.

ADEC Art Womer D. Dennis

EXXON Andy Gar Paul

NOAA Gary Petros Andy Padine

USCG G.A. Reiter G.A. Ditter

FOSC: My L DATE: 7-10-90

✓ 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)

1B Salmon stream mouth - spawning (7/10 to 8/31)

No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: ADF&G John Morison 267-2324

3 Salmon fry nursery area (4/31 to 7/31)

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D Esther Hatchery release (4/15 to 6/15)

1E Main Bay Hatchery release (4/20 to 6/15)

1F Sawmill Bay Hatchery release (4/15 to 6/1)

1G Cannery Creek Hatchery release (4/21 to 6/1)

1H Remote release site

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.

AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214

1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511

✓ 1I Gill net area (6/7 to 8/31)

✓ 1J Purse seine area (7/20 to 9/30)

1K Purse seine hook-off (7/20 to 9/30)

1L Set net sites (8/11 to 7/25)

Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

2M Herring spawning (4/1 to 6/15)

Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235

IP Harbor seal and sea lion pupping (5/15 to 7/1)

Q Harbor seal and sea lion molting (8/15 to 9/15)

Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235

ADF&G Don Calkins 267-2403

5R Seabird colony (5/1 to 9/1)

Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S Shorebird/waterfowl concentration (4/1 to 5/15)

Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

ADF&G Tom Roth 267-2206

✓ 5T All Bald Eagle nests (3/1 to 6/1)

Active Bald Eagle nests (3/1 to 9/1)

Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U Recreation: Tent sites (6/1 to 9/15)

6V Anchorages (6/1 to 9/15)

6W Forest Service cabins (6/1 to 9/15)

6X Lodge (6/1 to 9/15)

6Y Special use destination

7Z Subsistence area: Salmon harvesting (5/1 to 9/30)

7HH Finfish harvesting

7H Deer harvesting (8/15 to 2/28)

✓ 7JJ Invertebrate harvesting

Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.

AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / CS-01 SUBDIVISION: A-1 of 1 DATE 04/27/90**SCG**NAME David S. Thomas SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED**ADEC**NAME Clara J. Crosby SIGNATURE Clara J. Crosby☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Oil recovery within this segment would
be minimal -

LAND MANAGERNAME John J. Mearin SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY

REVISION NO 04-13-90

OG RICK GILLIE USCG DAVE THOMAS SEGMENT ST/ CS-01
 BIO DAVE LOHSE LAND REP JOHN MOONIN (EB) SUBDIVISION A (1 OF 1)
 EXXON FRANK FOX ADEC CLARA CROSBY TIME 19:10 to 20:50
 TEAM NO. 13 TIDE LEVEL +6 to +4 DATE 04/27/90
 EST. SUBDIVISION LENGTH: 6,250 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 PLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 30 % B 20 % C 15 % P 15 % G 5 % S 5 % M 5 % V 5 %
 SLOPE: Long 70 % Hang 20 % Vert 10 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 120 m NO 6,130 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	C	S	P	S	SL	DR	GY	BR	LR	SU	U	M	U
ASPHALT PAVEMENT				X		X					X		
POOLED													
COVER				X		X					X		
COAT				X		X					X		
STAIN													
MOUSSE													
PATTIES													
TARBALLS													
FILM													
OIL										X	X	X	

PAVEMENT H F (S) 5 sq. m by 3 cmPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT			DID YOU COLLECT DEBRIS?
	SM	MD	LG	
Logs				YES ☒ NO ☐
Vegetation				
Trash				
Debris	X			
				TYPE <u>AP/S</u>
				#BAGS <u>1 1/2</u>

Photographs: (NOT OILED)Roll No. ST-13-05Frames 30, 31, 32

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CE)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UC	SL	DR	GY	BR	LR	SU	U	M	U				
1	20					X	.		X						X							P-P
2	20					X	.		X						X							P-P
3	30					X	.		X						X							P-PG
4	40					X	.		X						X							S-G, S
5	30					X	.		X								X					C-C, G
6	20					X	.		X						X							C-P, S

COMMENTS

① SURVEY FROM 12:20 to 13:50 AND 19:10 to 20:50

② GEOMORPHOLOGY: LAGOON, COBBLE PIT, BOUNDER/ROCK BAY

③ OILING: NO OIL TO VERY LIGHT. AN OILY MATERIAL RECOVERED.

REVIEWED BAT DATE 1 MAY 90

SHORELINE OILING SUMMARY (PAGE 2)

REVISION 04.12.90

SEGMENT ST/ CS-01 SUBDIVISION A- (1 OF 1)

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR							PIT ZONE				A N A	SHEER (Y/N)	!	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	1	2	3	4	5	6	7	BU	U	W	U				
7	30					X	.		X									X						Bk-P.S
8	20					X	.		X								X							C-P.S
9	25					X	.		X								X							C-P.S
10	40					X	.		X								X							P-G.S
11	30					X	.		X								X							P-G.S
							.																	
							.																	
							.																	
							.																	
							.																	
							.																	
							.																	
							.																	
							.																	
							.																	
							.																	

COMMENTS

- ① PREVIOUS SURVEY (ADEC WALKATHON) SHOWED NO OIL ON EXPOSED OUTER COAST OF SEGMENT.
- ② ALL VISIBLE OILY MATERIAL RECOVERED FROM SHORELINE. TOTAL = 60 LBS OILED SEDIMENTS (1 1/2 BAGS)
- ③ 2950 M OF ORIGINAL SEGMENT LENGTH NOT SURVEYED.

REVIEWED BAT DATE 1 MAY 90

00 KICK GILLIE

SEGMENT CS-01

SUBDIVISION A-101

DATE 04/27/90

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Bndry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. MIN/LVL
- ☒ SSI
- ☒ Profile Location(s)
- ☒ Photo Location(s)

LEGEND

1 Δ
PR - No Subsurface Oil

2 Δ
PR - Subsurface Oil

CT/C
Continuous Distribution

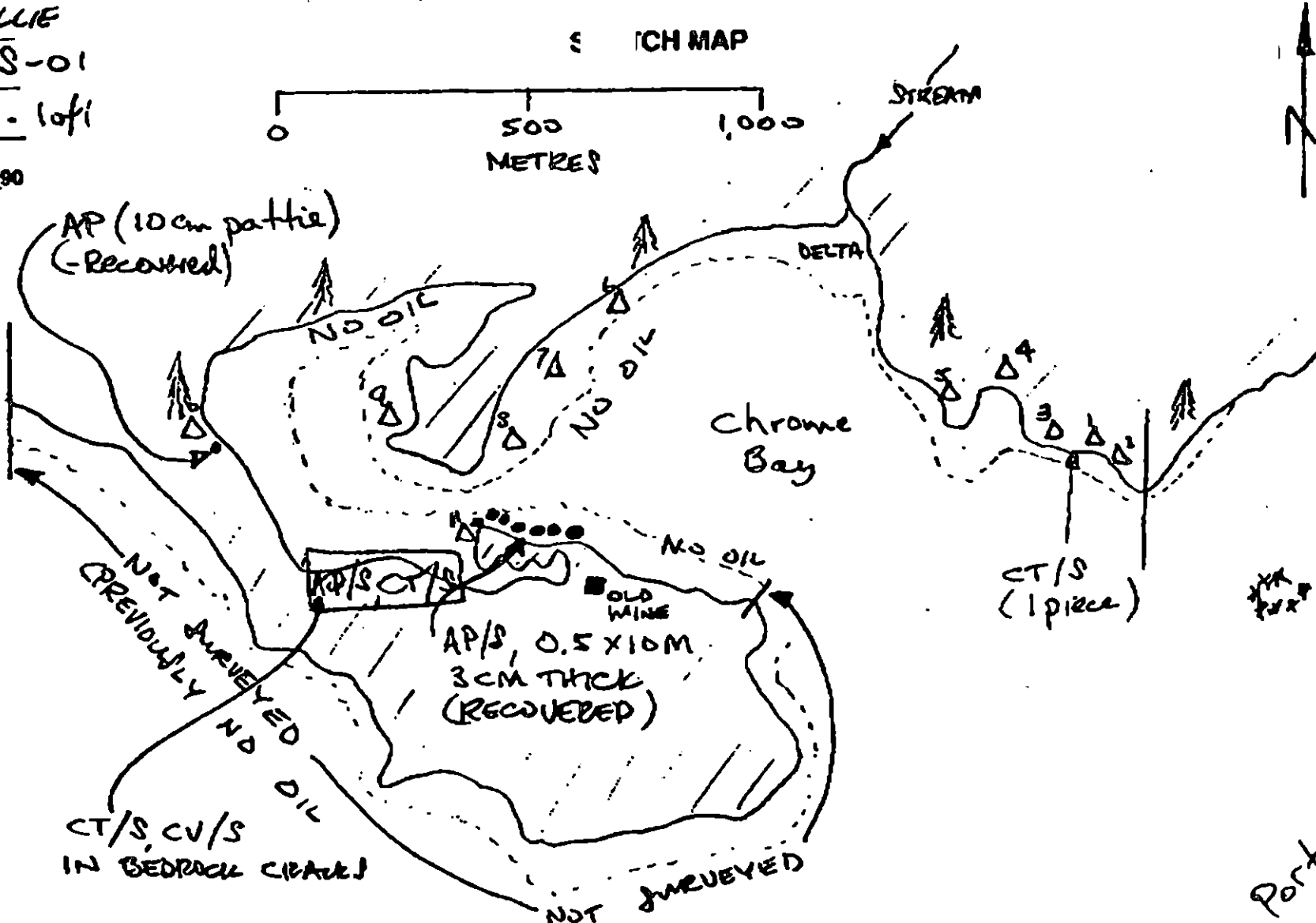
CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oiled Vegetation

1 ●●
Photo location, direction, and number



NOTE: ALL AP/S RECOVERED FROM PERMIT
TOTAL ~ 60 LBS OILED PEBBLES/SAND
(1 1/2 BAGS)

Oil Character Length (m): AP 10 PO 0 CV 0 CT 10 ST 0 MS 0 PT 1 TB 0 FL 0 NO 6130

REVISION 000000

Port Chatham

1 of 2

SHORELINE ECOLOGICAL SUMMARY

REVISION: 00/22/90

Segment ST/ CS001 Subdivision A Date (mo/day/yr) 4-27-90Time (24 hr) 19:00 Biologist David Lohse(A) Substrate type and % of segments:
(1) Bedrock 30 (2) Boulder 20 (3) Cobble 15 (4) Pebble 15 (5) Sand 10 (6) Silt 5(B) Overall % cover of biota (% of segment): Dense 20 Moderate 20 Low 60

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (O)

Photographs:
Roll No. ST-13-5Frames 30-32

BARNACLES

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

MYTILUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

GASTROPODS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

FUCUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

Wildlife Observations/ General Comments:

See page 2

Ecological Considerations:

1 Bald eagle nest found in segment. It was occupied by a mature bald eagle. See OG map for location.

Other ecological sensitivities/considerations are unknown.

Shoreline Ecological Summary

Z of 2

Segment ST-CS001

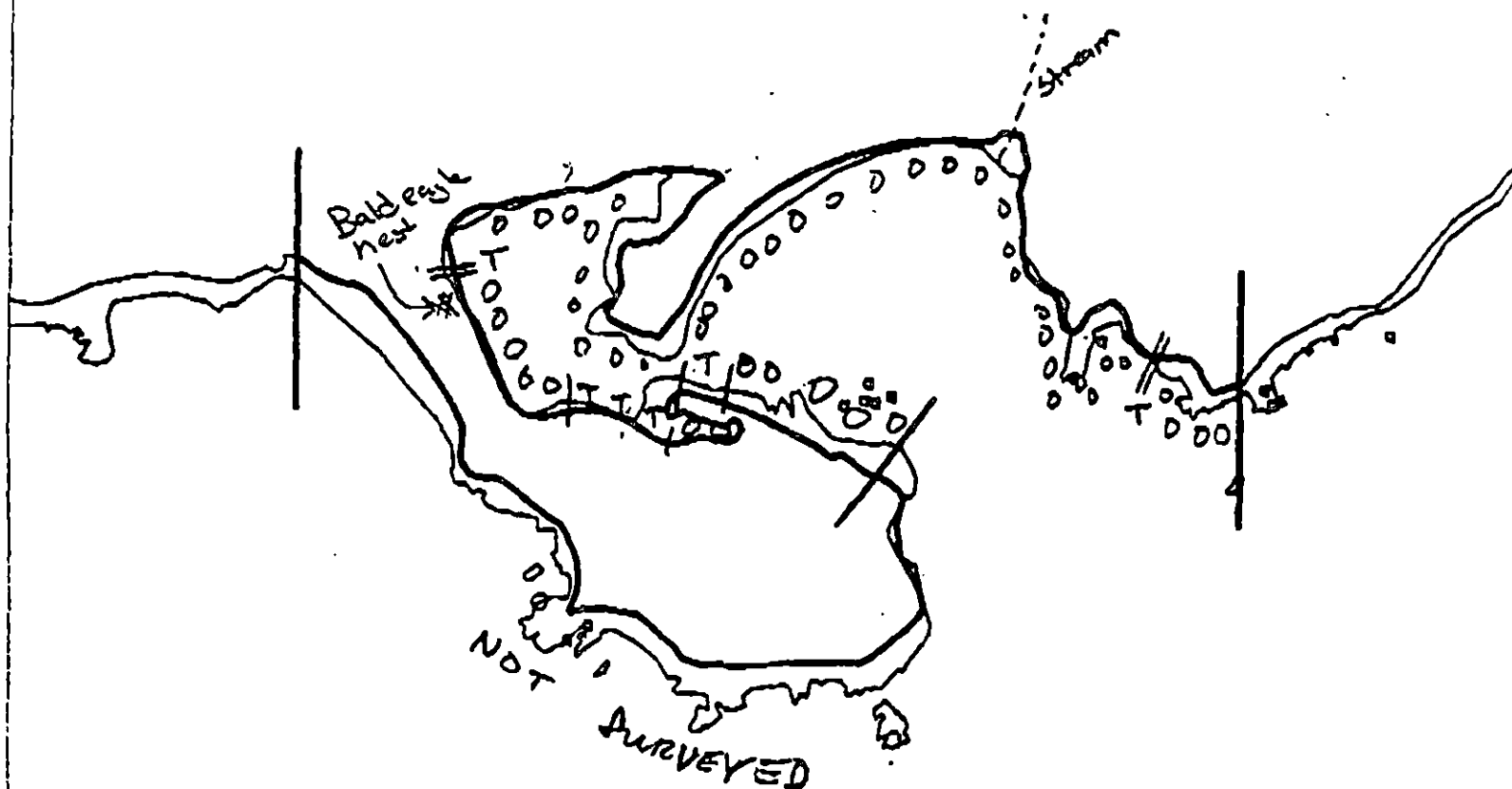
Subdivision A

4-27-90

Biologist: David Lohse

L. Life Observations/General Comments

- Present in low intertidal: Halosaccus, Entomomorpha, Ulva, Alaria, Porphya, unknown yellow sponge, coralline algae, Epiactus, Katharina tunicata, Tealia, Laminaia, Analipus, unknown red algal "blade", unknown red algal "branch" (Rhodomenia?)
mid intertidal: Analipus, Halosaccus, Entomomorpha, Porphya, Endocladia, Scytosiphon, Epiactus, unknown red algal "branch" (Rhodomenia?), coralline algae, Pagurus, Nucula, Sculpins, Alaria (in tide pools), Cladophora, Ectocarpus
high intertidal: Ulva, Scytosiphon (in tide pools)
- Algal cover was ~75% on low intertidal bedrock ~~area~~ (one site estimated) and between 60-75% on low intertidal boulders (2 sites estimated).
- Barnacle mortality on mid-intertidal bedrock was ~20% (estimate of one site).
- One stream located in segment. Unknown whether or not it is anadromous.
- Virtually all of the species listed in observation¹ above were found in the section of the segment between the easternmost ~~the~~ segment boundary and the stream. This section was primarily composed of bedrock and boulders. Most of the rest of the segment (at least what was surveyed) was composed of cobble → mud beaches (with some boulders) and was actually quite ~~low~~ low in diversity.



CS-01

XXX Wide

/// Medium

--- Narrow

TTTT Very light

CS-1

ADEC Segment Length: 7814m

Map Key: KEN-29

Name: Rick Gilie

Date: 04/27/90

SHORELINE EVALUATION

SEGMENT ST/ CU-01 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Salmon stream mouth (no. 12995)

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)

1B Salmon stream mouth - spawning (7/10 to 8/31)

6U Recreation: Tent sites (6/1 to 9/15)

6V Recreation: Anchorages (6/1 to 9/15)

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid disturbance/damage to uncoiled biota and substrate.

SHPO SIGNATURE

Charles H. Hume

DATE:

4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 193 m: Narrow 237 m: V. Light 1560 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 17 cm

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X Manual Pickup

X Bioremediation

X Tarmat: Breakup

X Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: The recommended treatment activities are as follows: 1) Manual pick up of debris, 2) Removal of tarmat and, 3) Bioremediation of areas shown on attached sketch map. Treatment activities should be conducted between 5/15 and 7/10 based on above salmon constraints, unless approved by ADF&G.

TAG COMMENTS:

TAG APPROVAL DATE:

4/25/90

ADEC

Art Weissen

EXXON

Andrew

NOAA

Joseph Talbot

USCG

Kenneth Kean

FOSC:

M L

DATE:

5-3-90

PWS ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
 1D Esther Hatchery release (4/15 to 6/1)
 1E Main Bay Hatchery release (4/20 to 5/10)
 1F Sawmill Bay Hatchery release (4/20 to 5/10)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 1I Gill net area (6/7 to 8/31)
 1J Purse seine area (7/21 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (6/11 to 7/25)
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
 Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (6/1 to 9/15)
 6V Anchorages (6/1 to 9/15)
 6W Forest Service cabins (6/1 to 9/15)
 6X Lodge (6/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7HH Finfish harvesting
 7II Deer harvesting (8/15 to 2/28)
 7JJ Invertebrate harvesting
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

EGMENT ST / CU-01 SUBDIVISION: A-1 of 1 DATE 04/04/9

USCG

NAME Daniel S. Thomas SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

ADEC

NAME Clara Crosby SIGNATURE Clara S. Crosby

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Manual removal of mats - If Bioremediation is considered at this site - oiling should be broken ^(PIT#2) up or filled - Very Poor energy area -
to 170m.

LAND MANAGER

NAME MARSHA MARTIN / DNR SIGNATURE Marsha Martin

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Did not observe the outlying islands with Exxon & USCG Reps.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Rick GILLIE USCG bm 1 Thomas SEGMENT ST/ CU-01
 NO DAVE LOHSE LAND REP Marsha Martin SUBDIVISION A, 1st
 EXXON FRANK ADEC Clara Crosby (ADNR) TIME 18:00 to 19:30
 TEAM NO.: 13 TIDE LEVEL: +3 to +5 DATE 04/04/90
 EST. SUBDIVISION LENGTH: 286 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 30 % B 10 % C 20 % P 40 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Lang 40 % Hang 30 % Vert 20 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 100 m N 400 m VL 2316 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	IC	IS	IP	IR	BR	BL	BY	BL	BR	TL	LR	SL	SU	U	M	U
ASPHALT PAVEMENT	X					X							X			
POOLED																
COVER																
COAT		X	✓		XV										XV	
STAIN																
MOUSSE																
PATTIES				X			X						X			
TARBALLS				X			X						X			
FILM	X		✓		XV								XV			
NO OIL																X

PAVEMENT: H F (S) 100 sq. m by 4 cm

PATTIES / TARBALLS 0.5 BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash	X		
Debris			

DEBRIS COLLECTED

☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

Roll No. ST-13-2

Frames 21-24

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR								PIT ZONE	A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	VO	BR	BL	BY	BL	BR	TL	LR	SL			
1	30					X	.											X		P, G, C
2	15			X			2.8	X		X								X		P, G, SM
3	20	X					7-17	X		X								X		P, M
4	20					X	.											X		P, G
							.													
							.													

* OILED INTERVAL (5 CM IN PIT NO. 2 DOES NOT CONSTITUTE SUBSURFACE OIL
 COMMENTS

① OILING - AP/C DESIGNATED ALONG APPROX. 100m OF SITE 1 AREA. ALSO SUBSURFACE OIL TO DEPTH OF 17 cm.

- OTHERWISE, CT/S AND AP/S.

1 of 1

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / W001 Subdivision A Date (mo / day / yr) 4-4-90

Time (24 hr) 18:00 Biologist David Cohen

(A) Substrate type and % of segments:
(1) Bedrock 30 (2) Boulder 10 (3) Cobble 20 (4) Pebble 40 (5) Sand (6) Silt

(B) Overall % cover of biota (% of segment): Dense 15 Moderate 25 Low 60

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:
Roll No. ST-13-2

Frames 21-24

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

MYTILUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

GASTROPODS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

FUCUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments:

See page 2

Ecological Considerations:

1, 6V, 6Y - no comment

10 - One running stream located in segment - oil present in area of stream mouth

1. Moderate to dense mosaics in mid-intertidal cobble would be susceptible to foot traffic / disturbances.

Shoreline Ecological Summary

L of L

Segment ST-CU001

Subdivision A

4-4-90

Biologist David Lohse

Wildlife Observations/General Comments

1. present in mid-intertidal: Enteromorpha, Nueella, Ulva, Ectocarpus, Cladophora
unidentified "branching" red alga
2. One sea lion spotted in area
3. In mid-intertidal cobble/pebble mussel mortality reaches 50%
in some areas. Overall mortality is ~10%.
4. deer skeleton found above high tide line. No oil observed.
5. Lots of drift Fuws washed up on beach at one location. H₂S present
6. Low intertidal not sampled due to tidal level

OG Rick GILLIE

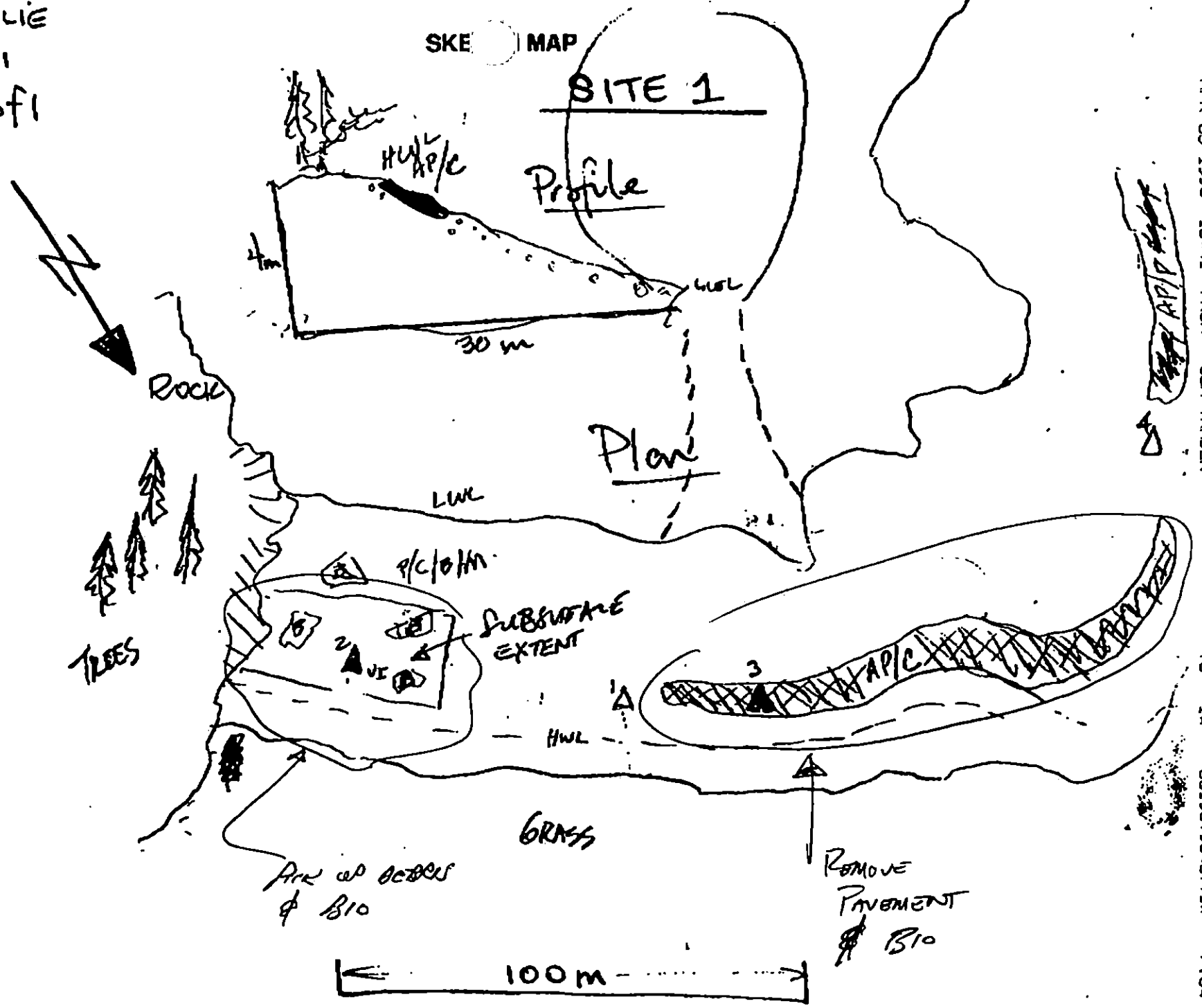
SEGMENT ST/ 1-01

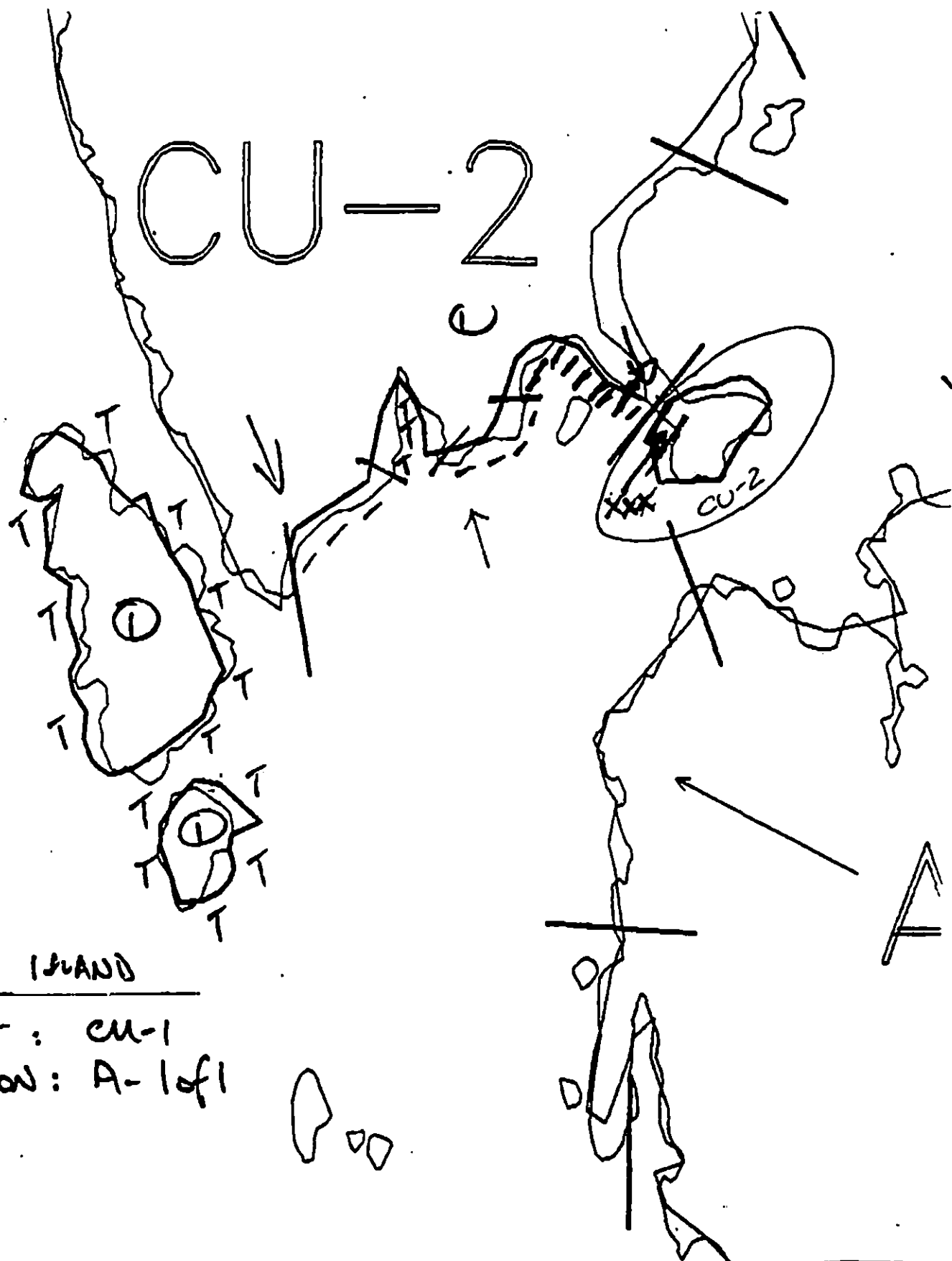
SUBDIVISION A-1 of 1

DATE 04/04/90

- CHECKLIST
- ☐ M Arrow
 - ☐ Approx. Scale
 - ☐ Seg/Sub Entry
 - ☐ Oil Dist.
 - ☐ Width
 - ☐ Length
 - ☐ % Cover
 - ☐ Substrate Character
 - ☐ Est. HWA/LWA
 - ☐ SSL
 - ☐ Profile Location(s)
 - ☐ Profile(s)
 - ☐ PI Location(s)
 - ☐ Photo Location(s)

- LEGEND
- 1 Δ
PI1 - No Subsurface Oil
 - 2 Δ
PI1 - Subsurface Oil
 - CT/C
Continuous Distribution
 - CT/B
Broken Distribution
 - CT/P
Patched Distribution
 - CT/S
Splashed Distribution
 - Oiled Vegetation
 - 1 $\Rightarrow$
Photo location, direction, and number





CULEBA ISLAND

SEGMENT : CU-1

SUBDIVISION : A-1 of 1

CU-1

XXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ADEC Segment Length: 2394m



Map Key: PWS-67

Name: GILLIE

Date: 4-4-90

Data Entered:

ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 224-20-12995

SEGMENT CU-1 SUBDIVISION A

WORK WINDOW	
Manual Pickup	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

SEE SUBDIVISION CONSTRAINT ADDENDUM CU-1A
FOR ADDITIONAL CONSTRAINT INFORMATION.

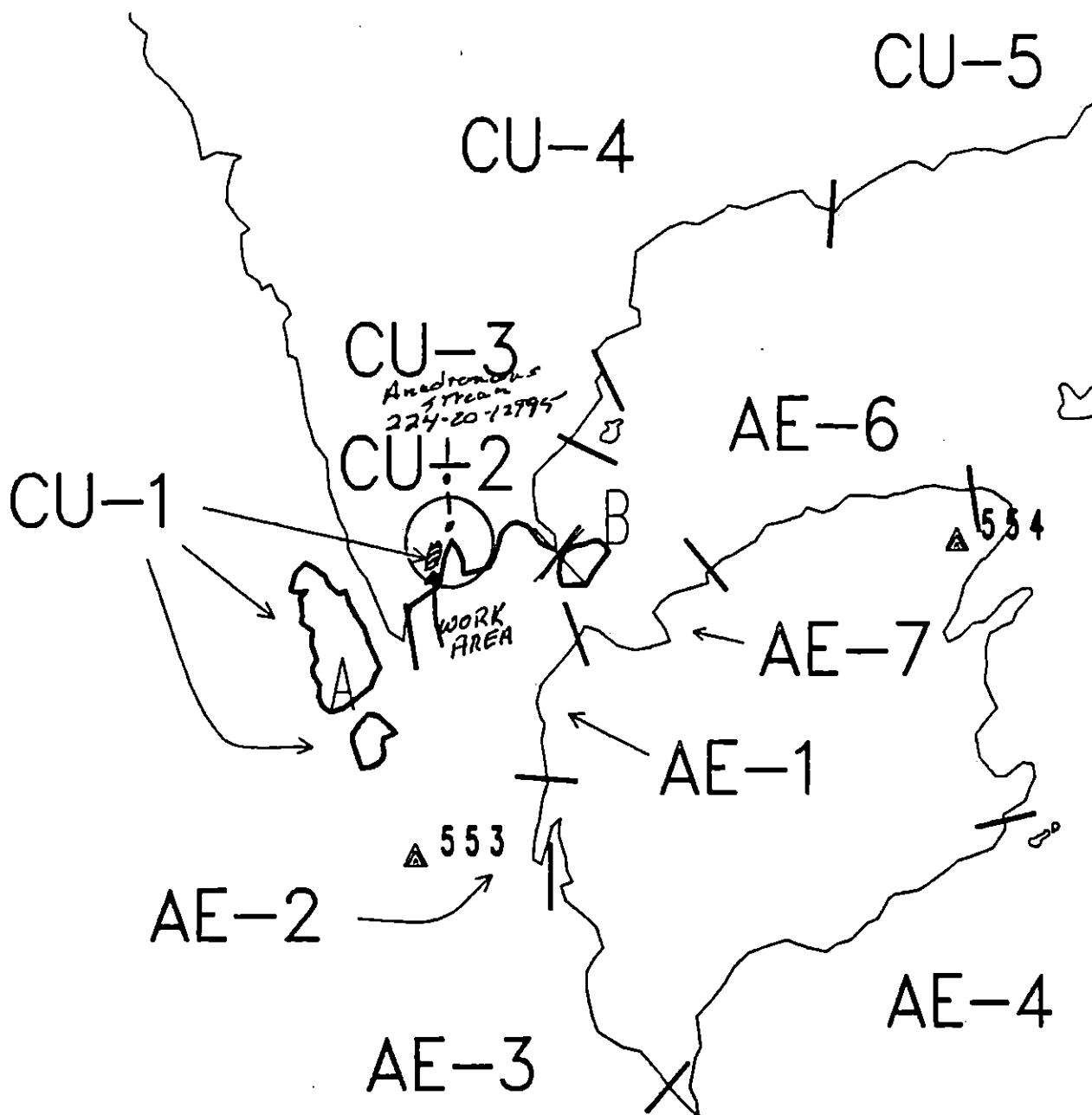
TAG APPROVAL DATE 5/29/90.
ADEC Art Weiner
EXXON Amory
NOAA B. Wescott
USCG G.A. Deiter

FOSC

DATE MAY 29 1990

Prepared By: Adam Meyer

Date 5/28/90



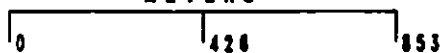
Exxon Company, USA

Map Key: PMS-CU-1

May 11, 1990



ECOLOGY MAP
SEGMENT CU-1
SUBDIVISION A (1 of 1)
METERS



- ★ Seabird Colony
- △ Eagle Nest

1 inch = 1399 feet

SHORELINE EVALUATION

SEGMENT ST/ CU-01 SUBDIVISION B (2 OF 2) DATE 4/24/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 224-20-12995 (12/89, Ps)

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)

1B Salmon stream mouth - spawning (7/10 to 8/31)

6Y Recreation: Special use destination

6U Recreation: Tent sites (6/1 to 9/15)

6V Recreation: Anchorages (6/1 to 9/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: *Charles J. H. [Signature]* DATE: 5/3/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 384 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

<u>X</u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u> </u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u> </u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u> </u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u> </u> Tarmat Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 5/3/90
ADEC *Art Weiner* *Dat Weiner*
EXXON *Andy TGA* *Atal*
NOAA *Gary Petros* *Roy Petros*
USCG *Kenneth Levine* *[Signature]*

FOSC: *[Signature]* DATE: 17 June 90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- ✓ 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 ✓ 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 1C Salmon fry nursery area (4/31 to 7/31)
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D Esther Hatchery release (4/15 to 6/15)
 1E Main Bay Hatchery release (4/20 to 6/15)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
 AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
 1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- 1I Gill net area (6/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (6/11 to 7/25)
 Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M Herring spawning (4/1 to 6/15)
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3Q, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (6/1 to 9/15)
 6V Anchorages (6/1 to 9/15)
 6W Forest Service cabins (6/1 to 9/15)
 6X Lodge (6/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7HH Finfish harvesting
 7H Deer harvesting (8/15 to 2/28)
 J Invertebrate harvesting
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / CU-1B SUBDIVISION: A DATE 4/24/90**USCG**NAME M.J. SHARPE SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED**ADEC**NAME STEPHEN FERGUSON SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTEDNO oil OBSERVED / CHECKED ENTIRE ISLAND**LAND MANAGER**NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTEDListed in PWS Area Plan as frequently used camping and anchorage spot. Listed as priority 1 by PWSCA.

SHORELINE OILING SUMMARY

REVISION NO. 04-12/98

OG K. Ramsey USCG R. Sharpe SEGMENT ST/ CU-1b
 BIO G. Penn LAND REP E. Carlson SUBDIVISION A (2 OF 2)
 EXXON S. Reid ADEC S. Ferguson TIME 5:51 to 7:15
 TEAM NO. 4 TIDE LEVEL -2' to -2' DATE 4/24/90
 EST. SUBDIVISION LENGTH: 460 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 78 % B 7 % C 5 % P 10 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 0 % Hang 22 % Vert 78 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 460 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	10	15	20	25	30	35	40	45	50	SU	U	M	L
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT													
STAIN													
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL										X	X	X	X

PAVEMENT H F S 0 sq. m by 0 cmPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE 0#BAGS 0

Photographs:

Roll No. Frames

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE-SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	30	35	40	45	50	SU	U	M	L				

COMMENTS

This subsegment was basically a tumbolo + vertical bedrock. Area appeared cleaned. Arrived at -1.0' tide. Walked + dug around tumbolo, skiffed around to baby pocket cove + checked. NO oil observed.

REVIEWED W DATE 4/25/90

00 K. Rams...
SEGMENT ST/ CU-1B

SUBDIVISION A

DATE 4/24/90

CHECKLIST

- ☒ Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Body
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HWA/YA
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ PR Location(s)
- ☒ Photo Location(s)

LEGEND

1 Δ
PR - No Subsurface Oil

2 Δ
PR - Subsurface Oil

$\boxed{CT/C}$
Continuous Distribution

$\boxed{CT/B}$
Broken Distribution

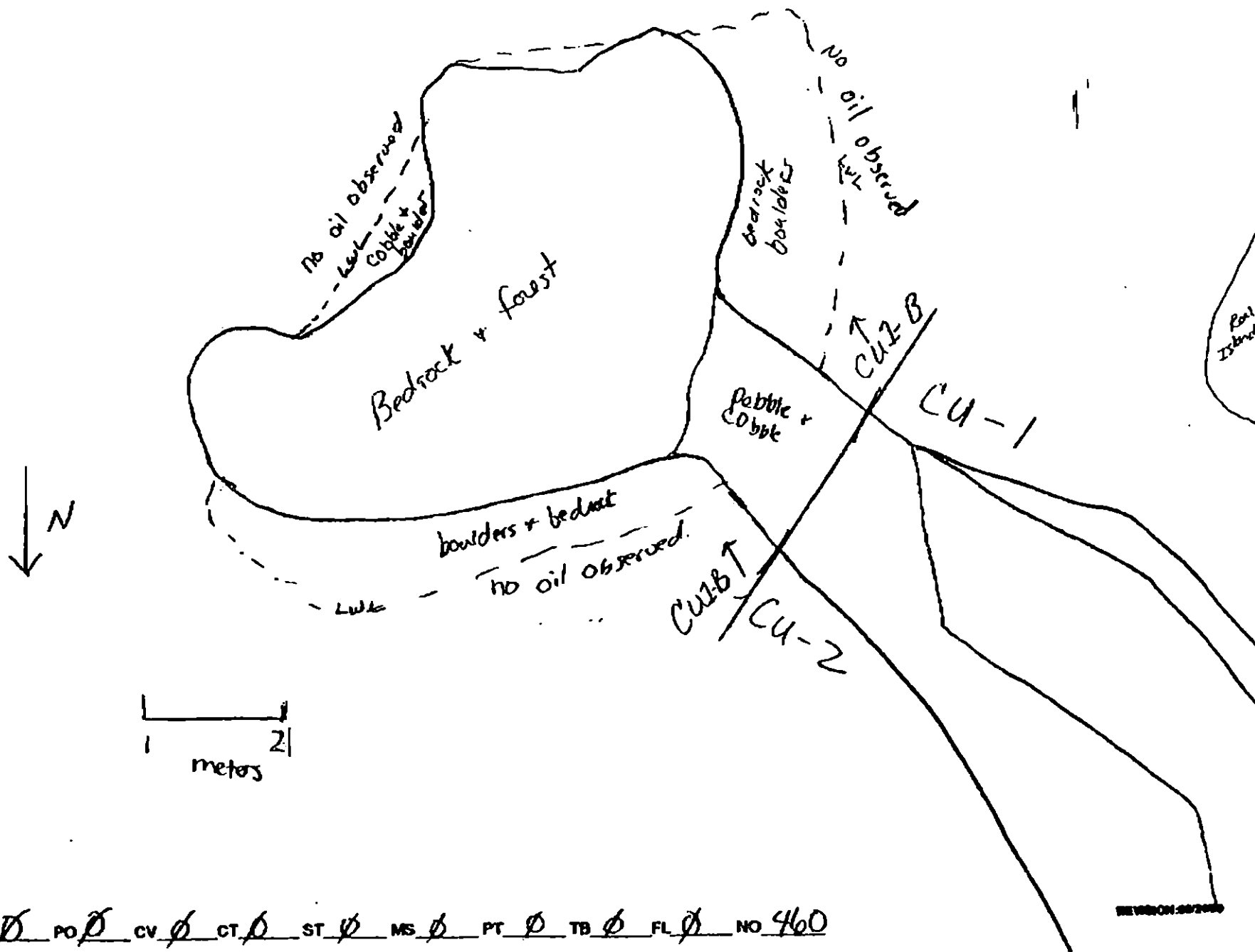
$\boxed{CT/P}$
Patchy Distribution

$\boxed{CT/S}$
Splashed Distribution

eee
Oiled Vegetation

1 $\Rightarrow$
Photo location, direction,
and number

SKETCH MAP



100-24-1350

22:08

FROM

NO BEULIN CHILDES

TO

18-0015075645714

P.05

REVISION: 002000

ECOLOGICAL MAP

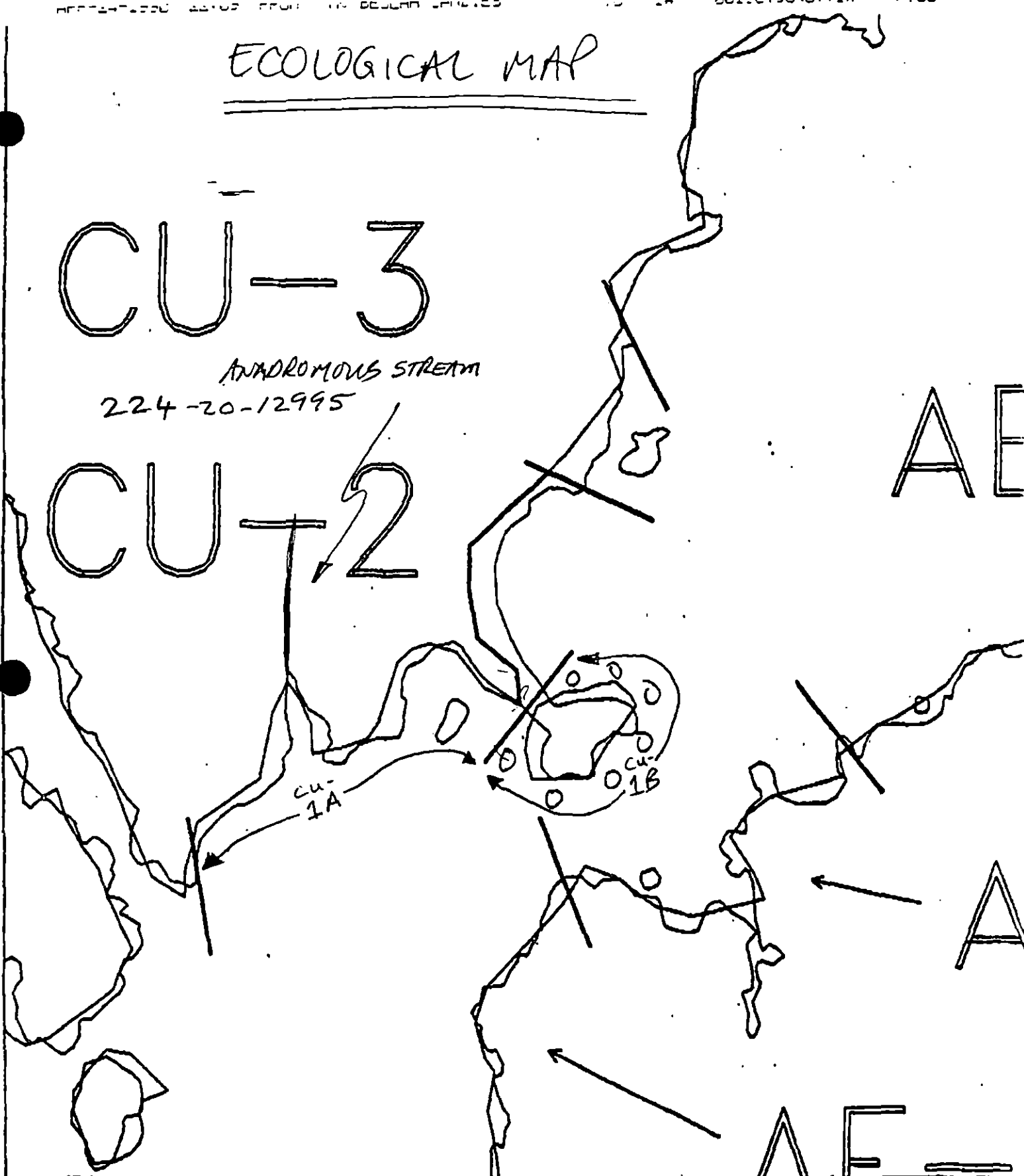
CU-3

ANADROMOUS STREAM

224-20-12995

CU-2

AE



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

CU-1B

ADEC Segment Length: ⁴¹⁰ ~~310~~ for ADEC Line

0 100 200 300

METERS

Map Key: PWS-78

Name: K. RAMSEY

Date: 4/24/90

Data Entered:

CU-3

CU-2

AE

A

AE

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

CU-01B

ADEC Segment Length: 410 For
Line

0 100 200 300
METERS

Map Key: PWS-78

Name: K. RAMSEY

Date: 4/24/90

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ CU-02 SUBDIVISION A (1 OF 1) DATE 4/24/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6Y Recreation: Special use destination

See attached-Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

SHPO SIGNATURE: Charles E. Hines DATE: 5/3/90

OILING CATEGORIZATION:

Wide 0 m: Medium 25 m: Narrow 0 m: V.Light 9 m: No Oil 322 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

☒ No Treatment Recommended	☐ Snare/Absorbent Booms
☐ Treatment Recommended	☐ Oil Snares (pom poms)
☐ Manual Pickup	☐ Absorbents (pads, rolls, etc)
☐ Bioremediation	☐ Spot Washing: _____ Wands
☐ Tarmat Removal	☐ Beach Cleaner
	☐ Other (see comments)

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 5/3/90
ADEC Art Weiner Art Weiner
EXXON Andy Cern Andy Cern
NOAA Gary Peters Gary Peters
USCG Kenneth Korman Kenneth Korman

FOSC: DEWL DATE: 5-8-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A** Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 1C** Salmon fry nursery area (4/31 to 7/31)
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D** Esther Hatchery release (4/15 to 6/15)
1E Main Bay Hatchery release (4/20 to 6/15)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
 AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
 1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- 1I** Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
 Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M** Herring spawning (4/1 to 6/15)
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 3N, 3P** Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R** Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S** Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2208
- 5T** All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U** Recreation: Tent sites (6/1 to 9/15)
6V Anchorages (6/1 to 9/15)
6W Forest Service cabins (6/1 to 9/15)
6X Lodge (6/1 to 9/15)
6Y Special use destination
- 7Z** Subsistence area: Salmon harvesting (5/1 to 9/30)
 Finfish harvesting
 Deer harvesting (8/15 to 2/28)
 Invertebrate harvesting
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2350

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / CU-2 SUBDIVISION: 7 DATE 4/24/90

USCG

NAME M.J. SHAPIRO SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME STEPHEN FERGUSON SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

- ① picked up 3 mouse paddies (HITZ)
 - ② some sat/seed in horizontal bedrock (TRACE) → HITZ
 - ③ splash / ST/CT (TRACE)
- Team # 4 Recovered oiled paddies / rest of oiling is very difficult to retrieve.

LAND MANAGER

NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Listed in PWS Area Plan as frequently used camping and anchorage spot. Listed as priority 1 by PWSCA.

SHORELINE OILING SUMMARY

REVISION NO. 04/13/90

OG K. Ramsey USCG R. Sharpe SEGMENT ST/ CU-2
 BIO G. PENN LAND REP L. Carlson SUBDIVISION A (1 OF 1)
 EXXON S. REID ADEC S. Ferguson TIME 7:15 to 8:00
 TEAM NO. 4 TIDE LEVEL -2' to -2' DATE 4/24/90
 EST. SUBDIVISION LENGTH: 320 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 5 % B 15 % C 5 % P 95 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 95 % Hang 5 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0.5 m NO 319.5 m
1 319

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	10	15	20	25	30	35	40	45	50	SU	U	M	L
ASPHALT PAVEMENT													
POOLED													
COVER				X		X				X			
COAT													
STAIN													
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL										X	X	X	X

PAVEMENT H F S 0 sq. m by 0 cmPATTIES / TARBALLS 0 - we picked up Rocks BAGSNEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	X		
Vegetation			
Trash			
Debris	X		

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE 0#BAGS 0

Photographs:

Roll No. Frames

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	VO	30	35	40	45	50	SU	U	M	L				
1	42					X	---		X						X				N	-	-	C, P
2	25					X	---		X						X				N	-	-	C, P, R
3	40					X	---		X							X			N	-	-	C, P
4	30					X	---		X								X		N	N	23	C, P
5	25					X	---		X								X		N	N	20	C, P
6	30					X	---		X								X		N	-	-	C, P

COMMENTS

This segment was mainly a scalloped beach made of cobbles + pebbles with 3 distinct berms. There was oil found in the cracks of bedrock outcrop in Su which was thick enough to be called cover but a very small area. Pits around + below this outcropping were clean. Just past this outcrop was an area 1m x 1m of mousse patties. Collected the patties. All that was left was a coat on the boulders left from the patties. Very

REVIEWED W DATE 4/25/90

SHORELINE OILING SUMMARY (PAGE 2)

REVISION 06/13/90

SEGMENT ST/ CU-2 SUBDIVISION A (1 OF 1)

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR						PIT ZONE				A	N	A	SHEEN (Y/N)	▼	SURFACE SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UO	1	2	3	4	5	6	BU	U	M	U	-	-	-	-	-	
7	30					X	---		X								X			N	-	-	-	-	C, P
8	35					X	---		X							X				N	-	-	-	-	P
9	45					X	---		X							X				N	-	-	-	-	P
10	35					X	---		X								X			N	-	-	-	-	C, P
11	35					X	---		X								X			N	-	-	-	-	C, P, R
12	25					X	---		X								X			N	-	-	-	-	C, P, R
13	40					X	---		X								X			N	N	34	-	-	C, P
							.																		
							.																		
							.																		
							.																		
							.																		
							.																		
							.																		
							.																		

COMMENTS

REVIEWED _____ DATE _____

(15)

00 K. Ramsey

SEGMENT ST/ 2

SUBDIVISION A

DATE 4/24/80

CHECKLIST

- ☒ M Area
- ☒ Approx. Scale
- ☒ Graphical Entry
- ☒ On Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HRR/LVL
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Pit Location(s)
- ☒ Photo Location(s)

LEGEND

1 Δ
PR - No Subsurface Oil

2 Δ
PI - Subsurface Oil

CT/C
Continuous Distribution

CT/D
Broken Distribution

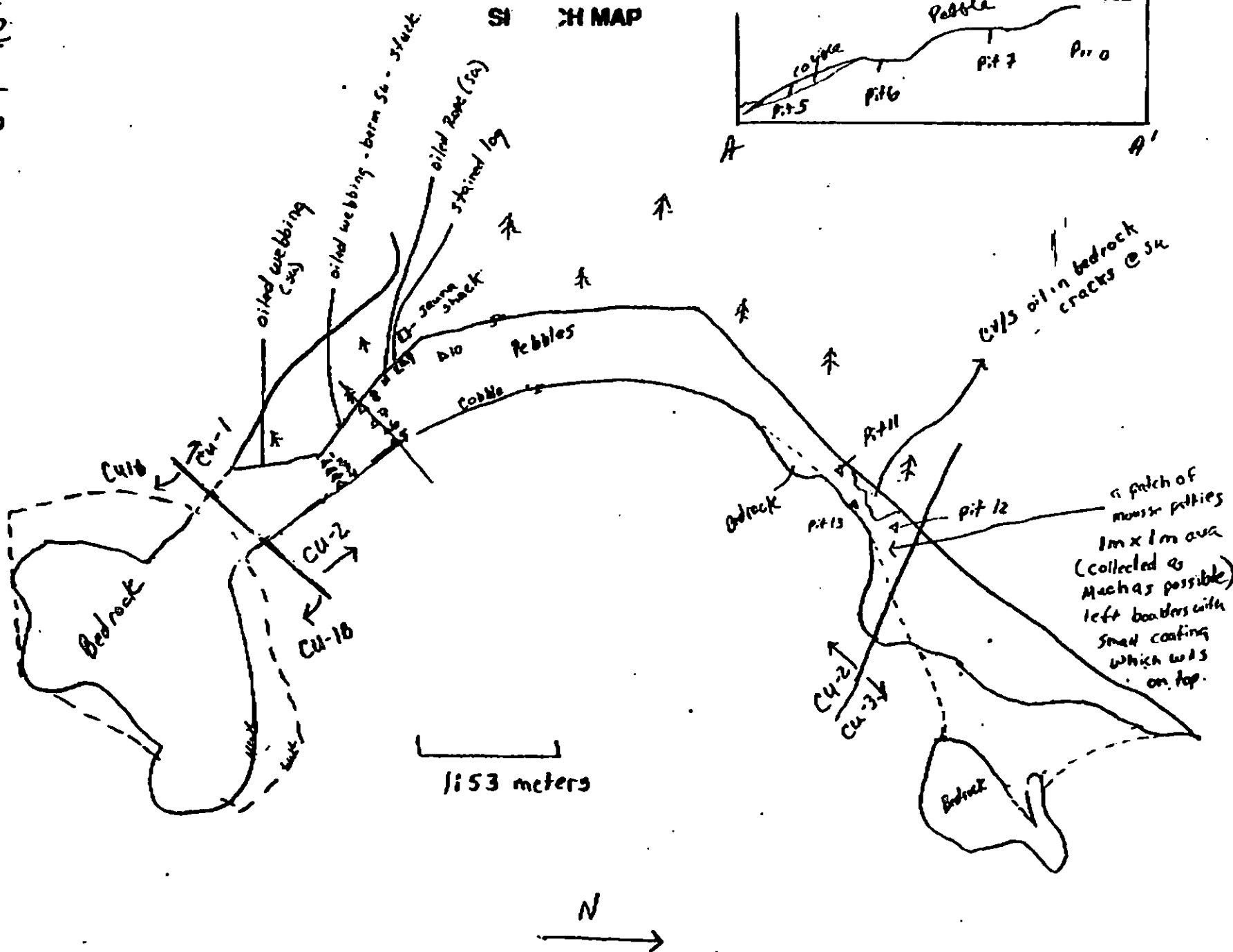
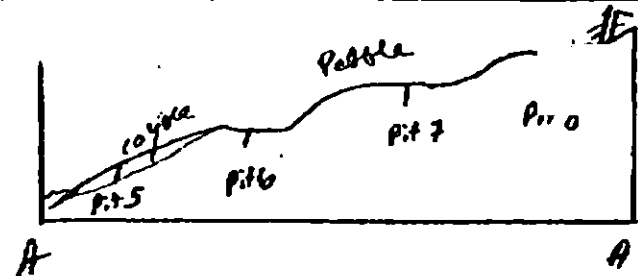
CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oil Vegetation

Photo location, direction, and number

SI X MAP



Character Length (m): AP ☒ PO ☒ CV .5 CT ☒ ST ☒ MS ☒ PT ☒ TB ☒ FL ☒ NO 319.5

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/23/7

Segment ST / CU-2 Subdivision A Date (mo / day / yr) 4-24-90
Time (24 hr) 07:15 Biologist Penn

- (A) Substrate type and % of segments:
(1) Bedrock 1/2 (2) Boulder 1.5 (3) Cobble 5 (4) Pebble 93 (5) Sand 0 (6) Silt 0
- (B) Overall % cover of biota (% of segment): Dense 2 Moderate 20 Low 60
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs: —
Roll No. —
Frames —

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

MYTILUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

GASTROPODS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

FUCUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments:

Diverse & Healthy mite & Litz on Rock

Ecological Considerations:

DATE 4-24/90 TIME 07:15 TIDE HEIGHT 0.0

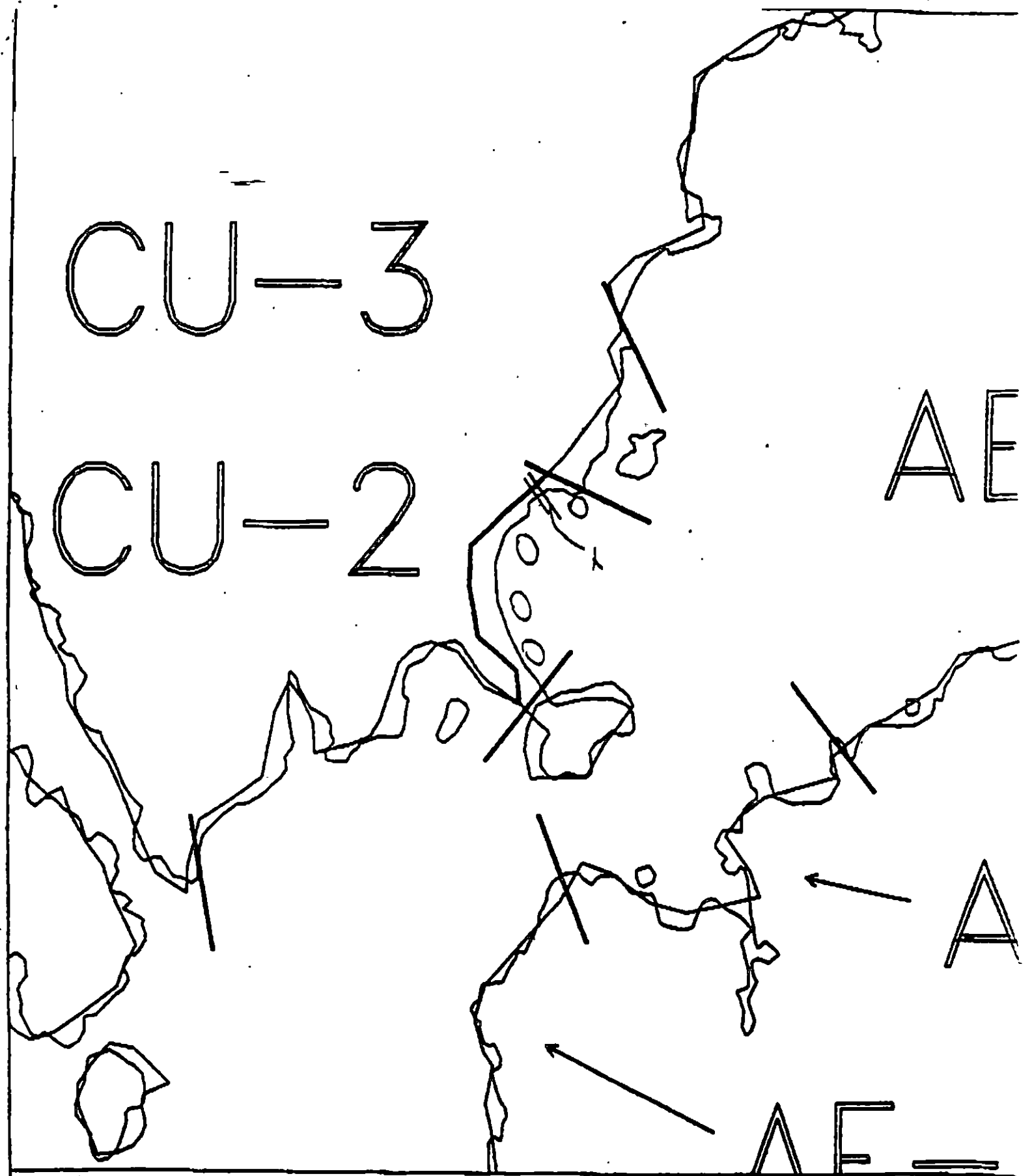
1 = BEDROCK 2 = BOULDER 3 = COBBLE 5 = SAND 6 = SILT

FLORA:

SPECIES	UITZ	MITZ	LITZ	COMMENTS
BOSSIELLA/CORALLINA				
CALYPTHON (CORALLINA)			1	Dense in Tide Pools
CLADOPHORA SPP			1	Sparsely
COSTARIA SPP				
ENDOCLADIA MURICATA				
FILAMENTOUS GREENS				
FILAMENTOUS REDS				
GLOIOPELTIS FURCATA				
HALOSACCION GLANDIFORME		1	1	Moderate
LAMINARIA SPP				
LITHOTHAMNION			1	Moderate in Tide Pools
NERBOCYSTIS SPP				
PORPHYRA SPP				
RALPHSIA/HILDENBRANDIA				
PHODOMELA LARX			1	Moderate
RHOHOMENIA PALMATA		1	1	Moderate
SCYTOSIPHON SPP			1	Moderate
ULVA SPP			1	Moderate on Rock, Dense in Gulf Pools
ZOSTERA MARINA			1	Moderate
ENTOROMORPHA		1		Moderate
Coastal algae			1	Moderate

FAUNA:

ANTHOPLEURA SPP			1	Tide Pools - Moderate, Dense in Sand
(SEM) BALUNUS CARIOSUS				
B. GLANDULA		1		
BRYOZOANS				
CHITONS (other than K. TUNICATA)				
CLAMS				
CRABS				
DERMASTERIAS IMBRICATA			1	Moderate
KATHARINA TUNICATA			1	Sparsely
LEPTASTERIAS HEXACTIS			1	Sparsely
LIMPETS		1	1	Sparsely - Mitz, Litz on Cobble in Sand
LITTORINA SPP		1		Dense
NUCELLA SPP			1	Cobble in Sand
PAGURUS SPP			1	Rare
PISASTER OCHRACEUS				
POLYCHAETES			1	Moderate - sand
PYCNOPODIA HELIANTHOIDES			1	Dense
SEARLESIA DIRA				
SERPULIDS				
SIPHONARIA THERSITES				
TEALIA				
5 m cili. ex g. massae			1	Moderate
R. th. 1. 1. 1.				



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

CU-2

ADEC Segment Length: 336m



Map Key: PWS-78

Name: K. Ramsey

Date: 4/24/90

Date Entered: (17)

SHORELINE EVALUATION

SEGMENT ST/ CU-03 SUBDIVISION A (1 OF 1) DATE 4/24/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: *Charles J. Hines* DATE: 5/3/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 13 m: V.Light 83 m: No Oil 332 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u>X</u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u> </u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u>X</u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u>X</u> Tarmat Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: Recommended treatment includes tarmat removal and bioremedi-
ation in areas of surface coat as shown on sketch map. No specific
ecological time constraints identified.

TAG COMMENTS:

TAG APPROVAL DATE: 5/3/90
ADEC Art Weiner
EXXON Andy Tate
NOAA Geny Patrae
USCG Kenneth Keane

FOSC: *W L* DATE: 5-8-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)**
1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 1C Salmon fry nursery area (4/31 to 7/31)**
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D Esther Hatchery release (4/15 to 6/15)**
1E Main Bay Hatchery release (4/20 to 6/15)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
 AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
 1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- 1I Gill net area (6/7 to 8/31)**
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
 Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M Herring spawning (4/1 to 6/15)**
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)**
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)**
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)**
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2208
- 5T All Bald Eagle nests (3/1 to 6/1)**
Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation:**
6V Tent sites (6/1 to 9/15)
6W Anchorages (6/1 to 9/15)
6X Forest Service cabins (6/1 to 9/15)
6Y Lodge (6/1 to 9/15)
Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)**
H Finfish harvesting
I Deer harvesting (8/15 to 2/28)
J Invertebrate harvesting
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

MENT ST / CU-3 SUBDIVISION: A DATE 4/24/90

USCG

NAME M.J. SHARPT SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Picked up some of the pavement, but some remained.
MANUAL PICK-UP WITH ^{TRAY} SMALL SHOVELS. HIGH HUMAN USE.

ADEC

NAME STEPHEN FERGUSON SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

MENTS

Look at AP/P ON SKETCH MAP / RECOMMEND MANUAL REMOVAL
OF THIS 17m(L) X 3m(W) PAVEMENT AREA / WORK TIME
WOULD BE APPROX. 1 HOUR MAX TO ACCOMPLISH THIS (10 MAN CREW)

LAND MANAGER

NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Listed in PWS Area Plan as frequently used camping and anchorage spot. Listed as priority 2 by PWSCA. Diking is located on a beach area that receives a lot of human use. Recommend manual pick-up of remaining pavement.

SHORELINE OILING SUMMARY

REVISION NO. 06/13/98

OG K. Ramsey USCG R. Sharpe SEGMENT ST/ CU-3
 BIO G. Penn LAND REP L. Carlson SUBDIVISION A (1 OF 1)
 XXON S. Reid ADEC S. Ferguson TIME 8:00 to 8:54
 EAM NO. 4 TIDE LEVEL -2.0' to 0' DATE 4/24/90
 EST. SUBDIVISION LENGTH: 428 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 37 % B 3 % C 50 % P 10 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 50 % Hang 50 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 17 m VL 85 m NO 37.6 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	NO	IR	IP	IS	1	2	3	4	5	6	7	8	SU	U	M	U
ASPHALT PAVEMENT			X		X								X			
POOLED																
COVER																
COAT			X	Δ	X	Δ							X	X	X	Δ
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
M																
NO OIL														X	X	X

PAVEMENT H 51 sq. m by 1 cmPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE —#BAGS —

Photographs:

Roll No. —Frames —

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR								PIT ZONE	A N A	SHEEN (Y/N)	↓	SURFACE-SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	US	1	2	3	4	5	6	7	8					
1	20					X	—	X										X	N	N	15	C, P

COMMENTS This segment was basically cobble beach with bedrock outcropping in front. There was oil found behind bedrock in crevice in diagram which a patchy band. Behind this island of bedrock was an area of Asphalt Pavement 17m long x 3m wide. There was patchy coat on back bedrock wall with splashes of coat & dribbles on boulders.

REVIEWED 7W DATE 4/25/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/02/90

Segment ST / C4-3 Subdivision A Date (mo / day / yr) 4-24-90
 ne (24 hr) 0800 Biologist Penn

- (A) Substrate type and % of segments:
 (1) Bedrock 37 (2) Boulder 3 (3) Cobble 50 (4) Pebble 10 (5) Sand 0 (6) Silt 0
- (B) Overall % cover of biota (% of segment): Dense 40 Moderate 10 Low 20
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (O)

Photographs:
 Roll No. -
 Frames -

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

MYTILUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

GASTROPODS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

FUCUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments:

1- Eagle

Ecological Considerations:

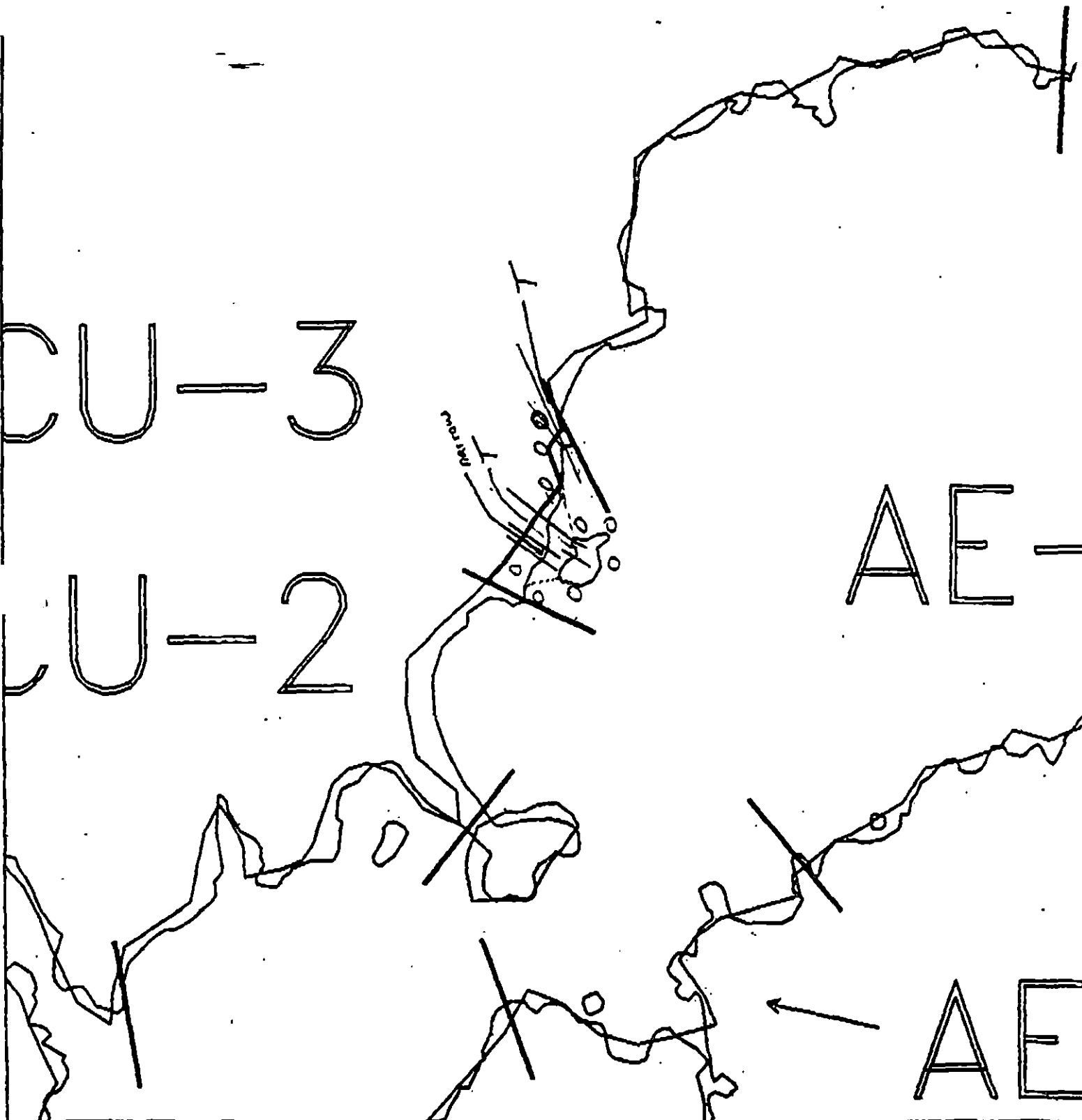
CU-4

CU-3

CU-2

AE-

AE



XXXX Wide

/// Medium

---- Narrow

TTTT Very Light

0000 No Oil

CU-3

ADEC Segment Length: 230m



Map Key: PWS-81

Name: K. Ramsey

Date: 4/24/90

Date Entered:

⑥

SHORELINE EVALUATION

SEGMENT ST/ CU-05 SUBDIVISION A (1 OF 1) DATE 4/24/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
Biologist noted eagle nest at east end of segment.

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

SHPO SIGNATURE: [Signature] DATE: 5/3/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 984 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

<u>X</u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u> </u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u> </u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u> </u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u> </u> Tarmat Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 5/3/90
ADEC ART WEAVER Dist/Genes
EXXON ANDY TALL Genes
NOAA GARY PETER Andy PETER
USCG KENNETH KEENE Kenneth/June

FOSC: [Signature] DATE: 5-8-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 1C Salmon fry nursery area (4/31 to 7/31)
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D Esther Hatchery release (4/15 to 6/15)
 1E Main Bay Hatchery release (4/20 to 6/15)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
 AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
 1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- 1I Gill net area (6/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (6/11 to 7/25)
 Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M Herring spawning (4/1 to 6/15)
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2208
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (8/1 to 9/15)
 6V Anchorages (6/1 to 9/15)
 6W Forest Service cabins (6/1 to 9/15)
 6X Lodge (6/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 71-81 Finfish harvesting
 Deer harvesting (8/15 to 2/28)
 Invertebrate harvesting
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ CU-5 SUBDIVISION: 7 DATE 4/24/90

USCG

NAME M. J. SHARPESIGNATURE M. J. Sharpe☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

ADEC

NAME STEPHEN FERGUSONSIGNATURE Stephen Ferguson☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

OBSERVED SOME STAINS / NOT WORKABLE

LAND MANAGER

NAME Leigh CarlsonSIGNATURE Leigh Carlson

ADNR

☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Listed in PWS Area Plan as frequently used camping and anchorage spot. Listed as priority 1 by PWSCA.

SHORELINE OILING SUMMARY

REVISION NO. 04/13/88

OG K. Ramsey USCG R. Sharpe SEGMENT ST/ CU-5
 BIO G. PENN LAND REP L. Carlson SUBDIVISION A (1 OF 1)
 XON S. REID ADEC S. FERGUSON TIME 8:54 to 9:52
 TEAM NO. 4 TIDE LEVEL 0' to 3' DATE 4/24/90
 EST. SUBDIVISION LENGTH: 1027 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 3 % B 2 % C 45 % P 50 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 2 % Hang 98 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 1027 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	N	P	S	1	2	3	4	5	6	7	8	SU	U	M	L
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN				X		X									X	
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL													X		X	X

PAVEMENT H F S 0 sq. m by 0 cm

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒

TYPE 0

#BAGS 0

Photographs:

Roll No.

Frames

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR								PIT ZONE				A	N	A	SH	VEE	W	Y	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		SO	UC	1	2	3	4	5	6	7	8	SU	U	M	L	—	—	—	—	—	—	—	
1	35					X	1-1		X										X				N	—	—				P, C, M
2	45					X	1-1		X											X			N	—	—				P, C, R
3	20					X	1-1		X										X				N	—	—				P, C, R
4	40					X	1-1		X										X				N	—	—				P, R
5	15					X	1-1		X										X				N	N	13				P, R

COMMENTS

REVIEWED 7W DATE 4/25/90

OG K. Bar-24

SKE MAP

SEGMENT ST/ C-5

SUBDIVISION A

DATE 4, 24 90

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Entry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HWR/LWR
- ☒ SCL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ P/L Location(s)
- ☒ Photo Location(s)

LEGEND

1 Δ
P/L - No Subsurface Oil

2 Δ
P/L - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

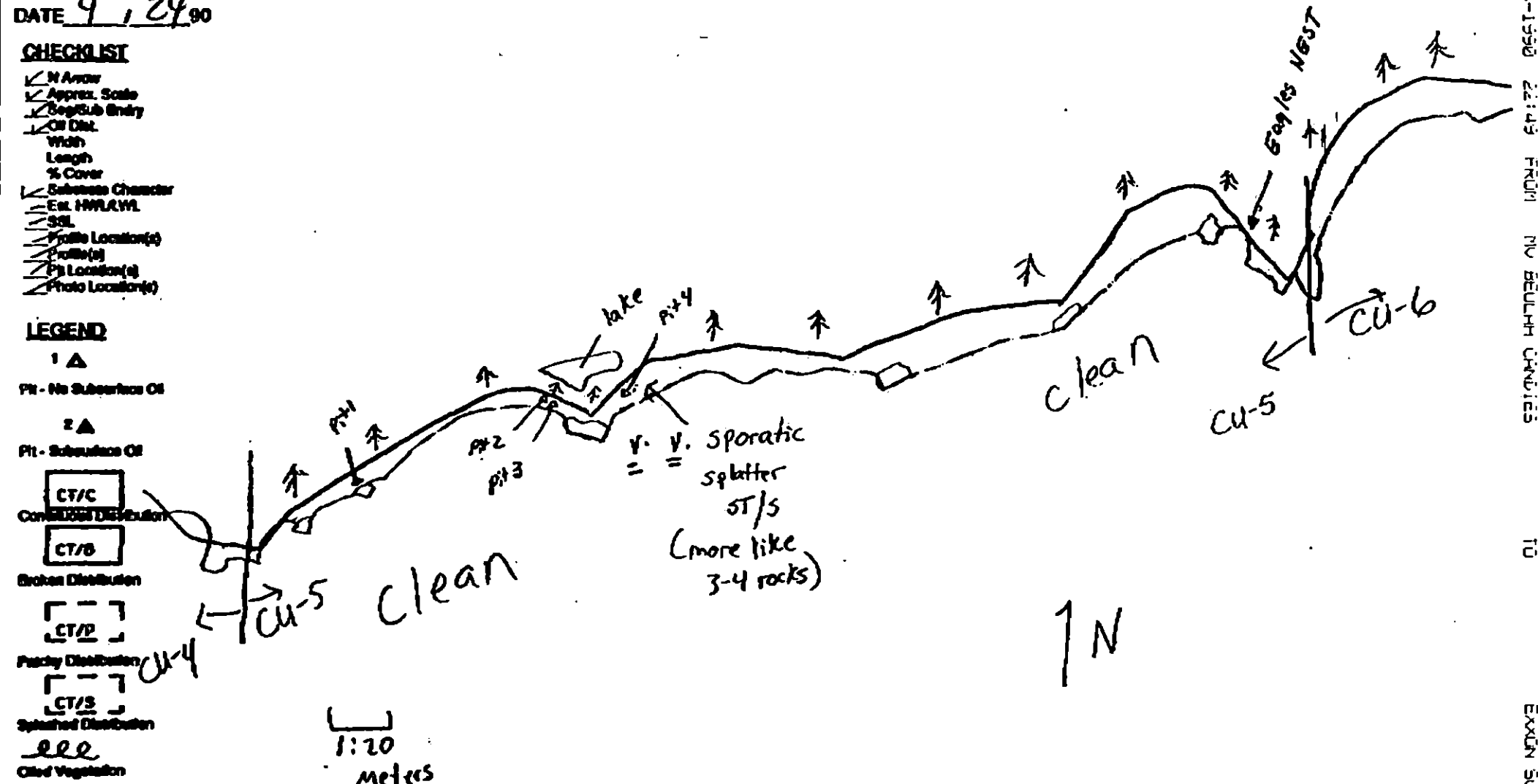
CT/P
Pecchy Distribution

CT/S
Splashed Distribution

eee
Oiled Vegetation

1 →
Photo location, direction,
and number

Oil Character Length (m): AP ☒ PO ☒ CV ☒ CT ☒ ST ☒ MS ☒ PT ☒ TB ☒ FL ☒ NO 1027



APR-24-1990 22:45 FROM MV BEULAH CANNIES

TO

EXXON SIGHT

P. 14

REVISION 000000

SHORELINE ECOLOGICAL SUMMARY

REVISION: 09/22/90

gment ST/ CU-5 Subdivision A Date (mo / day / yr) 4-24-90Time (24 hr) 0854 Biologist PENN

(A) Substrate type and % of segments:

(1) Bedrock 3 (2) Boulder 2 (3) Cobble 45 (4) Pebble 50 (5) Sand 0 (6) Silt 0(B) Overall % cover of biota (% of segment): Dense 12 Moderate 12 Low 20

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:

Roll No. ST-4-2Frames 17, 18, 19

BARNACLES

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	X	NOT PRESENT
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

MYTILUS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	NOT PRESENT
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

GASTROPODS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	X	NOT PRESENT
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

FUCUS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	NOT PRESENT
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

Wildlife Observations/ General Comments:

4 Harlequin, 20, 22

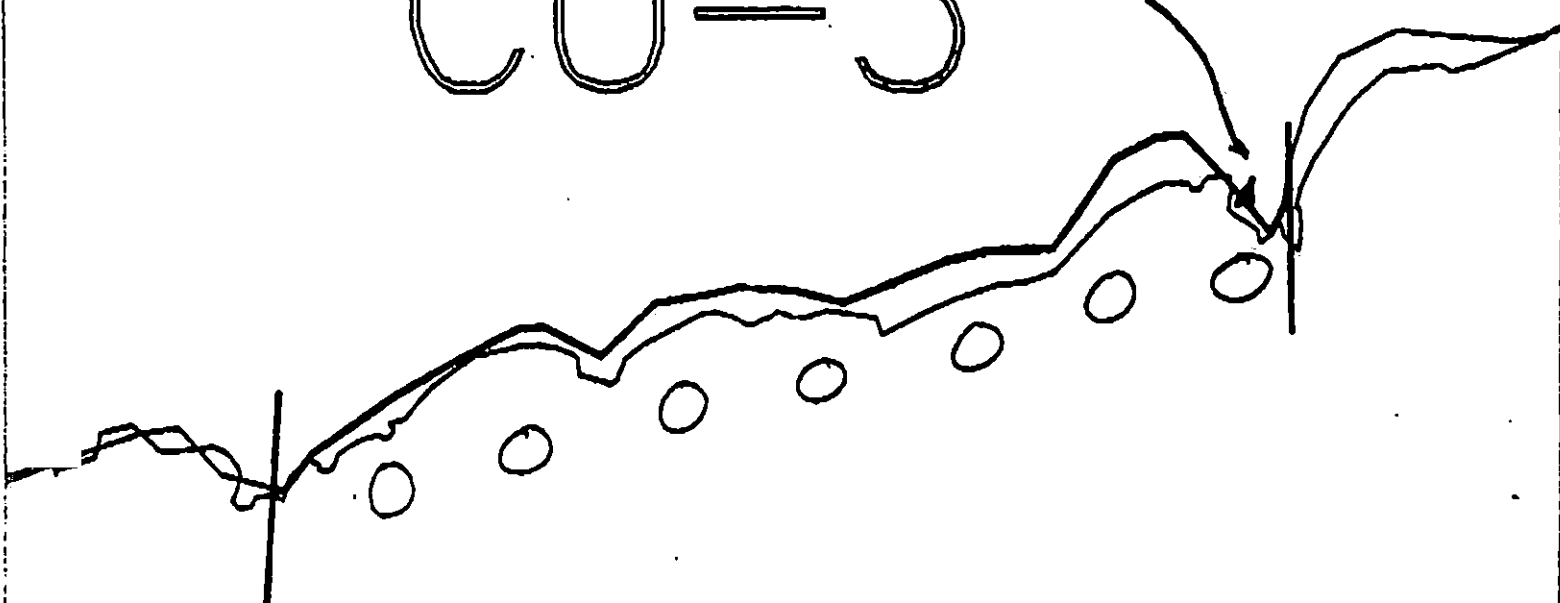
3 Seals

Biological Considerations:

1 song sparrow
 1 Seal Haul out - offshore rock
 1 eagle nest (not on Ecology map) - see map
 Limpets unusually dense in Hitz on rubble.

CU-5

eagles nest



F-6



XXX Wide
/// Medium
--- Narrow
TTTT Very Light
0000 No Oil

CU-5

ADEC Segment Length: 984m



Map Key: PWS-83

Name: K. RAMSEY

Date: 4/24/90

Data Entered:

(15)

SHORELINE EVALUATION

SEGMENT ST/ CU-07 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Salmon stream mouth (ADF&G catalogue 224-20-13010) - fry outmigration (1A) - 3/1 to 5/15 and spawning (1B) - 7/10 to 8/31; active bald eagle nest (5T) - 3/1 to 6/1; recreation special use designation (6Y) - 6/1 to 9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: (1A, 1B) No disturbance of stream bed or banks unless authorized by ADF&G. Contact ADF&G Habitat Division prior to treatment for permits. (5T) Restrict air traffic to essential minimum. Air approach and takeoff from and to seaward only. Contact USFWS prior to treatment for confirmation of dates and avoidance minimums.

SHPO SIGNATURE: Charles E. Holmes DATE: April 14, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 113 m: No Oil 696 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u>X</u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u>X</u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u>X</u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u> </u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> Removal	<u> </u> Other (see comments)

COMMENTS: Pick up sporadic tarballs. + OILED DEBRIS Bioremediation of areas shown on sketch map. Work between 6/1 and 7/10.

TAG COMMENTS: MONITORS TO ASSESS SEAWARD SIDE OF THE LAKE INDICATED ON THE SKETCH MAP

TAG APPROVAL DATE: 4/13/90

ADEC JOHN BAUER John Bauer

EXXON ANDY TEAL Andy Teal

NOAA Burt Wright Burt Wright

USCG G.A. REITER G.A. Reiter

FOSC:

DATE: 4-20-90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / CU-07 SUBDIVISION: A-10f1 DATE 04/04/9

USCG

NAME David S. Thomas SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

ADEC

NAME Clara J Crosby SIGNATURE Clara J Crosby

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

✓ C. area. removal of oil / manual - Tarball found
in HWC debris -

LAND MANAGER

NAME Marsha Martin/DNR SIGNATURE Marsha Martin

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

For both areas marked on map.
Beware that the lake against the storm berm
gets occasional inundation from storms.
Snow covered still, many washed up logs in
one section adjacent to berm.

SHORELINE OILING SUMMARY

REVISION NO. 03-22-90

OG Rick GILLIE USCG BM 1 Thomas SEGMENT ST/ CU-07
 BIO DAVE Lohie LAND REP Marsha Martin SUBDIVISION A 1 of 1
 EXXON FRANK ADEC Clara Crosby (ADNR) TIME 16:51 to 17:41
 TEAM NO.: 13 TIDE LEVEL: +1 10 +2 DATE 04/04/90
 EST. SUBDIVISION LENGTH: 514 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☐ Rock Snow
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 30 % B 20 % C 20 % P 30 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 60 % Hang 30 % Vert 30 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 40 m NO 494 m

SURFACE OIL

CHARACTER	DISTRIBUTION					OIL / FILM COLOR							IMPACTED ZONES				
	C	S	P	B	SP	OR	OW	OT	SL	DR	TL	LR	SU	UI	MI	U	
ASPHALT PAVEMENT																	
POOLED																	
COVER				X								X		X			
COAT				X						X				X			
STAIN																	
MOUSSE																	
PATTIES																	
TARBALLS				X					X							X	
FILM																	
NO OIL																X	X

PAVEMENT: H F S N/A sq. m by _____ cmPATTIES / TARBALLS 0.1 BAGSNEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash	X		
Debris	X		

DEBRIS COLLECTED

☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

Roll No. ST-13-2Frames 18-20

SUBSURFACE OIL

PIT NO.	PIT DEPTH (gm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR							PIT ZONE				A N A	SUBSURFACE SEDIMENTS	
		OP	OR	OL	OF	NO		VO	UC	SP OR	OW FW	OT SL	OR TL	LR	SU	UI	M	U					
1	10					X	.										X						G, S
2	15					X	.										X						P, S
3	20					X	.										X						P
4	40					X	.										X						P, G
5	20					X	.										X						C, P, S
6	40					X	.										X						P, C

COMMENTS (GENERAL)

① OILING: V. LIGHT CT/S ON NORTH AND SOUTH SIDES
 OF BAY NEAR BEACH ON CORAL/BOULDER
 SUBSTRATE.

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / CU007 Subdivision A Date (mo / day / yr) 4-4-90Time (24 hr) 16:50 Biologist David Lohr

(A) Substrate type and % of segments:

(1) Bedrock 30 (2) Boulder 30 (3) Cobble 20 (4) Pebble 30 (5) Sand (6) Silt (B) Overall % cover of biota (% of segment): Dense 20 Moderate 30 Low 50

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (O)

Photographs:

Roll No. ST-13-2Frames 18-20

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

MYTILUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

GASTROPODS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

FUCUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments:

1. present in low intertidal - Enteromorpha, Anthopleura, Nuxella, Nuxella egg cases
 mid intertidal - Endocladia, Nuxella, beach hoppers under cobble (Orchestoidea?)
 high intertidal - Beach hoppers under cobble (Orchestoidea?)

Ecological Considerations: 2. Ducks spotted in area

IL, IS, 64 - no comment

ST - none observed

OG Ric GILLIE
 SEGMENT ST/ CU-07
 SUBDIVISION A-1 of 1
 DATE 04/04/90

SKETCH MAP

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Bndry
- ☒ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☒ Pic Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ

Pt - No Subsurface Oil

2 Δ

Pt - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

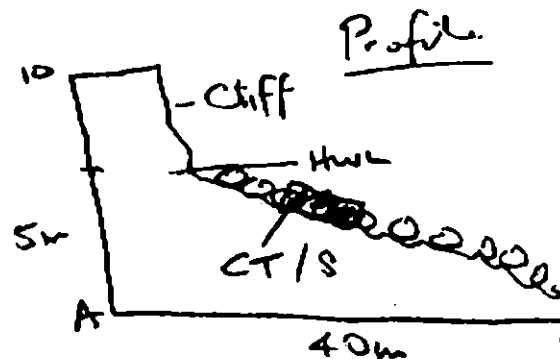
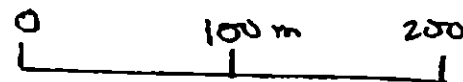
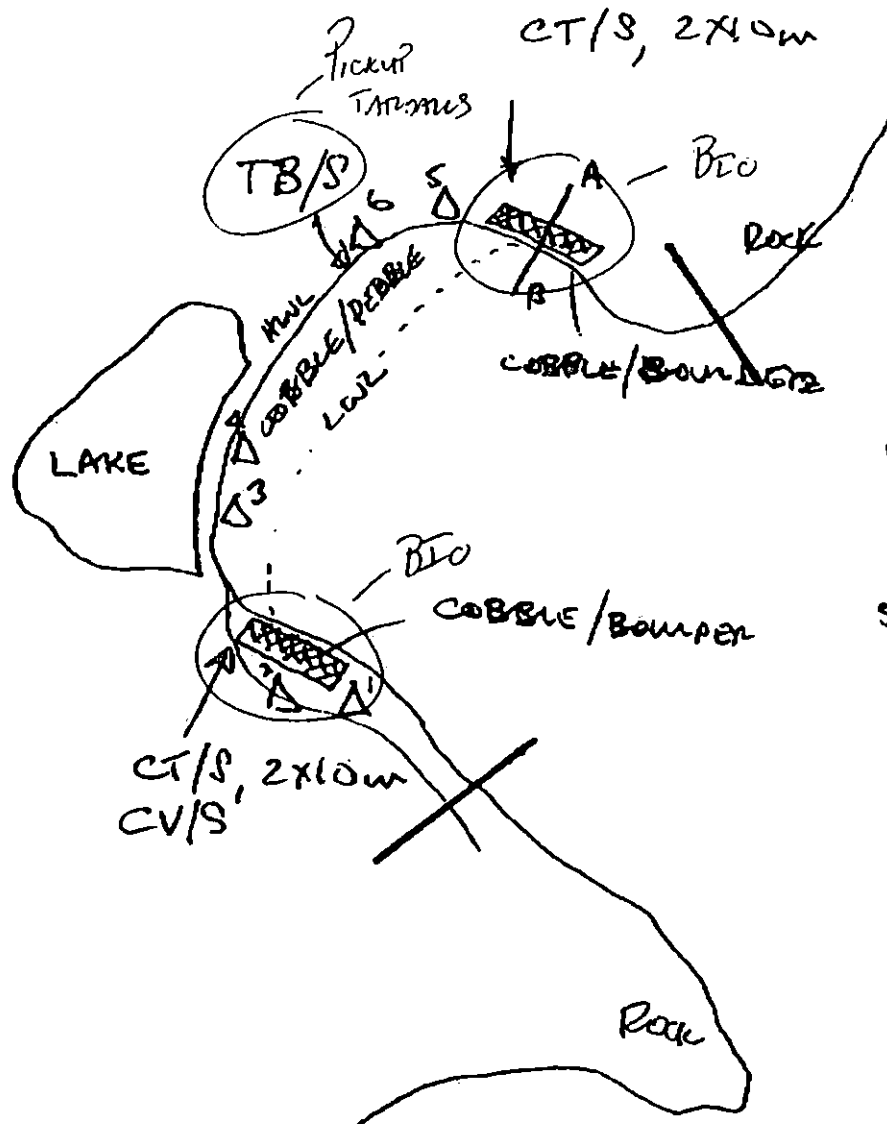
CT/S

Splashed Distribution

Oiled Vegetation

1 ●→

Photo location, direction, and number

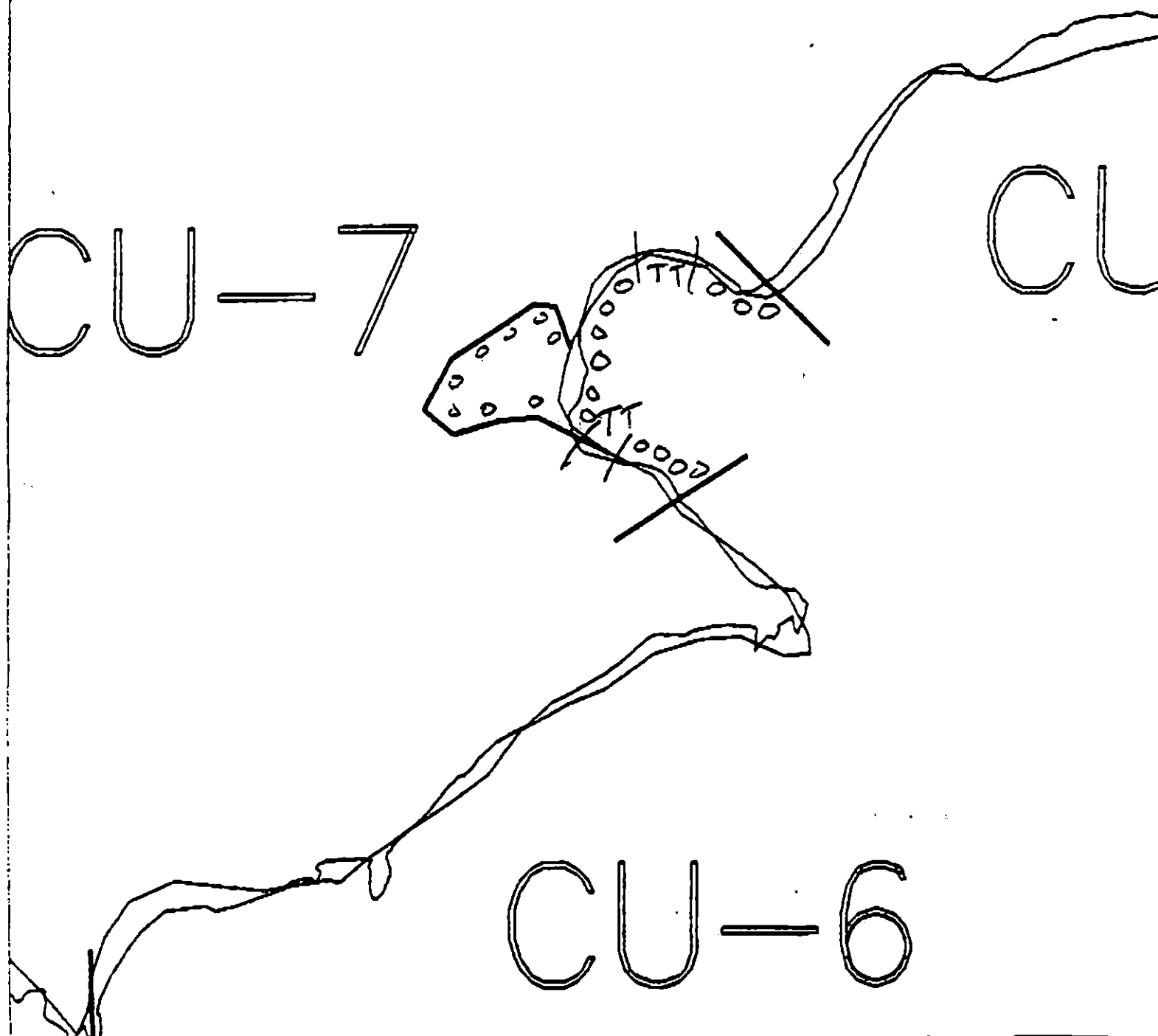


Oil Character Length (m): AP 0 PO 0 CV 0 CT 20 ST 0 MS 0 PT 0 TB 1 FL 0 NO 493

CULEOAS ISLAND

Segment: CU-07

Division: A-1 of 1



XXX Wide

/// Medium

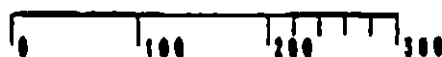
--- Narrow

TTTT Very Light

OOOO M. O. I.

CU-7

ADEC Segment Length: 443m



Map Key: PWS-85

Name: GILLIE

Date: 4-4-90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT CU-7 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup Less Than 400m From Eagle Nest	CLOSED
Manual Pickup More Than 400m From Eagle Nest	OPEN
Bioremediation Less Than 400m From Eagle Nest	CLOSED
Bioremediation More Than 400m From Eagle Nest	OPEN
Bioremediation Less Than ^{100m} 400m From Stream	WORK PRIOR TO 7/10 (ADF&G MONITOR REQ.)
Bioremediation More Than ^{100m} 400m From Stream	

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream	ADF&G catalogued anadromous stream (224-20-13020) is present in the Subdivision. This subdivision is closed to bioremediation less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation is permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation more than 100m from stream.
5T Bald Eagle Nests	USFWS 6/1/90 map indicates an active nest in Subdivision B. Closed to manual pickup and bioremediation within 400m of active nest. No constraints more than 400m from nest.

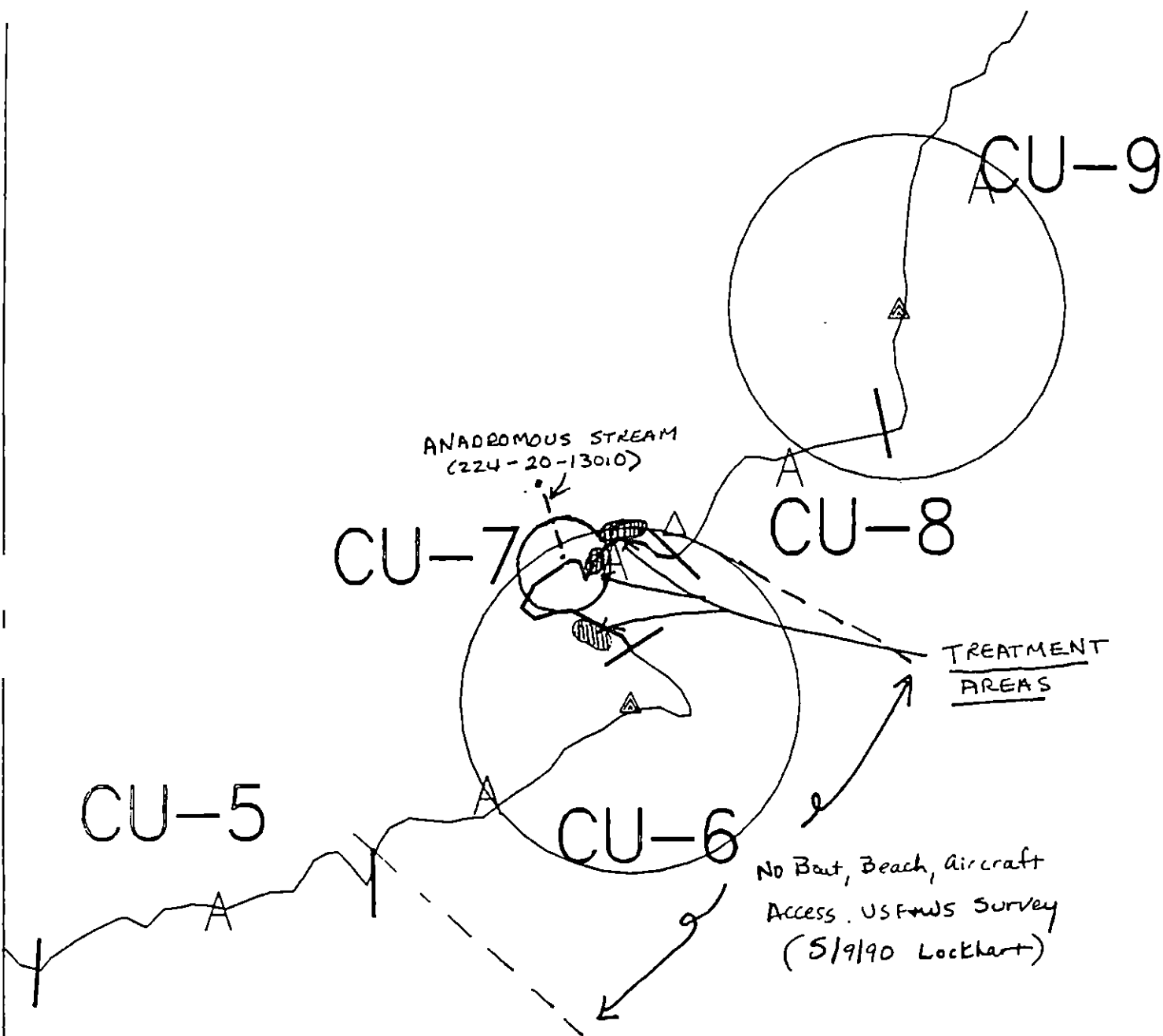
OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. No flushing of pollutants or sediments into stream drainage; do not allow Inpol to enter stream flow. On-site examination and consultation by ADF&G monitor is required prior to bioremediation in order to authorize a setback distance from the stream during chemical application; if ADF&G monitor's presence is impossible, authorization may be given by the ADEC monitor. Restrict air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from active nests. Avoid any unnecessary disturbance or damage to uncollected biota and substrate.

SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM (STREAM NO. 224-20-13020)
FOR ADDITIONAL CONSTRAINT INFORMATION

FOSC

Date 6-10-90



Exxon Company, USA
Map Key: PWS-CU-7
June 04, 1990

ECOLOGY MAP
SEGMENT CU-7
SUBDIVISION A (1 of 1)
METERS
0 500 750

- ★ Seabird Colony
- △ Active Eagle Nest
- △ Inactive Eagle Nest

1 inch = 192 feet

SHORELINE EVALUATION

SEGMENT ST/ CU-08 SUBDIVISION A (1 OF 1) DATE 4/24/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 224-20-13014 (Ps, 2/90)

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)

1B Salmon stream mouth - spawning (7/10 to 8/31)

5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1) and an eagle nest within 400M in adjacent segment to north.

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

SHPO SIGNATURE: Charles E. Hume DATE: 5/3/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 625 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

X No Treatment Recommended
 Treatment Recommended
 Manual Pickup
 Bioremediation
 Tarmat Removal

 Snare/Absorbent Booms
 Oil Snares (pom poms)
 Absorbents (pads, rolls, etc)
 Spot Washing: Wands
 Beach Cleaner
 Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 5/3/90
ADEC Art Weiner Dybbines
EXXON Andy Fahl Seal
NOAA Gary Petros Gary Petros
USCG Kenneth Keene

FOSC: DATE: 5-8-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morrison 267-2324
- 1C Salmon fry nursery area (7/31 to 7/31)
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D Esther Hatchery release (4/15 to 6/15)
 1E Main Bay Hatchery release (4/20 to 6/15)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
 AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
 1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- 1I Gill net area (8/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (8/11 to 7/25)
 Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M Herring spawning (4/1 to 6/15)
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206
- 6T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (8/1 to 9/15)
 6V Anchorages (8/1 to 9/15)
 6W Forest Service cabins (8/1 to 9/15)
 6X Lodge (8/1 to 9/15)
 6Y Special use destination
- 7Z Subistence area: Salmon harvesting (5/1 to 9/30)
 71-74 Finfish harvesting
 Deer harvesting (8/15 to 2/28)
 Invertebrate harvesting
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2350

SHORELINE OILING SUMMARY

REVISION NO. 04/13/88

OG G. MACDONALD USCG S. RAINBOW SEGMENT ST/ CU-8
 BIO MA. SCOTT LAND REP L. KEELE NFS SUBDIVISION A (1 OF 1)
 EXXON J. BUTLER ADEC LORI J. STRATTON TIME 10:15:10:18:55
 IAM NO. 3 TIDE LEVEL 1.8 to +1 FT DATE 4/24/90
 J.T. SUBDIVISION LENGTH: 650 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow.
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: SW to NE
 SURFACE SEDIMENTS: R 65 % B 10 % C 10 % P 5 % G 5 % S 5 % M 0 % V 0 %
 SLOPE: Long 30 % Hang 60 % Vert 10 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 650 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	N	E	P	S	1	2	3	4	5	6	7	8	SW	U	NE	U
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT				X		X								X		
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
M																
NO OIL													X	X	X	

PAVEMENT H F S 0 sq. m by 0 cmPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE 0#BAGS 0

Photographs:

Roll No. ST-2-3Frames —

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SHEEN (Y/N)	▼	SURFACE - SUBSURFACE SEDIMENTS	
		OP	OR	OL	OF	NO		US	UC	1	2	3	4	5	6	SW	U	M	U					
1	35					X	1	-								X							-	C
2	40					X	1	-									X						28	PGPG
3	32					X	1	-										X					31	PSC
							.																	
							.																	
							.																	

COMMENTS Exposed rocky shore w/ mod. L. CPG beach. Single splat of tar was observed @ NE end of segment.
No oil.

 REVIEWED 7W DATE 4/26/90

SKETCH MAP

SEGMENT U-8

SUBDIVISION A

DATE 4/24/80

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWL/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Photo Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
P1 - No Subsurface Oil

2 Δ
P1 - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

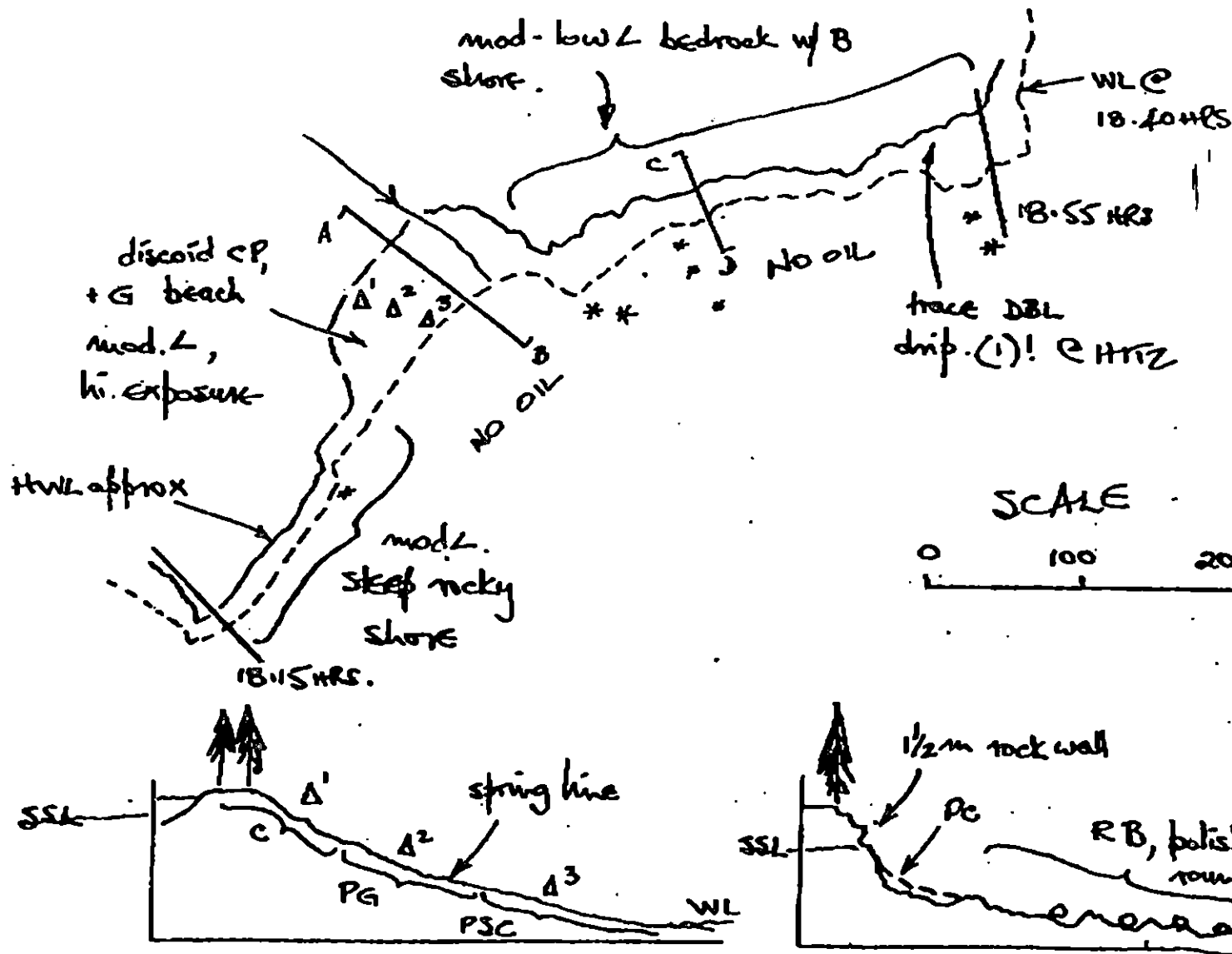
CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oil Vegetation

1 ●
Photo location, direction, and number

* submerged rocks



Oil Character Length (m): AP — PO — CV — CT — BT — MS — PT — TB — FL — NO 650

REVISION 5/2/80

SHORELINE ECOLOGICAL SUMMARY

REVISION: 06/22/90

Segment ST/CA-8 Subdivision A Date (mo / day / yr) 4/24/90

Time (24 hr) 1815-1955 Biologist M. A. Scott

(A) Substrate type and % of segments:
(1) Bedrock 65 (2) Boulder 10 (3) Cobble 10 (4) Pebble 10 (5) Sand 5 (6) Silt —

(B) Overall % cover of biota (% of segment): Dense 30 Moderate 35 Low 35

(C) Density, substrate preference (by number from A. above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L):
Juveniles / adults (X), new settlement (3)

Photographs:
Roll No. Ø
Frames Ø

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

MYTILUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

ydense patches

NOT PRESENT

GASTROPODS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

FUCUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments: (observation-beat + land)

- 6 eagles - rock/bl'd headlands separated by cobble cays (cobbles - no biota)
- 3 gulls - eagle nest on eco-map not observed
- 10 surfers
- 1 seal

Ecological Considerations:

anadromous stream - extensive cobble/pebble area at mouth
eagle nest - so. end of segment noted on "eco-map" - not observed; suspect additional nest at north end of segment (behavior of pair of eagles)
rock/bl'd - moderate density and diversity; *Eucus* reproductive, barnacle spat throughout
Mytilus - dense patches with 5+6 in crevices & edge of beds; small tide pools on headlands (diversity & density slightly greater than CU-8A)

ECOLOGICAL MAP

1A, 1B
ST-1
67

BALD EAGLE
NESTS

ANADROMOUS STREAM
224-20-13014

CU-8

14

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No

CU-8

ADEC Segment Length: 625m

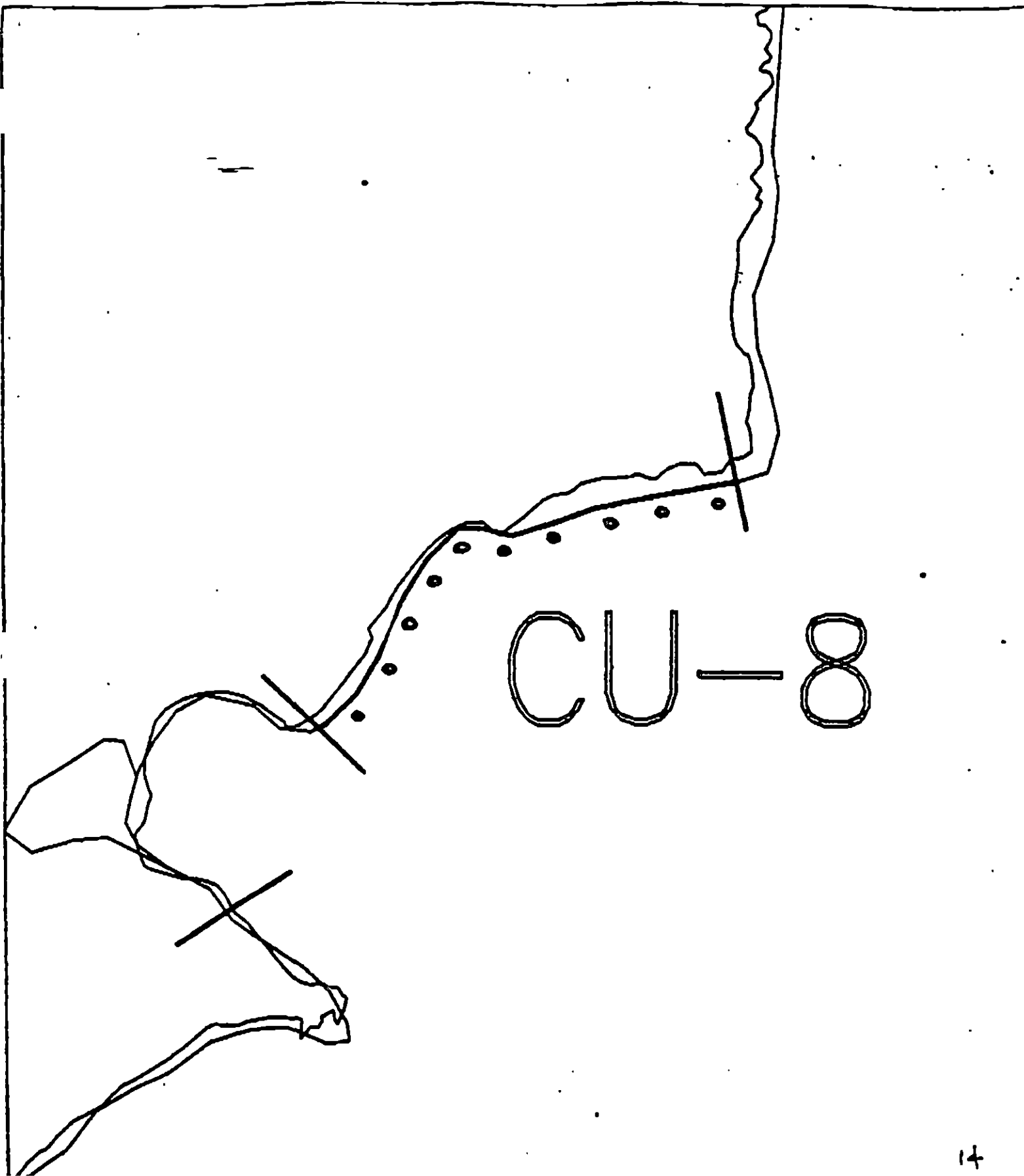
0 100 200 300

Map Key: PWS-88

Name: GM.

Date: 4.24.90

Data Entered:



14

(XXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

CU-8

ADEC Segment Length: 625m

0 100 200 300

Map Key: PWS-86

Name: GM.Date: 4.24.90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ CU-09 SUBDIVISION A (1 OF 1) DATE 4/24/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: R. Malle & Holman DATE: 5/3/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 39 m: No Oil 1264 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

<u>X</u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u> </u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u> </u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u> </u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u> </u> Tarmat Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 5/3/90
ADEC Art Wever
EXXON Andy
NOAA Gary
USCG Kenneth

FOSC: WJL DATE: 5-8-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)

1B Salmon stream mouth - spawning (7/10 to 8/31)

No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: ADF&G John Morison 267-2324

1C Salmon fry nursery area (4/31 to 7/31)

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D Esther Hatchery release (4/15 to 6/15)

1E Main Bay Hatchery release (4/20 to 6/15)

1F Seward Bay Hatchery release (4/15 to 6/1)

1G Cannery Creek Hatchery release (4/21 to 6/1)

1H Remote release site

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.

AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214

1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511

1I Gill net area (6/7 to 8/31)

1J Purse seine area (7/20 to 9/30)

1K Purse seine hook-off (7/20 to 9/30)

1L Set net sites (6/11 to 7/25)

Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

2M Herring spawning (4/1 to 6/15)

Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)

3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)

Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235

ADF&G Don Calkins 267-2403

5R Seabird colony (5/1 to 9/1)

Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S Shorebird/waterfowl concentration (4/1 to 5/15)

Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

ADF&G Tom Roth 267-2206

5T All Bald Eagle nests (3/1 to 6/1)

Active Bald Eagle nests (3/1 to 9/1)

Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U Recreation: Tent sites (6/1 to 9/15)

6V Anchorages (6/1 to 9/15)

6W Forest Service cabins (6/1 to 9/15)

6X Lodge (6/1 to 9/15)

6Y Special use destination

7Z Subsistence area: Salmon harvesting (5/1 to 9/30)

7HH Finfish harvesting

Deer harvesting (8/15 to 2/26)

Invertebrate harvesting

Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.

AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

SEGMENT ST/ CW-09 SUBDIVISION: A DATE 4/24/90IS
NAME SCOTT RAINSFORD SIGNATURE Scott Rainford MST1☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTEDDEC
NAME Lori J. Stratten SIGNATURE Lori J. Stratten☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Pebble & cobble/pebble beaches are surrounded by boulder and bedrock. Most of the segment had very light traces of coat and stain splashed in UI + SU on boulders.

In Location #2, the coat was splashed on boulders over an area 10 m x 35 m. ~~Also~~There was very light coat splashed and ^{patchy} cover in ^{splash} distribution, with some pooling between boulders (<1% category). The oil is protected by boulder & bedrock barriers from being weathered by waves.

Cleanup is not recommended due to lack of significant oil present + low potential for oil being mobi.

AND MANAGER

NAME M. S. [unclear] SIGNATURE Don [unclear] (NPS)☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Oil is on vertical face of large boulders and in small protected pockets. No Sensitive Resources in the area.

29

Does not warrant physical treatment or Biological Enhancement

Continue Natural Cleaning.

SHORELINE OILING SUMMARY

REVISION NO. 04/12/88

OG G. MACDONALD USCG S. RAINFOLD SEGMENT ST/ CU-9
 BIO MA. SCOTT LAND REP L. KEELER NFS SUBDIVISION A (1 OF 1)
 EXXON J. BUTLER ADEC LORI J. STRATTON TIME 18:56 19:40
 TEAM NO. 3 TIDE LEVEL +1 to 0.5 ft DATE 4/24/90
 EST. SUBDIVISION LENGTH: 1630 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☐ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 30 % B 20 % C 15 % P 25 % G 10 % S 0 % M 0 % V 0 %
 SLOPE: Long 40 % Hang - % Vert 60 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 35 m NO 1595 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	W	M	N	VL	1	2	3	4	5	SV	U	M	U
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT													
STAIN													
MOUSSE													
PATTIES													
TARBALLS													
LM													
NO OIL										X		X	X

PAVEMENT H F S 0 sq. m by 0 cmPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE 0#BAGS 0

Photographs:

Roll No. ST-3-3Frames -

SUBSURFACE OIL BEDROCK / BOULDER SUBSTRATE TYPICAL - NO PITS

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	SURFACE - SUBSURFACE SEDIMENTS
		OF	OR	OL	OF	NO		VO	VO	1	2	3	4	5	SV	U	M	U			

COMMENTS Exposed rocky shore, partly scalloped w/ small pc pockets.
 Trace of surface oil at NE end of segment — cr/s and cv/s
 in protected rock channel — driphits and splashes plus
 30 cm dia. cv patches on PG between boulders.
 No subsurface oil.

REVIEWED 7/11DATE 4/24/90

SEGMENT S U-9

SUBDIVISION A

DATE 4/24/80

CHECKLIST

☐ M Arrow
☐ Approx. Scale
☐ Sep/Sub Entry
☐ Oil Dist.
☐ Width
☐ Length
☐ % Cover
☐ Substrate Character
☐ Est. HW/LWL
☐ SSL
☐ Profile Location(s)
☐ Photo(s)
☐ Photo Location(s)

LEGEND

1 Δ
PH - No Subsurface Oil

2 Δ
PH - Subsurface Oil

CT/C
Continuous Distribution

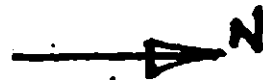
CT/B
Broken Distribution

CT/P
Patchy Distribution

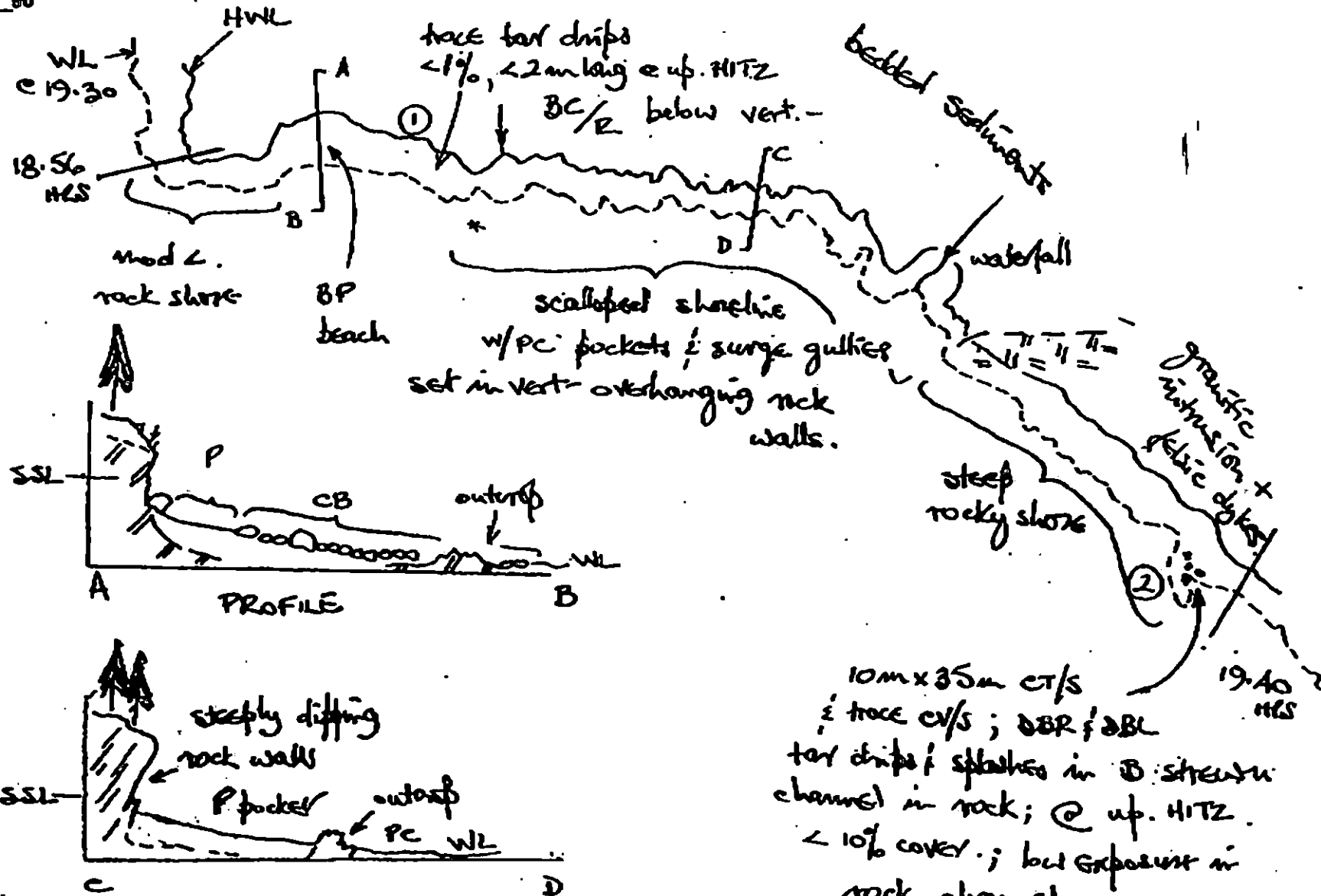
CT/S
Scalloped Distribution

Oil Vegetation

Photo location, direction, and number

① DEC. LOC^N

SCALE.
0 100 200 300 m



Oil Character Length (m): AP — PO — CV 20 CT 35 ST — MS — PT — TB — FL — NO 1595

N

REVISION: 00000

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/22/90

Segment ST/ C4-9 Subdivision A Date (mo / day / yr) 7/25/90

Date (24 Hr) 1855-1955 Biologist M.A. SCOTT

(A) Substrate type and % of segments:
(1) Bedrock 30 (2) Boulder 20 (3) Cobble 15 (4) Pebble 35 (5) Sand — (6) Silt —

(B) Overall % cover of biota (% of segment): Dense 30 Moderate 25 Low 45

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs: Roll No. —

Frames —

BARNACLES

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	X	X	2	2	2	2	2	2	X	NOT PRESENT
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	
6	6	6	6	6	6	6	6	6	6	6	6	

MYTILUS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	X	2	2	2	2	NOT PRESENT <i>up dense patches</i>
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	
6	6	6	6	6	6	6	6	6	6	6	6	

GASTROPODS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	X	2	2	2	2	2	2	2	NOT PRESENT
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	
6	6	6	6	6	6	6	6	6	6	6	6	

FUCUS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	X	2	2	2	2	2	2	2	NOT PRESENT
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	
6	6	6	6	6	6	6	6	6	6	6	6	

Wildlife Observations/ General Comments: (observations by boat & land)

2 eagles
1 sea lion
2 golden eyes
5% barnacle zone-rock wall

Ecological Considerations:

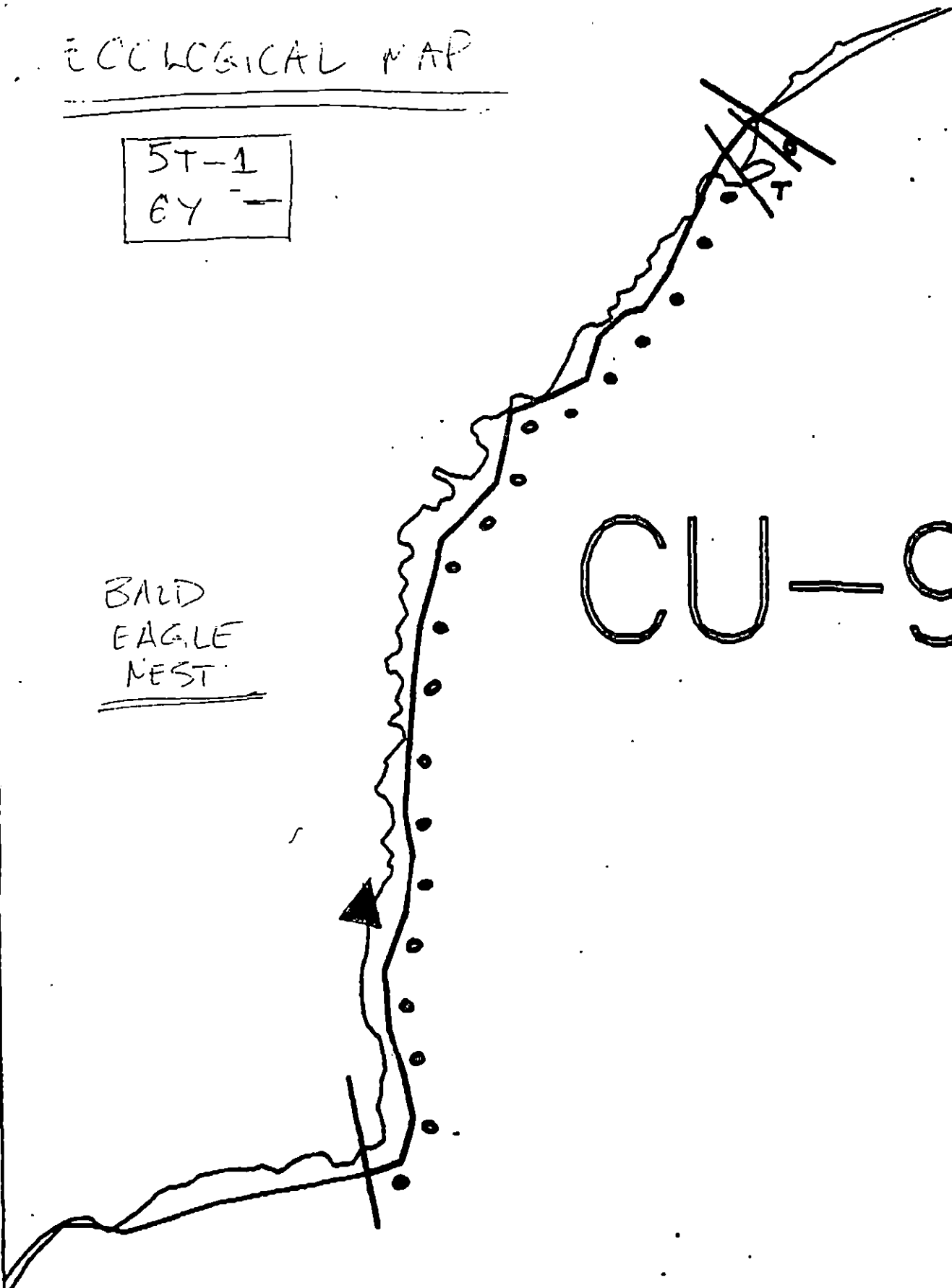
eagle nest (as located on "eco-map"), eagle in vicinity
boulders - very low diversity & density
rock/blw headlands - moderate density & diversity; appears to be slight increase in density & diversity from se end of island (C4-6 to C4-7, through C4-8 to C4-9); dense patches of well established mytilus (w/ new settlement), new settlement of barnacles, Fucus reproductive

ECOLOGICAL MAP

5T-1
6Y --

BALD
EAGLE
NEST

CU-9



24

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

CU-9

ADEC Segment Length: 1621m

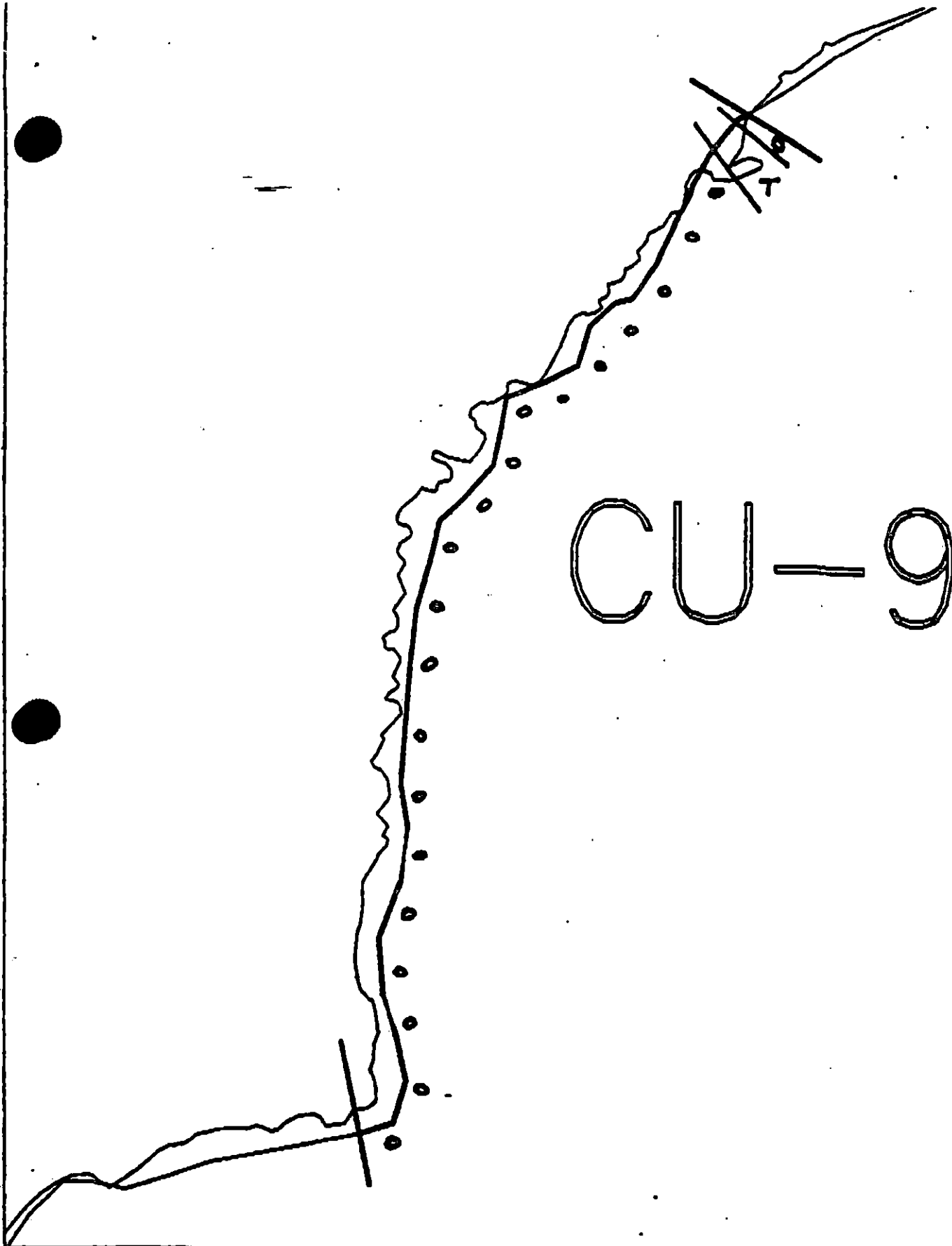


Map Key: PWS-127

Name: G.M.

Date: 4.24.90

Date Entered:



CU-9

24

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

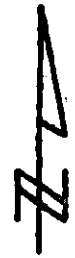
0000 No Oil

CU-9

ADEC Segment Length: 1621m



METERS



Map Key: PWS-127

Name: G.M.

Date: 4.24.90

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT CU-10 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarmat Removal	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

ADF&G catalogued anadromous stream (224-20-13020) is more than 100m from work site. No constraint to manual pickup and tarmat removal.

1K Purse Seine Hook-off

No constraint to manual pickup and tarmat removal.

5T Bald Eagle Nest

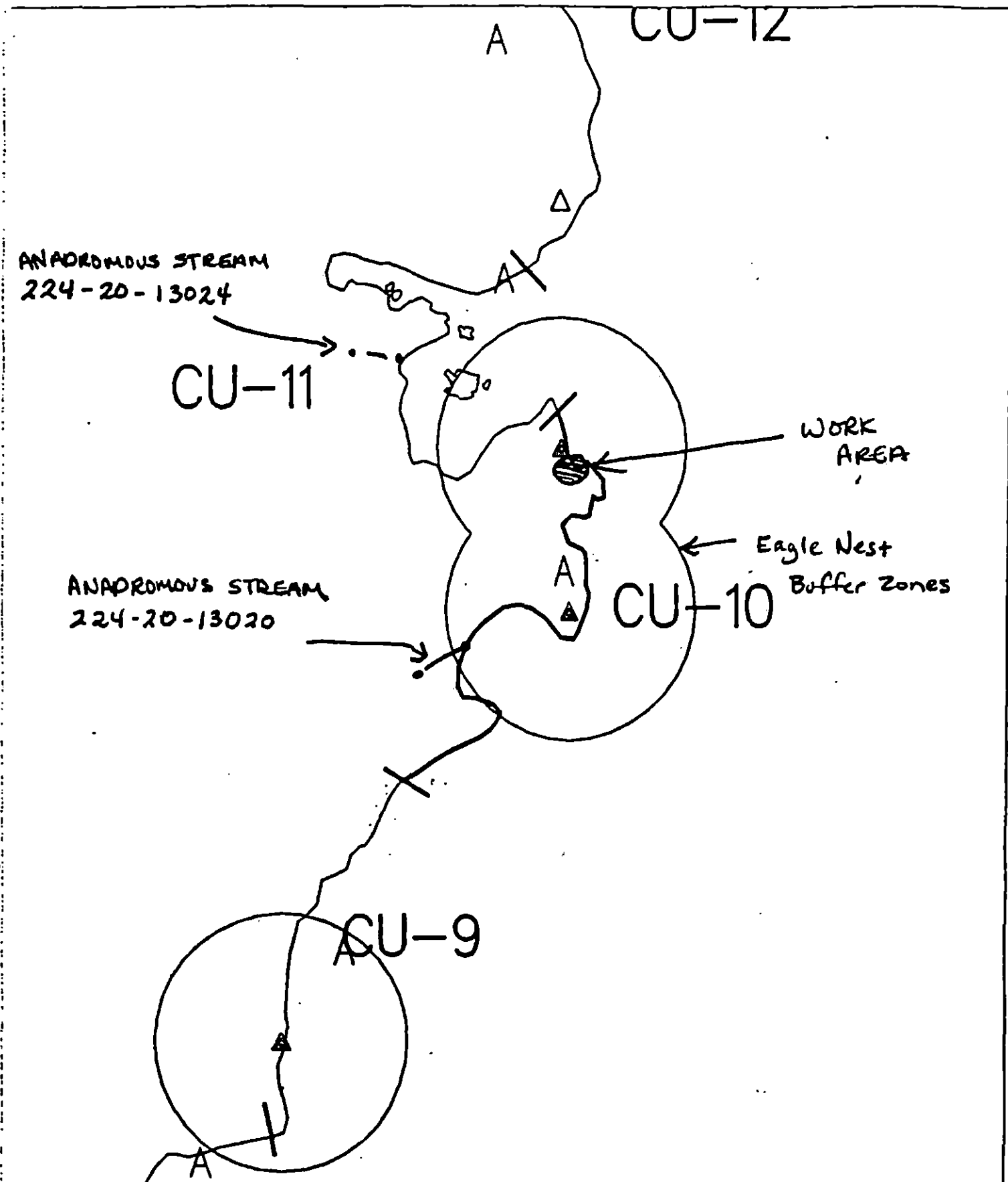
USFWS 6/1/90 map indicates an active nest in Subdivision A. Closed to manual pickup and tarmat removal within 400m of active nest.

OTHER ECOLOGICAL CONSIDERATIONS

If eagle nest constraint is removed, other ecological considerations will apply. Avoid any unnecessary disturbance or damage to unexcavated biotas and substrates.

FOSC DD Rome Date 6/24/90

Prepared by J. P. Kelly Date 6/22/90



Exxon Company, USA
Map Key: PMS-CU-10
June 08, 1990

ECOLOGY MAP SEGMENT CU-10

SUBDIVISION A (L-1-L-1)

METERS

0 414 827

- ★ Seabird Colony
- ▲ Active Eagle Nest
- △ Inactive Eagle Nest

1 inch = 1357 feet

SHORELINE EVALUATION

SEGMENT ST/ CU-11 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Salmon stream no. 224-20-13024 (Ps, 2/90)

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)

1B Salmon stream mouth - spawning (7/10 to 8/31)

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

SHPO SIGNATURE: L. David M. Mahan DATE: 5/9/90

OILING CATEGORIZATION:

Wide_0_m: Medium_66_m: Narrow_140_m: V.Light_939_m: No Oil_1890_m
Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

RECOMMENDATIONS:

No Treatment Recommended

X Treatment Recommended

Manual Pickup

X Bioremediation

X Tarmat Removal

Snare/Absorbent Booms

Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

X Spot Washing: 4 Wands

Beach Cleaner

Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of tarmat in area indicated on sketch map #1, 2) spot hot water washing in areas indicated on sketch maps #1, and 2, and 3) bioremediation in areas indicated on sketch maps #1 and 2. Work should be conducted between 5/15 and 7/10 due to salmon stream constraints.

TAG COMMENTS:_____

TAG APPROVAL DATE: 3/9/80

ADEC ARTWORKER Art Wilson

EXXON *Amstel* *2* *10*

NOAA Burt Wescott Anderson

USCG D.D. Rome DD Rome

FOSC: M L DATE: 5-12-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 1C Salmon fry nursery area (4/31 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D Esther Hatchery release (4/15 to 6/15)
1E Main Bay Hatchery release (4/20 to 6/15)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- 1I Gill net area (5/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (5/11 to 7/25)
Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M Herring spawning (4/1 to 6/15)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unrolled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G Evelyn Bliggs 424-3235
- N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
O, 3Q Harbor seal and sea lion molting (5/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 588-7235
ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Roth 267-2208
- 5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 6/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (5/1 to 9/15)
6V Anchorages (5/1 to 9/15)
6W Forest Service cabins (5/1 to 9/15)
6X Lodge (5/1 to 9/15)
6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
Finfish harvesting
Deer harvesting (5/15 to 2/28)
Invertebrate harvesting
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2358

SEGMENT ST/ CU-11 SUBDIVISION: A DATE 4/25/90

USCG NAME MS. SHARPE SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
 COMMENTS

ADEC NAME STEPHEN FERGUSON SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
 COMMENTS

WEEK DEC (MAP) RECOMMENDATIONS

Pocket #3 SPOT WASH → POOLED MOUSE ON STATE COUNTRY RR.
 MARSHAL ROAD → SPOT WASH → RIO → PARKWAY + POOLED MOUSE AREA SHOWN IN ☐

Pocket #4 SPOT WASH + BED

Pocket #5 SPOT WASH (POOLED MOUSE → BURIED ATTOP ANTIQUED BEDROCK)

☒ → IF SPOT WASHING IS GOING ON AT Pockets 3+4+5 MAY WANT TO ASSESS POSSIBILITY OF WASHING THIS AREA ALSO

AND MANAGER NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
 COMMENTS

Listed as priority 2 by PWSCA.. Area used for recreation.

Oiling is in or adjacent to pocket beaches that are good for recreational uses. Recommend treatment as

suggested by ADEC above.

SHORELINE OILING SUMMARY

REVISION NO. 06/12/88

OG K. Ramsey USCG R. SHARPE SEGMENT ST/ CU-11 Page 192
 BIO G. PENN LAND REP L. CARLSON SUBDIVISION A (1 OF 1)
 EXXON S. REID ADEC S. FERGUSON TIME 8:20 to 11:30
 TEAM NO. 4 TIDE LEVEL -3.0 to +5.5' DATE 4/25/90
 EST. SUBDIVISION LENGTH: 3924 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 90 % B 20 % C 3 % P 7 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 0 % Hang 50 % Vert 50 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 114 m N 153 m VL 1,143 m NO 2,513 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	R	B	P	S	1	2	3	4	SU	U	M	U
ASPHALT PAVEMENT			X					X		X		
POOLED		✓	A									
COVER			X									
COAT			X									
STAIN			X									
MOUSSE			X									
PATTIES			X									
TARBALLS			X									
FILM												
NO OIL												

PAVEMENT H (F) S 1 sq. m by 3 cmPATTIES / TARBALLS 10 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	X		
Vegetation	X		
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐TYPE absorbant pa#BAGS 1

Photographs:

Roll No. ST-4-2Frames 20, 26, 27 + 28

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR				PIT ZONE				ANALYSIS	SHEEN (μm)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	OS		SO	SC	1	2	3	4	SU	U	M	U				
1	25					X	1-1		X						X			N	N	20	C, G, S
2	35					X	1-1		X						X			N	N	34	B, P, G, Rx
3	15					X	1-1		X						X			N	-	-	P, G, Rx
4	30		X				5-10		X		X				X			N	-	-	P, G
5	37		X				5-10		X		X				X			N	-	-	P, G
6	30					X	1-1		X						X			P	-	-	P, G, Rx

COMMENTS

See attached sheet

REVIEWED MH DATE 4-27-90

COMMENTS

Segment CU-11 consists of mainly high angle to vertical rocky headlands with several boulder and cobble pocket beaches and coves. The northern bay area is a low wave exposure environment, and the southern bay is a moderate to high wave exposure area. In general, there is a band which ranges from patchy coat, cover and stain found in the southern bay. It is roughly 3-4 m in width and is found at the HWL along the vertical bedrock face.

The second predominant oiling is pooled with soft dull black oil which occurs in the crevices and interstices of bedrock and localized areas in the upper intertidal zone. There are a couple of pocket beaches worthy of notice. See diagram for location.

Pocket beach No. 3. This beach is a cobble pocket beach which has pooled mousse splash in an area approx. 13 m long x 2 m wide. Then there is an area of heavier pooled mousse described as patchy (20 - 30% coverage) in an area approx. 13 m long x 4 m wide. Next to this area, there is a small area of friable asphalt pavement about 1 m x 1 m and 3 cm deep.

Pocket beach No. 4. The south side of this pocket beach had the band on the bedrock and patchy pooled mousse which ran from the mitz to sitz. There was oiled fucus in the mitz. There was subsurface oiling in the storm berm and the north side of this pocket beach. The subsurface oiling was 5 cm down and was about 5 cm thick. It covers an area about 1 m wide x 7 m long.

Pocket beach No. 5. There is a runoff stream located mid way on this pocket beach. There is pooled mousse under the runoff water trapped behind boulders which creates a shallow tidal pool. A light brown film occurs on the surface of the water in this area.

SEGMENT CU-11

SUBDIVISION A

DATE 4.25.90

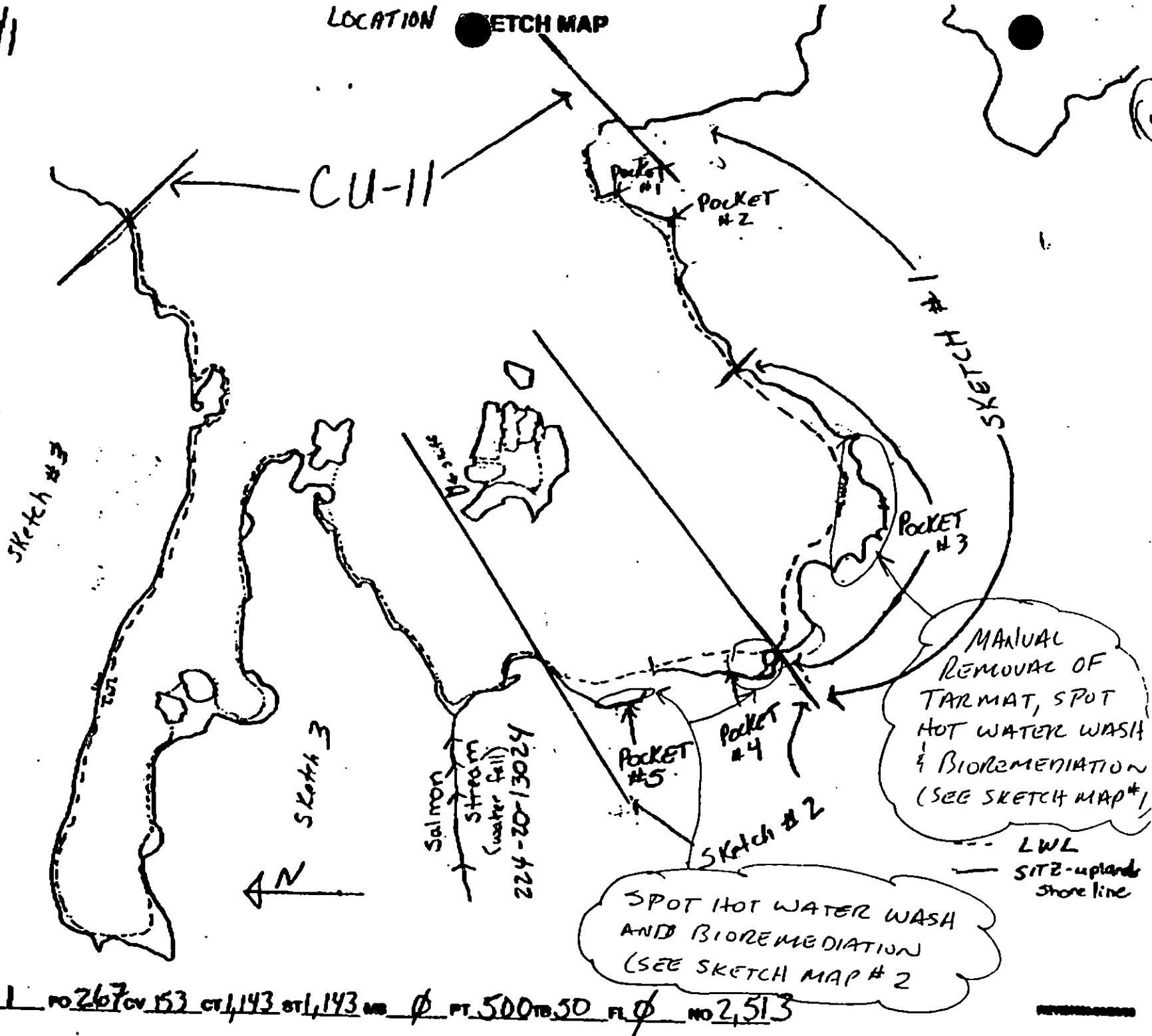
CHECKLIST

- ☒ N Area
- ☒ Approx. Scale
- ☒ Right/Left Entry
- ☒ Oil Out
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HWA/LWL
- ☒ SLL
- ☒ Photo Location(s)
- ☒ Profile Location(s)
- ☒ Photo Location(s)
- ☒ Photo Location(s)

LEGEND

- 1 Δ
PT - No Subsurface Oil
- 2 Δ
PT - Subsurface Oil
- CT/C
Continued Distribution
- CT/B
Broken Distribution
- CT/P
Patchy Distribution
- CT/B
Splashed Distribution
- eee
Old Vegetation
- 1 ●
Photo location, direction, and number

LOCATION CU-11 SKETCH MAP



Oil Character Length (ft): AP 1 PO 267 CV 153 CT 1,143 ST 1,143 MB 0 PT 500 TB 50 FL 0 NO 2,513

REVISIONS

SEGMENT S' U-11

TCH MAP #1

SUBDIVISION A

DATE 4, 25 90

CHECKLIST

- M Area
 Approx. Size
 Soil/Sub. Study
 Off Dist.
 Width
 Length
 % Cover
 Substrate Character
 Est. HUMUS %
 S.M.
 Profile Location(s)
 Profile(s)
 Pit Location(s)
 Photo Location(s)

LEGEND

- 1 Δ**
PR - No Subsurface CP

- 2 ▲ 1
PM - Subsurface Oil

CT/C
Continental Conti-Store

CT/D
Broken Discharge

CT/P
Policy Distribution

CT/S
Specialized Distribution

eee
Other Vegetation

Photo location, direction,
and number

band
ST/CP/CPs on Rock face
Pgs placed in reverts
AP/P/F 1st one
3m deep

State country R
Pooled mouse
@ Nitz
between state
creeks
(Patchy - 20-300
m range)
area ~ 13m long x 4m
wide

CT/cv
band is
5 m long x 1 m wide
(from Hitz to Sitz)

SPOT HOT WATER WASH

Oil Character Length (in): AP _____ PO _____ CV _____ CT _____ ST _____ MS _____ PT _____ TS _____ FI _____ NO _____

REVISIONS

15

u-11

A

4,2500

CHECKLIST

- _____ N Area
 _____ Approx. Scale
 _____ Sed./Silt. Ratio
 _____ Cl. Dist.
 _____ Width
 _____ Length
 _____ % Cover
 _____ Substrate Character
 _____ Est. HWA/LWL
 _____ SWL
 _____ Profile Location(s)
 _____ Profile(s)
 _____ FH Location(s)
 _____ Photo Location(s)

LEGEND

1 Δ

Fit - No Substitution Case

PI - Subscriptions Q1

CT/C

Confidential Distribution

CT/D

Grading Distribution?

CT/P

Pottery Distribution

CT/3

Synthetic Distribution

000

ALL
ON

Case vignettes

1.

100

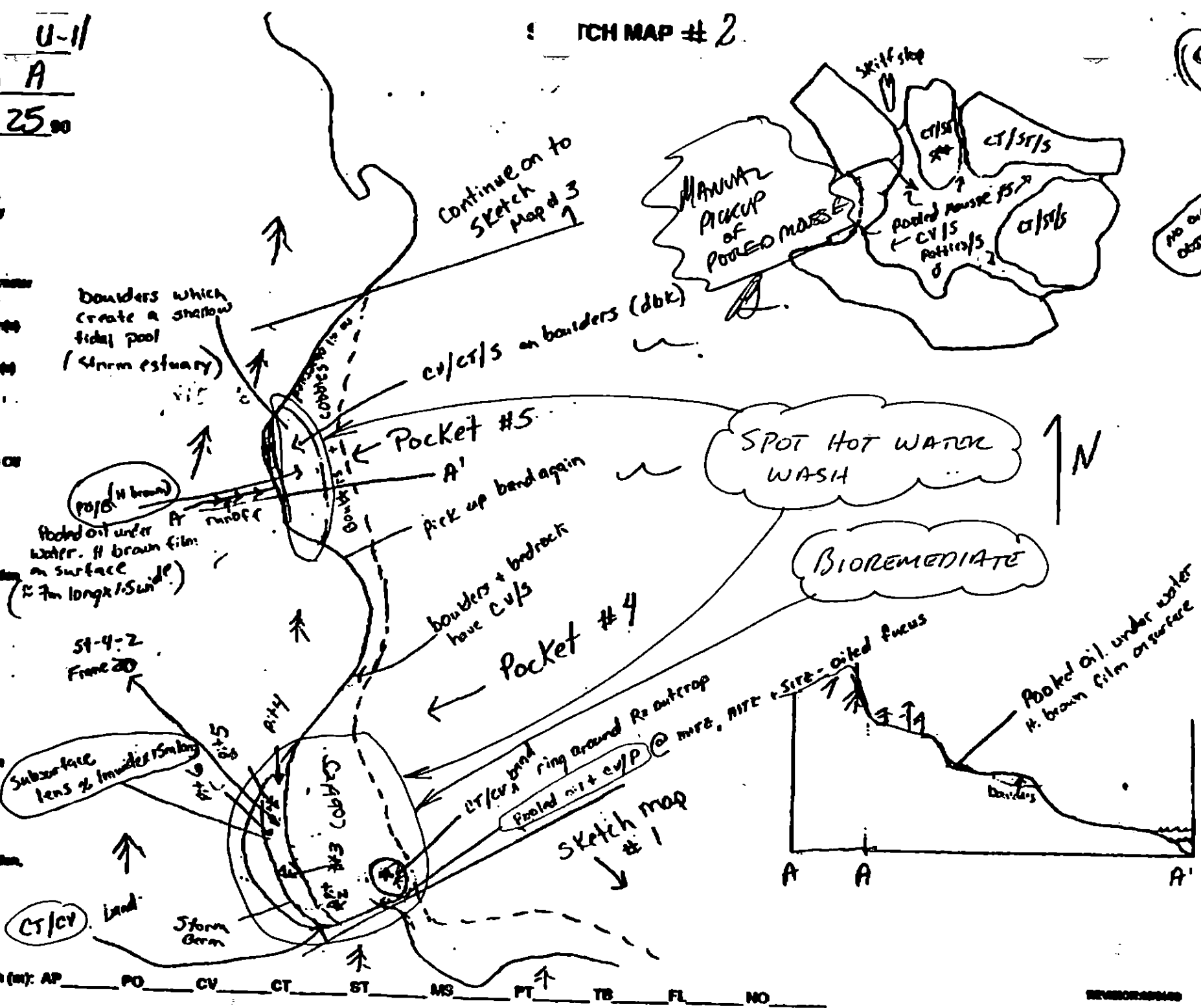
Photo location, date

UNIT 10

1000

Character Law

1 TCH MAP # 2



Oil Character Length (in): AP _____ PO _____ CV _____ CT _____ ST _____ MS _____ PT _____ TB _____ FL _____ NO _____

Keywords:

SEGMENT: 4-1

SUBDIVISION A

DATE 4.25.80

CHECKLIST

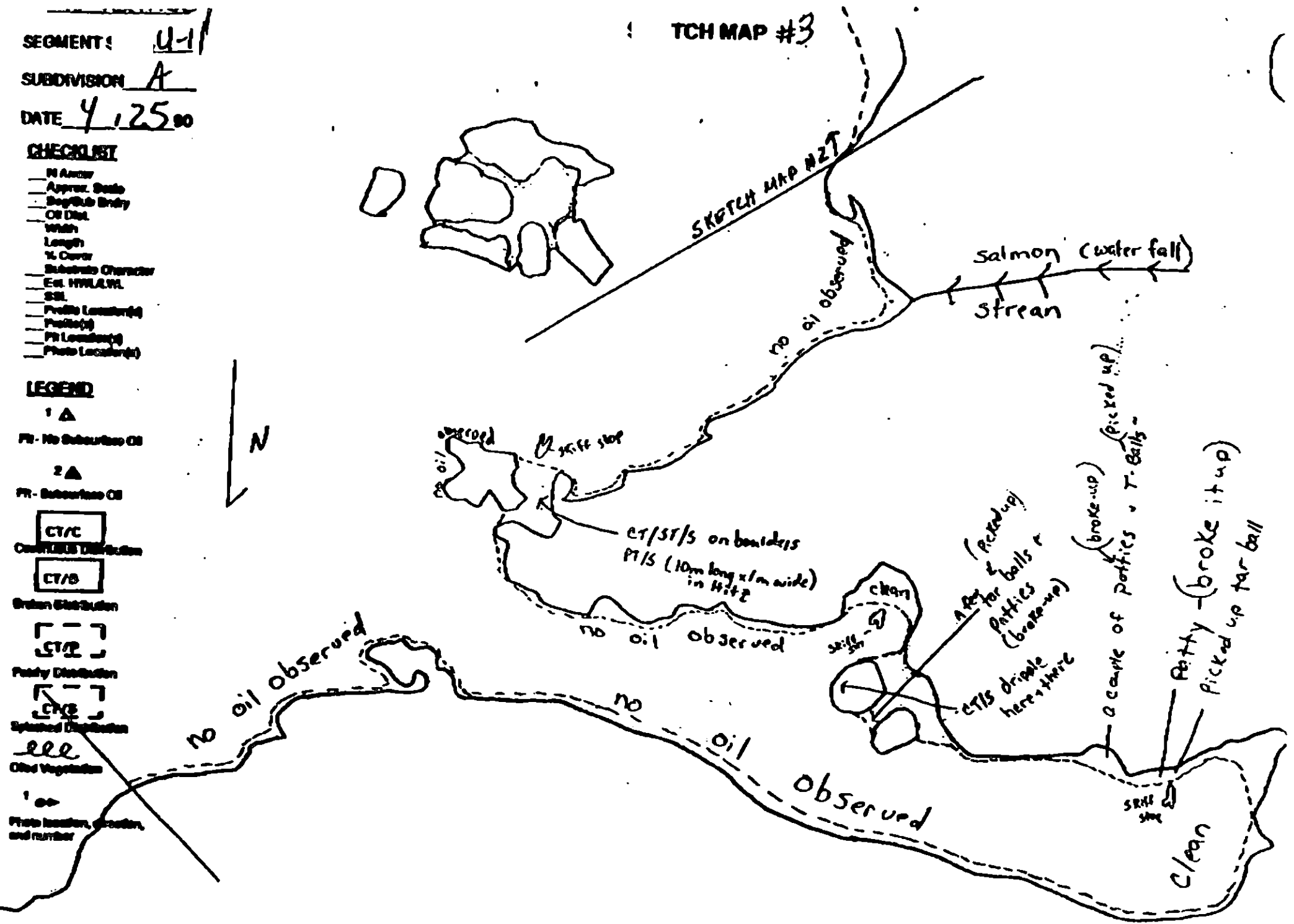
- ☐ N. Area
- ☐ Approx. Scale
- ☐ Significant Findings
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. NW/SE/NE
- ☐ S.S.
- ☐ Profile Location(s)
- ☐ Photo(s)
- ☐ Photo Location(s)

LEGEND

- 1 Δ No Subsurface Oil
- 2 Δ Subsurface Oil
- CT/C Core/Lens Distribution
- CT/S Broken Distribution
- [CT] Patchy Distribution
- [CT] Smeared Distribution
- eee Other Vegetation
- 1 ● Photo location, elevation, and number

TCH MAP #3

SKETCH MAP NZT



Oil Character Length (m): AP _____ PO _____ CV _____ CT _____ ST _____ MS _____ PT _____ TB _____ FL _____ NO _____

REVENUE

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/25/90

Segment ST / C4-11 Subdivision A Date (mo / day / yr) 4/25/90Time (24 hr) 0820 Biologist PENN

(A) Substrate type and % of segments:

(1) Bedrock 70 (2) Boulder 20 (3) Cobble 3 (4) Pebble 7 (5) Sand 0 (6) Silt 0(B) Overall % cover of biota (% of segment): Dense 5 Moderate 10 Low 40

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:

Roll No. ST-4-2Frames 20-28

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

MYTILUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

GASTROPODS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

FUCUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments:

3 eagles

4 Hairywood

2 Seals

1 Steller Jay

18 Kinglets

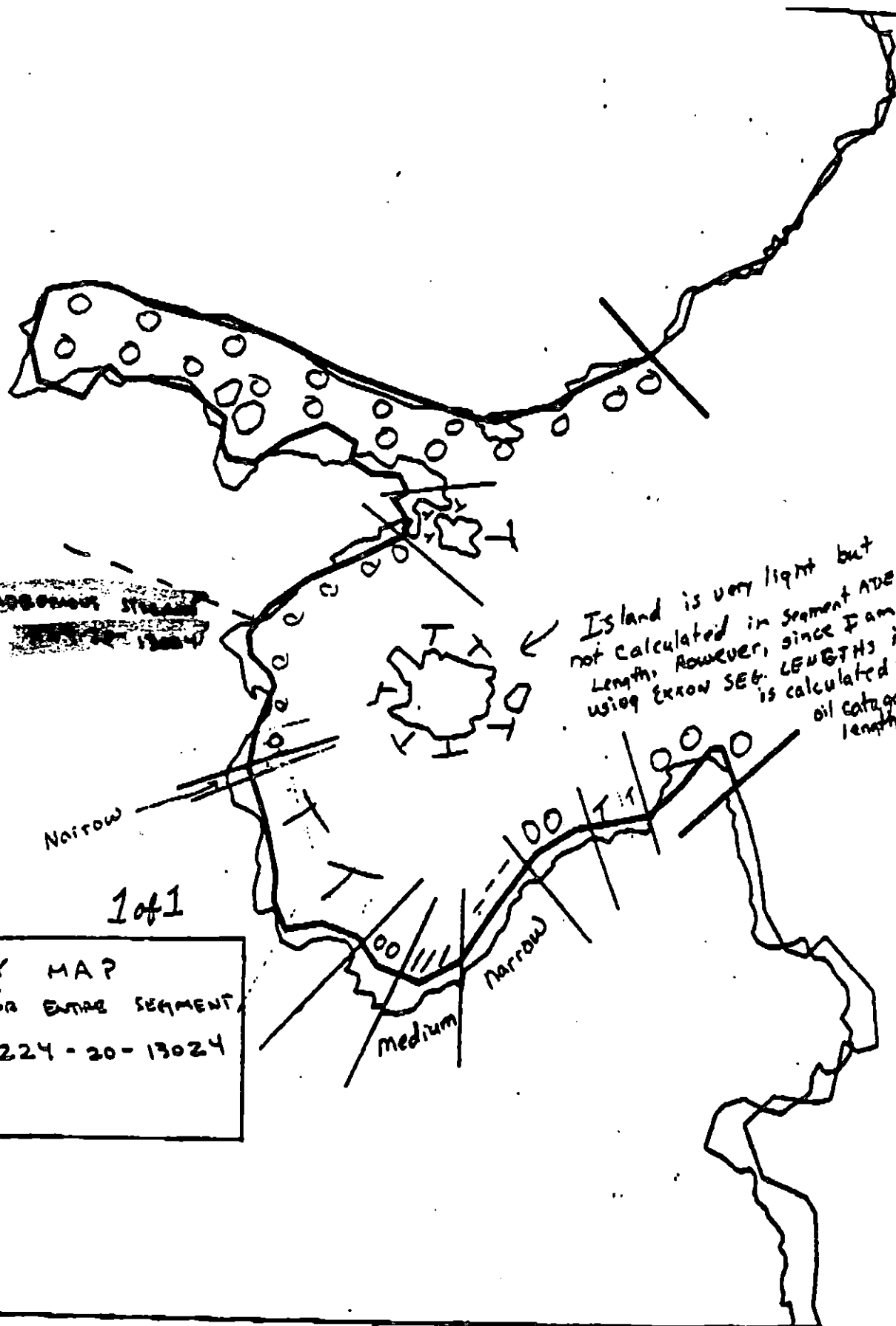
2 Murrelets

~75 Sand Hill Cranes (overflight)

1 River Otter

1 Song Sparrow

Ecological Considerations:



ECOLOGY MAP
 RESOURCE CODES FOR ENTIRE SEGMENT
 TA-16-224-20-13024
 6/5

● XXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

CU-11

ADEC Segment Length: 2458m



Map Key: PWS-69

Name: K. Ramsey

Date: 4/25/90

ANADROMOUS STREAM
224-20-13024

Narrow

medium
Narrow

Island is very light but
not calculated in segment ADEC
Length. However, since Dam
using Arrow SEE LENGTHS it
is calculated in
oil category
length.

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

CU-11

ADEC Segment Length: 2458m

Map Key: PUS-08

Name: K. Ramsey

Date: 4/25/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT CU-11 SUBDIVISION A (1 of 1)

WORK WINDOW	
Tarmat Removal	OPEN
Spot Washing	OPEN
Bioremediation More Than 100m From Stream	OPEN
Bioremediation Less Than 100m From Stream	WORK PRIOR TO 7/10 (ADF&G MONITOR REQ.)

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

- 1A,1B Salmon Stream** ADF&G catalogued anadromous stream (224-20-13024) is present within Subdivision A. This subdivision is closed to bioremediation less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation is permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation more than 100m from stream. No constraint to tarmat removal or spot washing.
- 1K Purse Seine Hook-off** No constraint to tarmat removal and spot washing. Closed to bioremediation after 7/20.
- 5T Bald Eagle Nest** NO CONSTRAINT. USFWS bald eagle Impact assessment was completed 5/27/90 by Mike Lockhart. The work areas are outside the buffer zone around active nests established by USFWS.

OTHER ECOLOGICAL CONSIDERATIONS

Use designated access corridor. Restrict boat and air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from active nests. No disturbance to stream bed or bank. No flushing of pollutants or sediments into stream drainage; do not allow Inipol to enter stream flow. On-site examination and consultation by ADF&G monitor is required prior to bioremediation in order to authorize a setback distance from the stream during chemical application; if ADF&G monitor's presence is impossible, authorization may be given by the ADEC monitor. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

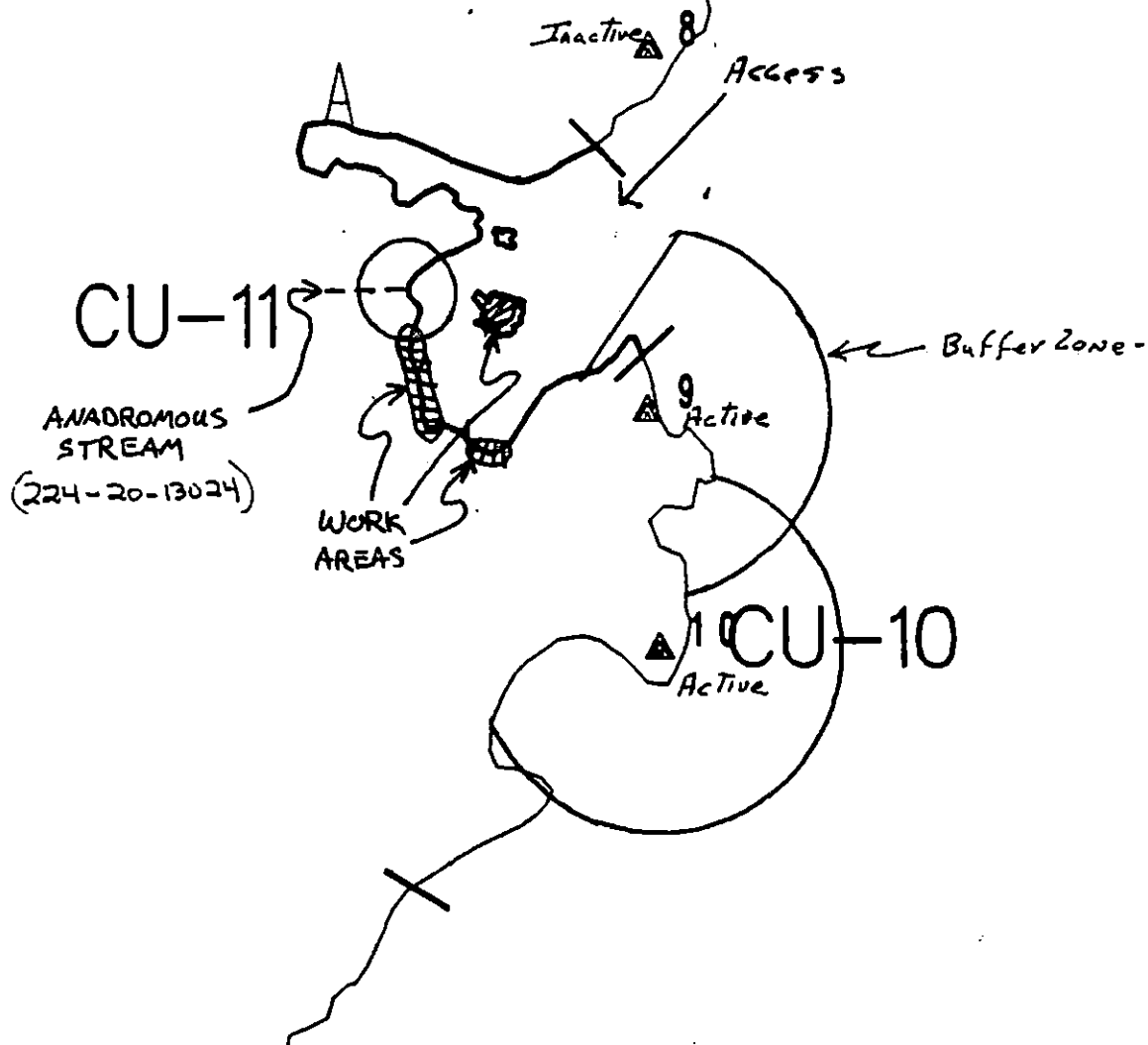
TAG ADDENDUM DATE 6/04/90
ADEC Ray Mager's
EXXON Andy
NOAA Joseph
USCG G.A. HEITER
FOSC [Signature] DATE 6/4/90

Prepared by: [Signature]

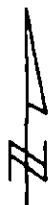
Date: 6/2/90

CU-12

*Incorporates information from
USFWS bald eagle survey 5/27/90.*



Exxon Company, USA
Map Key: PWS-CU-11
May 11, 1990



ECOLOGY MAP 5/30
SEGMENT CU-11
SUBDIVISION A (1 of 1)
METERS
0 420 839

- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1377 feet

SHORELINE EVALUATION

SEGMENT ST/ CU-12 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Gill net area (1I) - 6/7 to 8/31; Purse seine area (1J) - 7/21 to 9/30; bald eagle nests (5T) - 3/1 to 6/1; Recreation special use destination (6Y) - 6/1 to 9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: (1I, 1J) Contact ADF&G for dates, locations, constraints. (5T) Restrict air traffic to essential minimum. Air approach and takeoff from and to seaward only. Contact USFWS prior to treatment for confirmation dates and avoidance minimums.

SHPO SIGNATURE: Charles H. Jones

DATE: April 14, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 1767 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

☒ No Treatment Recommended	☐ Snare/Absorbent Booms
☐ Treatment Recommended	☐ Oil Snares (pom poms)
☐ Manual Pickup	☐ Absorbents (pads, rolls, etc)
☐ Bioremediation	☐ Spot Washing: <u> </u> Wands
☐ Tarmat: <u> </u> Breakup	☐ <u> </u> Beach Cleaner
☐ <u> </u> Removal	☐ Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/14/90

ADEC JOHN BAUER John Bauer

EXXON ANDY TEK Andy Tek

IOAA Burt Wescott Burt Wescott

JSCG G.A. REITER G.A. Reiter

FOSC:

DATE: 4-20-90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / CU-12 SUBDIVISION: A-1 of 1 DATE 04/04/9c

USCG

NAME David S. Thomas

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME Clara Crosby

SIGNATURE Clara S. Crosby

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

No oil observed - unable to land on any
part of segment - rock face & surf limited
Accessed at

LAND MANAGER

NAME MARSHA MARTIN / DNR

SIGNATURE Marsha Martin

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Rick Gillie USCG Bm 1 Thomas SEGMENT ST/ CU-12
 BIO DAVE Lohr LAND REP Marsha Martin SUBDIVISION A-10F1
 XCON FRANK Doy ADEC Clara Crosby (ADNR) TIME 15:45 to 16:00
 TEAM NO.: 13 TIDE LEVEL: +1 16 + DATE 04/04/90
 EST. SUBDIVISION LENGTH: 2167 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock Snow
 SURVEYED FROM: ☐ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 95 % B 5 % C 0 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 0 % Hang 10 % Vert 90 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 2,167 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES						
	C	B	P	S		OP	OR	OL	OF	NO	VO	UC	SV	UI	ME	U	
ASPHALT PAVEMENT																	
POOLED																	
COVER																	
COAT																	
STAIN																	
MOUSSE																	
PATTIES																	
TARBALLS																	
FILM																	
NO OIL													X	X	X	X	X

PAVEMENT: H F S N/A sq. m by cmPATTIES / TARBALLS N/A BAGSNEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☐ NOTYPE #BAGS

Photographs:

Roll No. N/AFrames N/A

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UC	SV	UI	ME	U	SV	UI	ME	U						
							.																
							.																
							.																
							.																
							.																
							.																

COMMENTS

- ① SURVEYED BY BOAT. UNABLE TO LAND BECAUSE OF STEEP BEDROCK SHORELINE. NO BEACHES. HIGH WAVE.
- ② PREVIOUS SURVEYS INDICATED NO OIL.

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03-22-90

Segment ST / CU012 Subdivision A Date (mo / day / yr) 4-4-90Time (24 hr) 15:45 Biologist David Lohr(A) Substrate type and % of segments:
(1) Bedrock 95 (2) Boulder 5 (3) Cobble (4) Pebble (5) Sand (6) Silt (B) Overall % cover of biota (% of segment): Dense 20 Moderate 50 Low 30

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:
Roll No.
Frames

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

MYTILUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

GASTROPODS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

FUCUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments:

1. This segment was censused by boat due to difficult landing conditions. Only those organisms evident from the boat were recorded.

2. low intertidal not seen.

Ecological Considerations: 3. Ulva/Enteromorpha present in mid zone

4. Ducks seen in area

17, 15, 64- no comment

ST- none observed

OG Ric GILLIE

SEGMENT ST/ U-12
SUBDIVISION A-1 of 1

DATE 04/04/90

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Bndry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ

Pit - No Subsurface Oil

2 Δ

PS - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

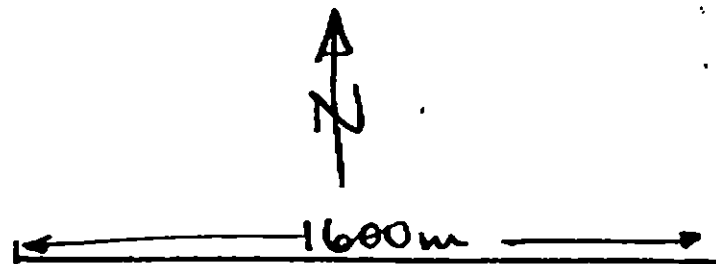
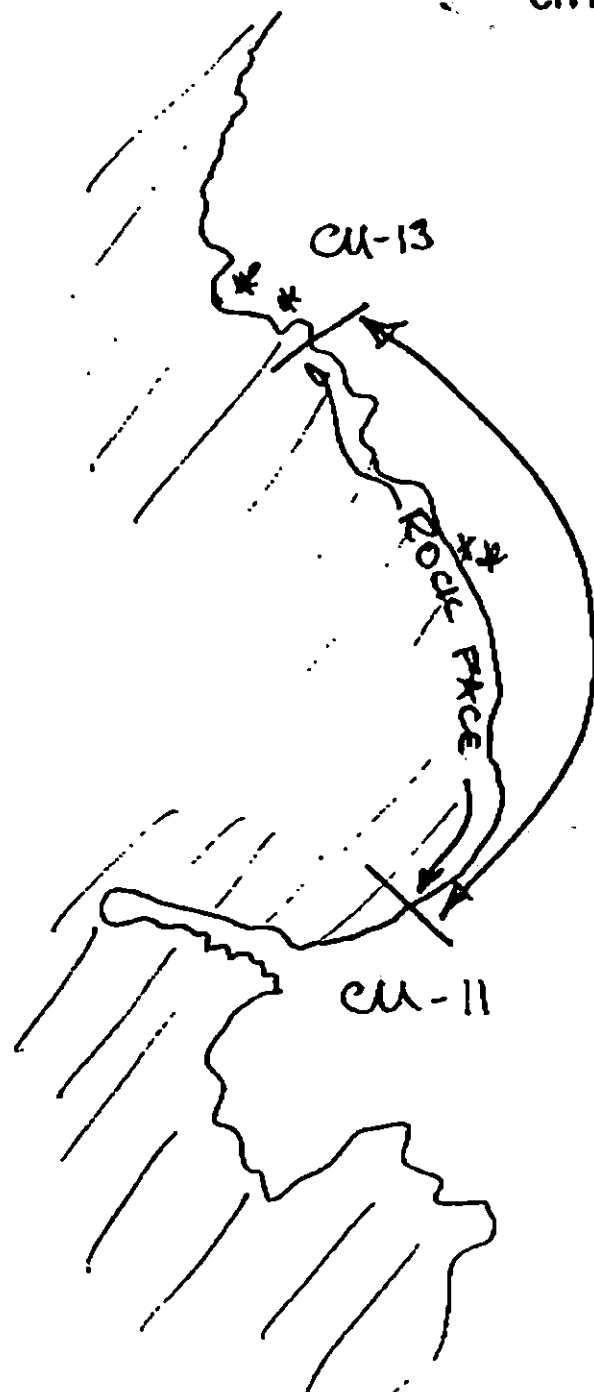
Splashed Distribution

Oil-d Vegetation

1 $\Rightarrow$

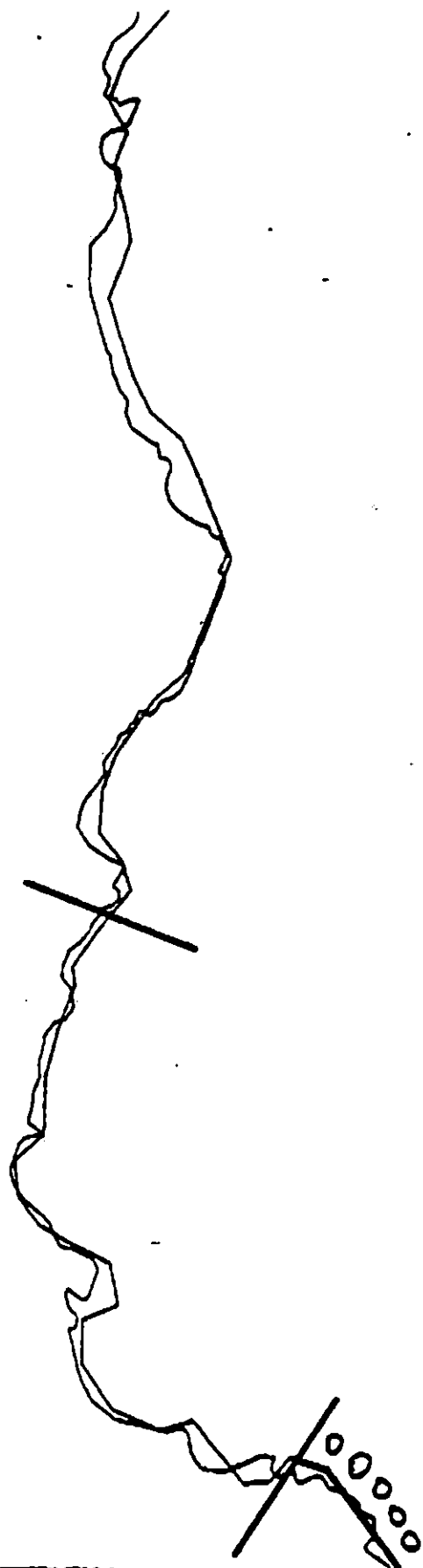
Photo location, direction,
and number

CH MAP



Oil Character Length (m): AP $\bigcirc$ PO $\bigcirc$ CV $\bigcirc$ CT $\bigcirc$ ST $\bigcirc$ MS $\bigcirc$ PT $\bigcirc$ TB $\bigcirc$ FL $\bigcirc$ NO 2,167

REVISION: 03/24/90



CULEBRAS ISLAND

SEGMENT: CU-~~12~~ 12
SUBDIVISION: A-1 of 1

NORTH PART

↓ PWS 70A

XXXX Wide

CU-12

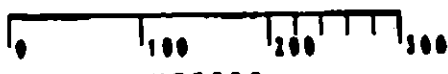
//// Medium

---- Narrow

TTTT Very Light

OOOO No Oil

ADEC Segment Length: 1787m



Map Key: PWS-70b

Name: GILLIE

Date: 4-4-90

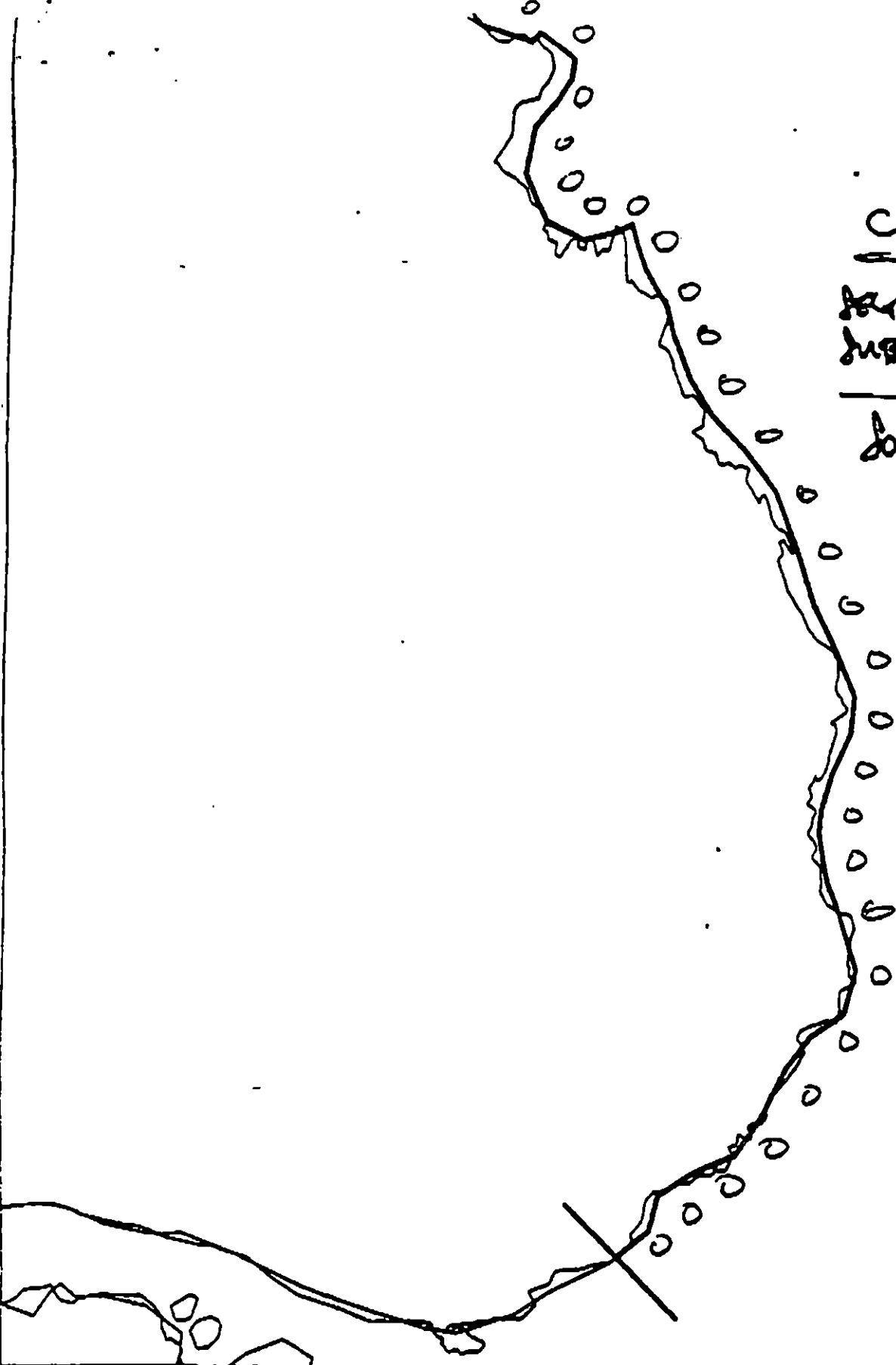
Date Entered:

↑ PWS 70B

CULEROY ISLAND

SEGMENT: CU-12
SUBDIVISION: A, 1 of 1

SOUTH PART



XXXX Wide

/// Medium

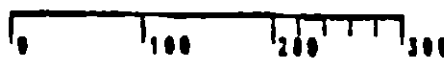
--- Narrow

TTTT Very Light

OOOO No Oil

CU-12

ADEC Segment Length: 1767m



Map Key: PWS-70a

Name: GILLIE

Date: 4-4-90

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ CU-13 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Salmon stream mouth (ADF&G catalogue 224-20-13030) - fry out migration (1A) - 3/1 to 5/15 and spawning (1B) 7/10 to 8/31; Gill net area (1I) - 6/7 to 8/31; Purse seine area (1J) - 7/21 to 9/30; Recreation special use ^{destination} designation (6Y)

SUBDIVISION ECOLOGICAL CONSTRAINTS: (1A, 1B) No disturbance of stream bed or banks unless authorized by ADF&G. Contact ADF&G Habitat Division prior to treatment for permits. (1I, 1J) Contact ADF&G for dates, locations, constraints.

SHPO SIGNATURE: [Signature] DATE: 4/17/90

OILING CATEGORIZATION:

Wide 45 m: Medium 38 m: Narrow 0 m: V.Light 650 m: No Oil 0 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 10cm

RECOMMENDATIONS:

☐ No Treatment Recommended ☐ Snare/Absorbent Booms
☒ Treatment Recommended ☐ Oil Snares (pom poms)
☒ Manual Pickup ☐ Absorbents (pads, rolls, etc)
☒ Bioremediation ☐ Spot Washing: _____ Wands
☒ Tarmat: _____ Breakup _____ Beach Cleaner
 ☒ Removal ☐ Other (see comments)

COMMENTS: Treatment activities are recommended as follows: 1) Manual pickup of mousse and tar patties, 2) tarmat removal and 3) bioremediation of areas shown on attached sketch map. Work should be conducted between 5/15 and 6/7 based on above constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 12/16/20

ADEC HL KOSSEL AL
EXXON ANDY TEAL RD
NOAA Burl Wesscott Burl Wesscott
USCG G.A. FEITER G.A. Feiter

FOSC: Y L DATE: 4-20-90

SHORELINE OILING SUMMARY

REVISION NO. 03-22-90

OG Rick Gillie USCG Bm 1 Thomas SEGMENT ST/ CU-13
 RIO DAVE Lohr LAND REP Marsha Martin SUBDIVISION A-1 of 1
 XON FRANK Dwy ADEC Clara Crosby (ASNR) TIME 4:25 to 1330
 TEAM NO.: 13 TIDE LEVEL: +3 to +2 DATE 09/04/90
 EST. SUBDIVISION LENGTH: 778 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock Snow
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo 10 WORKING DIRECTION: S to N 5
 SURFACE SEDIMENTS: R 50 % B 30 % C 10 % P 5 % G 0 % S 0 % M 0 % V 5 %
 SLOPE: Lang 30 % Hang 30 % Vert 40 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 20 m M 20 m N 0 m VL 738 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	B	P	S	BR	OR	OL	OF	NO	SU	UI	M	U			
ASPHALT PAVEMENT			X								X					
POOLED		X									X					
COVER				X							X					
COAT			X								X	X				
STAIN																
MOUSSE		X									X	X				
PATTIES																
TARBALLS				X		X					X					
FILM																
NO OIL											X				X	

PAVEMENT: H F (S) 5 sq. m by 4 cmPATTIES / TARBALLS 0.5 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE N/A#BAGS

Photographs:

Roll No. ST-13-2Frames 12-17

SUBSURFACE OIL * OILED INTERVAL < 5 CM IN PIT NOS. 5 AND 6 DO NOT CONSTITUTE SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	VC	BR	OR	OL	OF	NO	SU	UI	M	U					
1	20					X	-									X							G, S
2	30					X	-									X							P, G
3	30					X	-									X							P, G
4	20			X			5-10	X				X				X							P
* 5	10	X					0-5	X				X	X			X							V, S
* 6	10	X					0-5	X				X	X			X							V, S

COMMENTS (GENERAL)

① OIL: "WIDE" AND "MEDIUM" OIL CATEGORY AT SITE 1 AND 2. OTHERWISE "V. LIGHT"

② GEOMORPHOLOGY: ROCK SHORELINE (VERT.) EXCEPT FOR TWO OILED BEACHES

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / CU-13 SUBDIVISION: A-1 of 1 DATE 04/04/9

USCG

NAME David S. Thomas SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

ADEC

NAME Clara Crosby SIGNATURE Clara S. Crosby

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

SITE #1 & 2 - Bedrock Base-wash site - or manual removal of mussel
saturated peat - (pooled mussel to 7.5cm) in AP/P - manual removal
No specific treatment technique recommended for the
rest of the segment.

LAND MANAGER

NAME MARSHA MARTIN/DNR SIGNATURE Marsha Martin

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / W013 Subdivision A Date (mo / day / yr) 4-4-90

Time (24 hr) 14:25 Biologist David Lohr

(A) Substrate type and % of segments:
(1) Bedrock 50 (2) Boulder 30 (3) Cobble 10 (4) Pebble 5 (5) Sand (6) Silt 5

(B) Overall % cover of biota (% of segment): Dense 20 Moderate 45 Low 35

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (O)

Photographs:
Roll No. ST-13-2

Frames 12-17

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	X	2	2	X	X	X	2	2	X	<u>2</u>	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

MYTILUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	X	2	2	<u>2</u>	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	X	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

GASTROPODS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	X	2	X	2	X
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

FUCUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	X	2	X	<u>2</u>	X	<u>2</u>	2	X
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments:

See page 2

Ecological Considerations:

IS, 6Y - no comment

1B - several small running streams found in segment

Segment ST-CU013

Subdivision A

4-4-90

Biologist David Lohse

Wildlife Observations/General Comments

1. present in low intertidal - Enteromorpha, Ulva, Halosaccus, coralline algae
mid intertidal - Ralfsia, Anthopleura, sculpins, coralline algae, Enteromorpha, unidentified "branching" red alga
high intertidal - Enteromorpha
2. Patches of just byssal threads found in mid-intertidal on bedrock and boulders
3. Cormorants spotted in area
4. Enteromorpha is dense on mid- and high-intertidal boulders in some areas.
5. One mature bald eagle sited in area.

OG Ric GILLIE
 SEGMENT ST/ U-13
 SUBDIVISION A-1 of 1
 DATE 04, 04 90

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Bndry
- ☒ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HW/L/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pt Location(s)
- ☐ Photo Location(s)

LEGEND

1 ▲

Pt - No Subsurface Oil

2 ▲

Pt - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

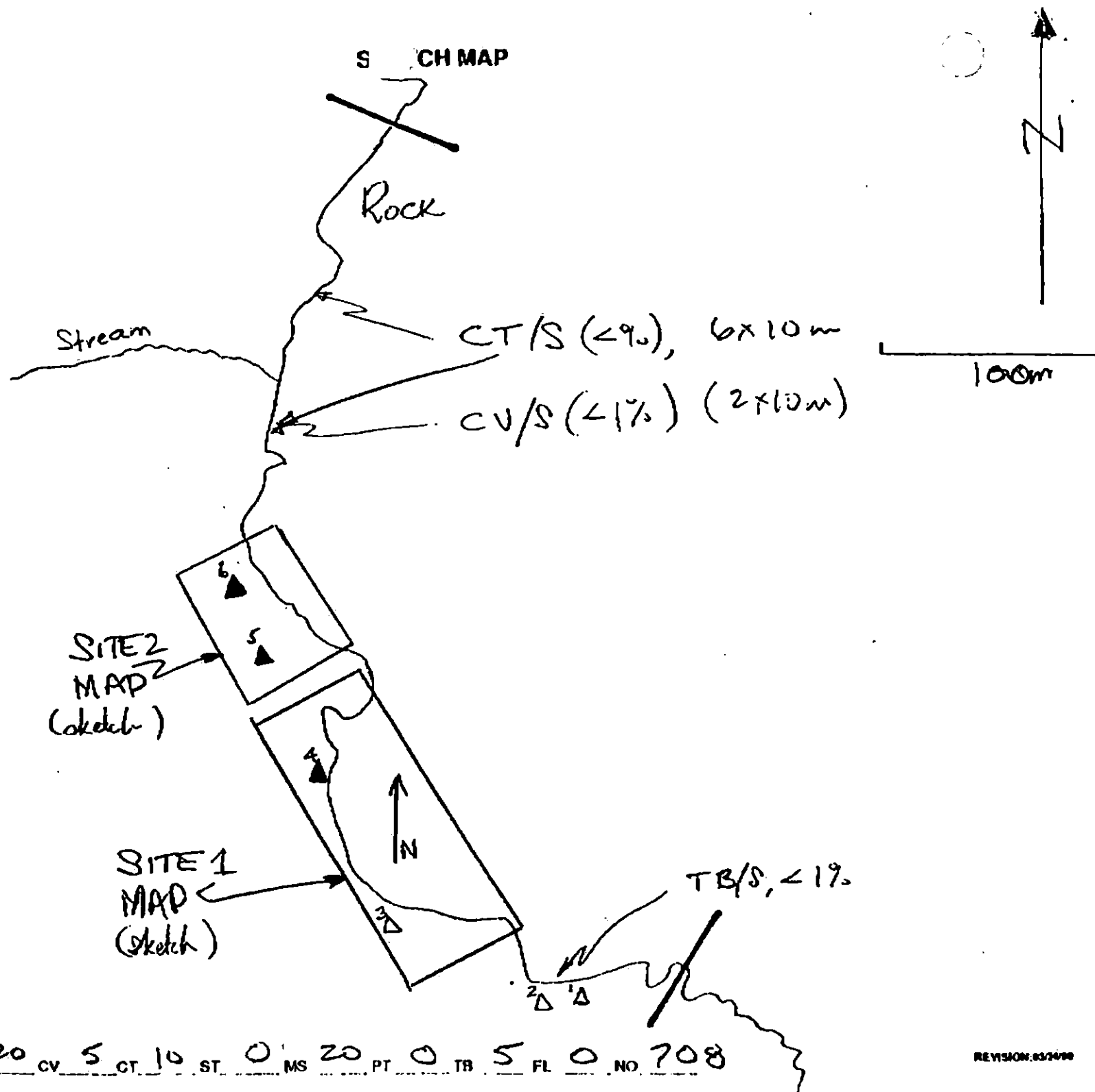
CT/S

Splashed Distribution

Oiled Vegetation

1 ➡

Photo location, direction, and number



Oil Character Length (m): AP 10 PO 20 CV 5 CT 10 ST 0 MS 20 PT 0 TB 5 FL 0 NO 708

00 Rick Gilue

SK H MAP

SEGMENT ST/ 213

SUBDIVISION A, 1 of 1

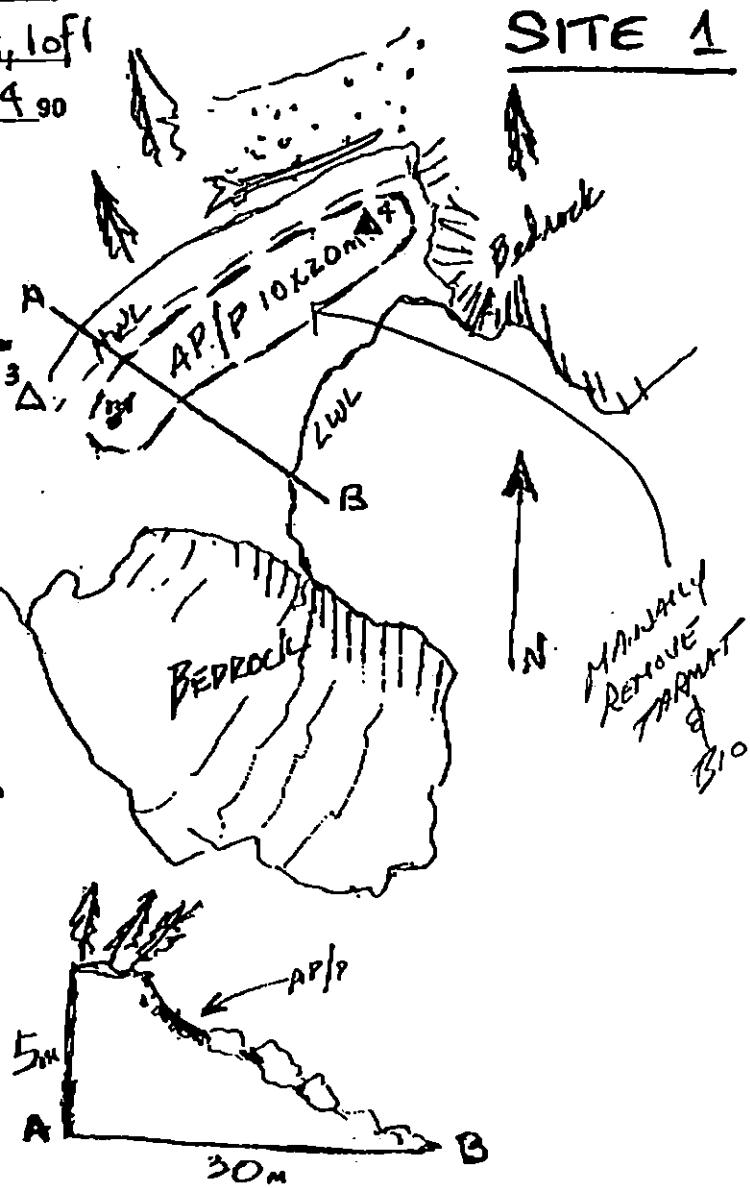
DATE 04, 04 90

CHECKLIST

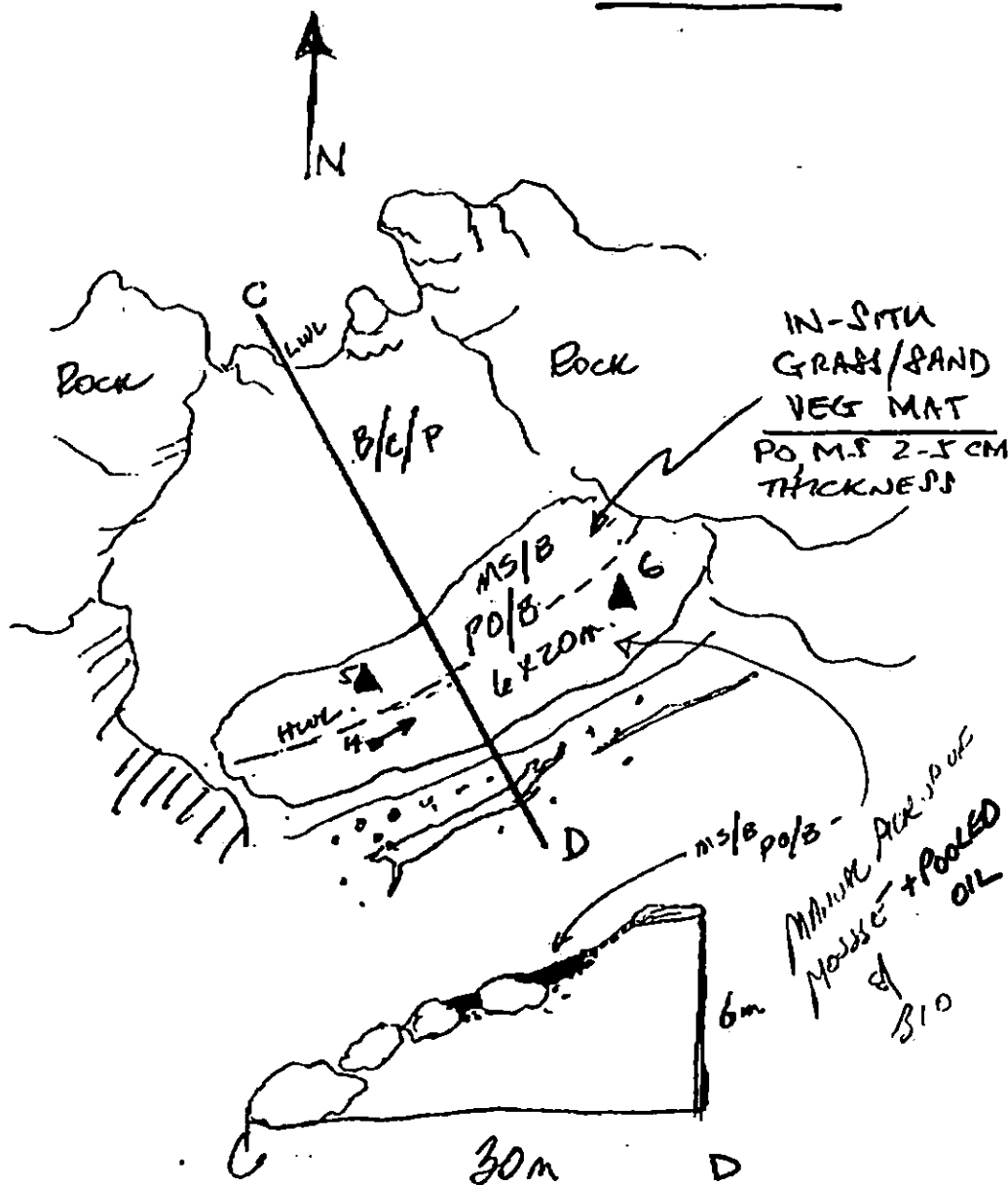
- ✓ Arrow
- ✓ Approx. Scale
- ✓ Seg/Sub Bndry
- ✓ Oil Dist
- ✓ Width
- ✓ Length
- ✓ % Cover
- Substrate Character
- Est. HNW/LWL
- SSL
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

LEGEND

- 1 Δ
- Pit - No Subsurface Oil
- 2 ▲
- Pit - Subsurface Oil
- CT/C
- Continuous Distribution
- CT/B
- Broken Distribution
- CT/P
- Patchy Distribution
- CT/S
- Splashed Distribution
- Oiled Vegetation
- 1 →
- Photo location, direction, and number



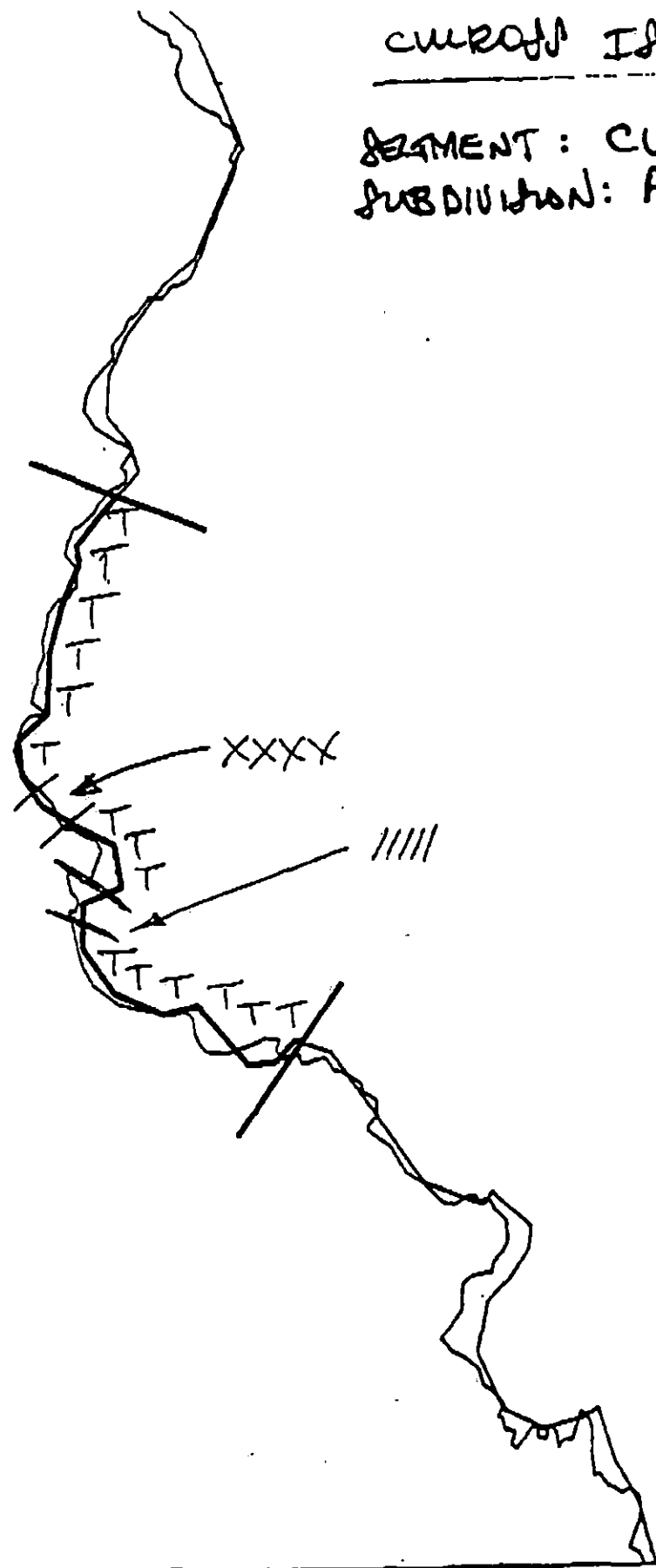
SITE 2



REVISION: 03/24/90

CURROJ ISLAND

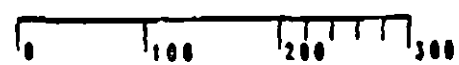
SEGMENT: CU-13
SUBDIVISION: A-1 of 1



XXX Wide
//// Medium
--- Narrow
TTTT Very Light

CU-13

ADEC Segment Length: 732m



Map Key: PWS-71
Name: GILLIE
Date: 4-4-90
Note: Colored:

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ CU-13 STREAM NO: 224-20-13030 DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. Subject stream is located within Subdivision A (1 of 1).

SHPO SIGNATURE: [Signature] DATE: 5/10/90

Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u>X</u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u>X</u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u>X</u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u>X</u> Tarmat Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: Recommended treatment includes 1) manual pickup of tar
patties and tar balls in areas indicated on sketch map, 2) manual re-
moval of tarmat in area indicated on sketch map, and 3) bioremediation
of broken stain in area indicated on sketch map. Work should be con-
ducted between 5/15 and 6/7 due to salmon and gill net constraints.

TAG COMMENTS: NO. BIO OF STAINS.

TAG APPROVAL DATE: 5/10/90

ADEC Art Weimer [Signature]

EXXON Andy Tate [Signature]

NOAA Burl Wesoff [Signature]

USCG D.D. Rome [Signature]

FOSC: [Signature] DATE: 5-14-90

NOTIFY PCVE 24 HRS PRIOR TO

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

Salmon stream mouth - fry outmigration (3/1 to 5/15)

Salmon stream mouth - spawning (7/10 to 8/31)

No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: ADF&G John Morison 267-2324

1C Salmon fry nursery area (4/31 to 7/31)

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D Esther Hatchery release (4/15 to 6/15)

1E Main Bay Hatchery release (4/20 to 6/15)

1F Sawmill Bay Hatchery release (4/15 to 6/1)

1G Cannery Creek Hatchery release (4/21 to 6/1)

1H Remote release site

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.

AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214

1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511

1J Gill net area (6/7 to 8/31)

1K Purse seine area (7/20 to 9/30)

1L Purse seine hook-off (7/20 to 9/30)

1M Set net sites (6/11 to 7/25)

Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

Herring spawning (4/1 to 6/15)

Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)

3O, 3Q Harbor seal and sea lion molting (6/15 to 9/15)

Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235

ADF&G Don Calkins 267-2403

5R Seabird colony (5/1 to 9/1)

Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S Shorebird/waterfowl concentration (4/1 to 5/15)

Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

ADF&G Tom Roth 267-2206

5T All Bald Eagle nests (3/1 to 6/1)

Active Bald Eagle nests (3/1 to 9/1)

Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U Recreation: Tent sites (6/1 to 9/15)

6V Anchorages (6/1 to 9/15)

6W Forest Service cabins (6/1 to 9/15)

Lodge (6/1 to 9/15)

Special use destination

7Z Subsistence area: Salmon harvesting (5/1 to 9/30)

7HH Finfish harvesting

7I Deer harvesting (6/15 to 2/26)

7JJ Invertebrate harvesting

Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact names.

22/28

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ CU-013 SUBDIVISION: ^{ASC# 13038 HAPD} 224-20-13036 DATE 25 APR 90

USCG

NAME Kevin L. Dreher SIGNATURE cwo K. L. Dreher

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Agree

~~ADEC~~ ^{ADFG}

NAME Aimee Weseman SIGNATURE Aimee Weseman

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

A pocket beach salmon spawning area with a small stream/springs running through it.

- Manually remove tar mat (24 x 2 x 3 cm) in UITZ cobbles of southern beach

- Manually remove scattered tar balls & patties in UITZ & SITZ of northern cove - interspersed between rocks/boulders/gravels

- Bio remediate oil pockets on northern cove, unreachable by shovel & trowel

~~LAND MANAGER~~ ^{ADWE}

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

OG GAL LARSON USCG DREHER, CWE SEGMENT ST/ CU 013 5/25
 BIO KEN CRITCHLOW LAND REP STREAM 22A 10 1000 OF
 EXXON DARRELL YOE ADFG 22A KAYTON-AIMEE WISEMAN TIME 08:10 to 09:15
 TEAM NO. 14 TIDE LEVEL DATE 4/23/90
 EST. SUBDIVISION LENGTH: 100 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☐ Foot ☐ Boat ☐ Helo
 SURFACE SEDIMENTS: R 20 % B 50 % C 10 % P 10 % G 10 % S 0 % M 0 % V 0
 SLOPE: Long 0 % Hang 100 % Vert 0 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 24 m M 0 m N 120 m VL 0 m NO 36

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	R	B	P	N	W	B	C	P	W	M	N	V
ASPHALT PAVEMENT	✓				✓				✓			
POOLED												
COVER												
COAT												
STAIN		✓			✓				✓	✓		
MOUSSE												
PATTIES			✓		✓				✓			
TARBALLS			✓		✓				✓			
FILM												
NO OIL									✓			✓

PAVEMENT H F (S) 48 sq. m by 3

PATTIES / TARBALLS 1 BA

NEAR SHORE SHEEN? (NO) BA RW SL T

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

Did You Collect DEBRIS
☐ YES ☒ NO
 TYPE _____
 #BAGS _____

Photographs:

Roll No. 7

Frames 19-37

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	SHEEN (Y/N)	SURFACE SUBSURFACE SEDIMENT
		OP	OR	OL	OF	NO		NO	NO	W	B	C	P	W	M	N	V			
1	20					L	•							✓						CB/PB/CB
2	34					L	•							✓						PB/CB/CB
3	10					L	•							✓				✓		CB, PB, CB
							•													
							•													
							•													

COMMENTS TO POCKET BEACHES AT THIS SITE. NO MAJOR STREAM AT THIS SITE. RUN OFF FROM SNOW MELT/BOB AND LARGE SEDIMENT HOLD FRESH WATER, MAKING FOR PINK SALMON BREEDING AREA

REVIEWED FW DATE 4-28-90

3 CALLA

MENT ST/COUS

STRAH 2242019090

TE 4 125 90

HECKLIST

- N Area
- Approx. Scale
- Soil/Substr
- Of Dist
- Width
- Length
- % Cover
- Substrate Character
- Est. HW/LW
- SSI
- Profile Location(s)
- Photo(s)
- PR Location(s)
- Photo Location(s)

LEGEND

1 A
No Surface Of

2 A
Surface Of

CT/C
Total Distribution

CT/B
n Distribution

CT/P
y Distribution

CT/S
ed Distribution

2 R
Vegetation

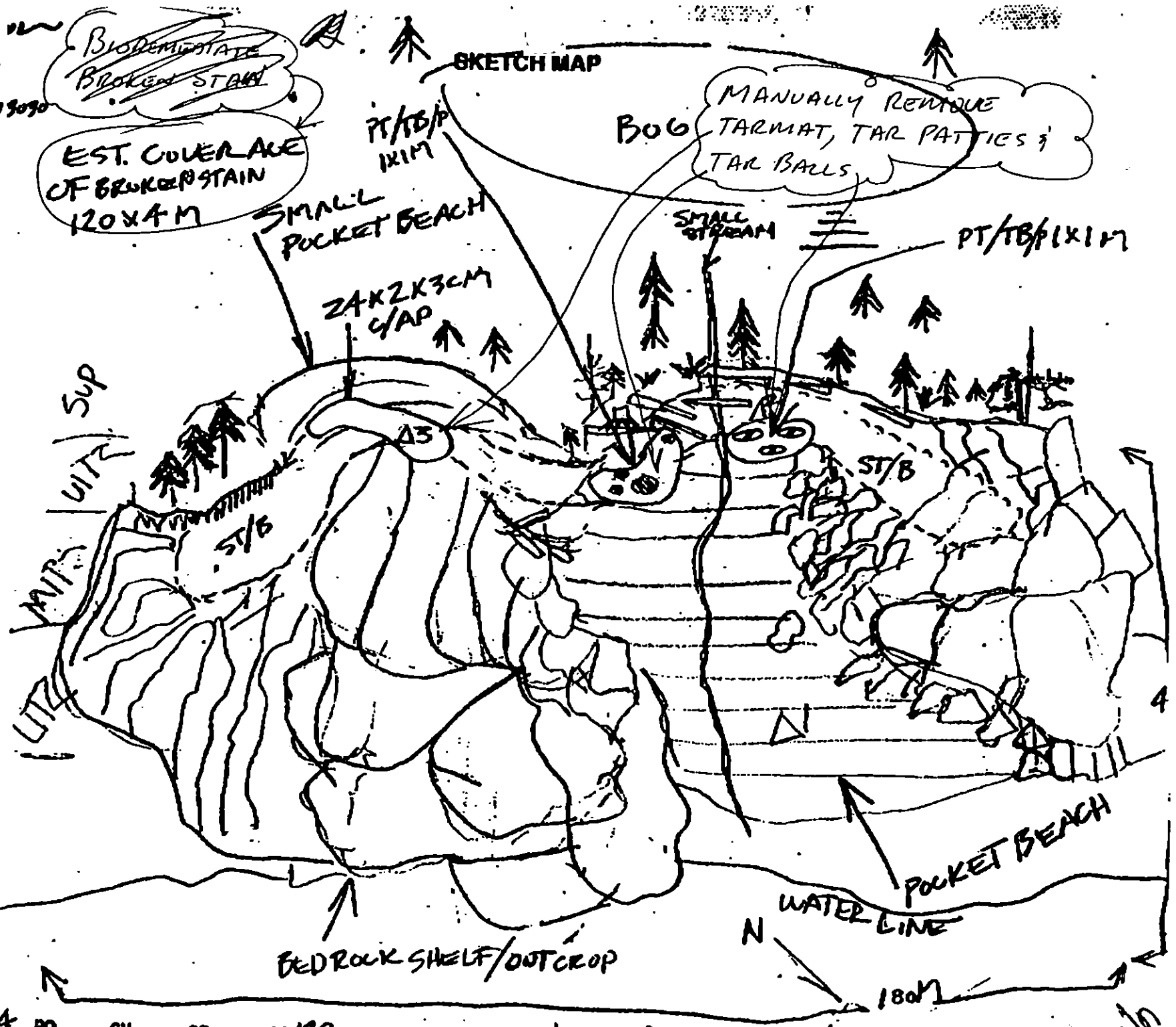
location, direction,
other

actor Length (m): AP 24 PO CV CT ST 120 MS PT TB FL NO

SKETCH MAP

BIODEGRADABLE
BROKEN STAIN
EST. COVERAGE
OF BROKEN STAIN
120 X 4 M

MANUALLY REMOVED
TARMAT, TAR PATIES &
TAR BALLS



REVISION 03/2000
3/10

7/22

Seg ID: CU-013 Subdiv: 224-20-13030

Survey Date: 4/25/90

Comments by: Ken Critchlow

At first appraisal, this site doesn't appear to be an "anadromous fish stream" in that it isn't characterized by a defined channel. The "stream" is comprised of numerous spring flows across and through the beach sediments. At high water much of the freshwater is probably discharged through cobble and boulder as up-welling, providing suitable spawning habitat for pink salmon.

Virtually all oil observed on this site was confined to the UITZ and STZ. Asphalt pavement, tarballs and patties can be removed by a small crew using shovels and trowels. Only surface sediments will need removal since pits indicate that subsurface oil isn't present. In locations where large boulders / bedrock preclude ready access to oil, and thus removal, use of Inipol may be advisable. This is a diverse and productive inter-tidal region; it is also very difficult to traverse safely. Therefore, foot traffic should be limited to the UITZ and STZ for worker safety and to minimize impact of

20/26

ADPAC MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: ES US CS TS AVS SCH MMIS PTA 2 REGION: PR KP CI KAP

METHOD: Aerial Ground Boat

3 DATE: 4-25-90 15 HIGH TIDE TIMES: 1 21 TEAM RECORDER: Aimee Wkema

4 START TIME: 0815 16 HIGH TIDE HTS: 1 22 OBSERVERS: Rick Gustin

5 STOP TIME: 0915 17 LOW TIDE TIMES: 1 23 AGENCY: ADF46

6 SECTID #1: CU013 18 LOW TIDE HTS: 1 24 PHOTOS TAKEN: Y N

7 STATION #1: _____ 19 TIDE HT AT SURVEY: _____ Roll #1: _____ Frames: _____

8 K-UNIT: _____ Ebb Slack Flood Slack 25 VIDEO TAKEN: Y N TAPE: 90-ATW-0C

9 STAT AREA: _____ 26 USCG QUAD: 5C3 Starts: 464 Ends: 585

10 LAT: _____ 11 LONG: _____ 28 SAMPLES TAKEN: Y N NUMBER

12 SOURCE: Map Loran Oil _____

13 LOCATION: se side Culross I coastline Sediment _____

14 DESCRIPTION: _____ Biological _____

Water _____

EXTENT OF OIL

	SHORELINE				STREAM			
	L	Y	N		L	Y	N	
27 SURFACE COVERAGE								
28 SURFACE THICKNESS								
29 PENETRATION	<u>1-2cm</u>							

30 CATALOGED ANAD. FISH STREAM? Y N

37 CATALOG #1: 224-20-1303C

38 STREAM NAME: _____

39 OIL IN STREAM BED? Y N

40 OIL ON STREAM BANKS? Y N

41 OIL ON BEACH ADJACENT TO MOUTH? Y N
(within 50 meters)

42 OIL WITHIN 1 MILE OF STREAM? Y N

Where: _____

43 ANADROMOUS FISH PRESENT? Y N

44 ANADROMOUS FISH OBSERVATION

Species	Aerial	Ground

30 OVERALL OIL IMPACT: N VL C N N

31 OIL TYPE: Pooled Mucous Tar Asphalt Sticky Stain

32 OILED DEBRIS? Y N

33 SHORELINE TYPE: Headland Low-lying Rocks Beach Cave
Lagoon Marsh

34 WAVE EXPOSURE: High Moderate Low

35 SUBSTRATE TYPE: Bedrock 10 Boulder 40 Cobble 35
Gravel 10 Sand 5 Mud/silt _____

INVERTS: Salmon spawning area fed by small stream/springs
salmon seen spawning in cobble/pebble substrate with rocks &
boulders interspersed throughout (last call)

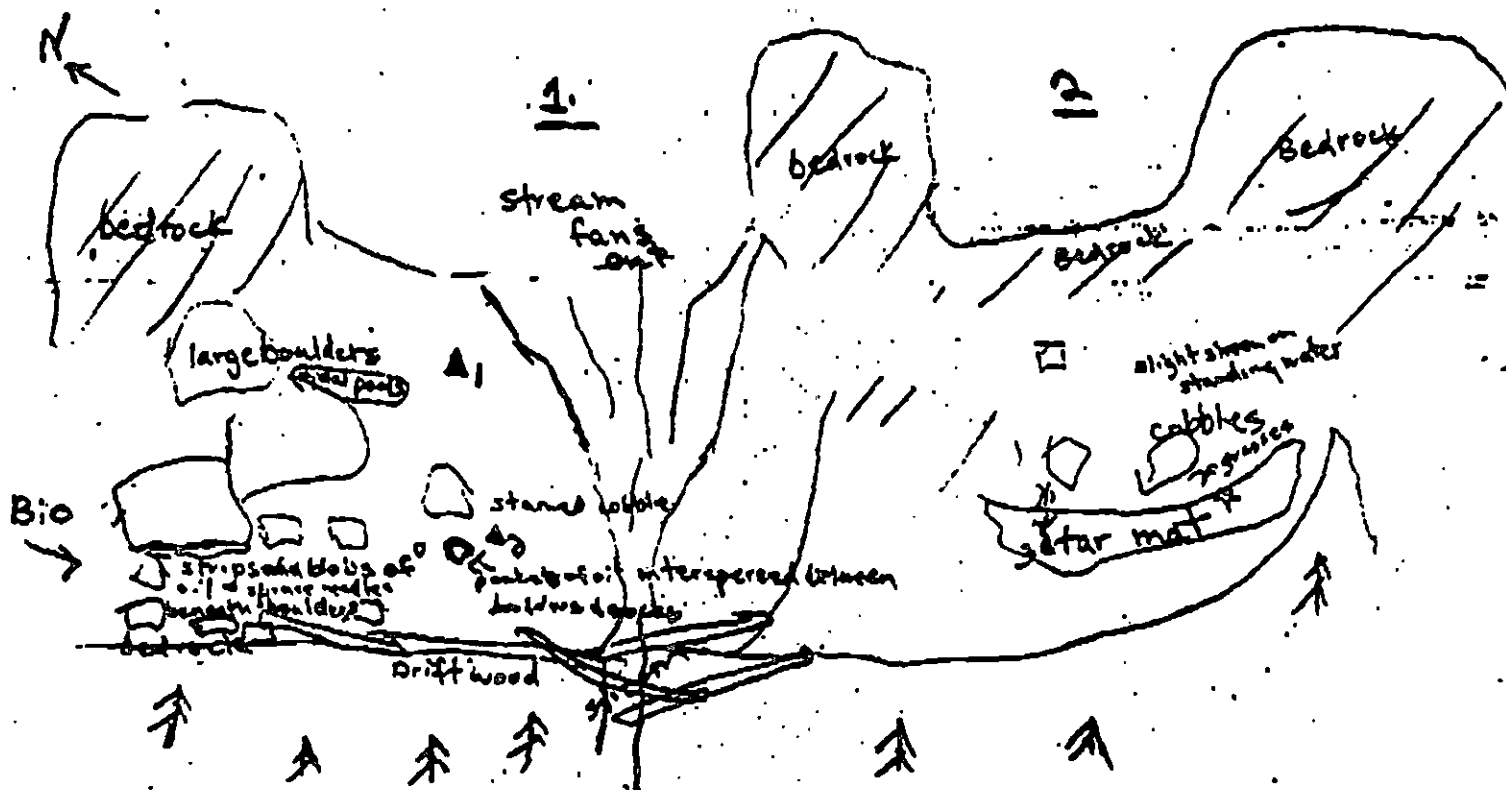
tar mats & patties. Some oil was trapped in boulder² interstices in UITZ as PHOTOLOG

FRAME(S)

DESCRIPTION

pit 1 - 2.4' deep no noticeable oil
pit 2 - 34cm - no oil UITZ
pit 3 - 10cm 1-2cm oil per mobile oil

48 OIL DISTRIBUTION DIAGRAM



treatment recommendations -

Manually remove tar mat (24 x 2 x 3cm) in UITZ of 2nd pocket beach by pit 3.

manually remove scattered tar balls & oiled spruce needles in UITZ of 1st pocket beach

Bioremediate oil trapped in boulder interstices in UITZ - in areas

ECOLOGICAL MAP

ECOLOGICAL SURVEY

148°07'30" 139000m E.
60°45'

5

1850 000 FEET ZONE 4

6735000m N.

1A, 1B

1I, 1J

6Y

2 460 000 FEET
ZONE 4

13042

SUBJECT
ANADROMOUS
STREAM

224-20-13030
(13, 2/90)



ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 224-20-13030

SEGMENT CU-13 SUBDIVISION A

WORK WINDOW	
Manual Pickup & Tarmat Removal More Than 400m From Eagle Nest	OPEN
Manual Pickup & Tarmat Removal Less Than 400m From Eagle Nest	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Stream	ADF&G catalogued anadromous stream (224-20-13030) is present in Subdivision A. No constraint to manual pickup and tarmat removal.
1I	Gill Net Area	No constraint to manual pickup and tarmat removal.
1J	Purse Seine Area	No constraint to manual pickup and tarmat removal.
5T	Bald Eagle Nest	Closed to manual pickup and tarmat removal less than 400m from nest. Open to manual pickup and tarmat removal more than 400m from nest.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. When set net sites are present, restrict beach operations to essential minimum. Restrict boat and air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from active nests. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

SEE SUBDIVISION CONSTRAINT ADDENDUM CU-13
FOR ADDITIONAL CONSTRAINT INFORMATION.

TAG APPROVAL DATE _____

ADEC

EXXON

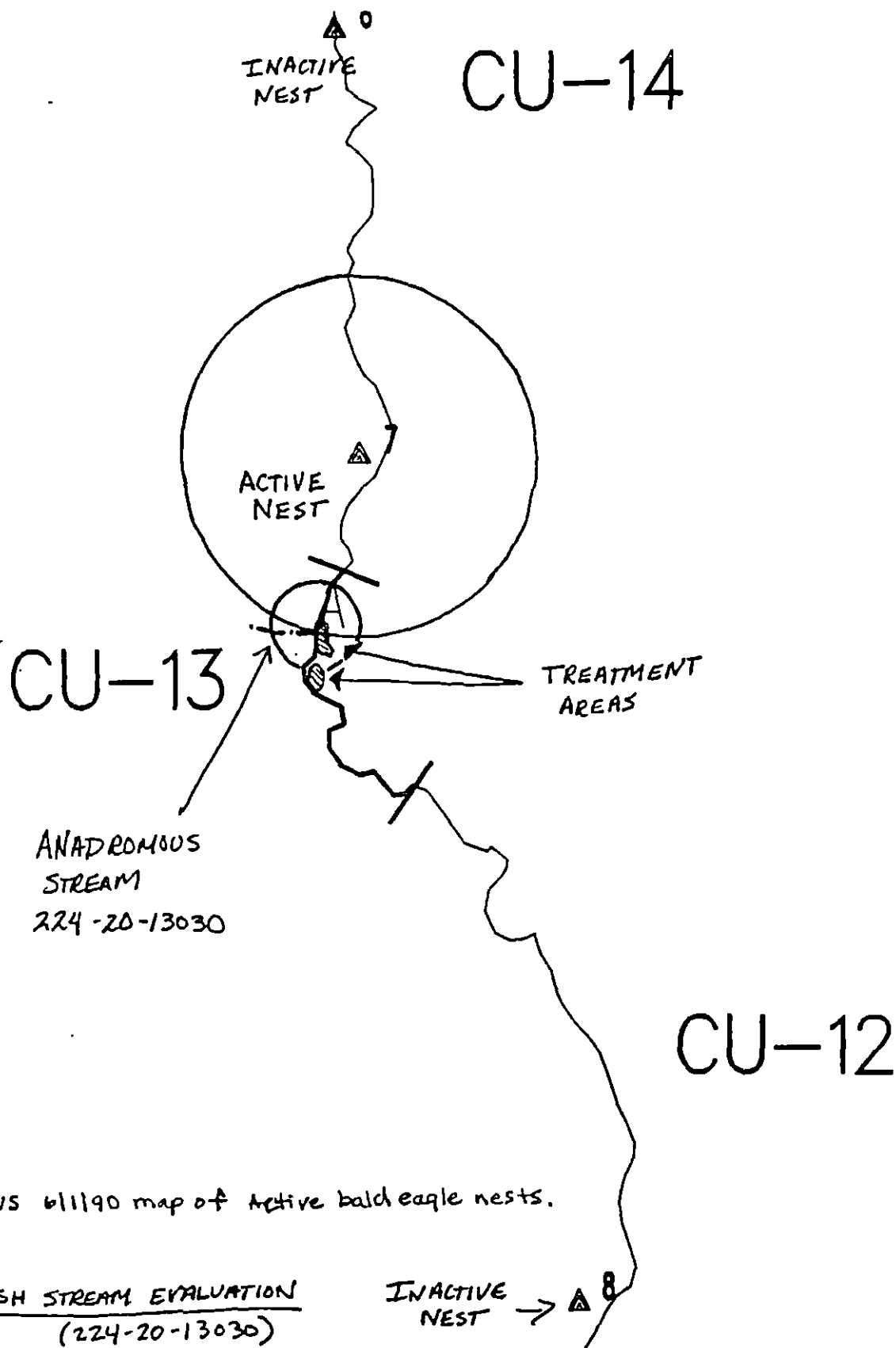
NOAA

USCG

FOSC

Date

6-8-90



Exxon Company, USA
Map Key: PWS-CU-13

ECOLOGY MAP

SEGMENT CU-13

SUBDIVISION A (L-011-)

METERS



Seabird Colony



Eagle Nest

1 inch = 1147 feet

SHORELINE EVALUATION

SEGMENT ST/CU-14 SUBDIVISION A (1 OF 1) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Salmon stream mouth (no. 13036, 13034) Salmon fry outmigration
(1A) - 3/1 to 5/15 and spawning (1B) - 7/10 to 8/31; Bald eagle
nest (5T) - 3/1 to 6/1; Gill net area (1I) - 6/1 to 8/31 (contact
ADF&G for exact dates and locations); Purse seine area (1J) - 7/20
to 9/30 (contact ADF&G for exact dates and locations). Special use
designation (6Y) - 6/1 to 9/15. Restrict boat and air traffic to
a minimum essential. Air approach and takeoff from and to seaward
only.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Do not disturb stream bed or banks unless authorized by ADF&G. Contact ADF&G prior to treatment for permit and USFWS re: eagle nests. Avoid unnecessary disturbance/damage to unoiiled substrate and biota.

SHPO SIGNATURE: [Signature] DATE: April 14, 1990

OILING CATEGORIZATION:

Wide_0_m: Medium_580_m: Narrow_64_m: V.Light_0_m: No Oil_1649_m
Subsurface Oil Observed: Yes_X No_____ Maximum Depth_20_cm_____

RECOMMENDATIONS:

☐ No Treatment Recommended	☐ Snare/Absorbent Booms
☒ Treatment Recommended	☐ Oil Snares (pom poms)
☒ Manual Pickup	☒ Absorbents (pads, rolls, etc)
☒ Bioremediation	☒ Spot Washing: ☒ Wands
☒ Tarmat: ☐ Breakup	☐ Beach Cleaner
☒ Removal	☐ Other (see comments)

COMMENTS: Spot wash area where pooled mousse found with wands and absorbents. Manual pickup of any debris. Tarmat removal as indicated on sketch map. Bioremediation of areas where cover and coat found. Work between 6/1 and 7/10 based on constraints.

RAKE CILED GRAVEL AREA AT SITE TWO - PIT 6 - PRIOR TO BIOREMEDIATION.

TAG COMMENTS:

TAG APPROVAL DATE:

ADEC

EXXON

NOAA

USCG

FOSC:

DATE: 4-20-90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / CU-14 SUBDIVISION: A-1 of 1 DATE 4/2/90

USCG

NAME David S. Thomas SIGNATURE Bm' [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Agree with Below comments

ADEC

NAME Clara S. Crosby SIGNATURE Clara S. Crosby

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

SITE #1 - MODERATE OILING - BEDROCK BASE - SHALLOW SEDIMENTS - SUGGEST
WASH/FLUSH -

SITE #2 - ANADROMOUS FISH STREAM - RECOMMEND MANUAL REMOVAL
OF ASPHALT MATS -

SITE #3 - SUGGEST TREATMENT AFT SITE - BEDROCK. BASE -
DISAGREE W/TH /S DISTRIBUTION FOR CT CV. CONSIDER
COVERAGE CT/P, CV/P.

LAND MANAGER

NAME MARSHA MARTIN / DVR SIGNATURE Marsha Martin

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

SEE comments FROM ADEC for site
#2 AND site #3.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Rick GILLIE USCG BM 1 Thomas SEGMENT ST/ CU-14
 TIO DAVE Lohse LAND REP Marsha Martin SUBDIVISION A 1 of 1
 OXON FRANK ADEC Clara Crosby TIME 1330 to 1500
 TEAM NO.: 13 TIDE LEVEL: +1 to +2 DATE 4/2 / 90
 EST. SUBDIVISION LENGTH: 2,883 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock SNOW
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 40 % B 30 % C 20 % P 10 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Lang 10 % Hang 60 % Vert 30 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 700 m N 83 m VL 0 m NO 2,000 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	C	S	P	B	BR	BL	GY	DR	TL	LR	SU	U	M	U
ASPHALT PAVEMENT				X	■	X						X		
POOLED				X				X				X		
COVER		*	X	✓				X	*			X	*	
COAT		X	■	✓				X	✓			X	✓	
STAIN														
MOUSSE														
PATTIES														
TARBALLS														
FILM														
NO OIL											X		X	X

PAVEMENT: H F S 20 sq. m by 5 cmPATTIES / TARBALLS N/A BAGSNEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash	X		
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE T#BAGS 1

Photographs:

Roll No. ST-13-2Frames 1-10

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SBL BR	ORL RW	OT SL	ORR TL	LRR	SU	U	M	U					
1	10					X	.								X							P	
2	10	X					5-10		X				X		X							P	
3	10	X					2-5		X				X		X							P	
4	10	X					2-5		X				X		X							P	
5	20		X				5-15		X				X		X							P/S	
6	20		X				10-20		X				X		X							P	

COMMENTS * OILED INTERVAL < 5cm IN PIT NOS. 3 AND 4 DOES NOT CONSTITUTE
SUBSURFACE OIL

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/90

Segment ST / CU 014 Subdivision A Date (mo / day / yr) 4-2-90Time (24 hr) 13:30 Biologist David Loh

(A) Substrate type and % of segments:

(1) Bedrock 40 (2) Boulder 30 (3) Cobble 20 (4) Pebble 10 (5) Sand (6) Silt (B) Overall % cover of biota (% of segment): Dense 30 Moderate 40 Low 30

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (O)

Photographs: Roll No. ST-13-2Frames 1-10

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

MYTILUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

GASTROPODS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

FUCUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments:

See page 2

Ecological Considerations:

1I, 1J, 64 - no comment

1 One running stream found in segment, O.I is present in the area of the stream mouth

ST-1 mature bald eagle was observed

There are dense barnacles and mussels in mid-intertidal at site 1 (see OG map), and dense Fucus beds in low intertidal at sites 1 and 3 (see OG map) which

Shoreline Ecological Summary

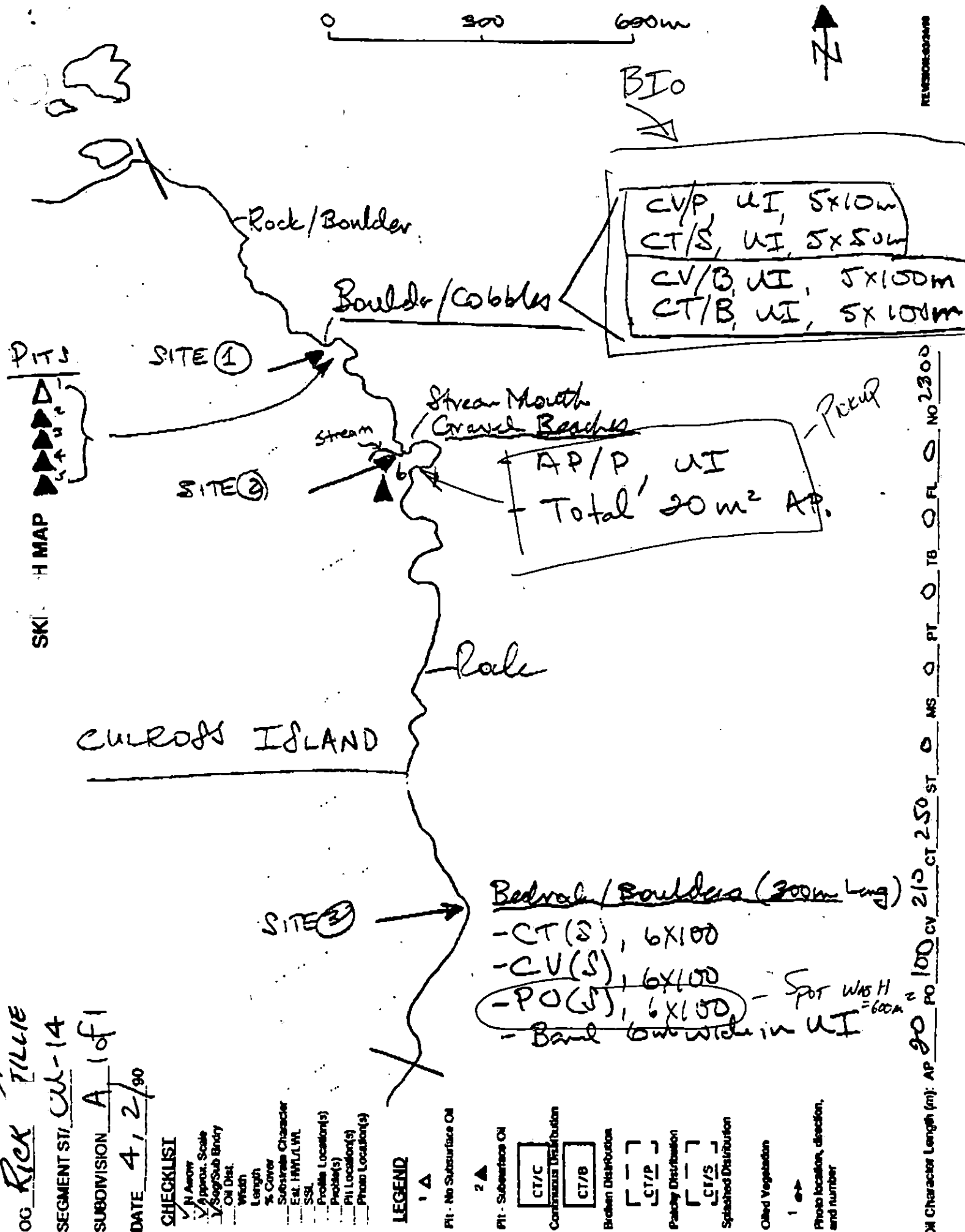
Lot C

Segment ST-CW014 Subdivision A 4-2-90

Regist David Lohse

Wildlife Observations/General Comments

1. present in low intertidal - Scytosiphon, coralline algae, Halosaccion, Ulva, Enteromorpha, Ectocarpus, Ceramium, un. identified red algal "bleb", un. identified "branching" red algae
mid intertidal - Ectocarpus, Enteromorpha, Ulva, Scytosiphon, Endocladia, Kathrina tunicata, coralline algae, Nuella, Ralfsia
2. In some areas of mid-intertidal on bedrock there were patches of byssal ~~threads~~ threads where mussels were previously attached.
3. Some of this segment was surveyed by boat due to the impassability of the cliff faces. The abundances of Fuus and Mytilus (the only obvious species from the boat) appeared comparable to those areas visited on foot.

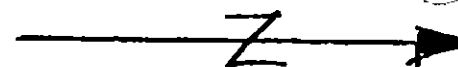


OG RICK TULLIE
 SEGMENT ST/ -A-014
 SUBDIVISION A, 1 of 1
 DATE 4/2/90

SKE I MAP

SITE 1

50m



CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Bndry
- ☒ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☒ Substrate Character
- ☐ Est. HML/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pk Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
 Pk - No Subsurface Oil

2 Δ
 Pk - Subsurface Oil

CT/C
 Continuous Distribution

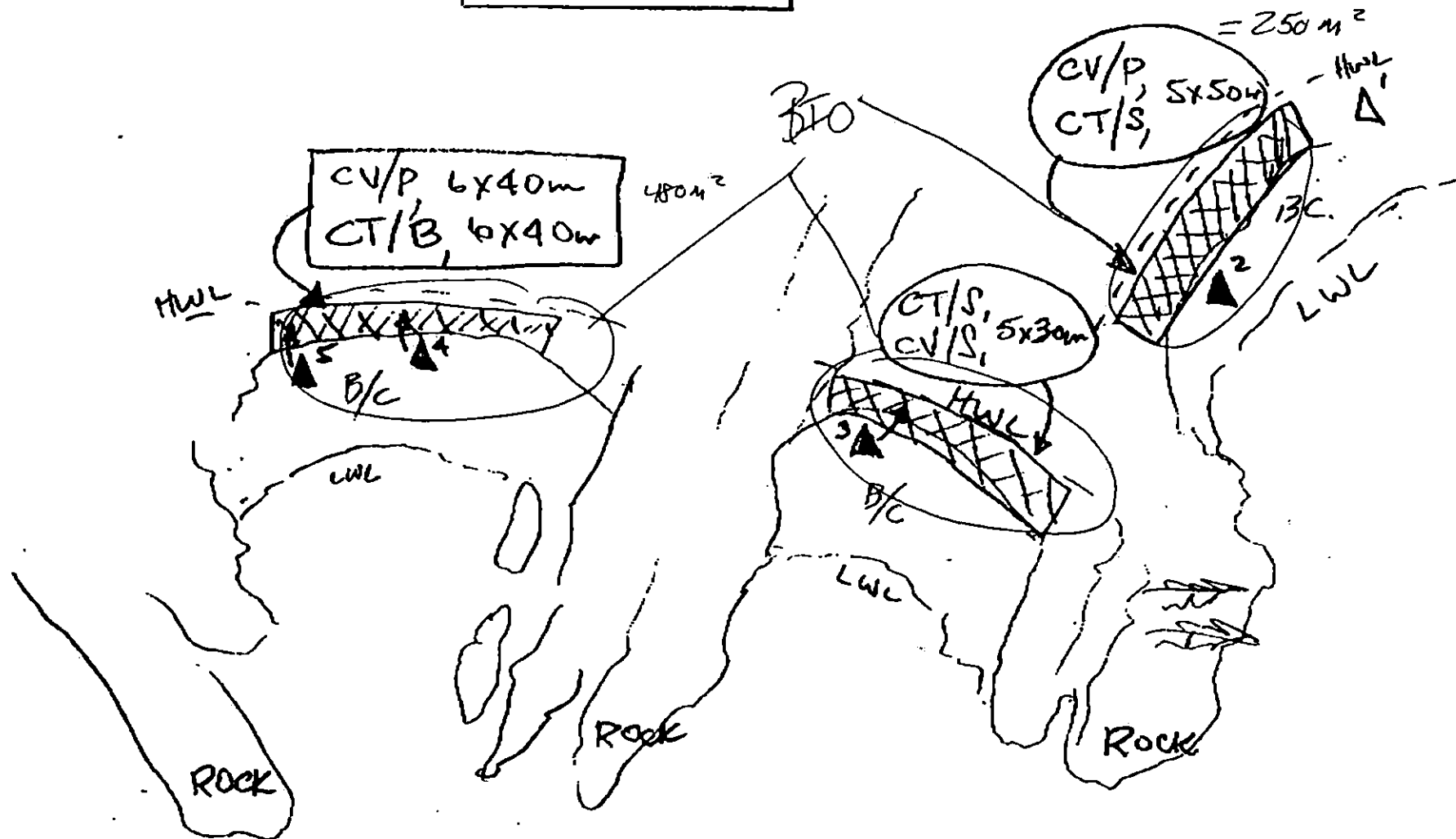
CT/B
 Broken Distribution

CT/P
 Patchy Distribution

CT/S
 Splashed Distribution

 Cilled Vegetation

1 $\Rightarrow$
 Photo location, direction,
 and number



APR-03-1990 07:51 FROM SEA TRADER

TU 18-0013075643771# P.04

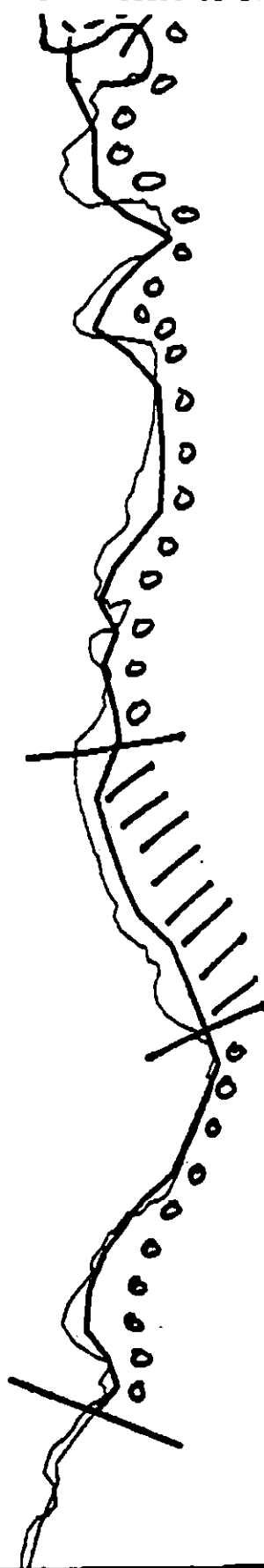
Oil Character Length (m): AP PO CV CT ST MS PT TB FL NO

REVISION: 00/00/00

SITE (2)

PWS
72BSEGMENT: ST/CU-14
SOUTH PART

SITE (3)



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

OOOO No Oil

CU-14

ADEC Segment Length: 2293m

METERS

Map Key: PWS-72a

Name: GILLIE

Date: 4-2-90

Date Entered:

~~CU-15~~

ST/
SEGMENT: CU-14.
NORTH PART

SITE ①

↓ PWS
72A

XXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

CU-14

ADEC Segment Length: 2293m

0 100 200 300
METERS

Map Key: PWS-72b

Name: GILLIEDate: 4-2-90

Data Entered:

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ CU-14 STREAM NO: 224-20-13034 DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Subject stream and one additional stream 224-20-13036, Ps, 2/90

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)

1B Salmon stream mouth - spawning (7/10 to 8/31)

1I Gill net area (6/7 to 8/31)

1J Purse seine area (7/20 to 9/30)

5T-3 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Subject stream exists within Subdivision A (1 of 1).

SHPO SIGNATURE: J. David McMillan DATE: 5/10/90

Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X Manual Pickup

 Bioremediation

 Tarmat Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommended treatment includes manual pickup of oiled vege-
tation, cleanup debris (zodiac), and mousse patties in areas indicated
on sketch map. Work should be conducted after 6/1 with approval of
USFWS regarding eagle nest.

TAG COMMENTS:

TAG APPROVAL DATE: 5/10/90

ADEC ART WEINER Dist. Comm.

EXXON ARMY CORP. OF ENGRS

FOSC: W L DATE: 5-15-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- ✓ 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 ✓ 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 1C Salmon fry nursery area (4/31 to 7/31)
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D Esther Hatchery release (4/15 to 6/15)
 1E Main Bay Hatchery release (4/20 to 6/15)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
 AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
 1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- ✓ 1I Gill net area (6/7 to 8/31)
 ✓ 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (6/11 to 7/25)
 Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 21 Herring spawning (4/1 to 6/15)
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unopened intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Rothy 267-2208
- ✓ 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (5/1 to 9/15)
 6V Anchorages (5/1 to 9/15)
 6W Forest Service cabins (5/1 to 9/15)
 6X Lodge (5/1 to 9/15)
 ✓ 6Y Special use destination
- Subsistence area: Salmon harvesting (5/1 to 9/30)
 Finfish harvesting
 7H Deer harvesting (8/15 to 2/25)
 7J Invertebrate harvesting
- Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

25/20

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / CU-014 SUBDIVISION: ASC# 13054¹²⁰ 224-20-13054 DATE 25 APR 9

USCG

NAME Kerwin L. Dreher SIGNATURE CWO K. L. Dreher☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED~~ADEC~~ → ~~ADFC~~

NAME

Rick Gustin

SIGNATURE

Richard J. Gustin☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

Remove scattered tar patches in the upper+supra ITZ
on north and south sides of stream

Remove oiled parts of log on south bank
If possible remove trashed Zodiac:

~~LAND MANAGER~~ → NONE

NAME

SIGNATURE

☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY (ANAD)

REVISION NO. 04

OG CAL LARSON USCG DREHER, CWE SEGMENT ST/ CUOIAN 14/2
 BIO KEN CRITCHLOW LAND REP STREAM 22A-20-13041 OF
 EXXON DARIN YOE ADFG RAK GUTH-AIMEE WESSEMAN TIME 10:00 to 10:25
 TEAM NO. 14 TIDE LEVEL -0-FT DATE 4/25/90
 EST. SUBDIVISION LENGTH: 25 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo
 SURFACE SEDIMENTS: R 20 % B 40 % C 30 % P 5 % G 5 % S 5 % M 5 % V 5
 SLOPE: Long 40 % Hang 60 % Vert 0 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 5 m NO 20

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	R	B	P	S	1	2	3	4	5	SU	M	M	U
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT													
STAIN				✓	✓					✓			
MOUSSE													
PATTIES				✓	✓					✓	✓		
TARBALLS				✓	✓					✓	✓		
FILM													
NO OIL												✓	✓

PAVEMENT H F S 0 sq. m by 0PATTIES / TARBALLS 3 BANEAR SHORE SHEEN? ☒ BR RW SL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	✓		
Vegetation			
Trash			
Debris			

Did you COLLECT DEBRIS?
☐ YES ☒ NO

TYPE 0#BAGS 0

Photographs:

Roll No. 8Frames 11-17

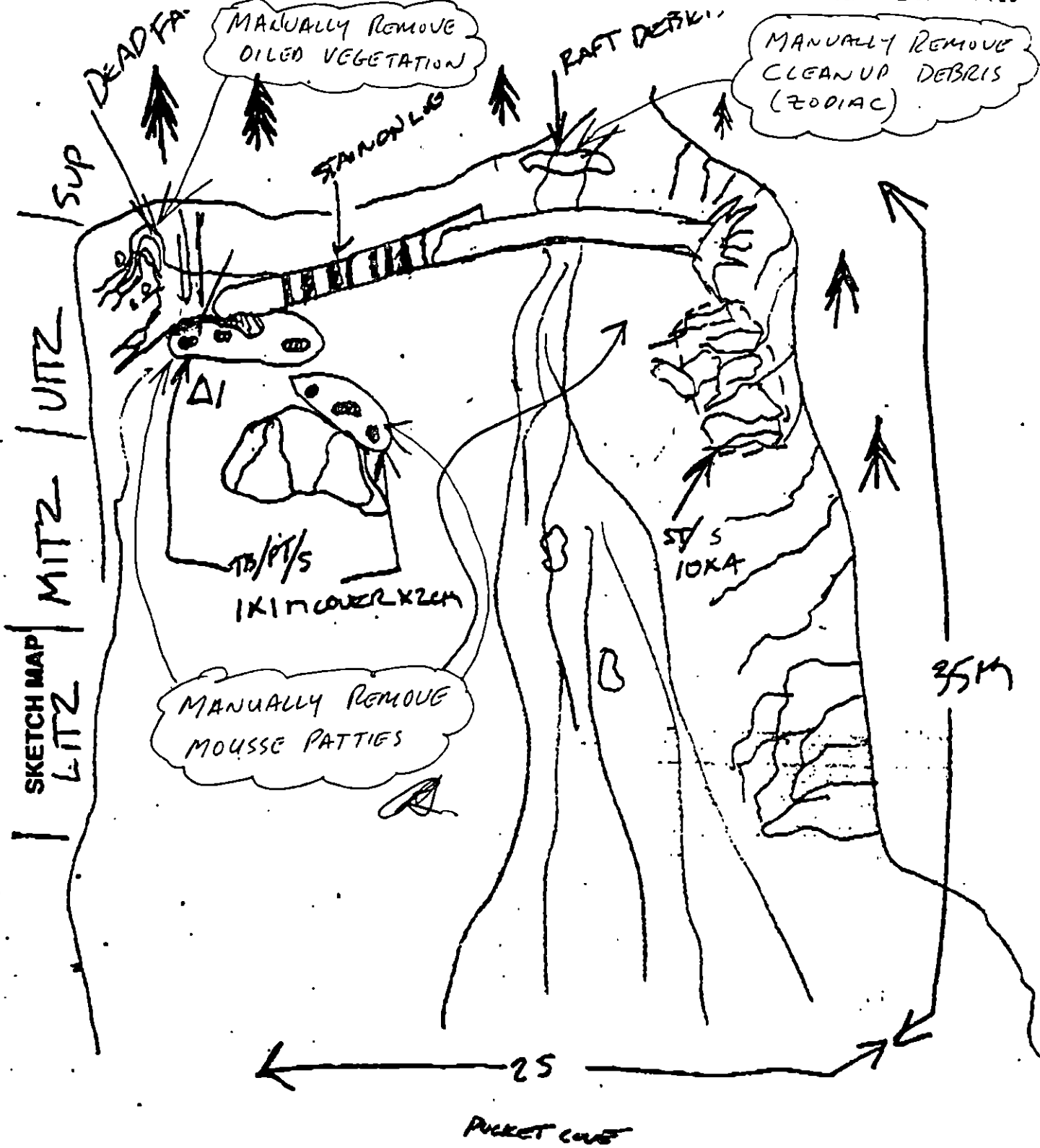
SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	N E E N (Y/N)	↓	SURFACE SUBSURF SEDIMENT
		OP	OR	OL	OF	NO		SO	BO	1	2	3	4	5	SU	M	M	U				
1	24					✓	•											✓		N		25,7862/
							•															
							•															
							•															
							•															
							•															
							•															

COMMENTS

VERY LITTLE OIL FOUND ON THIS BEACH -

19/20



CALLAI NW
GMENT STICUOIA N

STRENGTH 22A-20-1303A

TE 4 125 00

- HECKLIST**
- ☐ N Arrow
 - ☐ Approx. Size
 - ☐ Bay/Side Entry
 - ☐ Oil Out
 - ☐ Width
 - ☐ Length
 - ☐ % Cover
 - ☐ Substrate Character
 - ☐ E.g. HWA/AMA
 - ☐ SSS
 - ☐ Profile Location(s)
 - ☐ Profile(s)
 - ☐ PT Location(s)
 - ☐ Photo Location(s)

- LEGEND**
- 1 Δ No Substrate Oil
 - 2 Δ Substrate Oil
 - CT/C ☐ Substrate Oil
 - CT/B ☐ in Distribution
 - CT/P ☐ y Distribution
 - CT/S ☐ Red Distribution
 - RL ☐ Vegetation

location, direction, under

15/28

Seg ID: CU-014 Subdiv: 224-20-13034

Survey Date: 4/25/90

Comments by: Ken Critchlow

Very little oil was observed in the vicinity of the stream at this site. Scattered tarballs and patties were present in the upper MITZ and lower STZ on the south side, some distance from the stream. A log in this vicinity was stained sporadically. Stain was also observed on boulders and bedrock at the same elevation on the opposite side of the stream. An uncoiled Avon raft/boat was stranded as debris in the STZ channel.

I suggest that the tarballs and patties be removed by a small crew using shovels and trowels. This should be sufficient since a pit in this location didn't indicate the presence of subsurface oil. The oil stained log could be scraped and shouldn't be removed. Bio-remediation isn't required.

KR Critchlow

23/26

ADFG MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: ES ES TS AVS SCM MMB PTA2 REGION: PR RP CI KAPMETHOD: Aerial Crooks Boat3 DATE: 4-25-9015 HIGH TIDE TIMES: 121 TEAM RECORDER: Aimee Wesem4 START TIME: 100016 HIGH TIDE HTS: 122 OBSERVERS: Rick Gustin5 STOP TIME: 102017 LOW TIDE TIMES: 123 ADDRESS: ADFG6 SEGMENT #: C401418 LOW TIDE HTS: 124 PHOTOS TAKEN: Y (R)

7 STATION #:

19 TIDE HT AT SURVEY:

Roll #: Frames:

8 K-UNIT:

25 Slack Flood Slack

25 VIDEO TAKEN: (Y) N TAPES: 90-ASW-0

9 STAT AREA:

26 USCG QUAD: SC3Starts: 643 Ends: 698

10 LAT:

11 LONG:

28 SAMPLES TAKEN: Y (R) Number12 SOURCE: Map Loran

Oil

13 LOCATION: se Culross I coastline south of

Sediment

14 DESCRIPTION: hidden bay

Biological

Water

EXTENT OF OIL

	SHORELINE				STREAM			
	L	M	H	S	L	M	H	S
27 SURFACE COVERAGE	1m	1m						
28 SURFACE THICKNESS	thin mat 2-4cm							
29 PENETRATION	0							

30 OVERALL OIL IMPACT: N VL (L) N N35 CATALOGED ANAD. FISH STREAM: (Y) N31 OIL TYPE: Pooled Mousse TEX Asphalt Sticky Steam37 CATALOG #: 224-20-1303432 OILED RESIST (Y) N

38 STREAM NAME:

33 SHORELINE TYPE: Headland Low-lying Rocks Beach Cave
Lagoon Marsh39 OIL IN STREAM BED? Y (R)34 WAVE EXPOSURE: High Moderate Low

40 OIL ON STREAM BANK? Y N

35 SUBSTRATE TYPE: Bedrock 20 Boulder 10 Cobble 2541 OIL ON BEACH ADJACENT TO MOUTH? (Y) N
(within 50 meters)Gravel 40 Sand 5 Mud/silt42 OIL WITHIN 1 MILE OF STREAM? (Y) N

Where:

43 ANADROMOUS FISH PRESENT? Y N

44 ANADROMOUS FISH OBSERVATION

Species Aerial Ground

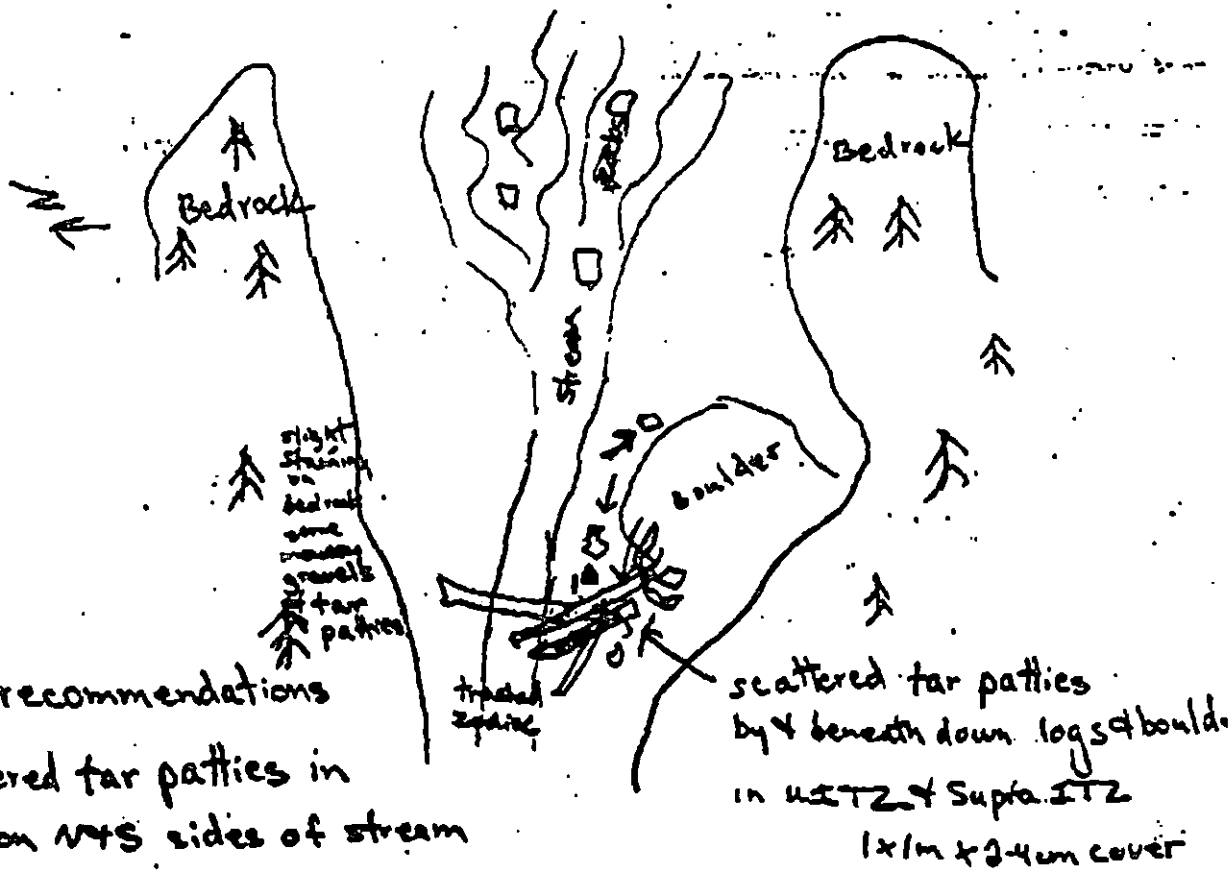
COMMENTS: this stream runs through a small rubble/gravel pocket beach which is between bedrock headlands. The oiling we found consisted of scattered mousse & tar patties in the UTT2 & SUMA IT2 on the south side of the

24/28

45 PHOTOLOG

FRAME(S)	DESCRIPTION
	spot 1 - 24cm non-oiled oil

46 OIL DISTRIBUTION DIAGRAM



Treatment recommendations
 Remove scattered tar patties in
 the USTZ on N/S sides of stream
 Remove oiled parts of log on south bank
 If possible - remove trashed zodiac

13042

Climatic Map

CU-014-A (1 of 1)

1A, 1B

ST(3)

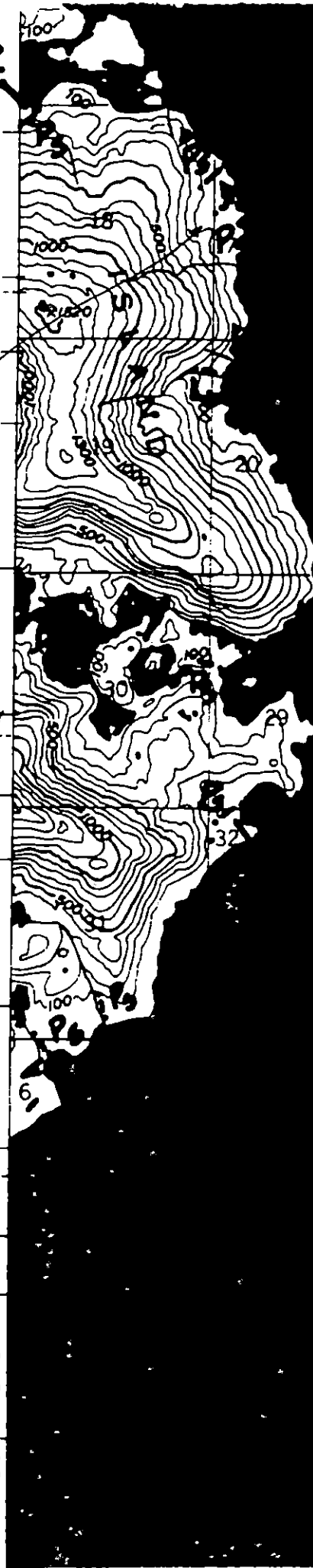
1I, 1S

6Y

SUBJECT ANAEROBIC
STRENGTH

#224-20-13034
(is, 2/10)

(SEWARD C-4)



ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 224-20-13034

SEGMENT CU-14 SUBDIVISION A

WORK WINDOW	
Manual Pickup	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Stream	ADF&G catalogued anadromous streams (224-20-13036 and 224-20-13034) are present in Subdivision A. No constraint to manual pickup.
1I	Gill Net Area	No constraint to manual pickup.
2K	Purse Seine Hook-off	No constraint to manual pickup
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Restrict boat and air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from active nests. Avoid any unnecessary disturbance or damage to uncollected biota and substrate.

SEE SUBDIVISION CONSTRAINT ADDENDUM CU-14A
FOR ADDITIONAL CONSTRAINT INFORMATION.

TAG APPROVAL DATE _____
ADEC _____
EXXON HANS O. JAHNS 6/8/90
NOAA _____
USCG _____

FOSC

Date

6-8-90

ANADROMOUS FISHERY SITE EVAL
(224-20-13034)

CU-15

INACTIVE NEST

5

ANADROMOUS STREAM 100m ZONE

INACTIVE NEST

CU-14

ANADROMOUS STREAM
(224-20-13036)

Anadromous Stream
(224-20-13034)

TREATMENT AREA

ACTIVE NEST

400m EAGLE NEST ZONE

CU-13

ANADROMOUS STREAM
(224-20-13034)

CU-12

INCORPORATES USFWS 6/1/90
MAP OF ACTIVE EAGLE NESTS.



Exxon Company, USA
Map Key: PWS-CU-14

ECOLOGY MAP SEGMENT CU-14

SUBDIVISION A (1 of 1)

METERS



Seabird Colony



Eagle Nest

1:25,000 - 1:50,000

ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 224-20-13036

SEGMENT CU-14 SUBDIVISION A

WORK WINDOW	
Tarmat Removal	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Stream	ADF&G catalogued anadromous streams (224-20-13036 and 224-20-13034) are present in Subdivision A. No constraint to tarmat removal.
1I	Gill Net Area	No constraint to tarmat removal.
1J	Purse Seine Area	No constraint to tarmat removal.
1K	Purse Seine Hook-off	No constraint to tarmat removal.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.

OTHER ECOLOGICAL CONSIDERATIONS

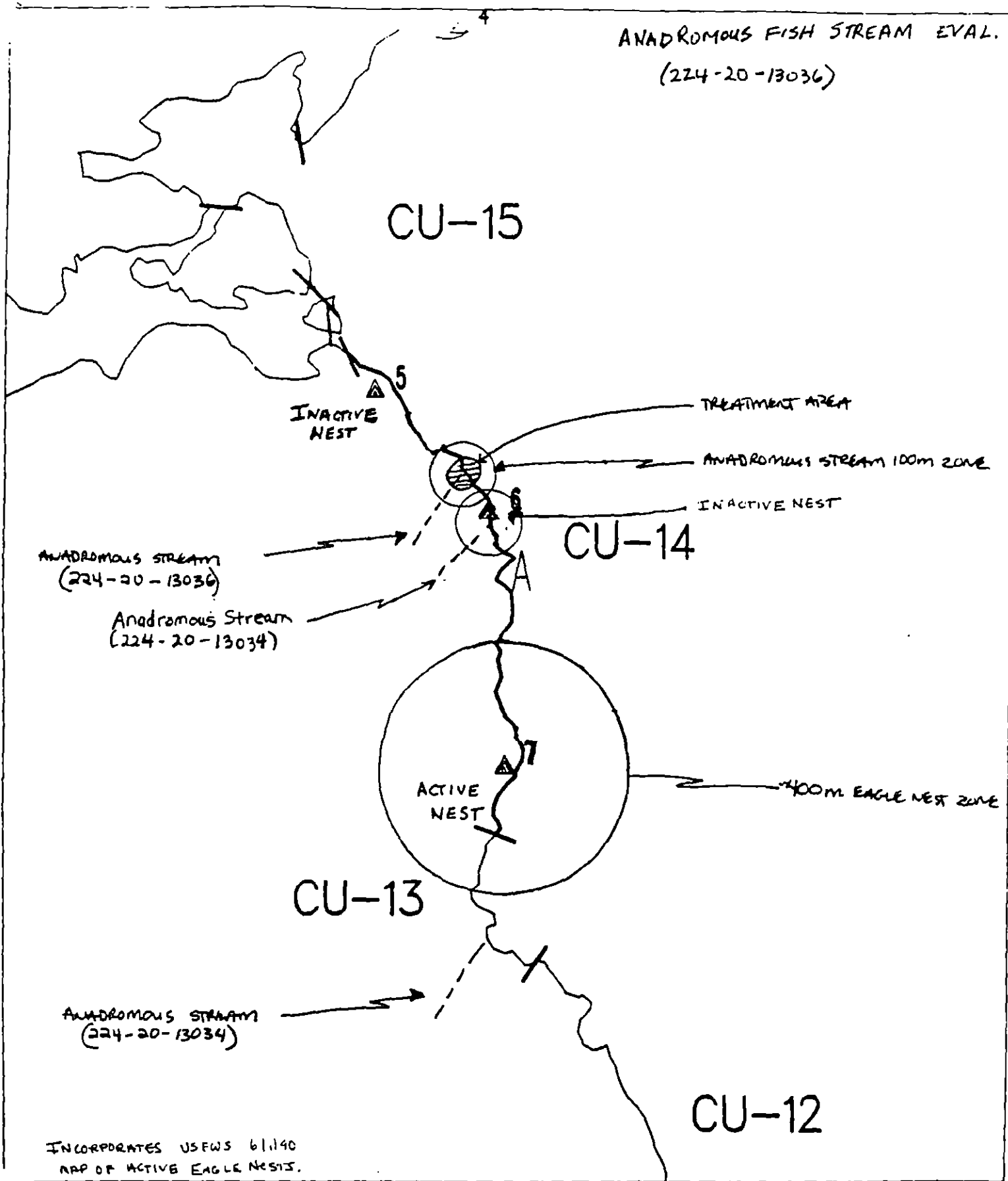
No disturbance to stream bed or banks. Restrict boat and air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from active nests. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

SEE SUBDIVISION CONSTRAINT ADDENDUM CU-14A
FOR ADDITIONAL CONSTRAINT INFORMATION

TAG APPROVAL DATE _____
ADEC _____
EXXON KANS O. JAHNS FOSC [Signature] Date 6-8-90
NOAA [Signature]
USCG _____

Prepared by _____ Date _____

ANADROMOUS FISH STREAM EVAL.
(224-20-13036)



INCORPORATES USEFS 61140
MAP OF ACTIVE EAGLE NESTS.



Exxon Company, USA
Map Key: PWS-CU-14

ECOLOGY MAP
SEGMENT CU-14
SUBDIVISION A (1 of 1)
METERS

★	Seabird Colony
▲	Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ CU-15 SUBDIVISION A (1 OF 4) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. (224-20-13076, Ps, 2/90 and 224-20-13042, Rs, 2/90)

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)

1B Salmon stream mouth - spawning (7/10 to 8/31)

5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

SHPO SIGNATURE: Charles J. Holmes DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 29 m: No Oil 6467 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

No Treatment Recommended

X Treatment Recommended

X Manual Pickup

Bioremediation

Tarmat Removal

Snare/Absorbent Booms

Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

Spot Washing: Wands

Beach Cleaner

Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of cleanup debris and oiled sediments in area indicated on sketch map. Work should be conducted after 6/1 and with approval of USFWS regarding eagle nest.

TAG COMMENTS: _____

TAG APPROVAL DATE: May 5, 1990

ADEC ART WORKER Det Wren

EXXON *Walt N. Wilbert, Mark N. Silber*

NOAA Gary Petron

USCG G.A. REITER G.A.D.

FOSC: ML DATE: 5-18-90

NOTIFY CUE 24 HAS PRIOR TO WORK.

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inpol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 1C Salmon fry nursery area (4/31 to 7/31)
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inpol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D Esther Hatchery release (4/15 to 6/15)
 1E Main Bay Hatchery release (4/20 to 6/15)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inpol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
 AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
 1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- 1I Gill net area (8/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (8/11 to 7/25)
 Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inpol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M Herring spawning (4/1 to 6/15)
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unopened intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inpol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inpol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- SR Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (8/1 to 9/15)
 6V Anchorage (8/1 to 9/15)
 6W Forest Service cabins (8/1 to 9/15)
 6X Lodge (8/1 to 9/15)
 6Y Special use destination
- Subsistence area: Salmon harvesting (5/1 to 9/30)
 Finfish harvesting
 Deer harvesting (8/15 to 2/25)
 7J Invertebrate harvesting
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inpol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / CU-015 SUBDIVISION: A DATE 4/25/90

ISCG
NAME SCOTT RAINDORF SIGNATURE Scott Raindorf ST

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

DEC
NAME Lori J. Stratton SIGNATURE Lori J. Stratton

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

The surveyed segment consists of high angle bedrock shoreline. In one location (see OG sketch), patches of pooled splashes and coat splashes were observed on rock channels and walls. Dark brown + dull black oil penetrates to 3 cm into gravel and average $\approx$ 30 cm diameter, over an area of approx. 0.3 m x 10 m. Oil category is very light. An oiled pompon and oiled net could not be disentangled. They need to be picked up; See location on OG map. No other treatment is recommended.

AND MANAGER
NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

A small patch of oil found at south entrance to Bay (mapped). Oil is between rocks and on vertical face. Some very light sheen in puddles or water. Could be treated. Biological enhancement if a crew is already in the area - but do not warrant sending a crew in for on its own. Contains: Natural Cleaning.

SHORELINE OILING SUMMARY

REVISION NO. 04/13/98

IG E. MACDONALD USCG S. RAINFORD SEGMENT ST/ CU-15
 BIO MA. SCOTT LAND REP L. KEPLER NFS SUBDIVISION A (1 OF 4)
 EXXON J. BUTLER ADEC LOBI STRATTON TIME 08:05:40
 TEAM NO. 3 TIDE LEVEL -3.5 to +4 FT DATE 4/25/90
 EST. SUBDIVISION LENGTH: 16.450 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 95 % B 4 % C 1 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long <1 % Hang 4 % Vert 95 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 10 m NO 11,340 m

US 5100m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	N	E	S	W	1	2	3	4	5	SU	U	M	U
ASPHALT PAVEMENT													
POOLED			X					X			X		
COVER													
COAT			X		X		X				X		
STAIN													
MOUSSE													
TATTIES													
TARBALLS													
FILM													
NO OIL										X		X	X

PAVEMENT H F S 0 sq. m by 0 cm

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris	X		

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒

TYPE _____

#BAGS _____

Photographs:

Roll No. ST-3-3

Frames _____

SUBSURFACE OIL ROCK ONLY - NO SUITABLE SUBSTRATE FOR PITS.

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OIL OIL INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				AN A	KEE (mm)	V	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OP	NO		UO	UO	1	2	3	4	5	SU	U	M	U				

COMMENTS

Deep, sheltered bay w/ occasional muddy coasts which are exposed at very low tide. The steep rock walls harbor a rich, diverse intertidal biota. Surface oil only @ a single location at the segment's south boundary ~ here, CT/S: P/S has some oiled debris cover a 10m long rocky channel @ , ,

CU015 ~~15~~ A, B, C, D.

-15B; 20m dT

CU-15C

500.0

CU-15B

CU-15D
No oil

10m dT

OILING

- H - Heavy
- M - Moderate
- L - Light
- VL - Very Light
- ng - None
- US - Not Surveyed

Distance in Meters

AMC Sep/Oct 1990 Survey

G. MACDONALD

4.25.90

Data Enter: _____

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/80

Segment ST/ CU-15 Subdivision A (B, C, + D)* Date (mo / day / yr) 4/25/90

Time (24 hr) 745-1005 Biologist MA Scott

(A) Substrate type and % of segments:
(1) Bedrock 95 (2) Boulder 4 (3) Cobble 1 (4) Pebble — (5) Sand — (6) Silt —

(B) Overall % cover of biota (% of segment): Dense 80 Moderate 15 Low 5

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:
Roll No. 57-3-3

Frames 8

BARNACLES

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

MYTILUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

- few small beds, only in outer (eastern) part of bay

GASTROPODS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

FUCUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

(reproductive)

Wildlife Observations/ General Comments: (observations made by boat)

- 6 golden eyes
- 1 geal
- 3 Canadian geese
- very low tide (-3.5')
- western third of bay (west of CU-15C) not accessible due to ice; patches of intertidal still covered by thin sheet of ice

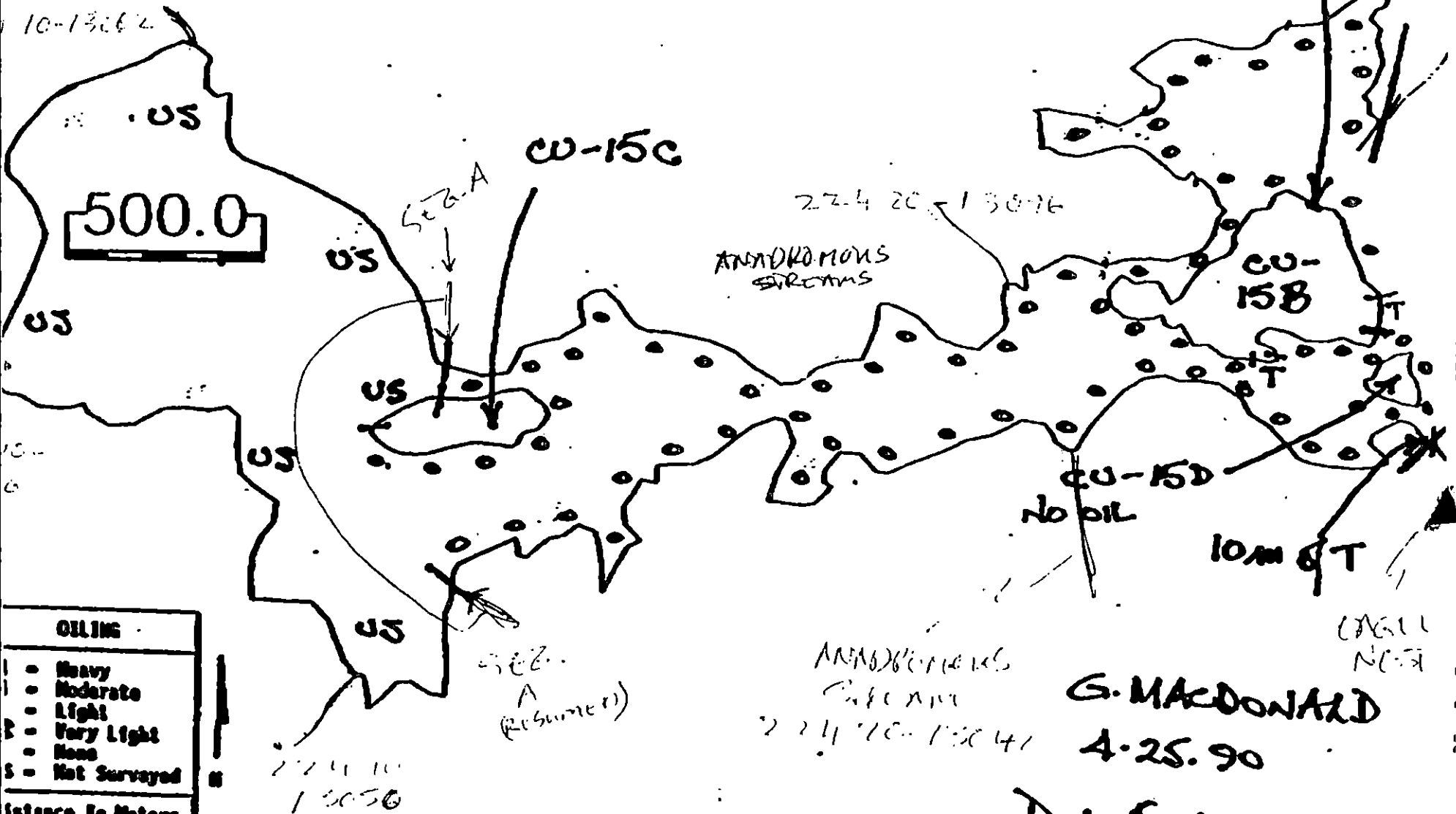
Ecological Considerations:

extreme low tide exposed a lush, diverse intertidal community; high density and diversity in mid- & LTB with decreasing diversity in the inner bay (decrease in diversity occurs west of narrow neck in the mid-bay area); extensive Epilimna beds (low subtidal) in small coves w/ mud bottom and in inner bay; Mytilus found only in low densities in outer (eastern) part of bay; no disturbance/mortality observed; diverse, well established rock/boulder community; no barnacle spot observed, in

CC(C)C(C)C(=O)N1C=CC=C1

CU015 A, B, C, D.

-15B; 20 m dT



Data Entry: _____

Hand-drawn map of a coastal area, likely a bay or fjord, with various labels and annotations. The map includes a scale bar for 500.0 meters, a north arrow pointing towards the top left, and a date stamp 'M. 25.90' in the bottom left corner. The map shows a coastline with several points labeled A through H. Key features include:

- Ice:** Labeled 'ICE (thick & white)' and 'ICE (thin & clear)'. A note says 'UNSURVEYED' near the top left.
- Water Levels:** 'MHWL' (Mean High Water Level) and 'WL' (Water Level) are marked at several points.
- Coastal Features:** 'Mudflats', 'glacier scoured bedrock', 'water-fall', and 'Mud' are labeled.
- Points and Lines:** Points A, B, C, D, E, F, G, H are marked. Lines connect some points, and others are labeled 'steep R w/ some B.' or 'steep rock shore w/ some B/R'.
- Oil Spill Information:** 'NO OIL' is written in several locations. A note says 'trace DBR CT/S @ 40m, 2 1/2 ST/S'. Another note says 'CT/S; tr. Pds oiled net & bottom.' with a circled 'X' and 'SEE ENLARGEMENT'.
- Other Labels:** 'CU-15A', 'CU-15B', 'CU-15D', 'CM COVE.', 'BASE N DEC.', 'PROFILES', 'M. 25.90', and '3.5 FT' are also present.

.M.
-25-90

T
PWS 73H

CU-15D
NO OIL

OILED NET &
POMPOM

ENLARGEMENT
of small scale map.

Sketch 2 of 2.

DBR-DBL tax as
CT/s and trace PO/s
@ up. HITZ ; on rock
channels & gap walls.

< 5% cover, $\leq 0.3m$ wide x $10m$
x $\leq 3cm$ penetration in
granulats over bedrock;
PO/s patches $\leq 30cm$ dia

MANUALLY REMOVE
CLEANUP DEBRIS &
OILED SEDIMENTS

CU-14

CU

CU-15A

VL 10m

NO 11,340m

US 5,100m

← PWS
73C

XXX Wide

//// Medium

--- Narrow

TTTT Very Light

CU-15A/D

ADEC Segment Length: 17535m

Map Key: PWS-73d

Name: G.M.

Date: 4.25.90



XXXX Wide

//// Medium

--- Narrow

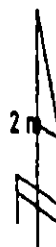
TTTT Very Light

OOOO M. 0:1

CU-15

Approx. Segment Length: 19062m

0 300 600 900



Map Key: PWS-CU-15a

Name: _____

Date: _____

Data Entered: _____

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT CU-15 SUBDIVISION A (1 of 4)

WORK WINDOW

Manual Pickup

OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

Two anadromous streams (224-20-13042 and 224-20-13036) are in Subdivision A. No constraint to manual pickup.

1K Purse Seine Hook-off

No constraint to manual pickup.

5T Bald Eagle Nest

No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

TAG APPROVAL DATE

ADEC Ran Morris
EXXON ANDY TEAL
NOAA W. H. H. H.
USCG

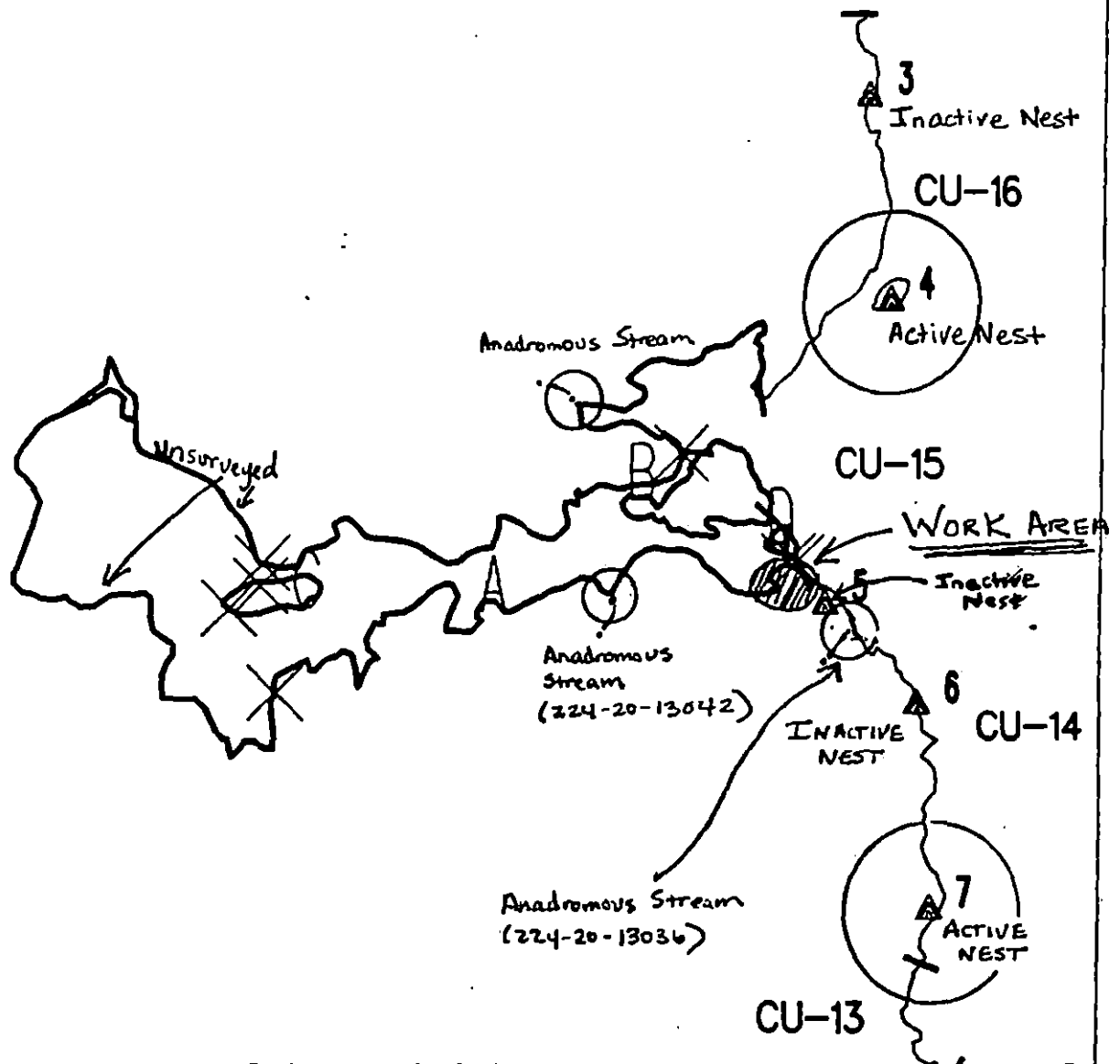
FOSC W. H. H. H.

DATE 8 June 90

Prepared By: Andru Meyer

Date 6/16/90

Incorporates USFWS data
from survey of bald
eagle nest map (6/1/90)



Exxon Company, USA
Map Key: PHS-CU-15

ECOLOGY MAP SEGMENT CU-15

SUBDIVISION A (1 of 4)

METERS



- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 2711 feet

SHORELINE EVALUATION

SEGMENT ST/ CU-15 SUBDIVISION B (2 OF 4) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
Eagle nest in adjacent segment.
6Y Recreation: Special use destination
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

SHPO SIGNATURE: Charles E. H. Moore DATE: 5/5/80

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 165 m: No Oil 1919 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

<u> X </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u> </u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u> </u> Manual Pickup	<u> </u> Absorbents (pads,rolls,etc)
<u> </u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u> </u> Tarmat Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: May 5, 1990
 ADEC ART WEINER Art Weiner
 EXXON Mark N. Silbert Mark N. Silbert FOSC: W L DATE: 5-15-90
 NOAA Gary Petrone Gary Petrone
 USCG G.A. KEITER G.A. Keiter

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 3 Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: ADF&G John Morison 267-2324

- 1C Salmon fry nursery area (4/31 to 7/31)
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

- 1D Esther Hatchery release (4/15 to 6/15)
 1E Main Bay Hatchery release (4/20 to 6/15)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.

AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214

1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511

- 1I Gill net area (6/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (6/11 to 7/25)

Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

Herring spawning (4/1 to 6/15)

Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235

- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)

Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235

ADF&G Don Calkins 267-2403

- 5R Seabird colony (5/1 to 9/1)

Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

- 5S Shorebird/waterfowl concentration (4/1 to 5/15)

Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

ADF&G Tom Rothy 267-2206

- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)

Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

- 6U Recreation: Tent sites (5/1 to 9/15)
 6V Anchorages (5/1 to 9/15)
 6W Forest Service cabins (5/1 to 9/15)
 6X Lodge (5/1 to 9/15)
 Y Special use destination

- Z Subsistence area: Salmon harvesting (5/1 to 9/30)

- 7-HH Finfish harvesting
 7H Deer harvesting (8/15 to 2/28)
 7JJ Invertebrate harvesting

Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.

AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ CU-015 SUBDIVISION: B DATE 4-25-90

JSCG
NAME SCOTT RAINSFORD SIGNATURE Scott Rainsford MSTI

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

DEC
NAME Lori J. Stratton SIGNATURE Lori J. Stratton

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

The segment consisted of an island of high angle bedrock and boulders. On one beach, very light coat ^{of dark brown} was splashed on boulders within a band 1/2 meter wide along a 20-meter length. Along vertical bedrock, a very light stain was splashed along a "drip line" at U.I.

No treatment is recommended due to insignificant oiling.

AND MANAGER

NAME U.S. Forest Service SIGNATURE Lee Taylor

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Trace of oil on outside, neither face. Is not treatable.

No Treatment Recommended.

SHORELINE OILING SUMMARY

REVISION NO. 04/13/88

OG G. MACDONALD USCG S. RAINFORD SEGMENT ST/ CU-15
 BIO MA. SCOTT LAND REP L. KEELER NFS SUBDIVISION 5 (2 OF 4)
 EXXON J. BUTLER ADEC LOBI STRATION TIME 10:07 to 10:30
 TEAM NO. 3 TIDE LEVEL +1 to +2 FT DATE 4/25/90
 EST. SUBDIVISION LENGTH: 2,500 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☐ Foot ☒ Boat ☐ Helo WORKING DIRECTION: _____ to _____
 SURFACE SEDIMENTS: R 85 % B 15 % C 0 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 2 % Hang 20 % Vert 75 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 100 m NO 2,400 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	10	15	20	25	30	35	40	45	SU	U	M	U
ASPHALT PAVEMENT												
POOLED												
COVER												
COAT				X		X			X			
STAIN				X		X			X			
MOUSSE												
PATTIES												
TARBALLS												
FILM												
NO OIL									X		X	X

PAVEMENT H F S 0 sq. m by 0 cm

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒

TYPE 0

#BAGS 0

Photographs:

Roll No. —

Frames —

SUBSURFACE OIL NO SUITABLE SUBSTRATE FOR PITS.

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					BELOW	OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	30	35	40	45	SU	U	M	U		

COMMENTS Steep rock island at the entrance to Hidden Bay.
 Trace of surface oil as CT/S & ST/S @ upper H.T.Z., < 10cms.
 wide & < 5% cover, on exposed east side of island.
 No subsurface oil.

REVIEWED 7W DATE 4/26/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/23/88

Segment ST/ CU-15 Subdivision A (B, C, + D)* Date (mo/day/yr) 4/25/90

Time (24 hr) 745-1005 Biologist M.A. Scott

(A) Substrate type and % of segments:
(1) Bedrock 95 (2) Boulder 4 (3) Cobble 1 (4) Pebble — (5) Sand — (6) Silt —

(B) Overall % cover of biota (% of segment): Dense 80 Moderate 15 Low 5

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:
Roll No. 57-3-3

Frames 8

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

MYTILUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

- few small mussels, only in outer (eastern) part of bay
NOT PRESENT

GASTROPODS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

FUCUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

(reproductive)

NOT PRESENT

Wildlife Observations/ General Comments: (observations made by boat)

6 golden eyes

1 gull

3 Canadian geese

- very low tide (-3.5')

- western third of bay (west of CU+SC) not accessible due to ice; patches of intertidal SM covered by thin sheet of ice

Ecological Considerations:

extreme low tide exposed a lush, diverse intertidal community; high density and diversity in mid-bay with decreasing diversity in the inner bay (decrease in diversity occurs west of narrow neck in the mid-bay area); extensive ~~extensive~~ beds (low subtidal) in small coves w/ mud bottom and in inner bay; Mytilus found only in low densities in outer (eastern) part of bay; no disturbance/mortality observed; diverse, well established ~~rock~~ community; no barnacle spot observed on

* islands (subdivisions B, C, D) similar to adjacent mainland ~~mainland~~ ^{new from}

ECOLOGICAL MAP

CU015: A, B, C, D.

1-10-13062

-15B; 20 m dT

CV-15c

224-20 < 1.3076

ANADROMOUS STREAMS

500.0

ॐ नमः

No but

ANATOMY

22-4-20-13042

G. MACDONALD

4.25.90

Data Entered:

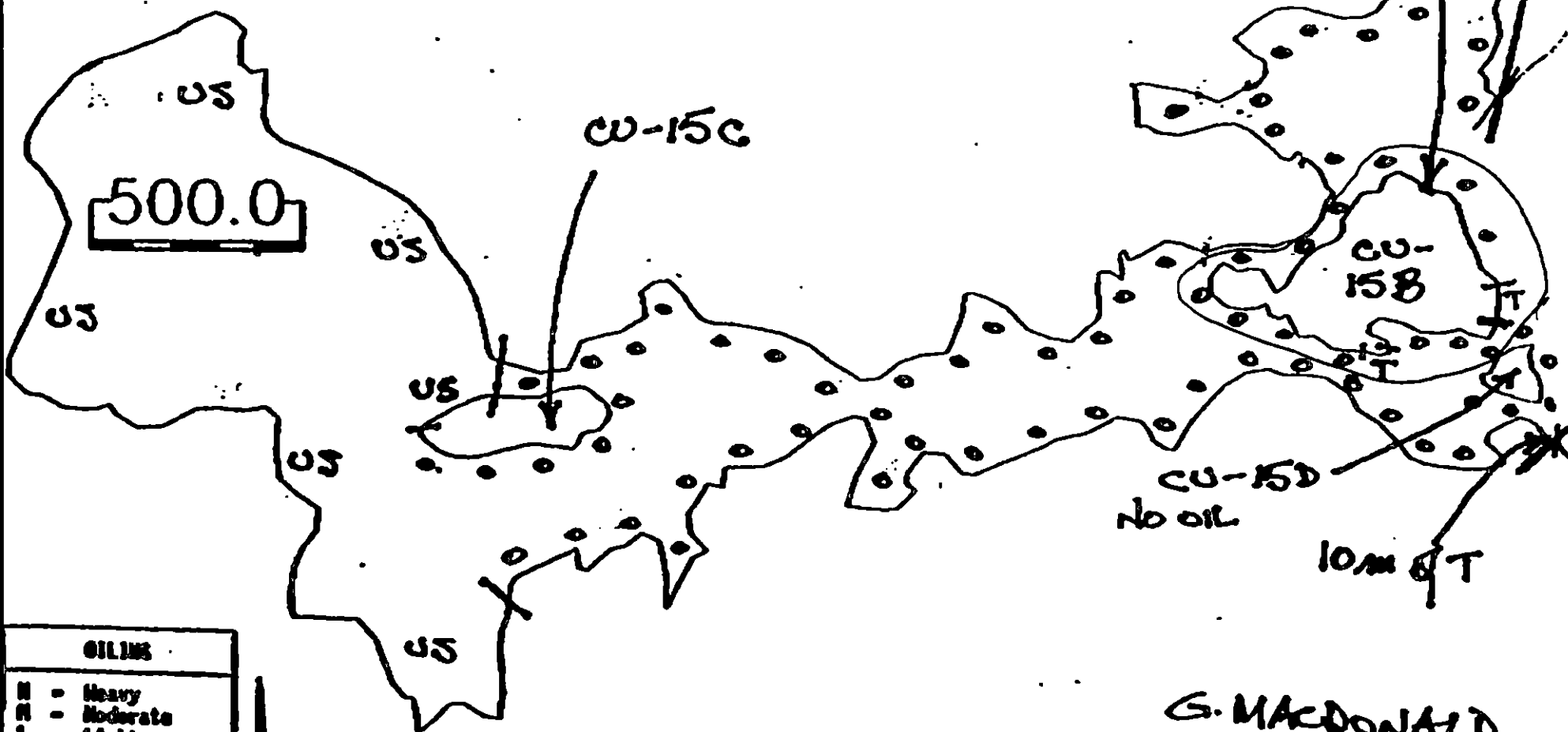
001 1000

- 1 - Heavy
1 - Moderate
1 - Light
2 - Very Light
- None
3 - Not Surveyed

Distance In Meters

EC Sept/Oct 2000 Survey

CU015 ~~A~~ (B) C, D.



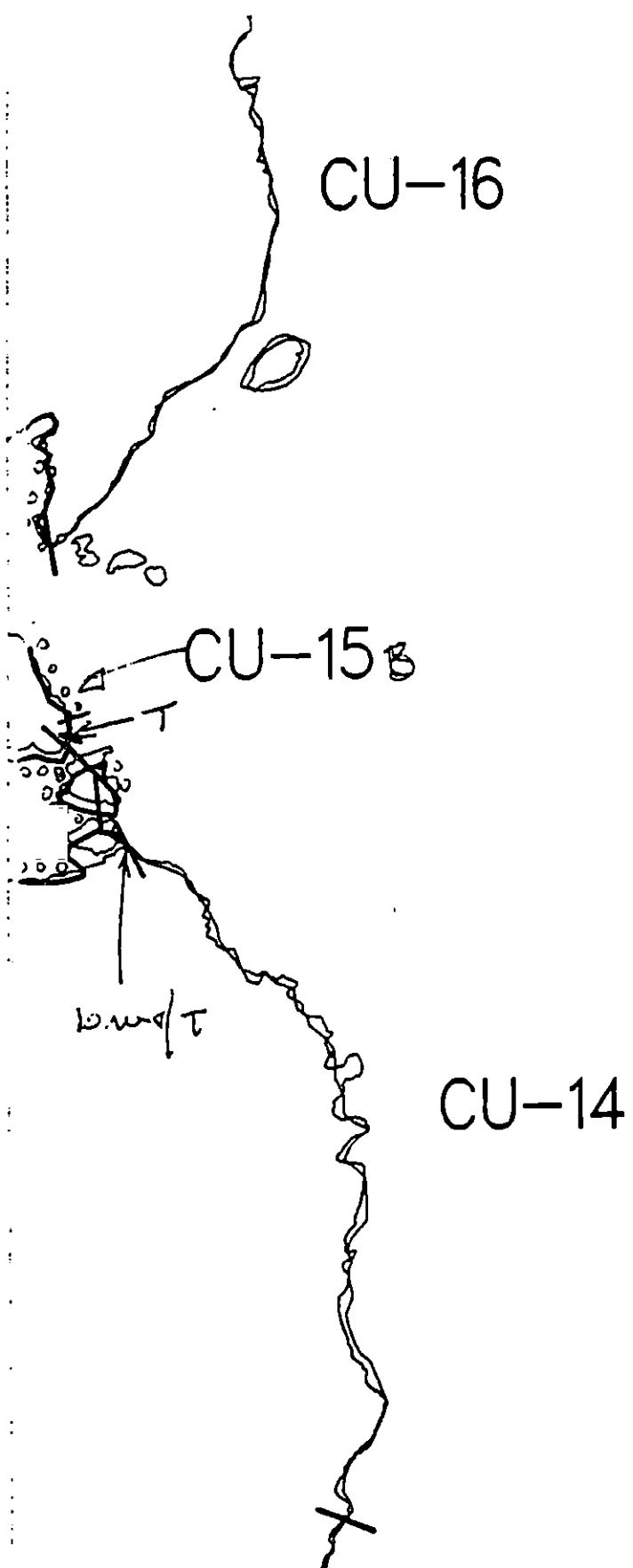
OILING	
H	Heavy
M	Moderate
L	Light
VL	Very Light
N	None
US	Not Surveyed
Distance in Meters	

ARCC Sep/Oct 1990 Survey

G. MACDONALD

4.25.90

Data Entry: _____



XXXX Wide

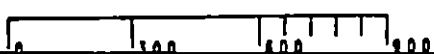
//// Medium

---- Narrow

TTTT Very Light

CU-15

Approx. Segment Length: 19062m



Map Key: PWS-CU-15b

Name: _____

Date: _____

SHORELINE EVALUATION

SEGMENT ST/ CU-15 SUBDIVISION C (3 OF 4) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
Eagle nest in adjacent segment.
6Y Recreation: Special use destination
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: Charles E. Holmes DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 811 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

☒ No Treatment Recommended	☐ Snare/Absorbent Booms
☐ Treatment Recommended	☐ Oil Snares (pom poms)
☐ Manual Pickup	☐ Absorbents (pads, rolls, etc)
☐ Bioremediation	☐ Spot Washing: <u> </u> Wands
☐ Tarmat Removal	☐ Beach Cleaner
	☐ Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: May 5, 1990
ADEC ART WENZER D. L. Williams
EXXON Mark N. Willett Mark N. Silbert FOSC: W L DATE: 5-18-90
NOAA Gary Petrus Gary Petrus
USCG G.A. BEITER G.A. Beiter

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A** Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 1C** Salmon fry nursery area (4/31 to 7/31)
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D** Esther Hatchery release (4/15 to 6/15)
1E Main Bay Hatchery release (4/20 to 6/15)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
 AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
 1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- 1I** Gill net area (5/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (8/11 to 7/25)
 Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M** Herring spawning (4/1 to 6/15)
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unopened intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 3N, 3P** Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R** Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S** Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206
- 5T** All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U** Recreation: Tent sites (8/1 to 9/15)
6V Anchorages (8/1 to 9/15)
6W Forest Service cabins (8/1 to 9/15)
6X Lodge (8/1 to 9/15)
6Y Special use destination
- Subistence area: Salmon harvesting (5/1 to 9/30)
 Finfish harvesting
 Deer harvesting (8/15 to 2/26)
7JJ Invertebrate harvesting
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

EVENT ST/ CU-015 SUBDIVISION: C DATE 4/25/90

ISCG
NAME SCOTT RAINSEAD SIGNATURE Scott Rainsead MSTI

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

DEC
NAME Lori J. Stratton SIGNATURE Lori J. Stratton

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

Due to ice on the water, 15% of the segment could not be surveyed. The island was high angle bedrock.
No oil was observed.
No treatment recommended due to no oil presents

AND MANAGER
NAME U.S. Coast Guard SIGNATURE Lee Keeler

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

No oil
No Treatment Recommended

SHORELINE OILING SUMMARY

REVISION NO. 04/12/80

OG G. Macdonald USCG S. RAINSFORD SEGMENT ST/ CU-15
 BIO MA. SCOTT LAND REP L. KEELER NPS SUBDIVISION C (3 OF 4)
 EXXON J. BUTLER ADEC LORI STRATTON TIME 08:46:00 SO
 TEAM NO. 3 TIDE LEVEL 0 - 0 DATE 4 / 25 / 90
 EST. SUBDIVISION LENGTH: 1100 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☐ Foot ☒ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 70 % B 3 % C 2 % P 10 % G 10 % S 0 % M 5 % V 0 %
 SLOPE: Long 15 % Hang 10 % Vert 75 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 925 m

US 165

SURFACE OIL

CHARACTER	DISTRIBUTION					OIL / FILM COLOR					IMPACTED ZONES			
	R	B	P	C	N	W	G	S	M	V	SU	U	M	U
ASPHALT PAVEMENT														
POOLED														
COVER														
COAT														
STAIN														
MOUSSE														
ATTIES														
TARBALLS														
FILM														
NO OIL											X	X	X	X

PAVEMENT H F S 0 sq. m by 0 cm

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? ☒ BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒

TYPE Q

#BAGS 0

Photographs:

Roll No. —

Frames —

SUBSURFACE OIL NO PITS — ROCK SHORE

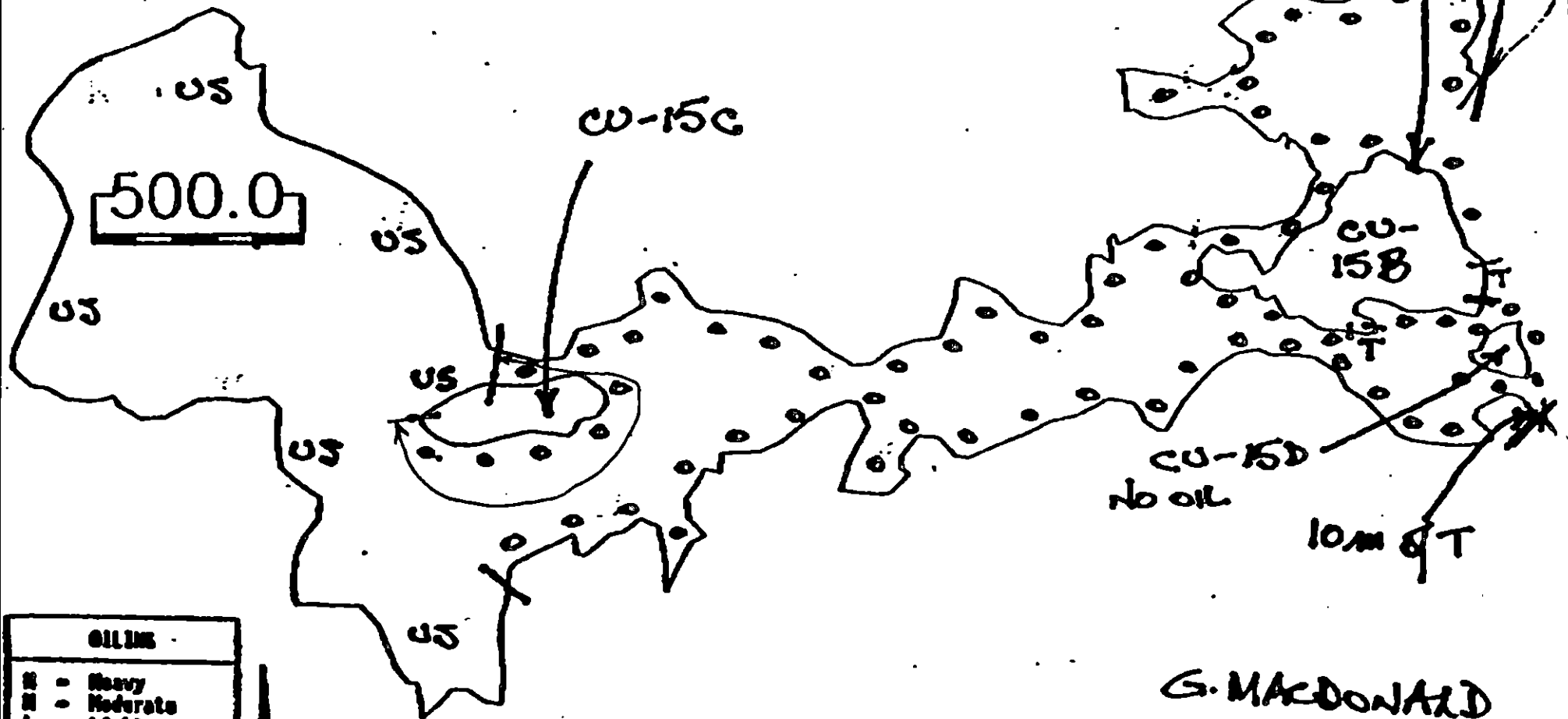
PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	! ↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UO	W	G	S	M	V	SU	U	M	U				

COMMENTS: Small isle in Hidden Bay, with shore bound ice @ west end. No oil here, nor within 1 mile radius.

4/26

4/26/90

CU015 ~~A~~, B, (C) D.



OILLINE	
H	Heavy
M	Moderate
L	Light
VL	Very Light
NS	None
US	Not Surveyed
Distance in Meters	

ADOC Sep/Oct 1990 Survey

G. MACDONALD

4-25-90

Data Enter: _____

SHORELINE ECOLOGICAL SUMMARY

REVISION: 10/23/88

Segment ST / C-1-15 Subdivision A (B, C, + D)* Date (mo / day / yr) 7/25/90

Time (24 hr) 745-1005 Biologist MA Scott

(A) Substrate type and % of segments:
(1) Bedrock 95 (2) Boulder 4 (3) Cobble 1 (4) Pebble — (5) Sand — (6) Silt —

(B) Overall % cover of biota (% of segment): Dense 80 Moderate 15 Low 5

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:
Roll No. 57-3-3

Frames 8

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

MYTILUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

- few small beds, only in outer (eastern) part of bay
NOT PRESENT

GASTROPODS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

FUCUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

(reproductive)

NOT PRESENT

Wildlife Observations/ General Comments: (observations mostly by boat)

- 6 golden eyes
- 1 geal
- 3 canadian geese
- very low tide (-3.5')
- western third of bay (west of cut-off) not accessible due to ice; patches of intertidal still covered by thin sheet of ice

Ecological Considerations:

extreme low tide exposed a lush, diverse intertidal community; high density and diversity in mid-bay with decreasing diversity in the inner bay (decrease in diversity occurs west of narrow neck in the mid-bay area); extensive ~~extensive~~ beds (low subtidal) in small coves w/ mud bottom and in inner bay; Mytilus found only in low densities in outer (eastern) part of bay; no disturbance / mortality.

ECOLOGICAL MATR

CU015: A, B, C, D.

24-10-13062

-15B; 20 m dT

224-20513076

ANADROMOUS FISHES

CU-
158

40-150

no pot

10m GT

ANADROMOUS
SPECIES

22420-13042.

G. MACDONALD

4-25-90

Data Entry: _____

224 10
13050

COLINE	
H	- Heavy
M	- Moderate
L	- Light
VL	- Very Light
SL	- None
U	- Not Surveyed

Distance In Meters

ASAC Sep/Oct 2000 Survey

SHORELINE EVALUATION

SEGMENT ST/ CU-15 SUBDIVISION D (4 OF 4) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
Eagle nest in adjacent segment.
6Y Recreation: Special use destination
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: Charles F. Shuman DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 470 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

<u>X</u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u> </u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u> </u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u> </u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u> </u> Tarmat Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: May 5, 1990
ADEC ART WONGER D. L. Williams
EXXON Mark N. Willett Mar E N. Silber FOSC: W L DATE: 5-16-90
NOAA Gary Petrog Randy Petrog
USCG G.A. KESTER G.A. Kester

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ CU-015 SUBDIVISION: D DATE 4/25/90

USCG

NAME SCOTT RAINSFORD SIGNATURE Scott Rainsford☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTEDADEC
NAMENAME Lori J. Stratton SIGNATURE Lori J. Stratton☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

No oil was observed on this high angle bedrock/boulder segment. Therefore, no treatment is recommended.

LAND MANAGER

NAME U.S. Forest Service SIGNATURE Reo Taylor☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

No oil
No treatment needed.

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- ✓ 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 ✓ 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 1C Salmon fry nursery area (4/31 to 7/31)
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D Esther Hatchery release (4/15 to 6/15)
 1E Main Bay Hatchery release (4/20 to 6/15)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
 AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
 1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- 1I Gill net area (5/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (5/11 to 7/25)
 Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- Henning spawning (4/1 to 6/15)
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (5/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2208
- ✓ 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (5/1 to 9/15)
 6V Anchorages (5/1 to 9/15)
 6W Forest Service cabins (5/1 to 9/15)
 6X Lodge (5/1 to 9/15)
 ✓ 6Y Special use destination
- Subsistence area: Salmon harvesting (5/1 to 9/30)
 Finfish harvesting
 7H Deer harvesting (5/15 to 2/28)
 7J Invertebrate harvesting
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

SHORELINE OILING SUMMARY

REVISION NO. 04/12/90

G G. MACDONALD USCG S. RAINSFORD SEGMENT ST/ CU-15
 IO MA. SCOTT LAND REP L. KEELE NFS SUBDIVISION D (4 OF 4)
 EXXON J. BUTLER ADEC LODI STATION TIME 10:35 to 10:40
 TEAM NO. 3 TIDE LEVEL +2 to +4 DATE 4 / 25 / 90
 EST. SUBDIVISION LENGTH: 600 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 100% B 0% C 0% P 0% G 0% S 0% M 0% V 0%
 SLOPE: Long — % Hang — % Vert 100% WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 600 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	R	B	P	S	1	2	3	4	5	BU	U	M	U
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT													
STAIN													
MOUSSE													
ATTIES													
TARBALLS													
FILM													
NO OIL										X	X	X	X

PAVEMENT H F S 0 sq. m by 0 cmPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE 0#BAGS 0

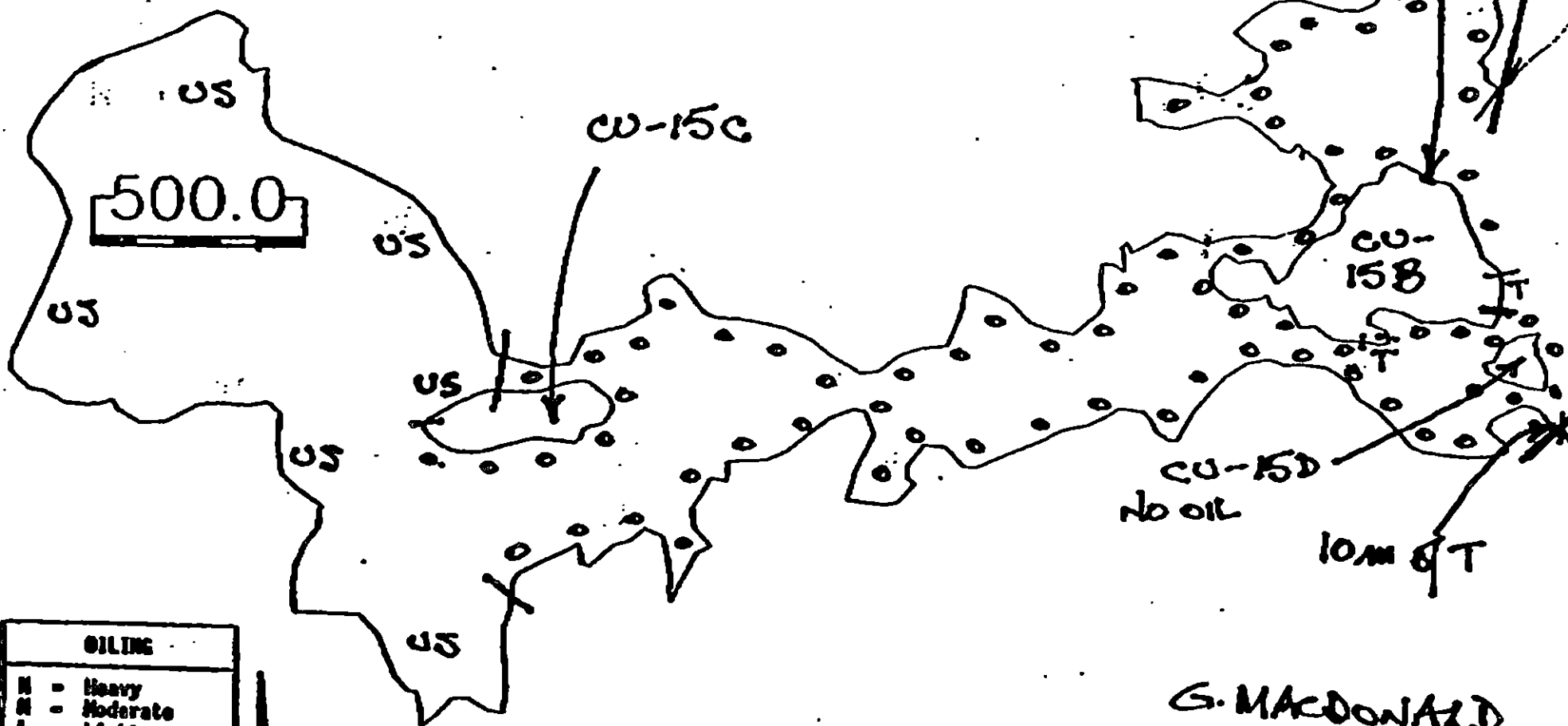
Photographs:

Roll No. —Frames —SUBSURFACE OIL ALL ROCK - NO PITS.

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UC	1	2	3	4	5	BU	U	M	U				

COMMENTS Small rock island guarding the entrance to Hidden Bay. No oil present this survey.

CU015 ~~A~~, B, C, (D)



OILING	
H	Heavy
M	Moderate
L	Light
VL	Very Light
NS	None
US	Not Surveyed
Distance in Meters	

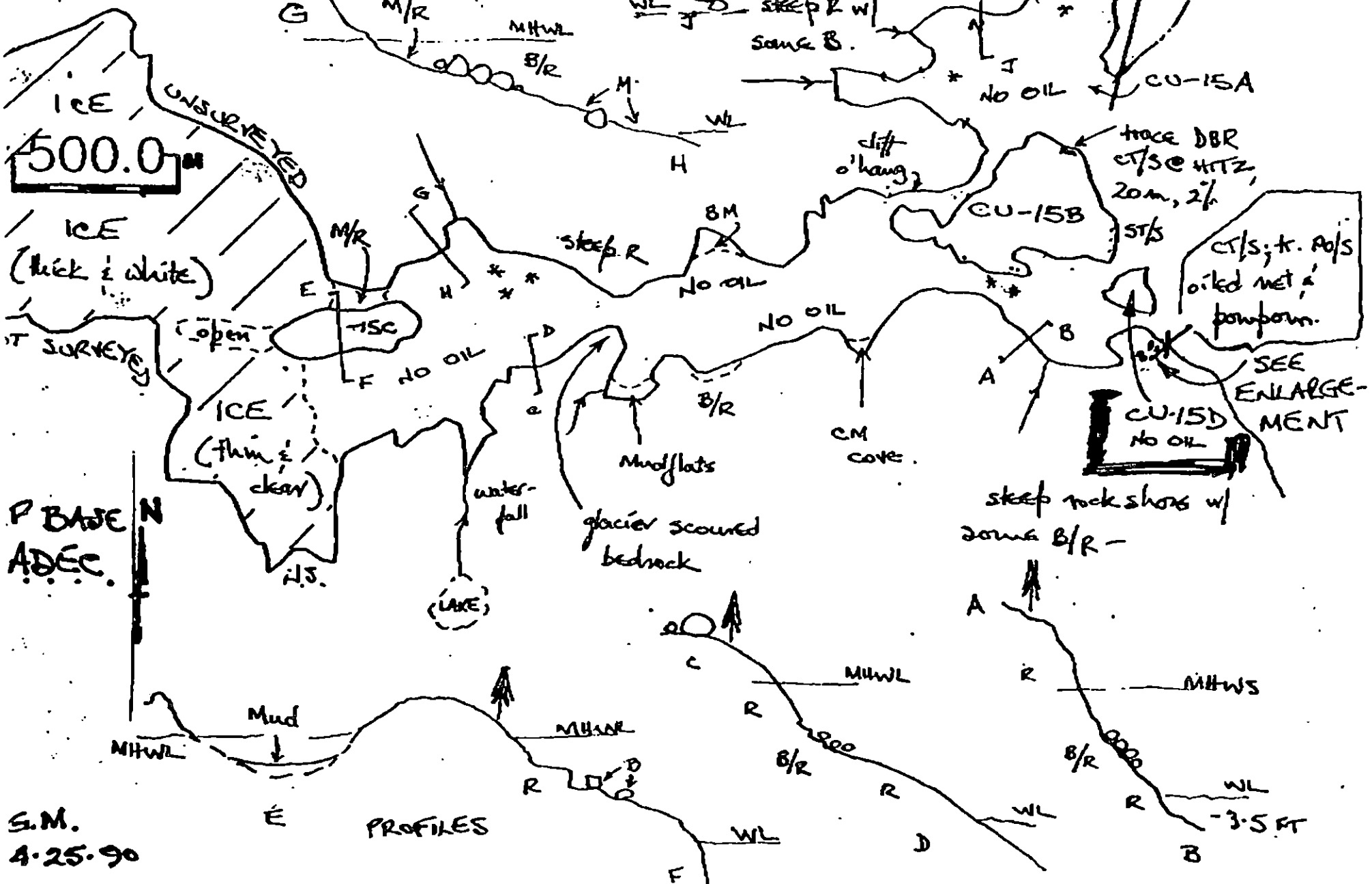
AMEC Sep/Oct 1990 Survey

G. MACDONALD

4-25-90

Data Entry: _____

ST/CU-15D



APR-25-1990 21:42 FROM NY BEULIH CHIDIES

TU

EXAMINER F.23

SHORELINE EVALUATION

SEGMENT ST/ CU-17 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Salmon stream mouths (ADF&G catalogue 224-20-13078; 224-20-13070) - fry outmigration (1A) -- 3/1 to 5/15 and spawning (1B) - 7/10 to 8/31; purse seine hook-off (1K) - 7/21 to 9/30; bald eagle nests (5T-2) - 3/1 to 6/1.

SUBDIVISION ECOLOGICAL CONSTRAINTS: (1A, 1B) No disturbance of stream bed or banks unless authorized by ADF&G. Contact ADF&G Habitat Division prior to treatment for permits. (1K) Contact ADF&G for dates, locations, constraints. (5T) Restrict air traffic to essential minimum, air approach and takeoff from and to seaward only. Contact USFWS prior to treatment for confirmation of dates and avoidance minimums.

SHPO SIGNATURE

DATE:

OILING CATEGORIZATION:

Wide_0_m: Medium_0_m: Narrow_123_m: V.Light_311_m: No Oil_2504_m
Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

RECOMMENDATIONS:

☐ No Treatment Recommended	☐ Snare/Absorbent Booms
☒ Treatment Recommended	☐ Oil Snares (pom poms)
☒ Manual Pickup	☐ Absorbents (pads, rolls, etc)
☒ Bioremediation	☐ Spot Washing: _____ Wands
☒ Tarmat: _____ Breakup	☐ _____ Beach Cleaner
☒ X Removal	☐ Other (see comments)

COMMENTS: The recommended treatment activities are as follows:

1) Manual pickup of intermittent tar balls; 2) Manual removal of TRASH + small tarmat; 3) Bioremediation of areas shown on attached sketch map but no closer than 100m of stream. Activities should be conducted 6/1 to 7/10 based on above constraints.

TAG COMMENTS:

TAG APPROVAL DATE:

ADEC

EXXON

NOAA

USCG

FOSC:

DATE :

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / CU-17 SUBDIVISION: A, 1 of 1 DATE 04/04/90

NAME Dr. David S. Thomas SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC NAME Clara J. Crosby SIGNATURE Clara J. Crosby

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Treatment suggested @ Site # 4
Manual removal of Asphalt. (Possible Anadromous Stream CC - Site)
Upper Intertidal not viewed due to Snow cover.
Manual removal of any tarballs ~~if~~ within Segment.
(POSTED NO FISHING marker @ 250m N of Site ADEC(?))

LAND MANAGER

NAME MARSHA MARTIN/DUR SIGNATURE Marsha Martin

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Rick Gillie USCG BM 1 Thomas SEGMENT ST/ CU-17
 PID DAVE Lohie LAND REP Marsha Martin SUBDIVISION A-1 of 1
 XON FRANK Boy ADEC Clara Crosby (ADNR) TIME 12:15 to 13:40
 TEAM NO.: 13 TIDE LEVEL: +10 to +5 DATE 04/04/90
 EST. SUBDIVISION LENGTH: 3336 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock Snow
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 60 % B 30 % C 15 % P 5 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 10 % Hang 40 % Vert 50 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 100 m VL 300 m NO 2936 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	IC	IS	IP	IR	OP	OR	OL	OF	NO	BU	U	M	U	
ASPHALT PAVEMENT					*									
POOLED														
COVER				X				X				X		
COAT			*	X				X		X		X		
STAIN														
MOUSSE														
PATTIES														
TARBALLS				X				X				X		
FILM				X				X				X		
NO OIL										S			X	

PAVEMENT: H F S N/A sq. m by cmPATTIES / TARBALLS 0.5 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash	X		
Debris	X		

DEBRIS COLLECTED
☐ YES ☒ NOTYPE N/A#BAGS N/A

Photographs:

Roll No. ST-13-2Frames 11

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CH)	BELOW	OIL / FILM COLOR								PIT ZONE	A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO			BU	U	M	U	BU	U	M	U			
1	10	X					5-10	X			X				X				C, P
2	10					X	.				X				X				C, P
3	20					X	.				X				X				P, S, M
4	15					X	.				X				X				P, G, S
5	30					X	.				X				X				P
6	20	X					5-10	X			X				X				P, S, M

COMMENTS

① Snow covered beach down to previous HT (+10'), however do not consider that this significantly affected assessment

② SITE 4 HAS "NARROW" OIL CATEGORY ON COBBLE / BOUNDER BEACH.

SHORELINE ECOLOGICAL SUMMARY

REVISION: 232270

Segment ST / 10013 Subdivision A Date (mo / day / yr) 4-4-90

Time (24 hr) 12:15 Biologist David White

(A) Substrate type and % of segments:
(1) Bedrock 50 (2) Boulder 30 (3) Cobble 15 (4) Pebble 5 (5) Sand (6) Silt

(B) Overall % cover of biota (% of segment): Dense 30 Moderate 40 Low 30

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X) . new settlement (3)

Photographs:
Roll No. ST-13-7

Frames 11

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

MYTILUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

GASTROPODS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

FUCUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments:

See page 2

Ecological Considerations:

ST- Scabb and one juvenile bald eagle sited in area. No nests observed
IK- no comment

Shoreline Ecological Summary

2 of 2

Segment ST-CU017

Subdivision A

4-4-90

Biologist David Lohse

Wildlife Observations/General Comments

1. low intertidal not sampled due to tidal level
2. present in mid-intertidal: *Scytosiphon*, coralline algae, *Anthopleura*
high intertidal: *Enteromorpha* (dense in some areas)
3. cormorants, ducks spotted in area
4. many deer tracks observed above high tide line
5. Some of the shoreline was surveyed by boat due to rough seas and impassible rocky cliffs. However, the abundances of *Fucus* and *Mytilus* (the only organisms readily ~~seen~~ seen from the boat) appeared comparable to those areas sampled on foot
6. While landing at site 5 (see OG map), we startled an adult bald eagle feeding on an otter carcass at the high tide line. No oil observed.
7. At site 2 (see OG map) there were lots of empty *Uvella* shells and ~95% mortality of mussels in mid-intertidal cobble.
8. One running stream located at site 4 (see OG map). Although there is no indication of this being an ecologically sensitive stream based on the sensitivity tables, there was a "no salmon fishing" sign posted several hundred meters north of this location. Oil is present in area of stream mouth.

OG KICK GILLIE

SEGMENT ST/ 1-17

SUBDIVISION A-2 of 1

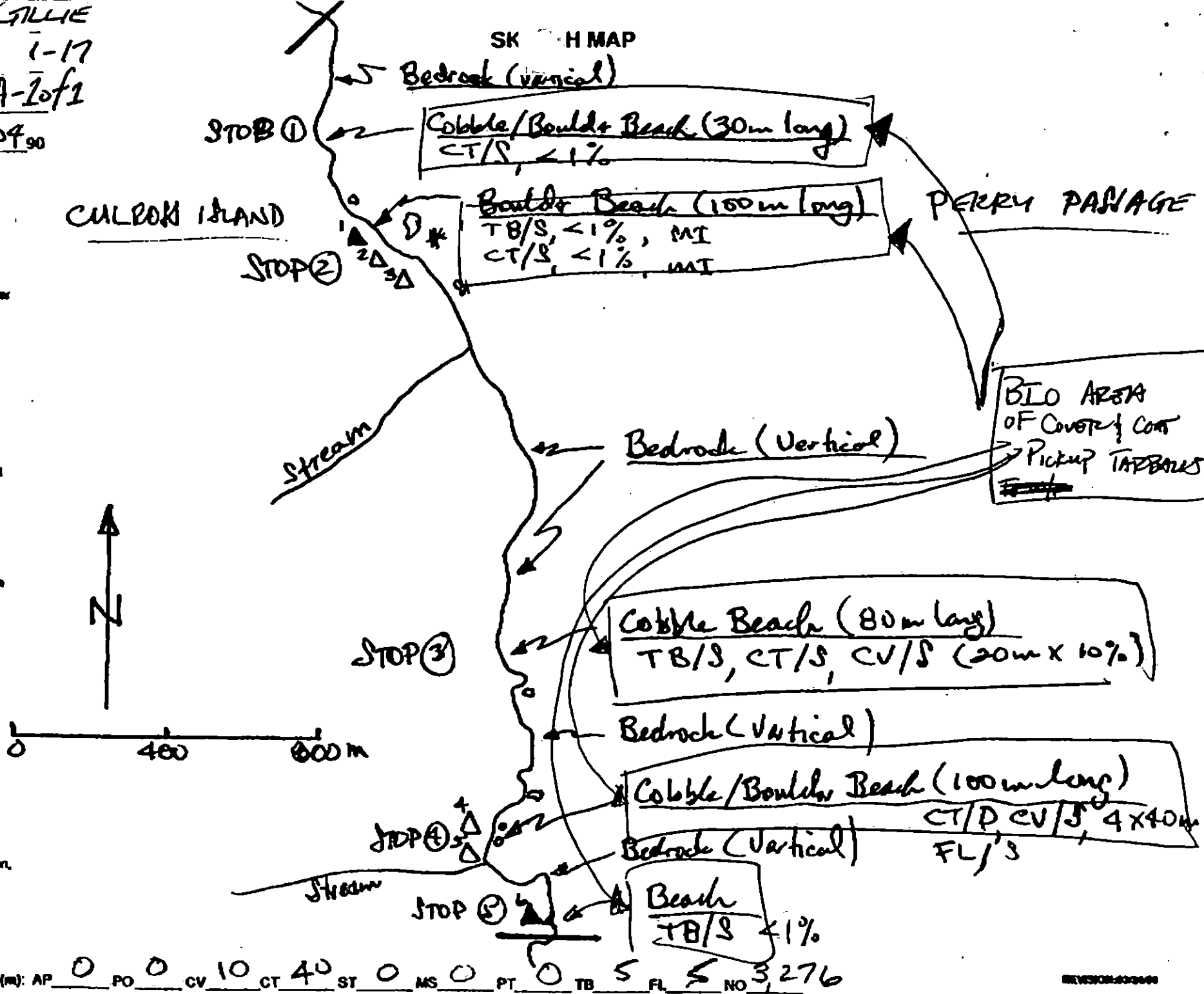
DATE 04, 04, 90

CHECKLIST

- ☒ N Area
- ☒ Approx. Scale
- ☒ Seg/Sub Bndry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ E.M. H/WL/VOL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

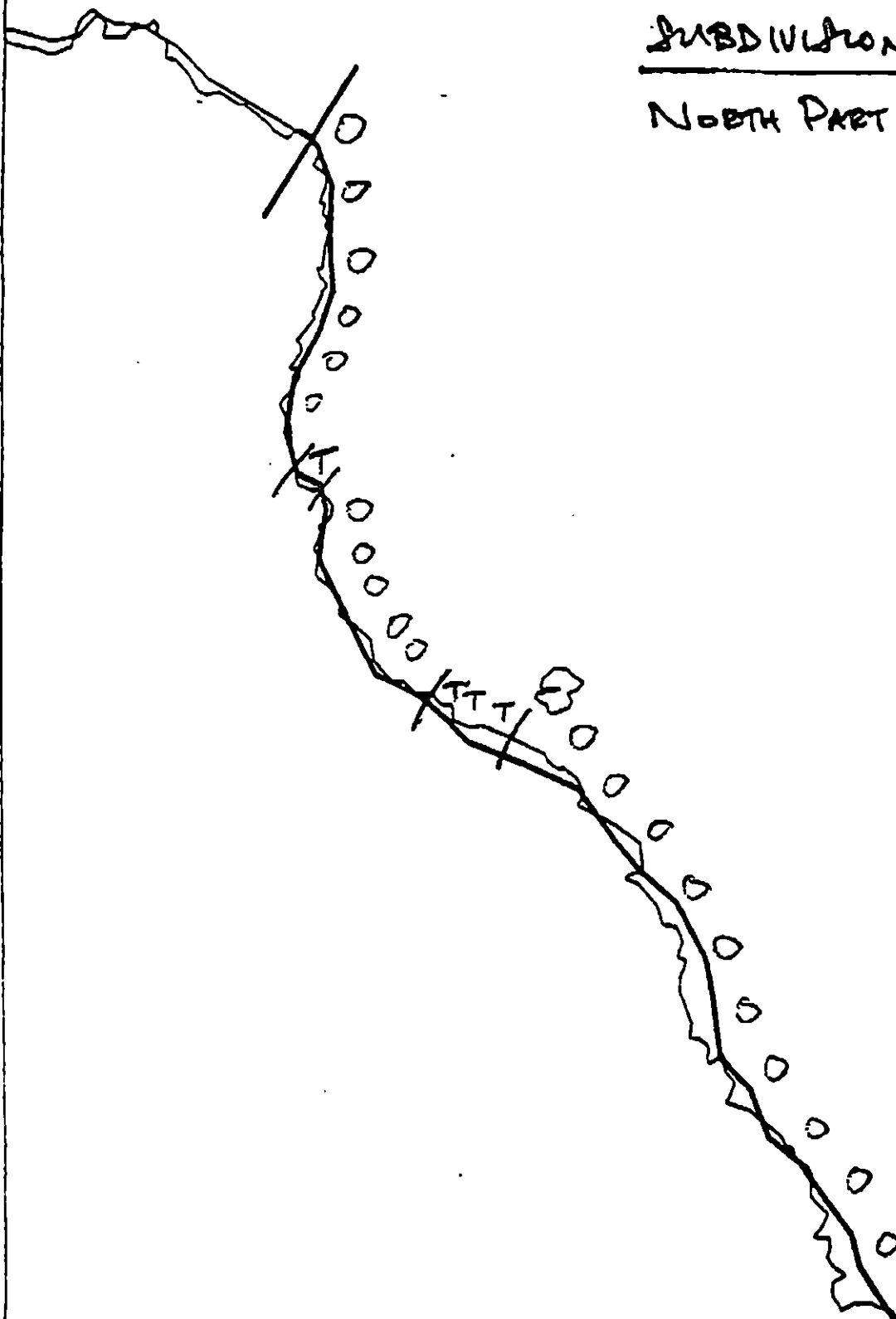
- 1 Δ
- Pit - No Subsurface Oil
- 2 Δ
- Pit - Subsurface Oil
- CT/C
- Continuous Distribution
- CT/B
- Broken Distribution
- CT/P
- Patchy Distribution
- CT/S
- Splashed Distribution
- Oiled Vegetation
- 1 $\Rightarrow$
- Photo location, direction, and number



CULROSS ISLAND

SEGMENT: CU-17
SUBDIVISION: A-1 of 1

NORTH PART



XXX Wide

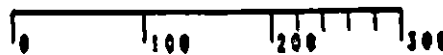
/// Medium

--- Narrow

TTTT Very Light

CU-17

ADEC Segment Length: 3338m



Map Key: PWS-115b

Name: GILLIE

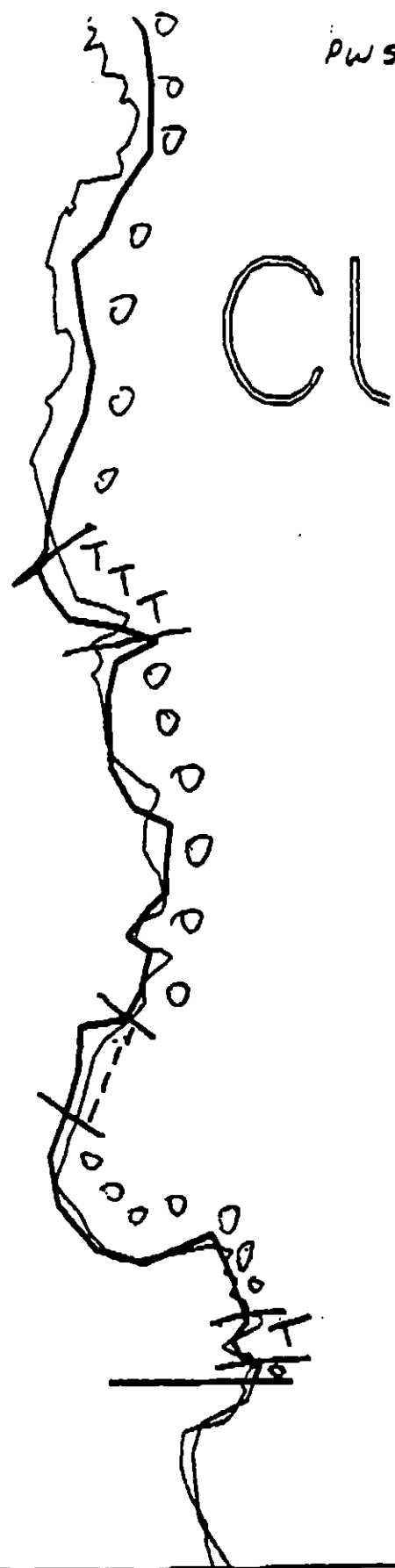
Date: 4-9-90

Data Entered:

CULROSS ISLAND

PWS 75B

SEGMENT: CU-17
SUBDIVISION: A-1 of 1
SOUTH PART



XX Wide
/// Medium
--- Narrow
TTTT Very Light
OOOO No Oil

CU-17

ADEC Segment Length: 2939m

0 100 200 300



Map Key: PWS-75a
Name: GILLIE
Date: 4-4-90
Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT CU-17 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup & Tarmat Removal
More Than 400m From Active Nest

OPEN

Manual Pickup & Tarmat Removal
Less Than 400m From Active Nest

CLOSED

Bioremediation More Than 100m From Stream

WORK PRIOR TO 7/20

Bioremediation Less Than 100m From Stream

WORK PRIOR TO 7/10
(ADF&G MONITOR REQ.)

Bioremediation More Than 400m From Active Nest

OPEN

Bioremediation Less Than 400m From Active Nest

CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

ADF&G catalogued anadromous streams (224-20-13078; 224-20-13070) are present in Subdivision A. This subdivision is closed to bioremediation less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation is permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation more than 100m from stream. No constraint to manual pickup and tarmat removal.

1K Purse Seine Hook-off

No constraint to manual pickup and tarmat removal; closed to bioremediation after 7/20.

5T Bald Eagle Nest

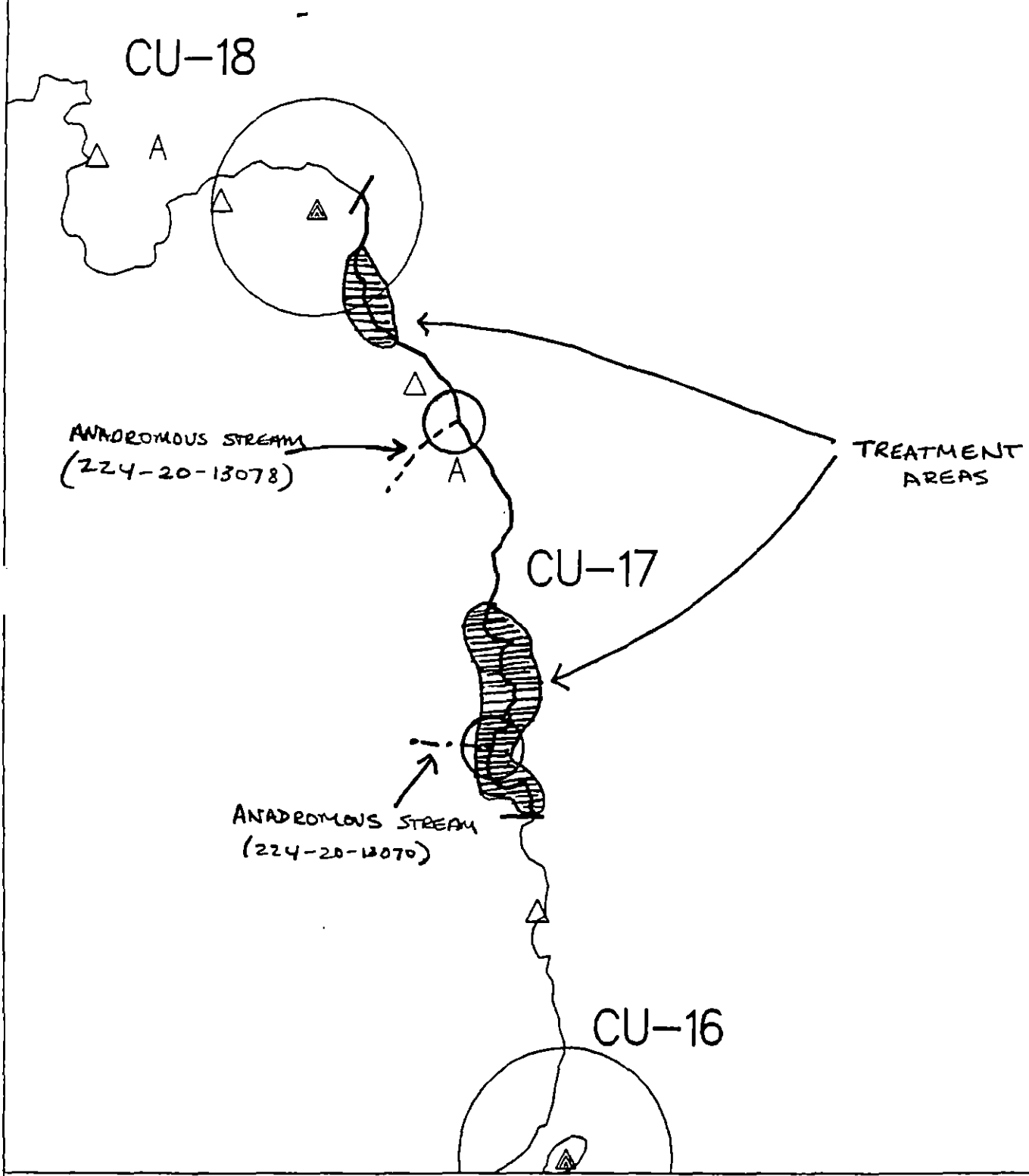
USFWS 6/1/90 map indicates an active nest in adjacent subdivision. Closed to manual pickup, tarmat removal, and bioremediation within 400m of active nest. No constraint to manual pickup, tarmat removal, and bioremediation more than 400m from active nest.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or bank. No flushing of pollutants or sediments into stream drainage; do not allow Inipol to enter stream flow. On-site examination and consultation by ADF&G monitor is required prior to bioremediation in order to authorize a setback distance from the stream during chemical application; if ADF&G monitor's presence is impossible, authorization may be given by the ADEC monitor. Restrict boat and air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from active nests. Avoid any unnecessary disturbance or damage to uncolled biota and substrate.

FOSC

Date 6-10-90



Exxon Company, USA
 Map Key: PWS-CU-17
 June 04, 1990

ECOLOGY MAP
 SEGMENT CU-17
 SUBDIVISION A (1 of 1)
 METERS

- | | |
|---|---------------------|
| ★ | Seabird Colony |
| ▲ | Active Eagle Nest |
| △ | Inactive Eagle Nest |
- 1 inch = 15.24 meters

SHORELINE EVALUATION

SEGMENT ST/ CU-18 SUBDIVISION A (1 OF 1) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Esther hatchery release (1D) - 4/15 to 6/1; Purse seine hook-off (1K) - 7/20 to 9/30; Active Bald Eagle nests (5T-3) - 3/1 to 6/1; Recreation anchorage (6V) - 6/1 to 9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: (1K) and (1D) Contact ADF&G for dates, locations, constraints. (5T) Restrict air traffic to essential minimum. Air approach and take off from and to seaward only. Contact USFWS prior to treatment, for confirmation dates and avoidance minimums.

SHPO SIGNATURE: Charles J. Homa DATE: April 14, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 0 m: No Oil 2982 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

<u>X</u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u> </u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u> </u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u> </u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u> </u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> Removal	<u> </u> Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/14/90.

ADEC JOHN BAUER JDB

EXXON ANDY TSH Beal

NOAA Bur/Wesgart Bur/Wesgart

USCG G.A. REITER G.A. Reiter

FOSC:

DATE: 4-20-90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / CU-18 SUBDIVISION: A, 1 of 1 DATE 4/2/90

USCG

NAME David S. Thomas

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME Clara S. Crosby

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

No Oil observed - Eastern portion of
CU018 was surveyed by skiff - Rocky
Beach? surf. limited access.

LAND MANAGER

NAME MARKSHAH MARTIN / DNR

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Did not observe any oil

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Rick Gillie USCG BM 1 Thomas SEGMENT ST/ Cu-18
 RIO DAVE Lohr LAND REP Marsha Martin SUBDIVISION A-1 of 1
 XXON FRANK Dwy ADEC Clara Crosby (DPR) TIME 10:00 to 12:00
 TEAM NO.: 13 TIDE LEVEL: +7 16 +3 DATE 4/2/90
 EST. SUBDIVISION LENGTH: 2,901 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock SNOW
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 20 % B 20 % C 40 % P 10 % G 10 % S 0 % M 0 % V 0 %
 SLOPE: Long 40 % Hang 40 % Vert 20 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 2,901 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	C	B	P	S	SR BL	BR RW	GY SL	DRK TL	LR	SU	UI	MI	U	
ASPHALT PAVEMENT														
POOLED														
COVER														
COAT														
STAIN														
MOUSSE														
PATTIES														
TARBALLS														
FILM														
NO OIL										X	X	X	X	

PAVEMENT: H F S N/A sq. m by cmPATTIES / TARBALLS N/A BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation	<u>N/A</u>		
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE #BAGS Photographs: Roll No. Frames No Photos, No oil!

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CH)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SL BR	SL FW	OL SL	TL TL	LR	SU	U	M	U					
1	30					X	.								X							P/G/S	
2	20					X	.										X					P/G	
3	20					X	.										X					G/S/M	
4	30					X	.								X							P	
5	30					X	.								X							P/G	
6	30					X	.								X							P/G	

COMMENTS

GENERAL: ① No oil observed on surface or in pits!

② Geomorphology comprises wavecut platforms covered with boulders/cobble and small pocket beaches of gravel.

SHORELINE OILING SUMMARY (PAGE 2 of 2)
 SEGMENT ST/ CU-18 SUBDIVISION A-1-f1

REVISION 03/22/90

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UD	UC	BR	BL	GR	OR	TR	LR	SU	U	M	U		
7	30					X	.										X				G/S
8	30					X	.											X			G/S
							.														
							.														
							.														
							.														
							.														
							.														
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							.														
							.														

COMMENTS

REVIEWED PCW DATE 4-7-90

OG Rick WIE
 SEGMENT ST/ CU-18
 SUBDIVISION A, 1 of 1
 DATE 4, 2/90

SKI MAP

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Bndry
- ☒ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☒ Substrate Character
- ☐ Est. HWM/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☒ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

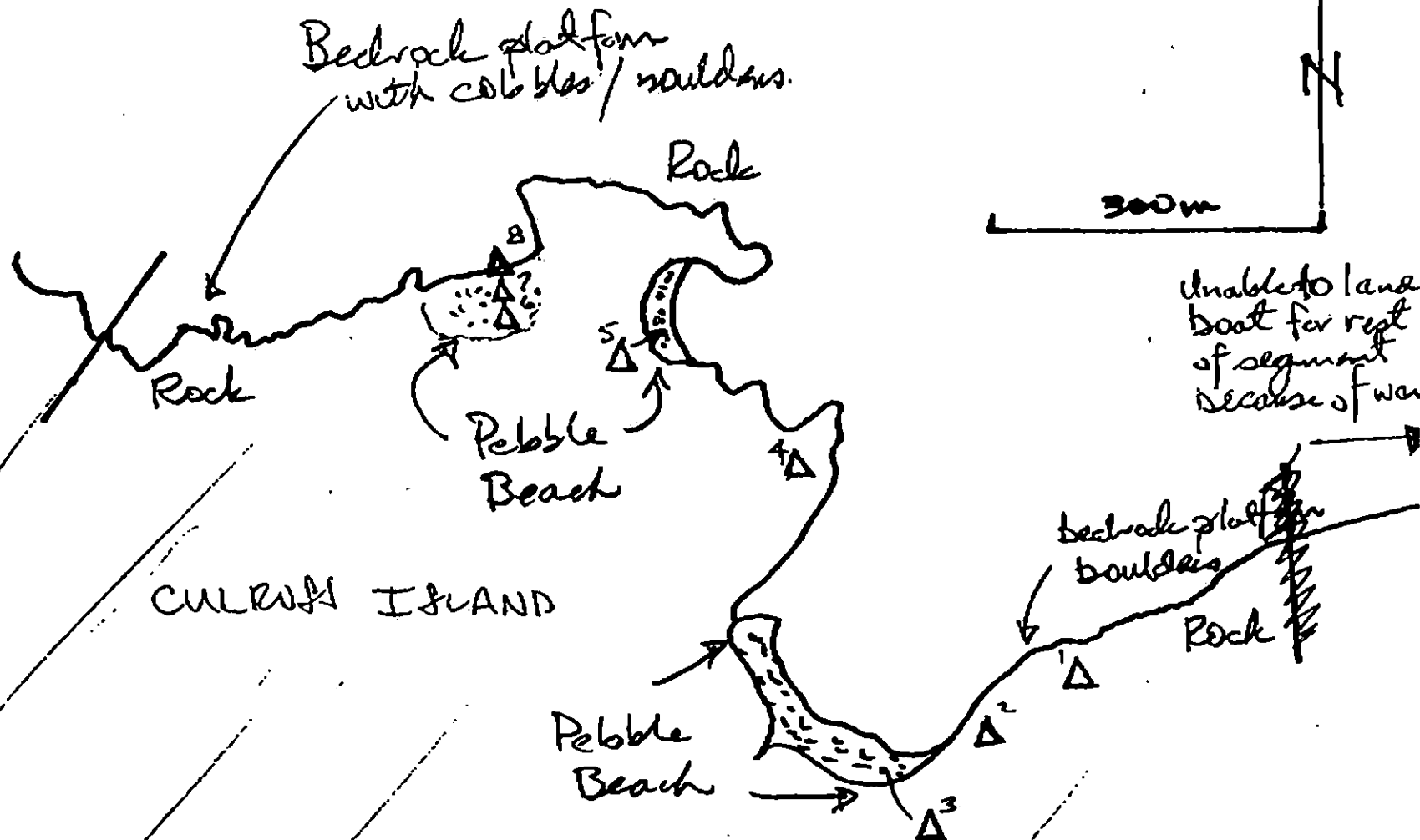
- 1 Δ
 PH - No Subsurface Oil
- 2 Δ
 PR - Subsurface Oil
- CT/C

 Continuous Distribution
- CT/B

 Broken Distribution
- CT/P

 Patchy Distribution
- CT/S

 Splashed Distribution
- Oiled Vegetation
- Photo location, direction, and number



Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 0 MS 0 PT 0 TB 0 FL 0 NO 2,901

REVISION: 03/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / C0018 Subdivision A Date (mo / day / yr) 4-2-90

Time (24 hr) 16:00 Biologist David Lohse

(A) Substrate type and % of segments:
(1) Bedrock 20 (2) Boulder 20 (3) Cobble 40 (4) Pebble 10 (5) Sand 10 (6) Silt

(B) Overall % cover of biota (% of segment): Dense 20 Moderate 30 Low 50

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:
Roll No.

Frames

BARNACLES

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

MYTILUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

GASTROPODS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

FUCUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

Wildlife Observations/ General Comments:

See page 2

Ecological Considerations:

1D, 1K, 6V - no comment.

ST-3 ~~WAX~~ mature bald eagles observed in area. No nests were seen.

Shoeline Ecological Summary

Lot 2

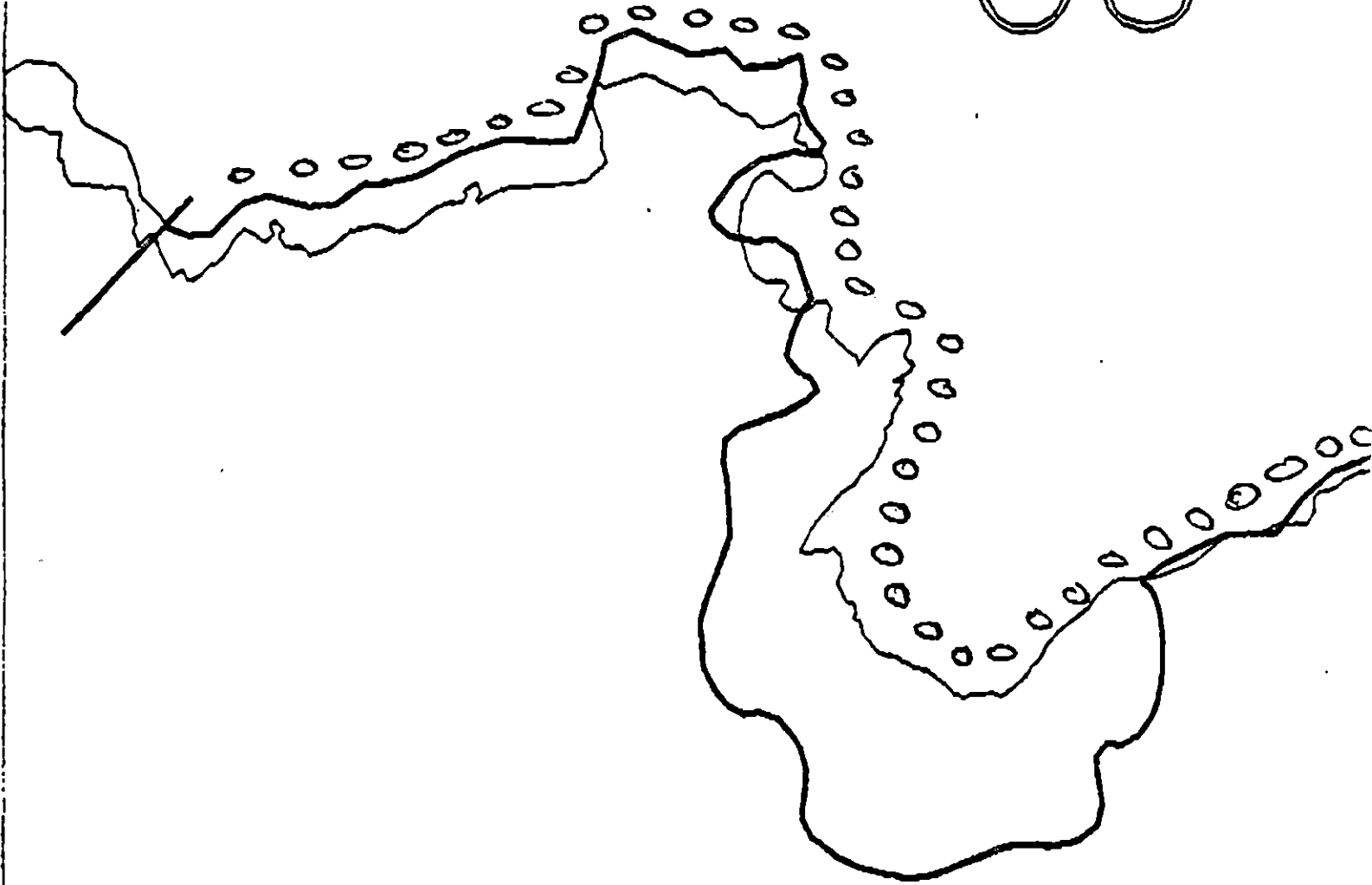
Segment ST-CU018 Subdivision A 4-2-90
Ecologists David Cohen

Wildlife observations/General comments

1. present in mid intertidal - Cladophora, Anthopleura, Nucella, Enteromorpha (dense in spots)
high intertidal - Enteromorpha (dense in spots)
2. low intertidal not sampled due to tidal level.
3. Deer tracks spotted on beach and above high tide line
4. Cormorants, ducks, several shore birds, and one seal observed in area
5. There were several areas in mid-intertidal on bedrock where there were ~~byssal~~ patches of byssal threads attached to the rock, but no mussels, ~~byssal~~
6. Skeleton and some fur of a dead seal were observed near high tide line. No oil was observed

SEGMENT: CU-18
 SUBDIVISION: A-10f1
 (WEST PART)

CU—



XXX Wide
 /// Medium
 --- Narrow
 TTTT Very Light
 ADEC Segment Length: 2901m

CU-18

0 100 200 300

Map Key: PWS-125a

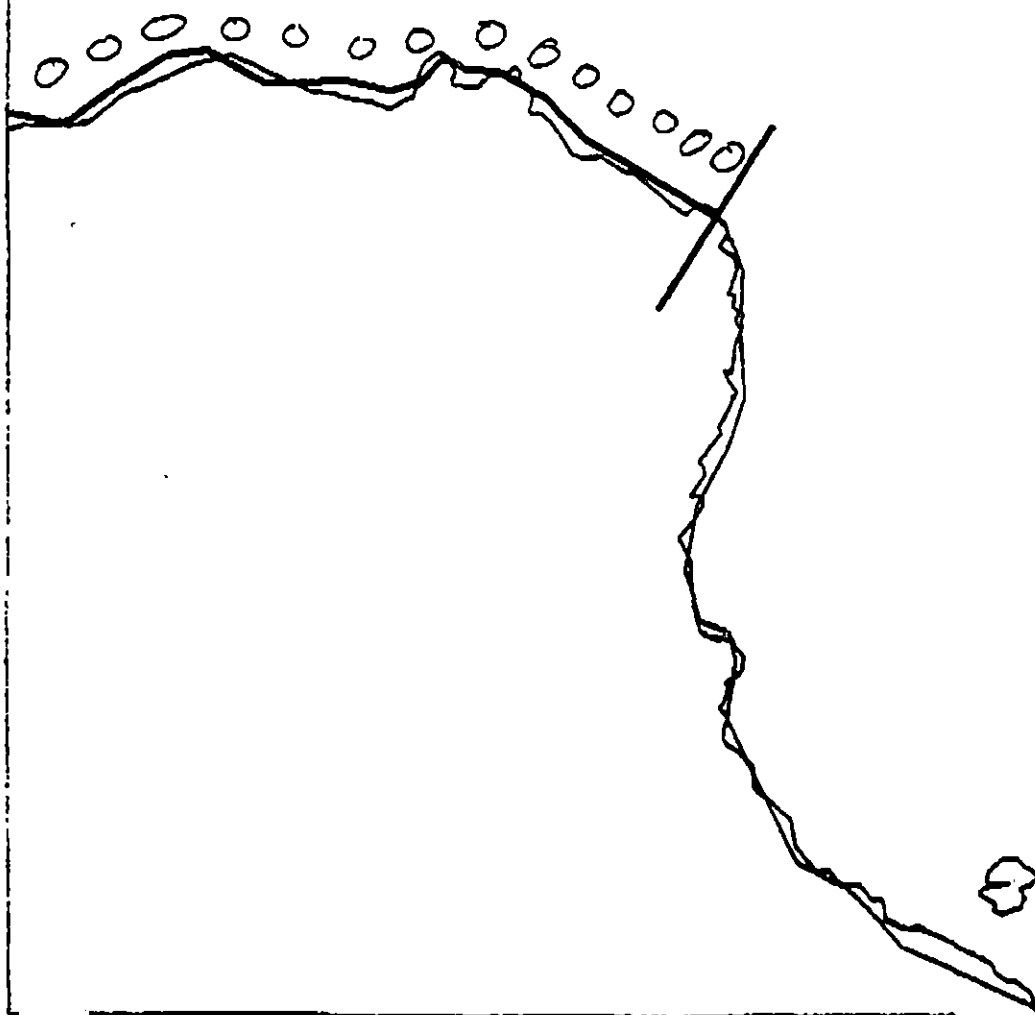
Name: GILLIE

Date: 4-2-90

Data Entered:

SEGMENT : CU-18
SUBDIVISION : A-1 of 1

(EAST PART)



XXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO Very Dark

CU-18

ADEC Segment Length: 2901m

0 100 200 300

Map Key: PWS-1256

Name: GILLIE

Date: 4-2-90

Note: Estimated

SHORELINE EVALUATION

SEGMENT ST/ CU-19 SUBDIVISION A (1 OF 1) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

SHPO SIGNATURE: [Signature] DATE: 5/9/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 3993 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

<u>X</u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u> </u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u> </u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u> </u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u> </u> Tarmat Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 5/9/90
ADEC [Signature]
EXXON [Signature]
NOAA [Signature]
USCG [Signature]

FOSC: [Signature] DATE: 5-12-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A** Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 257-2324
- 1C** Salmon fry nursery area (4/31 to 7/31)
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D** Esther Hatchery release (4/15 to 6/15)
1E Main Bay Hatchery release (4/20 to 6/15)
1F Seward Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
 AGENCY CONTACT PERSON: **1E** ADF&G Larry Peltz 424-3214
1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- 1I** Gill net area (5/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (5/11 to 7/25)
 Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M** Herring spawning (4/1 to 6/15)
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unrolled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 3N, 3P** Harbor seal and sea lion pupping (5/15 to 7/1)
4O, 3Q Harbor seal and sea lion molting (5/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Collins 257-2403
- 5R** Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S** Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 257-2205
- 5T** All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 6/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U** Recreation: Tent sites (5/1 to 8/15)
6V Anchorages (5/1 to 8/15)
6W Forest Service cabins (5/1 to 8/15)
6X Lodge (5/1 to 8/15)
6S Special use destination
- Subistence area: Salmon harvesting (5/1 to 9/30)
 Finfish harvesting
 Deer harvesting (5/15 to 2/28)
7J Invertebrate harvesting
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 257-2359

SEGMENT ST / CU-19 SUBDIVISION: A DATE 4-26-90

USCG

NAME M.J. SHARRK SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME STEPHEN FERGUSON SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

one mouse BOLL WAS OBSERVED (REMOVED)

LAND MANAGER

NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Listed as priority 1 by PWSCA. Area used for recreation.

SHORELINE OILING SUMMARY

REVISION NO. 05-12-88

OG K. Ramsey USCG R. Sharpe SEGMENT ST/ CU-19
 BIO G. Penn LAND REP L. Carlson SUBDIVISION A (1 OF 1)
 EXXON S. Reid ADEC S. Ferguson TIME 7:40 to 11:30
 TEAM NO. 4 TIDE LEVEL -3' to +1' DATE 4/26/90
 EST. SUBDIVISION LENGTH: 4207 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 40 % B 25 % C 15 % P 10 % G 5 % S 0 % M 0 % V 0 %
 SLOPE: Long 5 % Hang 55 % Vert 40 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 4207 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	C	R	P	S	1	2	3	4	SW	W	M	U
ASPHALT												
PAVEMENT												
POOLED												
COVER												
COAT												
STAIN												
MOUSSE												
PATTIES												
TARBALLS												
FILM												
NO OIL												

PAVEMENT H F S sq. m by cmPATTIES / TARBALLS BAGSNEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT	DID YOU COLLECT DEBRIS? YES ☒ NO ☐ TYPE <u>Pond Pom</u> #BAGS <u>1</u>
Logs	<u> </u>	
Vegetation	<u> </u>	
Trash	<u> </u>	
Debris	<u> </u>	

Photographs:

Roll No. Frames

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR				PIT ZONE				ANAS	SHEEN (N/A)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		SW	W	1	2	3	4	SW	W	M	U				
1	25					X	---		X						X			N	N	23	G
2	30					X	---		X					X				N	N	26	P, G
							.														
							.														
							.														
							.														

COMMENTS

This segment consisted of vertical rocky headland with boulders, cobble & gravel pocket beaches. There were 2 tar balls found in the southern end of the segment & were picked up. Otherwise, no oil

REVIEWED MHDATE 4-27-90

OG K.K. Sel
 SEGMENT ST/ CU-19
 SUBDIVISION A
 DATE 4, 26 00

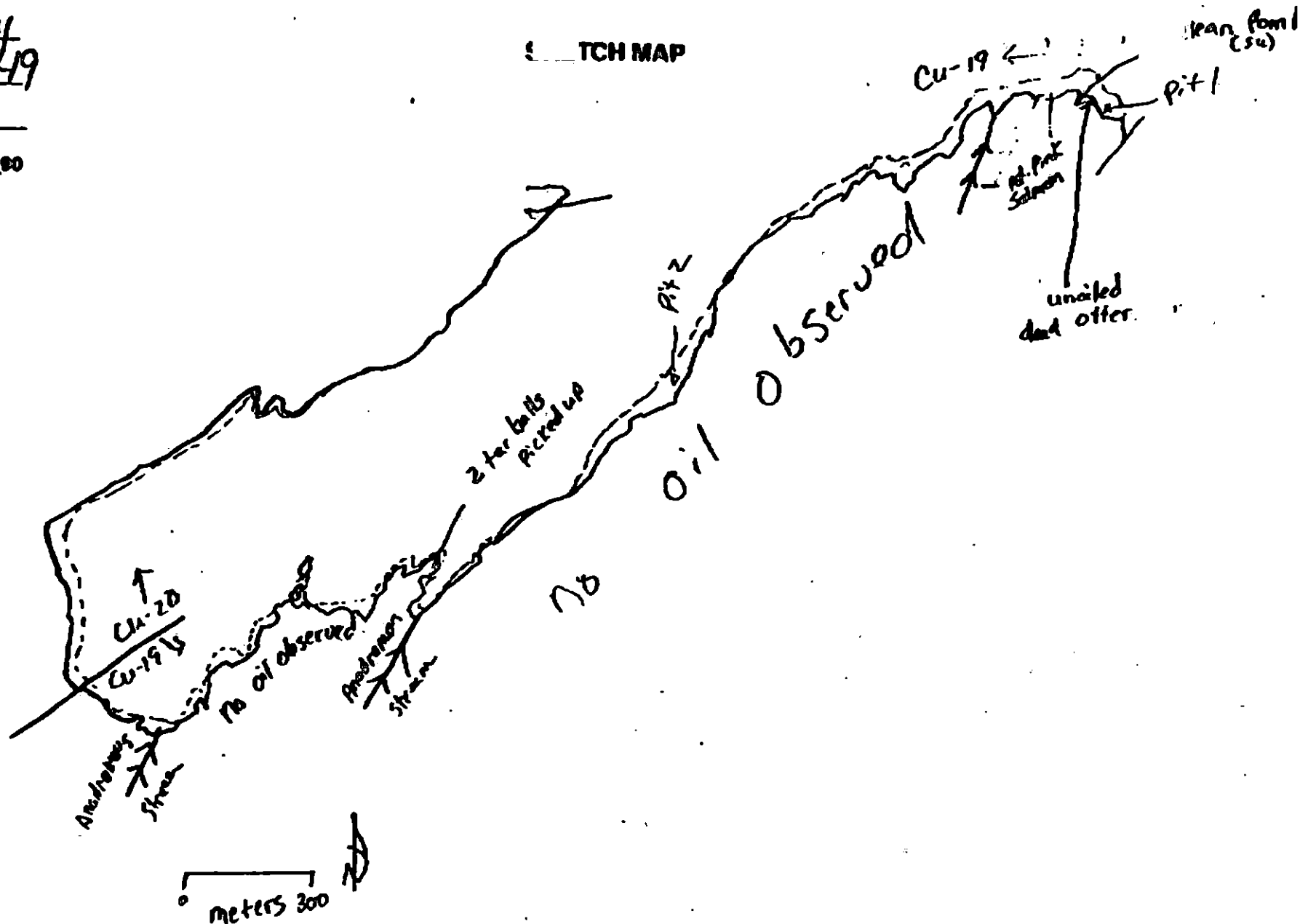
TCH MAP

CHECKLIST

- ☒ Area
- ☒ Apprx. Scale
- ☒ Sample Body
- ☒ Oil
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ MRL HAWAII
- ☒ SCL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ PL Location(s)
- ☒ Photo Location(s)

LEGEND

- 1 Δ
 PE - No Subsurface Oil
- 2 Δ
 PE - Subsurface Oil
- CT/C
 Continuous Distribution
- CT/B
 Broken Distribution
- CT/P
 Patchy Distribution
- CT/S
 Splashed Distribution
- Oil Vegetation
- 1 ●
 Photo location, direction, and number



Oil Character Length (m): AP PO CV CT ST MS PT TB FL NO 4207

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/20/90

Segment ST-19 Subdivision A Date (mo/day/yr) 04/26/90

Time (24 hr) 0740 Biologist Penz

- (A) Substrate type and % of segments:
 (1) Bedrock 40 (2) Boulder 25 (3) Cobble 15 (4) Pebble 15 (5) Sand 0 (6) Silt 0
- (B) Overall % cover of biota (% of segment): Dense 10 Moderate 15 Low 40
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (O)

Photographs: ST-4-2
 Roll No. ST-4-2

Frames 29-36

BARNACLES

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

MYTILUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

GASTROPODS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

FUCUS

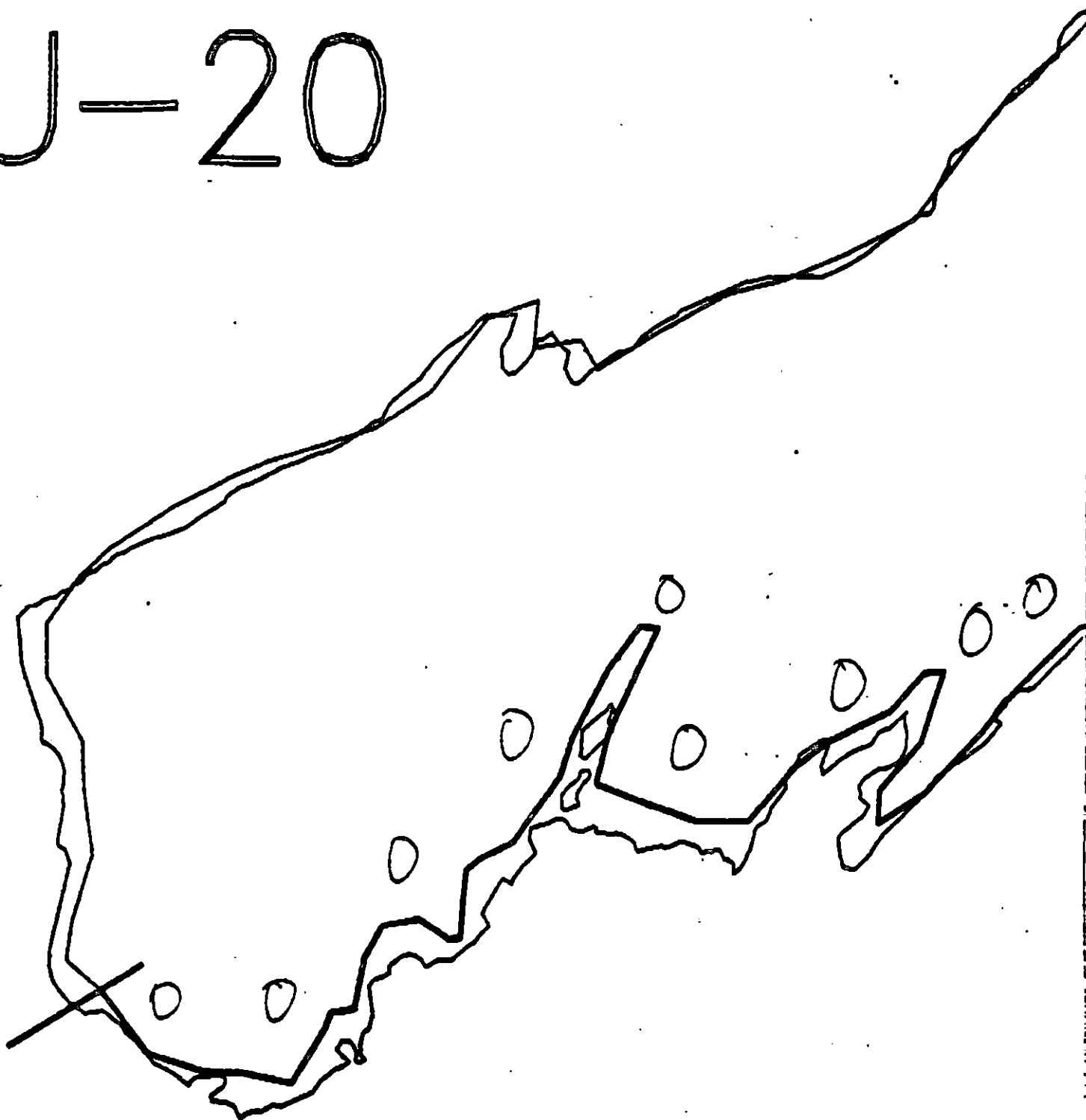
Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

Wildlife Observations/ General Comments:

1 Bank Otter - Hitz
 1 River Otter
 1 immature eagle
 1 eagle
 2 Harlequin

Ecological Considerations:

U-20



PWS
778 →

XX Wide
/// Medium
--- Narrow
TTTT Very Light

CU-19

ADEC Segment Length: 3992m



Map Key: PWS-77c

Name: K. RAMSEY

Date: 4/26/90

APR-26-1990 21:43 FROM NO BEULAH CANDIES

TO

EXXON SOFT P.87

↑ PWS 77B

CU-19

← PWS 77A

XXX Wide

//// Medium

---- Narrow

TTTT Very Light

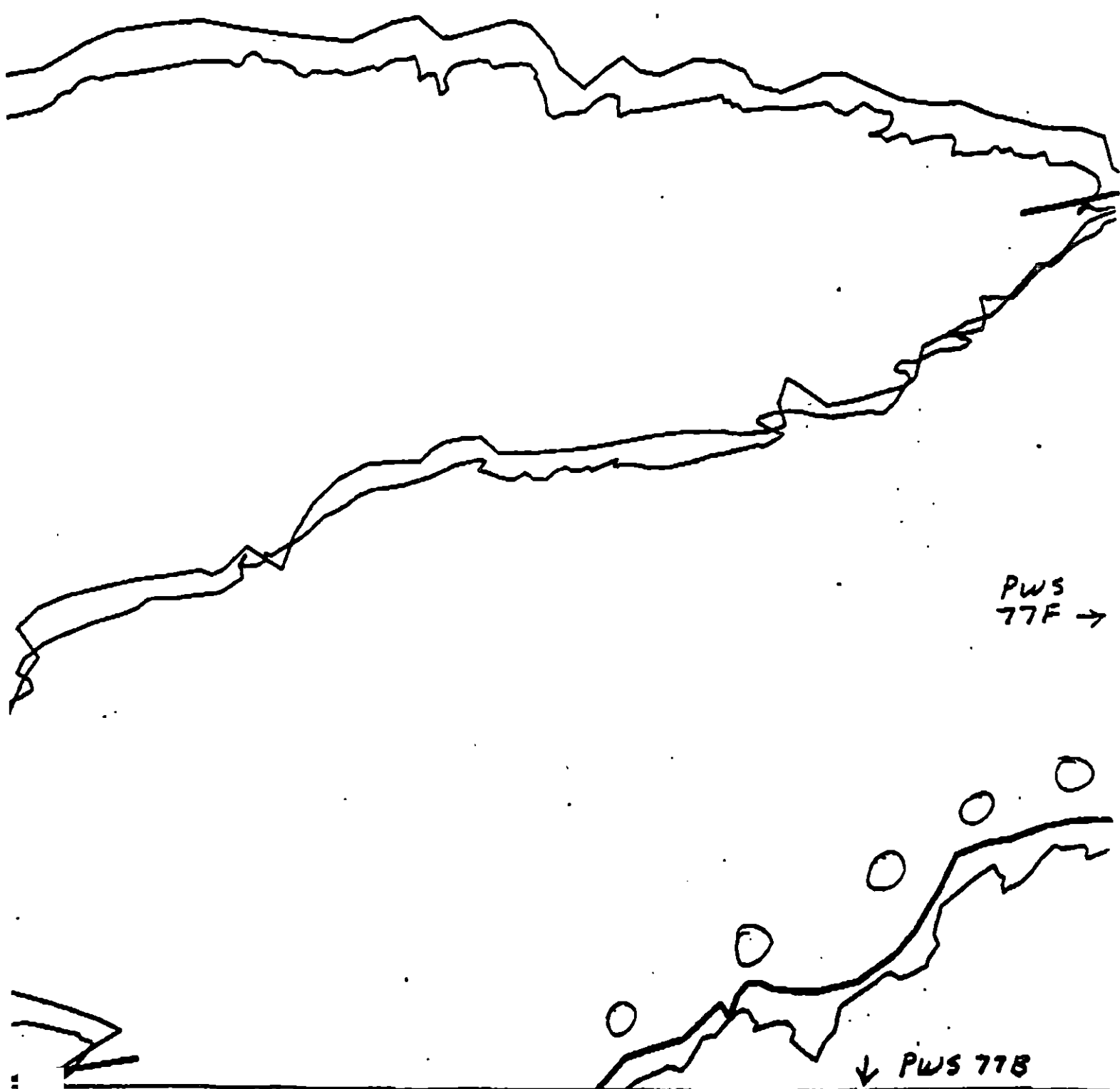
CU-19

ADEC Segment Length: 3992m

Map Key: PWS-77b

Name: K. Ramsey

Date: 4/26/90



PWS 77F →

↓ PWS 77B

XXX Wide
 /// Medium
 --- Narrow
 TTTT Very Light

CU-19

ADEC Segment Length: 3992m

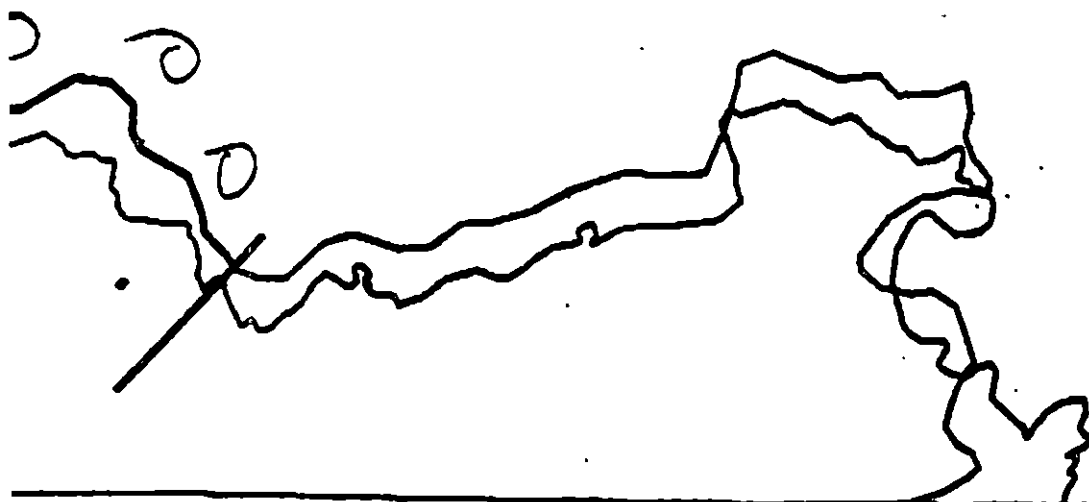
Map Key: PWS-770

Name: K. Ramsey

Date: 4/26/90

← PWS 77E

CU-



XX Wide

/// Medium

--- Narrow ADEC Segment Length: 3992m

TTTT Very Light

0000 No Oil

CU-19



Map Key: PWS-771

Name: K. RamseyDate: 4/26/90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ CU-20 SUBDIVISION A (1 OF 1) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1D Esther Hatchery release (4/15 to 6/15)

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: [Signature]

DATE: 5/9/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 1905 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

X No Treatment Recommended
 Treatment Recommended
 Manual Pickup
 Bioremediation
 Tarmat Removal

 Snare/Absorbent Booms
 Oil Snares (pom poms)
 Absorbents (pads, rolls, etc)
 Spot Washing: Wands
 Beach Cleaner
 Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 5/9/90
ADEC Art Wenzel
EXXON Andy Galt
NOAA Burt Wascott
USCG D.D. Rome

FOSC: [Signature]

DATE: 5-12-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A** Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inpol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 1C** Salmon fry nursery area (4/31 to 7/31)
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inpol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D** Esther Hatchery release (4/15 to 6/15)
1E Main Bay Hatchery release (4/20 to 6/15)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inpol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
 AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
 1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- 1I** Gill net area (8/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (8/11 to 7/25)
 Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inpol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M** Herring spawning (4/1 to 6/15)
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inpol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- N, 3P** Harbor seal and sea lion pupping (5/15 to 7/1)
O, 3Q Harbor seal and sea lion molting (5/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inpol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R** Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S** Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2208
- 5T** All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U** Recreation: Tent sites (5/1 to 8/15)
6V Anchorages (5/1 to 8/15)
6W Forest Service cabins (5/1 to 8/15)
6X Lodge (5/1 to 8/15)
6Y Special use destination
- Subsistence area: Salmon harvesting (5/1 to 9/30)
 Finfish harvesting
 Deer harvesting (5/15 to 2/28)
7JJ Invertebrate harvesting
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inpol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2358

SEGMENT ST / CU-020 SUBDIVISION: A DATE 4/26/90

ISCG
NAME SCOTT RAMSFORD SIGNATURE Scott Ramsford MSTI

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

DEC
NAME Lori J. Stettin SIGNATURE Lori J. Stettin

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS
segment had pebble/granule clean-swept 10° beach and shoreline with angular
slate cobbles, and occasional moderate angle boulder shoreline, all
with very low energy exposure. We walked 95% of the segment.
No oil was observed; no cleanup recommended.

AND MANAGER
NAME G.S. [unclear] SIGNATURE [unclear]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS
No oil found

SHORELINE OILING SUMMARY

REVISION NO. 000000

OG G. MACDONALD USCG S. RANSFORD SEGMENT ST/ CU-20
 BIO MA: SCOTT LAND REP L. KEEFER SUBDIVISION A (1 OF 1)
 EXXON J. GUTER ADEC LOKI STRAIT TIME 07:45:00-09:10
 TEAM NO. 3 TIDE LEVEL -2.2 to -3.5 FT DATE 4 / 26 / 90
 EST. SUBDIVISION LENGTH: 1,950 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: SW to NE
 SURFACE SEDIMENTS: R 20 % S 30 % C 50 % P 9 % G 9 % B 1 % M 1 % V — %
 SLOPE: Long 65 % Hang 50 % Vert 5 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W — m M — m N — m VL — m NO 1,950 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	N	S	E	W	1	2	3	4	U	M	N	U
ASPHALT PAVEMENT												
POOLED												
COVER												
COAT												
STAIN												
MOUSSE												
PATTIES												
TARBALLS												
FILM												
NO OIL										X	X	X

PAVEMENT H F S — sq. m by — ft

PATTIES / TARBALLS — BAGS

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MO	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒

TYPE 0

SEAS 0

Photographs:

Roll No. —

Frames —

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					BELOW	OIL / FILM COLOR				PIT ZONE				SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	OB		1	2	3	4	U	M	N	U	
1	45					X	—					X				PSO
2	30					X	—					X				SGP
3	33					X	—					X				PG
4	35					X	—					X				PG
							—									
							—									

COMMENTS Sheltered bay w/ moderate LCB shore and low PG beach @ head of the bay. No oil. Conspicuously clean and free of debris and driftwood. Recent submergence as evidenced by drowned tree stumps & dead trees @ H. water level.

REVIEWED YH

DATE 4-27-90

SEGMENT ST/CL-20

SUBDIVISION A

DATE 4/26/80

CHECKLIST

[] Area
[] Approx. Scale
[] Sup/Sub Body
[] Oil Data
[] Wash
[] Length
[] % Cover
[] Substrate Character
[] Est. HML/LWL
[] SSL
[] Profile Location(s)
[] Profile(s)
[] Photo Location(s)
[] Photo Location(s)

LEGEND

1 A
No Microfossils Oil

2 A
Substrate Oil

CT/C
Coastal Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

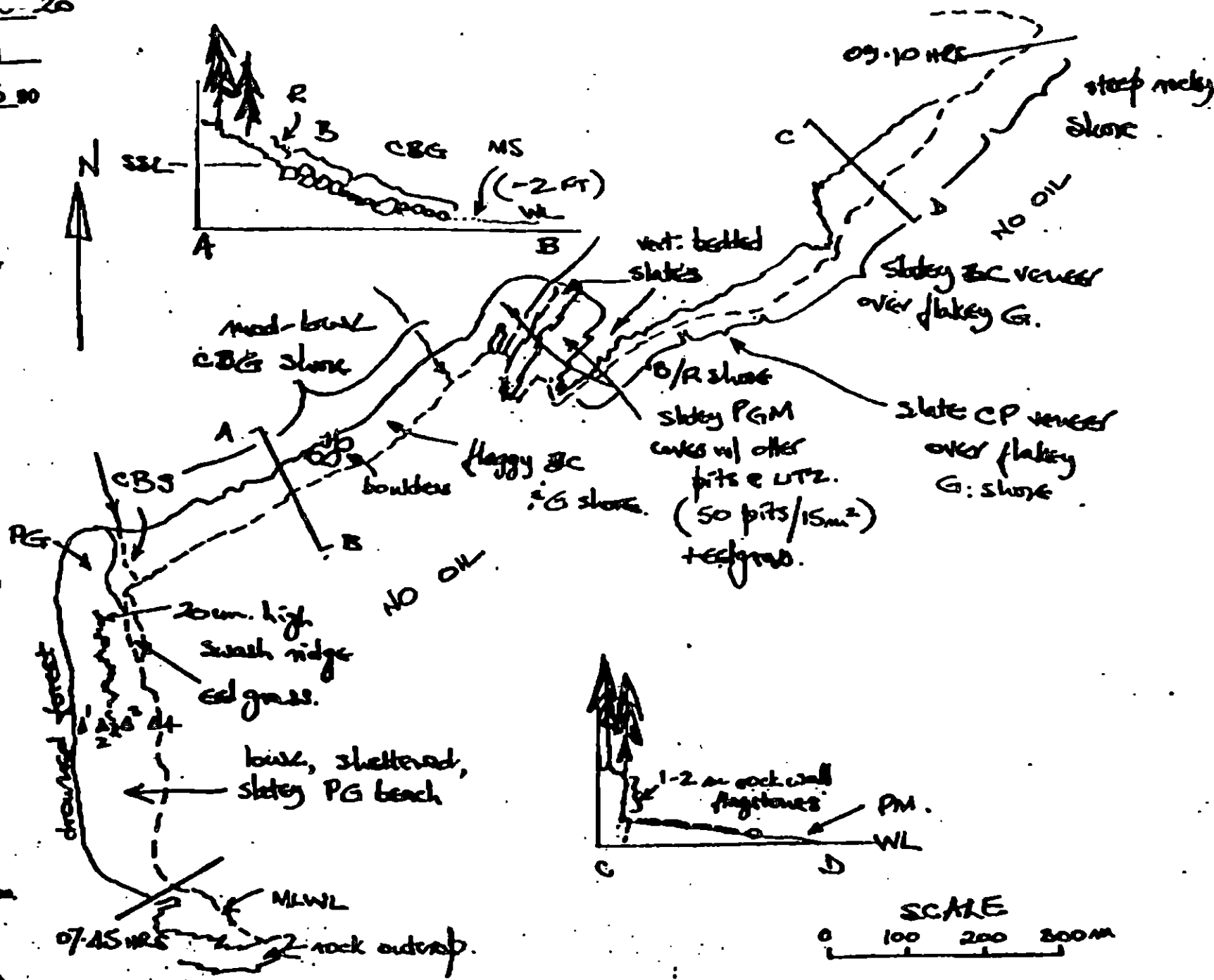
Oil Vegetation

Oil Vegetation

Photo location, direction, and number

STREAM

Oil Character Length (m): AP — PO — CV — CT — ST — MS — PT — TB — PL — NO 1950



SHORELINE ECOLOGICAL SUMMARY

REVISION: 10/8/80

Segment ST/ LU-20 Subdivision A Date (mo / day / yr) 4 / 24 / 90

Time (24 hr) 9:15 Biologist M.A. Scott

(A) Substrate type and % of segments:
(1) Bedrock 20 (2) Boulder 30 (3) Cobble 30 (4) Pebble 10 (5) Sand 1 (6) SR 1

(B) Overall % cover of biota (% of segment): Dense 25 Moderate 20 Low 55

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:
Roll No. 2
Frames 2

BARNACLES

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	NOT PRESENT
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

MYTILUS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	NOT PRESENT
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

GASTROPODS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	NOT PRESENT
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

FUCUS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	(reproductive)
4	4	4	4	4	4	4	4	4	4	4	4	NOT PRESENT
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

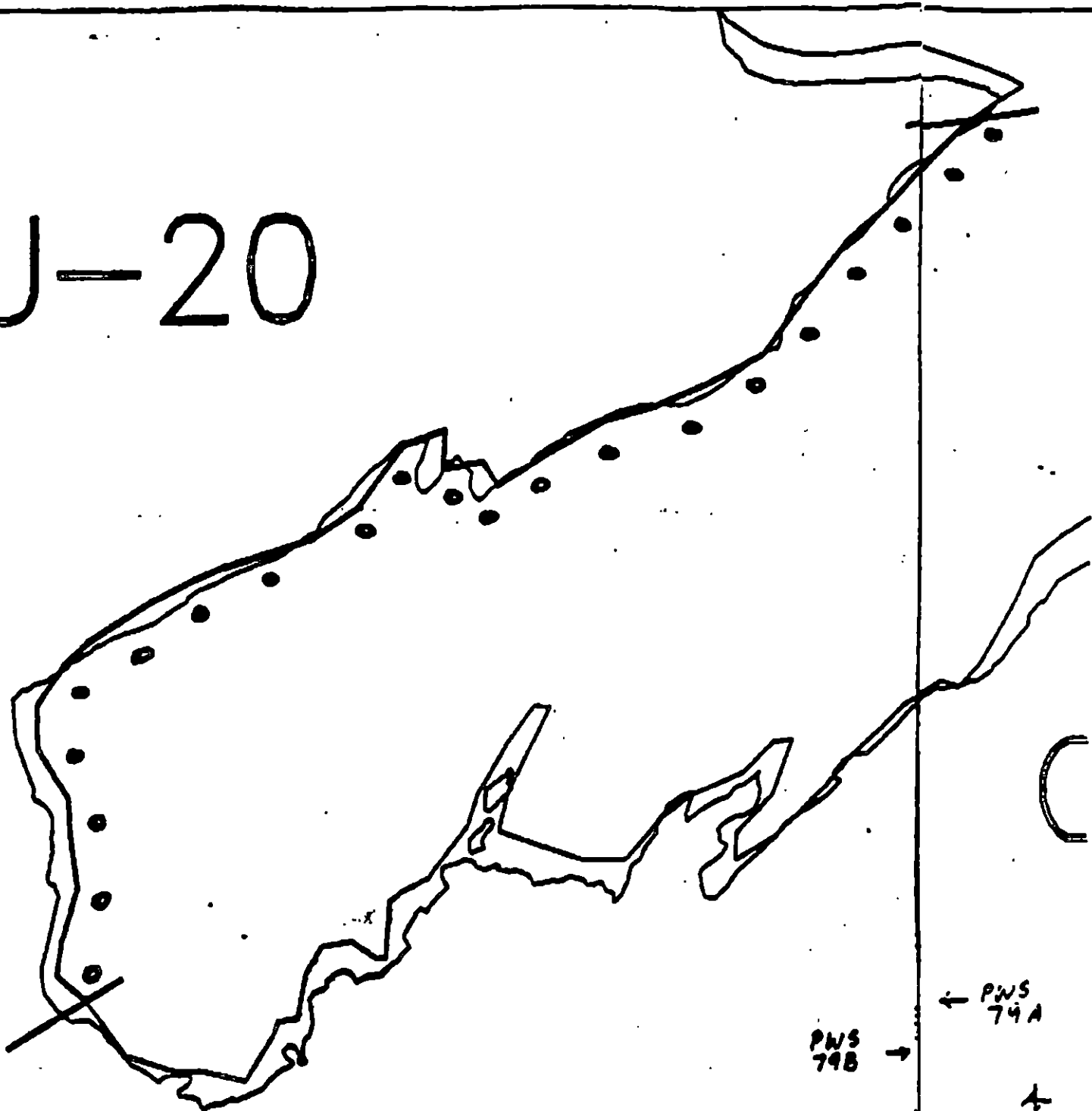
Wildlife Observations/ General Comments:

1. steller jay
2. golden eyes
3. ducks
western part - typical of inner bay - low plant density and diversity; eastern part had moderate density & diversity becoming more typical of more exposed areas

Ecological Considerations:

Eastern beds, dense in western (inner) part of segment - subtidal to LWR
salmon fry observed near shore

U-20



XX Wide
 // Medium
 --- Narrow
 TTT Very Light
 0000 No Oil

CU-20
 ADC Segment Length: 1003m

0 100 200 300
 METERS



Map Key: PWS-790

Name: A.M.

Date: 4.26.90

Date Entered:

XXXX Wi
 /// Me
 --- No
 TTTT Ve
 0000 No

SHORELINE EVALUATION

SEGMENT ST/ CU-21 SUBDIVISION A (1 OF 1) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1D Esther Hatchery release (4/15 to 6/15)

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

SHPO SIGNATURE: J. Daniel McManis

DATE: 5/9/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 2477 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

X No Treatment Recommended
 Treatment Recommended
 Manual Pickup
 Bioremediation
 Tarmat Removal

 Snare/Absorbent Booms
 Oil Snares (pom poms)
 Absorbents (pads, rolls, etc)
 Spot Washing: Wands
 Beach Cleaner
 Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 5/9/90.

ADEC Art Wagoner
EXXON Andy Tera
NOAA Bar/Wright
USCG D.D. Rome

FOSC:

DATE: 5-12-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A** Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 257-2324
- 1C** Salmon fry nursery area (4/31 to 7/31)
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D** Esther Hatchery release (4/15 to 6/15)
1E Main Bay Hatchery release (4/20 to 6/15)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
 AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
 1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- 1I** Gill net area (5/7 to 6/31)
1J Purae seine area (7/20 to 9/30)
1K Purae seine hook-off (7/20 to 9/30)
1L Set net sites (5/11 to 7/25)
 Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M** Herring spawning (4/1 to 6/15)
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unrolled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 3N, 3P** Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (5/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Collins 257-2403
- 5R** Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S** Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 257-2208
- 5T** All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 6/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U** Recreation: Tent sites (5/1 to 9/15)
6V Anchorages (5/1 to 9/15)
6W Forest Service cabins (5/1 to 9/15)
6X Lodge (5/1 to 9/15)
6Y Special use destination
- 7** Subistence area: Salmon harvesting (5/1 to 9/30)
 Fish harvesting
 Deer harvesting (5/15 to 2/25)
 Invertebrate harvesting
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 257-2389

EVENT ST / CU-021 SUBDIVISION: A DATE 4/26/90

SCG
AME SCOTT RAINSFORD SIGNATURE Scott Rainsford MSTI

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

DEC
AME Lori J. Stratton SIGNATURE Lori J. Stratton

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

Sgment had a gravel/pebble flat beach (10° slope) surrounded by boulder
beaches followed by moderate-angle bedrock and boulder shoreline.
No oil was observed. ∴ No treatment is recommended.

AND MANAGER
AME U.S. Forest Service SIGNATURE Ken Kehler

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

No oil found

SHORELINE OILING SUMMARY

REVISION 22. 09/12/90

OG G. MACDONALD USCG S. RANSFORD SEGMENT ST/ CU - 21
 IO MA. SCOTT LAND REP L. KEELER SUBDIVISION A (1 OF 1)
 XXON J. BUTLER ADEC LAKE JEN STRAIT TIME 09:20 10:15
 TEAM NO. 3 TIDE LEVEL -3.5 to -1.5 FT DATE 4/24/90
 EST. SUBDIVISION LENGTH: 2500 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: SW to NW
 SURFACE SEDIMENTS: R 70 % B 10 % C 10 % P 5 % G 5 % S 10 % M - % V - %
 SLOPE: Long 10 % Hang 70 % Vert 20 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W - m M - m N - m VL - m NO 2,500 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	C	S	R	B	1	2	3	4	W	M	N	U
ASPHALT PAVEMENT												
POOLED												
COVER												
COAT												
STAIN												
MOUSSE												
PATTIES												
TARBALLS												
FILM												
NO OIL									X	X	X	X

PAVEMENT H F S - sq m by - cmPATTIES / TARBALLS - BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐TYPE debris polypro#BAGS 2

Photographs:

Roll No. -Frame -

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW	OIL / FILM COLOR					PIT ZONE				AN A	SHEEN (Y/N)	V	SURFACE-SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO			1	2	3	4	5	W	M	N	U				
1	25					X	---							X						-	PC
2	35					X	---								X					-	GC
3	20					X	---									X				10	GC
4	15					X	---										X			2	CBGS
							.														
							.														

COMMENTS Northern shore of Culross Bay. Sheltered bay, fringed by BC and R shore. The local strata weather to flagstone BC and PC as flakes. The segment is devoid of debris of any kind. No oil at present, and none recorded ever to date.

REVIEWED LHDATE 4-27-90

12

SEGMENT 87/ 21

SUBDIVISION A

DATE 4/26/90

CHECKLIST

- ☐ N Area
- ☐ Approx. Scale
- ☐ Seg/Sub Study
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/LWL
- ☐ SGL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pt. Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
Pb - Pb Substrate Oil

2 Δ
Pb - Substrate Oil

CT/C
Coastal Distribution

CT/B
Urban Distribution

CT/E
Pebble Distribution

CT/S
Sediment Distribution

CT/D
Clad Vegetation

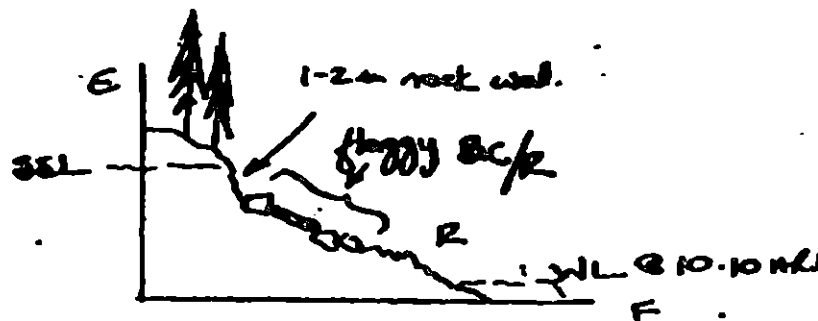
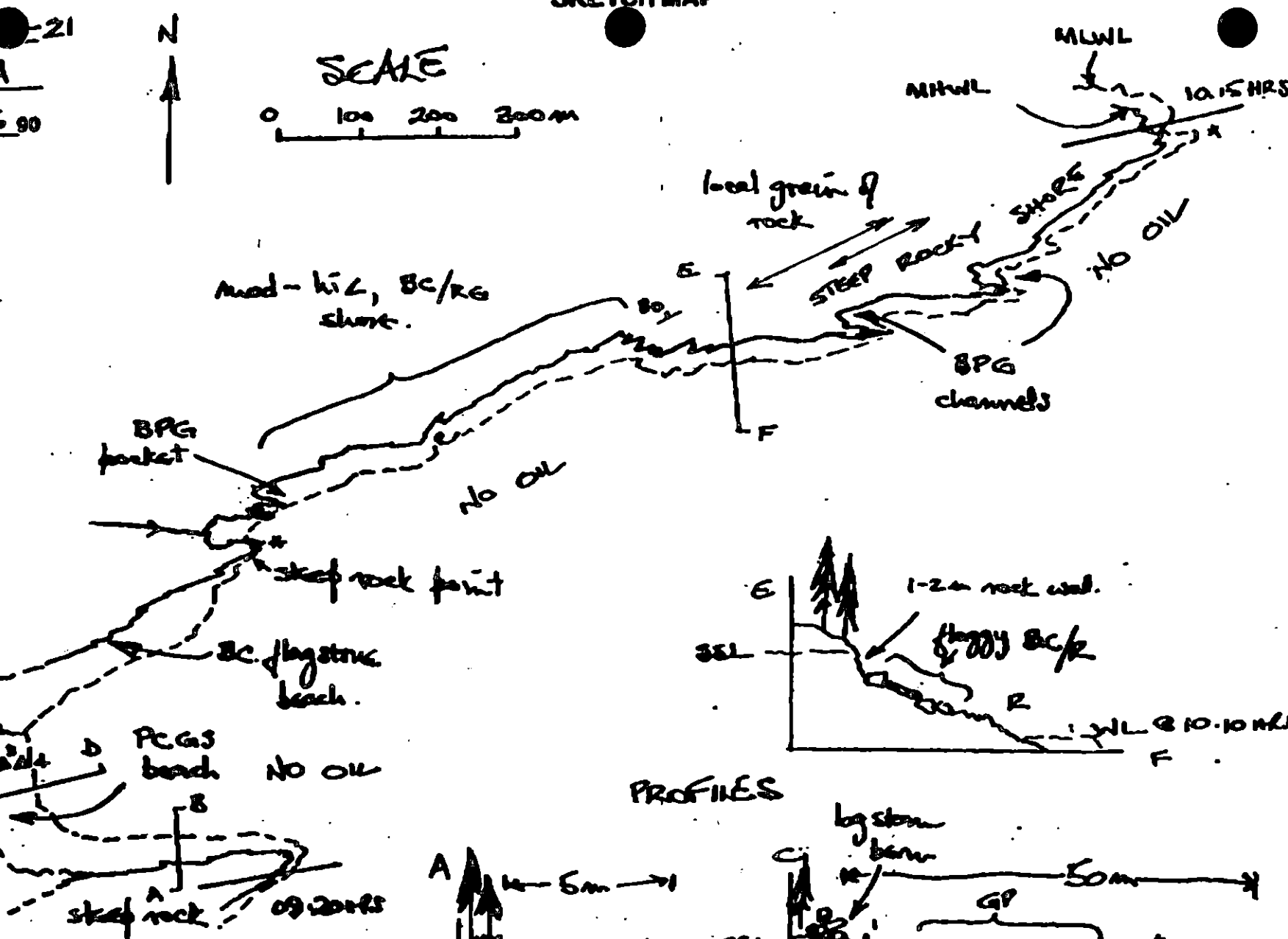
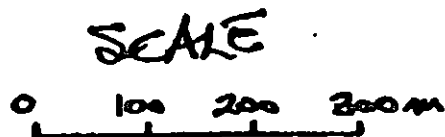
1 +
Photo location, direction, and number

stream

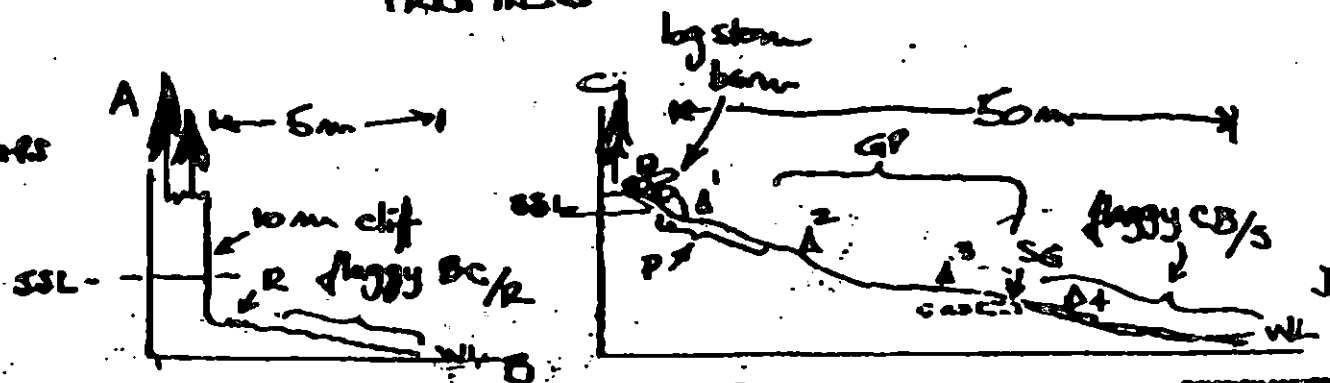
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PROFILES



Oil Character Length (m): AP — PO — CV — CT — ST — MS — PT — TB — FL — NO.2500

REVISION 000000

SHORELINE ECOLOGICAL SUMMARY

REVISION: 10/82

Segment ST / CU-21 Subdivision A Date (mo / day / yr) 4/26/98

Time (24 hr) 0800-1800 Biologist MASCOFF

(A) Substrate type and % of segments:

(1) Bedrock 70 (2) Boulder 10 (3) Cobble 15 (4) Pebble 5 (5) Sand 4 (6) SR —

(B) Overall % cover of biota (% of segment): Dense 50 Moderate 20 Low 20

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:

Roll No. 0

Frames 0

BARRIACLES

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	NOT PRESENT

MYTILUS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	NOT PRESENT

GASTROPODS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	NOT PRESENT

FUCUS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	NOT PRESENT

Wildlife Observations/ General Comments: (observations by boat)

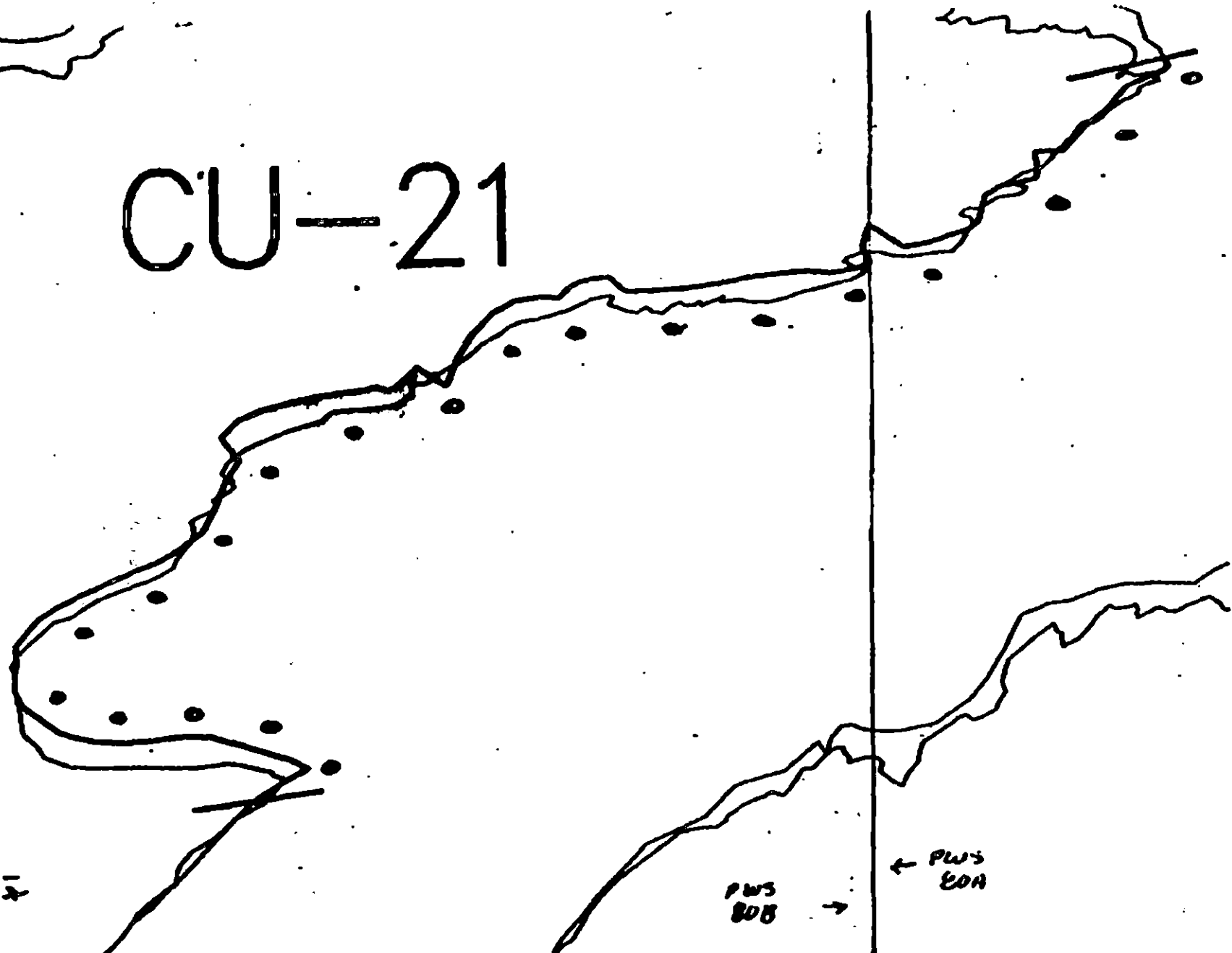
moderate/dense, diverse community; dense algae in MTS & LTR

Ecological Considerations:

salmon fry observed near shore

Zostera - subtidal, western part of segment

CU-21



X Wide
 / Medium.
 - Narrow ADEC Segment Length: 2077m
 T Very Light
 O No Oil

CU-21

100 200 300 METERS

Map Key: PWS-800
 Name: G.M.
 Date: 4-26-90
 Date Entered:

XXXX Wide
 /// Medium
 ---- Narrow ADEC:
 TTTT Very Light
 OOOO No Oil

PWS-800-3300
 CU-21
 PWS
 IN BEHIND VIEWS
 IN
 EARTH SHOT
 P.1.3