[Shoreline evaluations, 1991].

Prince William Sound EV-18 to EV-39

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REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-18

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION

SEGMENT ST/ EV-18  SUBDIVISION A (1 OF 1) DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
5T-2  All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
7II  Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: __________________________ DATE: __________________________

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 270 m: V.Light 270 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 30 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes bioremediation of area of subsurface and surface oil as shown on sketch map. Work should be conducted after 6/1 based on above constraints.

TAG COMMENTS: __________________________

TAG APPROVAL DATE: __________________________
ADEC __________________________
EXXON __________________________
NOAA __________________________
USCG __________________________
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigrating (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 lnipol 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 lnipol 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 Winter 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 Pelican release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or lnipol application, prior to 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 1F 1G PWS Aquaculture Association John McMillian or Bruce Suzomoto 424-7511

11 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 lnipol 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 8/15)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncolonized intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or lnipol 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, 3Q Harbor seal and sea lion molting (5/15 to 7/1)
3Q Harbor seal and sea lion molting (8/1 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 lnipol 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 Zimmermann 586-7235
ADF&G Dan Calcina 267-2403

5R Seabird colony (5/1 to 6/1)
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 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)
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 lnipol application 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 / EV 18 
SUBDIVISION: A (101) 
DATE 4-20-90

NOAA
NAME Michael Buchman 
SIGNATURE

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS Northern END is a raised shelf/platform outcropping with a Boulder/cobble band behind. This band had a coat on surface rocks, with a cover on the underside. One or small (~14 m²) patch of shallow was observed here. Center of segment is a beach of dimer-grade sized sand/shell rocks with silversed sand/shell, pebbles underneath, and a 19 rock outcrop on the northern end of the beach. An oilied log was seen near the outer, feet in the water swarm near South of the outcrop suggest a continues layer of surface oil through the beach. A 15m band of surface stain, with cover on underside of rocks, diminishes in intensity to the South. Southern end is a rock wall with some 19 boulders essentially below the Focus Zone. Light splattering was observed here. Rainbow sheens were observed on this pools near the northern rock platform.

ADEC
NAME John Hayes 
SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Middle of segment has two areas with surface + sub surface oiling.

Extent of oiling is UFZ2. Not a good candidate for Bio. Bedrock below section of the cobble + gravel + no water flush to H20. Recommend:
1. Mop up of any recoverable oil
2. Monitor for sheens S.S. oiling is primarily below 10-15 cm of clean gravel + cobble.

LAND MANAGER
NAME Horse Usery
CHANGE CO-Op 
SIGNATURE

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

Clean up loose oil that can be reached

Monitor for sheens.
**SHORELINE OILING SUMMARY**

**DATE** 4-23-90

**SEGMENT ST/** EV-18

**SUBDIVISION** A

**TEAM NO.** II

**EST. SUBDIVISION LENGTH:** 52.4 m

**SURVEYED FROM:**
- Foot
- Boat
- Helo

**SURFACE SEDIMENTS:**
- Grass
- Forest
- Rock

**SURFACE EXPOSURE:**
- Low
- Med
- High

**OIL CATEGORY LENGTH:**
- W 0 m
- M 0 m
- N 240 m
- V 289 m
- N O 0 m

### SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<tr>
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</table>

**PAVEMENT H F $$ 0$$ sq. m by $$0$$ cm

**PATTIES / TARBALLS** O BAGS

**NEAR SHORE SHEEN?** NO BR RW SL TL

**OILED DEBRIS**
- Logs
- Vegetation
- Trash
- Debris

**AMOUNT**
- Sm
- Md
- Lg

**DID YOU COLLECT DEBRIS?**
- YES
- NO

**TYPE**
- Stained Logs

**#BAGS** 0

**PHOTOGRAPHS:**
- Roll No.
- Frames

### SUBSURFACE OIL

**# OILED INTERVAL < 5 cm IN PITS 1 AND 2:** DOES NOT CONSTITUTE SUBSURFACE OIL

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>OILED OIL CHARACTER</th>
<th>OILED OIL COLOR</th>
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<td>X</td>
<td>0 - 10</td>
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<td>2</td>
<td>14</td>
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<td>3</td>
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<td>5</td>
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<td>20 - 25</td>
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<td>6</td>
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<td>15 - 30</td>
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**COMMENTS**

The Northern end of the segment contains low angle Rock outcrop with a 1m x 15m CT/S along the HitZ. The middle of the segment contains a long O/C Beach with a 15m x 230m CT/P (20% current) Coat/Stain in the HitZ and MidZ. In the HitZ is a 2m x 150m Subsurface oiling about 20 cm below surface. The Southern end of the segment contains 3 large rock outcrops with 2 coble/boulder pocket.

Reviewed DATE 4-23-90

REVIEWED DATE 4-23-90
### Subsurface Oil (Continued)

<table>
<thead>
<tr>
<th>Pit No.</th>
<th>Pit Depth (cm)</th>
<th>Subsurface Oil Character</th>
<th>Oiled Interval (cm/min)</th>
<th>Below</th>
<th>Oil/Film Color</th>
<th>Pit Zone</th>
<th>Ana</th>
<th>Sheen (Y/N)</th>
<th>Surface Sediments</th>
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<td>C, P, R</td>
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**Comments**
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST/15-1, Subdivision A (1 of 1)  
Date (mo/day/yr) 4/20/90

Time (24 hr) 13:28  
Biologist: Kathleen Conlan

(A)  
Substrate type and % of segments:
- (1) Bedrock 40%
- (2) Boulder 20%
- (3) Cobble 20%
- (4) Pebble 20%
- (5) Sand 0%
- (6) Silt 0%

(B)  
Overall % cover of biota (% of segment):  
Dense 20%, Moderate 80%, 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. ST11-3  
Frames 3, 4

**BARNACLES**

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**MYTILUS**

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**GASTROPODS**

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Wildlife Observations/ General Comments:  
*OU: SNOWSHOES, AMPH: PODS *COBBLE, GASTROPOD EGGS

Ecological Considerations:
ECOLOGY MAP (1 of 1)

RESOURCE CODES FOR ENTIRE SEGMENT:

ST-3
TII

1 BALD EAGLE NEST ≤ 400m OF SEGMENT AS SHOWN.

EV-1

EV-18

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

ADEC Segment Length: 533m

Map Key: PWS-186
Name:
Date:
Data Entered:
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT EV-18 SUBDIVISION A (1 of 1)

WORK WINDOW

Bioremediation WORK PRIOR TO 8/15

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T Bald Eagle Nest

NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.

7II Subsistence: Deer Harvesting

Closed to bioremediation after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic and beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

TAG APPROVAL DATE

ADEC

EXXON

NOAA

USCG

Prepared By: \\

FOSC

DATE 8/1/90

Prepared By: \\

DATE 8/1/90
ECOLOGY MAP
SEGMENT EV-18
SUBDIVISION A (___ of ___)

METERS
0 351 702

1 inch = 1151 feet

Exxon Company, USA
Map Key: PMS-EV-18
June 04, 1990

- Star: Seabird Colony
- Triangle: Active Eagle Nest
- Inverted Triangle: Inactive Eagle Nest
SHORELINE EVALUATION

SEGMENT ST/ EV-18 SUBDIVISION A (1 OF 1) DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
ST-2 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: ______________________ DATE: 5/1/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 270 m: V.Light 270 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 30 cm

RECOMMENDATIONS:
_____ No Treatment Recommended
_____ Snare/Absorbent Booms
_____ Oiling Snare (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 area of subsurface and surface oil as shown on sketch map. Work should be conducted after 6/1 based on above constraints.

ADDENDUM DATE: 7/20/90

TAG COMMENTS:

TAG APPROVAL DATE: 5/1/90
ADEC ______________________
EXXON ______________________
NOAA ______________________
USCG ______________________

FOSC: ______________________ DATE: 5-6-90
AUC 1 does not object to bioremedi
SHORELINE EVALUATION

SEGMENT ST/ EV-18 SUBDIVISION A (1 OF 1) DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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SHPO SIGNATURE: __________________________ DATE: 5/1/90

OILING CATEGORIZATION:

Wide_0 m: Medium_0 m: Narrow 270 m: V.Light 270 m: No Oil_0 m
Subsurface Oil Observed: Yes X No__ Maximum Depth 30 cm

RECOMMENDATIONS:

__ No Treatment Recommended _ Snare/Absorbent Booms
 X Treatment Recommended _ Oil Snare (pom poms)
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 X Bioremediation _ Spot Washing: Wands
 _ Tarmat Removal _ Beach Cleaner
 _ Other (see comments)

COMMENTS: Recommended treatment includes bioremediation of area of subsurface and surface oil as shown on sketch map. Work should be conducted after 6/1 based on above constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 5/1/90

ADEC _ AEC-Weiner _ Date: 5/8-90
EXXON _ Andrea _ Date: 5/8-90
NOAA _ O'Reilly _ Date: 5/8-90
USCG _ Kammer _ Date: 5/8-90
ENVIRONMENTAL SENSITIVITIES:
Work Window(s)       RESTRICTED 3/1 - 9/15

Ecological/Constraints (see page two for details)   Eagle nest, Subsistence - deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO Signature: ___________________________ Date: __________________ __

RECOMMENDATIONS:
TREATMENT REQUIRED (Y or N)   N

Manual Pickup (Check as Req.)
Spot Washing
Bio-Customblen Only
Bio-Inipol/Customblen
Other ______________________
Other ____________________

COMMENTS:
INITIAL: __________________________________________________

TAG:--------------------------~-------------------------------
FOSC:-------------------------------------------------------

TAG APPROVAL DATE:       FOSC APPROVAL DATE:   

ADEC_______________________________________  FOSC __________________

EXXON______________________________

USCG______________________________

NOAA______________________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Eagle Nest: Access restricted from 3/1 to 9/1. USF&WS authorization required. Maintain 1000' vertical and 1/4 mile horizontal buffer.

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.
EV-19: Subsection A

ADEC
Name: John Hayes
Signature:

□ NTR

[Reassessment of Oily Sediments]

Oiling observed on portion of segment surveyed was 1475 ml.

SD9/4, on surface at 1H/09/91, silt and surface sediments in the
UST and MIT. Because surface oiling was a small %, no further
investigation of bottom sediments was recommended. I do recommend
that the beach be reitored late this season or 1992 to determine full extent of
subsurface contamination and may rep. that my results from near surface oiling.

EXXON
Name: Martierner, M.
Signature: [Signature]

□ NTR

There is some sub-surface present. Prevented design per
see type or quantity of oil to justify
Manual work.

LANDMANAGER
Name: Steve Ward
Company: CVC
Signature: [Signature]

□ NTR

Lots of sub-surface oil and sheen - should be monitored for
several years to keep on oil and sheen. Should be labeled at

South Pt. for cleanup fleet. I don't think manual will do
anything in this area.

USCG/NOAA
Name: Drum/ Hedges
Signature: [Signature]

□ NTR

Some tar patches with sheens observed. Tar patches in mussel bed.

Some pits had oiled sediment while others showed traces of silver sheens.

At the time of the survey under noted atmospheric conditions I observed AE oil
sheen, and consider it probable that a measurable amount of substance will mobilize
and migrate (via sheen) to the water column when warmer conditions prevail.
**SEGMENT EV-18**

**SUBDIVISION A**

**DATE April 30, 1991**

**TIME 08:40 to 09:45**

**TIDE LEVEL 2 ft to 1.5 ft**

**ENERGY LEVEL ☑ M ☐ L**

**SURVEYED FROM: ☑ FOOT ☐ BOAT ☐ HELO**

**WEATHER: ☑ SUN ☐ CLOUDS ☐ FOG ☐ RAIN ☐ SNOW**

**TOTAL LENGTH SHORELINE SURVEYED: 283 m**

**NEAR SHORE SHEEN: ☑ BR ☑ RB ☑ SL ☐ NONE**

**EST. OIL CATEGORY LENGTH: W 30 m; M 7 m; N 1 m; VL 100 m; NO 145 m; US 250 m**

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**TOTAL SURFACE OIL CHARACTER: 5**

**TOTAL SURFACE OIL ZONE: 5**

**TOTAL SURFACE SHEEN ZONE: 5**

**TOTAL SURFACE SUBSURFACE: 5**

**TOTAL SURFACE SEDIMENTS: 5**

**DISTRIBUTION: C = 91-100%; B = 61-90%; P = 11-60%; S = 1-10%; T = <1%**

**SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE**

**PHOTO ROLL # MAYSAP-5 5 FRAMES 7-12**

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>OIL CHARACTER</th>
<th>OILED ZONE</th>
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**SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE**

**OG COMMENTS:**

Areas A & B have very shallow bedrock, lots of rainbow sheen on rainy day.

**NOTE:** Survey was conducted in driving rain, making lighter oiling types difficult to observe.

**REVISED:** F.W. 5/3/91

**REVIEWED:** M.C. 5/3/91
MAYSA-P BIOLOGICAL SUMMARY FORM

TEAM # 5  DATE 30 April 1991
SEGMENT # EV-18  TIDAL HEIGHT (Range) -2.0 - -1.5
SUBDIVISION A  BIOLOGIST Crank
SEA STATE 1-2' (1 to 3')  WIND SPEED/DIRECTION 15-20 knots IN
PHOTOGRAPHS: ROLL # MAYSA-P  FRAME #: 10

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):

(A) Area is low in UITT in lee of rock beach. There is an intertidal mussel bed with sparse to moderate concentration (various age classes).
Barnacles are rare and tightly sealing their inner plates. Littorina and limpets are rare. Filamentous green algae covers cobble. On beach and rock bench with site there is a dense concentration of Fucus with sporelings.

(B) Area is in UITT ~10 m south of (A). Within site filamentous green algae covers surfaces, patches of Enteromorpha (algae), rare Littorina and rare barnacles. Sparse Fucus with sporelings are present. Conchepides are beginning to mature. Directly below site (~1 m) there is a sparse intergravel mussel bed. Algae includes Scytosiphon, Fucus, Enteromorpha, Urospora and other filamentous greens.

(C) Area is located low UITT, high UITT in small boulders and cobble. There is ~20% biota cover with barnacle dominantly, spat is present and animals are tightly sealing their inner plates. Sparse limpets and Littorina eggs are present as well as rare Fucus and mussels. Alp Italia worm (nereis) are also present.

(D) Area is high in UITT 3 m above (A). Less than one percent biota cover by filamentous green algae and rare Littorina. No other macro-biota was observed with the site. Pit #1 located with (D).

WILDLIFE OBSERVATIONS TO BE COMPLETED IN ALL SUBDIVISIONS

| BIRDS          | # OF SPECIES | TOTAL BIRDS | FISH OBSERVED \n|----------------|--------------|-------------|----------------|
| Eagles         | 1            | 2           |                |
| Seabirds       | 1            | 3           |                |
| Waterfowl      | 1            | 8           |                |
| Gulls/kittiwakes| 1            | 10          |                |
| Shorebirds     | 2            |             |                |
| Corvids        |              |             |                |
| Other Birds    |              |             |                |

| MARINE MAMMALS | # OBSERVED \n|----------------|----------------|
| Sea Otters     |                |
| Pinnipeds      |                |
| Whales         |                |

| LAND MAMMALS | SPECIES | # OBSERVED \n|-------------|---------|----------------|
| Sea Otters  |         |                |
| Pinnipeds   |         |                |
| Whales      |         |                |

Shoreline subdivision map showing important biological features attached.

Reviewed: 5/3/91 MC
Comments (cont.)

(E) Area is a band 2m x 60m in the UITZ. Small boulders and cobble are covered with filamentous green algae. 2-3cm long segmented worms are found under veneer. Rare barnacles and Fucus sporelings also present <1% biota cover. Pits 2-7 located in. see (E).

(F) Area is located in the MITZ ~ 5m below (E). Filamentous green algae, sparse barnacles (new set present), sparse limpets, rare Littorina, rare Fucus and rare juvenile mussels are present in the site. Not including filamentous greens there is ~ 5% biota cover (~80% with greens).

Subdivision surveyed is a small boulder and cobble beach bordered by boulders and bedrock. On the beach UITZ has ~60% biota cover dominated by algae including Fucus, Halosaccion, Odonthalia, Ulva, Cladophora, bladed and filamentous. and filamentous greens. The MITZ is ~30% covered with Fucus dominant, sporelings are present. Fauna/animals is sparse including barnacles (new set present), limpets, Littorina, amphipods and anemones (in tidepools). Exposed sides of rocks is 90-100% cover; Fucus dominates.
MAYBAP 1991
OG SKETCH MAP: Bio Sketch Map
GREG CHANEY: Crank
TEAM 5
SEGMENT: EV-18 A
DATE: APRIL 30 1991
AIR P.H.: PM-C-006-114

LEGEND

BEDROCK
BOULDER
FINE BED
DRIFT LOG
GRABB
BRUSH
FOREST
OILED PIT
NO OIL PIT
PHOTO

SCALE

T M
N

OL ROUND FUCUS COVERED BEDROCK

LOW ROUND FUCUS COVERED BEDROCK OUTCROP with 90-100% benthic cover

BEDROCK OUTCROP IN MIDDLE OF BEACH

THIN LENSE HER-MER ~15x10m

55 GAL DRUM

In Area E near pits 2-7 there is less than one percent benthic cover.
1991 MAYSAP EVALUATION

SEGMENT: EV 018  SUB: A  REGION: PWS  SURVEY DATE: 4/30/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) RESTRICTED 3/1 - 9/15

Ecological/Constraints (see page two for details) Eagle nest, Subsistence - deer harvesting

ARCHEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO Signature: [Signature] Date: 5/14/91

RECOMMENDATIONS:

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<th>TREATMENT REQUIRED (Y or N)</th>
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<th>TAG</th>
<th>FOSC</th>
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<td>Other</td>
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COMMENTS:
INITIAL: ____________________________________________________

TAG: _________________________________________________________

FOSC: _______________________________________________________

TAG APPROVAL DATE: MAY 14 1991  FOSC APPROVAL DATE: 8/20/91

ADEC  [Signature]  EXXON [Signature]  USCG [Signature]  NOAA [Signature]

E. E. PAGE, CDR USCG
CHIEF OF STAFF, FOSC
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Eagle Nest: Access restricted from 3/1 to 9/1. USF&WS authorization required. Maintain 1000' vertical and 1/4 mile horizontal buffer.

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.
**MAYSAP FIELD SHORELINE COMMENT SHEET**

**TEAM NO. 5**  
**SEGMENT EV-18**  
**SUBDIVISION A**  
**DATE 4/30/91**

### ADEC

<table>
<thead>
<tr>
<th>NAME</th>
<th>John Hayes</th>
<th>SIGNATURE</th>
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</table>

- Oil patch in muck bed was identity with rain, since too 5% oiling. Oil/ing observed on position of segment surveyed was 1/15 C/le.
- Spa/t on surf ice H20/m on saturated surface sediments in the USTZ and MTTZ. Because surface oiling was a small % we touch it crevices
cr milling of boulder do not recommend manual crew. I do recommend that
this beach be recovered late this season or 1992 to determine full extent of
subsurface contain but hand more ap that may result from near surface oiling.

### EXXON

<table>
<thead>
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<th>NAME</th>
<th>Markman N.</th>
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</table>

- There is some sub-surface present. Spotted sheening was prevented. Did not see type or quantity of oil to justify manual work.

### LANDMANAGER

<table>
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<tr>
<th>NAME</th>
<th>Steve Ward</th>
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</table>

- Lots of Sub-Surface oil and sheening - should be monitored for
  several years to keep an x on sheening. Should be looked at
  by T.A.G for clean-up funds. I don't think manual will do
  anything in this area.

### USCG/NOAA

<table>
<thead>
<tr>
<th>NAME</th>
<th>Dreher / Hodges</th>
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- Some tar patches with sheens observed. Tar patches in mussel bed.
  Some pits had oiled sediment while others showed traces of silver sheens.
  At the time of the survey under noted atmospheric conditions I observed P0.6%L
  sheening and consider it probable that a measurable amount of substance will mobilize
  and migrate (via sheen) to the water column when warmer conditions prevail.
**MAYSAP SHORELINE OILING SUMMARY**

**Team No.** 5  
**OG** Chaney  
**Bio** Crank  
**ADEC** Hayes  
**USCG/NOAA** Drehé/Hodges

**Segment** EV-18  
**Subdivision** A  
**Date** April 30, 1991

**Time** 08:40 to 09:45  
**Tide level** -2 ft. to -1.5 ft.  
**Energy level**  

**Surveyed from:**  
- Foot  
- Boat  
- Helo  

**Weather:**  
- Sun  
- Clouds  
- Fog  
- Rain  
- Snow

**Total length shoreline surveyed:** 283 m  
**Near shore sheen:**  
- BR  
- IRB  
- SL  
- None

**Est. oil category length:**  
- W 30 m  
- M 7 m  
- N 1 m  
- V 100 m  
- L 145 m  
- US 250 m

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**Notes:**  
- Shallow Bedrock

---

**Distribution:**  
- C = 81-100%  
- B = 61-80%  
- A = 41-60%  
- S = 1-10%  
- T = <1%

**Slope:**  
- V = Vertical  
- H = High Angle  
- M = Medium Angle  
- L = Low Angle

**Photo roll:** MAYSAP 5 5 frames 7-12

---

**Subsurface oil character:**  
- OP: Oily patch  
- MOR: Oil patch  
- OR: Oily region  
- TH: Thickness

**Oiled area zone:**  
- S = Surface  
- H = Hidden  
- M = Medium  
- L = Low

**Surface/subsurface sediments:**  
- C = Clay  
- S = Sand  
- M = Mud  
- L = Loam  
- V = Vein

**Notes:**  
- Brown droplets

---

**OG Comments:**  
Areas A & B have very shallow bedrock. Lots of rainbow sheen on rainy day.

**Note:** Survey was conducted in driving rain, making lighter oiling types difficult to observe.

---

**Revised:** F.W. 5/3/91  
**Review:** M.L. 5/7/91
LEGEND

BEDROCK
BOULDER
FINE BED.
DRIFT LOG
GRASS
BRUSH
FOREST
OILED PIT
NO OIL PIT
PHOTO

SCALE
50 METERS
ROUGHLY

LOW ROUND FUCUS COVERED BEDROCK
LOW ROUND FUCUS COVERED BEDROCK OUTCROP
BEDROCK OUTCROP IN MIDDLE OF BEACH
THIN LENSE HQR-MOR ~15X10M

MAYSAP 1991
OC, SKETCH MAP
GREG CHANEY
TEAM 5
SEGMENT: EV-18 A
DATE: APRIL 30 1991
AIR P.H.: C-006-14

A 8x10m SOR 100%
B 5x7m SOR 100%
C 10x10m AP ~10%
SOR ~ 80%
D 1x1m HEAVY SOR
(AP 1x1m PU) 100%
E 2x100m CT ~2%
CV <1% < AP 1%
F 15x10m
FL ~60%
SOR ~10%
AP ~2%
IIAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 5  DATE 30 April 1991
SEGMENT # EV-18  TIDAL HEIGHT (Range) ~2.0 to -1.5
SUBDIVISION A  BIOLOGIST Crank
SEA STATE 1-2' (1.4 to 3')  WIND SPEED/DIRECTION 15-20 knots /N

PHOTOGRAPHS: ROLL # MAYSAN 5  FRAME # 10

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):

(A) Area is low in UITZ, in lee of rock beach. There is an intertidal mussel bed with sparse to moderate concentration (various age clases). Barnacles are rare and tightly sealing their inner plates. Littorina and limpets are rare. Filamentous green algae covers cobble. On beach west of site there is a dense concentration of Fucus with sputlings.

(B) Area is in UITZ ~10 m south of (A). Within site filamentous green algae covers surfaces patches of Enteromorpha (algae), rare Littorina and rare barnacles. Sparse Fucus with sputlings are present. Conceptacles are beginning to mature. Directly below site (~1m) there is a sparse intertidal mussel bed. Algae includes Scutellaria, Fucus, Enteromorpha, Uropsis and other filamentous greens.

(C) Area is located low UITZ, high MITZ in small boulders and cobble. There is ~20% biota cover with barnacle dominance, spat is present and animals are tightly sealing their inner plates. Sparse limpets and Littorina and Littorina eggs are present as well as rare Fucus and mussels. Ribbon worms (amebon) are also present.

(D) Area is high in UITZ, 3 m above (A). Less than one percent biota cover by filamentous green algae and rare Littorina. No other macro-biota was observed with the site. Pit #1 located with (D).

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

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<tr>
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Shoreline subdivision map showing important biological features attached.

REVIEWED: 5/3/91 MC
Comments (cont.)

(E) Area is a band 2m x 00 - in the ULIZ. Small boulders and cobbles are covered with filamentous green algae. 2-3 cm long segmented worms are found under veneer. Rare barnacles and Fucus sporelings also present <1% biota cover. Pits 2-7 located inland (E).

(F) Area is located in the MITZ, ~5m below (E). Filamentous green algae, sparse barnacles (new set present), sparse limpets, rare Littorina, rare Fucus and rare juvenile mussels are present in site. Not including filamentous greens there is ~5% biota cover (~80% with greens).

Subdivision surveyed is a small boulder and cobble beach bordered by boulders and bedrock. In the beach, LITZ has ~40% biota cover dominated by algae including Fucus, Haliotis, Odonthalia, Ulva, Scytosiphon, bladed and filamentous reds and filamentous greens. The MITZ is ~90% covered with Fucus dominant, sporelings are present. Fauna (animals) is sparse including barnacles (new set present), limpets, Littorina, amphipods and anemones (in tidepools). Exposed sides of rockberen is 90-100% cover; Fucus dominates.

Reviewed: 5/3/91 MC
MAY SAP 1991
OG SKETCH MAP
GREG CHANEY
TEAM 5
SEGMENT: EV-18 A
DATE: APRIL 30 1991
AIR P. #: PIM-C-006-114

LEGEND

Boulders

Fine Bed.

Drift Log

Grass

Brush

Forest

Oiled Pit

No Oil Pit

Photo

SCALE

T

M

N

LEGEND

BEDROCK

BOULDERS

FINE BED.

DRIFT LOG

GRASS

BRUSH

FOREST

OILED PIT

NO OIL PIT

PHOTO

55 GAL
DRUM

Low Round Fucus Covered Bedrock

Low Round Fucus Covered Bedrock Outcrop with 90-100% Biotrack Cover

Bare Intermittent Benthic Bed

30% Biotrack Cover; Dominant Species: Barnacles

Spat is Present; Thriving Egg Bundles

Bedrock Outcrop in Middle of Beach

Thin Lens Here; = 15 x 10 m

Litz has ~60% Biotrack Cover; Predominately Algae. Litz has ~30% Cover with Fucus Dominant

In Area E6 near pits 2-7, there is less than one percent biotrack cover.
SHORELINE EVALUATION

SEGMENT ST/ EV-20 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ST-1 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOCLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiied biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work
in the vicinity, mark the location of the find and contact a member of
Exxon’s Cultural Resource Program immediately (564-3657; 564-3658 or 564-
3276).

SHPO SIGNATURE: Date: 5/1/90

OILING CATEGORIZATION:

Wide 0 m: Medium 228 m: Narrow 99 m: V.Light 520 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth ______

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes removal of tarmat and manual
pick up of oiled vegetation and tarballs. Work should be conducted
after 6/1 and with approval of USFWS regarding eagle nest.

TAG COMMENTS: Monitors TO KIER SUITZ

BIOREMEDIATION OF AREAS INVOLVED ON SHEET

TAG APPROVAL DATE: 5/4/90.
ADEC Art Werner Date: 5/15/90
EXXON Andy Eder
NOAA Gayle Peterson Date: 5/15/90
USCG Pat Rice
1991 MAYSAP EVALUATION

SEGMENT: EV 020  SUB: A  REGION: PWS  SURVEY DATE: 4/30/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s)  RESTRICTED 3/1 - 9/15

Ecological/Constraints (see page two for details)  Eagle nest,
Subsistence - Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is
required prior to shoreline treatment.

SHPO Signature: ___________________________ Date: ___________________________

RECOMMENDATIONS:

<table>
<thead>
<tr>
<th>TREATMENT REQUIRED (Y or N)</th>
<th>INITIAL</th>
<th>TAG</th>
<th>FOSC</th>
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<tbody>
<tr>
<td>N</td>
<td>_____</td>
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</tbody>
</table>

Manual Pickup (Check as Req.)
Spot Washing
Bio-Customblen Only
Bio-Inipol/Customblen
Other ______________________ |
Other ______________________ |

COMMENTS:

INITIAL: ____________________________________________________________

TAG: _____________________________________________________________

FOSC: ____________________________________________________________

TAG APPROVAL DATE: ___________  FOSSC APPROVAL DATE: ___________

ADEC ______________________
EXXON ____________________
USCG _____________________
NOAA _____________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Eagle Nest: Access restricted from 3/1 to 9/1. USF&WS authorization required. Maintain 1000' vertical and 1/4 mile horizontal buffer.

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.
ADEC
NAME: John Hayes
SIGNATURE: 

☐ NTR This small strand area still has some small patches of 10/15 ft regrass although grass is doing well. Crew picked up MP ball below 572 and 786 #4 CUC. No subsurface oiling observed here and remaining oil does not need treatment at this time. As CUC group will be in area they may want to note regrass + RO. Any reaching SOP work on this segment, see Land Manager comments.

EXXON
NAME: Marshall N. 
SIGNATURE: 

☒ NTR Area looks very good away. Oil left is weathering nicely. Further work would be of no environmental benefit.

LANDMANAGER
NAME: Steve wand 
OF: CUC
SIGNATURE: 

☐ NTR Chelsea Local Response should clean this area. High-Subs oil found, but there is enough Subsurface oil to warrant a clean-up. This is a high-Subs zone for Chelsea, and a good clean up right on this section. Claims can be protected by picking up remaining oil in grass and between rocks.

USCG/NOAA
NAME: Dreher / Hodges
SIGNATURE: 

☒ NTR Oil cont/coverage spatter with pine needles on most upper area rocks. Scattered tar patties in upper stream area were picked up.
**MAYSAP SHORELINE OILING SUMMARY**

**TEAM NO.**
- OG: CHANEY
- BIO: CRANK
- ADEC: HAYES
- EXXON: MARTINEZ

**SEGMENT** EV20

**LANDMANAGER** WARD

**USCG/NOAA** DREHER/HODGES

**DATE** April 30, 1991

**TIME** 09:50 to 10:30

**TIDE LEVEL** -1 ft. to 0 ft.

**ENERGY LEVEL**
- H
- M
- L

**WEATHER**
- SUN
- CLOUDS
- FOG
- RAIN
- SNOW

**SURVEYED FROM**
- FOOT
- HELO

**TOTAL LENGTH SHORELINE SURVEYED**
- 132 m

**NEAR SHORE SHEEN**
- BR
- RB
- SL
- NONE

**EST. OIL CATEGORY LENGTH**
- W 0 m
- M 23 m
- N 13 m
- V 15 m
- U 76 m
- US 792 m

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<th>LOC</th>
<th>SURFACE OIL CHARACTER</th>
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**DISTRIBUTION**
- C: 91-100%
- S: 51-60%
- P: 11-50%
- T: <1%

**SLOPE**
- V: VERTICAL
- H: HIGH ANGLE
- M: MEDIUM ANGLE
- L: LOW ANGLE

**PHOTO ROLL**
- MAYSAP 5-5 FRAMES 13-17

<table>
<thead>
<tr>
<th>PIT</th>
<th>PIT NO.</th>
<th>DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED ZONE</th>
<th>CLEAN BELOW LEVEL</th>
<th>SHEEN COLOR</th>
<th>PIT</th>
<th>SURFACE- SUBSURFACE SEDIMENTS</th>
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</tbody>
</table>

**SHEEN COLOR**
- B: BROWN
- R: RAINBOW
- S: SILVER
- N: NONE

**OG COMMENTS:**
This survey was conducted in driving rain so light oiling conditions were difficult to observe.

**REvised:** F.W. 5/3/91

**RANEF:** M.C. 5/3/91
MAYBAP 1991
06 SKETCH MAP
GREG CHANEY
TEAM 5
SEGMENT: EV-20-A
DATE: APRIL 30, 1991
AIR P.N.: 6EV3Z-1-65-41

LEGEND

BEDROCK
BOULDER
FINE BED.
DRIFT LOG
GRASS
BRUSH
FOREST
OILED PIT
NO OIL PIT
PHOTO

SCALE
ROUGHLY
10 METERS

AP 2%
SOR 2%
CV 10%
CT 20%
4 x 7 m

AP 0.5 x 0.5 m
PU

AP 0.5 x 0.5 m
PU

2 x 10 m
CT 30%
CV 30%

3 x 16
AP 20%
SOR 10%
SHALLOW BEDROCK
GRASS ABOVE

1.5 m
AP
PU

1.5 m
AP
PU

OILING CONDITIONS ARE
REPRESENTED AFTER
MANUAL REMOVAL

SHELTER
BAY

SMALL FALLEN TREES

SMALL STREAM
Note: This computer drawn shoreline map was traced from the old 5 ft. foggage because a new one couldn't be found.

EV 20A

After Chaney

April 30, 1991

REVISED: F.W. STAFF
REVISED: 5/1/91

MAYSAP 1991
GO-SKETCH MAP
GREG CHANEY
TEAM 5
SEGMENT: EV-20A
DATE: April 30, 1991
AIR P. #:

TRACED COMPUTER MAP
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 5
SEGMENT # EV-20
SUBDIVISION A
SEA STATE 1-2

TIDAL HEIGHT (Range) ~ -1.0 to 0
BIOLOGIST Crank
WIND SPEED/DIRECTION 10-15 knots / N

PHOTOGRAPHS: ROLL # MAYSAP S FRAMES: 17

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):

(A) and Pt 91 - Area located in U17 cobble with <1% biota cover including rare barnacles, amphipods and filamentous green algae. Barnacles are tightly sealing their inner plates. No other intertidal macro-biota was observed in the area. Rockwren, 2m SE of site has ~20% biota cover with sparse barnacles and sparse Fucus, sporelings. Below site is clam bed and ~200% Fucus cover.

(B) Area is located 90m SW of A in the U17. There is ~50% biota cover dominated by a moderate to dense concentration of healthy barnacles. Fucus is sparse, maturing conceptacles and stripe-only plants are present. Mussels are rare. Below site is a clam bed dominated by Prototreta (little-neck), Saxidomus (fuller) and Teams (tme). Also present. There are sparse limpets and Littorina (juvenile Littorina arenace.

(C) Area is located along rock face high in U17 and in SUPRA. No macro-biota observed to be in direct contact with oil. Approx. 30cm above site mosses are present and approx. 30cm below site. Fucus with maturing conceptacles and tightly sealing rare barnacles are present. In M17 on rock face Fucus dominates ~20% of plants are stripe-only (sporelings not present). Below rock is dense clam bed dominated by ~4yr old Prototreta. Many other ssp. present.

(D) Area is located in U17 and M17 ~500 m west of stream. There is ~20% biota cover. Barnacles are predominant species, animals are tightly sealing their inner plates. Fucus is present - no stripe-only plants and many sporelings are present. There are rare mussels, Littorina and limpets. Approx. 5m North of site there is a dense Fucus bed and a sparse intercobble mussel bed.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS None observed
# OF SPECIES TOTAL BIRDS FISH OBSERVED

| Eagles | Exotic | | |
| Seabirds | | | |
| Waterfowl | | | |
| Gulls/Kittiwakes | | | |
| Shorebirds | | | |
| Corvids | | | |
| Other Birds | | | |

LAND MAMMALS

| Marine Mammals | None observed | # OBSERVED | SPECIES | # OBSERVED |
| Sea Otters | | | |
| Pinnipeds (specify) | | | |
| Whales (specify) | | | |

Shoreline subdivision map showing important biological features attached.
Comments (cont.)

(E) Area is located in SUPRA and UITZ. There is a 30cm² patch of oiled rye grass, grass adjacent to patch is sprouting - see photo MAYSAP roll 5 frame 17. Green 'lawn' grass is also present in site. In UITZ Fucus sporlings are dominant species with ~10% biota cover. Barnacles are rare, Littorina and limpets are sparse. Rare Customlien castings are present. Seven meters below site - there is a dense Fucus bed in the fresh water stream.

(F) Area is a berm around and near the top of a large boulder. No biota located on the berm. Moderate limpets and Littorina; sparse Nucula (anem), and barnacles and rare mussels (various age classes) located on boulder below oil.

Site is low energy: beach with a fresh water runoff stream. UITZ is a dense clam bed dominated by ~4 yr. old Pleurotheta, Saxidomus is present. There is ~20% - 80% Fucus cover with maturing conceptacles present. A rare concentrated intergravel mussel bed is also present. Otters have been utilizing area (digs evident). Eagle nest was not located.
1991 MAYSAP EVALUATION

SEGMENT: EV 020  SUB: A  REGION: PWS  SURVEY DATE: 4/30/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) RESTRICTED 3/1 - 9/15

Ecological/Constraints (see page two for details) Eagle nest, Subsistence - Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO Signature: Rachid Date: 5/13/91

RECOMMENDATIONS:
TREATMENT REQUIRED (Y or N) N
Manual Pickup (Check as Req.)
Spot Washing
Bio-Customblen Only
Bio-Inipol/Customblen
Other
Other

COMMENTS:
INITIAL:

TAG:

FOSC:


ADEC

EXXON

USCG

NOAA
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Eagle Nest: Access restricted from 3/1 to 9/1. USF&WS authorization required. Maintain 1000' vertical and 1/4 mile horizontal buffer.

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.
TEAM NO. 5  SEGMENT EV-20  SUBDIVISION A  DATE 4/30/91

ADEC
NAME  John Heyer  SIGNATURE

☐ NTR  This small shore area still has some small patches of ryegrass although grass is dying here. Core picked up AP but below 572 at TB's 1 & 372. No subsurface oiling observed here. Remaining oil does not need treatment at this time. As CVC group will be in area they may want to raise ryegrass + P.U. core reaching SOR+AP on this segment. See land manager comments.

EXXON
NAME  Mammozzi M.J.  SIGNATURE

☒ NTR  Area looks very good away. Oil front is weathering nicely. Further work would be of no educational benefit.

LANDMANAGER
NAME  Steve Lillard  OF CVC  SIGNATURE

☐ NTR  Chenoa Local Response should clean this area. No subsurface found. But there is enough surface oil to warrant a clean-up. This is a high subsurface area for Chenoa until a good clean next right on this section. Claims can be protected by picking up remaining oil in grass and between rocks.

USCG/NOAA
NAME  Dresher /Hedges  SIGNATURE

☒ NTR  Oil contour coverage splatter with pine needles on most upper area rocks. Scattered tar patties in upper stream area were picked up.
MAYSAP SHORELINE OILING SUMMARY

TEAM NO. 5
OG ______ CHANEY ______
BIO _____ CRANK ______
ADEC ______ HAYES ______
EXXON _____ MARTINEZ ______
LANDMANAGER _____ WARD _____ for CVC
USCG/NOAA _____ DREHER/HODGES

SEGMENT EV20
SUBDIVISION A
DATE April 30, 1991

TIME 09:50 to 10:30
TIDE LEVEL -1 ft to -2 ft.
ENERGY LEVEL: □ H □ M □ L
WEATHER: □ SUN □ CLOUDS □ FOG □ RAIN □ SNOW

TOTAL LENGTH SHORELINE SURVEYED: 132 m
NEAR SHORE SHEEN: □ BR □ RB □ SL □ NONE

EST. OIL CATEGORY LENGTH:

<table>
<thead>
<tr>
<th>LOC</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT</th>
<th>SHORE SLOPE</th>
<th>WIDTH</th>
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DISTRIBUTION: C = 91-100%; B = 61-90%; P = 11-60%; S = 1-10%; T = <1%
SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE
PHOTO ROLL #: MAYSAP-5 - 5 FRAMES 13-17

DISTRIBUTION: C = 91-100%; B = 61-90%; P = 11-60%; S = 1-10%; T = <1%
SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE
PHOTO ROLL #: MAYSAP-5 - 5 FRAMES 13-17

<table>
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<th>PIT NO.</th>
<th>DEPTH (cm)</th>
<th>SUBSURFACE QIL CHARACTER</th>
<th>OILED ZONE</th>
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<th>PIT ZONE</th>
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SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS: THIS SURVEY WAS CONDUCTED IN DRIVING RAIN SO LIGHT OILING CONDITIONS WERE DIFFICULT TO OBSERVE.

REVISED: F.W. 5/3/91
REWRITTEN: M.C. 5/3/91
**MAYSAP BIOLOGICAL SUMMARY FORM**

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<th>TEAM #</th>
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<tr>
<td>SEA STATE</td>
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<td>TIDAL HEIGHT (Range)</td>
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**COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):**

(A) Pit #1 - Area located in UITZ cobble with <1% biota cover including rare barnacles, amphipods and filamentous green algae. Barnacles are tightly sealing their inner plates. No other intertidal macro-biota was observed in the area. Rockcutrock .5m SE of site has ~20% biota cover with sparse barnacles and sparse Fucus sporelings. Below site is clam bed and ~20% Fucus cover.

(B) Area is located 30cm SW of A in the UITZ. There is ~50% biota cover dominated by a moderate to dense concentration of healthy barnacles. Fucus is sparse. Maturing conceptacles and stipe-only plants are present. Mussels are rare. Below site is a clam bed dominated by *Prototreta (little-neck)*. *Saxicava (butler)* and *Teams (lone)* also present. There are sparse limpets and *Litairina (juvenile literature present)*.

(C) Area is located along rock face high in UITZ and in SUPRA. No macro-biota observed to be in direct contact with oil. Approx 30cm above site mosses are present and approx 30cm below site Fucus with maturing conceptacles and tightly sealing rare barnacles are present. In MITZ on rock face Fucus dominates ~70% of plants are stipe-only (sporelings not present). Below rock is dense clam bed dominated by <4yr old Prototreta. Many other dep present.

(D) Area is located in UITZ and MITZ ~5m west of stream. There is ~20% biota cover. Barnacles are predominant species - animals are tightly sealing their inner plates. Fucus is present - no stipe-only plants and many sporelings are present. There are rare mussels, limpets and *Littorina (juvenile literature present)*. Approx 5m North of site there is a dense Fucus bed and a sparse intercobbler mussel bed.

**WILDLIFE OBSERVATIONS**

**TO BE COMPLETED IN ALL SUBDIVISIONS**

<table>
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<th>BIRDS</th>
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<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED SPECIES PRESENT</th>
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<tr>
<td>Whales (specify)</td>
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</tbody>
</table>

**LAND MAMMALS**

Shoreline subdivision map showing important biological features attached.
Comments (cont.)

(E) Area is located in SUPRA and UITZ. There is a 30cm² patch of oiled rye grass, grass adjacent to patch is sprouting - see photo MAYSAP roll 5 frame 17. Green 'lawn' grass is also present in site. In UITZ Fucus sporelings are dominant species with ~10% biota cover. Barnacles are rare; Littorina and limpets are sparse. Rare Customblen casings are present. Seven meters below site there is a dense Fucus bed in the fresh water stream.

(F) Area is a band around and near the top of a large boulder. No biota located within band. Moderate limpets and Littorina; sparse Nucella (whelks), and barnacles and rare mussels (various age classes) located on boulder below oil.

Site is a low energy beach with a fresh water runoff stream. UITZ is a dense clam bed dominated by ~4 year old Prototheca, Saxidomus also present. There is ~20% - 80% Fucus cover with maturing concepticles present. A rare concentrated intergravel mussel bed is also present. Otters have been utilizing area (digs evident). Eagle nest was not located.
MAYBAP 1991
OG SKETCH MAP
GREG CHANEY
TEAM 5
SEGMENT: EV-20-A
DATE: APRIL 30 1991
AIR P. #: EV V/DZ-1-6S-14

LEGEND

SCALE
ROUGHLY
10 METERS

BEDROCK
BOULDER8
FINE BED.
DRIFT LOG
GRASS
BRUSH
FOREST
OILED PIT
NO OIL PIT
PHOTO

2m² AP
1PU

3 x 16
AP 20%
SOR 10%
SHALLOW BEDROCK
GRASS ABOVE

D 1 x 8m
CT 30%
CV 40%

E

F

EVANS ISLAND

SHELTER BAY

OILING CONDITIONS ARE REPRESENTED AFTER MANUAL REMOVAL
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-19

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION

SEGMENT ST/ EV-19 SUBDIVISION A (1 OF 1) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
5T All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO SIGNATURE:________________________ DATE:________________________

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 93 m: No Oil 1337 m
Subsurface Oil Observed: Yes___ No X___ Maximum Depth________

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: ___________________________________________________________

______________________________________________________________

______________________________________________________________

TAG COMMENTS: ______________________________________________________

______________________________________________________________

______________________________________________________________

TAG APPROVAL DATE:__________

ADEC _______________ EXXON _______________ NOAA _______________

FOSC:_______________ DATE:__________

USCG _______________
FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EV-19 SUBDIVISION: ___________________________ DATE 4/7/90

NOAA NAME GARY SHIGENAKA SIGNATURE Gary Shigewak

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS
SEGMENT CONSISTED OF BOULDER AND ROCK OUTCROP SHORELINE ON EVANS ISLAND, AT THE
NORTHEASTERN APPROACH TO SHELTER BAY. SOME EVIDENCE OF OILING WAS NOTED IN THE FORM
OF COAT/Cover ON THE SEAWARD FACES OF ROCK OUTCROPS NOT DIRECTLY EXPOSED TO SURF
(i.e., located behind other outcrops). WEATHERED STAIN AND COAT WERE FOUND ON ANOTHER
PORTION OF BEACH (CLOSER IN TO SHELTER BAY AND WITH A MORE WESTERLY ORIENTATION, IN THE
UPPER INTERTIDAL ZONE). THIS STAIN AND COAT WAS SEEN ON LARGE BOULDERS, MOSTLY ON THE
LEEWARD SIDE. IN ONE CASE, MOSS GROWING ON A BOULDER HAD BEEN COATED AND HAD VIEP, BUT THERE
WAS CLEARLY NEW MOSS GROWTH OVER THE WEATHERED OIL AND MOSS.

ALTHOUGH THE STAIN/C0AT/Cover WAS OCCASIONALLY FOUND IN BANDS ON THIS SEGMENT, THIS WAS
A SPORADIC OCCURRENCE. MUCH OF THE SEGMENT SHOWED NO SIGN OF OIL.

MUCH OF THE SUPERTIDAL THAT COULD BE DEFINED WAS COVERED WITH SNOW; THE UPPER PORTION
OF BEACHES WERE FROZEN (AND SOMEWHAT DIFFICULT TO PIG IN!)

ADEC NAME John Hayser SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS
Oiling observed consisted of CO. Staining on boulders
+ bedrock in UTV. No SS. oiling observed.

Supertidal zone was mostly covered with snow.

Bench was frozen so SS. holes were difficult to dig in
some areas although no SS. oiling was observed when holes were
 dug. Bench appeared to be free of visible oil + well washed.

LAND MANAGER
NAME James A. Barkser SIGNATURE

☑ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS OBSERVED VERY LIGHT STAINING ON PROTECTED SIDES
OF ROCKS, STAIN WEATHERED. SMALL BANDS OF WEATHERED
OIL ALSO FOUND.
SHORELINE OILING SUMMARY

TEAM NO.: 11  TIDE LEVEL: 1.5 to 2.8  DATE 4/17/90
EST. SUBDIVISION LENGTH: 1414 m  Weather: Sun  Clouds  Fog  Snow
SURVEYED FROM: Foot  Boat  Helo  WORKING DIRECTION: N to S
SURFACE SEDIMENTS: R 40% B 25% C 15% P 5% G 5% S 15% M 10% V 5% WAVE EXPOSURE: Low  Med  High
SLOPE: Lang 70% Hang 50% Vert 20%  OIL CATEGORY LENGTH: W m M m N m VL 35 m NO 1379 m

SURFACE OIL

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<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<tr>
<td>TARBALLS</td>
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PAVEMENT: H F S sq.m by cm
PATTIES / TARBALLS --- BAGS
NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS AMOUNT
Logs
Vegetation
Trash X
Debris

Photographs:
Roll No.
Frames

OILED DEBRIS AMOUNT
Logs
Vegetation
Trash X
Debris

Photographs:
Roll No.
Frames

SUBSURFACE OIL

<table>
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<tr>
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<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OIL INTERVAL</th>
<th>BELOW</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>A N A</th>
<th>SUBSURFACE SEDIMENTS</th>
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COMMENTS: Only some very light staining CT/S on the protected sides of rock outcrops and boulders was observed. The oil/ tar appeared to be weathered (dull black tar stain) the oiling occurred in the HETZ. The shore zone consists mostly of boulder/rock shore line with some focke cobble beaches.
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST / EVO19  Subdivision A  Date (mo/day/yr) 4/7/90

Time (24 hr) 07:20 hrs Biologist Ambrose

(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 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 (3)

### BARNACLES

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### FUCUS

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Wildlife Observations/General Comments:
- Otter, mink, bald eagle, seal (hauled out on rock)
- Dense cover on bedrock walls in low to mid intertidal; on cobbles, dense filamentous algal cover in lower intertidal, otherwise fairly sparse.

Ecological Considerations:
- 711, 5T: One mature bald eagle seen, but no nests.

*Additional wildlife observations: Pair of mature bald eagles with nest & immature near by in EVO72, pair of mature eagles and nest in EVO05, plus 3 adult otters + 1 beaver, 2 buffleheads, 1 merganser, 1 mallard, pair of immature eagles and one solitary mature eagle, 1 cormorant, 5 gulls, 3 white ducks, and 6 surf scoters.
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. Contact ADF&G Habitat Division prior to treatment for permits.

Salmon fry nursery area (4/31 to 7/31)
Esther Hatchery release (4/15 to 6/1)
Main Bay Hatchery release (4/20 to 5/10)
Sawmill Bay Hatchery release (4/15 to 6/1)
Cannery Creek Hatchery release (4/21 to 6/1)
Remote release site
Gill net area (8/7 to 8/31)
Purse seine area (7/20 to 5/30)
Purse seine hook-off (7/20 to 9/30)
Set net sites (8/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

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.

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.

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.

Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.

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.

Recreation: Tent sites (6/1 to 9/15)
Anchorage (6/1 to 9/15)
Forest Service cabins (6/1 to 9/15)
Lodge (6/1 to 9/15)
Special use destination

Subsistence area: Salmon harvesting (5/1 to 9/30)
Finfish harvesting
Deer harvesting (8/15 to 2/28)
Invertebrates harvesting
For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
1991 MAYSAP EVALUATION

SEGMENT: EV 021 SUB: A REGION: FWS SURVEY DATE: 4/30/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) OPEN 5/1 - 8/15; RESTRICTED 8/15 - 9/15

Ecological/Constraints (see page two for details) Subsistence - Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO Signature: ___________________________ Date: ___________________________

RECOMMENDATIONS:

<table>
<thead>
<tr>
<th>TREATMENT REQUIRED (Y or N)</th>
<th>INITIAL</th>
<th>TAG</th>
<th>FOSC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
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</tbody>
</table>

Manual Pickup (Check as Req.) X
Spot Washing
Bio-Customblen Only
Bio-Inipol/Custmblen X
Other__________________________
Other__________________________

COMMENTS:
INITIAL: Remove asphalt at locations A, B, D, E and F. Apply Customblen and Inipol after removal. Rake in customblen in area of pits 4 and 5.

TAG: __________________________________________________________

FOSC: _________________________________________________________

TAG APPROVAL DATE: ____________ FOSC APPROVAL DATE: ____________

ADEC________________________ FOSC ____________________________

EXXON_______________________

USCG_______________________

NOAA_______________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.
ADEC  
NAME: John Heslop  
SIGNATURE:  

☐ NTR  
EV Treatment Recommended  
Recemned manual cae remeoe remotely. See cree observed on surface particularz around deaders & east part of beach. Sub-surface oiling on this beach needs a more complete survey to determine feasibility of oiling here. This fine grain beach would be fillable in the MITZ & C1TZ. I expect a sub-surface oil mount this treatment. Beach was oteart site previously & did not reminc much treatment following 1989 as I recall.

EXXON  
NAME: Matthew N.  
SIGNATURE:  

☐ NTR  
There is some A/P litter that could be picked up plus some debris. Since area is sensitive good job for CVC.

LANDMANAGER  
NAME: Steve Ward of CVC  
SIGNATURE:  

☐ NTR  
Lots of manual can be done on this section to remove asphalt and lots of trash. There is quite bit of asphalt on this surface and a very large amount of Sub-surface oil. The sub-surface oil is shallow to keep out in this section of this beach. Could be tilled. A good study of the ecological risk to the area should be conducted. Any tilling is done there use herbicides and summer setbacks close to this area. High Subsides use is from rats and wild Life in this area.

USCG/NOAA  
NAME: Dreher/Hedges  
SIGNATURE:  

☐ NTR  
Oil cont with pine needles in upper rocks. Some tar patches found. Prot showed evidence of sub-surface oiled sediment, very lush grass not in upper berm.

Some manual pick up should be considered. H400
MAYSAP SHORELINE OILING SUMMARY

<table>
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<tr>
<th>Segment</th>
<th>EV 21</th>
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<tbody>
<tr>
<td>Subdivision</td>
<td>A</td>
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DATE: April 30, 1991

**Team No.** Team No. Chaney

<table>
<thead>
<tr>
<th>DATE</th>
<th>30/04/91</th>
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</thead>
</table>

**Surveyed From:**
- Foot
- Boat
- Helo

**Surveyed Length:** 164 m

**Estimated Oil Category Length:**
- W: 0 m
- M: 10 m
- N: 15 m
- V: 139 m
- D: 0 m
- US: 0 m

**Surface Oil Character**

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<tr>
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<th>AP</th>
<th>MS</th>
<th>MB</th>
<th>CV</th>
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**Notes:**
- Patches between boulders
- Seaweed drift covering
- Distance between big boulders
- Old grass roots
- Boulders

**Distribution:**
- C = 61-100%
- B = 61-90%
- P = 11-60%
- S = 1-10%
- T = <1%

**Slope:**
- V = Vertical
- H = High Angle
- M = Medium Angle
- L = Low Angle

**Photo Roll # Maysap:**
- 5 - 5 frames

**OG Comments:**
AP remains at this site in distinct patches. Some areas are accessible without difficulty. The site was covered by seaweed drift so some AP may have been missed. Subsurface oil distribution is complex and would require further delineation if treatment is conducted.

**Revised:** F.W. 5/10/91

**Rearranged:** M.C. 5/15/91
NOTE: SIX METER BAND OF THICK RAFTED
SEAWEED IS COVERING HIGH INTERTIDAL ZONE.

LEGEND

- BEDROCK
- BOULDER BASE
- FINE BED. SETTING
- DRIFT LOG
- GRABB
- BRUSH
- FOREST
- OILED PIT
- NO OIL PIT
- PHOTO

SOLDBERSH

10 X 30 m
DISTINCT PATCHES
OF AP AT BOULDER
Bases, AP<1%, CV<1%
CT<2%

LARGE
BOULDER
w/ BONZAI
SPRUCE
TREES

IN BOULDERS
SMALL PATCHES
AP TRACE
SOR 5%
CV TRACE
CT 5%

5 X 10 m

10 X 10 m HOST
10 X 10 m MAX

DRUG

20 M

PHOTO

ROUGHLY

POSSIBLE EAGLE NEST SITE

RED
55 GAL DRUM

10 X 10 m

CV 10% CT 10%

2 m² PU (more remains)
Area covered with raft of drifted seaweed

RED
55 GAL DRUM

10 X 10 m

CV on back of big boulders in band
up to 1 m high
AP patches at boulder bases on bedrock. There is a lot of clean sed in between boulders
AP<1%
CT<2%

REVIEWED: E.P. E. 6/17/91
TEAM # 5

SEGMENT # EV-21

SUBDIVISION: A

SEA STATE 1+2

PHOTOGRAPHS: ROLL \\

DATE 30 April 1991

TIDAL HEIGHT (Range) +1 → +4.5

BIOLOGIST Crank

WIND SPEED/DIRECTION 10-15 knots /N

Comments/Observations (to be completed in oiled subdivisions only):

(A) Area is located in supra and high UITZ. Moss, black lichen, white lichen, and drift Fucus only macro-biota. Founds two meters below site. There is c. 75% biota cover including a moderate 3m wide Fucus band with 50% cover. Below Fucus band is an inter-gravel mussel bed including a moderate to dense 10 x 20m patch. Barnacles are sparse.

Dists 2, 3, 4, 5 located on cobbles/gravel high energy beach with c. 10% biota cover.

(B) Area is located in high UITZ in drift pocket. Drift algae and amphipods are the only biota. Sea otter carcass adjacent to site; deceased more than 5 days. Teeth are present in skull.

(C) Area is in the high UITZ in the driftline, includes pit #17. Barnacles in area have Fucus sporangia; rare juvenile mussels and barnacles make up the 10% biota cover. 50% of the barnacles did not tightly seal their inner plates when stimulated. There are several tough feathers in the driftline, and one dead grebe (Podiceps). Below sea, in a Fucus bed with c. 25% cover on barnacles and c. 40% on cobbles. Approx. 10% of the plants are shade only; the MITZ barnacles are moderate with a new set present. Concentration increases to dense in the UITZ. Juvenile mussels are present in boulder cracks. Limpets and Kelping are sparse; Limpets, juveniles are present.

Wildlife Observations

To Be Completed In All Subdivisions

<table>
<thead>
<tr>
<th>Birds</th>
<th># of Species</th>
<th>Total Birds</th>
<th>Fish Observed Species Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eagles</td>
<td></td>
<td>1</td>
<td>2 Possible Next</td>
</tr>
<tr>
<td>Seabirds</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Waterfowl</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Gulls/Kittiwakes</td>
<td></td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Shorebirds</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Corvids</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Other Birds</td>
<td></td>
<td>2</td>
<td>1 hand</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Marine Mammals</th>
<th># Observed</th>
<th>Species</th>
<th># Observed</th>
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</thead>
<tbody>
<tr>
<td>Sea Otters</td>
<td>1–dead</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pinnipeds (specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whales (specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Land Mammals</th>
<th># Observed</th>
<th>Species</th>
<th># Observed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sea Otters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pinnipeds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whales</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Shoreline subdivision map showing important biological features attached.

Reviewed 60. M.C 5/3/91
Area is located high in the ULTZ; in angular cobble in the lee of boulders. Mosses, black lichen and drift algae (herring spawn on some drift) were the only macro-biota observed to be within the site. Ten meters below the site there is ~40% biota cover including Fucus (many plants have epiphytes), sparse to moderate barnacles; moderate Littorina, sparse limpets and hermit crabs.

Area is located high in the ULTZ ~10m west of D. Biota similar to area (D). Fish bones were present on top of knoll.

(F) Area is located high in the ULTZ, in and below the driftline. No intertidal biota present. Five meters below, Fucus sporangia and barnacles are sparse covering ~20% of the small boulders and cobbles. Filamentous green algae, Phaeophyta (algae) and rare mussels are also present below site.

Large amount of drift Fucus was present in the ULTZ. Low biota cover on gravel beach (~10%) and up to 80% cover on the boulder/rock beach corders. There appears to be an inactive Eagle Nest behind gravel beach. A dead sea otter (older than 5 days) was also found; all the teeth are present in both jaws. Some of the three stops appear to have been stripped (porcupine activity?).

Reviewer: M.C. 5/15/91
MAYBAP 1991
OG SKETCH MAP: Bio Map
GREG CHANEY; Crank
TEAM S
SEGMENT: E
DATE: APR 30 91
AIR P/N: DEB92 LGS-12

NOTE: SIX METER BAND OF THICK RAFTED
SEAWEED IS COVERING HIGH INTERTIDAL ZONE,
Fucus drift collection pocket

Intercoastal Mussel
Bed with 10-30m
patch of moderate to
dense concentration

Ground beach with
low bioaerosol
in litz

LARGE
BOULDER

with
BONZAI
SPRUCE

TREES

Fish bones often on this
Small

Eagle feathers
in drift line

Possible
Eagle Nest
Site Appears inactive

In Boulders
Small Patches
AP TRACED
SOR 5%
CV TRACED
CT 5%

5 x 10 m

AP 20%
1 x 5m
In Grass Roots
and Between
Boulders
AP<1%
CV<2%

AP~5%
3 x 60m
Patches AP
in Boulders

6 x 10m
(Patches) AP2%
CV 10% CT 10%

2 m² PU (more
remains)
Area covered with
raft of drifted
seaweed

RED
55 GAL DRUM

10 x 40m

CV on back of big
boulders in band
up to 1m high
AP patches at
boulder bases on
bedrock. There is
a lot of clean sand
between boulders
AP<1%
CV<2%

Legend

Legend

Bedrock
Boulders
Fine Bed
Drift Log
Grass
Brush
Forest
Oiled Pit
No Oiled Pit
Photo

Scale
Greg Chanten
April 30 1991
MAYSAP TEAM 5

Segment Reference Map
Map Key: EV8EV021

EAGLE NEST

REVISED: E.W. S1/91
REVISED: M.C. 5/3/91
1991 MAYSAP EVALUATION

SEGMENT: EV 021  SUB: A  REGION: FWS  SURVEY DATE: 4/30/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s)  OPEN 5/1 - 8/15; RESTRICTED 8/15 - 9/15

Ecological/Constraints (see page two for details)  Subsistence - Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find, and contact Exxon's Cultural Resource Program immediately:
564-3276; 564-3657; (Anchorage) or 229-1514 (24 hrs.).

RECOMMENDATIONS:

<table>
<thead>
<tr>
<th>TREATMENT REQUIRED (Y or N)</th>
<th>INITIAL</th>
<th>TAG</th>
<th>FOSC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual Pickup (Check as Req.)</td>
<td>X</td>
<td>X</td>
<td>A.</td>
</tr>
<tr>
<td>Spot Washing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bio-Customblen Only</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Bio-Inipol/Customblen</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

COMMENTS:

INITIAL: Remove asphalt at locations A, B, D, E and F. Apply Customblen and Inipol after removal. Rake in customblen in area of pits 4 and 5.

TAG: manually till in area of pit 5 (40R) to depth of oil prior to bio application

FOSC: NO B10 - due to CVC's concerns

TAG APPROVAL DATE: MAY 17 1991  FOSC APPROVAL DATE: 4/25/91

ADEC  EXXON  USCG  NOAA

E. E. PAGE, CDR, USCG  CHIEF OF STAFF, FOSC
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.
<table>
<thead>
<tr>
<th>Team No.</th>
<th>SEGMENT</th>
<th>Subdivision</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>EV-21</td>
<td>A</td>
<td>4/30/91</td>
</tr>
</tbody>
</table>

### ADEC

**NAME**: John Hayter  
**SIGNATURE**:  
- **NTR**: Yes  
- **Comment**: Manual canal removal needed. At times, the asphalt on the surface should be removed to determine feasibility of refilling. The grab sample should be filled in the M372-UITZ. The sand might not be easily recoverable. This site needs close monitoring.

### EXXON

**NAME**: Martinez, N.J.  
**SIGNATURE**:  
- **NTR**: Yes  
- **Comment**: There is some A/P patching that could be picked up. It also appears this area is sensitive, good job for CUC.

### LANDMANAGER

**NAME**: Steve Ward of CUC  
**SIGNATURE**:  
- **NTR**: Yes  
- **Comment**: Lots of manual can be done on this section. To remove asphalt and lots of trash, there is a lot of asphalt on the surface and a very large amount of subsurface. At the subsurface is shallow, to keep and a log section of this section could be filled. A good study on the ecological risk to the beach could be filled. Any filling is done, there are high Subsidence Good fish beds and Salmon streams close to this area. High Subsidence Good fish beds and Salmon streams close to this area. High Subsidence Good fish beds and Salmon streams close to this area.

### USCG/NOAA

**NAME**: Draper / Hedges  
**SIGNATURE**:  
- **NTR**: Yes  
- **Comment**: Oil coats with pine needles in upper rocks. Some tar patches found. Pits showed evidence of subsurface oiled sediment. Very lush focus not in upper berm. Some manual pick up should be considered. HAD
**MAYSAP SHORELINE OILING SUMMARY**

<table>
<thead>
<tr>
<th>SEGMENT</th>
<th>A/V 21</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBDIVISION</td>
<td>4</td>
</tr>
<tr>
<td>DATE</td>
<td>April 30/91</td>
</tr>
</tbody>
</table>

**TEAM NO.**
CHANEY

**NAMES**
HAYES
MARTINEZ

**TIME**
11:05 to 12:15

**TIDE LEVEL**
+1 ft. to +4.5 ft.

**ENERGY LEVEL**
- L - M - H

**SURVEYED FROM**

- Foot
- Boat
- Helo

**WEATHER**
- Sun
- Clouds
- Fog
- Rain
- Snow

**TOTAL LENGTH SHORELINE SURVEYED:** 164 m

**EST. OIL CATEGORY LENGTH:**

- W: 0 m
- M: 15 m
- N: 10 m
- V: 139 m
- U: 48 m
- S: 0 m

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT</th>
<th>SHORE SLOPE</th>
<th>AREA</th>
<th>LENGTH</th>
<th>ZONE</th>
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<tbody>
<tr>
<td>AS</td>
<td>B</td>
<td>M</td>
<td>3</td>
<td>60</td>
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<td></td>
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<tr>
<td>BP</td>
<td>B</td>
<td>P</td>
<td>3</td>
<td>40</td>
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<tr>
<td>CP</td>
<td>B</td>
<td>P</td>
<td>3</td>
<td>20</td>
<td></td>
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</tr>
<tr>
<td>DP</td>
<td>B</td>
<td>M</td>
<td>3</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EP</td>
<td>B</td>
<td>M</td>
<td>3</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FT</td>
<td>B</td>
<td>M</td>
<td>3</td>
<td>20</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTES**

- Patches between Boulder
- Seaweed Drift Coverage
- Distance Between Buoys
- Old Grass Roots
- Boulder

**DISTRIBUTION:**
C = 81-100%; B = 51-80%; P = 11-50%; S = 1-10%; T = <1%

**SLOPE:**
- V = Vertical
- H = High Angle
- M = Medium Angle
- L = Low Angle

**PHOTO ROLL # MAYSAP:**
5

**OG COMMENTS:**

AP remains at this site in distinct patches, some are accessible without difficulty. The site was covered by seaweed drift so some AP may have been missed. Subsurface oil distribution is complex and would require further delineation if treatment is conducted.

**REVISED:** F.W. 5/3/91

**REVIEWED:** M.C. 5/3/91
NOTE: SIX METER BAND OF THICK RAFTED
SEAWEED IS COVERING HIGH INTERTIDAL ZONE.

A) AP ~ 5%
3x60m
Patches AP
in Boulders

B) 6x10m
(Patches) AP 20%
CV 10% CT 10%

2 m² PU (more remains)
Area covered with raft of drifted seaweed

C) CV on back of big boulders in band up to 1 m high
AP patches at boulder bases on bedrock. There is a lot of clean sand between boulders
AP < 1%
CV ~ 2%

LEGEND

BEDROCK
BOULDERS
FINE BED
DRIFT LOG
GRASS
BRUSH
FOREST
OILED PIT
NO OIL PIT
PHOTO

SCALE
20 METERS
ROUGHLY

IN BOULDERS
SMALL PATCHES
AP TRACE
SOR 5%
CV TRACE
CT 5%

X
POSSIBLE EAGLE NEST SITE
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #5  DATE 30 April 1991
SEGMENT # EV-21 TIDAL HEIGHT (Range) +1 to +4.5
SUBDIVISION A BIOLOGIST Crank
SEA STATE 1-2 WIND SPEED/DIRECTION 10-15 knots /N

PHOTOGRAPHS: ROLL # FRAME #

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):

(A) Area is located in SUPRA and high UTZ. Moss, black lichen, white lichen, and drift Fucus only macro-biotic found. Two meters below site, there is a ~75% Fucus cover including a moderate 3 m wide Fucus band with sporplings. Below Fucus band is an inter-gravel mussel bed including a moderate to dense 10 x 30 m patch. Barnacles are sparse.

B 3, 4: 5 located on cobble/gravel high energy beach with ~10% Fucus cover

(B) Area is located in high UTZ in drift pocket. Drift algae and amphipods are the only biota. Sea Otter carcass adjacent to site, deceased more than 5 days - teeth are present in skull.

C) Area is in the high UTZ in the drift line. Includes pit #17. Boulders in area have Fucus sporplings, some juvenile mussels and barnacles make up the lower 5-2 biota cover. 60% of carcasses did not tightly seal their inner plates when stimulated. There are several large feathers in the drift line and one dead geyser (Pygocela). Below site is a Fucus bed with ~25% cover on boulders and ~40% on cobbles. Approx. 10% of the plants are stipe only. In the UTZ Barnacles are moderate with a new set present, concentration increases to dense in the UTZ. Juvenile mussels are present in boulder cracks. Limpets and kelpings are sparse; Limpet juveniles are present.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED</th>
<th>SPECIES PRESENT</th>
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</thead>
<tbody>
<tr>
<td>Eagles</td>
<td>1</td>
<td>2</td>
<td>Possible Neat</td>
<td></td>
</tr>
<tr>
<td>Seabirds</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waterfowl</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gulls/kittiwakes</td>
<td>1</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shorebirds</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corvids</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Birds</td>
<td>2</td>
<td>?-head</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MARINE MAMMAL</th>
<th># OBSERVED</th>
<th>LAND MAMMAL</th>
<th>SPECIES</th>
<th># OBSERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sea Otters</td>
<td>1 (dead)</td>
<td>Pinnipeds</td>
<td>specify</td>
<td></td>
</tr>
<tr>
<td>Whales</td>
<td>specify</td>
<td>Specify</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Shoreline subdivision map showing important biological features attached.
(D) Area is located high in the ULTZ in angular cobble in the lee of boulders. Mosses, black lichen and drift algae (herring spawn on some drift) were the only macro-biota observed to be within the site. Ten meters below the site there is ~40% biota cover including _Fucus_ (many plants have epiphytes), sparse to moderate barnacles, moderate _Littorina_, sparse limpets and hermit crabs.

(E) Area is located high in the ULTZ ~10 m west of D. Biota similar to area (D). Fish bones were present on top of knoll.

(F) Area is located high in the ULTZ, in and below the driftline. No intertidal biota present. Five meters below, _Fucus_ sporangia and barnacles are sparse covering ~20% of the small boulders and cobbles. Filamentous green algae, _Melopectis_ (algae) and rare mussels are also present below site.

Large amount of drift _Fucus_ was present in the ULTZ. Low biota cover on gravel beach (~10%) and up to 80% cover on the boulder/rock beach borders. There appears to be an inactive Eagle Nest behind gravel beach. A dead sea otter (oldest than 5 days) was also found, all the teeth are present in both jaws. Some of the three tops appear to have been stripped (porcupine activity?).

REVIEWED: ML 5/19/97
NOTE: SIX METER BAND OF THICK RAFTED SEAWEED IS COVERING HIGH INTERTIDAL ZONE.
Fucus drift collection pocket

Intercalate Mussels
Bed with 10x30 cm patch of moderate to dense concentration

Gravel beach with 10% debris cover
In LITZ

RED
55 GAL DRUM

10x40 m

CV on back of big boulders in band up to 1 m high
AP patches at boulder bases upslope. There is a lot of clean sed between boulders
AP ~5%
CV ~2%

AP ~5%
3x60 m

Patches AP in Boulders

B 6x10 m
(Patch) AP 20%
CV 10% CT 10%
2 m² PU (more remains)
Area covered with raft of drifted seaweed

C

D
AP 20%
1x5 m
In grass roots and between boulders

Possible Eagle Nest Site
Appears inactive

LEGEND

BEDROCK
BOULDER
FINE SED.
DRIFT LOG
GRASS
BRUSH
FOREST
OILED PIT
NO OIL PIT
PHOTO

SCALE
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-20

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION
SEGMENT ST/ EV-20 SUBDIVISION A (1 OF 1) DATE 4/19/90

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)
7TI Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: __________________________ DATE: __________________________

OILING CATEGORIZATION:

Wide 0 m: Medium 228 m: Narrow 99 m: V.Light 520 m: No Oil 0 m
Subsurface Oil Observed: Yes ___ No X Maximum Depth ______

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes removal of tarmat and manual pick up of oiled vegetation and tarballs. Work should be conducted after 6/1 and with approval of USFWS regarding eagle nest.

TAG COMMENTS: ____________________________________________

TAG APPROVAL DATE: __________________________

ADEC
EXXON
NOAA
USCG

FOSC: __________________________ DATE: __________________________
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 sites
1I Gill net area (6/7 to 6/31)
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 unoolied 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 (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 (6/1 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.

7A All Bald Eagle nests (3/1 to 8/1)
7B 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)
7IH Finfish harvesting
7JH 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 BT1, EV-20  SUBDIVISION: A (10.1)  DATE 9-19-90

NAME: Michael Rudder  SIGNATURE:  

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS:
Predominately narrow strip boulder/cobble shoreline with stain band 3m wide of southern and tapering to 1m moving north. Stains not seen on lamp or undersides of rocks and in crevices. Several patches of asphalt occurred in underlying gravel. No oil was observed thru the middle of the segment. A 2m band of cowpea/soda reefs, 6m west of Jetty, just south of pocket beach. The pocket beach was highly protected with vertical rock walls along either side of entrance. A 1x1m outcrop also blocks entrance. The outcrop of rock-walls have boulder stone ring (1m) cobble banks at the front were coated, including grass debris.

ADEC
NAME: John Hayter  SIGNATURE:  

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS:
1) Manual pick up of asphalt patches + manual mop up of oil using 3x3m. Bed (see sketch map)
2) Manual removal of oil/grass + oil beach grass + oil vegetation
3) Pocket beach # 2. Pocket beach # 3 manual removal of tar band and subsurface oil to 2cm.

LAND MANAGER
NAME:  SIGNATURE:  

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS:
Northern:  Southern segments had stain + bands of asphalt. Southern segment rocks: cobble band of asphalt. Many 3m spots not seen on lamp or 2m bands, continuing north. Stain + patches became broken distantly. At the north end of segment found greater trace, larger tidal and subaerial patches of oil may have been present. Areas not painted of left to hands indicate patches.

REVISION NO. 000100
SHORELINE OILING SUMMARY

CHARACTER DISTRIBUTION OIL/FILM COLOR IMPACTED ZONES PAVEMENT H (Y) 9 sq m by 2 cm

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>OIL/FILM COLOR</th>
<th>IMPACTED ZONES</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASPHALT PAVEMENT</td>
<td>X</td>
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<tr>
<td>POOLED</td>
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<td>X X</td>
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<tr>
<td>MOUSSE</td>
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<tr>
<td>PATTIES</td>
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<tr>
<td>TARBALLS</td>
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<td></td>
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<tr>
<td>FILM</td>
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</tr>
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</table>

OIL/FILM COLOR:
- BLACK
- BROWN
- GREEN
- RED

IMPACTED ZONES:
- TWO
- THREE
- FOUR

PAVEMENT:
- HIGH
- MEDIUM
- LOW

PATOIS/TARBALLS: 15 BAGS

NEAR SHORE SHEEN? NO OR RW SL TL

OILED DEBRIS AMOUNT TYPE
- LOGS
- VEGETATION
- TRASH
- DEBRIS

DID YOU COLLECT DEBRIS?
- YES★
- NO

OIL SPOTTED:
- YES
- NO

SURFACE SEDIMENTS:
- A
- B
- C
- D
- E

OIL DISTRIBUTION:
- SHAPE
- SIZE
- COLOR

OIL CATEGORY LENGTH:
- W 0 m
- M 80 m
- N 0 m
- V 656 m
- NO OIL

OIL CATEGORY LENGTH:
- W 0 m
- M 80 m
- N 0 m
- V 656 m
- NO OIL

SUBSURFACE OIL:
- OILED INTERVAL < 5 cm in Pit Nos. 3 and 4 does not constitute subsurface oil

PIT NO. PIT DEPTH (CM) SUBSURFACE OIL CHARACTER SUBST SUBSURFACE OIL OILED DEBRIS OILED DEBRIS AMOUNT TYPE
- YES★
- NO

OIL SPOTTED:
- YES
- NO

SURFACE SEDIMENTS:
- A
- B
- C
- D
- E

COMMENTS:
Medium oiling occurs in the Southern and Northern parts of the Segment.
There is a 50cm to 50cm thick oil layer on the surface in the Southern part of the Segment.

The Northern part of the Segment has a narrow protected cove at a low angle coast/rocky beach. There are patches of oil present with a low angle cove.

The majority of the Segment is a splattered distribution of stain among the high angle cove/rocks in the 1:472.

REVIEWED DATE 4-21-90
SHORELINE ECOLOGICAL SUMMARY

Segment ST 2, BU 20 Subdivision A (66 ft.) Date (mo/day/yr) 4/19/99

Type (20 hr) 1630  Biological KATHLEEN COGAN

(A) Substrate type and % of segments:

(B) Overall % cover of benthos (% of segment): Dense 5 Moderate 50 Low 15

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

BARNACLES

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MYTILUS

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OSTRACODA

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Wildlife Observations/General Comments:

Heavy cover of brown filamentous algae on boulders.
Many mussel shells by predatory gastropods.
Ecological Considerations:
About 50% barnacle, pocket mussel and barnacles alive, others dead.
ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T  Bald Eagle Nest

USFWS 6/1/90 map indicates an active nest in Subdivision B. Closed to manual pickup, tarmat removal, and bioremediation within 400m of active nest.

7II  Subsistence: Deer Harvesting

Closed to bioremediation after 8/15. No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

If eagle nest constraint is removed, other ecological considerations will apply.

TAG APPROVAL DATE

ADEC
EXXON
NOAA
USCG

Prepared By:

FOSC

DATE 17 June 1980

Date 6/12/80
ECOLOGY MAP
SEGMENT EV-20

Exxon Company, USA
Map Key: PWS-EV-20
June 04, 1990

EXON

EXXON

STAR Seabird Colony
triangle Active Eagle Nest
triangle Inactive Eagle Nest

1 inch = 1097 feet
SHORELINE EVALUATION

SEGMENT ST/ EV-20 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
SI-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
III Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: __________________ DATE: __________

OILING CATEGORIZATION:

Subs. 0 m: Medium 228 m: Narrow 99 m: V. Light 520 m: No Oil 0 m

Subsurface Oil Observed: Yes____ No____ Maximum Depth____

RECOMMENDATIONS:

- 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: Recommended treatment includes removal of tarmat and manual pick-up of oiled vegetation and tarballs. Work should be conducted after 6/1 and with approval of USFWS regarding eagle nest.

TAG COMMENTS: Monitors to assess Suitz

Bioremediation of areas involved on sketch.

TAG APPROVAL DATE: 5/4/90

ADEC Art Weller
EXXON Art Viner
NOAA Gary Balfour
USCG G.A. Heifer

FOSC: ______ DATE: 5-15-90

NOTIFY CCE 24 HRS IN ADVANCE OF WORK
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-21

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION

SEGMENT ST/ EV-21    SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work
in the vicinity, mark the location of the find and contact a member of
Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-
3276).

SHPO SIGNATURE: _____________________ DATE: ____________________

OILING CATEGORIZATION:

Wide 0 m: Medium 138 m: Narrow 0 m: V.Light 26 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 35 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of tar
patties and tarmats in areas indicated on attached sketch map, and 2)
bioremediation of beaches indicated on sketch map after tar patties and
tarmats are removed. Work should be conducted after 5/1.

TAG COMMENTS:


TAG APPROVAL DATE: __________

ADEC  _________________________  FOSC:  __________________ DATE: ________

EXXON  _________________________

NOAA  _________________________

USCG  _________________________
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
Estuarine Hatchery release (4/15 to 6/1)
1E
Main Bay Hatchery release (4/20 to 5/10)
1F
Seaweed 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 6/31)
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 8/15)
Restrict boat traffic to essential minimum. Avoid damage to un-oiled intertidal and subtidal algae and seagrasses. Contact ADF&G for specific dates and locations.

3N, 3P
Harbor seal and sea lion pupping (5/15 to 7/1)
3Q, 3O
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 6/1)
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
7H
Deer harvesting (9/15 to 2/28)
7JJ
Invertebrate harvesting

For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EV-21 SUBDIVISION: A (lot 1) DATE 4-19-90

NAME Michael Johnson

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS This segment is largely a broad public beach with occasional rock outcroppings. Southeastern tip is rock outcrop with small pocket beach. Asphault band continues from pocket beach to dune crest and on rock outcrop. Rocks on beach are not stained on bottom half. Light stain present on pebbles through head. Several patches of vegetable-scattered about beach. Silver to rainbow sheen observed in snowmelt seepage near asphalt patches. A presumably old pit, filled with water, which a slight silver sheen and a 5 cm band of oiled sediments was clearly detectable. Physical characteristics of beach may be appropriate for bio-remediation. Oiled debris extended under snow cover.

ADEC NAME John Hayes

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

- Exxon/Dunes & More Study Test Site
  - Beach segment EV-21 is a 152m segment primarily made up of sand + gravel + boulder on both sides by boulder outcrops. Entire segment has surface oil film.
  - Mop up + pick up oil in matrix of boulders that borders segment on both sides.
  - Manual removal of large extensive asphalt patches on segment (see drawing).
  - TILL gravel beach, flush with hot water, deoxygenate + bioremediate as finishing treatment. Beach is a good candidate for tilling + has SS oiling.
  - Oil in MSTZ from 5-15 cm/SS oil 2m to 3m in MSTZ + MSTZ covered with snow, oiled log + vegetation at snow line manual removal.

LAND MANAGER NAME James A. Parker

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

NOTE - Exxon Study Site, beach low grade angle, beach was largely sand, gravel and cobbles, more than 1 coren holes were dug, most revealing stain: green, some revealed saturation 3cm in non ocean. Much of the beach segment was covered with large asphalt patches patches varied in size, 4m x 7m to 8m x 3m. West: East ends of segment were rock: cobble, stain: asphalt present.
SHORELINE OILING SUMMARY

**SEGMENT:** EU-21
**TEAM NO.:** 11
**DATE:** 4/14/90
**TIDE LEVEL:** +2.0
**EST. SUBDIVISION LENGTH:** 153 m
**URPLANDS DESCRIPTION:** Sun, Clouds, Fog, Rain, Snow
**SURVEYED FROM:** Foot, Row, Helo
**WORKING DIRECTION:** E 10°
**SURFACE SEDIMENTS:** Rock, Sand, Clay, Soil
**SLOPE:** Long 70°, Short 15°
**WAVE EXPOSURE:** Low
**OIL CATEGORY LENGTH:** W 0.0 m, M 123 m, N 0.0 m, VL ZD 0.0 m

### SURFACE OIL

<table>
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<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL/FILM COLOR</th>
<th>IMPACTED ZONES</th>
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**PAVEMENT:** M 5 0

**NEAR SHORE SHEEN:** No

**PATTIES/TARBALLS:** 0
**BAGS:** 0

**OILED DEBRIS:**
- Logs
- Vegetation
- Trash
- Debris

**TYPE LOGS:** L:

**PHOTOGRAPHS:**
- Roll No.
- Frame

### SUBSURFACE OIL

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<th>OIL/FILM COLOR</th>
<th>PIT ZONE</th>
<th>ANA SHEET</th>
<th>GFI</th>
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**COMMENTS:** Shore zone consists mostly of a cobble/pool beach w/ some boulders. A rock/boulder outcrop to the east and west of this beach. The rock outcrop to the west has coating among the boulders. Rocks with some asphalt/near in the crevices. The pebble cobble beach has several large asphalt patches (10cm) in the upper and mid 2.72. Boulders located on the CIP beach also have a coat on them. The entire beach 35° CIP beach has a light stain w/ some film residue in the subsurface sediments.
SHORELINE OILING SUMMARY (PAGE 2)
SEGMENT ST/ EV-21 SUBDIVISION A

**SUBSURFACE OIL** (CONTINUED)

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* Oiled interval < 5 cm in Pit Nos. 1, 2, 3, 4, 5, 6, 8, 9, 10 does not constitute subsurface oil.

**COMMENTS**

For Pits 2, 3, 6, 8 and 9 there is no film on the sediments just a oil residue that rubs off on your hands.

Cobble/Pebble beach is a low angle beach with possible oiled vegetation and logs in the Supra ITZ. A majority of the Supra ITZ is covered by snow on the cliff beach.
**SHORELINE ECOLOGICAL SUMMARY**

**Segment ST / EU-21** | **Subdivision A (1 of 1)** | **Date (mo/day/yr) 4/19/90**
---|---|---

**Time (24 hr) 15:44** | **Biologist K. CONLAN**

(A) Substrate type and % of segments:
1. Bedrock 20%
2. Boulder 15%
3. Cobble 10%
4. Pebble 30%
5. Sand 25%
6. Silt 0%

(B) Overall % cover of biota (% of segment): Dense 15% Moderate 15% Low 80%

(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)

### BARNACLES

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**Wildlife Observations/ General Comments:**

Heavy filamentous brown algal cover on rocks
About 40% of the balance Hydrilla in the low intertidal zone
Ecological Considerations: Strong predation on Mytilus by Usnea
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**Comments:**
- PISASTER OCHRACEUS 5: Grey, black, 5-10 cm across.
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT EV-21 SUBDIVISION A (1 of 1)

<table>
<thead>
<tr>
<th>WORK WINDOW</th>
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<tbody>
<tr>
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<tr>
<td>Manual Pickup</td>
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<tr>
<td>Bioremediation</td>
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ARCHAEOLOGICAL STANDARD CONSTRAINT
If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS
7II Subsistence: Deer harvesting
No constraint to Manual Pickup or Tarmat Removal; closed to Bioremediation after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS
Avoid any unnecessary disturbance or damage to unconfined substrate and biota. Restrict boat and air traffic, and beach disturbance to essential minimum.
SHORELINE EVALUATION

SEGMENT ST/ EV-21 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

- Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: DATE: 5/1/90

OILING CATEGORIZATION:

- Wide 0 m: Medium 138 m: Narrow 0 m: V. Light 26 m: No Oil 0 m
- Subsurface Oil Observed: Yes X No Maximum Depth 35 cm

RECOMMENDATIONS:

- 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: Recommended treatment includes 1) manual removal of tar patties and tarmats in areas indicated on attached sketch map, and 2) bioremediation of beaches indicated on sketch map after tar patties and tarmats are removed. Work should be conducted after 5/1.

TAG COMMENTS: 

TAG APPROVAL DATE: 1/28/90

ADP secretariat

NOAA

USCG

TAG APPROVAL DATE: 5/5/90

CRU does not object to bioremediation.
SHORELINE EVALUATION

SEGMENT ST/ EV-21  SUBDIVISION A (1 OF 1)  DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7II  Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE:  DATE: 5/1/90

OILING CATEGORIZATION:

Wide __ m: Medium 138 m: Narrow __ m: V. Light 26 m: No Oil __ 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: _____ Wands
_____ Tarmat Removal  _____ Beach Cleaner

COMMENTS: Recommended treatment includes 1) manual removal of tar patties and tarmats in areas indicated on attached sketch map, and 2) bioremediation of beaches indicated on sketch map after tar patties and tarmats are removed. Work should be conducted after 5/1.

TAG COMMENTS:  MONITOR TO ASSESS SUIT

TAG APPROVAL DATE: 5/28/90

ADEC:  Art  Wimmer  Date: 5/1/90
EXXON:  Andy Calvert  Date: 5/1/90
NOAA:  George Prine  Date: 5/1/90
USCG:  Kenneth  Kane  Date: 5/1/90

FOSC:  M. L.  DATE: 5-8-90  CRC does not object to bioremediation.
**Manually Remove Tarmats and Patties off Beaches**

**Sketch Map**

- **3m x 20m CTPP** coat on D/R outcrop in the HITZ
- **3m x 10m AP/P asphalt patties in the HITZ**
- **DIC 2m x 20m**
- **2m x 20m CTPP dist. of asphalt patties in the HITZ**
- **6m x 12m AP/P asphalt patties in the HITZ**
- **2m x 20m AP/P asphalt on rocks and boulders**
- **3m x 15m AP/P in HITZ w/ CV on rocks and boulders**

**Legend**

- **1 A**
  - Petr - No Subsurface Oil
- **2 A**
  - Petr - Subsurface Oil
  - **CT/CT** Continuous Distribution
  - **CT/CT** Broken Distribution
  - **CT/S** Patchy Distribution
  - **CT/S** Splashed Distribution
  - Oiled Vegetation
  - **1**
    - Photo location, direction, and scale

**Oil Character Length (m):** AP 77 PT 30 TB 10 ST 90 MS 0 F1 0

**Total segment requires a second to clean entire section as several areas did not asphalt pattice**

**Enter 120m x 35m P/G beach w/ some boulders has a light stain with a subsurface residue which will rub off on one's hands**

**Bioremediate Pebble and Gravel Beaches after tarmats are removed.**
**1991 MAYSAP EVALUATION**

**SEGMENT:** IN 029 | **SUB:** A | **REGION:** PWS | **SURVEY DATE:** 5/14/91

**ENVIRONMENTAL SENSITIVITIES:**

Work Window(s) **RESTRICTED** 3/1 - 9/1

Ecological/Constraints (see page two for details)  Eagle nest

**ARCHAEOLOGICAL CONSTRAINTS:**

If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

**SHPO Signature:** [Signature]  Date: 5/14/91

**RECOMMENDATIONS:**

<table>
<thead>
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<th>FOSC</th>
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<tr>
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<td>Spot Washing</td>
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**COMMENTS:**

INITIAL: _________________________________________________

TAG: ---------------------------------------------------

FOSC: ____________________________________________________

TAG APPROVAL DATE: MAY 24, 1991  FOSC APPROVAL DATE: 5/27/91

ADEC [Signature]  EXXON  USCG [Signature]

FOSC [Signature]  E. E. PAGE, CDR, USCG

CHIEF OF STAFF, FOSC

NOAA [Signature]
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Eagle Nest: Access restricted from 3/1 to 9/1. USF&WS authorization required. Maintain 1000' vertical and 1/4 mile horizontal buffer.
TEAM NO. 2  SEGMENT IN 29  SUBDIVISION A  DATE 5/14/91

MAYSAP FIELD SHORELINE COMMENT SHEET

ADEC NAME: Peter Montesano  SIGNATURE: [Signature]

☐ NTR TREATMENT RECOMMENDED

PIT #1 was in location of heaviest concentration of oil for A-SAP and SSAT. The Remaining ms/SOR/AP (mapped as SOR) is barely retrievable around Boulders. The USCG Rep. never left the shift for the Southern 3/4 missing areas A,B,C,D.

EXXON NAME: O.M. Totsimakis  SIGNATURE: [Signature]

☐ NTR  OG & BIO REPORTS ARE ACCURATE: MOST OF THIS SHORELINE RELIEVES HIGH ENERGY: GOOD TEAM EFFORT HERE!

LANDMANAGER NAME: Dennis S. Kennedy of WSES  SIGNATURE: D.S. Kennedy

☐ NTR  Small amounts of stain & compost found. High energy beach - no need for future treatment.

USCG/NOAA NAME: Debra Simeone-Batty  SIGNATURE: [Signature]

☐ NTR  Only very small amounts of surface oiling was noted on this segment. In general, multiple SOR occurred between the boulder strand & high energy shoreline. 05-6

CG - Good Bio & OG Reports. NO TREATMENT NECESSARY. 3
### TEAM No.L

#### MAYSAP SHORELINE OILING SUMMARY

**TIME:** 08:49 to 09:29  
**TIDE LEVEL:** -2.76 ft. to -1.47 ft.  
**ENERGY LEVEL:** H  
**SURVEYED FROM:** FOOT  
**WEATHER:** SUN  
**TOTAL LENGTH SHORELINE SURVEYED:** 331 m  
**NEAR SHORE SHEEN:** SL  
**EST. OIL CATEGORY LENGTH:** W  
**TOTAL DEPTH OF SUBSURFACE OILED:** 25 cm  
**PIT PIT P坑 P坑**  
**ZONES:** P, P  
**COLOR:** B  
**NOTES:**  

#### DISTRIBUTION: C = 81-100%; B = 51-60%; P = 11-50%; S = 1-10%; T = <1%  
**SLOPE:** V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE  
**PHOTO ROLL # MAYSAP:** 2 - 14  
**FRAMES:** 8-10

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#### SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

#### OG COMMENTS:

SOR, CV, CT, ES found in Boulder Talus + Rock Platform area. Pebble beaches are free of oil.
**MASSAP Biological Summary Form**

**Date**: 14 May 91

<table>
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<tr>
<th>Team #</th>
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<tr>
<td>Segment #</td>
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<tr>
<td>Subdivision</td>
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<tr>
<td>Sea State</td>
<td>Calm</td>
</tr>
<tr>
<td>Tidal Height (Range)</td>
<td>-3.7 to -15 ft</td>
</tr>
<tr>
<td>Biologist</td>
<td>S. Brion</td>
</tr>
<tr>
<td>Wind Speed/Direction</td>
<td>Calm</td>
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**Comments/Observations** (to be completed in oiled subdivisions only):

A: Oil is a denser on rock face. Natural sea moss and other algae is oil on rocks. Rock face seaweed of oil support numerous egg laying starfish. These starfish should not be disturbed. Twisted (red algae) tends to adhere to the oil.  

B: Sediment is high in E12 - mosses and lichens are in this zone. Seaweed the oil is a thick cover of Ulva. Lower zones support bacterial films and sparse laminations on the boulders. Pebble areas have no surface debris. 

C-D: Oiled zones are high in E12 with only lichen on boulders. Ulva and other green algae in vicinity of oil are green. Also sparse adult barnacles near lower E12 in this region with small barnacles in this area. Recently settle barnacles spotted. 

E: Lichen in vicinity of oil. Ulva covered immediately, seaweed on the oil. Algae is dense and diverse at interline. Ulva, Fixing N. (Section 1, area, demersa, etc.).

---

**Wildlife Observations**

To be completed in all subdivisions

<table>
<thead>
<tr>
<th>Birds</th>
<th># of Species</th>
<th>Total Birds</th>
<th>Fish Observed</th>
<th>Species Present</th>
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<tbody>
<tr>
<td>Eagles</td>
<td>Not in nest - did not mate (1)</td>
<td></td>
<td>Dolphins ±3</td>
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<tr>
<td>Seabirds</td>
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<tr>
<td>Waterfowl</td>
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<td>Gulls/Kittiwakes</td>
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<td>Shorebirds</td>
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<tr>
<td>Corvids</td>
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<tr>
<td>Other Birds</td>
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**Marine Mammals**

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<td>Whales (specify)</td>
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**Land Mammals**

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Shoreline subdivision map showing important biological features attached.

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Reviewed 9/18/91
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-22

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION

SEGMENT ST/ EV-22 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: ___________________ DATE: ___________________ 

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 9 m: No Oil 159 m
Subsurface Oil Observed: Yes ___ No X ___ Maximum Depth ______

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 Removal ___ Beach Cleaner

COMMENTS: ______________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

TAG COMMENTS: ________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

TAG APPROVAL DATE: ________________
ADEC _________________________ FOSC: ________________ DATE: ________________
EXXON _________________________
NOAA _________________________
USCG _________________________
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 6/31)

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
Easter 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 (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
Recreation:

Tent sites (6/1 to 9/15)

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 2/26)

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/ EV 22  SUBDIVISION: A (1 of 1)  DATE 4-19-98

NAME Michael Buchman  SIGNATURE

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS
Tail ends of this segment are rock faces (covered by bow).
Middle of segment is narrow, very steep sloped boulder bench (walked).
Light stain was observed on boulders in a 1x1.5m band.
No oiling was observed in crevices or on underside of rocks.
Two small patches of asphalt (1/4 m^2) were observed south of waterfall. In underlying gravel.

ADEC
NAME John Hayes  SIGNATURE

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS
Segment is steep boulder bench bordered on both sides with vertical headwall.
Observed staining + tar splatters in U.T.E.
Two small asphalt patches south of waterfall. Recommend manual pickup if crews are working in area.
Low priority for treatment. Except for isolated patches(2) observed no treatment recommended for the rest of segment. No pits dug as substrate was boulder + bedrock.

LAND MANAGER
NAME James A. Bomber  SIGNATURE

☑ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS
EU - 22, BEACH SEGMENT HARD TO OBSERVE DUE TO STEEP SLOPE OF BEACH. 60% - 70% WAS WALKED, LARGE ROCK - BOULDER ON THIS SEGMENT, LIGHT STAINING WAS FOUND A STAIN WERE FOUND AT SOME LOC OF SEGMENT 1.8X20CM ANOTHER THAT WAS 15 X 20CM STAIN.
SHORELINE OILING SUMMARY

00 Mike Foerst

Bio: Kathleen Conlon

Land Rep: Steve A. Wood

Exxon: Larry Olson

ADEC: John Hayes

Team No.: 11

Tide Level: 4.1

Date: 4/29/90

EST. SUBDIVISION LENGTH: 169 m

- Sun - Clouds - Fog - Rain - Snow

UPLANDS DESCRIPTION: Grass - Forest - Rock

SURVEYED FROM: Foot - Boat - Helo

WORKING DIRECTION: S to N

SURFACE SEDMENTS: R 40% B 30% G 25% P 5% G 0% S 0% M 0% V 0%

SLOPE: Lang 0% Hang 60% Van 40%

WAVE EXPOSURE: Low - Med - High

OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m V 0 m VL 0 m NO 154 m

SURFACE OIL

CHARACTER

ASPHALT

PAVEMENT

POOLED

COVER

COAT

STAIN

MOUSE

PATTIES

TARBALLS

OIL

DISTRIBUTION

0 0 0 0

OIL / FILM COLOR

0 0 0 0

IMPACTED ZONES

PAVEMENT H F S 0 sq. m by 0 cm

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? NO 8R RW SL TL

OILED DEBRIS

AMOUNT

SM MD LG

DID YOU COLLECT DEBRIS?

YES □ NO □

TYPE OF DEBRIS

PAD

Debris

#BAGS 1

Photographs:

Roll No.

Frames

SUBSURFACE OIL

PIT NO.

PIT DEPTH (cm)

SUBSURFACE OIL CHARACTER

OILED INTERVAL

BELOW

OIL / FILM COLOR

IMPACTED ZONES

PIT ZONE

ANA

DATE

SURFACE - SUBSURFACE SEDMENTS

COMMENTS

No pits were excavated due to nature of the shore zone.

Cobbles were overturned but not logged. No oiling was observed in

this segment with the exception of a very light 1m x 15m staining in the

area D12. Shore zone consisted mostly of Boulder/Coobe high wave breakers.

Very rock wall at the Northern end of the segment.

REVIEWED □ DATE 4-20-90
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST/BU-22  Subdivision A (SE)  Date (mo/day/yr) 4/19/90

(24 hr) 1530  Biologist KATHLEEN CONLAN

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

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

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Wildlife Observations/General Comments:

*SEA OTTER DENNING*

Ecological Considerations:

Photographs:

Roll No. _______  Frames _______  NOT PRESENT
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</table>
XXX Wide  EV-22A
/// Medium
--- Narrow
TTTT Very Light
0000 No Oil

Map Key: PWS-191
Name: Mike Foskett
Date: 4/14/90
Data Entered:
SHORELINE EVALUATION

SEGMENT ST/ EV-22  SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: [Signature]  DATE: 5/1/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 0 m: No Oil 15 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: Wand

Beach Cleaner

Other (see comments)

COMMENTS: ____________________________

_____________________________________

TAG COMMENTS: MONITORS TO ASSURE THE NEED FOR TARP PATTY

PICK UP AS SHOWN ON SKETCH.

_____________________________________

TAG APPROVAL DATE: 4/28/90

ADEC  [Signature]  DATE: 5-8-90

EXXON  [Signature]  DATE: 5-8-90

NOAA  [Signature]  [Signature]

USCG  [Signature]  [Signature]
Legend

- high angle rock/boulder
- backshore
- boulders

1m x 1m ST/5
Stain in the surf
LTZ among the boulder
beach

Hith angle boulder/
Cobble / beach

Waterfall

2 for: Paties in the
HNZ1, 1.2m x 1.3m and
1m x 1.2m

Oii Character Length (m): AP 0 PO 0 CV 0 GT 0 ST 15 MS 0 PT 0 TB 0 FL 0 NO 154
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-23

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION

SEGMENT ST/ EV-23 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

● Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: __________________ DATE: __________________

OILING CATEGORIZATION:

Wide 0 m: Medium 61 m: Narrow 0 m: V.Light 55 m: No Oil 95 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

____No Treatment Recommended ___Snare/Absorbent Booms
___Treatment Recommended ___Oil Snare (pom poms)
____Manual Pickup ___Absorbents (pads, rolls, etc)
____Bioremediation ___Spot Washing: Wands
____Tarmat Removal ___Beach Cleaner
__X_Tarmat Removal ___Other (see comments)

COMMENTS: Recommended treatment includes manual removal of tarmats in two areas indicated on sketch map. Work should be conducted after 5/1. No specific time constraints identified.

TAG COMMENTS: __________________________________________________________

TAG APPROVAL DATE: ________

ADEC _______________ EXXON _______________ FOSC: _______________ DATE: ______

NOAA _______________ USCG ___________________
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A  Salmon stream mouth - fry outmigration (3/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 6/31)
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  Sewmill 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)
3Q, 3O  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.

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 5/1. 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)
7H  Finfish harvesting
7F  Deer harvesting (8/15 to 2/28)
7J  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 EV-23 SUBDIVISION: A (1 of 1) DATE 6-17-90

NAME Michael Buchanan SIGNATURE 

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS Center of this segment is a narrow, high angle rock/boulder beach which tapers into gravel/pebble beach at either end. There's a broad band of fucus below the boulder area which tapers off too. A 10 m wide band of asphalt patches, straddling above & below the high water line of the Fucus zone, was observed near a big rock outcropping on the northern half. A silver sheen was on seaweed segment in this area. It did not extend to water's edge. Asphalt patches were also observed in the gravel underlying the rock/boulder beach. Approximately six 40 m² patches were seen. Boulders have spilled stain.

ADEC NAME John Hayes SIGNATURE 

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS 1 Rec. mop up + manual pick up of oil in UITZ band.
2 Rec. manual pick up of 3 oblong large asphalt patties in middle of segment. Patties range from 2 - 5 cm. in depth. (See sketch map) Rakes + shovels for asphalt patties.

LAND MANAGER NAME James A Barker SIGNATURE John A Barker

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS FOUND IN CENTRAL AREA OF SEGMENT EXTENDING NORTH PATCHES AND BANDS OF ASPHALT FOUND, PITS OCE SATURATION SHOWN ASPHALT / STAIN.

BANDS RANGE IN SIZE 4m x 6m / 3 x 15m, BAND RUNS TO END OF SEGMENT.

OVERTURNING ROCKS REVEALED STAIN.
**SHORELINE OILING SUMMARY**

**OG Mine Field**

** mime preview:** Michael Buchman

** Bio:** Kathleen Conlin

** Land Rep:** Jimmie A Power

** Subdivision:** EV-2 3

** Team No.:**

** TIDE LEVEL:** +2.1

** EST. SUBDIVISION LENGTH:** 231 m

** Sun**:  [ ]

** Clouds**: [ ]

** Fog**: [ ]

** Rain**: [ ]

** Snow**: [ ]

** SURVEYED FROM:** Foot [ ]

** Boat**: [ ]

** Halo**: [ ]

** WORKING DIRECTION:** S to N

** SURFACE SEDIMENTS:** 2.7 \% 25 \% O. 40 \% P. 0 \% S. 5 \% 8 \% 0 \% M. 0 \% V. 0 \%

** SLOPE:** Lang 40 \% Hang 50 \% Vert 10 \%

** WAVE EXPOSURE:** Low [ ]

** Med**: [ ]

** High**: [ ]

** OIL CATEGORY LENGTH:** W 0 m M 75 m N 0 m V 60 m NO 96 m

### SURFACE OIL

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<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<td>✓</td>
<td>✓ ✓</td>
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<tr>
<td>COVER</td>
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</tr>
<tr>
<td>COAT</td>
<td>✓</td>
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<tr>
<td>TARBALLS</td>
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<td>FILM</td>
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</table>

** PAVEMENT **

** H ✓ S X 8 sq. m by 5 cm**

** PATTIES / TARBALLS **

** BAGS 0**

** NEAR SHORE SHEEN? **

** NO BR RW SL TL**

** OILED DEBRIS **

** AMOUNT **

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<td>Trash</td>
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<td>Debris</td>
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** Photographs:**

** Roll No.**

** Frames**

### SUBSURFACE OIL

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<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>ANA SHEEN (Y/N)</th>
<th>Y</th>
<th>SURFACE - SUBSURFACE SEDIMENTS</th>
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<td>Y 5</td>
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<td>N -</td>
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<td>P, S</td>
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** OILED INTERVAL < 5 cm in pit nos. 4 and 5 does not constitute subsurface oil**

** COMMENTS:**

No oil was observed in the northern and southern parts of the segment on the large boulder/rock outcrop. There is a patchy distribution of asphalt and coating occurs on the rocks. The asphalt is located between the crevices of the rocks. To the north of this rock outcrop is a patchy distribution of asphalt in the boulder/cobble. The bank is 10 m wide at the rock outcrop and silters down to 1 m wide. This 50 m north of the outcrop is a review by Paul and Paul.

** ST**: Date 4-24-90
1m x 60m ST/S 
Stain w/ splattered distribution in the HZT zone case

25m x 10m white tarpers down to 1m AP/P W/ cover

90m x 20m ST/P

3m x 6m AP/P
Asphalt with patchy distribution in the HZT

40m x 10m which tarpers down to 1m width among rock/boulders
Asphalt is in between cracks and cover is on the faces

Oil Character Length (m): AP: 31  PO: 0  CV: 45  OR: 0  ST: 80  MS: 0  PT: 0  TR: 0  FL: 0  NO: 40
# SHORELINE ECOLOGICAL SUMMARY

**Segment ST.EU-28**  
Subdivision A  
Date (mo/day/yr) 4/19/90

Time (24 hr)  1:16  Biologist K. Conlan

(A)  Substrate type and % of segments:  
1) Bedrock 20  
2) Boulder 25  
3) Cobble 40  
4) Pebble 10  
5) Sand 5  
6) Silt 0

(B)  Overall % cover of biota (% of segment):  
Dense 50  
 Moderate 40  
Low 10

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

### BARNACLES

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Wildlife Observations/ General Comments:

**GASTROPOD EGG MASSES UNDER COBBLES**  
**AMPHIPODS, ISOPODS, OLIGOCHAETES**

Ecological Considerations:
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<th>MITZ</th>
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<tr>
<td>NEREOCYSTIS SPP</td>
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<td>PORPHYRA SPP</td>
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<td>RALSPIA/HILDENBRANDIA</td>
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<td>PHODOMELA LARIX</td>
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<td>RHOMENIA PALMATA</td>
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<td>SCYTOCYPHER SPP</td>
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<td>ULYA SPP</td>
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<td>ZOSTERA MARINA</td>
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<tr>
<td>INTOROMORPHA</td>
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</table>

| AUNA:                   |     |      |      |          |
| ANTHOPLEURA SPP         |     |      |      |          |
| (SEM) BALUNUS CARIOSUS  |     |      |      |          |
| B. GLANDULA             |     |      |      |          |
| BRYOZAANS               |     |      |      |          |
| CHITONS (other than K. TUNICATA) |     |      |      |          |
| CLAMS                   |     |      |      |          |
| CRABS                   |     |      |      |          |
| DERMATERIAS IMBRICATA   |     |      |      |          |
| KATHARINA TUNICATA      |     |      |      |          |
| LEPTASTERIAS HEXACTIB   |     |      |      |          |
| LIMPETS                 |     |      |      |          |
| LITTORINA SPP           |     |      |      |          |
| NUCELLA SPP             |     |      |      |          |
| PACURUS SPP             |     |      |      |          |
| PISASTER OCHRACEUS      |     |      |      |          |
| POLYCHAETES             |     |      |      |          |
| PUCNOPODIA HELIANTHOIDES|     |      |      |          |
| SAELESIA DRAF           |     |      |      |          |
| SERPULIDS               |     |      |      |          |
| SYPHERNARIA RHERSITES   |     |      |      |          |
| TEALIA                  |     |      |      |          |
ECOLOGY MAP (1 of 1)
Resource Codes For Entire Segment

- EV

Map Key: PWS-192
Name: ________
Date: ________
Data Entered: ________

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

ADEC Segment Length: 210m
ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS


OTHER ECOLOGICAL CONSIDERATIONS

Avoid any unnecessary disturbance or damage to unoiled substrate and biota. Restrict boat and air traffic, and beach disturbance to essential minimum.
SHORELINE EVALUATION

SEGMENT ST/ EV-23 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

11 Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: [Signature] DATE: 5/1/90

OILING CATEGORIZATION:
Wide 0 m: Medium 61 m: Narrow 0 m: V.Light 55 m: No Oil 95 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:
- No Treatment Recommended
- X Treatment Recommended
- Manual Pickup
- Bioremediation
- X 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 removal of tarmats in two areas indicated on sketch map. Work should be conducted after 5/1. No specific time constraints identified. Remove unattached oiled vegetation.

TAG COMMENTS: Monitors to Hayes Smith

TAG APPROVAL DATE: 4/28/90
Dec Exxon NOAA USCG

FOSC: [Signature] DATE: 5/8/90
SHORELINE EVALUATION

SEGMENT ST/  EV-23    SUBDIVISION  A  (1 OF 1) DATE  4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

VII  Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: 5/1/90

OILING CATEGORIZATION:

Wide 0 m: Medium 61 m: Narrow 0 m: V.Light 55 m: No Oil 95 m
Subsurface Oil Observed: Yes   No   X   Maximum Depth

RECOMMENDATIONS:

____ No Treatment Recommended    ____ Snare/Absorbent Booms

X  Treatment Recommended        ____ Oil Snares (pom poms)

____ Manual Pickup            ____ Absorbents (pads, rolls, etc)

____ Bioremediation        ____ Spot Washing: ______ Wands

X  Tarmat Removal           ____ Beach Cleaner

_____ Other (see comments)

COMMENTS: Recommended treatment includes manual removal of tarmats in two areas indicated on sketch map. Work should be conducted after 5/1. No specific time constraints identified. Remove UNATTACHED OILED VEGETATION.

TAG COMMENTS:  ____________

TAG APPROVAL DATE:  4/28/90  

ADEC  ____________  DATE:  5-8-90

EXXON  ____________  DATE:  5-8-90

NOAA  ____________  DATE:  5-8-90

USCG  ____________  DATE:  5-8-90

TAG APPROVAL DATE:  4/28/90
1m x 60m St/5 stain w/ splattered distribution in the H1T2 event curve

2.5m x 10m which trappers down to 1m AP/P w/ sea cover

10m x 20m St/8

3m x 6m AP/P asphalt with patchy distribution in the H1T2

40m x 10m which trappers down to 1m width among rock/boulders highangle CU/P with nihil and cover asphalt is in between cracks and cover is on the faces

1m x 5m CU/P in the H1T2

Legend

1 - trees
2 - boulders; rock
3 - boulder/rock outcrop

CHECKLIST

- N Acre
- Approx. Scale
- Seg/Suite Ending
- Oil Dirt
- Water
- Length
- % Core
- Substrate Character
- Est. HW/MLVL
- SSL
- Profile Location(s)
- Peddle(s)
- Pit Location(s)
- Photo Location(s)

LEGEND

• - subsurface oil

• - subsurface oil

CTC - continuous distribution

CTB - broken distribution

CP/P - patchy distribution

CTVS - splashed distribution

Oiled Vegetation

• - photo location, direction, and number

Oil Character Length (m): AP 31, PO 0, CV 45, CT 0, ST 80, MS 0, PT 0, KB 0, FL 0, NO 40
1991 MAYSAP EVALUATION

SEGMENT: EV 023  SUB: A  REGION: PWS  SURVEY DATE: 4/30/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) OPEN 5/1 - 8/15; RESTRICTED 8/15 - 9/15

Ecological/Constraints (see page two for details) Subsistence - Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO Signature: __________________________ Date: __________________________

RECOMMENDATIONS: INITIAL TAG FOSC

TREATMENT REQUIRED (Y or N) N

Manual Pickup (Check as Req.)
Spot Washing
Bio-Customblen Only
Bio-Inipol/Customblen
Other
Other

COMMENTS:
INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: FOSC APPROVAL DATE:

ADEC ________________ FOSC __________________

EXXON __________________

USCG __________________

NOAA __________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.
ADEC
NAME: John Henry

☐ NTR Treatment Recommended

- Recommend manual pickup of AP in sections NE as identified on sketch map. Much of this AP is in isolated patches not clearly visible for pickup crews. Good area for change LRPM manual crews.

EXXON
NAME: Martinez, N.

☒ NTR Oil is widespread, I don't believe it should be wise to send a crew in. Maybe CUC local response.

LANDMANAGER
NAME: Steve Liddell

☐ NTR Good area for change local response, lots of asphalt, lots of spill generated trash manual treatment necessary.

USCG/NOAA
NAME: C. R. Smith

☒ NTR Widely scattered tar patches and oiled sediment in upper beach area. Some oil coat/coverage observed. No mobile oil or clean up required.
**MAYSAP SHORELINE OILING SUMMARY**

**SEGMENT:** EV 23  
**SUBDIVISION:** A  
**DATE:** April 30, 1991

**SURVEYED FROM:** Yes  
**WEATHER:** Sun  
**TOTAL LENGTH SHORELINE SURVEYED:** 210 m  
**NEAR SHORE SHEEN:** None

**EST. OIL CATEGORY LENGTH:**  
- W: 0 m  
- M: 15 m  
- N: 19 m  
- V: 35 m  
- US: 0 m

### Surface Oil Character

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<thead>
<tr>
<th>LOC</th>
<th>AP MS</th>
<th>TB</th>
<th>BOF CV</th>
<th>CT</th>
<th>ST</th>
<th>FL</th>
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<th>V</th>
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<tbody>
<tr>
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<td>P</td>
<td>T</td>
<td>T</td>
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<td>T</td>
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**SHEEN COLOR:** B = Brown; R = Rainbow; S = Silver; N = None

**OG COMMENTS:** No pits due to boulder substrate and fine grain matrix which acted as a barrier to oil and shovel penetration. Most oil observed along this subdivision was in the form of scattered patches of AP in the hitz.


AP 1991
ON SKETCH MAP
GREG CHANEY
TEAM S
SEGMENT: EV-23 A
DATE: APRIL 30 '91
AIR P. #: EY 197-16S-12

2 x 40 m
AP 15% SOME GRASS
ROOTS IN AP. AREA IS
DOMINATED BY BOULDERS

A

2 x 18 m
AP 25%
CV TRACE
SDR TRACE
BETWEEN
BOULDERS

B

1 x 10 m
AP ~5% SOR 10%
10 30 cm diam patties PU

C

4 x 15 m
AP 15% DISTINCT PATCHES
Fewer BOULDERS

D

1 x 15 m
AP 5% BETWEEN BOULDERS

F

0.25 x 20 AP ~5% SCATTERED
PATTIES UNDER LARGE BOULDERS

G

SEA OTTER SKELETON

EVANS ISLAND

SHELTER BAY

LEGEND

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<tr>
<th>SYMBOL</th>
<th>LEGEND</th>
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<tr>
<td>B</td>
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<td>BOULDERB</td>
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<td>D</td>
<td>FINE BED.</td>
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<td>E</td>
<td>DRIFT LOG</td>
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<td>GRASS</td>
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<td>G</td>
<td>BRUSH</td>
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<td>H</td>
<td>FOREST</td>
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<tr>
<td>I</td>
<td>OILED PIT</td>
</tr>
<tr>
<td>J</td>
<td>NO OIL PIT</td>
</tr>
<tr>
<td>K</td>
<td>PHOTO</td>
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SCALE
80 METERS
ROUGHLY

REVIEWED: RC 5/18/91
EK RECHECK/ May 7
DATE 30 April 1991

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS

<table>
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<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED</th>
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<td>Seabirds</td>
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<tr>
<td>Waterfowl</td>
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<td>Shorebirds</td>
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<td>Corvids</td>
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<td>Other Birds</td>
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MARINE MAMMALS

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<td>Pinnipeds</td>
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<tr>
<td>Dolphins</td>
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LAND MAMMALS

Shoreline subdivision map showing important biological features attached.

REMARKS: NC 5/8/91
Revd 5/10/91
(E) Area is located in the high U1TZ. filamentous green algae and black lichen were the only macro-biota observed within the site. One meter downshore of site Focus covers ~50% of the boulders and cobble. Sporelings are present. Barnacles and juvenile mussels are sparse. Gravel surface has ~5% biota cover.

(F) Area is located in the U1TZ. No intertidal macro-biota was observed within the site. Less than 1m below the site Focus, sparse barnacles, target algae, sparse juvenile mussels, moderate Littorina and moderate limpets cover ~75% of the available surface area.

(G) Area is located in the U1TZ along north side of stream. Target algae, sparse barnacle that sealed their inner plates when stimulated, sparse juvenile mussels and moderate Littorina limpets are located in site. Area below site biologically similar to area below (F).

- Areas E → G are located on a high angled beach. Little cover is found in the U1TZ. Approx. 5-75% biota cover is in the U1TZ. (U1TZ not surveyed due to tide level). Two otter skeletons were found on this subdivision, both have been dead longer than 5 days and both had a full set of teeth (see map for locations).
LEGEND

- BEDROCK
- BOULDERS
- FINE BED.
- DRIFT LOG
- GRASS
- BRUSH
- FOREST
- OILED PIT
- NO OIL PIT
- PHOTO

SCALE
80 METERS ROUNGLY

MAP 1991
DG SKETCH MAP: Bio Sketch Map
GREG CHAN: Crank
TEAM 5
SEGMENT: EV-23 A
DATE: APRIL 30, 91
AIR P.N. EX102/163-12

A 2x40m
AP 15% SOME GRASS
ROOTS IN AP, AREA IS
DOMINATED BY BOULDERS

B 1x18m
AP 25%
CV TRACE
SOR TRACE
BETWEEN
BOULDERS

C 1x10m AP ~5% SOR 10%
10-30cm diam patties PU

D 4x15m AP 15% Distinct patches
Fewer Boulders

E 1m² AP
Low to no biota found on
gravel, ~50% cover on
boulders and cobble
High angle
boulders. Approx.
75% biota cover
in MITZ

F 1x15m AP 5% BETWEEN BOULDERS

G 0.25x20 AP ~5% SCATTERED
PATTIES UNDER LARGE BOULDERS

SEA OTTER SKELETON Dead longer than 5 days
Full set of teeth

SMALL STREAM

SHELTER BAY

EVANS ISLAND
1991 MAYSAP EVALUATION

SEGMENT: EV 023  SUB: A  REGION: PWS  SURVEY DATE: 4/30/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) OPEN 5/1 - 8/15; RESTRICTED 8/15 - 9/15

Ecological/Constraints (see page two for details) Subsistence - Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find, and contact Exxon's Cultural Resource Program immediately: 564-3276; 564-3657; (Anchorage) or 229-1514 (24 hrs.).

RECOMMENDATIONS:
TREATMENT REQUIRED (Y or N)  N  Y  Y
Manual Pickup (Check as Req.)  X  X
Spot Washing
Bio-Customblen Only
Bio-Inipol/Custumblen
Other
Other

COMMENTS:
INITIAL:

TAG: MANUAL PICKUP OF EASILY ACCESSIBLE AP IN AREAS OF A B D

FOSC:

TAG APPROVAL DATE: 5/17/91  FOSC APPROVAL DATE: 25 MAY 1991
ADEC  FOSC  E. E. PAGE, CDR, USCG
EXXON  CHIEF OF STAFF
USCG
NOAA
Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.
MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5  SEGMENT EV-23  SUBDIVISION A  DATE 4/30/91

ADEC
NAME John Hayter SIGNATURE

☐ NTR  ☑ Treatment Recommended

Recommend manual pickup of AP in sections A-E as identified on sketch map. Much of this AP is in isolated patches and clearly visible for pickup crews. Good area for change LRP manual crews.

EXXON
NAME Markwez N.D. SIGNATURE

☐ NTR  ☑ Oil in the segment is minimal. Weathering to spread a crew w/o. Maybe CUC local response for debris pickup.

LANDMANAGER
NAME Steve Wark OF CUC SIGNATURE

☐ NTR  ☑ Good area for change local response. Lots of asphalt. Lots of skull generated. Heath manual treatment necessary.

USCG/NOAA
NAME Drover/Hodges SIGNATURE

☒ NTR  Widely scattered tar patches and oiled sediment in upper beach area. Some oil coat/coverage observed. No mobile oil or clean up required.
**MAYSAP SHORELINE OILING SUMMARY**

**TEAM NO.**
OG: CHANEY
BIO: CRANK
DEC: HAYES
LANDMANAGER: WARD
USCG/NOAA: DREHER/HODGES

**SEGMENT**
EV 23

**SUBDIVISION**
A

**DATE**
April 30, 1991

**TIME**
12:20 to 13:00

**TIDE LEVEL**
+5 ft. to +6.5 ft.

**ENERGY LEVEL**

**SURVEYED FROM:**
Foot, Boat, Helo

**WEATHER:**
SUN, CLOUDS, FOG, RAIN, SNOW

**TOTAL LENGTH SHORELINE SURVEYED:**
210 m

**NEAR SHORE SHEEN:**
BR, RB, SL, NONE

**EST. OIL CATEGORY LENGTH:**
W (m)
M (m)
N (m)
V (m)
L (m)
US (m)

<table>
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<th>LOC</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT</th>
<th>SLOPE</th>
<th>AREA</th>
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<td></td>
<td>B V</td>
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<td>B</td>
<td>M</td>
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**DISTRIBUTION:**
C - 91-100%; B - 81-90%; P - 71-80%; S - 61-70%; T - 11-60%; L - <1%

**SLOPE:**
V = Vertical; H = High Angle; M = Medium Angle; L = Low Angle

**PHOTO ROLL:** MAYSAP 5 - 6 FRAMES 2-7

**PIT NO.**

**PIT DEPTH**
(cm)

**SUBSURFACE OIL CHARACTER**

**OILED ZONE**

**CLEAN ZONE**

**H2O LEVEL**

**SHEEN COLOR**

**ZONE**

**SURFACE-SUBSURFACE SEDIMENTS**

**NOTES**

**OG COMMENTS:**
No pits due to boulder substrate and fine grain matrix which acted as a barrier to oil and shovel penetration. Most oil observed along his subdivision was in the form of scattered patches of AP in the hitz.
MAJ 1991
OD SKETCH MAP
GREG CHANEY
TEAM 5
SEGMENT: EV-23A
DATE: APRIL 30, '91
AIR P.#: EX/07/1G5/12

LEGEND

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<th>SYMBOL</th>
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<th>MAP NOTE</th>
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<tr>
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<td>O.C.A.</td>
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<td>PSTIPE</td>
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<tr>
<td>GRASS</td>
<td>Y</td>
<td></td>
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<tr>
<td>BRUSH</td>
<td>D</td>
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<td>A</td>
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</tr>
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<td>PHOTO</td>
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</tbody>
</table>

SCALE
80 METERS
ROUGHLY

T M
N

A

B 1 x 18 m
AP 25%
CV TRACE
SOR TRACE
BETWEEN BOULDERS

C 1 x 10 m
AP 5%
SOR 15%
10 30cm diam paddles P1

D 4 x 15 m
AP 15%
Distinct patches
Fewer boulders

E 1 m³ AP

F 1 x 15 m
AP 5%
BETWEEN BOULDERS

G 0.25 x 20
AP 5%
SCATTERED
PATTIES UNDER LARGE BOULDERS

2 x 40 m
AP 15%
SOME GRASS
ROOTS IN AP AREA IS
DOMINATED BY BOULDERS

SMALL STREAM

SEA OTTER SKELETON

SHELTER BAY

EVANS ISLAND

SHELTER BAY

REVISED: NC 5/18/91
EK reviewed/May 7
BIRDS

<table>
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<tr>
<th>Eagles</th>
<th># of Species</th>
<th>Total Birds</th>
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Seabirds

Waterfowl

Gulls/Kittiwakes

Shorebirds

Corvids

Other Birds

FISH OBSERVED

<table>
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<th>Species Present</th>
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LAND MAMMALS

<table>
<thead>
<tr>
<th>Species</th>
<th># Observed</th>
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Sea Otters

Pinnipeds (specify)

MAMMAL SUBDIVISION MAP SHOWING IMPORTANT BIOLOGICAL FEATURES ATTACHED.
(E) Area is located in the high UITZ. Filamentous green algae and black lichen were the only macro-biota observed within the site. One meter downshore of site Fucus covers ~50% of the boulders and cobble. Sporelings are present. Barnacles and juvenile mussels are sparse. Gravel surface has ~5% biota cover.

(F) Area is located in the UITZ. No intertidal macro-biota was observed within the site, less than 1m below the site Fucus, sparse barnacles, tangle algae, sparse juvenile mussels, moderate Littorina and moderate limpets cover ~75% of the available surface area.

(G) Area is located in the UITZ along north side of stream. Tangle algae, sparse barnacles that sealed their inner plates when stimulated, sparse, juvenile mussels and moderate Littorina + limpets are located within site. Area below site biologically similar to area below (F).

- Areas E → G are located on a high angled beach. Little biota is found in the UITZ. Approx. 5-75% biota cover is in the MITZ. [UITZ not surveyed due to tide level]. Two otter skeletons were found on this subdivision, both have been dead longer than 5 days and both had a full set of teeth (see map for locations).
MAP 1991
OG SKETCH MAP - Bio Sketch Map
GREG CHANEY - Crank
TEAM E
SEGMENT: EV-23 A
DATE: APRIL 30 '91
AIR P.N.: EV-121/G5-1

A 2x40m
AP 15% SOME GRASS
ROOTS IN AP AREA IS
DOMINATED BY BOULDERS

B 1x18m
AP 25%
CV TRACE
SOR TRACE
BETWEEN
BOULDERS

C 1x10m AP~5% SOR 10%
10 30cm diam patties PU

D 4x15m AP 15% DISTINCT PATCHES
Fewer Boulders

E 1m² AP
Low to no biota. Found on
gravel, ~50% cover on
boulders and cobble.

F 1x15m AP 5% BETWEEN BOULDERS

G 0.25 x 20 AP~5% SCATTERED
PATTIES UNDER LARGE BOULDERS

LEGEND
BEDROCK
BOULDERS
FINE BED.
DRIFT LOG
GRABB
BRUSH
FOREST
OLIED PIT
NO OIL PIT
PHOTO

SCALE
80 METERS
ROUGHLY

SHELTER BAY

HIGH ANGLE
boulders. Approx
75% biota cover in MITZ

Sea Otter Skeleton: Dead longer than 5 days, full set of teeth.

Sea Otter Skeleton: Dead longer than 5 days, full set of teeth.

Evans Island
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-24

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION

SEGMENT ST/ EV-24 SUBDIVISION A (1 OF 1) DATE 4/19/90

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)
- 7II Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Anadromous stream at southern end of segment.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: __________________ DATE: ______________________

OILING CATEGORIZATION:

- Wide 0 m: Medium 34 m: Narrow 29 m: V.Light 642 m: No Oil 0 m
- Subsurface Oil Observed: Yes X No
- Maximum Depth: 10 cm

RECOMMENDATIONS:

- 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: Recommended treatment includes removal of tarmats as shown on sketch map and bioremediation of area of surface cover to within 50 m of uncatalogued anadromous stream. Work should be conducted between 5/15 and 7/10 based on anadromous stream constraints.

TAG COMMENTS:

____________________________________________________

____________________________________________________

____________________________________________________

____________________________________________________

TAG APPROVAL DATE: __________

ADEC EXXON NOAA USCG

FOSC: __________ DATE: __________
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. Contact ADF&G Habitat Division prior to treatment for permits.

1C Salmon fry nursery area (4/31 to 7/31)
1D Estuary 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 (8/11 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 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 (5/1 to 6/1)
Active Bald Eagle nests (5/1 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)
Anchorages (6/1 to 9/15)
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)
Finfish harvesting

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

7JJ Invertebrates harvesting
For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST  EV-24  SUBDIVISION: EV-24  DATE 4/19/90

NAME Michael Backman  SIGNATURE ________

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

This segment alternates from patches of shale slivers to narrow bands of boulder/rock shoreline, & ends at the work with a rock outcrop.

In a swamp area near some patches, underlying gravel on boulder shoreline area was frequently cemented into asphalt patches.

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

ADEC NAME  John Hayes  SIGNATURE ________

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

1. Low moderate pressure hot water deluge on boulder outcrop at S. end of seg. Work & mid tide to protect healthy focus bed below oiling. Oil at 0.75-1.0m flood more.

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

ADEC NAME  Thomas A. Babich  SIGNATURE ________

LAND MANAGER

NAME  James A. Babich  SIGNATURE ________

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

BEACH SEGMENT SOUTH END REVEALED STAIN; ASPHALT PATCHED UNDER BOULDER AND COBBLE. START SOUTH MOVING NORTH ASPHALT PATCH STARTED 2m x 30m GETTING SMALLER TO A 1m x 30m BAND. TURN BECOMES BROKEN DISTRIBUTION: NORTHERN END OF SEGMENT REVEALED STRAINING.
**SHORELINE OILING SUMMARY**

**OG** Mike Foget  
**NOAA** Michael Bushman  
**EXXON** Larry Olson  
**ADEC** John Hayes  
**ST. SUBDIVISION LENGTH:** 675 m  
**DATE 7/14/90**

**SURFACE OIL**

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<tr>
<td>ASPHALT PAVEMENT</td>
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<tr>
<td>COVER</td>
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<tr>
<td>STAIN</td>
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<tr>
<td>TARBALLS</td>
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<tr>
<td>NO OIL</td>
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</tbody>
</table>

**OIL CATEGORY LENGTH:** W 70 m M 35 m N 30 m VL 610 m NO 0 m

**SURFACE OIL DISTRIBUTION**

- **OVEN**
- **OL**
- **OIL**
- **NO**

**PAVEMENT**

- **H**
- **S**
- **10 sq. m by 3 cm**

**NEAR SHORE SHEEN?**

- **NO**

**Bags**

- **50 BAGS**

**OILED DEBRIS**

- **SM**
- **MD**
- **LG**

**DID YOU COLLECT DEBRIS?**

- **YES**
- **NO**

**TYPE**

- **GRASS**

**OILED AMOUNT**

- **S**
- **M**
- **D**
- **L**

**OILED DEBRIS**

- **Logs**
- **Vegetation**
- **Trash**
- **Debris**

**OILED AMOUNT**

- **SM**
- **MD**
- **LG**

**REVIEWED**

- **6/21/90**

**PHOTOGRAPHS**

- **Roll No. ST-11-3**

**Frames**

- **1**

**SUBSURFACE OIL**

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED AMOUNT</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>SUBSURFACE SHEEN</th>
<th>SURFACE-SUBSURFACE DEBRIS</th>
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<tbody>
<tr>
<td>1</td>
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<td></td>
<td></td>
<td>X</td>
<td>N</td>
<td>10 P</td>
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**COMMENTS**

The southern end of the segment starts at a rock outcrop 32 m north of an ANAD stream. On this outcrop is a 3 m x 3.5 m patchy distribution of tar. On a high angle border outcrop, the oiling tapers down to a splattered distribution.

Asphalt patties: The width of the band increases because the shore zone changes to a low-angle A/B/C grain. The distribution of patties decreases up to the rock outcrop in the northern end of the segment. To the north of this rock outcrop is a broken distribution of asphalt (2-3 cm) which again tapers down to a light stain.

Reviewed by: [Signature]  
Date: 6/21/90
### Subsurface Oil (Continued)

<table>
<thead>
<tr>
<th>Pit No.</th>
<th>Pit Depth (cm)</th>
<th>Subsurface Oil Character</th>
<th>Oiled Interval</th>
<th>Below</th>
<th>Oil / Film Color</th>
<th>Pit Zone</th>
<th>Anaerobic</th>
<th>Needs Nfork</th>
<th>Surface Subsurface Sediments</th>
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</table>

* Oiled interval ≤ 5 cm in Pit Nos. 5 and 10 does not constitute subsurface oil.

**Comments**

- Pit No 10: Globular sheen on surface water
- Shore zone consists mostly of high angle B/C beach w/ some rock/winddr outcrops

**Reviewed by:** [Signature]  
**Date:** 4-21-90
SHORELINE ECOLOGICAL SUMMARY

Segment ST/ Env-24 Subdivision A (1 of 1) Date (mo/day/yr) APRIL 19, 1996

Time (24 hr) 03:27 Biologist KATHLEEN CONLAN

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

(B) Overall % cover of biota (% of segment): Dense 10 Moderate 25 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. ST-11.3
Frames # 1

BARNACLES

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MYTILUS

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GASTROPODS

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FUCUS

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</tbody>
</table>

Wildlife Observations/General Comments:
- 5 SEALS IN SHELTER BAY, ONE A MOTHER WITH PUP
- 2 CORNCRANTS JELLYFISH FLOATING IN BAY
- 1/0 SEALS

Ecological Considerations:
- BLENNIES UNDER MID-TIDAL COBBLE, SCUTINIOUS EGGS, MASS AMPHIPODS, OLIGOCHAETES AMBAXST COBBLES, PEBBLES, ISOPODS, CENTIPODES

Sediment Level: G
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EV-24 SUBDIVISION A (1 of 1)

WORK WINDOW

<table>
<thead>
<tr>
<th>Manual Pickup</th>
<th>OPEN</th>
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<tbody>
<tr>
<td>Tarmat Removal</td>
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</tr>
<tr>
<td>Bioremediation</td>
<td>WORK BEFORE 8/15</td>
</tr>
</tbody>
</table>

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

NO CONSTRAINT. Not an ADF&G catalogued anadromous stream.

711 Subsistence: Deer Harvesting

Closed to bioremediation after 8/15. No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

If stream is determined to be anadromous, other ecological considerations apply. Restrict boat and air traffic and beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.
Incorporates information from USFWS Active Eagle Nest Maps dated 6/1/90.

ECOLOGY MAP 6/13/90
SEGMENT EV-24
SUBDIVISION A (1 of 1)

SEABIRD COLONY
EAGLE NEST

EXXON Company, USA
Map Key: PMS-EV-24
May 11, 1990

1 Inch = 1142 Feet
SHORELINE EVALUATION

SEGMENT ST/ EV-24 SUBDIVISION A (1 OF 1) DATE 4/19/90

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)
7II Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Anadromous stream at southern end of segment.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: DATE: 5/5/90

OILING CATEGORIZATION:

Wide_0_m: Medium_34_m: Narrow_29_m: V.Light_642_m: No Oil_0_m
Subsurface Oil Observed: Yes_X No__ Maximum Depth_10_cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes removal of tarmats as shown on sketch map and bioremediation of area of surface cover to within 50m of uncatalogued anadromous stream. Work should be conducted between 5/15 and 7/10 based on anadromous stream constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 5/4/90

DEEC Art White Art White  FOSC: DATE: 5/18/90
EXXON EXXON NOAA NOAA USCG USCG Notify CVE 24 hrs prior to work.
SHORELINE EVALUATION

SEGMENT ST/ EV-24 SUBDIVISION A (1 OF 1) DATE 4/19/90

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)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Anadromous stream at southern end of segment.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: [Signature] DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m; Medium 34 m; Narrow 29 m: V.Light 642 m: No Oil 0 m
Subsurface Oil Observed: Yes X No___ Maximum Depth 10 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes removal of tarmats as shown on sketch map and bioremediation of area of surface cover to within 50 M of uncatalogued anadromous stream. Work should be conducted between 5/15 and 7/10 based on anadromous stream constraints.

TAG COMMENTS:

____________________________
____________________________
____________________________

TAG APPROVAL DATE: 5/4/90

ADEC [Signature] DATE: 5/5-90

EXXON [Signature] DATE: 5/5-90

NOAA [Signature]

USCG [Signature] NOTIFY ERR 24 HRS PRIOR TO WORK.
Sketch Map

Subdivision A

Date 11/19/90

Legend

Legend

1A
- No subsurface oil
2A
- Subsurface oil

CT/C
- Central subsurface distribution
CT/B
- Broken distribution
CT/P
- Patchy distribution
CT/2
- Splashed distribution

Oil Character Length (m): AP 160 PO 0 CV 35 CT 0 ST 480 MG 0 PT 0 TB 0 FL 0 NO 0
1991 MAYSAP EVALUATION

SEGMENT: EV 024 SUB: A REGION: PWS SURVEY DATE: 4/30/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) OPEN 5/1 - 7/10; RESTRICTED 7/10 - 9/15

Ecological/Constraints (see page two for details) Anadromous stream, Subsistence - Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO Signature: ________________________ Date: ________________

RECOMMENDATIONS:

TREATMENT REQUIRED (Y or N) Y

Manual Pickup (Check as Req.) X

Spot Washing

Bio-Customblend Only

Bio-Inipol/Custumblend

Other ______________________

Other ______________________

COMMENTS:

INITIAL: Remove asphalt at locations A, B, and C.

TAG: ______________________

FOSC: ______________________

TAG APPROVAL DATE: ____________ FOSC APPROVAL DATE: ____________

ADEC ______________________ FOSC ______________________

EXXON ______________________

USCG ______________________

NOAA ______________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Anadromous Stream: Unlimited treatment up to stream bank between May 15 and July 10. ADF&G approval required for work after July 10. Fish Habitat Permit required for instream work. ADF&G approval required for bioremediation within 100 meters of anadromous stream after July 10.

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.
<table>
<thead>
<tr>
<th>ADEC</th>
<th>NAME: John Hayes</th>
<th>SIGNATURE: [Signature]</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTR</td>
<td><strong>Recommend manual pick up of AP in all areas over 20% coverage.</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Identified on sketch map. Beach &amp; Surface oiling are both readily accessible at low energy. Segment borders EV-23 which also needs manual pick up.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXXON</th>
<th>NAME: Martinez N.J.</th>
<th>SIGNATURE: [Signature]</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTR</td>
<td><strong>Area is recovering well, no signs for sub-surface.</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Areas 4 &amp; 8 would benefit from P.U. of asphalt patches. Check for debris.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Good project for CVC response.</td>
<td></td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>LANDMANAGER</th>
<th>NAME: Steve WARD</th>
<th>SIGNATURE: [Signature]</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTR</td>
<td><strong>Lots of manual can be done by Local Response.</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Asphalt patches okay most of the subdivision.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No Sub-Surface located.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>USCG/NOAA</th>
<th>NAME: DREHER / HODGES</th>
<th>SIGNATURE: [Signature]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NTR</strong></td>
<td>Very small amount of surface AP; very little chance of mobilization.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Occasional scattered tar patches with debris in upper area observed. Some thick oiled sediment.</td>
<td></td>
</tr>
</tbody>
</table>
## MAYSAP SHORELINE OILING SUMMARY

**Segment:** EV-24  
**Subdivision:** A  
**Date:** April 30, 1991  
**Team No.:**  
**OG:** Chaney  
**BIO:** Crank  
**DEC:** Hayes  
**LANDMANAGER:** Ward  
**USCG/NOAA:** Dreher/Hodges  

**Surveyed From:** Foot  
**Weather:** Sun  
**Tide Level:** 5 ft. to 3.5 ft.  
**Energy Level:**  

**Time:** 18:50 to 19:45  
**Total Length Shoreline Surveyed:** 565 m  
**Near Shore Sheen:** Br  
**Total Length Oiled:**  

### Surface Oil Character

<table>
<thead>
<tr>
<th>LOC</th>
<th>AP</th>
<th>MS</th>
<th>TB</th>
<th>SOR</th>
<th>CV</th>
<th>CT</th>
<th>ST</th>
<th>FL</th>
<th>DB</th>
<th>NO</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT</th>
<th>AREA</th>
<th>ZONE</th>
<th>NOTES</th>
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<td>BG</td>
<td>M</td>
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<tr>
<td>A</td>
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<td>M</td>
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<tr>
<td>C</td>
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<td></td>
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<td>BG</td>
<td>M</td>
<td>10</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>D</td>
<td>T</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>BG</td>
<td>M</td>
<td>15</td>
<td></td>
<td>✓ ✓</td>
</tr>
<tr>
<td>E</td>
<td>S</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>BG</td>
<td>M</td>
<td>15</td>
<td>✓ ✓</td>
<td>Small patches between boulders under grass</td>
</tr>
<tr>
<td>F</td>
<td>S</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>BG</td>
<td>M</td>
<td>20</td>
<td>✓ ✓</td>
<td></td>
</tr>
</tbody>
</table>

### Distribution

- C = 91–100%; B = 51–60%; P = 11–50%; S = 1–10%; T = <1%
- SLOPE: V = Vertical; H = High Angle; M = Medium Angle; L = Low Angle
- PHOTO ROLL: MAYSAP- 5-6 FRAMES 8-14

### Pit Notes

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>OIL CHARACTER</th>
<th>OILED ZONE</th>
<th>CLEAN SEDIMENT</th>
<th>WATER LEVEL</th>
<th>SHEEN COLOR</th>
<th>PIT ZONE</th>
<th>SURFACE-SUBSURFACE SEDIMENTS</th>
<th>NOTES</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>HOR</td>
<td>OP</td>
<td>YN (cm)</td>
<td>BR SN</td>
<td>S</td>
<td>✓</td>
<td>PG - PG</td>
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</tr>
<tr>
<td>2</td>
<td>ZOR</td>
<td>DR</td>
<td>-</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
<td>8PG - RGB</td>
<td></td>
</tr>
</tbody>
</table>

**Sheen Color:** B = Brown; R = Rainbow; S = Silver; N = None

### OG Comments:

[Blank Space]
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 5  
SEGMENT # EV-24  
SUBDIVISION A  
SEA STATE 0  
PHOTOGRAPHS: ROLL #  

DATE 30 April 1991  
TIDAL HEIGHT (Range) +5.4 - +4  
BIOLeGIST Rank  
WIND SPEED/DIRECTION 5 knots / SE  

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):
(A) Area is in the SUPRA and high UITZ ~ 20 m south of EV-23A. Rye grass is sprouting within the site. No other intertidal birds found in site. Flee bleachers found in drift.

(B) Area is located in the lee of a rock outcrop in UITZ boulders, cobble and gravel. Rare Fucus, rare barnacles, rare Littorina and limpets are found w/ site, covering ~5% of the available surface area. Below site on the rock outcrop, Fucus is dominant with ~10% cover on lee side and ~75% cover on exposed side. North of rock outcrop is a 1m x 2m sparse intergravel mussel bed.

(C) Area is located in SUPRA. Rye grass is sprouting w/ site 10 cm of top profile. No other macrobiota found w/ site. Two meter below amphipods and isopods are found. Approx 3m below site there is 30% Fucus cover on tidepock; encrusting coralline algae are maturing, sporelings are rare. Barnacles are rare.

(D) Area is located in the UITZ and MITZ on cobble and gravel. Under a drift log, 710 intertidal micro-biota was found in the gravel on the cobble in the UITZ. There were amphipods, barnacles and mussels ~1% biota cover. In the MITZ there are sparse barnacles with a new set and rare Littorina with juvenile Littorina present ~5% biota cover. On drift log there is a moderate concentration of Fucus with sporelings present and sparse barnacles ~10% biota cover and on nearby rock outcrop there are dense barnacles and rare mussels with ~80% biota cover.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED</th>
<th>SPECIES PRESENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eagles</td>
<td></td>
<td>1 - immature</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seabirds</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waterfowl</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gulls/kittiwakes</td>
<td>1</td>
<td>~35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shorebirds</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corvids</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Birds</td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>MARINE MAMMALS</th>
<th># OBSERVED</th>
<th>SPECIES</th>
<th># OBSERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sea Otters</td>
<td>1 - skeleton &gt;5 days old</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pinnipeds (specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whales (specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LAND MAMMALS</th>
<th># OBSERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Shoreline subdivision map showing important biological features attached.
(E) Area is a narrow band in the UITZ. Amphipods are the only macro-biota present. Five meters below site there is a ~20% biota cover including moderate barnacles with a new set, sparse Fucus, rare mussels (various age classes) and sparse Littorina (juveniles present).

(F) Area is located in the SUPRA and high UITZ. The rye grass is sprouting and the mass has fruiting bodies. Black lichen and amphipods are also present. Biota below site is similar to biota found below site 'E'.

The intertidal biota in this subdivision appears to be healthy. New recruitment is occurring within the barnacles, Fucus, mussels and Littorina populations. LITZ was covered by tide and therefore, not included in this survey. Sea otter skeleton (dead more than 5 days) was found in the SUPRA behind rock outcrop (see map for location, Both jaws have a full set of teeth.)
1991 MAYSAP EVALUATION

SEGMENT: EV 024  SUB: A  REGION: PWS  SURVEY DATE: 4/30/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) OPEN 5/1 - 7/10; RESTRICTED 7/10 - 9/15

Ecological/Constraints (see page two for details)  Anadromous stream, Subsistence - Deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find, and contact Exxon's Cultural Resource Program immediately: 564-3276; 564-3657; (Anchorage) or 229-1514 (24 hrs.).

RECOMMENDATIONS:

<table>
<thead>
<tr>
<th>TREATMENT REQUIRED (Y or N)</th>
<th>INITIAL</th>
<th>TAG</th>
<th>FOSC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual Pickup (Check as Req.)</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spot Washing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bio-Customblen Only</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bio-Inipol/Customblen</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

COMMENTS:

INITIAL: Remove asphalt at locations A, B, and C.

TAG: Remove AP/HSOR at A, B, + C.

FOSC:

TAG APPROVAL DATE: MAY 14 1991  FOSC APPROVAL DATE: 8/20/91

ADEC  P. E. PAGE, CDR, USCG  CHIEF OF STAFF, FOSC
EXXON  Chief  USCG  Chief
NOAA  Chief 
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Anadromous Stream: Unlimited treatment up to stream bank between May 15 and July 10. ADF&G approval required for work after July 10. Fish Habitat Permit required for instream work. ADF&G approval required for bioremediation within 100 meters of anadromous stream after July 10.

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.
Described plan of the following:

**MAYSAP FIELD SHORELINE COMMENT SHEET**

**TEAM NO. 5 SEGMENT EV-24 SUBDIVISION A DATE 5/8/91**

**ADEC**

NAME: John Hayes SIGNATURE: 

[ ] NTR Treatment Recommended

[ ] NTR Recommended manual pick up of AP in all areas over 20% coverage identified on sketch map. Beach and surface oiling are both readily accessible at low energy. Segment borders EV-23 which also needs manual pick up.

**EXXON**

NAME: Martinez N.J. SIGNATURE: 

[ ] NTR Area is recovering well, no signs of sub surface. Areas A & B would benefit from P.U. of asphalt patches. Check for debris.

[ ] NTR Good project for CVC response.

**LANDMANAGER**

NAME: Steve Ward OF CVC SIGNATURE: 

[ ] NTR Lots of manual can be done by local response

Asphalt Sketches along most of subdivision

No sub-surface located.

**USCG/NOAA**

NAME: Dreher/Hodges SIGNATURE: 

[ ] NTR Very small amounts of surface AP, very little chance of mobilization.

Occasional scattered tar patches with debris in upper area observed. Some thick oiled sediment.
**MAYSAP SHORELINE OILING SUMMARY**

**SEGMENT**: EV-24  
**SUBDIVISION**: A  
**DATE**: April 30, 1991

**TEAM NO.**:  
**BIO**: CRANK  
**LANDMANAGER**: WARD or CVC  
**USCG/NOAA**: DREHER/HODGES

**TIME**: 18:50 to 19:45  
**TIDE LEVEL**: 7.5 ft. to 3.5 ft.  
**ENERGY LEVEL**: H  
**SURVEYED FROM**: FOOT BOAT  
**WEATHER**: SUN CLOUDS  
**TOTAL LENGTH SHORELINE SURVEYED**: 565 m

**NEAR SHORE SHEEN**:  
**EST. OIL CATEGORY LENGTH**:  
**SURVEYED FROM**: GFOOT BOAT  
**WEATHER**: SUN CLOUDS  
**TOTAL LENGTH SHORELINE SURVEYED**: 565 m

**DISTHIIiIUTION**: C = 91-100%; B = 51-90%; P = 11-50%; S = 1-10%; T = <1%

**SLOPE**: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE

**PHOTO ROLL**: MAYSAP - 5 - 6  
**FRAMES**: 8-14

**OG COMMENTS**:

- Revised by MC 5/7/91

- 26 removed, May 7
KAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 5  DATE 30 April 1991
SEGMENT # EV-24  TIDAL HEIGHT (Range) +5 → +4
SUBDIVISION A  BIOLOGIST Crank
SEA STATE O  WIND SPEED/DIRECTION 5 knots / SE
PHOTOGRAPHS: ROLL #  FRAME $

COMMENTS/ OBSERVATIONS (to be completed in oiled subdivisions only):
(A) Area is in the SUPRA and high UITZ ~ 20 m south of EV-23 A. Rye grass is sprouting within the site, no other intertidal biota found in site. Pege Teachers found in drift.

(B) Area is located in the lee of a rock outcrop in UITZ of cobble and gravel. Rye Fucus, rare barnacles, rare limpets and limpets are found with site covering ~5% of the available surface area. Below the rock outcrop, Fucus is dominant with ~10% cover on lee side and ~75% cover on exposed side. North of rock there is a 1m x 2m sparse intergravel mussel bed.

(C) Area is located in SUPRA. Rye grass is sprouting with 10 cm of tar pail. No other macrobiota found with site. 1m x 2m below amphipods and isopods are found. Approx. 4m below site there is 30% Fucus cover on bedrock, nannoplankton are maturing, sporelings are rare, barnacles are rare.

(D) Area is located in the UITZ and MITZ cobble and gravel under a drift log. 710 intertidal macrobiota was found in the gravel, on the cobble in the UITZ there were amphipods, barnacles and mussels 1% biota cover. In the MITZ there are sparse barnacles with a new set and rare Littorina with juvenile Littorina present ~5% biota cover. On drift log there is a moderate concentration of Fucus with sporelings present and sparse barnacles ~60% biota cover and on nearby rock outcrop there are dense barnacles and rare mussels with ~80% biota cover.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED</th>
<th>SPECIES PRESENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eagles</td>
<td>1</td>
<td>1: immature</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seabirds</td>
<td></td>
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<tr>
<td>Waterfowl</td>
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<td></td>
</tr>
<tr>
<td>Gulls/Kittiwakes</td>
<td>1</td>
<td>~ 35</td>
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</tr>
<tr>
<td>Shorebirds</td>
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<tr>
<td>Corvids</td>
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<tr>
<td>Other Birds</td>
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<tr>
<th>MARINE MAMMALS</th>
<th># OBSERVED</th>
<th>SPECIES</th>
<th># OBSERVED</th>
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<tbody>
<tr>
<td>Sea Otters</td>
<td>1: skeleton &gt; 5 days old</td>
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<tr>
<td>Pinnipeds (specify)</td>
<td></td>
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<tr>
<td>(specify)</td>
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<td>(specify)</td>
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</tbody>
</table>

Shoreline subdivision map showing important biological features attached.
Comments (cont.)

(E) Area is a narrow band in the U1TZ. Amphipods are the only macro-biota present. Five meters below site there is ~20% biota cover including moderate barnacles with a new set; sparse Fucus, rare mussels (various age classes) and sparse Littorina (juveniles present).

(F) Area is located in the SUPRA and high U1TZ. The rye grass is sprouting and the mass has fruiting bodies. Black lichen and amphipods are also present. Biota below site is similar to biota found below site E.

The intertidal biota in this subdivision appears to be healthy. New recruitment is occurring within the barnacles, Fucus, mussels and Littorina populations. U1TZ was covered by tide and therefore, not included in this survey. Sea otter Skeleton (dead more than 5 days) was found in the SUPRA behind rock outcrop (see map for location, both jaws have a full set of teeth.)
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-25

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION

SEGMENT ST/ EV-25     SUBDIVISION A (1 OF 1) DATE 4/8/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
ADF&G anadromous stream no. 226-40-16613
1A  Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B  Salmon stream mouth - spawning (7/10 to 8/31)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: __________________ DATE: __________________

OILING CATEGORIZATION:
Wide 222m: Medium 36 m: Narrow 28 m: V.Light 40 m: No Oil 84 m
Subsurface Oil Observed: Yes___ No X___ Maximum Depth_____

RECOMMENDATIONS:
_____No Treatment Recommended  _____Snare/Absorbent Booms
X  Treatment Recommended  _____Oil Snares (pom poms)
X  Manual Pickup  _____Absorbents (pads, rolls, etc)
_____Bioremediation  _____Spot Washing: _____Wands
X  Tarmat:  X  Breakup  _____Beach Cleaner
   X  Removal  _____Other (see comments)

COMMENTS: Recommended treatment includes 1) manual breakup and removal of tarmat in the areas shown on attached sketch map, 2) manual pickup of oiled debris. Work should be conducted between 5/15 and 7/10 based on salmon constraints.

TAG COMMENTS: ________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________

TAG APPROVAL DATE: ____________
ADEC  _________________________  FOSC: __________________ DATE: ____________
EXXON  _________________________
NOAA  _________________________
USCG  _________________________
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. 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 (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 (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 unspoiled 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
Invertebrates harvesting
For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 EV-25 SUBDIVISION: A DATE 04/08/90

☐ USCG NAME Randolph M. Newton SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

I recommend the area cleanup consist of washing the beach and removing the flaking off substance and tilted area where surface asphalt lied.

☐ ADEC NAME J. Lynn Martin SIGNATURE J. Lynn Martin

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

□ AGREE WITH EXXON OPS. RECOMMENDATION FOR MANUAL REMOVAL OF TARMACTS AND OILED AREAS. SEE MAP BY DOUG REMEMBER.

☐ LAND MANAGER NAME [Signature] SIGNATURE [Signature]

□ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

□ Manual Removal of Tarmats. I agree with but there is also submerged oil which is going to need a different type of cleaning, please.

REVISION NO. 03/19/0
**SHORELINE OILING SUMMARY**

**OG:** Reiner  
**USCG:** Hubbard  
**BIO:** Campas  
**LAND REP:** Selanoff  
**SEGMENT:** SV-25  
**EXXON:** Garcia  
**ADEC:** Martin

**TEAM NO.:** 16  
**TIDE LEVEL:** +3.5 m to +6 m  
**DATE:** 4/8/90  
**TIME:** 09:15 to 10:10

**EST. SUBDIVISION LENGTH:** 280 m  
**TIDE LEVEL:** +3.5 m to +6 m  
**DATE:** 4/8/90

**ROCK:**  
**FOOT:**  
**BOAT:**  
**HELLO:**

**SURVEYED FROM:**  
**FOOT:**  
**BOAT:**  
**HELLO:**

**SURFACE OIL**

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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</table>

**SURFACE OIL DISTRIBUTION**

- **OIL / FILM COLOR:**
- **IMPACTED ZONES:**

**PAVEMENT:** H ✓ S 86.7 sq. m by 3 cm

**PATTIES / TARBALLS:** 1 BAGS

**NEAR SHORE SHEEN:** NO BR RW SL TL

**OILED DEBRIS:**

- **AMOUNT:**
- **TYPE:**

**DEBRIS COLLECTED:**

- **ROLL NO.:** ST-16-6
- **FRAMES:** 11-19

**SUBSURFACE OIL**

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL (cm)</th>
<th>BELOW</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
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<th>SUBSURFACE SEDIMENTS</th>
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</table>

**COMMENTS:** Small area with rocky headlands on either side, fresh water stream and delta/esth

foot in center of Both, Bottom and Bilge along to rocky Section, silt and silt over silt

foot. There is a sparsely grassed on the rocks on the South west rocky shore with occasional

pails (10cm) in the M 1RRI. The site was enclosed to South west from a broken case and paper

amounted to be a continuous cover and paper around. Where the low angle break resulted in

silt covers by a continuous deposit (2 cm) thick. This continuous deposit extends over the

edge been by the tide except for where the action stream is flowing. On a bend 8-10 m wide, below

this is a broad area of paper, paper (10-20%) (8 cm). No Subsurface oil was found.

**REVIEWED**

**DATE**
## SHORELINE OILING SUMMARY (PAGE 2 of 2)

SEGMENT ST/ **EV - 2S** SUBDIVISION

### SUBSURFACE OIL (CONTINUED)

<table>
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<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
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<th>OILED INTERVAL (cm)</th>
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### COMMENTS

REVIEWED ___________ DATE ___________
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST / EV 25 Subdivision _______ Date (mo / day / yr) 4/8/96

Time (24 hr) 1035 off Biologist TONY ZAMORIA

- **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 5
  - Moderate 45
  - Low 50

- **C)** Density, substrate preference (by number from A, above), & vertical zonation of major taxa:
  - **Barnacles**
    - Dense
      1. 1U
      2. 1M
      3. 1L
    - Moderate
      1. 1M
      2. 1L
    - Sparse
      1. 1U
      2. 1M
      3. 1L
    - Rare
      1. 1U
      2. 1M
      3. 1L

  - **Mytilus**
    - Dense
      1. 1U
      2. 1M
      3. 1L
    - Moderate
      1. 1M
      2. 1L
    - Sparse
      1. 1U
      2. 1M
      3. 1L
    - Rare
      1. 1U
      2. 1M
      3. 1L

  - **Astroeco**
    - Dense
      1. 1U
      2. 1M
      3. 1L
    - Moderate
      1. 1M
      2. 1L
    - Sparse
      1. 1U
      2. 1M
      3. 1L
    - Rare
      1. 1U
      2. 1M
      3. 1L

  - **Fucus**
    - Dense
      1. 1U
      2. 1M
      3. 1L
    - Moderate
      1. 1M
      2. 1L
    - Sparse
      1. 1U
      2. 1M
      3. 1L
    - Rare
      1. 1U
      2. 1M
      3. 1L

Photographs:
- Roll No. ST-16-U
- Frames 1-19

Wildlife Observations/General Comments:
- **OTTER SPOTTED**
- Dense, Sexually Active Amphipods in MI
- Many Empty Mussel Shells (Most Drilled) in MI, in & Around Stream.
- Ecological Considerations: 735, 4/8
- Clam Habitat (Soft Silt/Sand) Lower MI on Reach, Clam Found (Mya Truncata): ~8 cm
- Stream Possibly Anadromous, Fed by 5m High Waterfall, Pink Salmon May Spawn Near Intertidal.
BIO-SCHEMATIC 1 PHOTOLOCATIONS

- Stream possibly anadromous
- Waterfall
- Sparling mussels
- Dense fucus
- Clam habitat
- Stream: steep grade (not anadromous)
- Possible anadromous stream
- Tar mats
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-26

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION

SEGMENT ST/EV-26 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unooled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: __________________________ DATE: _______________________

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 73 m: V.Light 176 m: No Oil 126 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: Recommended treatment includes 1) manual pickup of oiled grass in area indicated on sketch map, 2) manual removal of tarmats in areas indicated on sketch map, and 3) manually rake and bioremediate areas indicated on sketch map. Work should be conducted between 5/1 and 8/14 due to deer harvesting constraint.

TAG COMMENTS: __________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

TAG APPROVAL DATE: __________
ADEC ______________ FOSC: __________ DATE: __________
EXXON ________________________
NOAA _______________________
USCG _______________________
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 intrinsically hazardous, 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 is not intrinsically hazardous, and which will not affect nearshore oil or toxicity levels, such as manual 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 6/18)
1E Main Bay Hatchery release (4/20 to 6/18)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release sites
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: ADF&G Larry Peltz 424-3214

1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/10 to 9/30)
1K Purse seine hook and line (7/22 to 9/30)
1L Set net site (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 minimal 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 Evelyn Biggs 267-3235

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 unmerged 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 and appropriate Native Corporation for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 267-3235

3N 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). Contact ADF&G and USFWS prior to treatment for confirmation.
AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 565-7235
ADFG 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 789-3377

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 789-3377

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 only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 789-3377

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 designation

Subsistence areas: Salmon harvesting (5/1 to 9/30)
Finfish harvesting
Deer harvesting (6/15 to 9/30)
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
NO TREATMENT RECOMMENDED  TREATMENT SUGGESTED

Recommend manual removal asphalt/pavement patches and tarballs. Vegetation noted is dead and should be removed. Beach R.P.S. NOT MUCH R. Good for filling operation. Bioremediation.

NO SUBSURFACE OILS NOTED

ADEC NAME Dave Sale SIGNATURE

NO TREATMENT RECOMMENDED  TREATMENT SUGGESTED

1. Manually remove tar mat and oiled glasses at top (W.I.T.Z) or bank between stairs. Look for other tar balls at same time.
2. Manually remove sediments and clean legs, closed drain pipe, or S.E. section of segment.
3. Check Sut2 after snow melts. For oiling debris.
4. Tilling of sediments not removed is recommended.

LAND MANAGER NAME Don Kampkoff JR SIGNATURE

NO TREATMENT RECOMMENDED  TREATMENT SUGGESTED
**SHORELINE OILING SUMMARY**

**SURFACE OIL**

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<td>S</td>
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<tr>
<td>TARBALLS</td>
<td>B</td>
<td>B</td>
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</tr>
<tr>
<td>FILM</td>
<td>O</td>
<td>W</td>
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**PAVEMENT**

- H F (S) 20 sq.m by 4 cm
- PATTIES / TARBALLS 3 BAGS
- NEAR SHORE SHEEN? NO
- BR RW SL TL

<table>
<thead>
<tr>
<th>OILED DEBRIS</th>
<th>AMOUNT</th>
<th>DID YOU COLLECT DEBRIS?</th>
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<tbody>
<tr>
<td>Logs</td>
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<tr>
<td>Vegetation</td>
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<td>Trash</td>
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<td>Debris</td>
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Photographs:
- Roll No. ST/10/15
- Frames 29-33

**SUBSURFACE OIL**

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED MATERIAL INTERNAL</th>
<th>OILED MATERIAL BELOW</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
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<tr>
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<td>40</td>
<td>X - 0.81</td>
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<td>Y</td>
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<td>X</td>
<td>X</td>
<td>Y</td>
<td>N</td>
<td>8 - SV</td>
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**COMMENTS**

330641

**REVIEWED**

- LH
- DATE: 4-27-10
SHORELINE ECOLOGICAL SUMMARY

Segment ST/10/Ev24  Subdivision  A  Date (mo/day/yr) 4/25/90

Time (24 hr) 2010 - 1210  Biologist  Lemon

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

(B) Overall % cover of biota (% of segment): Dense____ Moderate____ Low 15%

(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/10/15
Frames 29 - 33

BARNACLES

<table>
<thead>
<tr>
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<th>Moderate</th>
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FUCUS

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<tr>
<td>1L</td>
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Wildlife Observations/General Comments:
3 Arches
1 gull
4 mule waterfowl

Ecological Considerations: A subsistence deer harvest area. A substantial stream (not 16610)
would appear to be good for salmon spawning, see map.

3786 41
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT EV-25 SUBDIVISION A (1 of 1)

WORK WINDOW

<table>
<thead>
<tr>
<th>Manual Pickup</th>
<th>OPEN</th>
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<tbody>
<tr>
<td>Tarmac Removal</td>
<td></td>
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<tr>
<td>Bioremediation Over 100m From Stream</td>
<td>WORK PRIOR TO 8/15</td>
</tr>
<tr>
<td>Bioremediation Less Than 100m From Stream</td>
<td>WORK PRIOR TO 7/10 (ADF&amp;G MONITOR REQ.)</td>
</tr>
</tbody>
</table>

ARCHAEOLOGICAL STANDARD CONSTRAINT
If cultural resources are uncovered, PHONE 564-3274

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A, 1B Salmon Stream

ADF&G catalogued anadromous stream (226-40-16613) is 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 tarmac removal.

7II Subsistence: Deer Harvesting

No constraint to manual pickup and tarmac removal; closed to bioremediation after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. No flushing of pollutants or sediments into stream drainage. Restrict boat and air traffic and beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM (226-40-16613) FOR ADDITIONAL CONSTRAINT INFORMATION

TAG ADDENDUM DATE 6/4/90
ADEC Ray W. Norris 2/17/90
EXXON 2/17/90
NOAA 2/17/90
USCG 2/17/90
FOSC 2/17/90

Prepared by: Arden Meyer PP
Date: 6/4/90
SEGMENT ST/ EV-25  SUBDIVISION A (1 OF 1) DATE 4/8/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
ADF&G anadromous stream no. 726-40-16613
1A  Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B  Salmon stream mouth - spawning (7/10 to 8/31)
7II  Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: Charles 3.5.10 DATE: 4/20/90

OILING CATEGORIZATION:
Wide 222 m: Medium 36 m: Narrow 28 m: V.Light 40 m: No Oil 84 m

Subsurface Oil Observed: Yes  No X Maximum Depth

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

COMMENTS: Recommended treatment includes 1) manual breakup and removal of tarmat in the areas shown on attached sketch map. 2) manual pickup of oiled debris. Work should be conducted between 5/15 and 7/10 based on salmon constraints.

TAG COMMENTS: ADD BIOREMEDIATION UP TO THE STREAM BANK TO BE CLEANED/CONTAINED BY ADF&G PRIOR TO TREATMENT

TAG APPROVAL DATE: 4/20/90
ADEC Art Wright  ART-WSF
EXXON  NOAA  USCG
NOAA  USCG

FOSC: DATE: 5-90

Do not bioremediate in main channel.
ASAP TAG REVIEW SHEET

Segment: EV26  Subd: A  Site: 1  Date  PRE-Review 11Aug90

Priority For Addressing In 1990

- HIGH
- MEDIUM
- LOW
- NTR

Treatment Recommended: MANUAL REMOVE TAGMAT

---

Priority Site For Reassessment In 1991

YES CG NO  YES DADEC NO  YES EXXON NO  YES LAND MGR NO

---

Manual Remove Accessible and/or AP of BIO

MODERATE PRIORITY
SEGMENT EV-26  SUBDIVISION A (14)  DATED 8-1-90

MODIFICATION

1. REASON FOR MODIFICATION:
ASAP survey crew located an area I assumed not treated during '90 summer cleanup.

2. SUGGESTED ADJUSTMENT TO WORK PLAN:
ASAP-YEEO crew worked for approx. 4 hours on EV-26 partially removing removed 1.5 super sacks

3. TIMING ISSUES:

4. ADDITIONAL COMMENTS:

ADEC  Bob McCready  Robert G. McCready
EXXON  Randal K. Boyd
USCG  
LAND MANAGER (If field rep is on scene)  
Ward Ward
WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT ET-26         SUBDIVISION A(171)       DATED 8/1/90

MODIFICATION

1. REASON FOR MODIFICATION:
   Moderate amount of tar mat/AP remains on ET-26 which can be broken up into two areas of concern. Area #1 runs from stream on segment to first prominent point. Area #2 runs from some prominent point to East boundary of segment.

2. SUGGESTED ADJUSTMENT TO WORK PLAN:
   Remaining AP/Tarmat warrants further treatment in 1990. Work would require a 10 person crew to manually remove remaining AP/Tarmat. Upon completion, manual removal, raking and custom-burn application is recommended.

3. TIMING ISSUES:
   Although ET-26 requires further treatment in 1990, area is not considered to be extremely high priority.

4. ADDITIONAL COMMENTS:
   VECO ASAP worked 4 hrs on the AP/8 patches between cobbles & boulders and will continue to work possibly tomorrow. 10 man crew could spend 3-4 days working.

ADEC Bob McCreaor  Robert E. McCready
EXXON Randall K. Boon
USCG
LAND MANAGER (If field rep is on scene)
SEGMENT AS: EV-26  SUBDIVISION: Site Site DATE: Aug 96

NAME: Ron Davis (212) SIGNATURE: Jane E. Williams

☑ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Several broken strips of Asphalt, Surface Oil, and Stains. Recommend low priority treatment in 1990, with reassessment in 1991. Heavy area noted in one area next to EV-25. Many areas will require hand towel removal of affected areas, especially in local rock areas.

ADEC NAME: Bob McCready SIGNATURE: Robert E. Milner

☑ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Remaining AP segments, further treatment in 1990. Area in question next from East side. Patch in segment & East boundary segment. Oiling is characterized by substantial amount of AP tarball. Also, 50% of oiling in question was manually treated as usual treatment appeared to have been insufficient. Other 50% AP tarball was for some reason not manually treated. It was hit by a freight train. Area others were noted to seek attention with no being applied directly to AP tarball. Result was virtually no change. AP's were removed and manual removal in the area.

HAND MANAGER NAME: Sharron V. Cuy SIGNATURE: Lea Cuy

☑ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: There is enough oil to warrant further work in 90, this area was worked manually. But a lot of oil remaining. It appears 50% was applied over too much oil. A manual crew could do a lot of good in this area

EXXON NAME: Randall K. Boyer SIGNATURE: Randall K. Boyer

☑ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: The Asphalt Pavement there is substantial and the VECO ASAP Crew is working on this area and this subdivision will warrant a look in 1991. The ASAP VECO Crew will spend another day in here and still not complete.
TOTAL EST LENGTH OF SHORELINE SURVEYED: 72 m

SURVEYED FROM: [Foot] [Boat] [Halo] WEATHER: [Sun] [Clouds] [Fog] [Rain] [Snow]

OIL CATEGORY LENGTH: W - m M - m N & O - m V - m NO - m US - m

<table>
<thead>
<tr>
<th>SURFACE OIL</th>
<th>SITE 1</th>
<th>SITE 2</th>
<th>SITE 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHARACTER</td>
<td>DISTRIBUTION</td>
<td>OILED ZONES</td>
<td>DISTRIBUTION</td>
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<td>ASPHALT</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>S.O.R.</td>
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<td>POOLED</td>
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<td>COVER</td>
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<td>COAT</td>
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<td>X</td>
<td>X</td>
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<td>STAIN</td>
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<tr>
<td>MOUSSE</td>
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<tr>
<td>PATTIES/T.B.</td>
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<tr>
<td>FILM</td>
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<tr>
<td>NO OIL</td>
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EST. SITE LENGTH: 80

SUBSURFACE OIL

<table>
<thead>
<tr>
<th>SITE NO.</th>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED ZONES</th>
<th>CLEAN BELOW (Y/N)</th>
<th>PIT ZONE</th>
<th>SURFACE-SUBSURFACE SEDIMENTS</th>
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</table>

PHOTOGRAPHS:
- Roll No.:
- Frames:

REVIEWS:
- Reviewed by:
- Date:

COMMENTS:
- SPORADIC DISTRIBUTION OF AP/SURF/ST
- 1 m² square area manually recovered
**SUPRATIDAL RESURVEY**

**DATE:** 6/15/90  
**TIME:** 10:40 to 11:20  
**SEGMENT:** EU 26 A  
**SITE:** A  
**USCG:** Fazio  
**CREW NO:** X  
**TIDE LEVEL:** +6  
**EST. SITE LENGTH:** 286 m  
**SURVEYED FROM:** Foot  
**WORKING DIRECTION:** S to N  
**SURFACE SEDIMENTS:** R 5% B 10% C 15% P 25% G 30% S 15% M 0% V O%  
**SLOPE:** Lang 100% Hang 0% Vert 0%  
**WAVE EXPOSURE:** Low  
**OIL CATEGORY LENGTH IN SITE:** W 0 m M 0 m N 0 m VL 60 m NO 226 m

### SURFACE OIL

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**PAVEMENT H F S** 0 sq. m by 0 cm  
**PATTIES / TARBALLS** 2  
**BAGS**  
**OILED DEBRIS AMOUNT**  
Logs  
Vegetation ✓  
Trash ✓  
Debris ✓  

**DID YOU COLLECT DEBRIS?**  
YES✓  
NO  
**TYPE** tarballs, trash  
**#BAGS** 4  

**PHOTOGRAPHS:**  
Roll No.  
Frames   

### SUBSURFACE OIL

**No pits dug because of vegetation cover.**

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### COMMENTS

Oiled material (tarballs, trash, and vegetation) was present in the surf zone on either side of the largest creek mouth (in work area). We picked most of this debris. No further treatment is suggested.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST1 EV26 SUBDIVISION: A DATE 4/5/90

USCG NAME: Sam Fazio SIGNATURE

[ ] NO TREATMENT RECOMMENDED [ ] TREATMENT SUGGESTED

COMMENTS:

No clean-up is needed area just have few Turtles and we collected them. – NTR –

ADEC NAME: Peter Montesano SIGNATURE

[ ] NO TREATMENT RECOMMENDED [ ] TREATMENT SUGGESTED

COMMENTS:

Segment shows scars from AIP removal, oiled debris and spill related debris remained in SLITZ. We collected the debris.

LAND MANAGER
NAME ____________________________ SIGNATURE ____________________________

[ ] NO TREATMENT RECOMMENDED [ ] TREATMENT SUGGESTED

COMMENTS
6/5/90
Supervised Resurvey
EV-26

EV-27

EV-26
W0RK AREA

EV-24

EV-25

ECOLOGY MAP
SEGMENT EV-26
SUBDIVISION A (_-of-_) WYERS

ONLY DEBRIS WAS PRESENT
IN SWAT IN NYEGRASS MEADOW HERE ON
EITHER SIDE OF CREEK MOUTH.
THIS DEBRIS COLLECTED 6/5/90 BY MONTESANO
AND FAZIO (4 BAGS WORTH)

★ Seabird Colony
△ Eagle Nest
ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-40-16610

SEGMENT EV-27 SUBDIVISION A

WORK WINDOW

Manual Pickup  OPEN

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B  Salmon Stream

ADF&G catalogued anadromous stream (226-40-16610) is in Subdivision A. No constraint to manual pickup.

7II  Subsistence: Deer Harvesting

No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Restrict boat and air traffic and beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unceded biota and substrate.

SEE SUBDIVISION CONSTRAINT ADDENDUM EV-27A FOR ADDITIONAL CONSTRAINT INFORMATION.

FOSC:

Prepared by:  Date: 6/14/90

Date: 6/10/90
Exxon Company, USA
Map Key: FMS-EV-27
June 08, 1990

ECOLOGY MAP
SEGMENT EV-27
SUBDIVISION A (L_of_L)
METERS

1 inch = 1176 feet

★ Seabird Colony
△ Active Eagle Nest
△ Inactive Eagle Nest

ANADROMOUS STREAM EVALUATION
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ EV-27     STREAM NO: 226-40-16610        DATE  4/26/90

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)
II  Subsistence area: Deer harvesting (8/15 to 2/28)
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 is located within Subdivision A (1 of 1).

ARCHAEOLOGICAL CONSTRAINT: Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time.

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

SHPO SIGNATURE:  DATE: 5/19/90

Subsurface Oil Observed: Yes  No  Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: SEE CONSTRAINTS ADDENDUM DATED 6/14/90

TAG COMMENTS: MANUAL PICK UP OF TAR PATTIES

TAG APPROVAL DATE:  5/9/90
ADEC  ART WEISSER  ART WEISSER  FOSC:  DATE: 6-8-90
EXXON  F. W. M.  DATE: 6-8-90
NOAA  B. W. B.  DATE: 6-8-90
USCG  D. D. A.  DATE: 6-8-90
ANADROMOUS FISH STREAM ASSESSMENT

REGION: PRINCE WILLIAM SOUND
SEGMENT: EV-27
STREAM NO: 226-40-16610
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ EV-27  STREAM NO: 226-40-16610  DATE  4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

IA  Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B  Salmon stream mouth - spawning (7/10 to 8/31)
1II Subsistence area: Deer harvesting (8/15 to 2/28)

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 is located within Subdivision A (1 of 1).

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO SIGNATURE:_________________________ DATE:_________________________

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:_________

ADEC  ____________________________  FOSC:____________________ DATE:_______

EXXON  ____________________________

NOAA  ____________________________

USCG  ____________________________
Salmon stream mouth - fry outmigration (3/1 to 5/15)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bio-remediation 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 Inpulp 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 or PWS Aquaculture prior to treatment for consultation and/or permit application.

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

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 Inpulp 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 Peitz 424-3214

Estuary Hatchery release (4/15 to 6/15)
Main Bay Hatchery release (4/20 to 6/15)
Seward Bay Hatchery release (4/15 to 6/1)
Canin Creek Hatchery release (4/21 to 6/1)
Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inpulp 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: ADF&G Larry Peitz 424-3214

Gill net area (6/7 to 8/31)
Purse seine area (7/20 to 9/5)
Purse seine hook-off (7/20 to 9/5)
Set net sites (8/11 to 7/28)
Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (11) restrict boat operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inpulp 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

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 unooled Intertidal and subtidal areas and seagrass. If plans for treatment include methods such as hot water wash or Inpulp application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

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

Harbor seal and sea lion pupping (6/15 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 600m horizontal and 300m vertical distance from haulouts. No application of Inpulp within two weeks of arrival dates (work window at these sites is limited to 7/1 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.

AGENCY CONTACT PERSON: USFWS Steve Zimmerman 586-7235

Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 600m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 788-3377

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 788-3377

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 600m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

AGENCY CONTACT PERSON: USFWS Jill Parker 788-3377

Recreation:
Tent sites (6/1 to 9/15)
Anchorage (6/1 to 9/15)
Forest Service cabin (6/1 to 9/15)
Lodge (8/1 to 9/15)
Special use designation

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 Inpulp 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 Pail 267-2359
FIELD SHORELINE COMMENT SHEET

DOCUMENT SITE: EV 027  SUBDIVISION: 126 10  DATE 4/26/90

USCG NAME: McMAHON  SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED  ☒ TREATMENT SUGGESTED

1. MANUAL CLEAN-UP: REMOVE TAR PATES
   (see map)

☐ NO TREATMENT RECOMMENDED  ☒ TREATMENT SUGGESTED

Manual removal of band of sporadic tar spots from both sides of streams.

LAND MANAGER

NAME: ___________________________ SIGNATURE: ___________________________

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED
ASC # 226-40-16610
Segment EV-027

Observations. A sporadic band of tar patties rings the high tide line adjacent to the two widely spaced mouths of this one stream. No subsurface oil was observed.

Treatment Recommendations. Manually remove all tar patties.
### Surface Oil

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<th>Distribution</th>
<th>Oil / Film Color</th>
<th>Impacted Zones</th>
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<td>Mousse</td>
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### Subsurface Oil

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<tr>
<td>3</td>
<td>30</td>
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</table>

**Comments:** *Oiled Interval <5 cm in Pit No. 2 does not constitute subsurface oil.
segment EV027
Stream 226-40-16610
Ecological Summary

There are two streams at this site (see sketch), separated by a wide, shallow-slope beach of cobble, pebbles, and gravel. Dense barnacles and scattered Fucus occur in the MTF. Little other intertidal biota exist except for a dense patch of mussels at the mouth of the larger (western) stream. Light scattered tar mats were found on the UTZ bank near the eastern stream. Manual removal recommended. There are no ecological constraints.

Michael Fancett
ECOLOGICAL MAP

ANADROMOUS
STREAM

226-40-16610
(P4.12/89)

LOCATED IN

EV-27-A
(1 of 1)

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

EV-27

Map Key: PWS-196
Name: Reimer
Date: 4/9/90
Data Entered:
### ADFAQ Multi-Assessment Data Form

1. **Survey Type:** Yes (Y) No (N) Avg SAC 1996 PTA
2. **Region:** Yes (Y) No (N) X, AP

#### Method
- **Date:** 9/26/90
- **Start Time:** 11:30
- **Stop Time:** 12:08
- **Location:** Shelter Bay

#### Site Info
- **Coordinate:** N 226-40-1660
- **Station:** #1
- **Site:** #1
- **Time at Site:** 42
- **Video Taken:** Y
- **Samples Taken:** Y
- **Comments:** Only stream mouth and one small source in 10 stream numbers.

#### Extent of Oil

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#### Survey Coverage

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#### Surface Thickness

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#### Oil Impact

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#### Oil Types

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#### Oiled Shear

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#### Shoreline Type

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### Anomalous Fish Observation

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### Comments

If sights or coho before computing and circle any (See map)

Recommend manual removal or infrastructure the path.

No Inland
EV 027
226-40-16610
4/26/90

Spotted Tal Flaps

Spotted Tal Flaps

Sew Resid.

Shelter Gun

Line at Stream Flaps

Stream Flaps

Window
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-27

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION

SEGMENT ST/EV-27  SUBDIVISION A (1 OF 1) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
- ADF&G anadromous stream no. 226-40-16610
  1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
  1B Salmon stream mouth - spawning (7/10 to 8/31)
- 7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: ______________________ DATE: ________________

OILING CATEGORIZATION:
- Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 26 m: No Oil 796 m
- Subsurface Oil Observed: Yes No X Maximum Depth __

RECOMMENDATIONS:
- X No 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: ____________
- ADEC
- EXXON
- NOAA
- USCG

FOSC: __________________ DATE: ____________
SCHET

FIELD SHORELINE COMMENT SHEET

DRAFT

SEGMENT ST: EV-27  SUBDIVISION:  DATE: 4/09/90

NAME: R. Hubbard
SIGNATURE:

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

ADEC

NAME: Lyon Martin
SIGNATURE:

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

RECOMMEND THAT ANAD SCAT CHECK OIL BELSIDE
STREAM TO DETERMINE WHETHER IT SHOULD BE
PICKED UP.

THE REST OF THE SEGMENT NEEDS NO TREATMENT

LAND MANAGER

NAME: Patrick Bower
SIGNATURE:

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

I would strongly suggest treatment be done here, becau
the oil is near a salmon stream. I am not
too sure of Bioremediation and its effects but any kind of
contam would be better than none.
## SHORELINE OILING SUMMARY

**SEGMENT** | EV - 27
---|---
**BIO. REP.** | USCG Hubbard
**LAND REP.** | Sagenoff (Giu)
**EXXON CAS** | ADEO, Martin
**TEAM NO.** | C
**TIDE LEVEL** | -1 ft
**UPLANDS/DESCRIPTION** | Grass, Forest, Rock
**SURFACE DISTRIBUTION** | In
**SURFACE OIL**

<table>
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<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL/FILM COLOR</th>
<th>IMPACTED ZONES</th>
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**SUBSURFACE OIL**

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<th>SUBSURFACE OIL CHARACTER</th>
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<th>OIL/FILM COLOR</th>
<th>PIT ZONE</th>
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**COMMENTS**

Western head of long estuary. Rocky beach with intermittent pebbles and shells along the south side of the segment. A major creek enters and drains (turbid water) fills the center of the segment punctuated with pebbles, gravel, and scattered shells. The northern end of the segment appears to have a grass and shell bed, whereas the southern section got snow exposed. The oil found in this segment was a band of spreading, punctuated (12) cm wide, near the northern and associated with a spreading coating on pebbles and gravel. The band was approximately 2 meters wide and dissipates into a spreading sheet to the southwest. Total length 50 m.

**PHOTOGRAPHS**

*Roll No: S-16-7*

**REVIEWED**

**DATE**

Page 1 of 7
<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>OILED INTERVAL (cm)</th>
<th>OIL/FILM COLOR</th>
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**COMMENTS**
SHORELINE ECOLOGICAL SUMMARY

Segment ST/5V27 Subdivision ___ Date (mo/day/yr) 4/9/90
Time (24 hr) 1030 Off Biologist TONY ZAMORA

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

(B) Overall % cover of biota (% of segment): Dense 60 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 (X)

BARNACLES

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NOTE PRESENT

Wildlife Observational/General Comments:
- DENSE CLAM BED - P. STRIGULA, C. NORTONI, H. TENACULA, S. PATINUS.
- DENSE FUCUS NARROW ALONG SITE OR RIVER BED.
- DENSE BARNACLES (NOT OBSERVED, BUT I DIDN'T HAVE TIME TO LOOK WELL)
- MANY BONY MUSSEL SHELLS IN & AROUND STREAMS, LIVING MUSSELS ABOVE WITHIN FUCUS PATCHES.
- EAGLE, OTTERS SITED.
- MANY PITTS IN CLAM BED INDICATE FEEDING AREA FOR OTTERS.
- ECOLOGICAL CONSIDERATIONS

7/31, 7/31, 1/4/83 (PINK SALMON PLY SEN)
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. Contact ADF&G Habitat Division prior to treatment for permits.

Salmon fry nursery area (4/31 to 7/31)
Esther Hatchery release (4/15 to 6/1)
Main Bay Hatchery release (4/20 to 5/10)
Sawmill Bay Hatchery release (4/15 to 6/1)
Cannery Creek Hatchery release (4/21 to 6/1)
Remote release site

Gill net area (6/7 to 8/31)
Purse seine area (7/20 to 9/30)
Purse seine hook-off (7/20 to 9/30)
Set net sites (6/11 to 7/25)

For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

Herring spawning (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to unveiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

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.

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.

Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.

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.

Recreation: Tent sites (5/1 to 9/15)
Anchorage (6/1 to 9/15)
Forest Service cabins (6/1 to 9/15)
Lodge (6/1 to 9/15)
Special use destination

Subsistence area: Salmon harvesting (5/1 to 9/30)
Finfish harvesting
Deer harvesting (8/15 to 2/28)
Invertebrate harvesting

For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
SHORELINE EVALUATION

SEGMENT ST/ EV-27 SUBDIVISION A (1 OF 1) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 226-40-16610
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
7II Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS: Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time.

SHPO SIGNATURE: DATE: 4/9/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 26 m: No Oil 796 m
Subsurface Oil Observed: Yes No Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

REMOVE ASPHALT + OILED TRASH

TAG COMMENTS:

TAG APPROVAL DATE: 4/20/90
ADEC ART WIEGART
EXXON NOAA
NOAA
USCG KENNETH KEANE

FOSC: DATE: 4/27/90
## ANADROMOUS FISH STREAM EVALUATION

**SEGMENT ST/ EV-27 STREAM NO: 226-40-16610 DATE 4/26/90**

### SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
- **IA** Salmon stream mouth - fry outmigration (3/1 to 5/15)
- **IB** Salmon stream mouth - spawning (7/10 to 8/31)
- **II** Subsistence area: Deer harvesting (8/15 to 2/28)

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 is located within Subdivision A (1 of 1).

### ARCHAEOLOGICAL CONSTRAINT:
Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time.

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

### SHPO SIGNATURE: Loretta Dean DATE: 5/18/90

### Subsurface Oil Observed: Yes No X Maximum Depth

### RECOMMENDATIONS:
- [ ] No Treatment Recommended
- [ ] Treatment Recommended
- [x] Manual Pickup
- [ ] Bioremediation
- [ ] Tarmat Removal

### COMMENTS:

TAG COMMENTS: MANUAL PICK UP OF TAR PATTIES

TAG APPROVAL DATE: 5/17/90

ADEC Art Weimer Art Weimer
EXXON [ ] [ ]
NOAA [ ] [ ]
USCG D.D. Rome D.D. Rome

FOSC [ ] [ ]
DATE: 6-6-90

Notify CVC of print cleanup
ECOLOGICAL MAP

1A/1B
1111

ANADROMOUS STREAM
226-40-16610
(Ps. 12/89)
LOCATED IN
EV-27-A
(1 of 1)

EV-26

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

ADEC Segment Length: 822m

Map Key: PWS-196
Name: Reimer
Date: 4/9/80
Data Entered:
SHORELINE EVALUATION

SEGMENT ST/ EV-36 SUBDIVISION A (1 OF 1) DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
- T-2 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
- 6Y Recreation: Special use destination
- 7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: [Signature] DATE: 5/2/90

OILING CATEGORIZATION:
- Wide 0 m: Medium 73 m: Narrow 0 m: V. Light 420 m: No Oil 1403 m
Subsurface Oil Observed: Yes ___ No X ___ Maximum Depth ______

RECOMMENDATIONS:
- X No Treatment Recommended
- Treatment Recommended
- Manual Pickup
- Bioremediation
- Tarmat Removal

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 5/2/90
- ADEC [Signature] DATE: 6/14/90
- EXXON [Signature] DATE: 6/14/90
- NOAA [Signature] DATE: 6/14/90
- USCG [Signature] DATE: 6/14/90
Legend

- steep Bedrock Backshore
- trees
- High angle Bedrock/Boulder/Shore zone
-

High angle B/R Shore zone

High angle Boulder/Cobble Beach
w/ a pebble storm. bern in the suqal ITZ

Oil Character Length (m): AP 0 PO 0 CV 0 CT 450 ST 130 MS 0 PT 0 TB 0 FL 0 NO 1404
ECOLOGY MAP

EV-39

CONFRAMMED
PRESENCE

EV-37

UNOILED
DEEP CARASS INTERBLITD tRINGS

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

EV-36

Map Key: PWS-242d
Name:
Date:
Data Entered:

ADEC Segment Length: 1984m
0 100 200 300 METERS
1991 MAYSAP EVALUATION


ENVIRONMENTAL SENSITIVITIES:
Work Window(s) RESTRICTED 3/1 - 9/1

Ecological/Constraints (see page two for details) Eagle nest, Fish harvest area

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO Signature: ______________________ Date: 5/8/91

RECOMMENDATIONS:

<table>
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<tr>
<th>TREATMENT REQUIRED (Y or N)</th>
<th>INITIAL</th>
<th>TAG</th>
<th>FOSC</th>
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</thead>
<tbody>
<tr>
<td>N</td>
<td>______</td>
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<td>N</td>
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</tbody>
</table>

Manual Pickup (Check as Req.) ______
Spot Washing ______
Bio-Customblen Only ______
Bio-Inipol/Customblen ______
Other ______________________

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: May 8 1991  FOSC APPROVAL DATE: 5/13/91

ADEC ______________________
EXXON ______________________
USCG ______________________
NOAA ______________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Eagle Nest: Access restricted from 3/1 to 9/1. USF&WS authorization required. Maintain 1000' vertical and 1/4 mile horizontal buffer.

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.
MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5  SEGMENT EV-36  SUBDIVISION A  DATE 4/18/91

ADEC
NAME: John Hayne
SIGNATURE: 
RECOMMENDATION: 

□ NTR

Heaviest oiling here was observed on predator at N.E. point of segment. High wave oiling here is difficult to locate and does not require substantial man treatment or mechanical work recommendations are for manual crew (Chessy CAP) to recover gross contamination at this pt. This is a high energy local and weather should be watched closely during treatment. The rest of this segment does not require treatment but I do recommend resurvey of the predator in 1992. Points A & B on sketch map identify area recommended for treatment.

EXXON
NAME: Martinez N.J.
SIGNATURE: 

□ NTR

S.O.R. is among damaged areas. Recoverable but difficult.

LANDMANAGER
NAME: Steve Wink Of CVC
SIGNATURE: 

□ NTR

There is oil Enough, surface and sub-surface to justify setting in Chessy Use OR A Use crew this summer and work with Chessy. Shocks are reassessed for sub-surface in Fall 91 and spring 92

USCG/NOAA
NAME: DREHER / Hodges
SIGNATURE: 

□ NTR

Air temp. = 70° F. Observed small pockets of sheening and recoverable quantities of oil. Recommend manual removal of deposits which will mobilize at higher ambient temperatures a release significant sheening.

Oil spatter and some coating with pine needles observed. Large mussel bed with isolated for petals on upper right of bench. Some surface and subsurface oil patches found.
## MAYSAP SHORELINE OILING SUMMARY

**Team No.** 5  
**Example** Chaney  
**ADEC** Hayes  
**Exxon** Martínez  
**Bio** Crank  
**Landmanager** Ward for CVC  
**USCG/NOAA** Dreher/Hodges  
**Segment** EV 36  
**Subdivision** A  
**Date** April 12, 1991  
**Time** 18:30 to 19:45  
**Tide Level** 3 ft. to 2 ft.  
**Energy Level**  

- **Surveyed From:**  
  - Foot  
  - Boat  
  - Helo  
  - Weather:  
    - Sun  
    - Clouds  
    - Fog  
    - Rain  
    - Snow  

**Total Length Shoreline Surveyed** 445 m  
**Near Shore Sheen**  
- BR  
- BB  
- SL  
- None  

**Est. Oil Category Length**  
- W 40 m  
- M 20 m  
- N 20 m  
- VL 125 m  
- NO 240 m  
- US 145 m

### SURFACE OIL CHARACTER

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<th>AP</th>
<th>MS</th>
<th>TB</th>
<th>SOR</th>
<th>CV</th>
<th>CT</th>
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<th>M</th>
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<td>ALPMUS UNDER BOULDER</td>
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### DISTRIBUTION:
- C = 91-100%; B = 81-90%; P = 71-80%; S = 1-10%; T = <1%

### SLOPE:
- V = Vertical  
- H = High Angle  
- M = Medium Angle  
- L = Low Angle  

### PHOTO ROLL # MAYSAP:
- 5  
- 4  
- 13-18  

### SURFACE-OILED SEDIMENTS

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<th>PIT NO.</th>
<th>DEPTH (cm)</th>
<th>OP</th>
<th>HOR</th>
<th>MOR</th>
<th>HOR</th>
<th>LOR</th>
<th>NO</th>
<th>TR</th>
<th>TR NO</th>
<th>OILED ZONE</th>
<th>CLEAN BELOW (cm)</th>
<th>H2O LEVEL</th>
<th>SHEEN COLOR</th>
<th>PIT ZONE</th>
<th>N</th>
<th>SURFACE-SUBSURFACE SEDIMENTS</th>
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</table>

### SHEEN COLOR:
- B = Brown  
- R = Rainbow  
- S = Silver  
- N = None

### OG COMMENTS:
- (A) Base of cliff, patches of APIMs under large boulders.  
- (B) Area is on the rocky point. Several distinct patches of asphalt were observed in this region although there are large areas without oil. Asphalt is mixed with mussels.  
- (C) Large boulders with coat stain and a couple of patches of SOR at Boulder Bases.

**Reviewed:** F.W. 5/1/91  
**Reviewed:** M.C. 5/1/91
MAYSAP 1991
DG SKETCH MAP
GREG CHANEY
TEAM 5
SEGMENT: EJ 3G A
DATE: APRIL 28 1991
AIR P.: HMC005132

RAINFOREST AND
SILVER SHEEPS
IN MANYTIDE POOLS

LEGEND
30Y.10
AP~5%
CV~1%
ST~10%

4X20
SOR 2 PATCHES
CV >1%
CT~10%
ST~10%

5X5m
CT TRACE
ST TRACE

INACCESSIBLE
NO SURVEY

LOW JAGGED
BOULDERS
SEA STACK

EAGLE
NESTS

SEEN
ENLARGEMENT

NO SURVEY DUE TO WILDLIFE CONCERN

LATOUCHE
PASSAGE

SURVEY TERMINATED
DUE TO ROUGH WEATHER
AND VERY LIGHT OILING
CONDITIONS

SCALE
100 METERS
APPROXIMATE

BEDROCK
BOULDERS
FINE BED.
DRIFT LOG
GRABB
BRUSH
FOREST
OILED PIT
NO OIL PIT
PHOTO

0.1 X 20 m
CT 15%
ST 10%
IN LARGE
BOULDERS

EVANS
ISLAND

SMALL
WATER FALL

100% METERS
APPROXIMATE
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 5  DATE 28 Apr '91
SEGMENT # EV 300  TIDAL HEIGHT (Range) +3 - +2
SUBDIVISION A  BIOLOGIST Crank
SEA STATE 3'  WIND SPEED/DIRECTION 15/E
PHOTOGRAPHS: ROLL # MAYSAP 4  FRAME # 17

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):

(A) Area is high in UIHZ. Rare filamentous green algae no other intertidal biota present.

(B) Area is in UIHZ directly below (A) on a rock bench. The bench is 90% covered with biota. There are dense mussels and Fucus (dominant 2700). There are sparse to moderate barnacles with tightly packed inner plates. Moderate Litonaria concentration and eggs present. Other algae includes Scytophorum, Ulva and filamentous greens. Removal of present oil would not be-net environmentally beneficial.

(C) Area is located high in the UIHZ, in a boulder field. No intertidal biota observed in area. Fifteen meters below site there is a 20% barnacle and Fucus cover.

(D) Area is located in the UIHZ. Rare barnacle spot in vicinity of oil. No other macro-biota. Seven meters below site there is a 20% biota cover.

(E) Area is located in UIHZ. Filamentous green algae present at oil surface. Black and white lichen present on top of boulders. Limpets are sparse. Rare barnacles 12 m down from area and a 20% biota cover 5 m below area.

(F) Area is located in large boulder field in the UIHZ. There are rare Fucus sporings, sparse limpets and rare barnacle recruits.

There are 2 confirmed Eagle nests - 50 m apart; southern one is active. Fifteen eagles were in vicinity during survey. Fresh deer carcass was present on adjacent beach.

WILDLIFE OBSERVATIONS. Areas surveyed are wildlife sensitive due to Eagle constraints.

TO BE COMPLETED IN ALL SUBDIVISIONS

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<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED SPECIES PRESENT</th>
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<td>Whales (specify)</td>
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LAND MAMMALS

Shoreline subdivision map showing important biological features attached.
**MAYSAP 1991**

**06 SKETCH MAP**

**GREG CHANEY**

**TEAM 5**

**SEGMENT:** EV 36 A

**DATE:** APRIL 28 1991

**AIR P. #:** KMCO-05132

---

**LEGEND**

<table>
<thead>
<tr>
<th>BEDROCK</th>
<th>Boulders</th>
<th>Fine Bed.</th>
<th>Drift Log</th>
<th>Grab</th>
<th>Brush</th>
<th>Forest</th>
<th>Oiled Pit</th>
<th>No Oil Pit</th>
<th>Photo</th>
</tr>
</thead>
</table>

**SCALE**

100 METERS APPROXIMATE

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**A**
30 x 40
AP ~ 5%
MS TRACE
SOR 5%
CV 20%
CT 30%
ST 10%

**B**
20 x 50 m
AP > 1%
CV > 1%
CT > 1%

**C**
4 x 20
SOR 2 PATCHES
CV > 1%
CT > 10%
ST > 10%

**EAGLE NESTS**

**RAINBOW AND SILVER SHEENS IN MANY TIDE POOLS**

**ENLARGEMENT**

**ROCK BEACH WITH DENSE BUSH COVER - INTRUSIVE CLEAN UP WOULD NOT BE NET ENVIRONMENTALLY BENEFICIAL**

**LOW JAGGED BOULDERS**

**SEA STACK**

**DRIVER (A)**

**ACTIVE NEST**

**DEER WAS LYING DOWN IN THE SUPRA WALKED THROUGH AREA ON SURVEYING. DID NOT WANT TO SPOOK ANIMALS**

**WILDLIFE CONCERN**

**INACCESSIBLE NO SURVEY**

**LATOCHE PASSAGE**

**SURVEY TERMINATED DUE TO ROUGH WEATHER AND VERY LIGHT OILING CONDITIONS**

**EAGLE ACCESSIBILITY**

**NO SURVEY**

**0.1 x 20 m**

**5 x 5 m**

**CT TRACE**

**ST TRACE**

**IN LARGE BOULDERS**

**EAGLE SURVEY TERMINATED**

**DEER IS WILDLIFE SENSITIVE DUE TO EAGLE CONSTRAINTS**

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**EVANS ISLAND**

**SOUTH FALL**

**SMALL WATERFALL**

**SURVEY TERMINATED DUE TO ROUGH WEATHER AND VERY LIGHT OILING CONDITIONS**
ENVIRONMENTAL SENSITIVITIES:
Work Window(s) RESTRICTED 3/1 - 9/1

Ecological/Constraints (see page two for details) Eagle nest, Fish harvest area

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO Signature: __________________________ Date: __________________

RECOMMENDATIONS:

TREATMENT REQUIRED (Y or N)  N

Manual Pickup (Check as Req.)
Spot Washing
Bio-Customblen Only
Bio-Inipol/Custumblen
Other

COMMENTS:
INITIAL:________________________________________

TAG:________________________________________

FOSC:________________________________________

TAG APPROVAL DATE: __________________________ FOSC APPROVAL DATE: __________________________

ADEC ___________________________________ FOSC ___________________________________

EXXON ___________________________________

USCG ___________________________________

NOAA ___________________________________
Eagle Nest: Access restricted from 3/1 to 9/1. USF&WS authorization required. Maintain 1000' vertical and 1/4 mile horizontal buffer.

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.
<table>
<thead>
<tr>
<th><strong>ADEC</strong></th>
<th><strong>NAME</strong></th>
<th><strong>SIGNATURE</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>□ NTR</td>
<td>John Hopper</td>
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</table>

- **Recommend treatment**
- Heavy oiling here was observed on property at N.E. point of segment. Because oiling here is difficult to locate and does not require substantial man treatment or mechanical work, recommendations are for manual crew (Chopra CAF) to recover gross contamination at this pt. This is a high energy local wind weather should be utilized closely during treatment. The rest of this segment does not require treatment but I do recommend reopening of the property in 1992. Points A+B on sketch map identify area recommended for treatment.

<table>
<thead>
<tr>
<th><strong>EXXON</strong></th>
<th><strong>NAME</strong></th>
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<tbody>
<tr>
<td>□ NTR</td>
<td>Martinez, N.R.</td>
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- SOR in surrounding beakers recoverable

<table>
<thead>
<tr>
<th><strong>LANDMANAGER</strong></th>
<th><strong>NAME</strong></th>
<th><strong>SIGNATURE</strong></th>
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<tbody>
<tr>
<td>□ NTR</td>
<td>Steve Ward OF CVC</td>
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- There is oil enough to recover and sub-surface to be handled by Chopra CAF, or USCG CAF this summer. This area is close to Chopra. Should be revisited for sub-surface in Fall 91 and Spring 92.

<table>
<thead>
<tr>
<th><strong>USCG/NOAA</strong></th>
<th><strong>NAME</strong></th>
<th><strong>SIGNATURE</strong></th>
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</thead>
<tbody>
<tr>
<td>□ NTR</td>
<td>Dreher/Pundez</td>
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- **Air temp. = 30° observed small packets of sheening and recoverable quantities of oil. Recommend manual removal of deposits which will mobilize at higher ambient temperatures a release significant sheening.**
- Oil spatter and some coating with pine needles observed. Large mussel bed with isolated tar patches on upper right of beach. Some surface and subsurface oil patches found.
**MAYSAP SHORELINE OILING SUMMARY**

**TIME** 18:30 to 19:45  **TIDE LEVEL** 3 ft. to 2 ft.  **ENERGY LEVEL:** DARK

**SURVEYED FROM:** FOOT □ BOAT □ HELO  **WEATHER:** ☼ SUN □ CLOUDS □ FOG □ RAIN □ SNOW

**TOTAL LENGTH SHORELINE SURVEYED:** 445 m  **NEAR SHORE SHEEN:** ☃ BR □ SL □ NONE

**EST. OIL CATEGORY LENGTH:** W 40 m M 20 m N 20 m V 125 m NO 240 m US 145 m

<table>
<thead>
<tr>
<th>LOC</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT TYPE</th>
<th>SHORE SLOPE</th>
<th>AREA</th>
<th>ZONE</th>
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<td>T S</td>
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<tr>
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<td>T S</td>
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<td>4</td>
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<tr>
<td>D</td>
<td>T T</td>
<td>R M</td>
<td>M</td>
<td>10</td>
<td>70</td>
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<tr>
<td>E</td>
<td>T T</td>
<td>R M</td>
<td>M</td>
<td>0.1</td>
<td>20</td>
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<tr>
<td>F</td>
<td>T T</td>
<td>RB</td>
<td>H</td>
<td>5</td>
<td>5</td>
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</table>

**DISTRIBUTION:** C = 91-100%; B = 81-90%; P = 71-80%; S = 1-10%; T = (<1%

**SLOPE:** V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE

**PHOTO ROLL # MAYSAP:** 5 - 4  **FRAMES:** 3 - 18

**PIT NO.** 1 2 3 4 5 6 7 8 9

**PIT DEPTH (cm):** 10 25 20 25 30 40 30

**SUBSURFACE OIL CHARACTER:** YES

**SUBSURFACE OIL CHARACTER:** YES

**OILED ZONE:** 0 - 10 cm

**CLEAN BELOW:** 20 - 25 cm

**H2O LEVEL:** (cm)

**SHEEN COLOR:** B

**ZONE:** S U M L

**NOTES:**

**OG COMMENTS:**

① **BASE OF CLIFF:** PATCHES OF ASPHALT UNDER LARGE BOULDERS RECOVERABLE

② **AREA B IS ON THE ROCKY POINT:** SEVERAL DISTINCT PATCHES OF ASPHALT WERE OBSERVED IN THIS REGION. ALTHOUGH THERE ARE LARGE AREAS WITHOUT OIL, ASPHALT IS MIXED WITH MUSSELS.

③ **LARGE BOULDERS WITH COAT # STAIN AND A COUPLE OF PATCHES OF OIL AT BOULDER BASES.**

**REVIEWED:** F.W. 5/1/91

**REVIEWED:** M.A. 5/1/91
In many tide pools, rainbow and silver sheens are present.

Legend:
- Bedrock
- Boulder
- Fine Bed
- Drift Log
- Grabb
- Brush
- Forest
- Oiled Pit
- No Oil Pit
- Photo

Scale: 100 Meters Approximate

Survey terminated due to rough weather and very light oiling conditions.
TECH #5
SEGMENT # 1EV 360
SUBDIVISION A
SEA STATE 3'
PHOTOGRAPHS: ROLL # MAYSAP 4

DATE 28 Apr '91
TIDAL HEIGHT (Range) +3 to +2
BIOLOGIST Crank
WIND SPEED/DIRECTION 15/E
FRAME # 117

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):
(A) Area is high in UITZ. Rare filamentous green algae with no other intertidal birds present.

(B) Area is in MITZ directly below (A) on a rock bench. The bench is 80% covered with
biota. There are dense mussels and Fucus (dominated by 2 spp). There are sparse
mussels and very few barnacles. Mussels have infaunal populations. Dense Littorina recruitment
and eggs present. Other algae includes Scytosiphon, Ulva and filamentous green.
Removal of present oil would not be environmentally beneficial.

(C) Area is located high in the UITZ, in a boulder field. No intertidal birds observed
in area. Fifteen meters below site there is a 20% barnacle and Fucus cover.

(D) Area is located in the UITZ. Rare barnacle spot in vicinity of oil. No other
maceration. Seven meters below site there is a 20% barnacle cover.

(E) Area is located in UITZ. Filamentous green algae present at all surface. Black
and white lichen present on top of boulders. Limpets are sparse. Rare barnacles
are present 2m down from area and a 20% barnacle cover 5m below area.

(F) Area is located in large boulder field in the UITZ. There are rare Fucus samplings,
sparse limpets and rare barnacle recruiter.

There are 2 confirmed Eagle nests 750 m apart, southern one is active. Fifteen
egrets were in vicinity during survey - fresh deer carcass was present on adjacent beach.

WILDLIFE OBSERVATIONS
Areas surveyed are wildlife sensitive due to Eagle constraints,

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED</th>
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<tbody>
<tr>
<td>Eagles</td>
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<tr>
<td>Seabirds</td>
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<tr>
<td>Waterfowl</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Gulls/kittiwake</td>
<td>2</td>
<td></td>
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<tr>
<td>Shorebirds</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Corvids</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Other Birds</td>
<td>1</td>
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MARINE MAMMALS

<table>
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<tr>
<th>MARINE MAMMALS</th>
<th># OBSERVED</th>
<th>SPECIES</th>
<th># OBSERVED</th>
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<tbody>
<tr>
<td>Sea Otters</td>
<td></td>
<td></td>
<td>Deer-lim</td>
</tr>
<tr>
<td>Pinnipeds(specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whales(specify)</td>
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LAND MAMMALS

Shoreline subdivision map showing important biological features attached.
MAYSAP 1991
DG SKETCH MAP
GREG CHANEY
TEAM 5
SEGMENT: EV 36 A
DATE: APRIL 28, 1991
AIR P.N. TMC605132

LEGEND

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>DESCRIPTION</th>
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<tr>
<td>BEDROCK</td>
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<tr>
<td>BOULDERB</td>
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<tr>
<td>FINE BED</td>
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<tr>
<td>DRIFT LOG</td>
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<td>GRABB</td>
<td></td>
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<tr>
<td>BRUSB</td>
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<td>FOREST</td>
<td></td>
</tr>
<tr>
<td>OILED PIT</td>
<td></td>
</tr>
<tr>
<td>NO OIL PIT</td>
<td></td>
</tr>
<tr>
<td>PHOTO</td>
<td></td>
</tr>
</tbody>
</table>

SCALE 100 METERS
APPROXIMATE

HDR 3X10
RAINBOW AND
SILVER SHEENS
IN MANY TIDE POOLS

SEGMENT:
~

20X50 m
AP >1%
CV >1%
CT >1%

4X20
SOR 2 PATCHES
CV >1%
CT ~10%
ST ~10%

Rainbow with Dense
Bisso coral - intrusive cleanups
would not be net environmentally
beneficial

C

Enlargement

This area is wildlife sensitive
due to Eagle constraints

LATOUCHE PASSAGE

INACCESSIBLE
NO SURVEY

EVANS ISLAND

SURVEY TERMINATED
DUE TO ROUGH WEATHER
AND VERY LIGHT OILING
CONDITIONS

#1

5X5 m
CT TRACE
ST TRACE

0.1X20 m
CT 15%
ST 10%
IN LARGE
BOULDER

DEER was lying down in the SUPRA
WALKED through area w/o surveying - did not
WANT to spook animal

No survey due to wildlife concern

LOW JAGGED BOULDERS

SEA STACK

S-S

SLOW TRAVEL

Small waterfall

Survey terminated
Due to rough weather
And very light oiling conditions

Active Nest

No Nest

SEE ENLARGEMENT

Forest

Deadwood

Dead tree

Fallen tree

Inaccessible

No survey

Topo map

La Gorce

Rocky point

Pine tree

Oak tree

Cedar tree

Mangrove

Saltwater

Freshwater
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-28

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION

SEGMENT ST/ EV-28 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: _____________________ DATE: ______________________

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 156 m: V.Light 1153 m: No Oil 476 m
Subsurface Oil Observed: Yes X No____ Maximum Depth 5 cm

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

COMMENTS: Recommended treatment includes 1) manual pickup of tar patties in area indicated on sketch map, and 2) manual raking and bioremediation of area indicated on sketch map. No specific working time constraints identified.

TAG COMMENTS: ___________________________________________________________

TAG APPROVAL DATE: ____________

ADEC _______________________________ FOSC: _____________ DATE: _______

EXXON _______________________________ NOAA _______________________

NOAA _______________________________ USCG _______________________

TAG APPROVAL DATE: ____________
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 Inpul application, prior to 7/10 or 8/31 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 Morton  267-2324

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 Inpul 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

Estuary Hatchery release (4/15 to 6/15)
Main Bay Hatchery release (4/20 to 6/15)
Sawmill Bay Hatchery release (4/15 to 6/1)
Cannery Creek Hatchery release (4/21 to 6/1)
Remote release site

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inpul 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

 Gill net area (6/7 to 8/31)
Purse seine area (7/20 to 9/30)
Purse seine hook-off (7/20 to 9/30)
Set net sites (6/11 to 7/23)

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 operation to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inpul 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 uncollected intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inpul 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

Gill net area (6/1 to 9/1)
Purse seine area (6/1 to 9/1)
Purse seine hook-off (6/1 to 9/1)

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

AGENCY CONTACT PERSON: ADF&G Jill Parker  786-3377

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 Roddy  267-2206

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

Shorebird/avocet/low 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 Roddy  267-2206

All Beld Eagle nests (3/1 to 9/1)
Active Beld Eagle nests (3/1 to 3/1)

Restrict air traffic and all disturbance to essential minimum. No personnel within 400m. Aircraft to maintain 300m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

AGENCY CONTACT PERSON: USFWS Jill Parker  786-3377

Recreation:
Tinsel area (6/1 to 9/15)
Anchorage (8/1 to 9/15)
Forest Service cabins (6/1 to 9/15)
Lodge (6/1 to 9/15)
Special use decalation

Substance area: Salmon harvesting (5/1 to 9/30)
Deer harvesting (3/15 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 Inpul 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 1 EV OL75 SUBDIVISION: A DATE 4/26/90

USCG
NAME Shume Maas
SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

RECOMMEND ANNUAL REMOVAL OF OIL PELTIES SOUTH END OF BEACH.

SUBSURFACE OILING NOTED NORTH END OF BEACH. P-GS, FURTHER EVALUATION, POSSIBLE SALMON STREAM CLOSE.

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

MANUAL REMOVAL OF OILY PELTIES AND OILED SEDIMENT NEXT TO STREAM ON N-O END OF SEGMENT. OILED SEDIMENT (ROCKS/GRUNLES TO 5 CM) IN ANAEROBIC SEDIMENTS. REMOVAL WOULD BE TOP LAYER.

☐ TREATMENT OF SEGMENTS THAT ARE NOT REMOVED WOULD HELP WEATHERING.

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

LAND MANAGER
NAME Dan Kaplanoff Jr. SIGNATURE Arnold P. Kaplanoff Jr.

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

210/41
**SHORELINE OILING SUMMARY**

**REVIEWED NO. 24-10-96**

<table>
<thead>
<tr>
<th>ONG</th>
<th>R. Marty</th>
<th>USCG S. Maps</th>
<th>SEGMENT ST/ EV-29</th>
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<tr>
<td>BIO</td>
<td>G. Lamon</td>
<td>LAND REP D. Kasper</td>
<td>SUBDIVISION A (AOF A)</td>
</tr>
<tr>
<td>EXXON</td>
<td>J. Carpentier</td>
<td>ADEC P. Sale</td>
<td>TIME 12:15 10/20/90</td>
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<tr>
<td>TEAM NO.</td>
<td>10</td>
<td>DATE 26/April/90</td>
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**EST. SUBDIVISION LENGTH:** 1762 m

**UPLANDS DESCRIPTION:**
- Sun
- Clouds
- Fog
- Rain
- Snow

**SURFACE SEDIMENTS:**
- Rain
- Vegetation
- Trash
- Debris

**NEAR SHORE SHEEN?**
- No

**OILED DEBRIS**
- Logs
- Vegetation
- Trash
- Debris

**DID YOU COLLECT DEBRIS?**
- Yes

**PHOTOGRAPHS:**
- Roll No. 57/04/5
- Frames 27, 29

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**SURFACE OIL**

<table>
<thead>
<tr>
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<th>DISTRIBUTION</th>
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<td>TARBALLS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FILM</td>
<td></td>
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<tr>
<td>NO OIL</td>
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</table>

**PAVEMENT**
- None

**PATTIES / TARBALLS**
- 1

**NEAR SHORE SHEEN?**
- No

**OILED DEBRIS**
- Logs
- Vegetation
- Trash
- Debris

**DID YOU COLLECT DEBRIS?**
- Yes

**PHOTOGRAPHS:**
- Roll No. 57/04/5
- Frames 27, 29

---

**SUBSURFACE OIL**

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>OIL CHARACTER</th>
<th>OILED MATERIAL</th>
<th>BELOW OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>SUBSURFACE SEDIMENTS</th>
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<tr>
<td>1</td>
<td>35</td>
<td>- X</td>
<td>0-3.2</td>
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<td>Y Y 33</td>
<td>GC-SV</td>
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<tr>
<td>2</td>
<td>38</td>
<td>- X</td>
<td>X</td>
<td>X</td>
<td>Y N 33</td>
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</tbody>
</table>

**COMMENTS:** Some subsurface oiling in a 20mm x 20mm band in boulders at the northern end of the segment; otherwise oiling consists of very widely scattered splatter and tar patties.

---

**REVIEWED**

**DATE**

**29/6/1**
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST / 10 / EV 24  Subdivision  A  Date (mo / day / yr) 4/25/90

Time (24 hr) 19:25 - 20:20  Biologist  Lemon

(A) Substrate type and % of segments:
1) Bedrock 15  2) Boulder 20  3) Cobble 15  4) Pebble 20  5) Sand 30  6) Mud

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

### BARNACLES

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<th>Sparse</th>
<th>Rare</th>
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**Photographs:**

Roll No. 5T/10/15
Frames 27, 28

### MYTILUS

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### GASTROPODS

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### FUCUS

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</tr>
</tbody>
</table>

**Wildlife Observations/General Comments:**

- Fucus is in reproductive condition. Littorina eggs present.
- Water is relatively clear. Large area of ice went in and out of bay during the day.
- The deeper into the bay we go the lower all zones became displaced; this paper best represents the north end of the segment where all occurs.
- The south end of the segment had noticeably more barnacles in the 1-2 mm size; clearly a fresh set.

**Ecological Considerations:**

- This is a subsistence shellfish harvesting area.

---

[Signature] 41
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT EV-28 SUBDIVISION A (1 of 1)

WORK WINDOW

<table>
<thead>
<tr>
<th>Work</th>
<th>Status</th>
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<tbody>
<tr>
<td>Manual Pickup</td>
<td>OPEN</td>
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<tr>
<td>Bioremediation</td>
<td>WORK PRIOR TO 8/15</td>
</tr>
<tr>
<td>Manual Raking</td>
<td></td>
</tr>
</tbody>
</table>

ARCHAEOLOGICAL STANDARD CONSTRAINT
If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

7II Subsistence: Deer Harvesting
No constraint to manual pickup; closed to bioremediation and manual raking after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS
Restrict boat and air traffic and beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unmodified biota and substrate.

TAG APPROVAL DATE 5/27/90
Prepared By: Andrew Meyers
Date 5/27/90

MAY 29 1990
DATE ___ _.
SHORELINE EVALUATION

SEGMENT ST/ EV-28 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

- Recreation: Special use destination
- Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: ______________________ DATE: 5/9/90

OILING CATEGORIZATION:

- Wide 0 m: Medium 0 m: Narrow 156 m: V. Light 1153 m: No Oil 476 m
- Subsurface Oil Observed: Yes X No ___ Maximum Depth 5 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pickup of tar patties in area indicated on sketch map, and 2) manual raking and bioremediation of area indicated on sketch map. No specific working time constraints identified.

TAG COMMENTS:

____________________________________________________

TAG APPROVAL DATE: 5/9/90

ADEC: Art Witter, Art Witter
EXXON: Art Witter, Art Witter
NOAA: Buil, Aircrft, Buil, Aircrft
USCG: D. D. Rome, D. D. Rome

FOSC: ______ DATE: 5-18-90

Notify CBO 24 HRS in advance of work.
SHORELINE EVALUATION

SEGMENT ST/ EV-28  SUBDIVISION A (1 OF 1)  DATE  4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

- Recreation: Special use destination
- Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

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- Beach Cleaner
- Other (see comments)

COMMENTS: Recommended treatment includes 1) manual pickup of tar patties in area indicated on sketch map, and 2) manual raking and bioremediation of area indicated on sketch map. No specific working time constraints identified.

TAG COMMENTS:

---------

TAG APROVAL DATE:  5/4/90

ADEC  EXXON  NOAA  USCG

FOSC:   DATE:  5/18/90

NOTIFY CIV 24 HRS IN ADVANCE OF WORK.
EV-28

Continued from Page 1

Splatterred coat

C Granite beach

Y tar patties
hardening - broken up

No oil

wall sorted beach

widen scattered
Splatter

wall sorted P-S beach

No oil

splottered coat

(very minor)

MANUALLY
Remove tar Patties

Ammoniacal
reaction of tar
patties, appear
to be remnants
of a larger
body recently
removed.

23/4/1
XXX Wide
/// Medium
---- Narrow
TTTT Very Light

EV-28

Map Key: PWS-1976
Name: R. Marty
Date: 25 April 1976
Date Entered:

000 No Oil

NO 3.0 450 486
VL 7.1 1005 1161
L 0.8 120 130
14.39 1767

---

000 Meters

---
1991 MAYSAP EVALUATION

SEGMENT: EV 039 SUB: A REGION: FWS SURVEY DATE: 4/29/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) RESTRICTED 3/1 - 9/15

Ecological/Constraints (see page two for details) Eagle nest, Fish harvest area, Subsistence, deer harvesting

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find, and contact Exxon's Cultural Resource Program immediately: 564-3276; 564-3657; (Anchorage) or 229-1514 (24 hrs.).

SHPO Signature: Charles E. Dittmer Date: 5/9/91

RECOMMENDATIONS:

TREATMENT REQUIRED (Y or N) Y Y Y
Manual Pickup (Check as Req.) X Y Y
Spot Washing ______ ______
Bio-Customblend Only ______ ______
Bio-Inipol/Customblend X X ______
Other ______ ______
Other ______ ______

COMMENTS:
INITIAL: Manual pickup of AP, HSOR/OP followed by Bio at locations A, C, D, E, F

TAG: Add Area B

FOSC: NO BIO - DUE TO CAMP MANAGER'S CONCERNS / COMMENTS, NOTED ON REPORT DATED 5/1/91. IF CMC RECONSIDERS, ADVISE ME AND I'LL REVISIT THIS ISSUE - LCL

TAG APPROVAL DATE: MAY 9 1991 FOSC APPROVAL DATE: 5/13/91

ADEC: E. E. PAGE, CDI, USCG CHIEF OF STAFF, FOSC
EXXON: _______
USCG: _______
NOAA: _______
1991 MAYSAP EVALUATION

SEGMENT: EV 039  SUB: A  REGION: FWS  SURVEY DATE: 4/29/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) RESTRICTED 3/1 - 9/15

Ecological/Constraints (see page two for details) Eagle nest, Fish harvest area, Subsistence, deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO Signature: ______________________ Date: __________________

RECOMMENDATIONS:

TREATMENT REQUIRED (Y or N)  INITIAL  TAG  FOSC

Manual Pickup (Check as Req.)  X  ______  ______
Spot Washing  ______  ______  ______
Bio-Customblen Only  ______  ______  ______
Bio-Inipol/Customblen  X  ______  ______
Other  ______  ______  ______
Other  ______  ______  ______

COMMENTS:
INITIAL: Manual pickup of AP, HSOR/OP followed by Bio at locations A, C, D, E, F

TAG: ______________________

FOSC: ______________________

TAG APPROVAL DATE: ______________________
FOSC APPROVAL DATE: ______________________

ADEC ______________ FOSC ______________
EXXON ______________
USCG ______________
NOAA ______________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Eagle Nest: Access restricted from 3/1 to 9/1. USF&WS authorization required. Maintain 1000' vertical and 1/4 mile horizontal buffer.

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Subsistence, Deer Harvesting: Unlimited treatment prior to 8/15.
Agree with OBS conclusions, some may be recoverable but tedious due to exposed grade and offshore rocks. May be good site for CYC.

Logs or Sub + Sub Surface Oil. This area has been worked four times. It still needs lots of manual effort at least. This was a high subsurface oil. For us in Cheneg, reduce dem. logs for five weeks. This area until cleaned continues to be considered a dead zone and we can't use it. Lots of work needed.

Under adverse weather conditions, considerable brown sheening was observed. Recoverable quantities of AP were observed. Considerable that at higher ambient temperatures and direct sunlight these deposits will mobilize.

Some saturated oil pockets up to 9 cm in depth. Many areas of oiled sediment is specific segments of the beach. All pits in the lower inner tidal zone were clean with no sheening. Oil coat/coverage w/ pine needles observed. Eagle carcass found.
# Maysap Shoreline Oiling Summary

**Term No.**
- Chaney

**Bio.**
- Crank

**Aden.**
- Hayes

**LandManager.**
- Ward

**LandManager.**
- Hayes

**Usco/Noaa.**
- Dreher/Hodges

**Date.**
- April 12/21

**Time.**
- 07:45 to 09:40

**Tide Level.**
- -2 ft. to 0 ft.

**Energy Level.**
- N I M L

**Surveyed From.**
- Foot, Boat, Helo

**Weather.**
- Sun, Clouds, Fog, Rain, Snow

**Total Length Shoreline Surveyed.**
- 455 m

**Near Shore Sheen.**
- No

**Est. Oil Category Length.**
- W 35 m, M m, N m, V 25 m, NO 306 m, US 11 m

## Surface Oil Character

<table>
<thead>
<tr>
<th>LOC</th>
<th>AP MS</th>
<th>TB SC</th>
<th>CV CT</th>
<th>ST FL</th>
<th>DB NO</th>
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<tr>
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<td>S</td>
<td>S</td>
<td>S</td>
<td>S</td>
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## Surface Sediment

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<td>BPG</td>
<td>M 20</td>
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<td>D</td>
<td>BPG</td>
<td>M 10</td>
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<td>E</td>
<td>BPG</td>
<td>M 25</td>
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## Area

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<td>S</td>
<td>Silver Sheen in Tidal Pools</td>
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## Notes

**Surface-Surface Sediments**

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<tr>
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<td>R - P</td>
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<td>3-10</td>
<td>Y - 10</td>
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<td>4-15</td>
<td>Y - 10</td>
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<td>O - 10</td>
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<td>0 - 7</td>
</tr>
<tr>
<td>7-25</td>
<td>0 - 15</td>
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**HOR Condition Seems Concentrated in a 6x15m Band Between Large Boulders. Silver Sheen in Tidal Pools. Small Pockets Are Recoverable.**

**Quantities Exist But They Would Be Tidious To Remove.**
<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>OIL CHARACTER</th>
<th>OILED ZONE</th>
<th>CLEAN BELOW</th>
<th>SHEEN COLOR</th>
<th>SURFACE-SUBSURFACE SEDMENTS</th>
<th>NOTES</th>
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<td>15-20 Y</td>
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<td>PC-CPG</td>
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<td>0-10 Y</td>
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<td>BPG-SPG</td>
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<td>10-15 N</td>
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<td>BPG-SPG</td>
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</table>

SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS:

In Area (F) The patches are larger and better defined.
A region of Hor to Op subsurface oiling exists in the center of the pebble/cobble beach around Pits 7-8. A total of 8 Pits were dug to roughly define the area as 40 x 10 m.

Note: Survey was conducted in heavy rain. Lighter oiling types were difficult to observe.
TEAM # 5

DATE 28 Apr '91

SEGMENT # EV-39

TIDAL HEIGHT (Range) -1.5 → +1.5

SUBDIVISION A

BIOLeGIST Crank

SEA STATE 3

WIND SPEED/DIRECTION 10-15 knots / E

PHOTOGRAPHS: ROLL # MAYSA P 3

FRAME # 110, 32

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):

(A) Area is located in the UITZ. There are rare barnacles on the boulders, inner plates not sealing well.

(B) Area is located in the UITZ. Rare barnacles located in site not tightly sealing their inner plates when stimulated. Below site, low in MITZ, barnacles are moderate density, inner plates tightly sealed when stimulated and gast is present. Focus has mature conceplicles. Littorina and limpet concentrations range from moderate to sparse.

(C) Area is located in a rock beach from SUPRA to high MITZ. Customblen pellets are present.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED SPECIES PRESENT</th>
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<tr>
<td>Eagles</td>
<td>1</td>
<td>2 (and dead)</td>
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<td>Seabirds</td>
<td></td>
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<tr>
<td>Waterfowl</td>
<td>2</td>
<td>14</td>
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<tr>
<td>Gulls/Kittiwakes</td>
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<tr>
<td>Shorebirds</td>
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<tr>
<td>Corvids</td>
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<tr>
<td>Other Birds</td>
<td></td>
<td>2</td>
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<table>
<thead>
<tr>
<th>MARINE MAMMALS</th>
<th># OBSERVED</th>
<th>SPECIES</th>
<th># OBSERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sea Otters</td>
<td></td>
<td>Deer seal</td>
<td></td>
</tr>
<tr>
<td>Pinnipeds(specific)</td>
<td>2 - Sections 1/6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whales(specific)</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

Shoreline subdivision map showing important biological features attached.
Comments (cont.)

(D) Area is located in the UITZ among boulders and seafloor. Exposed B/C surfaces have a filamentous green algae coating. Segmented worms (2 cm long) are present. No other macro-biota present in upper/mid portion of area. Along the lower edge of the site, barnacles are sparse and are tightly scaling their inner plates. Limpets and Appropriately are found in moderate concentrations in tidepools. Mussels are rare. Below site in MITZ, biota same as found in (C).

(E) Area located in Supra and UITZ. Oil is present in rye grass root system but less greasy feeling than oil found on rocks. Rye grass is sprouting and appears to be unaffected by present oil. UITZ boulders are covered with filamentous green algae. Sparse barnacle are present low in area, they tightly scale their inner plates. A small patch of Enteromorpha and Ulva (algae) is present in a tidepool. Biota below area in MITZ same as found in (C).

(F) Area is in UITZ to high MITZ. CVC rep. reported in 1989 contaminated rye grass not removed from this area. Area has not re-established itself although root system still partially visible. See Photo # MAY 3/22. Filamentous green algae covers B/C. In the UITZ, barnacles; Littorina are rare. In the high MITZ, there is heavy barnacle recruitment and dense Fucus with maturing conceptacles. Gloiopeltis (algae) is moderate
Dead Bald Eagle found high in LITZ. Skeleton was complete including talons and beak. Eye were gone. Residual flesh was present. No oil observed on feathers. See Photo roll MAY 3 frame 16.

There is a moderate to dense Fucus band in the MITZ continuing into LITZ. Concepticles are maturing. The LITZ is rich and diverse. LITZ biotic community is continuous throughout subdivision. There is heavy barnacle recruitment (new set present). Clams include Prototheca, Saxidomus and cockles. Mussels, juvenile eels, hermit crabs, peanut worms, Littorina, limpets, Nucella (whelk ), Nucella eggs, Odontolida, Coraline algae, Searlesia (whelk) and tarspot algae are present. Biotic cover is 50-80%. The lesser percentage is on the cobble near stream. Organisms appear to be healthy and recruitment is present.
### 1991 MAYSAP EVALUATION

**SEGMENT:** EV 39  **SUB:** A  **REGION:** PWS  **SURVEY DATE:** July 4 - Field Crew

#### ENVIRONMENTAL SENSITIVITIES:
- **Work Window(s):**
- **Ecological/Constraints (see page two for details):**

#### ARCHAEOLOGICAL CONSTRAINTS:
Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time. PHONE 564-3276; 564-3657; (Anchorage) or 229-1514 (24 hrs.).

**ANCHORAGE-AO0/A**

**RECOMMENDATIONS:**

<table>
<thead>
<tr>
<th>TREATMENT REQUIRED (Y or N)</th>
<th>INITIAL</th>
<th>TAG</th>
<th>FOSC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual Pickup (Check as Req.)</td>
<td>____</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Spot Washing</td>
<td>____</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bio-Customblen Only</td>
<td>____</td>
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<tr>
<td>Bio-Inpol/Customblen</td>
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<td></td>
</tr>
<tr>
<td>Other <strong>MECHANICAL TILLING</strong></td>
<td>____</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Other</td>
<td>____</td>
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</table>

**COMMMENTS:**

**INITIAL:**

---

**TAG:** ADD MECHANICAL TILLING OF SUBSURFACE OIL TO THE SOUTH OF AREA D (10x40 HDR) IF FEASIBLE (TO BE DETERMINED BY WORK SQUAD) NOT TO BE MULTIPLE TILLING OR TIDE DEPENDENT FOLLOWED BY INPOL OF TILLED AREA

**FOSC:**

---

**TAG APPROVAL DATE:** July 10 1991  **FOSC APPROVAL DATE:** 7/11/91

ADEC  
EXXON  
USCG  
NOAA  

---

E. E. PAGE, CDR, USCG  
CHIEF OF STAFF, FOSC
**Evans Island**

**MAYBAP 1991**
**DG SKETCH MAP**
**GREG CHANEY**
**TEAM 5**
**SEGMENT: EV-39 A**
**DATE: APRIL 29 1991**
**AIR P.: 3XV10-* No. 49**

**Legend**
- **Bedrock**
- **Boulders**
- **Fine Bed.**
- **Drift Log**
- **Grass**
- **Brush**
- **Forest**
- **Oiled Pit**
- **No Oil Pit**
- **Photo**

**Scale**
- Approx 65 Meters

**Map Details**
- **Steep Rock Face**
- **Carcass (Eagle)**
- **Heavy SOR ~5% Between Boulders, 6 x 15 m**
- **AP Patches on Lee of Boulders ~ 3 x 10 m 3%**
- **AP 10% SOR 5% CV 20% CT 20% ST 20%**
- **Lee Side of Boulders 20 x 10 m**
- **55 Gal Drums**
- **OP to HOR 40 x 10 m Center of Beach 8 pits**
- **Low Jagged Rocks**
- **OP on Oils Times 10 x 10 m**
- **Till**
- **Forest**
- **Tall Seastack**

**Knight Island Passage**

**Notes**
- **OP/1000**
- **OR 6 x 15 Between Large Boulders May Not Be Continuous**

**Map Comments**
- **AP 5% SOR 5% CV 20% CT 20%**
- **25 x 105 m Large Boulders and Shallow Bedrock**
- **20 x 20 CV 10% AP 30% CT 30% Asphalt Between Boulders**

**Scale**
- Approx 65 Meters
SUPPLEMENTAL 1991 MAYSAP EVALUATION

SEGMENT: EV 39  SUB: A  REGION: PWS  SURVEY DATE: July 4 - Field Crew

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) ________________________________

ECOLOGICAL/CONSTRAINTS (SEE PAGE TWO FOR DETAILS) ________________________________

ARCHAEOLOGICAL CONSTRAINTS:
Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time. PHONE 564-3276; 564-3657; (Anchorage) or 229-1514 (24 hrs.).

RECOMMENDATIONS:

TREATMENT REQUIRED (Y or N)  ___  Y  ___  Y

Manual Pickup (Check as Req.)  ___  ___  ___  ___
Spot Washing  ___  ___  ___  ___
Bio-Customblen Only  ___  ___  ___  ___
Bio-Inpol/Customblen  ___  ___  ___  ___
Other MECHANICAL TILLING-  ___  ___  ___  ___
Other

COMMENTS:
INITIAL:

TAG:
ADD MECHANICAL TILLING OF SUBSURFACE OIL TO THE SOUTH OF AREA D (10X40 HQR) IF FEASIBLE (TO BE DETERMINED BY WORK SQUAD) NOT TO BE MULTIPLE TILLING- OR TIDE DEPENDENT, FOLLOWED BY INPOL OF TILLED AREA

FOSC:

TAG APPROVAL DATE: July 10, 1991  FOSC APPROVAL DATE: 7/11/91

ADEC  POH  FOSC  E. E. PAGE, CDR, USCG
EXXON  POH  CHIEF OF STAFF, FOSC
USCG  POH  POH
NOAA  POH  POH
ASAP TAG REVIEW SHEET

Segment: EV39  Subd: A  Site: 1  Date: 11/4/90

Priority For Addressing In 1990

- [X] HIGH  ____ MEDIUM  ____ LOW  ____ NTR

Treatment Recommended:

- Manual: PICKUP TAR/AP 4/BY

(SUB SURFACE OIL, PRESENT TO 8-10 CM)

OG SHEET: EV039

COMMENT SHEET: EB039

THE OG SHEET DOES NOT AGREE WITH COMMENTS.

Priority Site For Reassessment In 1991

- YES  NO
- CG  ADEC  EXXON  LAND MGR

TAG 13/4/90

TAG TRIP
ASAP FOLLOWUP RECOMMENDATIONS

Conditions Observed: Despite previous work completed during summer 90, extremely heavy oiling persists through out another half of segment 7.40. West lower AP, NE corner, and NE oiling is widespread in shoulder field areas off roadway, and exists within ditches.

Followup Recommendations: Further manual removal of gross contamination AP, NE and sub-surface oiling contaminants is recommended. Area will require some combination of HP water washing and possibly mechanical equipment will aid the additional cleanup this and future. Recommendations should follow above treatment.

Completed by Pickup Crew: [Signature]

Priority for Addressing in 1990: [X] High

Comments: It should be noted that EV-39 is an extremely heavily oil segment which will be very difficult to target area and find a viable way to determine the methods for accomplishing this difficult cleanup.

USCG: [Signature]

Comments: Official hot water washing appears the only effective method of removal in large areas of oiling and thousands of feet. Consideration should be given to some low cost vessel for use on site.

Land Rep: [Signature]

Comments: Follow up recommendation that this is a level 1 high use area for the people on Chemehuevi Indian Reservation. Gathering Cattle and Firewood.

ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/EV-39 Subd.: A Site: Date: 9/7/90

Conditions Observed: Despite previous work completed during summer 90, extremely heavy oiling persists through out another half of segment 7.40. West lower AP, NE corner, and NE oiling is widespread in shoulder field areas off roadway, and exists within ditches.

Followup Recommendations: Further manual removal of gross contamination AP, NE and sub-surface oiling contaminants is recommended. Area will require some combination of HP water washing and possibly mechanical equipment will aid the additional cleanup this and future. Recommendations should follow above treatment.

Completed by Pickup Crew: [Signature]

Priority for Addressing in 1990: [X] High

Comments: It should be noted that EV-39 is an extremely heavily oil segment which will be very difficult to target area and find a viable way to determine the methods for accomplishing this difficult cleanup.

USCG: [Signature]

Comments: Official hot water washing appears the only effective method of removal in large areas of oiling and thousands of feet. Consideration should be given to some low cost vessel for use on site.

Land Rep: [Signature]

Comments: Follow up recommendation that this is a level 1 high use area for the people on Chemehuevi Indian Reservation. Gathering Cattle and Firewood.
**Site 1**

<table>
<thead>
<tr>
<th>Character</th>
<th>Distribution</th>
<th>Oiled Zones</th>
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<tr>
<td>Pooled</td>
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<tr>
<td>Cover</td>
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<td>Mousse</td>
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<td>Patties/T.B.</td>
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<td>Est. Site Length</td>
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**Site 3**

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<tr>
<td>Patties/T.B.</td>
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<tr>
<td>Film</td>
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**Subsurface Oil**

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<tr>
<th>Site No</th>
<th>Pit No.</th>
<th>Pit Depth (cm)</th>
<th>Subsurface Oil Character</th>
<th>Oil Content Material</th>
<th>Clean Below (Y/N)</th>
<th>Pit Zone</th>
<th>Surface Subsurface Sediments</th>
<th>Photographs</th>
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<tr>
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<td>20</td>
<td>X</td>
<td>8.10</td>
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<tr>
<td>1</td>
<td>2</td>
<td>10</td>
<td>X</td>
<td>8.10</td>
<td>Y</td>
<td>X</td>
<td>P/C/G</td>
<td>Photos</td>
</tr>
</tbody>
</table>

**Comments**

- Subsurface oil was present in two pits and at the upper A1 level.
- Subsurface oil was found in four areas associated with large concave/convex in water.
- Broken distribution.

- Oil was found in four areas associated with large concave/convex in it.
SEGMENT AS / EB-39 SUBDIVISION: A SITE: 1 DATE 8-3-90

YES ☐ NO ☐ PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Very thick, residual oiling of boulders, interstitial sediment & bedrock, which will be difficult to treat. Further work is recommended for 1990. This would be a higher priority reassessment for 1991.

REASON:

Despite previous work completed during summer '90, extremely heavy oiling persists. Throughout southern half of segment Tan, AP, OP, OR, Cat, and lower is undergrazed in boulder fields, areas of bedrock, and cattle/grass beaches. Further manual, mechanical, HP HW washing, followed by bioremediation has been recommended. Area is very heavily oiled and should receive full TAG review.

REASON:

There is a lot of oil still here to use renewal.

Sub-Surface Priority Site, High Use For Chappaquiddick Residents Hunting, Fishing etc.

REASON:

I agree with NOAA/USCg comments above. Class III TAG Review Has Been Recommended.
ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/ EV-39 Subd.: A  Site:  Date: 8-7-90  1990

Conditions Observed: Despite previous work completed during summers 1- '90, extensive debris/piling persists through out southern half of gangway from Coast Line to OR. OR, and of debris is widespread on beach area of seashore and cattle paddle break.

Followup Recommendations: Further manual removal of gross contamination of debris/piling /sediment is recommended area will require some combination of HP HP washing and possible mechanical equipment will aid the off- shore cleaning team and require recommendations should follow above treatment.

Completed by Pickup Crew: NO  Priority for Addressing in 1990: High

ADEC  Bob McCreary (Name)  (Signature)

Comments: This should be noted that EV-39 is an external seawall aided segment which will be very difficult to treat. I recommend that the TAC discuss this method for accomplishing the difficult cleanup.

Exxon  John Dean (Name) (Signature)

Comments: I agree this segment should carry a HIGH PRIORITY for additional work in '90. I further agree to request class II evaluation by TAC.

USCG  Don Osbourn (Name) (Signature)

Comments: High priority HOT WORK /HAZARDS poses the only effective method of removal in long terms. Outage and new or clean-out.尽管评估

Land Rep.  Steven Ward CVC (Name) (Signature)

Comments: Follow up recommendation that this is an area in high use

GENERAL DATA

SEG ID: EB639 SBOV: TEAM: 3
A SITE: DATE: 8/7/90
OIL CATEGORIES: M60 N VL10 NO 210 186

SURFACE DATA

CHAR #1: OIL CHAR: CV OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU MI LI

CHAR #2: OIL CHAR: CT OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU MI LI

CHAR #3: OIL CHAR: ST OIL DIST: CONT BRKN PTCH SPLH 10
TIDAL ZONE: SU MI LI

CHAR #4: OIL CHAR: FL OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU MI LI

CHAR #5: OIL CHAR: NO OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU MI LI

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU MI LI

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU MI LI

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CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU MI LI

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU MI LI
ASAP DATA ENTRY FORM

SEGMENT ID: EB - 039 SUBDIV: A SITE: 1

PIT # 1  PIT DEPTH 20 OIL CHARACTER OF OIL INTVAL: FROM 5 TO 10
CLEAN BELOW: Y  PIT ZONE: SU - UI X MI - LI -
SUBSURF SEDIMENT: BRK - BLD X COB X PEB X GRN X SAN - MUD - VEG -

PIT # 2  PIT DEPTH 10 OIL CHARACTER OF OIL INTVAL: FROM 5 TO 10
CLEAN BELOW: Y  PIT ZONE: SU - UI X MI - LI -
SUBSURF SEDIMENT: BRK - BLD X COB X PEB X GRN X SAN - MUD - VEG -

PIT # 3  PIT DEPTH _____ OIL CHARACTER OF OIL INTVAL: FROM _____ TO _____
CLEAN BELOW: _____  PIT ZONE: SU - UI X MI - LI -
SUBSURF SEDIMENT: BRK - BLD X COB X PEB X GRN X SAN - MUD - VEG -

PIT # 4  PIT DEPTH _____ OIL CHARACTER OF OIL INTVAL: FROM _____ TO _____
CLEAN BELOW: _____  PIT ZONE: SU - UI X MI - LI -
SUBSURF SEDIMENT: BRK - BLD X COB X PEB X GRN X SAN - MUD - VEG -

PIT # 5  PIT DEPTH _____ OIL CHARACTER OF OIL INTVAL: FROM _____ TO _____
CLEAN BELOW: _____  PIT ZONE: SU - UI X MI - LI -
SUBSURF SEDIMENT: BRK - BLD X COB X PEB X GRN X SAN - MUD - VEG -

PIT # 6  PIT DEPTH _____ OIL CHARACTER OF OIL INTVAL: FROM _____ TO _____
CLEAN BELOW: _____  PIT ZONE: SU - UI X MI - LI -
SUBSURF SEDIMENT: BRK - BLD X COB X PEB X GRN X SAN - MUD - VEG -

PIT # 7  PIT DEPTH _____ OIL CHARACTER OF OIL INTVAL: FROM _____ TO _____
CLEAN BELOW: _____  PIT ZONE: SU - UI X MI - LI -
SUBSURF SEDIMENT: BRK - BLD X COB X PEB X GRN X SAN - MUD - VEG -

PIT # 8  PIT DEPTH _____ OIL CHARACTER OF OIL INTVAL: FROM _____ TO _____
CLEAN BELOW: _____  PIT ZONE: SU - UI X MI - LI -
SUBSURF SEDIMENT: BRK - BLD X COB X PEB X GRN X SAN - MUD - VEG -

PIT # 9  PIT DEPTH _____ OIL CHARACTER OF OIL INTVAL: FROM _____ TO _____
CLEAN BELOW: _____  PIT ZONE: SU - UI X MI - LI -
SUBSURF SEDIMENT: BRK - BLD X COB X PEB X GRN X SAN - MUD - VEG -
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-36

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION

SEGMENT ST/ EV-36 SUBDIVISION A (1 OF 1) DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
5T-2 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: ______________________ DATE: ______________________

OILING CATEGORIZATION:

Wide 0 m: Medium 73 m: Narrow 0 m: V.Light 420 m: No Oil 1403 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 Snare (pom poms)
Absorbents (pads, rolls, etc)
____ Spot Washing: Wands
____ Beach Cleaner
____ Other (see comments)

COMMENTS:
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

TAG COMMENTS:
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

TAG APPROVAL DATE: __________

ADEC ______________________ FOSC: ______________________ DATE: __________
EXXON ______________________
NOAA ______________________
USCG ______________________
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 Harbor seal pupping
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

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 Evelyn Biggs 424-3235

2M Herring spawning (4/1 to 8/15)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncollected 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

3C 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/ 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 766-3377

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 766-3377
ADF&G Tom Roth 267-2206

5F All Bold Eagle nests (3/1 to 6/1)
Active Bold 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 766-3377

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

7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
7HH Finfish harvesting
7HH Deer harvesting (8/15 to 2/20)
7HH 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, EU-36    SUBDIVISION: A (10-1)    DATE: 6-23-90

NOAA     NAME: Michael Bushman     SIGNATURE: 

☐ NO TREATMENT RECOMMENDED    ☐ TREATMENT SUGGESTED

COMMENTS:

Only light stain observed at northern 2/3 of segment.

ADEC     NAME: John Hayes     SIGNATURE: 

☐ NO TREATMENT RECOMMENDED    ☐ TREATMENT SUGGESTED

COMMENTS:

Only oil observed were light to very light stain bands U.T.Z. Northern half of segment.

LAND MANAGER     NAME: Stephen Yeo-chen Lin     SIGNATURE: 

☐ NO TREATMENT RECOMMENDED    ☐ TREATMENT SUGGESTED

COMMENTS:


**SHORELINE OILING SUMMARY**

- **Author:** Mike Foy
date: 8/13/90
- **Report:** Exxon
- **Date:** 4/7/90
- **Survey:** Exxon Oil Discharge
- **Oil Category:**
  - **Surface Oil:**
    - Asphalt Pavement
    - Puddled
    - Cover
    - Coat
    - Stain
    - Mousse
    - Patties
    - Tarballs
    - Film
    - No Oil
  - **Subsurface Oil:**
    - Pit No.: 1, 2, 3, 4, 5, 6
    - Pit Depth (cm): 30, 25, 40, 20, 35, 40
    - Subsurface Oil Character: Oiled, Oiled, Oiled, Oiled, Oiled, Oiled
    - Oil/Film Color: UO, VC, SU, UR, UM
    - Impacted Zones: N, N, N, N, N, N
    - Oiled Debris: Yes
    - Vegetation: Yes
    - Trash: No
    - Debris: Yes
- **Surveys:**
  - **Uplands:**
    - Grass, Forest, Rock
  - **Slopes:**
    - Long, Short, Vertical
  - **Wave Exposure:**
    - Low, Medium, High
- **Oiled Amount:**
  - **Pavement:**
    - H: 0 sq. m, F: 0 cm
  - **Patties/Tarballs:**
    - 0 bags
  - **Near Shore Sheen:**
    - No
  - **Subsurface Sediments:**
    - P.C

---

**COMMENTS:**
Light staining and coating was observed in the Northern Part of the Segment in the HITZ among Boulders and Bedrock. Most of the Coated Stain was observed on the Protected Part of the Rock and Boulders. No oiling was observed in the Southern Part of the Segment.
### Subsurface Oil (Continued)

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>Subsurface Oil Character</th>
<th>Oiled Interval (cm)</th>
<th>Below</th>
<th>Oil/Film Color</th>
<th>Pit Zone</th>
<th>A N A</th>
<th>Needs (Y/N)</th>
<th>Surface Subsurface Sediments</th>
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<tbody>
<tr>
<td>7</td>
<td>30</td>
<td>X</td>
<td>X</td>
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<td>N</td>
<td>CP</td>
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<td>8</td>
<td>30</td>
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<td>9</td>
<td>25</td>
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<td>X</td>
<td>X</td>
<td>N</td>
<td>PC</td>
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</table>

**Comments**

**Reviewed** [Signature] **Date** 4-23-90
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST/EU-36  
Subdivision A (10E1)  
Date (mo/day/yr) 04/22/90

Time (24 hr) 0700  
Bioligist K. Connan  
0930

(A) Substrate type and % of segments:
1) Bedrock 40  
2) Boulder 50  
3) Cobble 5  
4) Pebble 5  
5) Sand 0  
6) Silt 0

(B) Overall % cover of biota (% of segment): Dense 35  
Moderate 40  
Low 25

(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)

**BARNACLES**

<table>
<thead>
<tr>
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<th>Sparse</th>
<th>Rare</th>
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<td>1M</td>
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<tr>
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</table>

Photographs:
- Roll No.
- Frames

**MYTILUS**

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**GASTROPODS**

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**FUCUS**

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<tr>
<td>1U</td>
<td>1M</td>
<td>1L</td>
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</tbody>
</table>

Wildlife Observations/ General Comments:

- Barnacles, Euglenophytes amongst seaweed in stream runoff at MIZ
- 2 Stellar Jays
- 3 Bald Eagles: (1 Adult, 1 Juv.)
- Male Harlequin Duck
EV-39
EV-37

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

EV-36

ADEC Segment Length: 1984m

Map Key: PWS-242d
Name: Mike Coger
Date: 4/22/90

Data Entered:
ASAP TAG REVIEW SHEET

Segment: EV37  Subd: A  Site: 1  Date PRE-Review 11/14/880

Priority For Addressing In 1990

X HIGH    ___ MEDIUM     ___ LOW     ___ NTR

Treatment
Recommended: MANUAL PICKUP - AP & BIO

OG SHEET DOES NOT REFLECT
HEAVY SPOR AS PER COMMENT.

HEAVY COAT STAIN - COVERED w/BIO

Priority Site For Reassessment In 1991

YES CG NO YES ADEC NO YES EXXON NO YES LAND MGR NO

TAG TRIP

13 AUS 90
Conditions Observed: Heavy oiling present throughout northern beach on EV-3. Oil is in AP, Chet, Coon, DP, OP, and off area in shoulder, field, bedrock, and possible paddle beach.

Followup Recommendations: Area is similar to EV-39. Further manual of gross contamination across contaminated AP, OP, and off areas, face remediation in recommended area. Will require some combination of HP HW, washing, and possibly, the use of mechanical equipment. Bioremediation should follow above recommended treatment.

Completed by Pickup Crew: [ ] YES [ ] NO
Priority for Addressing in 1990: [ ] High [ ] Mod. [ ] Low

DEC
Bar McGready
Robert E. M

Comments: Like EV-39, EV-37 will be extremely difficult to effectively treat. A creative combination of treatment techniques will be required.

Exxon
John Dean

Comments: I agree with recommendations above and further recommend a risk III assessment by TAG in combination w 39 A

USCG
Don Davis

Comments: Agree with all comments and recommendations.

Land Rep.
Steve Clark CUC

Comments: Follow up recommendations with High Use Area for the People of Chengen - Hunting, Fishing, Beer Corniing - Log 24 6 E. For Firebird
SEGMENT AS / EV-32 SUBDIVISION: ___ SITE: ___ DATE 8-7-90

NAME: David K. X. SIGNATURE: 
San Joaquin Mus

\checkmark YES \Box NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

A very complex area of heavy, residual oil. Treatment is recommended for 1990 season, with high priority for 1991 reassessment.

DATE: ___ NAME: Robert E. McLean SIGNATURE: 

\checkmark YES \Box NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Heavy oiling persist throughout northern beach on EV-3 Oilings in A, B, C, D, E, F, G, O, R, and U and occurs in several fields, beach, and little/petite beach. Area will require HP H2O flushing, Manual Removal, Mechanical removal, and Tilling followed by bioremediation. This segment has heavy oiling and will require a creative mix of treatment methods and is disputed remote area.

MANAGER NAME: Steve L. Signature: 

\checkmark YES \Box NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Lots of Subsoil Oil - Lots of Subsoil Oil - High Priority for 90 and 91 - High Use Area for Fishing -

NAME: John Dean SIGNATURE: 

\checkmark YES \Box NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: I agree with team comments
Conditions Observed: Heavy oiling persists throughout northeastern beach on P1-3. Oil is APChat, Con, Tor, 02, 02, and PF and occurs in shallow pools, backwash, and cattle/paddle tracks.

Followup Recommendations: Area is similar to P1-3. Further removal of gross contamination of gross contaminants at AP, 02, and oil subsurface sediment is recommended. Area will require some combination of oil HU washing and possible the use of mechanical equipment. Recommendations should follow above recommended treatment.

Completed by Pickup Crew: [ ] YES [x] NO
Priority for Addressing in 1990: [x] High [ ] Mod. [ ] Low

Comments: Like P1-3, P1-37 will be extremely difficult to effectively treat. A creative combination of treatment techniques will be required.

USCG
Comments: Agree with recommendations above and further recommend a Corps III assessment by TAG in conjunction w/ 39-A.

Land Rep.
Comments: Follow up recommendations and High Use Area for the People of Lenaga, Hunting, Fishing, Deeky Gathairin' - lego. CE Kin, Fire Ann.
GENERAL DATA

SEG ID: EV-37  SUBV: A SITE: 1 TEAM: 3 DATE: 8-3-90
SITE LGTH 9.55 OIL CATEGORIES: W M N VL NO O

SURFACE DATA

CHAR # 1 OIL CHAR: AP OIL DIST: CONT BRKN PTCH SPLH 0
TIDAL ZONE: SU UI XM LI

CHAR # 2 OIL CHAR: CV OIL DIST: CONT BRKN 50 PTCH 35 SPLH 25
TIDAL ZONE: SU UI XM LI

CHAR # 3 OIL CHAR: ST OIL DIST: CONT BRKN 50 PTCH 35 SPLH 25
TIDAL ZONE: SU UI XM LI

CHAR # 4 OIL CHAR: ST OIL DIST: CONT BRKN 50 PTCH 85 SPLH 225
TIDAL ZONE: SU UI XM LI

CHAR # 5 OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI XM LI

CHAR # 6 OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI XM LI

CHAR # 7 OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI XM LI

CHAR # 8 OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI XM LI

CHAR # 9 OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI XM LI

CHAR # 10 OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI XM LI

CHAR # 11 OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI XM LI
ASAP DATA ENTRY FORM

SUBSURFACE DATA

SEGMENT ID: EV-33  SUBDIV:  SITE:  

PIT # 1  PIT DEPTH — OIL CHARACTER — OIL INTERVAL: FROM — TO —
CLEAN BELOW:  PIT ZONE: SU ___ WI ___ MI ___ LI ___
SUBSURFACE SEDIMENT: BRK ___ BLD ___ COB ___ PEB ___ GRN ___ SAN ___ MUD ___ VEG ___

PIT # 2  PIT DEPTH — OIL CHARACTER — OIL INTERVAL: FROM — TO —
CLEAN BELOW:  PIT ZONE: SU ___ WI ___ MI ___ LI ___
SUBSURFACE SEDIMENT: BRK ___ BLD ___ COB ___ PEB ___ GRN ___ SAN ___ MUD ___ VEG ___

PIT # 3  PIT DEPTH — OIL CHARACTER — OIL INTERVAL: FROM — TO —
CLEAN BELOW:  PIT ZONE: SU ___ WI ___ MI ___ LI ___
SUBSURFACE SEDIMENT: BRK ___ BLD ___ COB ___ PEB ___ GRN ___ SAN ___ MUD ___ VEG ___

PIT # 4  PIT DEPTH — OIL CHARACTER — OIL INTERVAL: FROM — TO —
CLEAN BELOW:  PIT ZONE: SU ___ WI ___ MI ___ LI ___
SUBSURFACE SEDIMENT: BRK ___ BLD ___ COB ___ PEB ___ GRN ___ SAN ___ MUD ___ VEG ___

PIT # 5  PIT DEPTH — OIL CHARACTER — OIL INTERVAL: FROM — TO —
CLEAN BELOW:  PIT ZONE: SU ___ WI ___ MI ___ LI ___
SUBSURFACE SEDIMENT: BRK ___ BLD ___ COB ___ PEB ___ GRN ___ SAN ___ MUD ___ VEG ___

PIT # 6  PIT DEPTH — OIL CHARACTER — OIL INTERVAL: FROM — TO —
CLEAN BELOW:  PIT ZONE: SU ___ WI ___ MI ___ LI ___
SUBSURFACE SEDIMENT: BRK ___ BLD ___ COB ___ PEB ___ GRN ___ SAN ___ MUD ___ VEG ___

PIT # 7  PIT DEPTH — OIL CHARACTER — OIL INTERVAL: FROM — TO —
CLEAN BELOW:  PIT ZONE: SU ___ WI ___ MI ___ LI ___
SUBSURFACE SEDIMENT: BRK ___ BLD ___ COB ___ PEB ___ GRN ___ SAN ___ MUD ___ VEG ___

PIT # 8  PIT DEPTH — OIL CHARACTER — OIL INTERVAL: FROM — TO —
CLEAN BELOW:  PIT ZONE: SU ___ WI ___ MI ___ LI ___
SUBSURFACE SEDIMENT: BRK ___ BLD ___ COB ___ PEB ___ GRN ___ SAN ___ MUD ___ VEG ___
**DATE**: 5/17/90  
**TIME**: 17:30 to 20:30  
**TIDE LEVEL**: 10  

**TOTAL EST LENGTH OF SHORELINE SURVEYED**: 955 m  
**SURVEYED FROM**:  
- Foot  
- Boat  
- Helo  
**WEATHER**:  
- Sun  
- Clouds  
- Fog  
- Rain  
- Snow  

**TOTAL NO SITES**: 1  
**SUBDIVISION**: A  
**LAND REP**: STEVE WARD  
**TOTAL NO SITES**: 1

---

**SURFACE OIL**

<table>
<thead>
<tr>
<th>SITE 1</th>
<th>SITE 2</th>
<th>SITE 3</th>
</tr>
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<tbody>
<tr>
<td><strong>CHARACTER</strong></td>
<td><strong>DISTRIBUTION</strong></td>
<td><strong>OILED ZONES</strong></td>
</tr>
<tr>
<td>ASPHALT</td>
<td>/C</td>
<td>/B</td>
</tr>
<tr>
<td>S.O.R.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>POOLED</td>
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<tr>
<td>COVER</td>
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<tr>
<td>COAT</td>
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<tr>
<td>STAIN</td>
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<tr>
<td>MOUSSE</td>
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<tr>
<td>PATIES/T.B.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FILM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO OIL</td>
<td>X</td>
<td></td>
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<tr>
<td>EST. SITE LENGTH</td>
<td>955 m</td>
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**SUBSURFACE OIL**

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<tr>
<th>SITE NO.</th>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL (cm)</th>
<th>CLEAN BELOW (Y/N)</th>
<th>PIT ZONE</th>
<th>SURFACE-SUBSURFACE SEDIMENTS</th>
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<tbody>
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<td></td>
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</table>

**COMMENTS**

- OIL CONFINED TO THE NORTH/SOUTH ENDS OF THE SITE AS CV1/775/F/P  
  IN LARGER BOUNDERS IN FRONT OF AND TO THE CEE OF JOURNAL ROCK SUPERIOR

**PHOTOGRAPHS**  
**FRAMES**  

**REVISION NO.**: 7/27/90
WORK PLAN ADDENDUM

Segment  **Ev 37**  Subdivision  **A**  Dated  **07/16/90**

MODIFICATION

1. REASON FOR MODIFICATION

   Addition  **MANUAL WORK EFFORT REQUIRED.**

2. ADJUSTMENT TO WORK PLAN

   **MANUAL PICK UP OF MOUSSE, POOLED OIL, + ASPHALT PATCHES**

SHPO APPROVAL NEEDED  **YES**  SHPO SIGNATURE  **______________________**

TAG APPROVAL DATE  **07/16/90**

ADEC  **Ray Menard, R.M.**

EXXON  **Andy Team, A.D.**

NOAA  **Burt Wescott, B.D.**

USCG  **C.A. Reiter, C.A. Reiter**

FOSC  **______**  DATE  **7/16/90**
### ASAP Follow-Up Recommendations

#### TAG Recommendations - August 13, 1990

<table>
<thead>
<tr>
<th>SEGMENT</th>
<th>B Site 1</th>
<th>Manual pickup of tarmats, rake and bioremediate* H.P.</th>
<th>Manual pickup of tarmats, rake and bioremediate* H.P.</th>
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<tbody>
<tr>
<td>CH-09</td>
<td>B Site 1</td>
<td>NTR</td>
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</tr>
<tr>
<td>EL-52</td>
<td>B Site 2</td>
<td>Manual till - mop up mobile oil with snare and bioremediate - low priority</td>
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<tr>
<td>EL-55</td>
<td>A Site 1</td>
<td>Storm berm relocation (mechanical if necessary)</td>
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<tr>
<td>EL-56</td>
<td>C Site 2</td>
<td>NTR - Reassessment in '91</td>
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<tr>
<td>EL-58</td>
<td>C Site 1</td>
<td>Customblen application and reassessment in '91</td>
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<tr>
<td>ER-07</td>
<td>A Site 1</td>
<td>Manual pickup of tarmat and bioremediation (low priority)</td>
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</tr>
<tr>
<td></td>
<td>Site 2</td>
<td>Limited manual pickup followed by bioremediation - Customblen (low priority)</td>
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<tr>
<td>EV-05</td>
<td>A Site 1</td>
<td>Manual pickup of mousse/AP followed by bioremediation. Manual till in heaviest areas if necessary (H.P.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Site 2</td>
<td>Access and remove heaviest concentration of AP/OP/HOR manual removal followed by bioremediation</td>
<td></td>
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<tr>
<td></td>
<td>Site 3</td>
<td>Manual removal of MS/AP/OP/HOR where accessible - bioremediation (H.P.)</td>
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<tr>
<td>EV-12</td>
<td>A Site 1</td>
<td>Manual removal of AP and bioremediation (M.P.)</td>
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<tr>
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<td>Site 2</td>
<td>Manual pickup of OP/HOR sediments (relocate armor to access)</td>
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<tr>
<td></td>
<td>Site 3</td>
<td>Bioremediate</td>
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<td>FL-01</td>
<td>A Site 1</td>
<td>Manual pickup of mousse (H.P.)</td>
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<tr>
<td></td>
<td>Site 2</td>
<td>NTR - work done</td>
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<td></td>
<td>Site 3</td>
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<tr>
<td>GR-301</td>
<td>B Site 1</td>
<td>Manual pickup of mousse (H.P.)</td>
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<tr>
<td></td>
<td>Site 2</td>
<td>NTR</td>
<td></td>
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<td></td>
<td>Site 3</td>
<td>NTR</td>
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<tr>
<td>GR-301</td>
<td>B New Site</td>
<td>Manual pickup of mousse (H.P.)</td>
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<tr>
<td>KN-07</td>
<td>A Site 1</td>
<td>Manual pickup of AP/OP/mousse and bioremediation (H.P.) both areas</td>
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<tr>
<td></td>
<td>Site 2</td>
<td>Manual pickup followed by bioremediation (L.P.)</td>
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<tr>
<td>KN-08</td>
<td>A Site 1</td>
<td>Manual removal of AP followed by bioremediation (M.P.)</td>
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<tr>
<td>KN-201</td>
<td>A Site 1</td>
<td>Manual pickup of oiled debris at stream mouth next to small pool, use chain saw as necessary to access.</td>
<td></td>
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<tr>
<td></td>
<td>Site 2</td>
<td>NTR</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Site 3</td>
<td>NTR</td>
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<td>Site 4</td>
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<tr>
<td>KN-400</td>
<td>A Site 1</td>
<td>Manual removal of accessible AP followed by rake and bioremediation (L.P.)</td>
<td></td>
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<tr>
<td></td>
<td>Site 2</td>
<td>NTR</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Site 3</td>
<td>Bioremediate and assessment in '91</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Site 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KN-404</td>
<td>A Site 1</td>
<td>Further TAG evaluation - bioremediation and assessment in '91</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Site 2</td>
<td></td>
<td></td>
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<td>KN-405</td>
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<td></td>
<td></td>
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<td>NK-02</td>
<td>A Site 1</td>
<td>Manual pickup AP/mousse - bioremediation (M.P.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Site 2</td>
<td>Manual pickup of mousse patties and bioremediation, Inipol and Customblen (M.P.)</td>
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<tr>
<td>PD-04</td>
<td>A Site 1</td>
<td>Manual pickup of AP and bioremediation (L.P.)</td>
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<td></td>
<td>Site 2</td>
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<td>Site 2</td>
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</table>

*ANADROMOUS STREAM CONSTRAINT*

---

**TAG**

**DATE**

---

**EXXON**

**DATED** Aug 15 1990

**ADEC**

**FOSC**

**USCG**

**NOAA**

---

*(See attached Archaeological Constraint sheet)* **DATE** Aug 14 1990

*Walk with land manager in effecting the*
1991 MAYSAP EVALUATION

SEGMENT: EV 037  SUB: A  REGION: PWS  SURVEY DATE: 4/28/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) RESTRICTED 3/1 - 9/15

Ecological/Constraints (see page two for details) Eagle nest, Fish harvest area, Subsistence, Deer harvesting

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find, and contact Exxon's Cultural Resource Program immediately: 564-3276; 564-3657; (Anchorage) or 229-1514 (24 hrs.).

SHPO Signature:.............................. Date: 5/6/91

RECOMMENDATIONS:

<table>
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<td>Bio-Inipol/Customblen</td>
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<tr>
<td>Other</td>
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</tbody>
</table>

COMMENTS:
INITIAL: Manual pickup AP-HSOR/OP followed by Bio at locations A, B, C, D

TAG: USCG-Monitor will coordinate an assessment of the areas indicated on the attached sketch to determine if small patches of AP are present and require pickup during site treatment.

FOSC: No Bio! This is due to CVC's objections to the use of Bio as noted in CVC memo 03/11/91. If CVC residues, no Bio! (AD)

TAG APPROVAL DATE: 4/18/91  FOSC APPROVAL DATE: 8/13/91

ADEC: ..............................  EXXON: ..............................
USCG: ..............................  NOAA: ..............................
1991 MAYSAPE EVALUATION

SEGMENT: EV 037  SUB: A  REGION: PWS  SURVEY DATE: 4/28/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) RESTRICTED 3/1 - 9/15

Ecological/Constraints (see page two for details) Eagle nest, Fish harvest area, Subsistence, deer harvesting

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO Signature: __________________________ Date: __________________

RECOMMENDATIONS:

<table>
<thead>
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<th>FOSC</th>
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<tr>
<td>Bio-Customblen Only</td>
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<tr>
<td>Bio-Inpol/Customblen</td>
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</tr>
<tr>
<td>Other</td>
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<tr>
<td>Other</td>
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</table>

COMMENTS:
INITIAL: Manual pickup AP-HSOR/OP followed by Bio at locations A, B, C, D

TAG: ______________________________________________________

FOSC: _____________________________________________________

TAG APPROVAL DATE: ___________  FOSC APPROVAL DATE: ___________

ADEC_____________________________  FOSC______________________________

EXXON___________________________

USCG___________________________

NOAA___________________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Eagle Nest: Access restricted from 3/1 to 9/1. USF&WS authorization required. Maintain 1000' vertical and 1/4 mile horizontal buffer.

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Subsistence, Deer Harvesting: Unlimited treatment prior to 8/15.
**MAYSAP FIELD SHORELINE COMMENT SHEET**

**TEAM NO.** 5  **SEGMENT** EV-37  **SUBDIVISION** A  **DATE** 4/28/91

<table>
<thead>
<tr>
<th>ADEC</th>
<th>NAME</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>John Hays</td>
<td></td>
</tr>
</tbody>
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- **NTR**  Oily conditions here are similar to EV-37A although water between USEC and MTS is more heavily oiled here. Recommend continued treatment here that began in 1980. Due to poor access, mechanical treatment is not feasible here. Recommend work be manually removed prior to completion where existing is limited to matrix of boulder and cobble beds at high A, B, C, D, E extent or above. Also recommend retreatment following treatment of more heavily oiled area.

<table>
<thead>
<tr>
<th>EXXON</th>
<th>NAME</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Martinez</td>
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- **NTR**  Worked this beach last summer, very difficult to high energy.

<table>
<thead>
<tr>
<th>LANDMANAGER</th>
<th>NAME</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Steve Ward</td>
<td></td>
</tr>
</tbody>
</table>

- **NTR**  Lots of surface and subsurface, this should be removed. Difficult to work in this area between 1/2 and 3/4 mile. People in chenega there worked there I yes know. Also numerous areas where good work there. Just not enough, this area has been and will continue to be considered a dead zone by the villagers of chenega. In 1995 used to be the subsistence for bushes were and logs for fire wood.

<table>
<thead>
<tr>
<th>USCG/NOAA</th>
<th>NAME</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dreher /Hodges</td>
<td></td>
</tr>
</tbody>
</table>

- **NTR**  Densely oiled cobble flakes in small ≤ 3 m band observed. Oiled sediment and some large tar puddles. Pits showed pore oil and sheen. Dense mussel bed on far left beach in lower inner tidal. It would be difficult, if not impossible, to remove this existing oil. Oil isolated primarily in upper (to mid) inner tidal areas.
**MAYSAP SHORELINE OILING SUMMARY**

**TIME:** 09:50 to 11:15  
**TIDE LEVEL:** 1 ft. to 5 ft.  
**ENERGY LEVEL:** □ M □ L  
**SURVEYED FROM:** □ FOOT □ BOAT □ HELO

**TOTAL LENGTH SHORELINE SURVEYED:** 239 m  
**NEAR SHORE SHEEN:** □ BR □ RS □ SL □ NONE

**EST. OIL CATEGORY LENGTH:**  
- W 110 m  
- B 58 m  
- N 58 m  
- V 32 m  
- M 27 m  
- US 993 m

<table>
<thead>
<tr>
<th>L.G.</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT TYPE</th>
<th>SHORE ZONE</th>
<th>AREA</th>
<th>ZONE</th>
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<tr>
<td>A</td>
<td>P</td>
<td>B</td>
<td>4</td>
<td>8</td>
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<tr>
<td>B</td>
<td>T</td>
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<td>S</td>
<td>R</td>
<td>5</td>
<td>30</td>
<td>□</td>
</tr>
</tbody>
</table>

**NOTES:** LARGE CLAY CLUSTER

**DISTRIBUTION:**  
- C = 91-100%  
- B = 81-90%  
- P = 61-80%  
- S = 1-10%  
- T = <1%

**SLOPE:**  
- V = VERTICAL  
- H = HIGH ANGLE  
- M = MEDIUM ANGLE  
- L = LOW ANGLE

**PHOTO ROLL # MAYSAP:** 5 | 4  
**FRAMES:** 5-12

**OG COMMENTS:** THIS SURVEY WAS CONDUCTED IN HEAVY RAIN AND WIND. THIS CONDITION MADE OBSERVING LIGHT OIL DIFFICULT. ALONG HIGH TIDAL, AP AND SOR WERE OBSERVED AT BOULDER BASES. AP PATCHES WERE OFTEN RECOVERABLE BUT IT WOULD BE TIDIOUS.
MAPSAP 1991
OG SKETCH MAP
GREG CHANEY
TEAM 5
SEGMENT: EV 374
DATE: APRIL 28/91
AIR P/N: 6-1-71

AP AT BASE OF LARGE BOULDERS ON SHALLOW BEDROCK

AP AT BASE OF LARGE BOULDERS ON SHALLOW BEDROCK

EYAN'S ISLAND

AP 10% SOR 10%
CV 15%
CT 15%

10x10M

AP 15% CV 10%
HEAVY SOR 15%
AP Poorly Formed

4x8M

15x20M

CT 30% CV 30%
HEAVY SOR 2% AP 1%
LARGE BOULDERS

AP 30% CV 10%
6x3M OP CORRESPONDS SHALLOW BEDROCK

HOR-ER TRIANGLE 10x15M

LARGE 15x20M BOULDERS AP ~5%
CV 10%
CT 30%
ST 20%
SOR ~5%

No P/AO On Passw 5x5m NOD

BEGIIEW

DATE:

KNIGHT ISLAND PASSAGE
TEAM # 5
SEGMENT # EV-37
SUBDIVISION A
SEA STATE 3+4
PHOTOGRAPHS: ROLL # FRAME #

DATE 28 Apr '91
TIDAL HEIGHT (Range) +1.5 - 5.5
BILOGIST C. Rank
WIND SPEED/DIRECTION -15 knots /E

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):

(A) Area is in the SUPRA + U1T2. Rye grass sprouting and white and black lichen present in SUPRA. In U1T2 2cm long segmented worms present. No other macro-biota observed in area.

(B) Area is in U1T2. Filamentous green algae covers boulder bases. No other macro-biota observed in area. Caulerpa shells present.

(C) Area is boulder field high in U1T2 and SUPRA. Mosses are healthy and have reproductive structures. Black lichen present. Filamentous green algae cover boulder bases. 2cm long segmented worms present under veneer. No other macro-biota observed in area.

Ten meters downshore focus begins.

(D) Area is in U1T2 boulder field. Filamentous green algae cover boulder surfaces. There is a pocket of Enteromorpha in a small tidepool. High concentration of limpets observed on oil CT. Area 30m from upper U1T2 where barnacles cover > 50% of sediments and fewer (juvenile, spawlings) are present.

(E) Area is in U1T2. Rare barnacles, rare Ulva, and limpets, and segmented worms present. Filamentous green algae covers boulder bases. Directly below site there is a dense 7m x 4m intergravel/cobble mussel bed.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
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<tr>
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<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
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<tr>
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<td>3</td>
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<td>700</td>
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<td>Gulls/kittiwakes</td>
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<td>Shorebirds</td>
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<td>Corvids</td>
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<td>Other Birds</td>
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<table>
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<tr>
<th>MARINE MAMMALS</th>
<th># OBSERVED</th>
<th>SPECIES</th>
<th># OBSERVED</th>
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<tr>
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<tr>
<td>Pinnipeds(specify)</td>
<td>0. Harbor Seals</td>
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<tr>
<td>Whales(specify)</td>
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<table>
<thead>
<tr>
<th>LAND MAMMALS</th>
<th># OBSERVED</th>
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</table>

Shoreline subdivision map showing important biological features attached.
Areas A-E are located on a single beach. The MITZ is rich and diverse with ~80% biotic cover on boulders and rock outcrops and ~5% cover on small boulders and cobble. Organisms present include: Fucus (striped-only and plants with mature conceptacles), coralline algae, black chiton (Kathrina tunica), Ulva, filamentous green algae, Palmaria (aka), Odonthalia (algae-25%), Desmerestia (aka), Anenomas, Nucella (whale), Littorina, limpets, Scythes (aka), juvenile eels, and a moderate barnacle concentration (new set present). The MITZ is dominated by barnacles (heavy recruits), Fucus (rare sporophytes) and Gloiopeltis (algae). Bioti cover ~40% The intertidal biota appears to be healthy.

(F) Area is located in SUPRA, MITZ and high MITZ. There is a runoff stream in area. The new grass is sprouting. Moss, white and black lichen are present. Filamentous green algae cover B/lc and the base of rock outcrop. Ran- barnacles are present. Animals did not seal their inner-plates when stimulate Custombilen casings present.

(G) No intertidal biota observed in site. Two meters below site there is a moderate Fucus, concentration near runoff stream, sporophytes are present. Sparse barnacles near runoff ~30% or animals not tightly sealing inner plates.
(H) Area is in the SUPRA and U1TZ. Rye grass is sprouting. Filamentous green algae cover Blc at bottom margin of site. No other macrobiota within site. Biota rare for ~15m downslope then 
Fucus begins.

(I) Area is located in U1TZ boulders. Filamentous green algae covers boulders. Rare barnacles, including recruits, and Littorina are present within site. Two meters below site in the MITZ barnacles are moderate.

Areas F → I are located on a single pocket beach. A pair of Bald Eagles were flushed by helicopter - possible nest in vicinity. Tide had covered U1TZ during survey. The MITZ has ~30% biotic cover dominated by barnacles, Fucus, mussels and Gloiopeltis (algae). Littorina are moderately concentrated. MITZ biota appear to be healthy.
1991 MAYSAP EVALUATION

SEGMENT: EV 037  SUB: A  REGION: PWS  SURVEY DATE: 4/28/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) RESTRICTED 3/1 - 9/15

Ecological/Constraints (see page two for details). Eagle nest, Fish harvest area, Subsistence, deer harvesting

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find, and contact Exxon's Cultural Resource Program immediately: 564-3276; 564-3657; (Anchorage) or 229-1514 (24 hrs.).

SHPO Signature: [Signature]  Date: 5/8/91

RECOMMENDATIONS:

<table>
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<th>FOSC</th>
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<tr>
<td>Manual Pickup (Check as Req.)</td>
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<td>Y</td>
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<tr>
<td>Other</td>
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</tr>
</tbody>
</table>

COMMENTS:
INITIAL: Manual pickup AP-HSOR/OP followed by Bio at locations A, B, C, D

TAG: USCG monitor will coordinate an assessment of the areas indicated on the attached sketch to determine if small patches of AP are present and require pickup during site treatment.

FOSC: NO BIO! THIS IS DUE TO CVC'S OBJECTION TO THE USE OF BIO AS NOTED IN CVC MEMO ON 5/11/91. IF CVC RECONSIDERS, NO W/ I. (I)

TAG APPROVAL DATE: 5/8/91  FOSC APPROVAL DATE: 5/13/91

ADEC  [Signature]  FOSC  [Signature]
EXXON  [Signature]  E. E. PAGE, CDR, USCG
USCG  [Signature]  CHIEF OF STAFF, FOSC
NOAA  [Signature]
*See next ramp for additional shoreline to EV37-A

**Subdivision Field Map**

**Map Key:** PSEV037A

**Name:** GREG CHANEY

**Date:** APRIL 28 1971

---

**Medium**

**Narrow**

**Very Light**

**No Oil**

---

**EV037 A**

**ABEC Subsegment Length:** 1231m

---

**Perspective for Sketch Map 2**

---

**A**

**UNSURVEYED**

---

**ABAP - HP, CT**

**ST-CUB**

---

**DIAG. SURVEY**
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Eagle Nest: Access restricted from 3/1 to 9/1. USF&WS authorization required. Maintain 1000' vertical and 1/4 mile horizontal buffer.

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Subsistence, Deer Harvesting: Unlimited treatment prior to 8/15.
MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5  SEGMENT EV-37  SUBDIVISION A  DATE 4/28/91

ADEC
NAME: John Hayes
SIGNATURE: [Signature]

☐ NTR  Bo Treatment Recommended
Oiling conditions here are similar to EV-37A although cover leaves EMZ
+ MZT is more heavily oiled here. Recommend continued treatment here that
began in 1990. Due to poor access mechanical treatment is not feasible here.
Recommended work crews manually remove from contamination that persists
in matrix of boulder and o, bedrock at 50% A/B+C+E and on and below
coffles at sites H+I+6.
Also recommend revegetation following treatment of site heavily oiled site.

EXXON
NAME: [Name]
SIGNATURE: [Signature]

☐ NTR
Worked this beach last summer; very difficult
to high energy.

LANDMANAGER
NAME: Steve Ward
SIGNATURE: [Signature]

☐ NTR
Lots of Surface and Sub-Surface. This Should Be Removed.
Difficult to Work in this Area. Between Lg Boulders. But the
People in Chenega have worked there. All now know. Also
Numerous UCs. Need Time. One good work here. Just not
Enough. This Area Has Been And Will Continue To Be Considered
A Dead Zone. By the Villagers of Chenega. Area used to
be High Subsitance For Crabs, Deer And Logs For Firewood.

USCG/NOAA
NAME: Dreher/Hodges
SIGNATURE: [Signature]

☐ NTR
Densely oiled cobbles flakes in small 3m band observed, oiled sediment and
some large tar pockets. Pits showed pore oil and sheen. Dense mussel bed on far
left beach in lower inner tidal. It would be difficult, if not impossible, to remove
this existing oil. Oil isolated primarily in upper (to mid) inner tidal area.
## Maysap Shoreline Oiling Summary

**Team No.:** 5  
**Oil (Og):** Chaney  
**Bio (Bio):** Crank  
**Adec: Hayes**  
**Landmanager: Ward**  
**Exxon:** Martinez  
**Uscg/noaa:** Dreher/Hodges  

### Time

09:50 to 11:15  

### Tide Level

1 ft to 5 ft  

### Energy Level

H M L  

### Surveyed From

Foot  

### Weather

SUN  

### Total Length Shoreline Surveyed

238 m  

### Near Shore Sheen

No.  

### Est. Oil Category Length

W 110 m, M 68 m, N 4 m, V 4 m, L 527 m US 99.3 m  

### Surface Oil Character

<table>
<thead>
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<th>L</th>
<th>0</th>
<th>C</th>
<th>AP</th>
<th>AP</th>
<th>NS</th>
<th>TB</th>
<th>SOR(CV)</th>
<th>CT</th>
<th>ST</th>
<th>FL</th>
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<th>UI</th>
<th>MI</th>
<th>LI</th>
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### Notes

**Notes:**

- Surface Oil Character:  
  - C = 91-100%; B = 51-90%; P = 11-50%; S = 1-10%; T = <1%
  - Slope: V = Vertical; H = High Angle; M = Medium Angle; L = Low Angle
  - Photo Roll # Maysap-5-4 Frames 5-12
  - Subsurface Oil Character:  
    - Oiled Zone: Clean Below (Y/N)
    - Water Level: BASN
    - Sheen Color:  
      - B = Brown; R = Rainbow; S = Silver; N = None
    - Pit Zone: Large Class 3 Zone
  - Subsurface Sediments:  
    - Notes: BC-BC

### Sheen Color

- B = Brown; R = Rainbow; S = Silver; N = None

### OG Comments

OG comments: This survey was conducted in heavy rain and wind. This condition made observing light oil difficult. Along high intertidal, AP and sor were observed at Boulder Bases. AP patches were often recoverable but it would be tedious.
SKETCH MAP #2 of 2

MAYSAP 1991
OG SKETCH MAP
GREG CHANEY
TEAM 5
SEGMENT: EV37A
DATE: Apr 28, 1991
AIR P.##: 2-11-87 EVDZ 4 No. 49
VER. EDGE PARTIAL

7x30m BOULDERS
AP TRACE BEDROCK
CV 30%
CT 20%
ST 20%

10x10m LARGE
AP 15% BOULDERS
CV 10%
CT 5%
SOR 5%

TALL SEA STACK
WITH SMALL TREE
ON TOP

VERTICAL ROCK

55 GAL DRUM

TALL OFFSHORE ROCK

CURVED DRIFT LOG

AP FEW PATTIES
SOR Trace
CT 10%
ST 10%
BOULDER BEACH

VERTICAL ROCK

MAGNETIC NORTH APPROXIMATELY

REVIEWED: MC. 5/19
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #: 5  DATE: 28 Apr '91  pg 1 of 3
SEGMENT #: EV-37
SUBDIVISION: A
SEA STATE: 3-4
PHOTOGRAPHS: ROLL #: FRAME #

TIDAL HEIGHT (Range): +1.5 to +5.5
WIND SPEED/DIRECTION: 15 kts E

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):
(A) Area is in the SUPRA + UITZ. Rye grass sprouting and white and black lichen present in SUPRA. In UITZ, 2cm long segmented worms present. No other macro-biota observed.

(B) Area is in UITZ. Filamentous green algae cover boulder bases. Healthy barnacles on boulder bases. No other macro-biota observed in area. Custombilen shells present.

(C) Area is boulder field high in UITZ and SUPRA. Mosses are healthy and have reproductive structures. Black lichen present. Filamentous green algae cover boulder bases. 2cm long segmented worms present under veneer. No other macro-biota observed in area. Ten meters downshore, Fucus begins.

(D) Area is in UITZ boulder field. Filamentous green algae cover boulder surfaces. There is a pocket of Enteromorpha in a small tide pool. Rare concentrations of limpets observed on oil CT. Area <1m from upper UITZ where barnacles cover ~30% of sediments and Fucus (mature sporelings) are present.

(E) Area is in UITZ. Rare barnacles, rare limpets, and segmented worms present. Filamentous green algae covers boulder bases. Directly below site there is a dense 7m x 4m intergravel/cobble mussel bed.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

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<td>7 (S.ursus)</td>
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LAND MAMMALS

Shoreline subdivision map showing important biological features attached.
SKETCH MAP #1 of 2

EVAN'S ISLAND

MAYSAIP 1991
DG SKETCH MAP: BioMap
GREG CHANEY: Crank
TEAM S
SEGMENT: EV 37A
DATE: APRIL 13, 1991
AIR P.: 37-1-2F, 4602-4729

A) 4 x 8 m
AP 15% CV 10%
HEAVY SOR 15%
AP Poorly Formed

B) 15 x 20 m
CT 30% CV 30%
HEAVY SOR 2% AP 1%
LARGE BOULDERS

C) AP 30% CV 10%
6 x 3 m OP Corresponds to Shallow Bedrock

D) AP 10%, CV 15%, CT 15%

E) MITZ ~40% biota cover being recruited by Fucoid and barnacles

F) Large 15 x 20 m Boulders AP ~5%, CV 10%, CT 30%, ST 20%, SOR ~5%

KNIGHT ISLAND PASSAGE
Areas A-E are located on a single beach. The LITZ is rich and diverse with ~80% biotic cover on boulders and rock outcrops and ~5% cover on small boulders and cobble. Organisms present include: Fucus (stipes-only and plants with mature conceptacles), coralline algae, black chiton (Katharina tunicata), Uva, filamentous green algae, Palmaria (aka), Odonthalia (algae - 2 spp), Desmarestia (algae), anemones, Nucella (whale), Littorina, limpets, Scytozoon (algae), juvenile eels, and a moderate barnacle concentration (new set present). The LITZ is dominated by barnacles (heavy recruits), Fucus (rare sporelings) and Gloioptilis (algae). The intertidal biota cover ~40%. The intertidal biota appears to be healthy.

(F) Area is located in SUPRA, UITZ and high MITZ. There is a runoff stream in this area. The rye grass is sprouting. Moss, white and black lichen are present. Filamentous green algae cover B/c and the base of rock outcrop. Rare barnacles are present. Animals did not seal their inner plates when stimulated. Customblen casings present.

(G) No intertidal biota observed in site. Two meters below site there is a moderate Fucus concentration near runoff stream. Sporelings are present. Sparse barnacles near runoff ~30% of animals not tightly sealing inner plates.
(H) Area is in the SUPRA and U1TZ. Rye grass is sprouting.
Filamentous green algae cover Bic at bottom margin of site.
No other macro biota within site. Biota rare for 15m downslope than Eucus begins.

(I) Area is located in U1TZ boulders. Filamentous green algae covers boulders.
Rare barnacles, including recruits, and Littorina are present within site. Two meters below site in the MITZ, barnacles are moderate.

Areas. F->I are located on a single pocket beach. A pair of Bald Eagles were flushed by helicopter - possible nest in vicinity. Tide had covered U1TZ during survey. The MITZ has ~30% biotic cover dominated by barnacles, Fucus, mussels, and Gloiopeltis (algae). Littorina are moderately concentrated. MITZ biota appear to be healthy.
XXXI

---

Narrow

TTTT Very Light

0000 No Oil

EV037 A

ADEC Subsegment Length: 1231m Meters

Map Key: PWSEV037Ac

Name: GREG CHANEY

Date: APRIL 28 1991

Date Entered:

REVISED: F.W. 5/1/91

REVISED: M.G. 5/1/91
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-37

SUBDIVISIONS: A (1 OF 1)
SEGMENT ST/EV-37  SUBDIVISION A (1 OF 1) DATE  4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
ST-1  All bald eagle nests (3/1 to 6/1)--Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: ____________________  DATE: ____________________

OILING CATEGORIZATION:
Wide 0 m: Medium 480 m: Narrow 0 m: V.Light 453 m: No Oil 302 m
Subsurface Oil Observed:  Yes X  No  Maximum Depth 30+ cm

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

COMMENTS: Recommended treatment includes 1) manual pickup of oiled vegetation, 2) removal of tarmats, and 3) bioremediation where shown on sketch map. Work should be conducted after 6/1 and with USFWS approval based on eagle nest constraints.

TAG COMMENTS:_________________________________________________________

TAG APPROVAL DATE:__________
ADEC  ________________  FOSC: __________ DATE: __________
EXXON  ________________
NOAA  ________________
USCG  ________________
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 lnipol 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 lnipol 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 lnipol 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

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 lnipol 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

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 unseed intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or lnipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Steve Zimmerman 586-7235

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
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 lnipol 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: USFWS Steve Zimmerman 586-7337

5R Seabird colony (6/1 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

AGENCY CONTACT PERSON: ADF&G Tom Rothe 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 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)
Finnish 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 lnipol 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 / EV-37  SUBDIVISION: A (106)  DATE 4-21-90

NAME: Michael Buchanan  SIGNATURE: 

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS:
- Northern end of segment has a raised shelf with oiled debris.
- First peak on the northern end has noticeably heavier coating, especially toward the south end of the beach. Sheen was seen in tide pools.
- Poor colonization was observed below oiling in the south end of this beach.
- Staining & coating continued thru our segment. Southern tip was an area of light sheenk with considerable coat on lower portions in cracks, and asphalt in understory rock.
- Oil impacts ST-6 were naturally degrading.

ADEC
NAME: John Hayes  SIGNATURE: 

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS:
- HWHP Wash UITZ
- Manual Cleanup of potlles & oiled vegetation UITZ + ST-6
- Bio. on cobble beaches in MITZ

See sketch map. Treatment suggested for Northern, mid, & Southern portions of segment indicated on map.

LAND MANAGER
NAME: Steve Ann-Chenega  SIGNATURE: 

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS:
- Manual Cleanup and Hi-Pressure Wash.
SHORELINE OILING SUMMARY

SEGMENT ST: EV - 37

TEAM NO. II
TIDE LEVEL: +5.5 ft
DATE: 4/21/90

EST. SUBDIVISION LENGTH: 12.55 km

UPLANDS DESCRIPTION:
- Sun
- Clouds
- Fog
- Rain
- Snow

SURVEYED FROM: Foot

SURFACE SEDIMENTS:
- Grass
- Forest
- Rock

SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<tbody>
<tr>
<td>ASPHALT PAVEMENT</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>POOLED COVER</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>MOUSSE STAIN</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>PATTIES TARBALLS</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

PAVEMENT: H (F) 10 sq. m by 5 cm

PAVEMENT HOLE:
- BR RW SL TL

NEAR SHORE SHEEN?

OILED DEBRIS AMOUNT

- Logs
- Vegetation
- Trash
- Debris

DID YOU COLLECT DEBRIS?

- YES
- NO

TYPE:

- #BAGS:

Photographs:

- Roll No.: ST 11-3
- Frames: 32-34

SUBSURFACE OIL

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>OILED INTERVAL (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>ANA SHEEN</th>
<th>SURFACE - SUBSURFACE SEDIMENTS</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>20</td>
<td>0 - 10</td>
<td>X</td>
<td>X</td>
<td></td>
<td>N</td>
<td>C, P, C</td>
</tr>
<tr>
<td>2</td>
<td>10</td>
<td>0 - 10</td>
<td>X</td>
<td>X</td>
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<td>N</td>
<td>C, P, R</td>
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<tr>
<td>3</td>
<td>30</td>
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<td>X</td>
<td>X</td>
<td></td>
<td>N</td>
<td>C, P, C</td>
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<tr>
<td>4</td>
<td>30</td>
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<td>X</td>
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<td></td>
<td>N</td>
<td>C, P, C</td>
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<tr>
<td>5</td>
<td>30</td>
<td>0 - 10</td>
<td>X</td>
<td>X</td>
<td></td>
<td>N</td>
<td>P, T, C</td>
</tr>
<tr>
<td>6</td>
<td>30</td>
<td>0 - 30</td>
<td>X</td>
<td>X</td>
<td></td>
<td>Y</td>
<td>C, P, C</td>
</tr>
</tbody>
</table>

COMMENTS:

Most of the oiling was observed in the Northeast end of the segment. The Northern most Pocket beach contained CR/GO tar in the Upper and HZ12 among Boulders and Rock with some asphalt and cover in the crevices. There is a continuous stain on the rocky headland between the 1st and 2nd Pocket beach. This 2nd Northernmost beach is a low angle B/C beach with a 20% to 30% CR/GO open with some Subsurface oiling (pit #5), South of this B/C beach is a Boulder/Rock outcrop w/ a 10m x 70m CR/GO with some asphalt in the crevices and rainbow sheen observed in the tide pool.
---

### Subsurface Oil (Continued)

<table>
<thead>
<tr>
<th>Pit No.</th>
<th>Pit Depth (cm)</th>
<th>Subsurface Oil Character</th>
<th>Oiled Sediment Interval</th>
<th>Below Oil/Film Color</th>
<th>Pit Zone</th>
<th>Analysis</th>
<th>Notes</th>
<th>Surface Subsurface Sediments</th>
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<tbody>
<tr>
<td>7</td>
<td>20</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td>-</td>
<td>C.G.C</td>
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<tr>
<td>8</td>
<td>30</td>
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<td>X</td>
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<td>G.C</td>
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<td>9</td>
<td>25</td>
<td>X</td>
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<td>X</td>
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<td>-</td>
<td>P.G.C</td>
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<tr>
<td>10</td>
<td>30</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td>-</td>
<td>P.G.P.C</td>
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</tr>
<tr>
<td>11</td>
<td>40</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>N</td>
<td>-</td>
<td>C.P.G.P</td>
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<tr>
<td>12</td>
<td>30</td>
<td>X</td>
<td>X</td>
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<td>13</td>
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<td>N</td>
<td>-</td>
<td>C.P.C</td>
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**Comments:**

Staining continues south of this beach on the rocky headland. The middle of the segment contains some staining in the HETZ. The south end of the segment contains a 10m x 40m CT/P on high angle B/R with some localized CV/O and asphalts between the crevasses in the boulder/rock. There is also some oiled vegetation and logs in the supra HETZ. The southern end of the segment contains a 5m x 100m CT/P among low angle boulders/bedrock in the HETZ.

---

**Reviewed:** J.W. 
**Date:** 4-25-90
### SHORELINE ECOLOGICAL SUMMARY

**Segment ST/ EU-37**  
**Subdivision A**  
**Date (mo/day/yr):** 04/21/90

**Time (24 hr):** 1830  
**Biologist:** KATHLEEN COOK

(A) Substrate type and % of segments:  
1) Bedrock 50  2) Boulder 20  3) Cobble 15  4) Pebble 10  5) Sand 5  6) Silt 0

(B) Overall % cover of biota (% of segment):  
Dense 50  Moderate 50  Low 20

(C) Density, substrate preference (by number from A. above), & vertical zonation of major taxa:  
- Photographs: Roll No. ST11-3  
- Frames 32-34

#### BARNACLES

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#### FUCUS

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<tr>
<td>6</td>
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Wildlife Observations/ General Comments:  
2 SEALS; 2 BALD EAGLES; NUMEROUS TOTAL OF ~50) GULLS FLEW OVERHEAD, NORTHWARDS FROM SHALLOW BAY AT VILLAGE

Ecological Considerations:
ECOLOGY MAP (1 OF 1)

RESOURCE CODES FOR ENTIRE SEGMENT:

Ev - 1
	

Confirmed present 28 April 1990 Two adults seen.

XXX Wide

// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EV-37

Map Key: PWS-243
Name: K.E. Conlan
Date: 21 April 1990
Date Entered:

ADEC Segment Length: 1255m

EV-37

100 200 300 METERS

ST 1-3

Y 32

(P1# 6) 33

34

Bald Eagle Nest

Very

Wide

Medium

Narrow

Very Light

No Oil

EV-37
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT EV-37 SUBDIVISION A (1 of 1)

WORK WINDOW

<table>
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<tr>
<th>Activity</th>
<th>Status</th>
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<tbody>
<tr>
<td>Manual Pickup and Tarmat Removal</td>
<td>CLOSED</td>
</tr>
<tr>
<td>Inside Eagle Nest Buffer Zone</td>
<td></td>
</tr>
<tr>
<td>Manual Pickup and Tarmat Removal</td>
<td>OPEN</td>
</tr>
<tr>
<td>Outside Eagle Nest Buffer Zone</td>
<td></td>
</tr>
<tr>
<td>Bioremediation and Manual Raking</td>
<td>WORK PRIOR TO 7/25</td>
</tr>
<tr>
<td>Inside Eagle Nest Buffer Zone</td>
<td></td>
</tr>
<tr>
<td>Bioremediation and Manual Raking</td>
<td>CLOSED</td>
</tr>
<tr>
<td>Outside Eagle Nest Buffer Zone</td>
<td></td>
</tr>
</tbody>
</table>

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

<table>
<thead>
<tr>
<th>Code</th>
<th>Activity</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1K</td>
<td>Purse Selne Hook-off</td>
<td>No constraint to manual pickup and tarmat removal; closed to bioremediation and manual raking after 7/25.</td>
</tr>
<tr>
<td>5T</td>
<td>Bald Eagle Nest</td>
<td>USFWS 6/1/90 map indicates an active nest in Subdivision B. Closed to manual pickup, tarmat removal, bioremediation and manual raking within USFWS eagle nest buffer zone established 5/12/90 by Mike Lockhart. No constraint to manual pickup, tarmat removal, bioremediation, and manual raking outside eagle nest buffer zone.</td>
</tr>
<tr>
<td>7II</td>
<td>Subsistence: Deer Harvesting</td>
<td>No constraint to manual pickup and tarmat removal; closed to bioremediation and manual raking after 8/15.</td>
</tr>
</tbody>
</table>

OTHER ECOLOGICAL CONSIDERATIONS

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 uncoiled biota and substrate.

TAG APPROVAL DATE
ADEC
EXXON
NOAA
USCG

FOSC [Signature] Date 7 June 1990
ECOLOGY MAP
SEGMENT EV-37
SUBDIVISION A (1 of 1)
METERS

Exxon Company, USA
Map Keys: PMS-EV-37
June 04, 1990

★ Seabird Colony
△ Active Eagle Nest
△ Inactive Eagle Nest

1 inch = 1152 feet
SHORELINE EVALUATION

SEGMENT ST/ EV-37 SUBDIVISION A (1 OF 1) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
ST-1 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoi led biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: [Signature] DATE: 5/3/90

OILING CATEGORIZATION:

Wide 0 m: Medium 480 m: Narrow 0 m: V.Light 453 m: No Oil 302 m
Subsurface Oil Observed: Yes X No Maximum Depth 30+ cm

RECOMMENDATIONS:

<table>
<thead>
<tr>
<th>Recommendation</th>
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<tbody>
<tr>
<td>No Treatment Recommended</td>
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<tr>
<td>X Treatment Recommended</td>
</tr>
<tr>
<td>X Manual Pickup</td>
</tr>
<tr>
<td>X Bioremediation</td>
</tr>
<tr>
<td>X Tarmat Removal</td>
</tr>
</tbody>
</table>

COMMENTS: Recommended treatment includes 1) manual pickup of oiled vegetation, 2) removal of tarmats, and 3) bioremediation where shown on sketch map. Work should be conducted after 6/1 and with USFWS approval based on eagle nest constraints.

TAG COMMENTS: MANUALLY RAKE/TILL AREA OF TG PRIOR TO OIL

TAG APPROVAL DATE: 5/3/90
ADEC [Signature] EXXON [Signature] NOAA [Signature] USCG

FOSC: [Signature] DATE: 5-18-90
NOTIFY EVRC 24 HRS IN ADVANCE OF WORK
SHORELINE EVALUATION

SEGMENT ST/ EV-37 SUBDIVISION A (1 OF 1) DATE 4/21/90

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)
7TII Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: DATE: 5/3/90

OILING CATEGORIZATION:
Wide 0 m: Medium 480 m: Narrow 0 m: V. Light 453 m: No Oil 302 m
Subsurface Oil Observed: Yes X No Maximum Depth 30+ cm

RECOMMENDATIONS:
--- No Treatment Recommended
X Treatment Recommended
X Manual Pickup
X Bioremediation
X 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 pickup of oiled vegetation, 2) removal of tarmats, and 3) bioremediation where shown on sketch map. Work should be conducted after 6/1 and with USFWS approval based on eagle nest constraints.

TAG COMMENTS: MANUALLY RAKE/TILL AREA OF TP C PRIOR TO 6/1

TAG APPROVAL DATE: 5/3/90
ADEC ART WEBER DATE: 5/15/90
EXXON X
NOAA X NOTIFY OCEAN ASR IN ADVANCE OF WORK
USCG X
ECOLOGY MAP (1 of 1)

RESOURCE CODES FOR ENTIRE SEGMENT:

chief

(Bald Eagle)

confirmed present 28 April 1996. Two adults seen.

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

EV-37

ADEC Segment Length: 1255 m

Map Key: PWS-243
Name: K.E. Conlan
Date: 21 April 1990
Date Entered:
1991 MAYSAP EVALUATION

SEGMENT: EV 038 SUB: A REGION: PWS SURVEY DATE: 4/28/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) RESTRICTED 3/1 - 9/1

Ecological/Constraints (see page two for details) Eagle nest, Fish harvest area

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO Signature: ___
Date: 5/10/91

RECOMMENDATIONS:

TREATMENT REQUIRED (Y or N) N

Manual Pickup (Check as Req.)
Spot Washing
Bio-Customblen Only
Bio-Inipol/Customblen
Other ____________________
Other ____________________

COMMENTS:

INITIAL:

TAG:

FOSC: __________________________

TAG APPROVAL DATE: MAY 10 1991

ADEC
EXXON
USCG
NOAA

FOSC APPROVAL DATE: 5/15/91

E. E. PAGE, CDR, USCG
CHIEF OF STAFF FOSC
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Eagle Nest: Access restricted from 3/1 to 9/1. USF&WS authorization required. Maintain 1000' vertical and 1/4 mile horizontal buffer.

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.
<table>
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<th>NAME: John Haye</th>
<th>SIGNATURE: [Signature]</th>
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<tbody>
<tr>
<td>NTR</td>
<td>Ed 38 only partially surveyed as Eagle was flushed from nest 3 when we began to survey. Oiling observed on bedrock &amp; boulder. We convinced that island did not need treatment in 1990 &amp; remaining oiling on Island may continue to weather.</td>
<td></td>
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<table>
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<tr>
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<th>NAME: Martinez Ali</th>
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<tr>
<td>NTR</td>
<td>No recoverable or treatable oil noted in nesting area. Surveying continued due to nesting eagles. Talking with Land Manager Steve Ward, local response is CVC Wilson &amp; ADEC Rep J. Haye this area has needed treatment since summer 90.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LANDMANAGER</th>
<th>NAME: Steve Ward</th>
<th>SIGNATURE: [Signature]</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTR</td>
<td>No History of Sub-Surface Oil. No oil in pits &amp; eyes. Survey stopped due to Eagle nesting, this area has a slight boil on Unkuan oil on Rock Faces around Entire Island. Oil is mostly on Vegetation Faces.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>USCG/NOAA</th>
<th>NAME: Dreher / Hedges</th>
<th>SIGNATURE: [Signature]</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTR</td>
<td>Very little spatter was found in areas of large rocks. No recoverable oil. Oil &quot;bleached&quot; spots were discovered on large lichen rocks.</td>
<td></td>
</tr>
</tbody>
</table>
MAYSAP SHORELINE OILING SUMMARY

<table>
<thead>
<tr>
<th>TEAM NO.</th>
<th>DATE</th>
<th>SEGMENT</th>
<th>SUBDIVISION</th>
<th>TIME</th>
<th>TIDE LEVEL</th>
<th>ENERGY LEVEL</th>
<th>SURVEYED FROM</th>
<th>TOTAL LENGTH SHORELINE SURVEYED</th>
<th>EST. OIL CATEGORY LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHaney</td>
<td>May 28, 1991</td>
<td>EV 38</td>
<td>A</td>
<td>07:15 to 07:45</td>
<td>-1.5 ft to -2.0 ft</td>
<td></td>
<td>Foot, Boat, Helo</td>
<td>155 m</td>
<td>W - m; M - m; N - m; V - 85 m; N - 70 m; US - 289 m</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MATERIAL</th>
<th>NATURE</th>
<th>WIDTH</th>
<th>LENGTH</th>
<th>ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface</td>
<td>Oil Character</td>
<td>Shore Sediment</td>
<td>Area</td>
<td>Zone</td>
</tr>
<tr>
<td>A</td>
<td>B R H</td>
<td>0.1</td>
<td>0.5</td>
<td>X</td>
</tr>
<tr>
<td>B</td>
<td>B R H</td>
<td>0.1</td>
<td>0.3</td>
<td>X</td>
</tr>
<tr>
<td>C</td>
<td>R R H</td>
<td>0.1</td>
<td>0.3</td>
<td>X</td>
</tr>
</tbody>
</table>

DISTRIBUTION: C = 91-100%; B = 51-90%; P = 11-50%; S = 1-10%; T = <1%

SLOPE: V = Vertical; H = High Angle; M = Medium Angle; L = Low Angle

PHOTO ROLL # MAYSAP-5 - 3 FRAMES 3-12

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>OILED ZONE</th>
<th>OILED H2O</th>
<th>OILED SHEEN</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>PIT DEPTH</th>
<th>SURFACES</th>
<th>OILED ZONE</th>
<th>OILED H2O</th>
<th>OILED SHEEN</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>SURFAACES</th>
<th>NOTICES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>35</td>
<td>V</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td>-</td>
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</tr>
<tr>
<td>2</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

SHEEN COLOR: B = Brown; R = Rainbow; S = Silver; N = None

OG COMMENTS: SURVEY WAS CONDUCTED ON THE WEST SIDE OF THE ISLAND ONLY. SURVEY WAS TERMINATED DUE TO EAGLE WHICH WAS DISTURBED FROM NEST. OIL OBSERVED WAS MOSTLY IN THE FORM OF COAT & STAIN Drips ON ROCK FACES.
TEAM # 5

DATE 28 Apr '91

SEGMENT # EV-38

TIDAL HEIGHT (Range) -1 - 1.5

SUBDIVISION A

BIOLOGIST Crank

SEA STATE 1-2

WIND SPEED/DIRECTION 5-10 knots / E

PHOTOGRAPHS: ROLL #: MAYSAP # 3

FRAME #: 10, 11

COMMENTS/ OBSERVATIONS (to be completed in oiled subdivisions only):

(A) Area on rock face, ranging vertically from SUPRA to MITZ. In the SUPRA there are oil drips on the rock that have "peaked off" leaving a "reverse shadow" in the black lichen (see Photo Roll # 3 Frame, 10, 11). In the MITZ there is a barnacle band 1 m wide. Top of band is contaminated with oil. About 30-40% of the shells are empty. At the bottom of the band a new set is present. There is a thin (2cm) band of mussels at the base of rock following a crevice. Littorina and limpets are sparse.

(B) Area is in a MITZ Boulder pocket. Within the site barnacles and Littorina are rare. One meter below site in the MITZ there is a moderately concentrated mussel population and barnacles increase to sparse. There is a dense Fucus bed 30 m NW of site and the MITZ is rich including semiballans (flax barnacles), Katerina tumida (black chitons), Ulva, Halosaccion, algae.

(C) Unable to investigate—flushed eagle from nest so we left the beach. NOAA rep. reported heavy barnacle recruitment in vicinity. OG reported area very similar to (B).

Active Bald Eagle Nest. Rich MITZ with 80-90% bionta coverage including the algae Fucus, Ulva, Odontella, Halosaccion, filamentous green and Desmarestia. Animals included juvenile eels, bryozoans, clams, barnacles and sea stars. Legoria and Bythogorgia. With such a rich healthy MITZ and sensitive Eagle site not environmental benefit would be minimal if present oil was treated.

WILDLIFE OBSERVATIONS

To be completed in all subdivisions

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED SPECIES PRESENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eagles</td>
<td>1</td>
<td>2 - Active Nest</td>
<td></td>
</tr>
<tr>
<td>Seabirds</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Waterfowl</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gulls/Kittiwakes</td>
<td>1</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Shorebirds</td>
<td>1</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Corvids</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Birds</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>MARINE MAMMALS</th>
<th># OBSERVED</th>
<th>SPECIES</th>
<th># OBSERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sea Otters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pinnipeds(specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whales(specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Shoreline subdivision map showing important biological features attached.

Reviewed MB 5/4/91
MAYSAP 1991
OG SKETCH MAP
GREG CHANEY
TEAM 5
SEGMENT: EV-38A
DATE: APRIL 29 91
AIR P.#: PM-C-006-12

LEGEND

BEDROCK
BOULDERB
FINE BED
DRIFT LOG
GRASS
BRUSH
FOREST
OILED PIT
NO OIL PIT
PHOTO

SCALE
APPROX 65 METERS

Survey Stopped
Due To Eagle
Disturbance

Did not survey - Eagle
Flushed and team left beach

EAGLE'S NEST
(ACTIVE)

Knight Island Passage

Rich dense
LITZ

Evans Island

Trees & Brush

Review MBS 5/19/91
1991 MAYSAP EVALUATION

SEGMENT: EV 038 SUB: A REGION: PWS SURVEY DATE: 4/28/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) RESTRICTED 3/1 - 9/1

Ecological/Constraints (see page two for details) Eagle nest, Fish harvest area

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO Signature: ___________________________ Date: ___________________________

RECOMMENDATIONS:

TREATMENT REQUIRED (Y or N) N

Manual Pickup (Check as Req.)
Spot Washing
Bio-Customblen Only
Bio-Inipol/Customblen
Other

INITIAL: ___________________________

TAG: ________________

FOSC: ________________

COMMENTS:
INITIAL: __________________________________________________

TAG: ______________________________________________

FOSC: ______________________________________________

TAG APPROVAL DATE: ________________ FOSC APPROVAL DATE: ________________

ADEC: __________________________

EXXON: _________________________

USCG: __________________________

NOAA: __________________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Eagle Nest: Access restricted from 3/1 to 9/1. USF&WS authorization required. Maintain 1000' vertical and 1/4 mile horizontal buffer.

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.
<table>
<thead>
<tr>
<th>TEAM NO.</th>
<th>SEGMENT</th>
<th>SUBDIVISION</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>EV-38</td>
<td>A</td>
<td>4/18/91</td>
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</tbody>
</table>

**ADEC**

<table>
<thead>
<tr>
<th>NAME</th>
<th>SIGNATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>John Haye</td>
<td></td>
</tr>
</tbody>
</table>

NTR EV-38 only partially surveyed as Eagle was flushed from nest 3 times as we began to survey. All oil observed was CR/CV on beach in lee of boulder. CVC & I concurred that island did not need treatment in 1990 as remaining oiling on island may continue to weather.

**EXXON**

<table>
<thead>
<tr>
<th>NAME</th>
<th>SIGNATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Montagne N.</td>
<td></td>
</tr>
</tbody>
</table>

NTR Area surveyed. Survey cut short due to nesting eagles. Talking with Land Manager Steve Ward, Local Response Carol Wilson & ADEC. Rep: John Haye this area has no need for treatment since

**LANDMANAGER**

<table>
<thead>
<tr>
<th>NAME</th>
<th>SIGNATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steve Ward</td>
<td></td>
</tr>
</tbody>
</table>

NTR No history or sub-surface oil. No oil in pits dug.

Survey stopped due to Eagle nesting, this area has a light band of residual oil on rack faces around entire island. Oil is mostly on vegetation faces.

**USCG/NOAA**

<table>
<thead>
<tr>
<th>NAME</th>
<th>SIGNATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dreher / Hodges</td>
<td></td>
</tr>
</tbody>
</table>

NTR Very little spatter was found on areas of large rocks. No recoverable oil. Oil "bleached" spots were discovered on large lichen rocks.
MAYSAP SHORELINE OILING SUMMARY

SEGMENT E/U 38
SUBDIVISION A
DATE Apr/12/81

CRANK
LANDMANAGER WARD for CVC

EXXON MARTINEZ
USCG/NOAA DREHER/HODGES

TIME 07:15 to 07:40
TIDE LEVEL -1.5 ft to -2.0 ft
ENERGY LEVEL: H M L
WEATHER: SUN CLOUDS FOG RAIN SNOW

TOTAL LENGTH SHORELINE SURVEYED: 155 m
NEAR SHORE SHEEN: BR RB SL NONE
EST. OIL CATEGORY LENGTH: W m M m N m V 85 m NO 70 m US 289 m

<table>
<thead>
<tr>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT</th>
<th>SHORE SLOPE</th>
<th>AREA WIDTH</th>
<th>LENGTH</th>
<th>ZONE</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>T T</td>
<td>BR H 0.1</td>
<td>25</td>
<td>X</td>
<td>Random Drips on Rock</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>T T</td>
<td>BR H 0.1</td>
<td>30</td>
<td>X</td>
<td>Random Drips on Rock</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>T T</td>
<td>RR 1/2 0.1</td>
<td>30</td>
<td>X</td>
<td>Random Drips on Rock</td>
<td></td>
</tr>
</tbody>
</table>

DISTRIBUTION: C = 81-100%; B = 51-80%; P = 11-50%; S = 1-10%; T = <1%
SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE

PHOTO ROLL # MAYSAP- 5 - 3 FRAMES 7-12

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED ZONE</th>
<th>CLEAN BELOW LEVEL</th>
<th>SHEEN COLOR</th>
<th>PIT ZONE</th>
<th>SURFACE-SUBSURFACE SEDIMENTS</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PE-PB</td>
</tr>
</tbody>
</table>

SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS: SURVEY WAS CONDUCTED ON THE WEST SIDE OF THE ISLAND ONLY. SURVEY WAS TERMINATED DUE TO EAGLE WHICH WAS DISTURBED FROM NEST. OIL OBSERVED WAS MOSTLY IN THE FORM OF COAT & STAIN Drips ON ROCK FACES.

REVISED: P.W. 5/2/91
REVIS: M.C. 5/3/91
MAYBAP 1991
OG SKETCH MAP
GREG CHANEY
TEAM 5
SEGMENT: EY-38A
DATE: APRIL 29 91
AIR P. #: TIM-C 006-12

LEGEND

KNIGHT ISLAND PASSAGE

Survey Stopped Due To Eagle Disturbance

EAGLE'S NEST (ACTIVE)

SCALE
APPROX 65 METERS

Bedrock
Boulder
Fine Bed
Drift Log
Grass
Brush
Forest
Oiled Pit
No Oil Pit
Photo

Reviewed: P.M. 5/4/91
**MAYSAP BIOLOGICAL SUMMARY FORM**

<table>
<thead>
<tr>
<th>TEAM #</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATE</td>
<td>28 Apr '91</td>
</tr>
<tr>
<td>SEGMENT</td>
<td>EV-38</td>
</tr>
<tr>
<td>SUBDIVISION</td>
<td>A</td>
</tr>
<tr>
<td>SEA STATE</td>
<td>1-2</td>
</tr>
<tr>
<td>TIDAL HEIGHT(Range)</td>
<td>-1 -1.5</td>
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<tr>
<td>WIND SPEED/DIRECTION</td>
<td>5-10 knots /E</td>
</tr>
<tr>
<td>PHOTOGAPHS: ROLL</td>
<td>MAYSAP #3</td>
</tr>
<tr>
<td>FRAME</td>
<td>10, 11</td>
</tr>
</tbody>
</table>

**COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):**

(A) Area on rock face, ranging vertically from SUPRA to MITZ. In the SUPRA there are oil drips on the rock that have "peeled off" leaving a "reverse shadow" in the black lichen. (see Photo Roll #3 Frame 10, 11). In the MITZ there is a barnacle band 1m wide. Top of band is contaminated with oil. About 30-40% of the shells are empty. At the bottom of the band a new set is present. There is a thin (2cm) band of mussels at the base of rock following a crevice. Littorina and limpets are sparse.

(B) Area is in a MITZ boulder pocket. Within the site barnacles are litorina are rare. One meter below site in the MITZ there is a moderately concentrated mussel population and barnacles increase to species. There is a dense pieces bed 5m NW of site and the MITZ is rich including Semibalanus (thick barnocks) Katorina turata (black chitons), U/Cl, Holosuccinum (algae).

(C) Unable to investigate - flushed eagle from nest so we left the beach. NOAA rep reported heavy barnacle recruitment in vicinity. OG reported area very similar to (B).

**WILDLIFE OBSERVATIONS TO BE COMPLETED IN ALL SUBDIVISIONS**

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED</th>
<th>SPECIES PRESENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eagles</td>
<td>1</td>
<td>2 - Active Nest</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seabirds</td>
<td>1</td>
<td>3</td>
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<tr>
<td>Waterfowl</td>
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</tr>
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<td>1</td>
<td>5</td>
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<tr>
<td>Shorebirds</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corvids</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Birds</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**LAND MAMMALS**

<table>
<thead>
<tr>
<th>MARINE MAMMALS</th>
<th># OBSERVED</th>
<th>SPECIES</th>
<th># OBSERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sea Otters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pinnipeds (specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whales (specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Shoreline subdivision map showing important biological features attached.
1991 MAYSAP EVALUATION

SEGMENT: EV38  SUB: A  REGION: PWS  SURVEY DATE:  ANCHORAGE-A00/A

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) ____________________________________

Ecological/Constraints (see page two for details)       JUL 1 8 1991

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is
required prior to shoreline treatment.

SHPO Signature:  Date: 6/27/91

RECOMMENDATIONS:
INITIAL          TAG          FOSC

TREATMENT REQUIRED (Y or N)  N

Manual Pickup (Check as Req.)  
Spot Washing  
Bio-Customblen Only  
Bio-Inipol/Customblen  
Other  
Other  

COMMENTS:
INITIAL:

TAG:  TAG DOES NOT BELIEVE TREATMENT OR A TAG RE-EVALUATION
IS WARRANTED BASED ON THE INFORMATION PRESENTED BY
ADEC. (LETTER DATED JUNE 24 91)

FOSC: REMOVE TREATMENT MOUSE IN AREA A:
OIL TOO LIMITED TO IMPACT CLEANUP - AF

TAG APPROVAL DATE:  FOSC APPROVAL DATE:  7/9/91
June 26 91  
ADEC  
E. E. PAGE  CDR, USCG  CHIEF OF STAFF, FOSC

EXXON  
USCG  
NOAA  

The state will evaluate the need to conduct treatment at this subdivision

John Buene
**MAYSAP SHORELINE OILING SUMMARY**

**SEGMENT:** EU038  
**SUBDIVISION:** A  
**DATE:** 6/11/91

**TIME:** 10:10 to 11:05  
**TIDE LEVEL:** 0.0 ft to 2.5 ft  
**ENERGY LEVEL:** H  
**WEATHER:**  
- **FOOT**  
- **BOAT**  
- **HELO**  
**NEAR SHORE SHEEN:**  
- **BR**  
- **RB**  
- **SL**  
- **NONE**

**TOTAL LENGTH SHORELINE SURVEYED:** 400 m  
**EST. OIL CATEGORY LENGTH:** W: 12 m, C: 0 m, N: 0 m, V: 40 m

<table>
<thead>
<tr>
<th>LOC</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT TYPE</th>
<th>SHORE SLOPE</th>
<th>WIDTH</th>
<th>LENGTH</th>
<th>ZONE</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
<td>RCP</td>
<td>M</td>
<td>4</td>
<td>12</td>
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<td></td>
</tr>
</tbody>
</table>

**DISTRIBUTION:** C = 01-100%; B = 11-50%; P = 1-10%; T = <1%

**SLOPE:** V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE  
**PHOTO ROLL #** MAYSAP-  
**FRAMES**

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED ZONE</th>
<th>CLEAN BELOW</th>
<th>H2O LEVEL</th>
<th>SHEEN COLOR</th>
<th>PIT ZONE</th>
<th>SURFACE- SUBSURFACE SEDIMENTS</th>
<th>NOTES</th>
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**OG COMMENTS:**

- LIGHT CONTAMINATION on REDROCK ISLAND PATH OF MAYSAP/TSOR.
- CAUGHT in sediments and on REDROCK PLUMMER SE SIDE OF ISLAND.
Portion of subdivision surveyed during MAYSAP

EV038 A

X X X X Wide
/ / / / Medium
----- Narrow
T T T T Very Light
0 0 0 0 No Oil

6/11/91
Ray Finch
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-38

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION

SEGMENT ST/ EV-38  SUBDIVISION A (1 OF 1) DATE  4/20/90

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)
7II  Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: __________________________ DATE: __________________________

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 292 m: V. Light 13 m: No Oil 140 m
Subsurface Oil Observed: Yes ___ No ___ X __ Maximum Depth ___

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 Removal ___ Beach Cleaner
___ Other (see comments)

COMMENTS:

________________________________________________________________
________________________________________________________________
________________________________________________________________

TAG COMMENTS: ______________________________________________________
________________________________________________________________
________________________________________________________________

TAG APPROVAL DATE: __________
ADEC __________________________  FOSC: __________ DATE: __________
EXXON __________________________
NOAA __________________________
USCG __________________________
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - try outrunmigration (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 Sewmill Bay Hatchery release (4/15 to 6/1)
1G Conner 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

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 Evelyn Biggs 424-3235

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 unooled intertidal and subtidal algal 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, 3R 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 Galtins 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 766-3377

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 766-3377
ADF&G Tom Rothly 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 766-3377

6U Recreation: Tent sites (6/1 to 9/15)
6V Anchorage (6/1 to 9/15)
6W Forest Service cabin (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 (9/15 to 5/15)
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 Fial 267-2359
FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ EU-38
SUBDIVISION: 4 (lot 1)
DATE: 4-20-90

NOAA
NAME: Michael Larkin
SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS: Island with a 1970s outcrop on the northern tip of headlands on the southern end. These are separated by a saddle which may be in wave wash at high tide. Nearly all the shoreline is uplifted, tilted slate slabs. High wave and sun exposure along the east side. Splatter stain with drips was seen along the south west side. The saddle and a stain to east there out. Stain band was observed north of beach on eastern side.

And continued with increasing intensity to east on the rock wall to the south of beach and around to the southern tip. It diminished to stain from southern tip around to western side. Oiling on eastern side is dried highy weathered.

One fissure south of beach on east side had noticeably heavier cant with drips.

ADEC
NAME: John Hayes
SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS:

Observe banks of stain + light coat of tar in UI TZ. Island is N. of Evans oil gets moderate to high exposure. No treatment recommended weathering is reducing oiling to stain.

LAND MANAGER
NAME: Steve O'Brien
SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS: Light oil band. Weather should clean stain.
**SHORELINE OILING SUMMARY**

**OIL**  Exxon  
**BIO**  Southcoast  
**LAND REP**  Steve Lukard  
**EXXON**  Gary ginger  
**ADEC**  John Amos  
**TIME**  5:30 10/14/79  
**TEAM**  EV-38  
**DATE**  10/20/90  
**TIDE LEVEL**  1.2  
**SURFACE LENGTH**  7.7 m  
**UPLANDS DESCRIPTION**  Grass, Forest  
**SURVEYED FROM**  Foot, Boat, Helo  
**WORKING DIRECTION**  N to S  
**SLOPE**  Lang _30_ % Hang  
**WAVE EXPOSURE**  Low, Med, High  
**OIL CATEGORY**  W  
**OIL AMOUNT**  NO OIL  
**OILED SHORE SHEEN?**  NO  
**NEAR SHORE BALLS?**  NO  
**OILED AMOUNT**  NO OIL  

### SURFACE OIL

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**PAVEMENT**  H  
**NEAR SHOREBALLS?**  NO  
**NATURAL DEBRIS**  NO  
**OILED AMOUNT**  NO OIL  
**OILED DEBRIS**  NO  
**DEBRIS**  NO  
**AMOUNT**  NO  
**DID YOU COLLECT**  NO  
**TYPE**  NO  

### SUBSURFACE OIL

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**COMMENTS**  

Shore zone consists mostly of steep high angle Boulder / Rock with a few pocket B/C. Beaches, there is a patchy distribution of tar/coat along the South Western end of the Island. Tar coating also occurs in a Rock Valley on the Northern Part of the Island. All oiling occurs in the Hitz on rock/boulder face. No subsurface oiling was discovered. The Northern and eastern parts of the Island have a high wave exposure, while the Western and southern parts of the Island have a medium wave exposure.

**REVIEWED**  4-23-90
SEARCH MAP

Wave Exposure Medium

2m x 50m CT/P in rock valley HfTZ
Wave exposure High

10m x 15m CT/P in HfTZ on o/c saddle

1m x 10m ST/P on HfTZ on Vert Rock

1m x 80m ST/P along High angle O/R shore zone in the HfTZ

3m x 50m CT/P along O/R shore zone in the HfTZ

Legend

- Boulders
- trees
- steep Bedrock / Boulder shore zone

Scale

100m

Oil Character Length (m): AP _ PO _ OV _ OT 42S ST 80 MS _ PT _ TB _ FL _ NO 287
SHORELINE ECOLOGICAL SUMMARY

Segment ST/EU-38  Subdivision A ( )  Date (mo/day/yr) 09/20/90
Time (24 hr) 1835 -  Biologist KATHLEEN CONLAN  19/20

(A) Substrate type and % of segments:
(1) Bedrock 70 (2) Boulder 20 (3) Cobble 5 (4) Pebble 5 (5) Sand 0 (6) Silt 0

(B) Overall % cover of biota (% of segment):
Dense 70  Moderate 20  Low 10

(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)

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Photographs:
Roll No. ________
Frames ________

BARNACLES

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Wildlife Observations/General Comments:
- BALD EAGLE
- SEA OTTER
- MAMMALS

Ecological Considerations:
SHORELINE EVALUATION

SEGMENT ST/ EV-38  SUBDIVISION A (1 OF 1)  DATE  4/20/90

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)
7II  Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:
If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO SIGNATURE:  DATE:  5/3/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 292 m: V.Light 13 m: No Oil 140 m
Subsurface Oil Observed: Yes  No  X

MAXIMUM DEPTH

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 Removal  ____ Beach Cleaner
____ Other (see comments)

COMMENTS:

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

TAG COMMENTS:

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

TAG APPROVAL DATE:  5/3/90
ADEC  Art Werner  Art Werner
EXXON  Amy G. Smith  FOSC:  [Signature]  DATE:  5/14/90
NOAA  Gary Peterson  Ray Peterson
USCG  Kenneth Herne  [Signature]
Sketch Map

Scale

Wave Exposure Medium

Legend

- Boulders
- Trees
- Steep Bedrock/Boulder Shore Zone

Oil Character Length (m): AP 0  PO 0  CV 0  OT 425  ST 80  MG 0  PT 0  TB 0  FL 0  NO 287
ECOLOGY MAP (10m)

RESOURCE CODES FOR ENTIRE SEGMENT:

MAP KEY: PWS-244

NAME:

DATE:

DATA ENTERED:

EV-11

EV-3

EV-39

Wide
// / Medium
--- Narrow
TT TT Very Light
0000 No Oil
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-39

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION

SEGMENT ST/ EV-39 SUBDIVISION A (1 OF 1) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Adjacent segment with eagle nest.
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: ____________ DATE: ____________

OILING CATEGORIZATION:

Wide 110 m: Medium 154 m: Narrow 32 m: V.Light 170 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 30 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend bioremediation of areas shown on sketch map, and manual pickup of mousse patties and oiled vegetation/debris where indicated. No specific ecological time constraints identified.

TAG COMMENTS: __________________________________________________________

TAG APPROVAL DATE: ________________

ADEC ___________________________ NOAA ___________________________
EXXON _________________________ USCG ___________________________
FOSC: __________________________ DATE: __________________________
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 Inpil 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 Motson 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 Inpil 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 Peitz 424-3214

1D Esther Hatchery release (4/15 to 6/1)
1E Main Bay Hatchery release (4/20 to 6/10)
1F Savanna 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 Inpil 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 Peitz 424-3214

1D 1E 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 7/20)

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 lnipil 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

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 unoiled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inpil 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

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 600m horizontal and 300m vertical distance from haulouts. No application of lnipil 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 (6/1 to 9/1)

Restrict air and boat traffic to essential minimum. No personnel within 600m. Aircraft to maintain 600m 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 Rotby 267-2205

ST All Bald Eagle nests (3/1 to 6/11)
Active Bald Eagle nests (3/1 to 9/11)

Restrict all traffic and disturbance to essential minimum. No personnel within 400m. 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 Anchorage (6/1 to 9/15)
6W Forest Service cabin (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)

AGENCY CONTACT PERSON: 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 Inpil 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/ EV-39  SUBDIVISION: A (lot 1)  DATE 9-21-90

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

This segment is largely stained and coated cobble beaches with frequent rock outcrops that are coated. Also, one large tilted, uplifted slate bench in the middle had noticeably greater oiling. Pits in this area were saturated with finny unweathered oil. Tide pools had silver to rainbow sheen. Small patches (~ 1% of area) of asphalt were observed in some shadows of outcrops/boulders along the beach north of there. Northern & southern ends had bedrock shelves with oil & debris/vegetation. Degree of oiling increased in southern end of segment. Frequent patches of asphalt between boulders & in pebbles overlying bedrock. Sheens in tide pools were common here too. Poor colonization was observed in the southern end & below the middle bench.

This area would be appropriate for hot water pressure washing & possibly bio-remediation.

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

Heavy oiled segment in SITZ, also areas of oiled vegetation + oil spots in SITZ.

1. HWHP with a HW Delge in addition
3. Mop up of any remaining free oil after HWHP wash.

Segment (as I recall) only had manual treatment last season.

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

- Hot water pressure washing -
- De-oil the oil in water -
SHORELINE OILING SUMMARY

OG  Mike Polet  NOAA  Mike Bushman  SEGMENT ST/ EV-39
BIO  Kathleen Cuslin  LAND REP  Steve Ward  ADEC  SUBDIVISION A (LOFT)
EXXON  Larry Olson  TIME: 10/27/89

TEAM NO. II  TIDE LEVEL + 3.3  DATE: 10/10/89
EST. SUBDIVISION LENGTH: 478 m  Sun  Clouds  Fog  Rain  Snow

UPLANDS DESCRIPTION:  Grass  Forest  Rock
SURVEYED FROM:  Foot  Boat  Helicopter
WORKING DIRECTION:  N to S

SURFACE SEDIMENTS:  R 40%  B 20%  C 30%  P 10%  O 0%  S 0%  MO 0%  VO 0%
SLOPE:  Lang 20%  Hang 20%  Ven 10% WAVE EXPOSURE:  Low  Med  High
OIL CATEGORY LENGTH:  W 1.20 m  M 1.00 m  N 3.10 m  VL 1.48 m
NO OIL

SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<tbody>
<tr>
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PAVEMENT H  P 3 sq.m by 10 cm

NEAR SHORE SHEEN?  NO

OILED DEBRIS AMOUNT

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<tr>
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<th>Trash</th>
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DID YOU COLLECT DEBRIS?

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TYPE: Oiled  FF0

# BAGS 1

Photographs:

Roll No. ST11-3
Frames 1-31

SUBSURFACE OIL

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<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
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<td>X</td>
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COMMENTS: Segment was heavily oiled. The northern end of the segment had CT/P oiled vegetation in the supra LTZ, with some ST/P staining and some asphalt patties occurring in between Boulder/Cobble crevasses. In the middle of the segment there is a large rock outcrop which extends through the LTZ. Just north of this is a 50m long Boulder/Cobble Beach with some CT/P stain and asphalt in between the Boulder/Rock/Cobble crevasses. There is also some patchy subsurface oiling in the LTZ in the cobble (pit # 5, #7)

REVIEWED:  JM  DATE: 4-23-90
COMMENTS

The Rock Beach outcrop, which extends to the LTZ in the middle of the segment, was heavily oiled, this had a CTBP on the exposed Boulder/Rock with cover and asphalt on the protected areas on this outcrop. A rainbow sheen was observed in tide pools on this outcrop. The Boulder Field just south of the large rock outcrop also had CTBP oiling on the exposed Boulder face with cover and asphalt in the crevasses. The low angle CTBP beach south of the rock outcrop and North of the stream had a STB staining in the upper and LTZ with some Subsurface Oil and OL Oiling (p.i. 10/13/5). The Southern Part of the Segment (S. of the Stream) consists of Bedrock and Large Boulders. This area was heavily oiled w/ CTBP tar slick on the exposed rock + face and asphalt with cover in the crevasses. This area also contains some oiled vegetation and logs in the Super LTZ.

REVIEWED: JH DATE: 4-23-90
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST/Ev-39  Subdivision A (10E1)  Date (mo / day / yr) 09/21/90

Time (24 hr) 12Z-16Z  Biologist  KATHLEEN CONLAN

(A) Substrate type and % of segments:
- Bedrock (30)
- Boulder (20)
- Cobble (30)
- Pebble (10)
- Sand (0)
- Silt (0)

(B) Overall % cover of biota (% of segment): Dense (40)  Moderate (20)  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)

### BARNACLES

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### GASTROPODS

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Wildlife Observations/ General Comments:
- Seal
- Oligochaetes
- Amphipods in gravel in stream runoff
- Abundant oligochaetes in wrack (which is oiled heauly) but no amphipods.

Ecological Considerations:
- [Oligochaetes](#)
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EV-39 SUBDIVISION A (1 of 1)

WORK WINDOW

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<tr>
<td>Manual Pickup</td>
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<tr>
<td>Bioremediation</td>
<td>WORK 6/1 TO 7/25</td>
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<tr>
<td>Manual Raking</td>
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<tr>
<td>Spot Washing</td>
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ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1K Purse Seine Hook-off  No constraint to manual pickup; closed to bioremediation, manual raking, and spot washing after 7/25.

5T Bald Eagle Nest  NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.

7II Subsistence: Deer Harvesting  No constraint to manual pickup; closed to bioremediation, manual raking, and spot washing after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 7/25. Restrict beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unölled biota and substrate.

TAG APPROVAL DATE 6/04/90
ADEC EXXON NOAA USCG  FOSC  DATE 6/4/90
Prepared By: [Signature]  Date 6/3/90
SHORELINE EVALUATION

SEGMENT ST/ EV-39 SUBDIVISION A (1 OF 1) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Adjacent segment with eagle nest.
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOCLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: __________________________ DATE: ______________

OILING CATEGORIZATION:
Wide 110 m: Medium 154 m: Narrow 32 m: V.Light 170 m: No Oil 0 m
Subsurface Oil Observed: Yes X No____ Maximum Depth 30 cm

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

COMMENTS: Recommend bioremediation of areas shown on sketch map, and manual pickup of mussle patties and oiled vegetation/debris where indicated. (No specific ecological time constraints identified)

TAG COMMENTS: Manual pickup of asphalt + mousse, Manual Raking prior to Bio as indicated on sketch, SPOT WASH WHERE FEASIBLE prior to Bio

TAG APPROVAL DATE: 5/3/89
ADEC __________________________
EXXON __________________________
NOAA __________________________
USCG __________________________

FOSC: __________ DATE: __________
NOTIFY CRC EV NES PRIOR TO WORK
SHORELINE EVALUATION

SEGMENT ST/ EY-39 SUBDIVISION A (1 OF 1) DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Adjacent segment with eagle nest.
- Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: ___________________ DATE: 5/3/90

OILING CATEGORIZATION:
Wide 110 m: Medium 154 m: Narrow 32 m: V.Light 170 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 30 cm

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

COMMENTS: Recommend bioremediation of areas shown on sketch map, and manual pickup of mousse patties and oiled vegetation/debris where indicated. No specific ecological time constraints identified.

TAG COMMENTS: Manual Pickup of asphalt + mousse. Manual ranking prior to bio. As indicated on sketch, spot wash where feasible prior to bio.

TAG APPROVAL DATE: 5/3/90
ADEC EXXON NOAA USCG

FOSC: ___ DATE: 5-18-90
Notify CEC by 24 hrs prior to work.
WORK PLAN ADDENDUM

Segment EV-39 Subdivision A Dated 6/16/90

MODIFICATION

1. REASON FOR MODIFICATION

REQUEST FROM FIELD FOR EXTENSION OF MANUAL TREATMENT AREA BEYOND THAT WHICH WAS INDICATED ON THE TAG SKETCH.

2. ADJUSTMENT TO WORK PLAN

- EXTEND MANUAL PICKUP OF MOUSSE AND ASPHALT PATCHES PRIOR TO BID.
  (SEE ATTACHED SKETCH).

SHPO APPROVAL NEEDED YES X NO

SHPO SIGNATURE [Signature] 6/18/98

TAG APPROVAL DATE 6/16/90

ADEC Ray Menzies, Lead

EXXON Andy Tetz, Lead

NOAA Karen Talbot, Lead

USCG C.A. Peters, C.A. Peters

DATE 7-10-90
ENVIRONMENTAL SENSITIVITIES:
Work Window(s) RESTRICTED 3/1 - 9/15

Ecological/Constraints (see page two for details) Eagle nest, Fish harvest area, Subsistence, deer harvesting

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find, and contact Exxon's Cultural Resource Program immediately: 564-3276; 564-3657; (Anchorage) or 229-1514 (24 hrs.).

SHPO Signature: Date: 5/9/91

RECOMMENDATIONS:
TREATMENT REQUIRED (Y or N) INITIAL TAG FOSC
Manual Pickup (Check as Req.) X Y Y
Spot Washing
Bio-Customblen Only
Bio-Inipol/Customblen X X NO!
Other
Other

COMMENTS:
INITIAL: Manual pickup of AP, HSOR/OP followed by Bio at locations A, C, D, E, F
TAG: Add Area B

FOSC: NO BIO - DUE TO CAND MANAGER'S CONCERNS/COMMENTS NOTED ON REPORT DATED 5/11/91. IF CVC RECONSIDER ADOPT ME AND I'LL REVISIT THIS ISSUE.

TAG APPROVAL DATE: MAY 9, 1991
FOSC APPROVAL DATE: 5/13/91

ADEC
EXXON
USCG
NOAA
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Eagle Nest: Access restricted from 3/1 to 9/1. USF&WS authorization required. Maintain 1000' vertical and 1/4 mile horizontal buffer.

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

Subsistence, Deer Harvesting: Unlimited treatment prior to 8/15.
**MAYSAP FIELD SHORELINE COMMENT SHEET**

**TEAM NO. 5**  
**SEGMENT EV-39**  
**SUBDIVISION A**  
**DATE 4/26/91**

<table>
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<tr>
<th>ADEC</th>
<th>John Haynes</th>
<th>SIGNATURE</th>
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- **NTR** Oily observed here by our survey team was similar to conditions I observed here last fall. Most of the oil was found on the lee side of boulders away the pebble matrix or as distinct isolated patches of AP oil. Depth on top of debris. I recommend continuing treatment here that 1990 caused started to remove remaining gross contamination that persists here. The OP-1 subsurface oil in the OIR is generally 10 cm. of recoverable. Additionally I recommend reassessment following treatment to determine if subsurface oily is still in OIR.

<table>
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<th>Martinez</th>
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- **NTR** Agree with OGS comments. Some may be recoverable but checking difficult access due to exposure of grade of beach and offshore rocks. May be good site for OGC. Team.

<table>
<thead>
<tr>
<th>LANDMANAGER</th>
<th>Steve Ward of CVC</th>
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- **NTR** Lots of Sub. Sub-surface oil. This area has been worked for 2 yrs. It still needs lots of manual at least. This was a high subsurface area for us in Cheney. Second deep layer in fire wood. High area until cleaned continues to be considered a dead zone and we can't use it. Lots of work needed.

<table>
<thead>
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</table>

- **NTR** Under adverse weather conditions considerable brown sheening was observed. Recoverable quantities of AP were observed. Probable that at higher ambient temperatures and direct sunlight these deposits will mobilize. Some saturated oil pockets up to 3 cm. in depth. Many areas of oiled sediment is specific segments of the beach. All pits in the lower inter tidal area were clean with no sheening. Oil coated coverage w/pine needles observed. Eagle carcass found.
**MAYSAP SHORELINE OILING SUMMARY**

**SEGMENT** EV 31  
**SUBDIVISION** A  
**DATE** April 12, 1991

**SURVEYED FROM:**  
Foot  
Boat  
HELO

**WEATHER:**  
Sun  
Clouds  
Fog  
Rain

**TOTAL LENGTH SHORELINE SURVEYED:** 455 m  
**NEAR SHORE SHEEN:**  
BR  
RB  
SL  
NONE

**EST. OIL CATEGORY LENGTH:**  
W 35 m  
M 1 m  
N 1 m  
VL 25 m  
US 11 m

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT</th>
<th>SHORE SLOPE</th>
<th>AREA</th>
<th>ZONE</th>
</tr>
</thead>
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<tr>
<td></td>
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<td>TYPE</td>
<td>WIDTH</td>
<td>LENGTH</td>
<td>UI</td>
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<tr>
<td>A</td>
<td>S</td>
<td>BPG</td>
<td>M</td>
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<tr>
<td>E S</td>
<td>S S P P</td>
<td>BPG</td>
<td>M</td>
<td>20</td>
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<tr>
<td>D S</td>
<td>S P P P</td>
<td>BPG</td>
<td>M</td>
<td>20</td>
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</tr>
<tr>
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<td>S P P P</td>
<td>BPG</td>
<td>M</td>
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</tr>
<tr>
<td>F P</td>
<td>S P</td>
<td>BPG</td>
<td>M</td>
<td>20</td>
<td>✓</td>
</tr>
</tbody>
</table>

**DISTRIBUTION:**  
C = 91-100%; B = 81-90%; P = 61-80%; S = 1-10%; T = <1%

**SLOPE:**  
V = Vertical  
H = High Angle  
M = Medium Angle  
L = Low Angle

**PHOTO ROLL #:** MAYSAP 5 - 4  
**FRAMES:** 1-4

**PIT NO.**  
**DEPTH (cm)**  
**SUBSURFACE OIL CHARACTER**  
**OILED ZONE**  
**CLEAN (cm)**  
**H2O (cm)**  
**SHEEN COLOR**  
**PIT ZONE**  
**SUBSURFACE SEDIMENTS**  
**NOTES**

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED ZONE</th>
<th>CLEAN H2O</th>
<th>SHEEN COLOR</th>
<th>PIT ZONE</th>
<th>SUBSURFACE SEDIMENTS</th>
<th>NOTES</th>
</tr>
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<tr>
<td>1</td>
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<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>15</td>
<td>✓</td>
<td>O-8</td>
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<td></td>
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</tr>
<tr>
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<td></td>
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</tr>
<tr>
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<tr>
<td>5</td>
<td>10</td>
<td>✓</td>
<td>D-10</td>
<td>N</td>
<td>✓</td>
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<tr>
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<td>7</td>
<td>25</td>
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<td>10-15</td>
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</tr>
</tbody>
</table>

**SHEEN COLOR:**  
B = Brown  
R = Rainbow  
S = Silver  
N = None

**OG COMMENTS:**

In region of A, horizon condition seems concentrated in a 6 x 15 m band between large boulders. Silver sheen in tidal pools, small pockets are recoverable. Generally where AP is indicated it occurs in discrete pockets between boulders, in most cases recoverable quantities exist but they would be tedious to remove.

**REVIEWED:** P.W. 5/31/91  
**NEXT PAGE**

**REVIEWED:** M.C. 5/1/91
<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED ZONE</th>
<th>CLEAN BELOW LEVEL (cm)</th>
<th>SHEEN COLOR</th>
<th>ZONE</th>
<th>SUBSURFACE SEDIMENTS</th>
<th>NOTES</th>
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<tbody>
<tr>
<td>8</td>
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<td>10-15</td>
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<td>PC-CPG</td>
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<td>9</td>
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<td>0-10</td>
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<td>BPG-BPG</td>
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</tr>
</tbody>
</table>

Sheen Color: B = Brown; R = Rainbow; S = Silver; N = None

OG Comments:
IN AREA the patches are larger and better defined.
A region of hor to op subsurface oiling exists in the center of the pebble/cobble beach around pits 7 & 8. A total of 8 pits were dug to roughly define the area as 40 x 10 m.

Note: survey was conducted in heavy rain. Lighter oiling types were difficult to observe.


MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 5
SEGMENT #: EV-39
SUBDIVISION: A
SEA STATE: 3'

TIDAL HEIGHT (Range): -1.5 to +1.5
WIND SPEED/DIRECTION: 10-15 knots / E

PHOTOGRAPHS: ROLL: MAYSAP 3  FRAME: 116, 22

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):

(A) Area is located in the UITZ. There are rare barnacles on the boulders, nine plates with gelatinous 

tubes on the upper end of rock beach and 1-2 cm long segmented worms in the gravel.

Rock beach below site has healthy moderate Fucales with maturing conceptacles. Small Litornia

There are many anemones in tidepools. On the small boulders below rock beach

barnacles are moderately concentrated.

(B) Area is located in the UITZ. Rare barnacles located in site not tightly sealed

their inner plates when stimulated. Below site low in MITZ barnacles are moderate density,
inner plates tightly sealed when stimulated and most is present. Fucales has mature
conceptacles. Litornia and limpet concentrations: range from moderate to sparse.

(C) Area is located in a rock beach from SUZRA to high MITZ. Customblen pellets are present

crevices. Yellow, white and black lichen is present on rock's upper surface. The

lichen appear healthy. Barnacles are rare; Litornia and limpets are sparse in
the UITZ. High in the MITZ Fucales sporelings are present as are rare mussels.

Litornia and limpet concentrations increase to moderate. Barnacles throughout site
appear healthy and tightly sealed inner plates. In the MITZ below site there is

healthy sparse Fucales with mature conceptacles. Glacophytes is moderately

concentrated in small patches. Barnacle concentrations increase to moderate

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED SPECIES PRESENT</th>
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<tbody>
<tr>
<td>Eagles</td>
<td>1</td>
<td>2</td>
<td>(one dead)</td>
</tr>
<tr>
<td>Seabirds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waterfowl</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Gulls/Kittiwakes</td>
<td></td>
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</tr>
<tr>
<td>Shorebirds</td>
<td></td>
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</tr>
<tr>
<td>Corvids</td>
<td></td>
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<td>Other Birds</td>
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</table>

MARINE MAMMALS

<table>
<thead>
<tr>
<th>MARINE MAMMALS</th>
<th># OBSERVED</th>
<th>SPECIES</th>
<th># OBSERVED</th>
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<tbody>
<tr>
<td>Sea Otters</td>
<td>3</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Pinnipeds(specify)</td>
<td>3 - Seals, sea lion, (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whales(specify)</td>
<td></td>
<td></td>
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</table>

LAND MAMMALS

<table>
<thead>
<tr>
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<th># OBSERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deer</td>
<td>5</td>
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</table>

Shoreline subdivision map showing important biological features attached.
(D) Area is located in the UITZ among boulders and cobble. Exposed B/C surfaces have a filamentous green algae coat. Segmented worms (2cm long) are present. No other macro-biota present in upper/mid portion of area. Along the lower edge of the site barnacles are sparse and are tightly sealing their inner plates. Limpets and Littorina are found in moderate concentrations in tidepools. Mussels are rare. Below site in MITZ biota same as found in (C).

(E) Area located in SUPRA and UITZ. Oil is present in rye grass root system but less greasy feeling than oil found on rocks. Rye grass is sprouting and appears to be unaffected by present oil. UITZ boulders are covered with filamentous green algae. Sparse barnacle are present low in area, they tightly sealed their inner plates. A small patch of Enteromorpha and Ulva (algae) is present in a tidepool. Biota below area in MITZ same as found in (C).

(F) Area in UITZ to high MITZ. CVC rep. reported in 1989, contaminated rye grass was removed from this area. Area has not re-established itself although root system still partially visible see Photo # May 3/22. Filamentous green algae covers B/C. In the UITZ barnacles; Littorina are rare. In the high MITZ there is heavy barnacle recruitment and dense Fucus with maturingconcepticles. Gloiopehitis (algae) is moderate.
Dead Bald Eagle found high in U1T2. Skeleton was complete including talons and beak. Eye were gone. Residual flesh was present. No oil observed on feathers. See Photo roll MAY 3 frame 114.

There is a moderate to dense *Fucus* band in the MITZ continuing into L1T2. Concepticles are maturing.

The L1T2 is rich and diverse. L1T2 biotic community is continuous throughout subdivision. There is heavy barnacle recruitment (new set present). Clams include *Prototheca*, *Saxidorma*, and cockles. Mussels, juvenile eels, hermit crabs, peanut worms, *Littorina*, limpets, *Nucella* (whelk), *Nucella* eggs, *Odenthalia*, *Corallina* algae, *Searlesia* (whelk) and tar-spot algae are present. Biotic cover is 50-80%. Tie lesser percentages are on the cobble near stream. Organisms appear to be healthy and recruitment is present.