[Shoreline evaluations, 1991].

Prince William Sound EV-70 to EV-900

Title supplied by cataloger. This title page is supplied by Alaska Resources Library and Information Services (ARLIS).
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-70

SUBDIVISIONS: A (1 OF 8)
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)
Sommer 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-(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 unoiled 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.

Recruitment:
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

Subsistence area: Salmon harvesting (5/1 to 9/30)
Finfish harvesting
Deer harvesting (8/15 to 2/25)
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-70  SUBDIVISION: A  DATE 4/1/90

NAME  GARY SHIGENAKA  SIGNATURE  Gary Shigenaka

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

SUBDIVISION CONSISTED OF ONE ISLAND. TWO BEACH LANDINGS WERE MADE. OILING WAS MUCH MORE EVIDENT AT THE BEACH LOCATED ON THE NORTHEAST SIDE OF THE ISLAND. CHARACTER OF THE OIL VARIED FROM HIGHLY WEATHERED TO STILL TACKY, WITH EXPOSED FACES OF BOULDERS SHOWING STAIN AND COVER. LANDWARD FACES OF ROCK OUTCroppings LOCATED ON THE WESTERN SIDE OF THE BEACH SHOWED BOTH A HEAVIER DEGREE OF OILING AND LESSER DEGREE OF WEATHERING.

NAME  John Hayes  SIGNATURE  Hayes

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

OILING observed on this small island consisted splash to 0.5 feet and remaining for brief with very light
coat of oil. No S.S. oiling was observed on this sub-segment. Stain & coat observed was weathering.

LAND MANAGER

NAME  SIGNATURE

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED
**SHORELINE OILING SUMMARY**

**OG:** Mike Foget  
**USCG:** Gary Shigenaka  
**BIO:** Richard Ambrose  
**LAND REP:** John Hayes  
**SUBDIVISION:** EV-70 (10/8)

**EST. SUBDIVISION LENGTH:** 1050 m  
**DATE:** 1/1/90

**TIDE LEVEL:** 0.0 to 0.4

**SURVEYED FROM:**  
**WORKING DIRECTION:** S to N

**SURFACE SEDIMENTS:**  
- R: 20%  
- B: 30%  
- S: 25%  
- C: 15%  
- P: 10%  
- G: 10%  
- S: 5%  
- M: 0%  
- V: 0%  
- P: 10%

**SLOPE:**  
- Lang: 55%  
- Hang: 35%  
- Vert: 20%

**WAVE EXPOSURE:**  
- Low  
- Med  
- High

**OIL CATEGORY LENGTH:**  
- W: 15 m  
- M: 25 m  
- N: 5 m  
- VL: 70 m  
- NO: 100 m

---

### SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASPHALT PAVEMENT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>POOLED</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COVER</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>COAT</td>
<td></td>
<td>V</td>
<td>V</td>
</tr>
<tr>
<td>STAIN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MOUSSSE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PATTIES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TARBALLS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FILM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO OIL</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

**PAVEMENT:**  
- H  
- F  
- S  
- T  
- L  
- R  
- W  
- SL  
- TL

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

**OILED DEBRIS AMOUNT**  
- Logs  
- Vegetation  
- Trash  
- Debris  
- YES  
- NO

**DEBRIS COLLECTED**  
-bags: 0

**Photographs:**  
- Roll No.: ST-11-1  
- Frames: 18-20

---

### SUBSURFACE OIL

<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>SUBSURFACE SEDIMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>C, P, G, S, C</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>G, C</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>B, C</td>
</tr>
<tr>
<td>4</td>
<td>10</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>C, H water (5cm to 3cm)</td>
</tr>
</tbody>
</table>

---

**COMMENTS**  
Oil was observed on the north side of the segment.  
A very light 1m x 100m oil patch located in the H1TZ.  
The rock outcrop on the western side of the same beach has a few oiled patches on a rock outcrop (noted).  
The western side of the island consists of high energy bedrock shore zone.  
The eastern half of the island consists of low energy cobble, pebble, gravel grain area.
SEGMENT ST/ EV-70
SUBDIVISION A (blow up)
DATE 4/1/90

CHECKLIST
- N Arrow
- Aspect, Scale
- Seepage Stream
- Oil Disl
- Water
- Length
  % Cover
- Substrate Character
- Est. HMLE/VL
- SSL
- Photo Location(s)
- Profile(s)
- Pt Location(s)
- Photo Location(s)

LEGEND
1 △
Pt - No Subsurface Oil
2 △
Pt - Subsurface Oil

Legend
//// - Bedrock
A - tree
Y - Dead tree

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

Segment ST/EO/F0 Subdivision A Date (mo/day/yr) 4/1/90

Time (24 hr) 1230 hrs Biologist Ambrose

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

(B) Overall % cover of biota (% of segment): Dense 35 Moderate 15 Low 50

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

juveniles / adults (X), new settlement (9)

Photographs:
Roll No. ST-11-1 Frames 21

<table>
<thead>
<tr>
<th></th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td>1U</td>
<td>1M</td>
<td>1L</td>
<td>1U</td>
<td>1M</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td>1U</td>
<td>1M</td>
<td>1L</td>
<td>1U</td>
<td>1M</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td>1U</td>
<td>1M</td>
<td>1L</td>
<td>1U</td>
<td>1M</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td>1U</td>
<td>1M</td>
<td>1L</td>
<td>1U</td>
<td>1M</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

Wildlife Observations/General Comments:
* 4 ducks, 6 crows.
Heavy algal cover on rock walls (mostly W. side of island), very sparse cover on cobble beaches that predominate on E. side of island.
Laminaria abundant in sub-tidal.

Ecological Considerations:
7/11, 18: Not relevant for this subdivision.

*Notes: most surveyed by boat.
Map Key: PWS-279
Name: Mike Foster
Date: 4/1/90

AOEC Segment Length: 12625 m

Wide
/// Medium
--- Narrow
TTTT Very Light
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-70

SUBDIVISIONS: B (2 OF 8)
SHORELINE EVALUATION

SEGMENT ST/ EV-70 _____ SUBDIVISION B (2 OF 8) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 226-40-16494, 16498, 16509, 16502.

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

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

5T-9 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. Bald eagle nest in Subdivision B.

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 788 m: No Oil 897 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) ___ Other

COMMENTS: ______________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

TAG COMMENTS: ___________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

TAG APPROVAL DATE: __________

ADEC _______________ EXXON _______________ FOSC: _______________ DATE: _______________

NOAA ___________________ USCG ___________________
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 unoiled intertidal and subtidal algae and seagrasses. 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 (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

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.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ EV-70   SUBDIVISION: B   DATE 4/1/90

NAME GARY SHIGENAKA   SIGNATURE

☐ NO TREATMENT RECOMMENDED   ☐ TREATMENT SUGGESTED

COMMENTS
Subdivision consisted of 2 islands off the west central coast of Evans Island. On the larger island lying to the southwest, light stain was observed in several areas on the west side, generally on the lee side of rocky faces. Sporadic splatters were noted along the north and east coasts.
On the smaller island, stain was noted on rock faces on the northeast coast.

ADEC
NAME John Heyer   SIGNATURE

☐ NO TREATMENT RECOMMENDED   ☐ TREATMENT SUGGESTED

COMMENTS
This sub-segment consisted of two small islands that had little age hardening for shoreline. Light staining was observed on both islands along with some tree splashes. Stain splashes were on vertical rock and weathering.

LAND MANAGER
NAME   SIGNATURE

☐ NO TREATMENT RECOMMENDED   ☐ TREATMENT SUGGESTED

COMMENTS
**SHORELINE OILING SUMMARY**

**DATE** 2/1/90

**OIL** Mike Foget, NOAA
**BIO** Richard Ambrose, ADEC

**Team No.:** 11 **Tide Level:** 0.4 to 1.0 **Date:** 2/1/90

**Estimated Subdivision Length:** 1800 m **Working Direction:** S to N

**UPLANDS Description:** Forest

**Surveyed From:** ClFloto, Boat, Helo

**Surface Sediments:** R 75%, B 20%, C 5%

**Slope:** Long 5% Hang 25% Vert 70%

**Wave Exposure:** Low Med High

**Oil Category Length:** W 0 m M 75 m N 0 m V 850 m NO 950 m

### SURFACE OIL

<table>
<thead>
<tr>
<th>Character</th>
<th>Distribution</th>
<th>Oil/Film Color</th>
<th>Impacted Zones</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt Pavement</td>
<td>Pot</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Pooled</td>
<td>Pot</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Cover</td>
<td>Pot</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Coat</td>
<td>Pot</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Stain</td>
<td>Pot</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Mousse</td>
<td>Pot</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Patties</td>
<td>Pot</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Tarballs</td>
<td>Pot</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Film</td>
<td>Pot</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>No Oil</td>
<td>Pot</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

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

**PATTIES/TARBALLS:** 0 BAGS

**NEAR SHORE SHEEN?** No

**OILED AMOUNT**

<table>
<thead>
<tr>
<th>Debris</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logs</td>
<td>SM MD LG</td>
</tr>
<tr>
<td>Vegetation</td>
<td>YES NO</td>
</tr>
<tr>
<td>Trash</td>
<td>TYPE</td>
</tr>
<tr>
<td>Debris</td>
<td>#BAGS</td>
</tr>
</tbody>
</table>

**Photographs:**

- **Roll No.:** 0
- **Frames:** 0

### SUBSURFACE OIL

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

**Comments:** No pits were made due to the nature of the shore zone.

Oiling was observed on Island I as a discontinuous stain located in the H1zz, most of the oiling occurred on southern exposure rock faces. Island II has 100 m of light stain occurring on the northern side in the H1zz.

**Reviewed by:** M. A. **Date:** 2/11/90
Legend

- Forest
/// - Bedrock/Large Boulders

Legend

1

- No Subsurface Oil

2

- Subsurface Oil

CT/C
Continuous Distribution

CT/B
Blocked Distribution

CT/P
Patch Distribution

CT/S
Splashed Distribution

Oiled Vegetation

Oil Character Length (m): AP___PO___CV___CT___ST___850___MS___PT___TB___FL___NO___950
SHORELINE ECOLOGICAL SUMMARY

Segment ST/ EVO70 Subdivision B ___________________________ Date (mo/day/yr) 4/1/90

Time (24 hr) 13 Shrs Biologist Ambrose

(A) Substrate type and % of segments:
   (1) Bedrock 75  (2) Boulder 20  (3) Cobble 5  (4) Pebble - (5) Sand - (6) Silt -

(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)

### BARNACLES

<table>
<thead>
<tr>
<th>Density</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dense</td>
<td>U</td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td>M</td>
<td></td>
</tr>
<tr>
<td>U</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

### MYTILUS

<table>
<thead>
<tr>
<th>Density</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dense</td>
<td>U</td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td>M</td>
<td></td>
</tr>
<tr>
<td>U</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

### GASTROPODS

<table>
<thead>
<tr>
<th>Density</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dense</td>
<td>U</td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td>M</td>
<td></td>
</tr>
<tr>
<td>U</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

### FUCUS

<table>
<thead>
<tr>
<th>Density</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dense</td>
<td>U</td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td>M</td>
<td></td>
</tr>
<tr>
<td>U</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Wildlife Observations/General Comments:

* Harbor Seal, 2 deer, 1 mature bald eagle. Heavy cover of biota around almost entire island, with only a few areas of sparser cover. Low tidal zone is dominated by red algae.

Ecological Considerations:

T11, 18: Not relevant for this subdivision.

*Note: most surveyed by boat.
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-70

SUBDIVISIONS: C (3 OF 8)
SHORELINE EVALUATION

SEGMENT ST/ EV-70 SUBDIVISION C (3 OF 8) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A  Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B  Salmon stream mouth - spawning (7/10 to 8/31)
5T-9 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:

Width 0 m: Medium 0 m: Narrow 0 m: V.Light 319 m: No Oil 511 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:________

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.

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 5/15)
Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrasses. 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)
Invertebrate harvesting

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

SEGMENT ST1 EV-70 SUBDIVISION: C DATE 4/1/90

NAME GARY SHIGENAKA SIGNATURE Gary Shigun

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

SUBDIVISION CONSISTED OF ONE SMALL ISLAND AND MOST OF A LARGER ONE LYING TO THE NORTHWEST OFF THE WESTERN COAST OF EVANS ISLAND. THE PORTION OF THE LARGER ISLAND NOT INCLUDED IN THIS SUBDIVISION (AND DESIGNATED AS SEPARATE SUBDIVISION "D") WAS THE NORTHERN EMBAYMENT OF THE ISLAND.

THE SMALLER ISLAND WAS SURVEYED BY BOAT. SPORADIC WEATHERED SPLATTERS WERE OBSERVED ON ROCK FACES.


ADEC

NAME John Hayes SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

This sub-section consisted of one island and part of another nearby island (see mop). Both islands had the splatters of weathering. Staining on both islands consisted of discontinuous bands on the U.S.R.

No S.J. oiling was observed on these segments.

LAND MANAGER

NAME SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

REV 08/01/10
**SHORELINE OILING SUMMARY**

**OG:** Mike Foget
**NOAA:** USCG
**Greg Shigenaka SEGMENT ST:** EV 70

**BIO:** Richard Ambrose
**LAND REP:** ADEC
**John Hayes SUBDIVISION:** C (3 x 8)

**TEAM NO.:** 11
**TIDE LEVEL:** k to 1/8
**DATE:** 4/1/90

**EST. SUBDIVISION LENGTH:** 1000 m
**SURF. DESCRIPTION:** Grass Forest Rock
**SURVEYED FROM:** Foot Boat Helo
**WORKING DIRECTION:** N to S

**SURFACE SEDIMENTS:**
- 75% B
- 15% C
- 10% P
- % G
- % S
- % M
- % V
- %

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

**WAVE EXPOSURE:**
- Low
- Med
- High

**OIL CATEGORY LENGTH:**
- W
- M
- N
- V
- L

---

### SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASPHALT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PAVEMENT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>POOLED</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COVER</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COAT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STAIN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MOUSSE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PATTIES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TARBALLS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FILM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO OIL</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**PARKING:** H F S _ sq. m by _ cm
**PATTIES / TARBALLS:** _ BAGS
**NEAR SHORE SHEEN?** _ BR RW SL TL

---

### SUBSURFACE OIL

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>BELOW OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>A N A</th>
<th>SUBSURFACE SEDIMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>30</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>P, G, S</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>10</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>G, S, M</td>
<td></td>
</tr>
</tbody>
</table>

---

**COMMENTS**

Some discontinuous scattered staining is located in the HITE on the Eastern side of the island along the vertical rock wall. The cobble beach on the Southern End of the island also has a thick coating of oil in the HITE. The smaller island just south of the larger island also has some discontinuous staining located on the bedrock in the HITE. (See map). All oil was weathered by: scattered, worn distribution, at light staining. **DATE:** 4/11/90
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST | EVOTO Subdivision | C | Date (mo/day/yr) 4/1/90
---|---|---|---

Time (24 hr) | 1350 | Biologist | Ambrose

(A) Substrate type and % of segments:
1. Bedrock - 75%
2. Boulder - 15%
3. Cobble - 10%
4. Pebble - 5%
5. Sand - 5%
6. Silt - 5%

(B) Overall % cover of biota (% of segment):
- Dense 55%
- Moderate 35%
- Low 10%

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa:
- Barnacles
  - Dense
    - 1L: 3, 3, 2
    - 1U: 2, 2, 2
  - Moderate
    - 1L: 3, 3, 3
    - 1U: 2, 2, 2
  - Sparse
    - 1L: 3, 3, 3
    - 1U: 2, 2, 2
  - Rare
    - 1L: 3, 3, 3
    - 1U: 2, 2, 2
- Mytilus
  - Dense
    - 1L: 2, 2, 2
    - 1U: 1, 1, 1
  - Moderate
    - 1L: 3, 3, 3
    - 1U: 2, 2, 2
  - Sparse
    - 1L: 3, 3, 3
    - 1U: 2, 2, 2
  - Rare
    - 1L: 3, 3, 3
    - 1U: 2, 2, 2
- Gastropods
  - Dense
    - 1L: 2, 2, 2
    - 1U: 1, 1, 1
  - Moderate
    - 1L: 3, 3, 3
    - 1U: 2, 2, 2
  - Sparse
    - 1L: 3, 3, 3
    - 1U: 2, 2, 2
  - Rare
    - 1L: 3, 3, 3
    - 1U: 2, 2, 2
- Fucus
  - Dense
    - 1L: 2, 2, 2
    - 1U: 1, 1, 1
  - Moderate
    - 1L: 3, 3, 3
    - 1U: 2, 2, 2
  - Sparse
    - 1L: 3, 3, 3
    - 1U: 2, 2, 2
  - Rare
    - 1L: 3, 3, 3
    - 1U: 2, 2, 2

Wildlife Observations/General Comments:
- Otter, 1 great blue heron.
- Algal cover a bit sparser than subdivision B on the E side, but still dense on the W side, esp. with red algae in the intertidal.

Ecological Considerations:
- Not relevant for this subdivision.

★ Note: most surveyed by boat.
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-70

SUBDIVISIONS: D (4 OF 8)
SEGMENT ST/EV-70  SUBDIVISION D (4 OF 8)  DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 226-40-16494, 16498, 16509, 16502.
1A  Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B  Salmon stream mouth - spawning (7/10 to 8/31)
5T-9  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. Do not trample or otherwise damage mussel bed at base of spit.

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 139 m: Narrow 0 m: V.Light 66 m: No Oil 73 m
Subsurface Oil Observed: Yes X No  Maximum Depth 5 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend bioremediation of area shown on attached sketch map. Work should be conducted after 6/1 with approval of USFWS regarding eagle nest constraint. Avoid mussel bed near proposed bioremediation site.

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 Esther Hatchery release (4/15 to 6/1)
1E Main Bay Hatchery release (4/20 to 5/10)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (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 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, 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)
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 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-70 SUBDIVISION: D DATE 4/1/90

NAME: GARY SHIGENAKA SIGNATURE: Gary Shiggecek

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Liquid oil was observed in this subdivision, which consisted of an embayment on the north side of an island about a mile south of the entrance to Sugarcane Bay (Evans Island). Excluding this embayment, the shoreline of the island was designated as subdivision "c." The beach was characterized by shale cobble and boulders. The upper intertidal showed evidence of oiling in the form of consistent splatters through a 1-2 m band along much of the beach. A band in the lower intertidal showed evidence of consistent surface oiling (weathered coat and cover). Examination under cobble and boulder revealed free oil on the water with a distinct odor of crude. This 1-2 m band extended for much of the enclosed beach, 60cm. A sheen was observed in the immediately adjacent nearshore waters, and as the boat approached the beach for landing, biologist Rich Ambrose had noted occasional small (1-2 cm) pockets of sheen. Liquid oil was estimated to be present to a depth of 3 cm in the sediments with water filling the pit below this depth and making further observation difficult. Neverthe- less, worms were observed living in sediments of oil exposed pit. Mussel beds near the lower intertidal oiled zone appeared to be okay, although observed asphyxiation may have caused a portion of the beds to break away. This beach may be a candidate for bioremediation.

ADEC

NAME: John Haver SIGNATURE:

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

This sub-segment consisted of 50% of an island off the shoreline of EV-70 (see map). The sub-segment D, had oiling in the L-N-U 12's. Subsurface oiling ranged from 3-5 cm. Most of the oiling was concentrated in the U572 in

LAND MANAGER

NAME: John Haver SIGNATURE:

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Rev. treatment only for section with three bands of oiling indicated. This section may be applicable but not to healthy streams. Beach would not be monitored in this segment.

REVISION NO. 03/21/90
SHORELINE OILING SUMMARY

OG: Mike Foget  
NOAA: Gary Shigenaka  
SEGMENT: ST/EV-70

BIO: Richard Ambrose  
LAND REP:  
ADEO: John Hayes

EXXON: Larry Olson

TEAM NO.: 11  
TIDE LEVEL: 1.1 to 3.6  
DATE: 4/1/90

EST. SUBDIVISION LENGTH: 240 m  
DATE: 4/1/90

UPLANDS DESCRIPTION:  
- Grass  
- Forest  
- Rock  
- Snow covered uplands

SURVEYED FROM:  
- Foot  
- Boat  
- Helo

SURFACE SEDIMENTS:  
- R 10%  
- B 10%  
- C 35%  
- P 20%  
- G 15%  
- S 10%  
- M 5%  
- V 0%  
- %  

SLOPE:  
- Lang 60%  
- Hang 20%  
- Vert 20%  

WAVE EXPOSURE:  
- Low  
- Med  
- High

OIL CATEGORY LENGTH:  
- W m  
- N m  
- V m  
- L m

SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL/FILM COLOR</th>
<th>IMPACTED ZONES</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASPHALT PAVEMENT</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>POOLED</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COVER</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>COAT</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>STAIN</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>MOUSSE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PATTIES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TARBALLS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FILM</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>NO OIL</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PAVEMENT:  
- H (B) 2 sq.m by 3 cm

PATTIES/TARBALLS:  
- BAGS

NEAR SHORE SHEEN? NO: BR AW SL TL

OILED DEBRIS:  
- AMOUNT

<table>
<thead>
<tr>
<th></th>
<th>SM</th>
<th>MD</th>
<th>LG</th>
<th>DEBRIS COLLECTED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logs</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Vegetation</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Trash</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Debris</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

TYPE:  
<table>
<thead>
<tr>
<th>BAGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
</tr>
</tbody>
</table>

Photographs:

- Roll No. ST-11-1
- Frames 22-26, 29-31

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 DEBRIS</th>
<th>OIL/FILM COLOR</th>
<th>PIT ZONE</th>
<th>ANA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5</td>
<td>X</td>
<td>0.1</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>P</td>
</tr>
<tr>
<td>2</td>
<td>10</td>
<td>X</td>
<td>0.3</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>P</td>
</tr>
<tr>
<td>3</td>
<td>15</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>P</td>
</tr>
<tr>
<td>4</td>
<td>10</td>
<td>X</td>
<td>0.5</td>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>P, S</td>
</tr>
<tr>
<td>5</td>
<td>10</td>
<td>X</td>
<td>0.3</td>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>C, P, S</td>
</tr>
<tr>
<td>6</td>
<td>15</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>C</td>
</tr>
</tbody>
</table>

COMMENTS:  
- Subdivision D is located on the North Eastern side of subdivision C. This shoreline had more extensive oiling than the rest of Subdivision C. A light discontinuous splattered tar/steam is located on the Eastern side of the cobble beach in H1-Z. The same distribution of stained cobble is located on the eastern side of the Large rock outcrop to the North of the beach.
SHORELINE OILING SUMMARY (PAGE 2 of 2)
SEGMENT ST/ EV-70 SUBDIVISION 0

SUBSURFACE OIL (CONTINUED)

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>DEPTH (cm)</th>
<th>OILED INTERVAL (cm-cm)</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>ANA</th>
</tr>
</thead>
</table>

| COMMENTS |

The beach to the west of the large rock outcrop and mussel bed was hit fairly hard. The oil category for this section is medium. In the upper ITZ is a 2m x 50m patchy distribution of oil/tar. Most of the oil is located on the protected side of the boulders and cobble. In the Mid intertidal is a splattered 4m x 50m tar staining with most of the oil located on the protected side of the cobble. The oil appears to be weathered on the exposed side of cobbles. In the LITZ there is a 2m x 50m cover of oil/tar in a patchy distribution on the surface. The oil appears highly weathered. Underneath cobbles is free oil, brown oil globules appear on the water surface (water at 5cm) when cobbles are uncovered. A slight rainbow sheen was observed in the water just off shore.

REVIEWS:

REVIEWS:

DATE 9/11/90
SHORELINE ECOLOGICAL SUMMARY

Segment ST_ EVO 70  Subdivision  D  Date (mo/day/yr)  4/1/90

Time (24 hr)  1400 hrs  Biologist  Ambrose

(A) Substrate type and % of segments:
(1) Bedrock 10  (2) Boulder 10  (3) Cobble 35  (4) Pebble 20  (5) Sand 25  (6) Silt

(B) Overall % cover of biota (% of segment): Dense 0  Moderate 15  Low 85

(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

Dense  Moderate  Sparse  Rare

1U 1M 1L  1U 1M 1L  X  1L  1U 1M 1L  2  2  2
2 2 2 2 2 2 2
3 3 3 3 3 3 3
4 4 4 4 4 4 4
5 5 5 5 5 5 5
6 6 6 6 6 6 6

MYTILUS

Dense  Moderate  Sparse  Rare

1U 1M 1L  1U 1M 1L  X  1L  1U 1M 1L  2  2  2
2 2 2 2 2 2 2
3 3 3 3 3 3 3
4 4 4 4 4 4 4
5 5 5 5 5 5 5
6 6 6 6 6 6 6

GASTROPODS

Dense  Moderate  Sparse  Rare

1U 1M 1L  1U 1M 1L  X  1L  1U 1M 1L  2  2  2
2 2 2 2 2 2 2
3 3 3 3 3 3 3
4 4 4 4 4 4 4
5 5 5 5 5 5 5
6 6 6 6 6 6 6

FUCUS

Dense  Moderate  Sparse  Rare

1U 1M 1L  1U 1M 1L  X  1L  1U 1M 1L  2  2  2
2 2 2 2 2 2 2
3 3 3 3 3 3 3
4 4 4 4 4 4 4
5 5 5 5 5 5 5
6 6 6 6 6 6 6

Wildlife Observations/ General Comments: * 14 buffle ducks (Harlequins ? ?), 4 cormorants
Generally sparse biota (since most of subdivision consists of E. side of island). Virtually all mussels occurred in one area; see Addendum.

Ecological Considerations:
7/11, 16: Not relevant for this subdivision.
Mussel bed would be susceptible to trampling; see Addendum.

*Note: most surveyed by boat.
A dense mussel bed on pebbles occurred at beach with free subsurface oil. The biota over the main part of the cove was quite sparse, with sparse barnacles and litorines and rare Fucus. The mussel bed would be susceptible to trampling, but it occurs on the ridge east of the main beach, and could be avoided during beach activities:

The mussel bed is about 5 cm thick. No oil was found on the mussels; however, the northwest edge of the bed was broken up, and it looks as though the bed used to extend to where subsurface oil and asphalt are found now.

Hermit crabs were observed under one rock in the mid intertidal (in oil zone). A nemertean - alive - was under a rock with a noticeable amount of free oil on the water.
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-70

SUBDIVISIONS: E (5 OF 8)
SHORELINE EVALUATION

SEGMENT ST/ EV-70  SUBDIVISION E (5 OF 8) DATE 4/1/90

SECTION ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

- ADF&G anadromous stream no. 226-40-16494, 16498, 16509, 16502.
- 1A  Salmon stream mouth - fry outmigration (3/1 to 5/15)
- 1B  Salmon stream mouth - spawning (7/10 to 8/31)
- 5T-9  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 unooled biota and substrate. Two bald eagle nests in Subdivision E.

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 0 m: V. Light 191 m: No Oil 839 m
Subsurface Oil Observed: Yes X  No  Maximum Depth 6 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: Recommend manual pick up of oiled debris and vegetation.
Work should be conducted after 6/1 and with permission of USFWS due to eagle nest 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 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 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)
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.

3Q 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.

3S 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
7HH Deer harvesting (8/15 to 2/28)
7JJ Invertebrate harvesting
For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EV - 70 ______ SUBDIVISION: E ______ DATE 4/1/90

NAME NOAA
NAME GARY SHIGENAKA SIGNATURE

[ ] NO TREATMENT RECOMMENDED [ ] TREATMENT SUGGESTED

COMMENTS

SUBDIVISION "E" consisted of a larger island due south of the entrance to Gugauk Bay (Evans Island). The subdivision included a very small island (island to the north of the larger). Splatters of weathered oil were observed on the sheer face of the small island, the larger island showed a "bathtub ring" of stain on many of its rock walls and boulders in the upper intertidal. A beach on the northeast side of the larger island was visited. The beach consisted of two distinct types, with a rock outcropping dividing the two, that to the west was composed of large boulders, some splatters were observed on exposed faces. No other evidence of oiling was seen. The supratidal was not accessible due to snow. The eastern half of the beach consisted of cobble and gravel, with some boulders. The landward faces of many of the boulders showed stain, coat or cover. Coating was seen on barnacles attached to a rocky outcropping on the eastern edge of the beach. With somewhat higher incidence of dead barnacles observed. No evidence of oiling was observed upon rocks or in pits. Oiled vegetation was found in the supratidal, although only a small part of that zone was accessible due to snow. This should be reexamined at a later date to more clearly define extent of oiling. The remainder of the island showed evidence of oiling in the form of weathered splatters or "bathtub rings", both discontinuous.

ADEC
NAME John Hayter SIGNATURE

[ ] NO TREATMENT RECOMMENDED [ ] TREATMENT SUGGESTED

COMMENTS

This sub-section consisted of two islands, one large and one small one next. The small island had staining on the east; the staining was a discontinuous band.

The larger island had a discontinuous tar stain on the UST.

A pocket beach on the large Island had oiling in the supratidal E.

Although most of the zone was covered with snow we observed oiled pebbles + vegetation, in a depth of 6 cm. Area should be re-covered after snow melts and manual pick up of oiled vegetation + pebbles is recommended. It appeared that contamination extended from this zone but was not continued, due to snow cover.

LAND MANAGER
NAME________ SIGNATURE

[ ] NO TREATMENT RECOMMENDED [ ] TREATMENT SUGGESTED

COMMENTS

REVISION NO. 05/21/90
SHORELINE OILING SUMMARY

OG: Mike Foget  NOAA  Gary Shigenaka  SEGMENT ST/ EV- 70
BIO: Richard Ambrose  LAND REP: NOLE  SUBDIVISION E (5a48)
EXXON: Larry Olsen  ADEC: John Hayes  TIME 15:40 to 16:00
TEAM NO.: 11  TIDE LEVEL: 4.6 to 5.0  DATE 4/1/90
EST. SUBDIVISION LENGTH: 100 m  ☑ Sun  ☐ Clouds  ☐ Fog  ☐ Rain  ☐ Snow
UPLANDS DESCRIPTION: ☑ Grass  ☐ Forest  ☐ Rock
SURVEYED FROM: ☐ Foot  ☐ Boat  ☐ Helo  WORKING DIRECTION: 5 to N
SURFACE SEDIMENTS: R 30%  B 30%  C 20%  P 10%  G 10%  S ~%  M ~%  V ~%  SLOWER EXPOSURE: ☐ Low  ☐ Med  ☐ High
OIL CATEGORY LENGTH: W 0 m  M 0 m  N 0 m  VL 120 m  NO 490 m

SURFACE OIL

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

PAVEMENT: H F S ☑ sq. m by ☑ cm
PATTIES / TARBALLS: ☐ BAGS
NEAR SHORE SHEEN? ☐ NO  BR  RW  SL  TL

OILED DEBRIS AMOUNT

<table>
<thead>
<tr>
<th>DEBRIS COLLECTED</th>
<th>TYPE Bag needs / Fc #BAGS</th>
<th>OILED DEBRIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legs</td>
<td>☑ ☐ ☐</td>
<td>☑ ☑ ☑</td>
</tr>
<tr>
<td>Vegetation</td>
<td>☑ ☐ ☐</td>
<td>☑ ☑ ☑</td>
</tr>
<tr>
<td>Trash</td>
<td>☑ ☐ ☐</td>
<td>☑ ☑ ☑</td>
</tr>
<tr>
<td>Debris</td>
<td>☑ ☐ ☐</td>
<td>☑ ☑ ☑</td>
</tr>
</tbody>
</table>

Photographs:
Roll No. 5T-11-1
Frames 30-

SUBSURFACE OIL

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>BELOW OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>ANA</th>
<th>SUBSURFACE SEDIMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>15</td>
<td>X</td>
<td>0.6</td>
<td>X</td>
<td>X</td>
<td></td>
<td>Debris, P</td>
</tr>
<tr>
<td>2</td>
<td>15</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td>P</td>
</tr>
<tr>
<td>3</td>
<td>20</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td>P</td>
</tr>
</tbody>
</table>

Comments:
Oiled interval <5 cm in Pit #1 does not constitute subsurface oil. Oil is located on a Pocket Beach on the N. side of the Island (P 2) in the storm area located in the Supra TIZ. Most of the Supra TIZ is covered by snow. Also there is some staining in the UTTZ on the S. E. part of the Island.

BUT LOOK DEEPEST!

JRH, 4/19/90

REVIEWED

DATE 4/17/90
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST/ EV030 Subdivision E Date (mo / day / yr) 4/1/90

Time (24 hr) 1540 hrs Biologist Ambrose

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

(B) Overall % cover of biota (% of segment):
Dense 50%
Moderate 30%
Low 20%

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

### Photographs:
Roll No. ST-(-)
Frames 33

#### BARNACLES

<table>
<thead>
<tr>
<th></th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td>1U</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>1M</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>1L</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

#### MYTILUS

<table>
<thead>
<tr>
<th></th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td>1U</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>1M</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>1L</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

#### GASTROPODS

<table>
<thead>
<tr>
<th></th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td>1U</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>1M</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>1L</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

#### FUCUS

<table>
<thead>
<tr>
<th></th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td>1U</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>1M</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>1L</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Wildlife Observations/General Comments:
2 Harlequin ducks, 1 eider, 1 common merganser, 1 mature bald eagle, 1 dear
plus dear tracks and dear skeleton on one beach.

Ecological Considerations:
711, 1B: Not relevant for this subdivision.

*Note: most surveyed by boat.*
Legend
- Rock
- Forest / Snow
- Bedrock / Boulders

Oiled storm berm w/ debris super ITZ

50m $[CT/S]$ Discontinuous splash staining in the HIFZ

10m $[CT/S]$ Splatter

HIFZ 10 cm wide discontinuous Dwind

Oil Character Length (m): AP — PO — CV — CT 60 — ST 60 — MS — PT — TB — FL — NO 1000
LEGEND

1 △
Pi - No Subsurface Oil

2 △
Pi - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oiled Vegetation

Phasing location, direction, and number

Oil Character Length (m): AP  PO  CV  CT  GQ  ST  MS  PT  TB  FL  NO  Z0

80 m Shore Zone
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-70

SUBDIVISIONS: F (6 OF 8)
SHORELINE EVALUATION

SEGMENT ST/ EV-70 SUBDIVISION F (6 OF 8) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 226-40-16494, 16498, 16509, 16502.
1A  Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B  Salmon stream mouth - spawning (7/10 to 8/31)
5T-9 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. Anadromous stream no. 226-40-16509 in Subdivision F; 4 bald eagle nests close by in Segment EV-60.

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 29 m: V.Light 36 m: No Oil 2808 m
Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

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

COMMENTS: Recommend bioremediation of areas shown in sketch map and reassessment of segment after additional snow-melt by Anadromous SCAT team. Work should be conducted with the approval of ADF&G regarding anadromous fish stream and USFWS concerning eagle nests.

TAG COMMENTS: ____________________________________________________________

TAG APPROVAL DATE: __________

ADEC ______________________
EXXON ______________________
NOAA ______________________
USCG ______________________
FOSC: ______________________ 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. 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)

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

SEGMENT ST/ EV - 70  SUBDIVISION: E  DATE 4/6/98

NAME  GARY SHIGEHIKA  SIGNATURE  GARY SHIGEHIKA

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS


☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

Recommend Land Seal team across this bay.

The area is a sheltered bay with very little wave energy
also 6 streams drain into bay 5 upper to be small + run-off
streams + 1 brd sign of being anchorage (ancho). No oil
was observed near the stream bed. Aprox 50 yrs. west of the stream (stream)
was a patch of oiling with 50% perc. to 13cm. The oiling was fine oil
+ screening. Further oil pool was observed in the NW corner of the bay +
had a loose weather cast oil with 50% perc. to 6cm. with a 5cm film to 6cm.

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

AND ON THE NORTH SIDE OF THE SEEP A 6 M (WIDTH) X 20 M (LENGTH) PATCH OF OIL
WAS FOUND. A PIT REVEALED 5 CM PENETRATION INTO THE SEDIMENTS. AN ISOLATED PATCH OF
COVER MEASURING 10 M X 1 M WAS SEEN ON A BOULDER NORTH OF THE PATCH. NO OTHER OILS
WAS OBSERVED ALONG THE SOUTHEAST APPROACH TO SUGUACU BAY.

LAND MANAGER  NOAA (CONTINUED FROM ABOVE)

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

Spot washing, the tierer and or fles, should still be considered for plus
in order to assess from Land Seal. Land Seal section should be
on a healthy growth (GB map) & access to bay is at high tide due
3 rocks at the extreme that are exposed at low tide.
SHORELINE OILING SUMMARY

REVIEWED BY: M. F. DATE: 11/11/90

OG: Mike Foye  NOAA
BIO: Richard Ambrose  LAND REP: None
EXXON: Larry Allen  ADEC: John Erskine

SEGMENT: E (Lot 8)
TIME: 15:00 to 17:15
DATE: 9/6/90

TEAM: [II]
TIDE LEVEL: [6.0]

ST. SUBDIVISION LENGTH: 2670 m
SURVEYED FROM: [Foot]

UPLANDS DESCRIPTION: [Grass]
SURFACE SEDIMENTS: R 10 % O 10 % C 30 % P 20 % G 10 % S 5 % M 5 % V 0 %

SLOPE: Lang 60 % Hang 70 % Ven 20 %

OIL CATEGORY:

LENGTH: W 0 m M 35 m N 90 m V 25 m NO 2610 m

SURFACE OIL

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

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

PATTERNS / TARBALLS

NEAR SHORE SHEEN?

SUN, CLOUDS, FOG, RAIN, SNOW

WAVE EXPOSURE: [Low]

BAGS

DEBRIS COLLECTED

Photographs:

Roll No. ST-11-2
Frames 13 - 18

SUBSURFACE OIL

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>DEPTH (cm)</th>
<th>OILED INTERVAL</th>
<th>OILED INTERVAL (CM-CM)</th>
<th>OIL / FILM COLOR</th>
<th>OIL / FILM COLOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

COMMENTS:

Most of the oiling that occurred in this segment was at beach 1 & 2, at beach 1 a 20m x 6m CT/8 cover in the HIZ. Subsurface oiling includes rainbow sheen and globules. Beach 2 had a 15m x 5m T/B cover of oil/tar in the HIZ. Subsurface oiling included a rainbow sheen. Both of these beach zones are R/P beaches. The rest of the oiling in this subdivision occurs as a CT/8 weathered far spill among boulders in the HIZ.
### Subsurface Oil (Continued)

<table>
<thead>
<tr>
<th>Pit No.</th>
<th>Pit Depth (cm)</th>
<th>Subsurface Oil Character</th>
<th>Oiled Interval (cm-cm)</th>
<th>Below</th>
<th>Oil/Film Color</th>
<th>Pit Zone</th>
<th>Ana</th>
<th>Subsurface Sediments</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>10</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>C, G, M</td>
</tr>
<tr>
<td>8</td>
<td>10</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>G, S</td>
</tr>
<tr>
<td>9</td>
<td>15</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>G, S, M</td>
</tr>
<tr>
<td>10</td>
<td>10</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>G, S, M (H2O &amp; Al)</td>
</tr>
<tr>
<td>11</td>
<td>20</td>
<td>X</td>
<td>0.7</td>
<td>X X</td>
<td></td>
<td>X</td>
<td></td>
<td>C, P, G (H2O &amp; Al)</td>
</tr>
<tr>
<td>11</td>
<td>20</td>
<td>X</td>
<td>7.10</td>
<td>X X</td>
<td></td>
<td>X</td>
<td></td>
<td>C, P, G (H2O &amp; Al)</td>
</tr>
<tr>
<td>12</td>
<td>15</td>
<td>X</td>
<td>0.5</td>
<td>X X</td>
<td></td>
<td>X</td>
<td></td>
<td>G, P, S</td>
</tr>
<tr>
<td>12</td>
<td>15</td>
<td>X</td>
<td>5.10</td>
<td>X X</td>
<td></td>
<td>X</td>
<td></td>
<td>G, P, S</td>
</tr>
<tr>
<td>13</td>
<td>15</td>
<td>X</td>
<td>10</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>C, S, M</td>
</tr>
<tr>
<td>14</td>
<td>20</td>
<td>X</td>
<td>1.5</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>G, S</td>
</tr>
<tr>
<td>15</td>
<td>20</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>P, G</td>
</tr>
</tbody>
</table>

**Comments**

Reviewed ___________ Date ________
SHORELINE ECLOGICAL SUMMARY

Segment ST/ EV070 Subdivision F Date (mo/day/yr) 4/6/90

Time (24 hr) 14:55 hrs Biologist Ambrose

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

(B) Overall % cover of biota (% of segment): Dense 10 Moderate 20 Low 70

(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)

<table>
<thead>
<tr>
<th>BARNACLES</th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1U</td>
<td>1M</td>
<td>1L</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>6</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MYTILUS</th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1U</td>
<td>1M</td>
<td>1L</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>6</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TROPODS</th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1U</td>
<td>1M</td>
<td>1L</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>6</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FUCUS</th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1U</td>
<td>1M</td>
<td>1L</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>6</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

Wildlife Observations/ General Comments: 2 oyster catchers, 2 common mergansers, 2 common murre, and 7 Brevibacteria, deer tracks. Most beach was generally sparse cover with moderate to dense areas; Gwynn's Bay was generally sparse with some Mytilus and Fucus areas.

Ecological Considerations:
11, 18: Oil noted within 30m of salmon stream (see Addendum).

Oil was also noted at the west end of the Bay; a dense Fucus band in the low intertidal would be susceptible to trampling if this second patch was cleaned (see Addendum).
Addendum

Both a salmon stream and oil were found in Guguale Bay. The salmon stream had salmon bones and jaws in the stream. A second stream also seemed large enough to be anadromous.

One oiled location, with globules of free oil & a sheen visible on the water in pits, was about 80 m from the known anadromous stream.
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-70

SUBDIVISIONS: G (7 OF 8)
SHORELINE EVALUATION

SEGMENT ST/ EV-70 SUBDIVISION G (7 OF 8) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 226-40-16494, 16498, 16509, 16502.
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-9 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. Two bald eagle nests in Subdivision E.

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 45 m: Narrow 61 m: V.Light 40 m: No Oil 1639 m
Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

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

COMMENTS: Recommended treatment includes 1) manual removal of tarmat, oiled vegetation and debris, 2) blot any mobile oil with pom poms, 3) bioremediate areas shown on attached sketch map. Work should be conducted after 6/1 and with permission of USFWS due to eagle nest constraint and ADF&G regarding anadromous streams.

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 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage.
No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

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

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

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

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

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

1H
Remote release site

1I
Gill net area (6/7 to 8/31)

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

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

1L
Set net sites (6/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

2M
Herring spawning (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to unooied 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)
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)
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)

7HH
Finfish harvesting

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

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

SEGMENT ST / EV-79

SUBDIVISION: G

DATE 4/6/90

NAME GARY SHIGENAKA

SIGNATURE

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

SUBDIVISION CONSISTS OF COBBLE - BOULDER - ROCKY OUTCROP SHORELINE ALONG THE WESTERN COAST OF EVANS ISLAND. DEGREE OF OBSERVED OILING WAS VARIABLE, WEATHERED STAIN AND "BATHTUB RING" WAS SEEN SPORADICALLY ALONG THE SUBDIVISION. AT THE NORTHERN END OF THE SUBDIVISION, A SMALL ISLAND THAT WAS CONNECTED TO THE MAIN BODY OF EVANS ISLAND AT LOWER LOCATIONS OF THE TIDAL CYCLE WAS SURVEYED ON FOOT, AND WEATHERED STAIN AND COVEE WAS FOUND, AS WELL AS SOFT PAVEMENT MATERIAL. THE LAYER WAS BROKEN UP WITH THE SHOVEL TO FURTHER THE WEATHERING PROCESS. THE LARGER ISLAND APPEARING ON THE MAPS TO THE SOUTH OF THE PREVIOUSLY DISCUSSED SMALL ISLAND ALSO WAS CONNECTED TO EVANS ISLAND AT LOW TIDE. A CONSISTENT BAND OF SPATTERS WAS OBSERVED IN THE UPPER INTRERTAL ZONE TO THE EAST OF THIS CONNECTING ISLAND ON THE EVANS ISLAND SIDE, AND SOME LIGHT SHEEN WAS SEEN IN A PITS PUP IN A FRESHWATER SEEP BELOW THIS BAND. CONTINUING SOUTH DOWN EVANS ISLAND, ANOTHER ISLAND LINKED TO EVANS AT LOW-TIDE WAS ENCOUNTERED, AND ALONG THE NORTHERN COAST OF THIS LINKED ISLAND, POOLED BUT WEATHERED OIL WAS FOUND IN THE UPPER INTRERTAL AMONG BOULDER'S. INTERESTINGLY, MUSSELS AND SNAILS WERE DETERMINED TO BE ALIVE IN THIS POOLED OIL. IN THE SUPRATIDAL, POOLED WEATHERED GOOZY OIL WAS ALSO FOUND, WITH A DEPTH OF 2-5 CM, AND IN TWO BANDS OF ABOUT 10 M EACH. AT THE SOUTHERN END OF THE SUBDIVISION, A COBBLE-BOULDER BEACH WAS FOUND IN WHICH A SHEEN WITH LITTLE PENETRATION COVERED AN AREA OF APPROXIMATELY 10 M (WIDTH) X 15 M (LENGTH).

ADEC

NAME JOHN HAYER

SIGNATURE

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

The shoreline on this subsection had a combination of the rocks + splinters that was weathered well. Tidal rips pockets observed were broken up manually and spread out. No treatment recommended for this shoreline. Although there was a small island connected to this subsection by a tidal bridge at low tide. This island had some splinters + staking with a patch of oil + vegetation + oil accumulation in the junction between the boulders (10 m). This oil is pooled in the supratidal and may be depth more than 2-5 cm. Manual pick up + removal is recommended.

LAND MANAGER

NAME

SIGNATURE

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

The majority of it is in the "Tan" Band. These bands are connected by a strip of the same type of oil in matrix between boulders about 5 x 15 m.
**SHORELINE OILING SUMMARY**

**NOAA: Mike Foger**
**LAND REP: Gary Shigemura**
**SUBDIVISION: G (245)**
**EXXON: Larry Olton**
**TIME: 17:15 to 19:35**
**DATE: 4/6/90**

**ST. SUBDIVISION LENGTH:** 1430 m
**DATE:** 4/6/90
**SUBDIVISION:** No.
**LENGTH:** 100 m
**CLOUDS:** 0
**FOG:** 0
**SNOW:** 0
**WORKING DIRECTION:** N to S
**SURFACE OILS:**
- **DISTRIBUTION:** POOLED, COVER, COAT, STAIN, MOUSSE, PATTIES, TAR BALLS
- **OIL/FILM COLOR:** X
- **IMPACTED ZONES:** No oil

**SURFACE OIL**

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL/FILM COLOR</th>
<th>IMPACTED ZONES</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASPHALT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PAVEMENT</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POOLED</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COVER</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COAT</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>STAIN</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>MOUSSE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PATTIES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TAR BALLS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FILM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO OIL</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

**PAVEMENT:** H F S 0 sq. m by 0 cm
**NEAR SHORE SHEEN:** NO BR RW SL TL

**SURFACE OIL DISTRIBUTION**

- Oiled Debris: C, P, C
- SEDIMENTS: G, S, M

- **PHOTOGRAPHS:** Roll No. 57-11.2
  - Frames 19-23

**SUBSURFACE OIL**

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>DEPTH (cm)</th>
<th>OILED INTERVAL</th>
<th>OILED OIL CHARACTER</th>
<th>OIL/FILM COLOR</th>
<th>IMPACTED ZONES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10</td>
<td>X</td>
<td>G, P, C</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>20</td>
<td>X</td>
<td>G, P, C</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>20</td>
<td>X</td>
<td>G, P, C</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>30</td>
<td>X</td>
<td>G, S, M</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>20</td>
<td>X</td>
<td>C, G, S</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>10</td>
<td>0.5</td>
<td>C, G, S</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>10</td>
<td>0.4</td>
<td>G, S, G</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

**COMMENTS:**

Most of the oiling in this segment occurred on two beaches. The oiled beach in the Northern part of the subdivision is a 2m x 80m oiled patch cover. The HITEZ with a 15m x 80m very light oil/splattered area in the HITEZ classifies this beach as narrow. There were some tar patties located in the HITEZ which were manually broken up by the SSAT team.

**REVIEWED:** 4/13/90
<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL (cm)</th>
<th>BELOW OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>ANA</th>
<th>SUBSURFACE SEDIMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>10</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>CM</td>
</tr>
<tr>
<td>8</td>
<td>10</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>S</td>
</tr>
<tr>
<td>9</td>
<td>15</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>SM</td>
</tr>
<tr>
<td>10</td>
<td>10</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>SM</td>
</tr>
<tr>
<td>11</td>
<td>20</td>
<td>X</td>
<td>0.5</td>
<td>X X</td>
<td>X</td>
<td></td>
<td>CM</td>
</tr>
<tr>
<td>12</td>
<td>15</td>
<td>X</td>
<td>0.5</td>
<td></td>
<td>X</td>
<td></td>
<td>CM</td>
</tr>
<tr>
<td>13</td>
<td>15</td>
<td>X</td>
<td>0.5</td>
<td></td>
<td>X</td>
<td></td>
<td>CM</td>
</tr>
<tr>
<td>14</td>
<td>20</td>
<td>X</td>
<td>0.5</td>
<td></td>
<td>X</td>
<td></td>
<td>CM</td>
</tr>
</tbody>
</table>

**COMMENTS**

11 - Rainbow + Glitter Sheen METZ 6in X 20in
14

Reviewed 7W 4/13/90
## Subsurface Oil (continued)

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>Subsurface Oil Character</th>
<th>Oiled Interval (cm-cm)</th>
<th>Below</th>
<th>Oil / Film Color</th>
<th>Pit Zone</th>
<th>Ana</th>
<th>Subsurface Sediments</th>
</tr>
</thead>
</table>

**Comments:**

The other beach with substantial oiling is located on a island in the southern part of the subdivision. This is a northern-facing beach which has pooling in the super ITZ (map 2). The is a 1 m x 1 m CT/0 distribution 4 cm thick. The other is a 2 m x 1 m CT/0 distribution approx 5 cm thick. There is also a oil coating in the HITZ approx 10 m in length. With this beach there is also some oiled material located in the storm berm. This area is classified as Medium.

**Reviewed:**

**Date:**
Sketch Map 1

- 2m x 80m Patchy
- CT5/6
- Some asphalt
- Patchy

Directions:
- 15m x 80m CT5/6 stain
- Very light splash weathered
- 30m x 0.2m Discontinuous CT5/6 stain
- HETZ
- 5m x 0.5m CT/6
- Stain on west rock outcrop
- on protected side

Legend:
- Rock outcrop
- Snow
- Trees
- Creek

Oil Character Length (m): AP PO Z CV 90 CT 80 ST 145 MS PT TB FL NO
**Sketch Map**

- **3m x 50m CT/S Coat in the Hitze**
- **3m x 30m CT/S Coat of Oil in the Hitze**
- **1m x 10m CT/O Band of Pooled Oil/Tar**
- **2m x 10m CT/O Band of Pooled Oil/Tar**
- **SUITZ w/oiled vegetation**
- **10m x 0.5m CT/O Coarse of Tar amongst Boulders**
- **Blot Oil/Remove Tar Bio**
- **Boulder/Cobble Beach**
- **Rocky/Boulder Outcrop**

---

**Legend**

1. **A**: No Subsurface Oil
2. **A**: Subsurface Oil
   - **CT/C**: Continuous Distribution
   - **CT/O**: Occasional Distribution
   - **CT/P**: Patches Distribution
   - **CT/S**: Splashed Distribution

---

**Oil Character Length (m):**
- AP
- PO
- CV
- CT
- ST
- MS
- PT
- TB
- FL
- NO
### SHORELINE ECOLOGICAL SUMMARY

**Segment ST / EVO70**  
**Subdivision:**  
**Date (mo/day/yr):** 4/6/90

**Time (24 hr):** 17:15 h  
**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 30  
- Moderate 30  
- Low 40

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

<table>
<thead>
<tr>
<th>Substrate Type</th>
<th>1U</th>
<th>1M</th>
<th>1L</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BARNACLES</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dense</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Moderate</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Sparse</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Rare</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

| **MYTILUS**    |    |    |    |
| Dense          | 2  | 2  | 2  |
| Moderate       | 2  | 2  | 2  |
| Sparse         | 2  | 2  | 2  |
| Rare           | 2  | 2  | 2  |

| **ASTRERODS**  |    |    |    |
| Dense          | 2  | 2  | 2  |
| Moderate       | 2  | 2  | 2  |
| Sparse         | 2  | 2  | 2  |
| Rare           | 2  | 2  | 2  |

| **FUCUS**      |    |    |    |
| Dense          | 2  | 2  | 2  |
| Moderate       | 2  | 2  | 2  |
| Sparse         | 2  | 2  | 2  |
| Rare           | 2  | 2  | 2  |

Wildlife Observational/General Comments:  
6 Barrow's goldeneyes, 2 eagles (mature)  
High-angle beaches had moderate to high cover; pocket beaches were generally sparse. In one section, littering and multicell were aggregated flaying eggs.

Ecological Considerations:  
711, 18: No relevant observations.

See Addendum.
Oil was found in two separate areas in this subdivision. In one cove, there were asphalt patches in the upper intertidal. A small mussel bed (with moderate Mytilus density) occurred off to one side of the cove, away from the asphalt. Otherwise, cover was sparse and there are no unusual ecological considerations.

Along one section of beach, asphalt was found in the upper intertidal and a mousse accumulation was found in the supralittoral zone. A sparse bed of mussels would be susceptible to trampling, but there are not many mussels there. There is also a dense band of green and red algae in the lower intertidal; these algae are, in part, ephemeral and not particularly susceptible to trampling.
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-70

SUBDIVISIONS: H (8 OF 8)
SEGMENT St/ EV-70       SUBDIVISION H (8 OF 8) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
ADF&G anadromous stream no. 226-40-16494, 16498, 16509, 16502.

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-9 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. Three anadromous streams one in Subdivision H: 226-40-16502; 16448; 16494. One bald eagle nest in Subdivision H. Do not trample or otherwise damage mussel bed.

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 42 m: V.Light 60 m: No Oil 2308 m
Subsurface Oil Observed: Yes X No Maximum Depth 15 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pick up of oiled debris, vegetation, patties and mousse. Work should be conducted between 6/1 and 7/10 and only with permission of USFWS due to eagle nest constraints.

TAG COMMENTS: 

TAG APPROVAL DATE: __________
ADEC ________________ EXXON __________________ FOSC: __________ DATE: __________
NOAA __________________ USCG __________________
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 bioirrigation 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 5/1)
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 unoviled 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 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.

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

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.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EV-70  SUBDIVISION: H  DATE 4/6/90

NAME  GARY SHIGENAKA  SIGNATURE  Shigenaka

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS


NO EVIDENCE OF OILING WAS OBSERVED IN THE REMAINDER OF THE SUBDIVISION.

ADEC

NAME  John Hayes  SIGNATURE  Hayes

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

Oiling observed on this segment consisted of soft pebbles and oiled vegetation + pebbles in the supratidal zone.

Full extent of oiling was not observed due to snow cover.

Deep into storm zone beyond 100 m, were pebbles with residual oil content.

Recommend manual removal of oiled pebbles + vegetation, also manual pickup of oil patters off of which are in supratidal just above storm zone (see sketch map).

Shrink was observed on beach indicating wave it originated from oily area of head of beach. No s.s. or oil coat was observed in L.M.U.T 72's.

LAND MANAGER

NAME  Signature

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

REVISION NO. 02/21/90
SHORELINE OILING SUMMARY

OG: Mike Foget  NOAA: Gary Shigaoka  SEGMENT: EV-70  TEAM NO.: 11  DATE: 4/16/90
BIO: Richard Ambrose  LAND REP: John Sitter  TIME: 11:45 to 20:10
EXXON: Larry Olson  ADEC:  DATE: 4/16/90
TEAMNO.: II  TIDELEVEL: 1.9 to 2.9

EST. SUBDIVISION LENGTH: 28.05 m  Sun  Clouds  Fog  Rain  Snow
UPLANDS DESCRIPTION:  Grass  Forest  Rock  Clay  Trees
SURVEYED FROM:  Foot  Boat  Helo  WORKING DIRECTION:  U to S
SURFACE SEDIMENTS:  B 20%  C 35%  D 25%  P 10%  G 10%  S 5%  M 0%  V 10%
SLOPE:  Lang  0%  Hang  10%  Vert  0%  Wave Exposure:  Low  Med  High
SLOPE:  Surface SEDIMENTS:  R 2.0%  B 16%  C 4.0%  P 10%  G 10%  S 5%

SURFACE OIL

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

PAVEMENT: H F 3 sq. m by 3 cm

PATTERNS/TARBALLS: 0 BAGS

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

OILED DEBRIS

<table>
<thead>
<tr>
<th>AMOUNT</th>
<th>SM</th>
<th>MD</th>
<th>LG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logs</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vegetation</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trash</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Debris</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Debris Collected

<table>
<thead>
<tr>
<th>TYPE</th>
<th>#BAGS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
</tbody>
</table>

Photographs:

Roll No. 31-11-2
Frames 24-25

SUBSURFACE OIL

*Sheen on water in pits 5&6; origin uncertain

*Oil below 0.5 cm in Pit 7 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 (cm or in)</th>
<th>OILED INTERVAL</th>
<th>OIL/FILM COLOR</th>
<th>IMPACTED ZONES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>25</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>30</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>25</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>30</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>15</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>10</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

COMMENTS: All oiling observed in the subdivision occurred in the southern end. Beach 1 was a 2m x 50 m. silvered stain along the cobble in the HTZ. Beach 2 is a 30 m. pocket low angle cobble/pebble. Beach with a 1m x 70 m. oiling in the storm berm. There is steady oil/vegetation, asphalt patches and some pooled oil in this area. YW: 4/13/90

REVIEWED: M.K.  DATE: 4/11/90

Page 1 of 2
**SHORELINE OILING SUMMARY (PAGE 2 of 2)**

**SEGMENT ST/ EU- 70 SUBDIVISION H**

**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>ANA</th>
<th>SUBSURFACE SEDIMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>20</td>
<td>X</td>
<td>0.7</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>G</td>
</tr>
<tr>
<td>8</td>
<td>20</td>
<td>XX</td>
<td>7.15</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>P</td>
</tr>
</tbody>
</table>

**COMMENTS**

Located in the MITZ on beach 2 is a 5m x 20m CTIP surface rainbow sheen. There is no subsurface oil in the MITZ.
SHORELINE ECOLOGICAL SUMMARY

Segment ST-NV070 Subdivision I Date (mo/day/yr) 4/6/90

Time (24 hr) 19:45 Biol. Ambrose

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

Overall % cover of biota (% of segment): Dense 15 Moderate 15 Low 70

BARNACLE

<table>
<thead>
<tr>
<th>Density</th>
<th>Rare</th>
<th>NOT PRESENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1U</td>
<td>1M</td>
<td>1L</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>NOT PRESENT</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>NOT PRESENT</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>NOT PRESENT</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>NOT PRESENT</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>NOT PRESENT</td>
</tr>
</tbody>
</table>

MYTILUS

<table>
<thead>
<tr>
<th>Density</th>
<th>Rare</th>
<th>NOT PRESENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1U</td>
<td>1M</td>
<td>1L</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>NOT PRESENT</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>NOT PRESENT</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>NOT PRESENT</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>NOT PRESENT</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>NOT PRESENT</td>
</tr>
</tbody>
</table>

ASTROPODS

<table>
<thead>
<tr>
<th>Density</th>
<th>Rare</th>
<th>NOT PRESENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1U</td>
<td>1M</td>
<td>1L</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>NOT PRESENT</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>NOT PRESENT</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>NOT PRESENT</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>NOT PRESENT</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>NOT PRESENT</td>
</tr>
</tbody>
</table>

FUCUS

<table>
<thead>
<tr>
<th>Density</th>
<th>Rare</th>
<th>NOT PRESENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1U</td>
<td>1M</td>
<td>1L</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>NOT PRESENT</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>NOT PRESENT</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>NOT PRESENT</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>NOT PRESENT</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>NOT PRESENT</td>
</tr>
</tbody>
</table>

Wildlife Observations/General Comments: 6 seals, 22 Barrow's goldeneyes, 6 Harlequin ducks, 6 Canada geese at anadromous stream, 3 deer tracks, cobble beaches are fairly sparse, but bedrock and high-angle beaches had dense red and green algae in mid and low intertidal. Dense kelp beds in subtidal.

Ecological Considerations:
711, 18: One anadromous stream noted in this subdivision; no oil seen nearby.

The pocket beach with oil has a mussel bed; see Addendum.
**Sketch Map 2**

**Legend**

- **1** Δ: No Subsurface Oil
- **2** Δ: Subsurface Oil

- **CT/C**: Continuous Distribution
- **CT/B**: Broken Distribution
- **CT/S**: Patchy Distribution
- **CT/S**: Splashed Distribution

- **Oiled Vegetation**

*Note: Diagram depicts geological features and oil contamination areas.*

**Notes:**
- Manual patch, remove vegetation and debris.
- Snow in the SUITZ.

**Checklist:**
- Date: 4/6/90
- Subdivision: H
- Segment ST: EV-70
- Location: FTG

**Sketch Map 1**

Oil Character Length (m): AP, CV, CT, ST, MS, PT, TB, FL, NO.
Cobble pocket beach with sheen and oiled debris. Mussel bed in mid intertidal spans half of the width of the beach. Mussels mostly are growing on the sides of large cobbles/small boulders, so are less susceptible to damage by foot traffic on beach. Fucus also occurs in mussel bed (in moderate density), and it would be susceptible to trampling.
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EV-70 SUBDIVISION D (4 of 8)

WORK WINDOW

<table>
<thead>
<tr>
<th>Manual Pickup</th>
<th>Bioremediation</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPEN</td>
<td>WORK PRIOR TO 7/20</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. ADF&G catalogued anadromous streams (226-40-16494, -16498, -16502, and -16503) are more than 100m from the work area.

IK Purse Seine Hook-off

Closed to bioremediation after 7/20. No constraint to manual pickup and tarmat removal.

5T Bald Eagle Nest

NO CONSTRAINT. Work area is more than 400m from nest.

7II Subsistence: Deer Harvesting

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

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 7/20. Restrict beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unloved biota and substrate. Do not trample or otherwise damage mussel bed at base of spit and avoid the bed during bioremediation.

TAG APPROVAL DATE: 5/29/90

Prepared by: Ande Myer, WIK Date: 5/29/90
SHORELINE EVALUATION

SEGMENT ST/ EV-70 SUBDIVISION D (4 OF 8) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADFG anadromous stream no. 226-40-16494, 16498, 16509, 16502.
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-9 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 9/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Do not trample or otherwise damage mussel bed at base of spit.

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: 4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 139 m: Narrow 0 m: V.Light 66 m: No Oil 73 m
Subsurface Oil Observed: Yes X No Maximum Depth 5 cm

RECOMMENDATIONS:

No Treatment Recommended X Treatment Recommended X Manual Pickup X Bioremediation X Tarmat: X Removal

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

COMMENTS: Recommend bioremediation of area shown on attached sketch map. Work should be conducted after(6/1) with approval of USFWS regarding eagle nest constraint. Avoid mussel bed near proposed bioremediation site. Penins Tarmat # indicated on Sketch

TAG COMMENTS:

See Constraint Addendum dated 5/18/90

TAG APPROVAL DATE: 4/25/90
ADEC Art Weasehart
EXXON Avon E. Foss FOSC: M. L. DATE: 5-6-90
NOAA Joseph J. Johnson
USCG Ronald H. Voorhees
**ADDENDUM: SUBDIVISION CONSTRAINTS**

**SEGMENT EV-70 SUBDIVISION G (7 of 8)**

---

### WORK WINDOW

<table>
<thead>
<tr>
<th>Manual Pickup</th>
<th>Tarmat Removal</th>
<th>Other Approved Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPEN</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bioremediation</th>
</tr>
</thead>
<tbody>
<tr>
<td>WORK PRIOR TO 7/20</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. ADF&G catalogued anadromous streams (226-40-16509) in Subdivision G and (226-40-16448) in adjacent Subdivision H are more than 100m from recommended treatment areas.

1K  **Purse Seine Hook-off**  No constraint to manual pickup, tarmat removal and other approved treatment; closed to bioremediation after 7/20.

5T  **Bald Eagle Nest**  NO CONSTRAINT. Nests more than 400m from treatment sites.

71i  **Subsistence: Deer Harvesting**  No constraint to manual pickup, tarmat removal, and other recommended treatment; closed to bioremediation after 8/15.

---

**OTHER ECOLOGICAL CONSIDERATIONS**

No disturbance to stream bed or banks. Restrict boat and air traffic to essential minimum after 7/20. Restrict beach disturbance after 8/15. Avoid any unnecessary disturbance or damage to unaltered biota and substrate.

---

**TAG ADDENDUM DATE** 5/21/90

**ADEC**  [Signature]  Date: 5/21/90

**EXXON**  [Signature]  Date: 5/21/90

**NOAA**  [Signature]  Date: 5/21/90

**USCG**  [Signature]  Date: 5/21/90

**Prepared by:**  [Signature]  Date: 5/20/90
SHORELINE EVALUATION

SEGMENT ST/ EV-70 SUBDIVISION G (7 OF 8) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 226-40-16494, 16498, 16509, 16502.

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

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

ST-9 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)

711 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. Two bald eagle nests in Subdivision E.

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: 4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 45 m: Narrow 61 m: V. Light 40 m: No Oil 1639 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: X Removal ---Beach Cleaner

---Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of tarmat, oiled vegetation and debris, 2) blot any mobile oil with pom poms, 3) bioremediate areas shown on attached sketch map. Work should be conducted after 6/1 and with permission of USFWS due to eagle nest constraint and ADF&G regarding anadromous streams. See Addendum dated 5/7/90.

TAG COMMENTS:

__________________________________________________________

TAG APPROVAL DATE: 4/25/90

ADEC [Signature] DATE: [Signature] FOSC: [Signature] DATE: [Signature]

EXXON

NOAA

USCG

TAG APPROVAL DATE: 4/25/90

ADEC [Signature] DATE: [Signature] FOSC: [Signature] DATE: [Signature]
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT EV-70 SUBDIVISION H (8 of 8)

WORK WINDOW

Manual Pickup    OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT
If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A,1B</td>
<td>Salmon Stream</td>
<td>ADF&amp;G catalogued anadromous streams (226-40-16494, 16498, and 16502) are present in Subdivision H. No constraint to manual pickup.</td>
</tr>
<tr>
<td>1K</td>
<td>Purse Seine Hook-off</td>
<td>No constraint to manual pickup.</td>
</tr>
<tr>
<td>5T</td>
<td>Bald Eagle Nest</td>
<td>NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision H work site.</td>
</tr>
<tr>
<td>7II</td>
<td>Subsistence: Deer Harvesting</td>
<td>No constraint to manual pickup.</td>
</tr>
</tbody>
</table>

OTHER ECOLOGICAL CONSIDERATIONS
Do not trample or otherwise damage mussel beds. 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 unoiled biota and substrate.

Prepared by: ____________________________  Date: 6/9/90

FOSC ____________________________  DATE 6-10-90
SHORELINE EVALUATION

SEGMENT S(7)/ EV-70 SUBDIVISION H (8 OF 8) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
- ADF&G anadromous stream no. 226-40-16494, 16498, 16509, 16502.
  1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
  1B Salmon stream mouth - spawning (7/10 to 8/31)
  5T-9 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. Three anadromous streams one in Subdivision H: 226-40-16502; 16498; 16494. One bald eagle nest in Subdivision H. Do not trample or otherwise damage mussel bed.

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: 4/6/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 42 m: V.Light 60 m: No Oil 2308 m
Subsurface Oil Observed: Yes X No Maximum Depth 15 cm

RECOMMENDATIONS:
___ 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: ___ Removal ___ Beach Cleaner
___ ___ Other (see comments)

COMMENTS: Recommend manual pick up of oiled debris, vegetation, patties and mousse. Work should be conducted between 6/1 and 7/10 and only with permission of USFWS due to eagle nest constraints.

TAG COMMENTS: Monitors to further assess suite due to snow cover during survey.

TAG APPROVAL DATE: 4/25/90
ADEC Art Weiner DATE: 5-4-90
EXXON Art Deese
NOAA Joseph Talbot
USCG
ADDENDUM: SUBDIVISION CONSTRAINTS
- SEGMENT IN-28 SUBDIVISION A (1 of 1)

WORK WINDOW

Bioremediation  CLOSED

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 bioremediation within 400m of active nest.

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE ______________
ADEC ________________________________________
EXXON ________________________________________
NOAA _______________________________________
USCG _______________________________________

Prepared By: ________________________________________ Date 6/9/90

FOSC ________________________________________ DATE 6/10/90
Surveyed by Mike Lockhart 5/19/90

ECOLOGY MAP
SEGMENT IN-28

SUBDIVISION A (1 of 4)

METERS

1 inch = 1503 feet

★ Seabird Colony
☆ Eagle Nest
SHORELINE EVALUATION

SEGMENT ST/IN-28 SUBDIVISION A (1 OF 1) DATE 4/8/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
5T-1 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
See attached Ecological Constraint sheet for specific constraints and contacts.

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

ARCHAEOLOGICAL CONSTRAINT: 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 (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: DATE: 5/8/90

OILING CATEGORIZATION:
Wide 32 m: Medium 0 m: Narrow 22 m: V.Light 468 m: No Oil 123 m
Subsurface Oil Observed: Yes No Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes bioremediation of broken coat area shown on sketch map with USFWS permission regarding the eagle nest.

TAG COMMENTS: Monitors to assess status during treatment.

TAG APPROVAL DATE: 4/25/90
ADEC EXXON NOAA USCG
Art Weller [Signature] [Signature] [Signature] [Signature]
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EV-70 SUBDIVISION F (6 of 8)

WORK WINDOW

| Bioremediation More Than 100m From Stream | WORK PRIOR TO 7/20 |
| Bioremediation Less Than 100m From Stream | WORK PRIOR TO 7/10 |
| (ADF&G MONITOR REQ.) |
| Bioremediation More Than 400m From Active Nest | WORK PRIOR TO 7/20 |
| Bioremediation Less Than 400m From Active Nest | CLOSED |

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A, 1B Salmon Stream

ADF&G catalogued anadromous stream (226-40-16509) is present in Subdivision F. 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.

1K Purse Seine Hook-off

Closed to bioremediation after 7/20.

5T Bald Eagle Nest

USFWS 6/1/90 map indicates an active nest in adjacent subdivision. Closed to bioremediation within 400m of active nest. No constraint to bioremediation more than 400m from active nest.

7II Subsistence: Deer Harvesting

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; do not allow inclpol to enter stream flow. On-site examination and consultation by ADF&G monitor is required prior to bioremediation in order to authorize a setback distance from the stream during chemical application; if ADF&G monitor's presence is impossible, authorization may be given by the ADEC monitor. Restrict boat and air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from active nests. Avoid any unnecessary disturbance or damage to uncolled substrate and biota.

SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM (STREAM NO. 226-40-16509) FOR ADDITIONAL CONSTRAINT INFORMATION

FOSC [signature] Date 6-10-90
See 5/26/90 Ecology Map with Areas Zones

Active Nest

Anadromous Stream
(226-40-16509)

See 5/26/90 map

Seabird Colony

Active Eagle Nest

Inactive Eagle Nest

1 inch = 2218 feet

Exxon Company, USA
Map Key: PMS-EV-70
June 04, 1990

ECOLOGY MAP
SEGMENT EV-70
SUBDIVISION F (6 of 8)
MEETERS

EV-60
EV-09
EV-70
EV-
SHORELINE EVALUATION

SEGMENT EV-70 SUBDIVISION F (6 OF 8) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

DF&G anadromous stream no. 226-40-16494, 16498, 16509, 16502.
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-9 All bald eagle nests (3/1 to 5/31) - Active eagle nests (3/1 to 5/15)
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 no. 226-40-16509 in Subdivision F; 4 bald eagle nests close by in Segment EV-60.

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: 4/25/90

OILING CATEGORIZATION:

- Side 0 m: Medium 0 m: Narrow 29 m: V.Light 36 m: No Oil 2808 m
- Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend bioremediation of areas shown in sketch map and reassessment of segment after additional snow-melt by Anadromous SCAT team. Work should be conducted with the approval of ADF&G regarding anadromous fish stream and USFWS concerning eagle nests.

See Constraint Addendum Dated 6/9/90 Wk

TAG COMMENTS:

ADEC: DATE: 4/25/90
EXXON: DATE: 
NOAA: DATE: 
USCG: DATE: 

EXXON
NOAA
USCG
ADDENDUM: SUBDIVISION CONSTRAINTS
-SEGMENT EV-70 SUBDIVISION E (5 of 8)

WORK WINDOW

Manual Pickup: CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Streams
NO CONSTRAINT. ADF&G catalogued anadromous streams are located in adjacent Subdivisions more than 100m from recommended treatment areas.

1K Purse Seine Hook-off
No constraint to manual pickup.

5T Bald Eagle Nest
USFWS 6/1/90 map indicates an active nest in Subdivision E. Closed to manual pickup within 400m of active nest.

7II Subsistence: Deer Harvesting
No constraint to manual pickup.

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. Restrict boat and air traffic to essential minimum after 7/20. Restrict beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.
SHORELINE EVALUATION

SEGMENT ST/ EV-70 SUBDIVISION E (5 OF 8) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
ADF&G anadromous stream no. 226-40-16494, 16498, 16509, 16502.
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-9 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 ECOCLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Two bald eagle nests in Subdivision E.

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: 4/25/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 191 m: No Oil 839 m
Subsurface Oil Observed: Yes X No Maximum Depth 6 cm

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

COMMENTS: Recommend manual pick up of oiled debris and vegetation. Work should be conducted after 6/1 and with permission of USFWS due to eagle nest constraints.

TAG COMMENTS: Monitor to check suit during treatment.

TAG APPROVAL DATE: 4/25/90
ADEC [Signature] DATE: 5-3-90
EXXON [Signature] FOSC: [Signature] DATE: 5-3-90
NOAA [Signature] USCG [Signature]
SHORELINE EVALUATION

SEGMENT ST/ EV-70 SUBDIVISION A (1 OF 8) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
ADF&G anadromous stream no. 226-40-16494, 16498, 16509, 16502.
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-9 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 uncoiled biota and substrate.

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

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

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 81 m: No Oil 983 m
Subsurface Oil Observed: Yes No 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
____ Tarmac: Removal Beach Cleaner
____ Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/25/90
ADEC Art Cheney
EXXON [Signature]
NOAA Joseph Talbot
USCG [Signature]

DATE: 5-3-90

FOSC: [Signature]
SEGMENT ST/ EU-70
SUBDIVISION A (blow up)
DATE 1/1/90

CHECKLIST
N Arrow
Approx. Scale
Seg/Line End
Oil Dist.
Wash
Length
% Cover
Substrate Character
Est. H/W/A/W
SL
Possible Source(s)
Possible(s)
Plan Location(s)
Note Location(s)

LEGEND

\[ \text{CT/C} \]
Continuous Distribution

\[ \text{CT/P} \]
Broken Distribution

\[ \text{CT/V} \]
Patchy Distribution

\[ \text{CT/S} \]
Splattered Distribution

Closed Vegetation

\[ \text{PO} \]
Possible direction, number

Legend

\[ \text{Bedrock} \]

\[ \text{Tree(s)} \]

\[ \text{Dead tree} \]

Oil Character Length (m): AP -- PO -- CV -- CT -- ST -- MS -- PT -- TB -- FL -- NO
SEGMENT ST/EV-70  SUBDIVISION B (2 OF 8) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A  Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B  Salmon stream mouth - spawning (7/10 to 8/31)
5T-9 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. Bald eagle nest in Subdivision B.

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

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

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 788 m: No Oil 897 m
Subsurface Oil Observed: Yes X No: No Oil

RECOMMENDATIONS:
X No Treatment Recommended
_____ Treatment Recommended
_____ Manual Pickup
_____ Bioremediation
_____ Tarmat: Removal

COMMENTS:

TAG COMMENTS: __________________________________________________

TAG APPROVAL DATE: 4/25/90
ADEC [Signature]  DATE: 4/3/90
EXXON [Signature]  DATE: 4/3/90
NOAA [Signature]  DATE: 4/3/90
USCG [Signature]  DATE: 4/3/90

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

EV-70

Anadromous stream 226-40-16509

Anadromous stream 226-40-16502

Anadromous stream 226-40-16448

Anadromous stream 226-40-16494

Map Key: PWS-279
Name: Mike Forest
Date: 4/1/90

Legend:

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

ADEC Segment Length: 12625 m
SHORELINE EVALUATION

SEGMENT ST/ EV-70          SUBDIVISION C (3 OF 8) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 226-40-16494, 16498, 16509, 16502.
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-9 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
7T-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 treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

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

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 319 m: No Oil 511 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: 4/25/90
ADEC Art Weber  EXXON Andy Tunnell  NOAANational Resource
USCG
LEGEND

1 △
- No Subsurface Oil

2 △
- Subsurface Oil

C/S/C
- Continuous Distribution

C/T/B
- Broken Distribution

C/P/S
- Patchy Distribution

S/S/S
- Splashed Distribution

Oiled Vegetation

1 △
- Photo location, direction, and number

Legend:

0 - Rock

/// - Bedrock / Large

0 - Forest

Legend:

[EV-70C] - Splattered distribution

50 cm x 5 cm discontinuous stain

100 m stain in the HZP

5 cm wide discontinuities

Banding

Scale

1

100 m

OIL CHARACTER LENGTH (M): AP — PO — CV — CT 100 ST 200 MS — PT — TB — FL — NO 700
ECOLOGY MAP

EV-70

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

ADEC Segment Length: 12625m

Map Key: PWS-278
Name: Mike Enest
Date: 4/1/90
Data Entered:
SHORELINE EVALUATION

SEGMENT ST/ EV-70 SUBDIVISION E (5 OF 8) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

• ADF&G anadromous stream no. 226-40-16494, 16498, 16509, 16502.
  1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
  1B Salmon stream mouth - spawning (7/10 to 8/31)
  5T-9 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. Two bald eagle nests in Subdivision E.

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: 4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 191 m: No Oil 839 m
        Subsurface Oil Observed: Yes X No Maximum Depth 6 cm

RECOMMENDATIONS:

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

CAMMENTS: Recommend manual pick up of oiled debris and vegetation. Work should be conducted after 6/1 and with permission of USFWS due to eagle nest constraints.

TAG COMMENTS: MONITORED TO CHECK SUITZ DURING TREATMENT.

TAG APPROVAL DATE: 4/25/90

ADEC       EXXON       FOSC:       DATE: 5-3-90
Andrew Weber Al Reiner                  90 ___ 
NOAA       USCG
Noah Tibbott      Kenneth Keene
LEGEND

1 △
- No Subsurface Oil

2 △
- Subsurface Oil

CT/C
- Composition Distribution

CT/B
- Broken Distribution

CT/D
- Patchy Distribution

CT/S
- Splashed Distribution

Oiled Vegetation

CT/G
- Photo location, direction, and number

Legend

- Rock

- Forest / Snow

- Bedrock / Boulders

Oiled storm beam w/ debris supra ITE

40m

Cobble bench

50m [CT/G]
- Distinctive splash staining in the HITZ

Pick up oiled debris vegetation

10 cm [CT/S]
- Splatter

HITZ 10 cm wide discontinous

Wind

Oil Character Length (m): AP_UU PO_UU CV_UU GT_60 ST_60 MS_UU PT_UU TB_UU FK_UU NO 1000
Legend

1 cm - Snow

III - Bedrock / Boulder

CT/B 15m x 15m Discontinous Tar Band in HITZ on VFR Rock Wall

5m Pebble Beach

Legend

1 0

BedRock

BedRock

40m

Scale

5m

Oil Character Length (m): AP - PO - CV - CT 60 ST - MB - PT - TB - FL - NO 20

80m Shore Zone
SHORELINE EVALUATION
SEGMENT ST/ EV-70 SUBDIVISION D (4 OF 8) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
ADF&G anadromous stream no. 226-40-16494, 16498, 16509, 16502.
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-9 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. Do not trample or otherwise damage mussel bed at base of spit.

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: 4/25/90

OILING CATEGORIZATION:
Wide 0 m: Medium 139 m: Narrow 0 m: V.Light 66 m: No Oil 73 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
X Tarmat: X Removal ____ Beach Cleaner
____ Other (see comments)

COMMENTS: Recommend bioremediation of area shown on attached sketch map. Work should be conducted after 6/1 with approval of USFWS regarding eagle nest constraint. Avoid mussel bed near proposed bioremediation site. Remove Tarmat as indicated on sketch.

TAG COMMENTS: __________________________
______________________________
______________________________
______________________________

TAG APPROVAL DATE: 4/25/90
ADEC Art Weiser __________________
EXXON Andy Allen __________________
NOAA Joseph Talbot __________________
USCG Kenneth Keene __________________
FOSC: __________________ Date: 5-6-90
A dense mussel bed on pebbles occurred at beach with free subsurface oil. The biota over the main part of the cove was quite sparse, with sparse barnacles & littorines and rare Fucus. The mussel bed would be susceptible to trampling, but it occurs on the ridge east of the main beach, and could be avoided during beach activities:

The mussel bed is about 5cm thick. No oil was found on the mussels; however, the northwest edge of the bed was broken up, and it looks as though the bed used to extend to where subsurface oil and asphalt were found now.

Hermit crabs were observed under one rock in the mid intertidal (in oil zone). A nemerteans - alive - was under a rock with a noticeable amount of free oil on the water.
SHORELINE EVALUATION

SEGMENT ST/ EV-70 SUBDIVISION F (6 OF 8) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 226-40-16494, 16498, 16509, 16502.
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-9 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. Anadromous stream no. 226-40-16509 in Subdivision F; 4 bald eagle nests close by in Segment EV-60.

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: 4/6/90

OILING CATEGORIZATION:

Wide 0 m: Medium_0 m: Narrow 29 m: V.Light 36 m: No Oil 2808 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)
____Manual Pickup ______Absorbents (pads, rolls, etc)
_X_Bioremediation ______Spot Washing: _Wands
____Tarmat: ___Removal ______Beach Cleaner
______Other (see comments)

COMMENTS: Recommend bioremediation of areas shown in sketch map and reassessment of segment after additional snow-melt by Anadromous SCAT team. Work should be conducted with the approval of ADF&G regarding anadromous fish stream and USFWS concerning eagle nests.

TAG COMMENTS:

______________________________________________

TAG APPROVAL DATE: 4/25/90
ADEC ART WEINER DAVE WEDN DAVE WEIN
EXXON _______ FOSC: _______ DATE: S-4-90
NOAA J. TALBOT J. TALBOT
USCG Kenneth Verdin /kenverd/
Both a salmon stream and oil were found in Gugnake Bay. The salmon stream had salmon bones and jaws in the stream. A second stream also seemed large enough to be anadromous.

One oiled location, with globules of free oil & a sheen visible on the water in pits, was about 80 m from the known anadromous stream.

---

Subdivision EV070F

Addendum

Ambrose
4/6/90
SEGMENT EVALUATION

SEGMENT EV-70 SUBDIVISION G (7 OF 8) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

- ADF&G anadromous stream no. 226-40-16494, 16498, 16509, 16502.
- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
- 1B Salmon stream mouth - spawning (7/10 to 8/31)
- ST-9 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. Two bald eagle nests in Subdivision E.

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: 4/25/90

OILING CATEGORIZATION:

- Wide 0 m: Medium 45 m: Narrow 61 m: V.Light 40 m: No Oil 1639 m
- Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

RECOMMENDATIONS:

- No Treatment Recommended
- X Treatment Recommended
- X Manual Pickup
- X Bioremediation
- X Tarmat: X 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 tarmat, oiled vegetation and debris, 2) blot any mobile oil with pom poms, 3) bioremediate areas shown on attached sketch map. Work should be conducted after 6/1 and with permission of USFWS due to eagle nest constraint and ADF&G regarding anadromous streams.

TAG COMMENTS:

TAG APPROVAL DATE: 4/25/90

ADEC
EXXON
NOAA
USCG

FOSC: DATE: 5-4-90
ECOLOGY MAP

EV-70

Map Key: PWS-279
Name: Mike Fong
Date: 4/11/40

ADEC Segment Length: 12625m

Wide

/// Medium

---- Narrow

TTTT Very Light

Anadromous Stream 226-40-16502

Anadromous Stream 226-40-16448

Anadromous Stream 226-40-16509

Eagle Nest (SW)

Eagle Nest (SW)
SHORELINE EVALUATION

SEGMENT ST/ EV-70 SUBDIVISION H (8 OF 8) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 226-40-16494, 16498, 16509, 16502.
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-9 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. Three anadromous streams one in Subdivision H: 226-40-16502; 16448; 16494. One bald eagle nest in Subdivision H. Do not trample or otherwise damage mussel bed.

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: 4/25/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 42 m: V.Light 60 m: No Oil 2308 m
Subsurface Oil Observed: Yes X No Maximum Depth 15 cm

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

COMMENTS: Recommend manual pick up of oiled debris, vegetation, patties and mousse. Work should be conducted between 6/1 and 7/10 and only with permission of USFWS due to eagle nest constraints.

TAG COMMENTS: Monitors to further assess suit due to snow cover during survey.

TAG APPROVAL DATE: 4/25/90
ADEC Art Weinrich DATE: 5-4-90
EXXON FOSC: [Signature]
NOAA Joseph Tallant
USCG Kenneth Keane
SEGMENT ST/70
SUBDIVISION H
DATE 4/16/90

CHECKLIST
- N Angle
- Approx. Scale
- Seg/Sub Bndy
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. WPL/WLD
- SSL
- Profile Location(s)
- Photo(s)
- PT Location(s)
- Photo Location(s)

LEGEND
1 A
Pt - No Subsurface Oil
2 A
Pt - Subsurface Oil

CT/C
Continuous Distribution
CT/B
Broken Distribution
CT/IP
Patchy Distribution
CT/S
Splashed Distribution

Legend
\(\text{Oil Character Length (m): AP - PO - CV} 30 \text{ CT - ST} 50 \text{ MS - PT - TB - FL} 20 \text{ NO} 2725\)
Cobble pocket beach with sheen and oiled debris. Mussel bed in mid intertidal spans half of the width of the beach. Mussels mostly are growing on the sides of large cobbles/small boulders, so are less susceptible to damage by foot traffic over beach. *Fucus* also occurs in mussel bed (in moderate density), and it would be susceptible to trampling.
1991 MAYSAP EVALUATION

SEGMENT: EV 070  SUB: G  REGION: PWS  SURVEY DATE: 5/25/91

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

COMMENTS:
INITIAL:

TAG: Manual P/UV of EASILY ACCESSIBLE AP. AT LOCATIONS 10 & 20 FOLLOWED BY CUSTOMBLEN

FOSC:

TAG APPROVAL DATE: June 6, 1991  FOSC APPROVAL DATE: 6/10/91

ADEC  FOSC  E. E. PAGE, SDR, USCG
EXXON  CHIEF OF STAFF, FOSC
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. 2   SEGMENT EU 70     SUBDIVISION C     DATE 5/12/91

ADEC NAME:  Peter Montesano    SIGNATURE:  [Signature]

TREATMENT RECOMMENDED

The APen area F+6 was broken up, moved around. This oiling should have been left for later removal. It was well broken up and scattered.

Area A has an AP area not entirely visible from the surface. This oil is well packed and gluing sediments together. Most of this is easily removable, and break up is appropriate for the rest. This oiling is made up of a hard layer protecting a mossy layer, which extends up into the gravel.

EXXON NAME:  FBA As Co    SIGNATURE:  [Signature]

NTR

The oil in section G+1 was broken up or forced up.

The patch of Asphalt on section 9 might be broken up.

ANDMANAGER NAME:  Dennis S. Kennedy    OF:  USF 5     SIGNATURE:  D. S. Kennedy

NTR

Location [F] had a P which was removed by crew.

Location [G] has the most workable oil, some is mixed with vegetation. Beach Rye Grass is melting this oil.

USCG/NOAA NAME:  D. Simecek, USCG     SIGNATURE:  [Signature]

NTR

VECO broke up portions within sections F, G. In section G, there is a small area of M which is not broken up. However, manual treatment may damage the beach grass that is growing, within the treatment D3-13.

No TREATMENT RECOMMENDED. 3
MAYSAP SHORELINE OILING SUMMARY

TEAM NO. 2
OG Reimer BIO Bair
ADEC Montasano LANDMANAGER Kennecke for USE
EXXON Box USCG/NOAA Skeneck-Pearl

TIME 17:25 to 19:20
TIDE LEVEL 2.92 ft. to 3.7 ft.
ENERGY LEVEL: H X M L
WEATHER: SUN CLOUDS FOG RAIN SNOW

SURVEYED FROM: FOOT BOAT HELO DATE 5-25-91
TOTAL LENGTH SURVEYED: 1786 m NEAR SHORE SHEEN: BR RB SL X 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>AREA</th>
<th>ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>S</td>
<td>BR</td>
<td>H</td>
<td>0.5</td>
<td>3</td>
</tr>
<tr>
<td>B</td>
<td>S</td>
<td>BR</td>
<td>H</td>
<td>0.5</td>
<td>1</td>
</tr>
<tr>
<td>C</td>
<td>T</td>
<td>BR</td>
<td>PC</td>
<td>M</td>
<td>10</td>
</tr>
<tr>
<td>D</td>
<td>S</td>
<td>BR</td>
<td>PC</td>
<td>M</td>
<td>2</td>
</tr>
<tr>
<td>E</td>
<td>S</td>
<td>BR</td>
<td>PC</td>
<td>M</td>
<td>3</td>
</tr>
<tr>
<td>F</td>
<td>S</td>
<td>R</td>
<td>V</td>
<td>0.25</td>
<td>50</td>
</tr>
<tr>
<td>G</td>
<td>T</td>
<td>R</td>
<td>PC</td>
<td>M</td>
<td>1.0</td>
</tr>
<tr>
<td>H</td>
<td>S</td>
<td>R</td>
<td>PC</td>
<td>M</td>
<td>2.0</td>
</tr>
<tr>
<td>I</td>
<td>S</td>
<td>PC</td>
<td>M</td>
<td>5.0</td>
<td>10</td>
</tr>
<tr>
<td>J</td>
<td>S</td>
<td>PC</td>
<td>M</td>
<td>5.0</td>
<td>15</td>
</tr>
<tr>
<td>K</td>
<td>S</td>
<td>PC</td>
<td>M</td>
<td>5.0</td>
<td>15</td>
</tr>
<tr>
<td>L</td>
<td>S</td>
<td>PC</td>
<td>M</td>
<td>5.0</td>
<td>15</td>
</tr>
<tr>
<td>M</td>
<td>S</td>
<td>PC</td>
<td>M</td>
<td>5.0</td>
<td>15</td>
</tr>
<tr>
<td>N</td>
<td>S</td>
<td>PC</td>
<td>M</td>
<td>5.0</td>
<td>15</td>
</tr>
<tr>
<td>O</td>
<td>S</td>
<td>PC</td>
<td>M</td>
<td>5.0</td>
<td>15</td>
</tr>
<tr>
<td>P</td>
<td>S</td>
<td>PC</td>
<td>M</td>
<td>5.0</td>
<td>15</td>
</tr>
</tbody>
</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- 2-27 FRAMES 1-6

OG COMMENTS:
Rocky, Boulder shoreline with two small new shore Islende forming tumbleos. The
hundred tumbleo has dropped a fair
bid g AP in pebble across the H72. This was largely removed or broken up.

The Southern Island has two small pockets of AP on the Northern Coast
at the H72 in 6.0 Y. The remainder of the shoreline has sporadic
extension on the port side.

REVIEWED: MC 5/24/91
REVIEWED: 11-30-91
REVISED: MC 5/29 91

SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE
**MAYSAP SHORELINE OILING SUMMARY**

**TEAM NO.** Reiner
**BIO.**

**AEC.** Montiandomo
**LANDMANAGER.**

**EXXON.** Box
**USCG/NOAA.** Z LIMAC/SHORE

**SEGMENT.** FV 70
**SUBDIVISION.** 6
**DATE.** 5/25/1991

**TIME.** 17:25 to 19:20
**TIDE LEVEL.** 3.92 ft. to 3.71 ft.
**ENERGY LEVEL.** M

**SURVEYED FROM.** FOOT
**WEATHER.** SUN

**TOTAL LENGTH SHORELINE SURVEYED.** 1784 m
**NEAR SHORE SHEEN.** NONE

**EST. OIL CATEGORY LENGTH.** W 0 m M 20 m N 19 m VL 453 m NO 314 m US 0 m

<table>
<thead>
<tr>
<th>LOC</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT</th>
<th>SHORE SLOPE</th>
<th>AREA</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</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-_________ FRAMES_________**

**PIT NO.**
**DEPTH (cm).**

**SUBSURFACE OIL CHARACTER.**

**OILED ZONE.**
**CLEAN BELOW LEVEL.**
**H2O COLOR.**
**SHEEN COLOR.**
**PIT ZONE.**
**SURFACE- SUBSURFACE SEDIMENTS.**

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

**OG COMMENTS:**

**REVISED:** 5/29/91
HAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2
SEGMENT # E0 - 32G
SUBDIVISION G
SEA STATE 1-2+ WIND SPEED/DIRECTION 5 kts
PHOTOGRAPHS: ROLL # — FRAME # —

DATE 26 May 9
TIDAL HEIGHT (Range) 3-4 ft
BIOLOGIST SmGr

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):
As CT in barnacle zone, focus 4.1, Horner's nearest. Amphibians + limpets under boulders in lower zones.
B: AP near 1. Horner's & Great Algae, lower zones as at "A".
C: CT high in T12 in lichen zone. The rocks in lower zones and the south support sculpins, limpets, chitons, abalone & crabs.
D: CT upper boulders in the lichen to upper barnacle zone.
Other barnacles observed in area. Pit # 2 in lichen zone, lower.
U. dense with Fucus & recent guests.
E: AP in lichen & green algae zone - beachrock is nearest. Lichens. Pit # 3.
F: AP in area with no biota - rock outcrop is nearest. Support barnacles, urchins. A dense mussel bed is surrounded by the outcrop.
H: AP in may to mid T12 in barnacle to Fucus zone. No oiled barnacles observed. Horner's near 25.
J: AP in lichen to upper barnacle zone. AP also in barnacle zone. Lower T12 has patchy Fucus, barnacles & mussels.
K: CT reaches the barnacle / Fucus zone.
O: AP/CT in lichen zone. Mussel beds dense in lower T12.
I: CT on rock face in lichen zone reaching to upper edge of barnacles.

If additional removal of AP is required, 3rd "D-6" washings of mussels in lower T12 should be undertaken.

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>
</tr>
</thead>
<tbody>
<tr>
<td>Eagles</td>
<td>8 &amp; 9</td>
<td>2</td>
<td>Sculpins</td>
</tr>
<tr>
<td>Seabirds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waterfowl</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gulls/Kittiwakes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shorebirds</td>
<td></td>
<td></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>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MARINE MAMMALS</th>
<th># OBSERVED</th>
<th>SPECIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sea Otters</td>
<td>3 (with pups)</td>
<td></td>
</tr>
<tr>
<td>Pinnipeds(specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Shoreline subdivision map showing important biological features attached.

Review: M. B. 5/9/84
Two eagles (♀, ♂) in nest during survey. Post - monitored the birds throughout the survey.

EV070 G

Subdivision Field Map
Map Key: PUSXEV070Gd
Name: __________
Date: __________
1991 MAYSAP EVALUATION

SEGMENT: EV 070 SUB: F REGION: FWS SURVEY DATE: 5/15/91

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

Ecological/Constraints (see page two for details) Eagle nest, Anadromous stream, 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) __ 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.

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.

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-10 SUBDIVISION F DATE 5/15/91

ADEC NAME John Hayes SIGNATURE

NTR Bay bus removed well oiling observed is light and no treatment is needed here.

EXXON NAME John Dean SIGNATURE

NTR Natural cleaning continues to improve cosmetic appearance. More Francesca & Hecata.

LANDMANAGER NAME Steve Ward OF CVC/FS SIGNATURE

NTR A lite sheen in one pit. No observable oil in pit. No oil found. Entire sub walked. No bio.

USCG/NOAA NAME DREHER/CLINE SIGNATURE K.R. Dreher

NTR Further clean-up operations would cause more environmental harm than the oil to be removed.

No significant surficial oiling occurs in this subdivision. However, subsurface oil (MOA) exists at oiling site A which should be treated.
**MAYSAP SHORELINE OILING SUMMARY**

**TEAM NO.**

OG: CHANEY

ADEC: HAYES

EXXON: DEAN

**BIO**

CRANK

**LANDMANAGER**

WARD

**SEGMENT**

EV 70

**SUBDIVISION**

F

**DATE**

MAY 15, 1991

**TIME**

19:25 to 20:45

**TIDE LEVEL**

3.5 ft to 2.5 ft

**ENERGY LEVEL**

☑ H ☑ M ☑

**SURVEYED FROM**

☑ FOOT ☑ BOAT ☑ HELO

**WEATHER**

☑ SUN ☑ CLOUDS ☑ FOG ☑ RAIN ☑ SNOW

**TOTAL LENGTH SHORELINE SURVEYED:**

1623 m

**NEAR SHORE SHEEN:**

☑ BR ☑ RB ☑ SL ☑ NONE

**EST. OIL CATEGORY LENGTH:**

W: 10 m M: 23 m N: 4 m V: 90 m US: 1519 m US: 1250 m

---

**SURFACE OIL CHARACTER**

<table>
<thead>
<tr>
<th>LOC</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT TYPE</th>
<th>SLOPE</th>
<th>WIDTH</th>
<th>LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
<td>P</td>
<td>L</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>B</td>
<td>C</td>
<td>P</td>
<td>L</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>C</td>
<td>B</td>
<td>P</td>
<td>L</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>D</td>
<td>C</td>
<td>P</td>
<td>L</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>E</td>
<td>B</td>
<td>P</td>
<td>L</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>F</td>
<td>T</td>
<td>B</td>
<td>C</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>G</td>
<td>T</td>
<td>B</td>
<td>C</td>
<td>5</td>
<td>70</td>
</tr>
</tbody>
</table>

**ZONE**

Rainbow Sheen on Surface

**NOTES**

Splash on Rike Ct.

Splash on Rike Ct.

---

**SURFACE-OIL SUBSURFACE SEDIMENTS**

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>DEPTH (cm)</th>
<th>SURFACE OIL CHARACTER</th>
<th>OILED ZONE</th>
<th>CLEAN BELOW</th>
<th>H20 LEVEL</th>
<th>SHEEN COLOR</th>
<th>PIT ZONE</th>
<th>SURFACE-OIL SUBSURFACE SEDIMENTS</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>35</td>
<td>B</td>
<td>Y/N</td>
<td></td>
<td></td>
<td></td>
<td>S</td>
<td>PG/PG</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>35</td>
<td>B</td>
<td>Y/N</td>
<td></td>
<td></td>
<td></td>
<td>S</td>
<td>PG/PGA</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>35</td>
<td>B</td>
<td>Y/N</td>
<td></td>
<td></td>
<td></td>
<td>S</td>
<td>PG/PGM</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>35</td>
<td>B</td>
<td>Y/N</td>
<td></td>
<td></td>
<td></td>
<td>S</td>
<td>GP/PGM</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>30</td>
<td>B</td>
<td>Y/N</td>
<td></td>
<td></td>
<td></td>
<td>S</td>
<td>GP/PGM</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>30</td>
<td>B</td>
<td>Y/N</td>
<td></td>
<td></td>
<td></td>
<td>S</td>
<td>GP/PGM</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>30</td>
<td>B</td>
<td>Y/N</td>
<td></td>
<td></td>
<td></td>
<td>S</td>
<td>GP/PGM</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>35</td>
<td>B</td>
<td>Y/N</td>
<td></td>
<td></td>
<td></td>
<td>S</td>
<td>GP/PGM</td>
<td></td>
</tr>
</tbody>
</table>

**SHEEN COLOR:**

B = BROWN; R = RAINBOW; S = SILVER; N = NONE

**THE OILED SENSE IN PIT**

OG COMMENTS: 5) WAS INDISTINCT DUE TO RAPID FLUSHING WITH WATER. BRIGHT RAINBOW SHEEN IN PIT. THE HIGHEST CONCENTRATION OF OIL OBSERVED WAS LOCATED ON THE WEST SIDE OF THE FALLEN TREE IN AREA A. THE SEDIMENTS IN THIS AREA HAD A RAINBOW SHEEN WHEN WE FIRST OBSERVED THEM. AFTER DIGGING PIT 5) A BRIGHT BAND OF SHEEN SPREAD FROM THE HITE TO THE WATERLINE. THESE AREAS MIGHT APPEAR LESS OILED ON A DRY DAY DUE TO LACK OF SHEEN.

REVIEWED: MC 5/19/91

---

**DISTRIBUTION:**

C = 91-100%; B = 81-90%; P = 71-80%; S = 61-70%; T = 51-60%

**SLOPE:**

V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE

**PHOTO ROLL # MAYSAP-**

5/17 FRAMES 6-9
HAYS, AP BIOLOGICAL SUMMARY FORK
TEAM I
SEGMENT # EV-70
SUBDIVISION F
SEA STATE 0 - 1'
WIND SPEED/DIRECTION 5 - 10 knots
PHOTOGRAPHS: ROLL # $ FRAMES # $

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

(P.4) There is a rare concentration of barnacles around the pit cover. ~ 5% of the surface area. One meter below the pit there is a sparse concentration of barnacles, oysters, and Fucus covering ~ 10% of the surface sediment.

(A) Area is located in the UITZ. Within the site there are Fucus ann barnacles (with raised spat settlement) covering 5% of the surface sediments. Two meters below the site Fucus dominates the surface water. A sparse concentration of barnacles and invertebrates is also present. Biotu cover is 50% sediment are soft near water's edge ~ 1' level, sinking under weights. Pit 5 is in area A.

(B) Area is in the high part of the UITZ, 100 north of a small stream. Barnacles are present within the site. Biotu cover is <1%. The UITZ is similar to that described for area A. Fucus cover increases to 70% next to stream.

(C) Area is in the UITZ. Sparsely concentrated barnacles that signify sealed their inner plates when stimulated were present in site. Biotu cover is 10%. UITZ species are the same as in A plus filamentous green algae. Biotu cover is 30%.

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>
</tr>
</thead>
<tbody>
<tr>
<td>Eagles</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Seabirds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waterfowl</td>
<td>2</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>Gulls/Kittiwakes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shorebirds</td>
<td>2</td>
<td>10</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>
</tr>
</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>2</td>
<td>Deer</td>
<td>2</td>
</tr>
<tr>
<td>Pinnipeds(specific)</td>
<td>1 Harbor Seal</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LAND MAMMALS</th>
<th>SPECIES</th>
<th># OBSERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Deer</td>
<td>2</td>
</tr>
</tbody>
</table>

Shoreline subdivision map showing important biological features attached.

Reviewed A.B. 5/19/81
**Comments (cont.)**

(D) Area is located low in the UITZ. Sparsely concentrated barnacles and limpets and rare mussels are present. Biota cover is 10%. Directly below site, high in MITZ, biota cover is 30%. There is a dense *Fucus* bed at the +3' tidal level with a moderate concentration of *Littorina*, limpets and mussels. Biota cover is 70%. Sandpipers were feeding in the vicinity during survey.

(E) Area is located in the UITZ next to a small stream. *Fucus* is the dominant species; rare barnacles are also present. Biota cover is 20%. In the MITZ, *Fucus* is dense, barnacles are moderate; *Littorina* and filamentous green algae are present. Biota cover is 70%.

(F) Area is located high in the UITZ. Black lichen covers ~80% of the surface. In the MITZ, main biota present are patchy, dense barnacles and *Littorina* are dense. Low in the zone is a clam bed. Biota cover is ~70%.

(G) Area is located in the UITZ. Barnacles cover ~5% of the surface sediments. Below site, in the MITZ there is a moderate concentration of barnacles, *Fucus* (with sporangia and maturing conceptacles) and mussels. *Littorina* are dense. Low in the zone is a clam bed. Biota cover is 70%.

...Gugule Bay is a habitat area for wildlife. Deer, waterfowl, and shorebirds were observed during survey.
1991 MAYSAP EVALUATION

SEGMENT: EV 070 SUB: D REGION: PWS SURVEY DATE: 5/15/91

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:

TREATMENT REQUIRED (Y or N) __N__ INITIAL __TAG__ FOSC

Manual Pickup (Check as Req.) ______ Initial ______ TAG ______ FOSC ______
Spot Washing ______ Initial ______ TAG ______ FOSC ______
Bio-Customblen Only ______ Initial ______ TAG ______ FOSC ______
Bio-Inipol/Customblen ______ Initial ______ TAG ______ FOSC ______
Other ______________________ Initial ______ TAG ______ FOSC ______
Other ______________________ Initial ______ TAG ______ FOSC ______

COMMENTS:
INITIAL: ________________________________________
______________________________________________________________
______________________________________________________________
______________________________________________________________
TAG: _________________________________________________
______________________________________________________________
______________________________________________________________
______________________________________________________________
FOSC: _________________________________________________
______________________________________________________________
______________________________________________________________
______________________________________________________________
TAG APPROVAL DATE: ___________ FOSC APPROVAL DATE: ___________

ADEC ___________________________ FOSC ___________________________
EXXON ___________________________
USCG ___________________________
NOAA ___________________________
Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.
<table>
<thead>
<tr>
<th>TEAM NO.</th>
<th>5</th>
<th>SEGMENT</th>
<th>EU-70</th>
<th>SUBDIVISION</th>
<th>0</th>
<th>DATE 5/15/91</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADEC NAME</td>
<td>John Hayes</td>
<td>SIGNATURE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NTR Tide was too high to survey EU-70 mud bed area, oily sheen was slight. NTR/2 only had true subsurface oil, 100% area of M/S/101 eyeglass in the STL of this segment No treatment recommended at this time.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EXXON NAME</td>
<td>John Dean</td>
<td>SIGNATURE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NTR Little evidence of oiling present, NTR recoverable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LANDMANAGER NAME</td>
<td>Steve Ward</td>
<td>SIGNATURE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NTR This area recovering very well, very little history of oil Not that was there is just about gone. No trash seen. One pit showed a lite sheen, but no observable oil could be found. No Bio.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>USCG/NOAA NAME</td>
<td>BREHER/CLINE</td>
<td>SIGNATURE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NTR Small splash of hard asphaltic residue found in supratidal. Oiling is insignificant in this subdivision. Subsurface oiling was expected, but none was found. Do not recommend any further treatment.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

*Note: The document contains additional watermarks and annotations not directly transcribed.*
TEAM NO. CRANK
ADEC HAYES
EXXON DEAN

SEGMEMT EV 70
SUBDIVISION D
DATE MAY 15, 1991

TIME 12:10 to 12:50
TIDE LEVEL +4 ft. to 6.5 ft.
ENERGY LEVEL: □ H □ M □
WEATHER: □ SUN □ CLOUDS □ FOG □ RAIN □ SNOW

SURVEYED FROM: □ FOOT □ BOAT □ HELO
TOTAL LENGTH SHORELINE SURVEYED: 279 m
NEAR SHORE SHEEN: □ BR □ RB □ SL □ NONE
EST. OIL CATEGORY LENGTH: W--m M--m N--m

<table>
<thead>
<tr>
<th>L</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT</th>
<th>SLOPE</th>
<th>WIDTH</th>
<th>LENGTH</th>
<th>ZONE</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>T T T T T T T T</td>
<td>BC</td>
<td>M</td>
<td>5</td>
<td>20</td>
<td>✓ ✓</td>
<td>BETWEEN BOULDERS</td>
</tr>
<tr>
<td>B</td>
<td>T T T T T T</td>
<td>BC</td>
<td>M</td>
<td>8</td>
<td>15</td>
<td>✓ ✓</td>
<td>3-4 ft. high, small</td>
</tr>
<tr>
<td>C</td>
<td>T T T T T T</td>
<td>BR</td>
<td>H</td>
<td>10</td>
<td>✓ ✓</td>
<td>FEW SPLASHES</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>T T T T T T</td>
<td>BC</td>
<td>M</td>
<td>3</td>
<td>40</td>
<td>✓ ✓</td>
<td>Random splashes</td>
</tr>
<tr>
<td>E</td>
<td>T T T T T T</td>
<td>BP</td>
<td>M</td>
<td>38</td>
<td>52</td>
<td>✓ ✓</td>
<td>Oiled grass between boulders</td>
</tr>
</tbody>
</table>

DISTRIBUTION: C = 91-100%; B = 51-90%; P = 11-50%; S = 1-10%; T = c1%
SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE

PHOTO ROLL # MAY 17 frames 1-5

PIT NO. DEPTH (cm) | SUBSURFACE OIL CHARACTER | OILED SUBSURFACE OIL | OILED ZONE | CLEAN ZONE | H2O LEVEL | SHEEN COLOR | PIT ZONE | SURFACE-SUBSURFACE SEDIMENTS | NOTES |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 30</td>
<td></td>
<td></td>
<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
DUE TO WATER FLUSHING PIT

OG COMMENTS: FEW SPLASH CT<CV REGIONS REMAIN, SCATTERED SMALL PATTIES WERE ALSO FOUND IN AREAS A B D. THE ONLY SUBSURFACE OIL WAS FOUND IN PIT 9. AN OIL FILM WAS OBSERVED ON THE SEDIMENTS BUT HORIZON WAS IMPOSSIBLE TO DETERMINE DUE TO RAPID FLUSHING OF PIT WITH GROUND WATER. SUBSURFACE OILING DID NOT SEEM FAR BEYOND THE LOCAL AREA OF PIT 9.
PRINCE OF WALES PASSAGE

LEGEND

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BEDROCK</td>
</tr>
<tr>
<td></td>
<td>BOULDERS</td>
</tr>
<tr>
<td></td>
<td>FINE BED.</td>
</tr>
<tr>
<td></td>
<td>DRIFT LOG</td>
</tr>
<tr>
<td></td>
<td>GRAB     V V V</td>
</tr>
<tr>
<td></td>
<td>BRUSH    O O O O O</td>
</tr>
<tr>
<td></td>
<td>FOREST</td>
</tr>
<tr>
<td></td>
<td>OILED PIT A A A A A A</td>
</tr>
<tr>
<td></td>
<td>NO OIL PIT A A A A A A</td>
</tr>
<tr>
<td></td>
<td>PHOTO</td>
</tr>
</tbody>
</table>

SCALE 50 m

1991 MAP
GREG CHANEY
TEAM 5
SEGMENT: EV 70 D
DATE: MAY 13, 1991
AIR P. #: PIMC 005 225

A 5 x 20 m
AP, CV, CT, ST
TRACE: SPLASHES & PATCHES BETWEEN BOULDERS

B 8 x 10 m
AP, CV, CT, ST
TRACE: SPLASHES AND 3 TO 4 PATTIES

C 3 x 15 m
CT TRACE
FEW SPLASHES ON BOULDERS

D 3 x 10 m AP & CT
TRACE REMNANT
PATTIES AND SPLASHES

E 5 x 2 m
AP, CV, CT
TRACE
OILED GRASS ~ 197%
"HANDFULS" OF OILED GRASS IN BEDROCK
SPLASHED BETWEEN BOULDERS

SILVER SHEEN ON SEEDS IN PIT BUT IT RAPIDLY FILLED WITH WATER

FALLEN TREE
KWSAP BIOLOGICAL SUMMARY FORM

DATE 15 May 1991

TEAM # 5

SEGMENT # EV-70

SUBDIVISION D

SEA STATE 1

PHOTOGRAPHS: ROLL # 1

TIDAL HEIGHT (range) +4 to +6.5

BIOLOGIST Rank

WIND SPEED/DIRECTION 15 W 20

FRAME 1

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

The surface water was brown in color, containing some floating debris, likely from the nearby tree planting. There was a sparse intertidal zone with various age classes of barnacles. Some species of birds were observed, including gulls and shorebirds. A peat layer is present under the mussed bed.

(B) Site is west of the spillover, similar to site A and M12. Species and bird concentrations are similar to site A.

(C) Site is east of the spillover, located in the M12. Fucus is rare, both sporelings and maturing Conceptacles are present. Barnacles are also rare. Intertribal and limpets are sparse. Barn cover is 5% in the M12, beginning 1m below the site. Fucus concentration near 30% of the surface sediments and up to 30% at a rock outcropping near the water's edge. Between the site and the rock outcrop, there is a sparse mussed bed with overlying Fucus, Odontalia and Ulva. A peat layer is present under the mussed bed.

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>
</tr>
</thead>
<tbody>
<tr>
<td>Eagles</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Seabirds</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Waterfowl</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Gulls/kittiwakes</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Shorebirds</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Crows</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Other Birds</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

MARINE MAMMALS

<table>
<thead>
<tr>
<th>SPECIES</th>
<th># OBSERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sea Otter</td>
<td>3 (inc)</td>
</tr>
<tr>
<td>Pinnipeds (specify)</td>
<td></td>
</tr>
<tr>
<td>Whales (specify)</td>
<td></td>
</tr>
</tbody>
</table>

LAND MAMMALS

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

(D) Area is located on the U17Z. There is an approximate 1% biosediment cover within the site, including barnacles, black lichen, littorinid snails and limpets. Two meters below the site, barnacles are dominant species with a moderate concentration covering ~40% of the surface. Seaweeds, sparce mussels and moderate concentrations of Littorina and limpets are also present.

Pit #9

Subsurface site on the U17Z. There are a few barnacles present in the site covering none to <1% of the surface. Four meters below the pit, Fucus has a sparse to moderate concentration. Barnacles are sparse, and Littorina are sparse with various age classes. Blota cover is ~50%.

(E) Area is located on the U17Z on cobbles and boulders. Black lichen is encrusting into ~60% of the sediment surfaces. Rye grass, moss and white lichen are also present covering ~30% of the area. Five meters below the site, there is a moderate Fucus pocket covering ~50% of the surface.

This subdivision has a tomolo Blota on the tomolo including a clam bed with Sacidomus, Protelphera, Triene (young clams 12 yrs old were found); a moderate to dense mussel bed. The beds are susceptible to trampling; access should be restricted.
MAYSAP 1991
OG SKETCH MAP
GREG CHANEY
TEAM 5

SEGMENT: EV 70 D
DATE: MAY 15, 1991
AIR P.#: PIMC-005-225

LEGEND

<table>
<thead>
<tr>
<th>BEDROCK</th>
<th>BOULDERS</th>
<th>FINE BED.</th>
<th>DRIFT LOG</th>
<th>GRASS</th>
<th>BRUSH</th>
<th>FOREST</th>
<th>OILED PIT</th>
<th>NO OIL PIT</th>
<th>PHOTO</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SCALE 50 m

PRINCE OF WALES PASSAGE

Tombolo area, some animal bed and clam bed. Flow is east to west.

Moderate Focus covering 25% of the sediments.
1991 MAYSAP EVALUATION

SEGMENT: EV 070  SUB:_ G_ REGION: FWS  SURVEY DATE: 5/25/91

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

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____________________________________

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. 2 SEGMENT EU 70 SUBDIVISION 0 DATE 5/25/91

ADEC
NAME: Peter Montenegro SIGNATURE: [Signature]

NTR: TREATMENT RECOMMENDED

The AP in area F6 was broken up, none remained. The oiling should have been left for later removal. It was well broken up and scattered.

Area Q has an asphalt mat entirely visible from the surface. This oil is well packed and gluing sediments together. Most of this is easily separable, and break up is appropriate for the rest. This oiling is made up of a hard layer protecting a mussy layer, which extends up into the gravel.

EXXON
NAME: FEBE A. G. SIGNATURE: [Signature]

☐ NTR The oil in section G+1 was broken up or packed up.

The patch of asphalt on section Q might be broken up.

NDMANAGER
NAME: DeWitt F. Kendry, OF WSP'S SIGNATURE: A S. Kennedy

☐ NTR Section F had P P which was removed by crew.

Section Q has the most problematic oil, some is mixed with veg chaff.

Brag Rye grass is invading this area.

USCG/NOAA
NAME: LCDR D. Singeleck, Infantry, THURSDAY, 3/18

☐ NTR USCG broke up7 comments within section F. In section Q there is a small area of P P that needs to be broken up. However, manual treatment may damage the beach grass that is growing within the shoreline D3-V3

☐ NTR TREATMENT RECOMMENDED.
**MAYSAP SHORELINE OILING SUMMARY**

**TEAM NO.** 2  
**OG** Reimer  
**BIO** Bair  

**ADEC** Montastruc  
**EXXON** Box  
**LANDMANAGER** Kenney, for USES  
**USCG/NOAA** Swatek-Dawth  
**DATE** 5/25/91

**TIME** 17:25 to 19:20  
**TIDE LEVEL** 2.92 ft. to 3.71 ft.  
**ENERGY LEVEL:** ☐ H ☐ M ☐ L

**SURVEYED FROM:** ☑ FOOT ☑ BOAT ☑ HELO  
**WEATHER:** ☐ SUN ☑ CLOUDS ☐ FOG ☐ RAIN ☐ SNOW

**TOTAL LENGTH SHORELINE SURVEYED:** 1786 m  
**NEAR SHORE SHEEN:** ☐ BR ☑ RB ☑ SL ☐ NONE

**EST. OIL CATEGORY LENGTH:**

<table>
<thead>
<tr>
<th>W</th>
<th>M</th>
<th>N</th>
<th>V</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>35</td>
<td>19</td>
<td>453</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL SURVEYED:** 7827 m

<table>
<thead>
<tr>
<th>LOC</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT</th>
<th>SHORE SLOPE</th>
<th>AREA</th>
<th>ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>S</td>
<td>BR H 0.5 3</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>S</td>
<td>BR H 0.5 1</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>T</td>
<td>BR H 0.5 80</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>T</td>
<td>PC M 10 80</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>S B</td>
<td>PC M 1 15</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>S</td>
<td>PC M 3 35</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>S</td>
<td>BC M 3 15</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>T</td>
<td>PC M 0.25 50</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>T</td>
<td>PC M 0.5 20</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL:**

<table>
<thead>
<tr>
<th>L</th>
<th>WIDTH</th>
<th>M</th>
<th>LENGTH</th>
<th>S</th>
<th>U</th>
<th>M</th>
<th>L</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0</td>
<td>35</td>
<td>19</td>
<td>453</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SURFACE OIL CHARACTER:**

- B: BROWN  
- R: RAINBOW  
- S: SILVER  
- N: NONE

**SURFACE SEDIMENT:**

- BR: BROWN RICH  
- PC: PARCHED

**SHORE SLOPE:**

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

**AREA:**

- S: SMALL  
- U: MEDIUM  
- M: LARGE  
- L: VERY LARGE

**ZONE:**

- X

**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-2

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>DEPTH</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED ZONE</th>
<th>CLEAN</th>
<th>H20 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>20</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>BCP - PC-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>20</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>BCP - PC-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>10</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>B - PC - R</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>10</td>
<td>2 - 5</td>
<td>Y</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>P - PC - G</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>10</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>PC - CSP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>20</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SURFACE- SUBSURFACE SEDIMENTS:**

- BCP: BROWN COPPER  
- PC: PARCHED  
- R: RAINBOW  
- G: GREEN  
- CSP: COPPER SPARKLE

**SHEEN COLOR:**

- B: BROWN  
- R: RAINBOW  
- S: SILVER  
- N: NONE

**OG COMMENTS:**

Buck/ Boulder shoreline with few small now show residue showing turbidity. The northern turbidity has dropped a fair bit of A in People across to 972. This is highly removed on beaches.

The southern Island has few small packets of A in the main Harbor set at 972 in C/B (0.1). The remainder of the Shoreline has sporadic GT (972) with random Tar balls.

Revised: ME 5/4/91  
Reviewed: 5/29/91
MAYSAP SHORELINE OILING SUMMARY

TEAM NO. 4
OG: Reiner
ADEC: Montana
EXXON: Box

BIO: G
e
LANDMANAGER: K
USCG/NOAA

EXxon: Box

DATE: 12-1991
TIME: 17:25 to 19:20
TIDE LEVEL: 2.9 ft to 3.71 ft
ENERGY LEVEL: H M L
WEATHER: SUN CLOUDS FOG RAIN SNOW
TOTAL LENGTH SHORELINE SURVEYED: 1786 m
NEAR SHORE SHEEN: BR RB SL NONE
EST. OIL CATEGORY LENGTH: W 0 m M 20 m N 19 m V 453 m

<table>
<thead>
<tr>
<th>LOC</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT TYPE</th>
<th>SHORE SLOPE</th>
<th>AREA Width</th>
<th>AREA LENGTH</th>
<th>ZONE</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

DISTRIBUTION: C = 91-100%; B = 81-90%; P = 11-50%; S = 1-10%; T = <1%
SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE

PHOTO ROLL # MAYSAP--- FRAMES

PIT NO. OIL CHARACTER
---
OP HOR MOR LOR TR NO

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

OG COMMENTS:

Reviewd: NC 5/7/91
revised 5/29/91
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2
SEGMENT # 34 = 3.4
SUBDIVISION 3
SEA STATE 1-2
WIND SPEED/DIRECTION 5-15
BIOLGIST S. M.

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

A: CT in barnacle zone. Eagles + Herring Gulls. Amphipods +
   Limets under boulders in lower zones
B: AP near Herring Gulls + Algae. Lower zone area of "A"
C: CT high in FIR in lichen zone. Two pools in lower zones
   and to the south support sculpins, limets, chitons, barnacles etc
D: CT under boulders in the lichen to upper barnacle zone
   Oiled barnacles observed in area. Act #2 in lichen zone. Lower
   CT same with Eunds + recent spat.
E: AP in lichen - screen algae zone - beachgrass nearby. Lichen at A + 3
F: AP is near with no biota - rock outcrops decayed support barnacles,
   etc. A dense mussel bed is seaward of the outcrops
H: CT in upper to mid FIR in barnacle + lower FIR zones. No oiled
   barnacles noted. Act near A.
E: CT in lichen to upper barnacle zone. AP again in barnacle zone.
   Lower CT has patchy mussels, barnacles and mussels
H: CT reaches to barnacle + Eunds zones
O: AP/CT in lichen zone. Mussel beds dense in lower FIR
E: CT on rock face in lichen zone reaching to upper edge of barnacles.
   No oiled barnacles observed.

TA additional removal of AP is required under "O-6" avoidance of
mussels in lower FIR should be strengthened.

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>
</tr>
</thead>
<tbody>
<tr>
<td>Eagles</td>
<td>♂ ♀</td>
<td>3</td>
<td>Sculpins</td>
</tr>
<tr>
<td>Seabirds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waterfowl</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gulls/kittiwakes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shorebirds</td>
<td></td>
<td></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>
</tr>
</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>3 (with pups)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pinnipeds(specific)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seals(specific)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Shoreline subdivision map showing important biological features attached.

Reviewed M.B. 5/19/91
1991 MAYSAP EVALUATION

SEGMENT: EV 070 SUB: F REGION: PWS SURVEY DATE: 5/15/91

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

Ecological/Constraints (see page two for details) Eagle nest, Anadromous stream, Fish harvest area, Subsistence - Deer harvesting

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

SHPO Signature: [Signature] Date: 5/30/91

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>N</td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
</tbody>
</table>

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

Comments:
INITIAL: __________________________

TAG: __________________________

FOSC: __________________________

TAG APPROVAL DATE: 5/29/91
FOSC APPROVAL DATE: 6/15/91

ADEC
EXXON
USCG
NOAA

E. E. PAGE, SOR, 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.

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.

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-70  
**SUBDIVISION** F  
**DATE** 5/15/91

<table>
<thead>
<tr>
<th>ADEC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NAME</strong></td>
</tr>
<tr>
<td><strong>SIGNATURE</strong></td>
</tr>
</tbody>
</table>

**NTR** Bay has removed well oiling observed is light oil  
no treatment is needed here.

<table>
<thead>
<tr>
<th>EXXON</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NAME</strong></td>
</tr>
<tr>
<td><strong>SIGNATURE</strong></td>
</tr>
</tbody>
</table>

**NTR** Natural Clean-up continues to improve cosmetic appearance. Biota abundant & healthy.

<table>
<thead>
<tr>
<th>LANDMANAGER</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NAME</strong></td>
</tr>
<tr>
<td><strong>OF</strong></td>
</tr>
<tr>
<td><strong>SIGNATURE</strong></td>
</tr>
</tbody>
</table>

**NTR** A light sheen in one pit. No observable oil in pit.  
no oil found. Entire Sub walked  
No Bio

<table>
<thead>
<tr>
<th>USCG/NOAA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NAME</strong></td>
</tr>
<tr>
<td><strong>SIGNATURE</strong></td>
</tr>
</tbody>
</table>

**NTR** Further clean-up operations would cause more environmental harm than the oil to be removed.

No significant surficial oiling occurs in this subdivision. However  
subsurface oil (MSOF) exists at oiling sites A which should be treated.  
DWC
**MAYSAP SHORELINE OILING SUMMARY**

**PAGE 5 OF**

**SEGMENT:** EV 70

**TEAM NO.:** 5

**NO.:** CHANEY

**BIO.:** CRANK

**DATE:** May 15/91

**TIME:** 19:25 to 20:45

**TIDE LEVEL:** 3.5 ft. to 2.5 ft.

**ENERGY LEVEL:** □ H □ M □ Y

**SURVEYED FROM:** Foot □ Boat □ Helo

**WEATHER:** □ Sun □ Clouds □ Fog □ Rain □ Snow

**TOTAL LENGTH SHORELINE SURVEYED:** 1623 m

**NEAR SHORE SHEEN:** □ BR □ AB □ SL □ None

**EST. OIL CATEGORY LENGTH:** W 10 m M - m N 4 m VL 90 m NO 159 m US 1250 m

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT</th>
<th>SHORE SLOPE</th>
<th>WIDTH</th>
<th>LENGTH</th>
<th>AREA</th>
<th>ZONE</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
<td>P</td>
<td>P</td>
<td>L</td>
<td>6</td>
<td>10</td>
<td>S</td>
<td>Ul</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>C</td>
<td>G</td>
<td>P</td>
<td>L</td>
<td>1</td>
<td>1</td>
<td>S</td>
<td>Ul</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>C</td>
<td>G</td>
<td>P</td>
<td>L</td>
<td>1</td>
<td>1</td>
<td>S</td>
<td>Ul</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>B</td>
<td>T</td>
<td>BG</td>
<td>H</td>
<td>5</td>
<td>20</td>
<td>S</td>
<td>Ul</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>T</td>
<td>T</td>
<td>BP</td>
<td>M</td>
<td>5</td>
<td>70</td>
<td>S</td>
<td>Ul</td>
<td></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 - 17

**FAMES:** G - 9

**PIT NO.:**

<table>
<thead>
<tr>
<th>DEPTH (cm)</th>
<th>OP</th>
<th>HOR</th>
<th>MOR</th>
<th>LOR</th>
<th>TR NO.</th>
<th>OILED ZONE</th>
<th>CLEAN BELOW</th>
<th>H2O LEVEL</th>
<th>SHEEN COLOR</th>
<th>BRASN</th>
<th>S</th>
<th>Ul</th>
<th>MI</th>
<th>LI</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>35</td>
<td>2</td>
<td>50</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>15</td>
<td>15</td>
<td>G</td>
<td>-</td>
<td>V</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>50</td>
<td>1</td>
<td>30</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>30</td>
<td>N</td>
<td>G</td>
<td>-</td>
<td>V</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>30</td>
<td>1</td>
<td>30</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>15 - 20</td>
<td>15</td>
<td>B</td>
<td>-</td>
<td>V</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>35</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>15</td>
<td>N</td>
<td>G</td>
<td>-</td>
<td>V</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>30</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>15</td>
<td>N</td>
<td>G</td>
<td>-</td>
<td>V</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>25</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>15</td>
<td>N</td>
<td>G</td>
<td>-</td>
<td>V</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>25</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>15</td>
<td>N</td>
<td>G</td>
<td>-</td>
<td>V</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>25</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>15</td>
<td>N</td>
<td>G</td>
<td>-</td>
<td>V</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SHEEN COLOR:** B = Brown; R = Rainbow; S = Silver; N = None

**THE OILED LENSE IN PIT:**

**OG COMMENTS:** ⑤ Was indistinct due to rapid flushing with water. Bright rainbow sheen in pit. The highest concentration of oil observed was located on the west side of the fallen tree in area A. The sediments in this area had a rainbow sheen when we first observed them. After digging pit ⑤ a bright band of sheen spread from the hitz to the waterline. These areas might appear less oiled on a dry day due to lack of sheen.

**REVIEWED:** 5/19/91

**REVIEWED:** MC 5/1/91
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM 4

Iraj

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

TOTAL BIRDS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eagles</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Seabirds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waterfowl</td>
<td>2 Ducks/Canard/Sea</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gulls/Kittiwakes/Geese</td>
<td>2</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Shorebirds</td>
<td>2 Oystercatcher/Sea</td>
<td>170</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>
</tr>
</tbody>
</table>

MARINE 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>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pinnipeds(specific)</td>
<td>1</td>
<td>Harbor Seal</td>
<td>2</td>
</tr>
<tr>
<td>Sea Lions(specific)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

LAND MAMMALS

<table>
<thead>
<tr>
<th>LAND MAMMALS</th>
<th>SPECIES</th>
<th># OBSERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Deer</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Harbor Seal</td>
<td>1</td>
</tr>
</tbody>
</table>

Shoreline subdivision map showing important biological features attached.

Reviewed A.B. 5/19/91
(D) Area is located low in the U1T2. Sparsely concentrated barnacles and limpets and rare mussels are present in site. Biota cover is 10%. Directly below site, high in M1T2, biota cover is 30%. There is a dense Fucus bed at the +3' tide level with a moderate concentration of limpets, limpets and mussels. Biota cover is 70%. Sandpipers were feeding in the vicinity during survey.

(E) Area is located in the U1T2 next to a small stream. Fucus is the dominant species; rare barnacles are also present. Biota cover is 20%. In the M1T2, Fucus is dense, barnacles are moderate, me and filamentous green algae are present. Biota cover is 70%.

(F) Area is located high in the U1T2. Black lichen covers ~80% of the surface. In the M1T2, main biota present are patchy, dense barnacles and continuous moderate Fucus. Biota cover is ~70%.

(G) Area is located in the U1T2. Barnacles cover ~5% of the surface sediments. Below site, in the M1T2 there is a moderate concentration of barnacles, Fucus (with sporocysts and maturing concepts) and mussels. Littoral sea sponges. Low in the zone is a clam bed. Biota cover is 70%.

Guquete Bay is a habitat area for wildlife. Deer, waterfowl and shorebirds were observed during survey.
MAP 1 of 2

LEGEND

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

SCALE
200 METERS

G 5x70 RANDOM DRIPS ON BOULDERS CT. TR.

Clam bed

F 5x20m RANDOM DRIPS ON BOULDERS CT. TR.

5x70 Passage

EVANS ISLAND

E 1x1m SOR 60%

D 1x1m SOR 100%

SEE INSET FOR AREAS A to C & PITS 1 to 6

INSET 1

GUGUAK BAY

EV 60A

STREAM

NO SURVEY
FUCUS HAS A DENSE CONCENTRATION IN ASSOCIATION WITH STREAMS.

SANDPIPIERS WERE OBSERVED FEEDING BETWEEN THE TWO STREAMS.

1 PATTIE AP PU

1 PATTIE PU
LEGEND

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

SCALE

ROUGHLY 85 METERS

MAP 1991
OG SKETCH MAP/BioMap
GREG CHANEY/Don Cline/Crank
TEAM 5
SEGMENT: EVJD F
DATE: MAY 15/1991
AIR P. #: PIA-C-985-227

INSET 1

A 6 x 10 m SOR 60% FL 40%

LARGE FALLEN TREE

TREES

DRAINAGE

LARGE BOULDER

B 1 x 1 m SOR 100% BRIGHT RAINBOW SHEEN ON SURFACE

SOIL SEDIMENTS at low tide today, one team recovered some up to his knees

EVANS ISLAND

Fuels concentration is dense in proximity of the stream

C 1 x 1 m FL 100% RAINBOW SHEEN ON SURFACE

SMALL STREAM

GU GUAK BAY
1991 MAYSAP EVALUATION

SEGMENT: EV 070 SUB: D REGION: PWS SURVEY DATE: 5/15/91

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: Charles E. Hesse Date: 5/30/91

RECOMMENDATIONS:
TREATMENT REQUIRED (Y or N) INITIAL TAG FOSC

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

COMMENTS:
INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: MAY 29 1991 FOSC APPROVAL DATE: 6/15/91

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.
MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5 SEGMENT EV-70 SUBDIVISION 0 DATE 5/15/91

ADEC
NAME John Hayes SIGNATURE

NTR Tide was too high to survey 6/12 mussel bed area, oily absorb
was not M+U312 only had trace subsurface oily. 112 oz of MS/or
eye gius in the 5/12 of this segment No treatment recommended at
this time.

EXXON
NAME John Dean SIGNATURE

NTR Little evidence of Oiling Present, None Recoverable

LANDMANAGER
NAME Steve Ward SIGNATURE

NTR This area Recovering very well, very little history of oil
Debris that was there is just about gone. No trash
seen, one pit showed a light sheen. But no observable
oil could be found.
No Bio.

USCG/NOAA
NAME BREMER/CLINE SIGNATURE COO Kirk Walker

NTR Small splash of hard asphaltic residue found in supratidal.

Oiling is insignificant in this subdivision. Subsurface oiling was
expected, but none was found. I don't recommend any further treatment.

Dace
MAYSAP SHORELINE OILING SUMMARY

SEGMENT EV 70
SUBDIVISION D
DATE MAY 15, 91

TEAM NO. ___
TEAM LEADERS:

CHANEY
CRANK

ADEC
HAYES

LANDMANAGER:
WARD

USCG/NOAA
DREHER/CLINE

TIME 12:10 TO 12:50
TIDE LEVEL +4 ft. to 6.5 ft.
ENERGY LEVEL: [ ] H [ ] M [ ] L

SURVEYED FROM:
[ ] FOOT [ ] BOAT [ ] HELO
WEATHER: [ ] SUN [ ] CLOUDS [ ] FOG [ ] RAIN [ ] SNOW

TOTAL LENGTH SHORELINE SURVEYED: 279 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 TYPE</th>
<th>SHORE SLOPE</th>
<th>AREA</th>
<th>ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>T T T</td>
<td>BC M</td>
<td>5 20</td>
<td>S</td>
<td>[ ]</td>
</tr>
<tr>
<td>B</td>
<td>T T T</td>
<td>BC M</td>
<td>8 10</td>
<td>S</td>
<td>[ ]</td>
</tr>
<tr>
<td>C</td>
<td>T T T</td>
<td>BR H</td>
<td>3 15</td>
<td>S</td>
<td>[ ]</td>
</tr>
<tr>
<td>D</td>
<td>T T T</td>
<td>BC M</td>
<td>3 10</td>
<td>S</td>
<td>[ ]</td>
</tr>
<tr>
<td>E</td>
<td>T T T</td>
<td>BP M</td>
<td>5 2</td>
<td>S</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

DISTRIBUTION: C = 91-100%; B = 51-90%; F = 11-50%; S = 1-10%; T = <1%

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

PHOTO ROLL # MAYSAP-5-17 FRAMES 1-5

PIT NO. PIT DEPTH OIL CHARACTER OILED ZONE CLEAN BELOW H2O COLOR PIT ZONE SUBSURFACE SEDIMENTS NOTES

1 15
2 20
3 25
4 20
5 25
6 15
7 30
8 25
9 30

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

OG COMMENTS:
FEW SPLASH CT & CV REGIONS REMAIN, SCATTERED SMALL PATTIES WERE ALSO FOUND IN AREAS A B E. THE ONLY SUBSURFACE OIL WAS FOUND IN PIT 9. AN OIL FILM WAS OBSERVED ON THE SEDIMENTS BUT HORIZON WAS IMPOSSIBLE TO DETERMINE DUE TO RAPID FLUSHING OF PIT WITH GROUND WATER. SUBSURFACE OILING DID NOT SEEM FAR BEYOND THE LOCAL AREA OF PIT 9.

Reviewed 5/19 94
Revised: 5-30 92
LEGEND

<table>
<thead>
<tr>
<th>Bedrock</th>
<th>Boulders</th>
<th>Fine Bed</th>
<th>Drift Log</th>
<th>Grass</th>
<th>Brush</th>
<th>Forest</th>
<th>Oiled Pit</th>
<th>No Oil Pit</th>
<th>Photo</th>
</tr>
</thead>
</table>

**SCALE**: 50 m

**FALLEN TREE**

**SEGMENT**: EV 70 D
**DATE**: MAY 15, 1991
**AIR P.**: PIM-005 225

**A** 5x20m
AP, CV, CT, ST
Trace: Splashes & patches between boulders

**B** 8x10m
AP, CV, CT, ST
Trace: Splashes and 3 to 4 patties

**C** 3x15m
CT Trace
Few splashes on boulders

**D** 3x10m AP & CT
Trace Remnant
Patties and splashes

**E** 5x2m
AP, CV, CT
Trace
Oiled grass ~1%
Hand fulls of oiled grass in bedrock
Cracks and between boulders

**NO SURVEY**

**NO OIL PIT**

**AP, CV, CT**

**FELL TREE**

**NO OIL**

**SILVER SHEEN ON SEIDS IN PIT BUT IT RAPIDLY FILLED WITH WATER**
HAYs.AP  BIOLOGICAL SUMMARY FORM

TEAM # 5  DATE 15 May 1991  pg 1 of 2

SEGMENT # EV-70  TIDAL HEIGHT (Range) +4 to +6.5

SUBDIVISION D  BIOLOGIST

SEA STATE 1  WIND SPEED/DIRECTION 15 knots/N

PHOTOGRAPHS: ROLL #  FRAME #

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

(A) Site is west of the tombolo, located in the Uitz and Mitz. Species and biota concentrations are similar to Site A.

(B) Site is east of the tombolo, located in the Mitz. Fucus is rare, both sporangia and maturing conceptacles are present. Barnacles are also rare. Littorina and limpets are sparse. Barnacle cover is ~30%.

(C) Site is east of the tombolo, located in the Mitz. Fucus is rare, both sporangia and maturing conceptacles are present. Barnacles are also rare. Littorina and limpets are sparse. Barnacle cover is ~40%.

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>1</td>
<td></td>
</tr>
<tr>
<td>Seabirds</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Waterfowl</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Gulls/kittiwakes</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Shorebirds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crows</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Birds</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

MARINE MAMMALS

<table>
<thead>
<tr>
<th>SPECIES</th>
<th># OBSERVED</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sea Otters</td>
<td>3 (inc 1)</td>
<td></td>
</tr>
<tr>
<td>Pinnipeds (specify)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whales (specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

LAND MAMMALS

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

(D) Area is located in the U11Z. There is an approximate 1% biota cover within the site, including barnacles, black lichen, littorinid snails and limpets. Two meters below the site, barnacles are dominant species with a moderate concentration covering ~40% of the surface. Seaweeds, sparse mussels and moderate concentrations of littorinid and limpet species are also present.

Pit #9

Subsurface oil in the U11Z. There are a few barnacles present in the site covering none to 6% of the surface. Four meters below the pit, Fucus has a sparse to moderate concentration, barnacles are sparse, and littorinid species are sparse with various age classes present. Biota cover is ~50%.

(E) Area is located in the SUPRA on cobbles and boulders. Black lichen is encrusted into ~40% of the sediment surfaces. Rye grass, moss and white lichen are also present covering ~36% of the area. Five meters below the site, there is a moderate Fucus pocket covering ~50% of the surface.

This subdivision has a tombolo. Biota on the tombolo includes a clam bed with Saxidomus, Protothaca, Tereus (young clams 2 yrs old were found); a moderate to dense mussel bed. The beds are susceptible to trampling; access should be restricted.
LEGEND

<table>
<thead>
<tr>
<th>Feature</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bedrock</td>
<td>O</td>
</tr>
<tr>
<td>Boulders</td>
<td>O</td>
</tr>
<tr>
<td>Fine Bed.</td>
<td>OOO</td>
</tr>
<tr>
<td>Drift Log</td>
<td>O</td>
</tr>
<tr>
<td>Grass</td>
<td>YYY</td>
</tr>
<tr>
<td>Brush</td>
<td>OFO</td>
</tr>
<tr>
<td>Forest</td>
<td>O</td>
</tr>
<tr>
<td>Oiled Pit</td>
<td>A</td>
</tr>
<tr>
<td>No Oil Pit</td>
<td>A'</td>
</tr>
<tr>
<td>Photo</td>
<td></td>
</tr>
</tbody>
</table>

SCALE 50 m

PRINCE OF WALES PASSAGE

Tombolo area is characterized by dense mussel bed and a gravel bed. Frets is a term used to describe the area:

Moderate Fucus covering 40% of the sediment.
ANADROMOUS FISH STREAM ASSESSMENT

REGION: PRINCE WILLIAM SOUND
SEGMENT: EV-70
SUBDIVISION: F
STREAM NO: 226-30-16840
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ EV-70 F STREAM NO: 226-40-16509 DATE 4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Subject stream plus: 226-40-16498, 226-40-16502, 226-40-16494
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
1K Purse seine hook-off (7/20 to 9/30)
5T-4 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 Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: ___________________________ DATE: ___________________________

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
_____ Tarmat Removal _____ Beach Cleaner
_____ Other (see comments)

COMMENTS: Recommended treatment is manual removal of tarmat where shown on attached sketch map. Work should be conducted between 6/1 and 7/10 based on eagle nest and salmon constraints with approval of USFWS regarding eagle nest.

TAG COMMENTS: __________________________________________________________

TAG APPROVAL DATE: ___________
ADEC _______________ EXXON _______________ FOSC: _______________ DATE: ___________
NOAA ___________________ USCG ___________________
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 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 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

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

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

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

1D Esther Hatchery release (4/15 to 6/15)
1E Main Bay Hatchery releases (4/20 to 6/15)
1F Swan Bay Hatchery releases (4/15 to 6/1)
1G Curnow 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: ADF&G Larry Peltz 424-3214

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 unvegetated intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

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

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

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.

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

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 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

7F All Bald Eagle nests (3/1 to 6/1)

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U Recreation: Tent sites (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 (6/1 to 9/30)

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

AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359
FIELD SHORELINE COMMENT SHEET

SEGMENT 16507 TO A  SUBDIVISION: 16509  DATE 4/21/90

USCG NAME  A. W. McMAHON  SIGNATURE  

☑ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

LAND MANAGER
NAME  NO Team member  SIGNATURE  

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED
### Shoreline Oiling Summary (ANAD.)

**CO:** William Reid USCG McMahon  
**BIO:** Michael Sweeney ADFG Mike Wunderer  
**TEAM NO.:** 15  
**EST. SUBDIVISION LENGTH:** 6.0 m  
**UPLANDS DESCRIPTION:** Grass Forest Rock  
**SURVEYED FROM:** Foot Boat Helo  
**SURFACE SEDIMENTS:** R  
**SLOPE:** Long Hang Vert  
**WAVE EXPOSURE:** Low Med High  
**OIL CATEGORY LENGTH:** W  

### Surface Oil

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONEs</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASPHALT PAVEMENT</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>POOLED</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COVER</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COAT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STAIN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MOUSSE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PATTIES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TARBALLS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FILM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO OIL</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Pavement

- PAVEMENT H F  
- PATIES/TARBALLS
- NEAR SHORE SHEEN?
- OILED DEBRIS

### Subsurface Oil

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>COLLECTED INTERVAL</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONEs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3.5</td>
<td>X</td>
<td>Oiled Interval</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>1.5</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>1.5</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

### Comments

- *OILED INTERVAL < 5 cm in PIT NOS 1 AND 3 DOES NOT CONSTITUTE SUBSURFACE OIL.

**Reviewed:** [Signature]  
**Date:** 4-23-9
SEGMENT:

STREAM: 226-40-16509

DATE: 7/1/90

CHECKLIST:
- N Amor
- Approx. Scale
- Seg/Eve Entry
- Oil Dist.
- Wash
- Length
- % Cover
- Substrate Character
- Est. HWL/WWL
- SSL
- Profile Location(s)
- Profile(s)
- Plot Location(s)
- Photo Location(s)

LEGEND:
1 ▲
- Pit - No Subsurface Oil

2 ▲
- Pit - Subsurface Oil

CT/C
- Canicularia Distribution

CT/B
- Enulatum Distribution

CT/P
- Patchy Distribution

CT/S
- Splashed Distribution

CVD
- Cited Vegetation

1 ↔
- Photo location, direction, and number

Oil Character Length (m): AP PO CV CT ST MS PT TB FL NO
ADFAF MULTI-ASSESSMENT DATA FORM

1. SURVEY TYPE: DS 35 OS TS AVS SCDS 1994S PTA
2. METHOD: Aerial
3. DATE: 4/21/90
4. START TIME: 1515
5. STOP TIME: 1530
6. SEGMENT #: EV-070A
7. STATION #: 226-40-1659
8. X-UNIT #: $12
9. STAT AREA: 
10. LAT: 
11. LON: 
12. SOURCE: Map
13. LOCATION: West Shore Evans Is.
14. DESCRIPTION: 

EXTENT OF OIL

<table>
<thead>
<tr>
<th>SHORELINE</th>
<th>STREAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>W</td>
</tr>
<tr>
<td>100y</td>
<td>20y</td>
</tr>
</tbody>
</table>

36. CATALOGED ANAD. FISH STREAM Y N
37. CATALOG #: 226-40-1659
38. STREAM NAME: 
39. OIL IN STREAM DEPT Y N
40. OIL ON STREAM BANK Y N
41. OIL ON BEACH ADJACENT TO MOUTH Y N (within 50 meters)
42. OIL WITHIN 1 MILE OF STREAM Y N
43. ANADROMOUS FISH PRESENT Y N
44. ANADROMOUS FISH OBSERVATION 

OIL

CONTRIBUTED: VERY SPORADIC STAIN, ASPHALT, TAR, AND BURIED MOUSE. QUANTITY AND DISTRIBUTION RELATIVE TO STREAM DO NOT PLACE SALMON OR OTHER ORGANISMS AT RISK. NO TREATMENT IS RECOMMENDED.
Vegetation

Sporadic tar patches on cobble and boulders.

Isolated pockets of buried mousse.

Vegetation

Very light, very sporadic tar patches in mid-upper intertidal sediments from 0-3 cm
Segment EV 70A (Gugak Cove)  
Stream 226-40-1650.9  

Ecological Summary

This stream has a relatively stable delta composed of pebbles/sand and mud, with a well-developed infaunal community (clams, worms, shrimp, etc.). Sparse scattered clumps of mussels, barnacles, and Fucus occur on isolated pebbles in MTZ and UTZ, along with abundant littorines, dogwhelks, and hermit crabs. Light patches of asphalt and stains were found in UTZ. If any cleanup operations are conducted, trampling and disturbance of LTZ should be avoided.

Michael Fawcett
ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-40-16509

SEGMENT EV-70 SUBDIVISION F

WORK WINDOW

<table>
<thead>
<tr>
<th>Tarmac Removal</th>
<th>OPEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioremediation Less Than 100m From Stream</td>
<td>WORK PRIOR TO 7/10 (ADF&amp;G MONITOR REQ.)</td>
</tr>
<tr>
<td>Bioremediation More Than 100m From Stream</td>
<td>WORK PRIOR TO 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  
ADF&G catalogued stream (226-40-16509) is in Subdivision F. 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. ADF&G catalogued streams (226-40-16498, -16502, and -16494) are also within segment, however, these do not affect work site.

1K Purse Seine Hook-off  
Closed to bioremediation after 7/20. No constraint to tarmac removal.

5T Bald Eagle Nest  
NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision F work site.

7II Subsistence: Deer Harvesting  
Closed to bioremediation after 8/15. No constraint to tarmac removal.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from active nests. No flushing of pollutants or sediments into stream drainage; do not allow lnpol to enter stream flow. On-site examination and consultation by ADF&G monitor is required prior to bioremediation in order to authorize a setback distance from the stream during chemical application; if ADF&G monitor's presence is impossible, authorization may be given by the ADEC monitor. Avoid any unnecessary disturbance or damage to uncleared biota and substrate.

SEE SUBDIVISION CONSTRAINT ADDENDUM EV-70F FOR ADDITIONAL CONSTRAINT INFORMATION

FOSC [Signature] Date 6-10-90
SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Subject stream plus: 226-40-16498, 226-40-16502, 226-40-16494
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
1K Purse seine hook-off (7/20 to 9/30)
5T-4 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 Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: [Signature] DATE: 5/20/90

Subsurface Oil Observed: Yes No Maximum Depth

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
X Tarmat Removal Beach Cleaner

COMMENTS: Recommended treatment is manual removal of tarmat where shown on attached sketch map. Work should be conducted between 6/1 and 7/10 based on eagle nest and salmon constraints with approval of USFWS regarding eagle nest.

TAG COMMENTS: Bioremediation (customized) as required following Tarmat Removal

TAG APPROVAL DATE: 5/18/90
ADEC: Art Weinert
EXXON: [Signature]
NOAA: Ken Peterson
USCG: G.A. Reeder (A.T. Turner)
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ EV-70 F  STREAM NO: 226-40-16509    DATE  4/21/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Subject stream plus: 226-40-16498, 226-40-16502, 226-40-16494
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
1K Purse seine hook-off (7/20 to 9/30)
ST-4 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 Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: [Signature] DATE: 5/22/90

Subsurface Oil Observed: Yes X No  Maximum Depth_____

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
X Tarmat Removal  ____ Beach Cleaner
____ Other (see comments)

COMMENTS: Recommended treatment is manual removal of tarmat where shown on attached sketch map. Work should be conducted between 6/1 and 7/10 based on eagle nest and salmon constraints with approval of USFWS regarding eagle nest.

TAG COMMENTS: Bioremediation (CustomChem) As Required Following Tarmat Removal

TAG APPROVAL DATE: 5/18/90
EXXON [Signature] [Signature]
NOAA [Signature] [Signature]
USCG [Signature] [Signature]
Sporadic tar patches on cobble and boulders.

Isolated pockets of buried muskeg.

Vegetation

Vegetation

Very light, very sporadic tar patches in mid-upper intertidal

Lightly oil sediments from 0-3 cm
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-71

SUBDIVISIONS: A (1 OF 3)
SEGMENT ST/ EV-71 SUBDIVISION A (1 OF 3) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
ADF&G anadromous stream no 226-40-16475, 16484, 16477.
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
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. 1 eagle nest on border with EV-68.

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 494 m: No Oil 258 m
Subsurface Oil Observed: Yes X No Maximum Depth 5+ cm

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

COMMENTS: __________________________

__________________________

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)
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.

1B

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
Haring 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 (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 8/1. 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)
Forest Service cabins (6/1 to 9/15)
Lodge (6/1 to 9/15)
Special use destination

6Z
Subsistence area:
Salmon harvesting (5/1 to 9/30)
Finfish harvesting
Deer harvesting (8/15 to 2/28)
Invertebrate harvesting

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

SEGMENT ST / EV-71 SUBDIVISION: A DATE 3/31/90

NOAA NAME GARY SHUGENAKA SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED COMMENTS

UPPER INTESTINAL ZONE HAD NARROW BANX OF OILING IN PORTION OF SEGMENT BETWEEN THE TWO EXISTING STREAMS FEEDING INTO THE EMBOYMENT. EXTENT OF OILING WAS SPORADIC AND RANDED FROM SPATTERS TO COVER TO SMALL 10CU PATCHES OF OILED VEGETATION. OILING DID NOT EXTEND BEYOND UPPER INTESTINAL. OG AND ADEC REPS OBSERVED NOTION PATCH OF COVER AS DESCRIBED ELSEWHERE IN THIS PACKAGE.

SNOW COVERED SUPRATTAL ZONE - AND ASSESSMENT OF ANY OILING AT THAT LEVEL WAS NOT POSSIBLE.

ADEC NAME John Hayes SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED COMMENTS

Two sections of oil beds but Special 1 100 meters (See sketch map). Both beds have for coast to 3 mill. 5 cm. Oiling to 5cm. Oiling is weathered and mostly on marks of cobble + gravel below border. Recommend manual removal of oiled beds. Also recommend working at mid-line to protect healthy rivers. 2 focus patches that are thriving on healthy. Both beds are near streams but not within 50 yds. No oil war observed within 50yds of streams that may be continous.
The rest of segment had patches of tar and weathered oil that were light to very light. Do not reccommend treatment to these.

LAND MANAGER NAME ______________ SIGNATURE ________________________

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED COMMENTS

NATIONAL FOREST SVC. REP NOT AVAILABLE
**SHORELINE OILING SUMMARY**

**TEAM NO.:** TIE LEVEL: 2.7 to 5.0  
**DATE:** 4/7/90

**APR-02-1990 20:49 FROM PACIFIC SEAHORSE TO 01#-001907643771# P.03**

<table>
<thead>
<tr>
<th>NO.</th>
<th>NAME</th>
<th>TITLE</th>
<th>SEGMENT</th>
<th>OILING SUMMARY</th>
<th>A (1 of 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Richard Ambrose</td>
<td>LAND REP</td>
<td>EV-71</td>
<td>JOSEPH</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Larry Olsen</td>
<td>ADEC</td>
<td></td>
<td>SHORELINE OIL</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Gary Shigenaka</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SUBDIVISION LENGTH:** 600 m

**DATE:** 4/7/90  
**TIME:** 13:00 to 14:00

**OIL CATEGORIES LENGTH:**

- **W:** 22 m  
- **M:** 98 m  
- **N:** 27 m  
- **VL:** 10 m  
- **NO:** 120 m

**SURFACE OIL**

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

**PAVEMENT:**

- **H:** 200 sq. m by 20 cm
- **F:** 100 sq. m by 10 cm

- **S:** 50 sq. m by 5 cm

**PATTERNS/TAR BALLS:**

- **NO:** 50 BAGS

**SURFACE OILS**

**NEAR SHORE SHEEN?**

- **NO:**

**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>OIL/FILM COLOR</th>
<th>PIT ZONE</th>
<th>SUBSURFACE SEDIMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>G, S</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>X</td>
<td>0-5</td>
<td>X</td>
<td>X</td>
<td>C, P, G</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>X</td>
<td>0-5</td>
<td>X</td>
<td>X</td>
<td>C, P, G</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>X</td>
<td>0-2</td>
<td>X</td>
<td>X</td>
<td>C, P, G</td>
</tr>
<tr>
<td>5</td>
<td>20</td>
<td>X</td>
<td>0-5</td>
<td>X</td>
<td>X</td>
<td>P, G, S</td>
</tr>
</tbody>
</table>

**COMMENTS:**

Oiling in subdivision consisted of a 450 m zone of weathered splattered oil located in the HETZ. The weathered oil was a black coat and located on the exposed face of cobble and boulder. The oil located on the sheltered side of cobble and boulders is brown coat. There is a small 1 m by 10 m patchy distribution of an oil cover near pits 2 and 4. The shore zone is mostly low angle boulder/cobble beach with some rock outcrops and two streams.

**REVIEWED**

- **DATE:** 4-9-90

Photographs:

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

...
SHORELINE ECOLOGICAL SUMMARY

Segment ST 3 ELEPHANT Subdivision A

Date (mo/day/yr) 3/31/90

Time (24 hr) 1:00 A.M. Biologist Ambrose

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

(B) Overall % cover of biota (% of segment):
Dense 40
Moderate 60
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)

<table>
<thead>
<tr>
<th></th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td>1U</td>
<td>1M</td>
<td>1L</td>
<td>1U</td>
<td>1M</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

Photographs:
Roll No. ST-11-1
Frames 14-15

Wildlife Observations/General Comments:
One or two seen. On high-angle beaches and rock walls, there was dense cover
of red algae (both on boulders and bedrock). Mytilus rare except in two
dense beds (see below) in mid tidal zone.

Ecological Considerations:
7/11, ST - 5': No bald eagles or nests seen.

One beach with oil had two dense Fucus/Mytilus patches, with Mytilus
imbued in pebbles. (Location noted on OCE's map.) These mussels would
be susceptible to trampling, which could be avoided by directing cleanup
crew away from streams, or having cleanup occur at high tide, when mussels
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-71

SUBDIVISIONS: B (2 OF 3)
SHORELINE EVALUATION

SEGMENT ST/ EV-71 SUBDIVISION B (2 OF 3) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADFG anadromous stream no 226-40-16494, 16484, 16477.
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-2 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. 1 eagle nest in EV-70, near border with Subdivision B.

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 118 m: No Oil 4957 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 _____ Removal
_____ Beach Cleaner
_____ Other (see comments)

COMMENTS:

____________________________________________________________________________

____________________________________________________________________________

____________________________________________________________________________

TAG COMMENTS:

____________________________________________________________________________

____________________________________________________________________________

____________________________________________________________________________

TAG APPROVAL DATE: ___________
ADEC EXXON FOSC: __________ DATE: ___________
NOAA USCG
FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ EV-71  SUBDIVISION: B  DATE 3/31/90

NAME: GARY SHIGENAKA  SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS:

This segment subdivision covered a relatively lengthy portion of shoreline and included different beach types with different vestiges of oiling. The section adjacent to and continuing north of subdivision EV-71A, ending about 1/2 mile northward, showed no evidence of oiling.

A cobble and boulder beach examined at a small embayment had weathered splatters on boulders and a band of residual oil on sediments, approx 3 cm deep and 1/4 or less wide extending for a length of 100 m. Oil was evident only along the northerly facing portion of the beach.

There was no oiled substrate in the bed of the stream itself, although the band of residual oil discussed above was in its vicinity to the south. No oil was noted north of the stream. The supratidal was covered by snow and not visible.

The remainder of the subdivision was largely free from evidence of oiling, with only occasional weathered splatters. Snow covered the supratidal in areas where beaches were well-defined, precluding assessment of underlying conditions.

Results from EV-71A and EV-71B suggest that north-facing beaches in this segment experienced a greater degree of exposure than other orientations.

ADEC
NAME: John Hoyes  SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS:

Oiling was very light at weathering. Oiling observed consisted of tar patches and bands of slimy oil. One area with dispersed oil on rim, continuity of residual oil present. Grasses drier to a film. Surface oil observed near weathering no treatments recommended.

S.u. Oiling was detected not near which was probably a stream.

LAND MANAGER
NAME: [Signature]

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS:

NAT'L FOREST REP NOT AVAILABLE

[Signature]
SHORELINE OILING SUMMARY

- **OG**: Mike Foget
- **USCG**: Gary Shigenaka
- **BIO**: Richard Ambrose
- **LAND REP**: Gary Haney
- **SEGMENT**: EV-71
- **SUBDIVISION**: "
- **TEAM NO.**: 11
- **TIDE LEVEL**: 2.7 to 0.2
- **DATE**: 4/7/90
- **EST. SUBMISSION LENGTH**: 575 m
- **SURVEYED FROM**: Boat, Helo
- **WORKING DIRECTION**: South to North
- **OIL CATEGORY LENGTH**: W - m, M - m, N - m
- **OIL DISTRIBUTION**: Oil/Film Color

### SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL/FILM COLOR</th>
<th>IMPACTED ZONES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt Pavement</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Pool</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cover</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coat</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Stain</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mousse</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pleases</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tarballs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Film</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Oil</td>
<td>S</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

### SUBSURFACE OIL

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>IN OILED INTERVAL</th>
<th>OIL CHARACTER</th>
<th>OIL/FILM COLOR</th>
<th>IMPACTED ZONES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20</td>
<td></td>
<td>Oiled</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>O-0.4</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>O-0.3</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>4</td>
<td>10</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>20</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>15</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**COMMENTS**: A: Narrow 1 m x 100 m tar coating was found in the H117 among the cobble at a bay located midway through the study locations 2 and 3 are located on this beach. The distribution of the oil is patchy. The oil shows signs of weathering because oil on the exposed rock is a tar stain and a coat on protected cobble (see map 2). An m² asphalt patch was also observed in this zone, no other oil was observed in this sub division w/ the exception of a few vented oil blow holes.

**REVIEWS**: JU, DATE 4/4/90
### Subsurface Oil (Continued)

<table>
<thead>
<tr>
<th>Pit No.</th>
<th>Pit Depth (cm)</th>
<th>Subsurface Oil Character</th>
<th>Oiled Interval (cm)</th>
<th>Below</th>
<th>Oil / Film Color</th>
<th>Pit Zone</th>
<th>ANA</th>
<th>Subsurface Sediments</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>10</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>G, R (under s1)</td>
</tr>
<tr>
<td>8</td>
<td>20</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>P, G, S</td>
</tr>
<tr>
<td>9</td>
<td>20</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>P, G, S</td>
</tr>
</tbody>
</table>

**Comments**

Reviewed: [Signature] Date: 4-4-90
In x 100m [C/P]
(See blow up near)

- EV071B
- 500.0

Legend

III - Bedrock, Border

- ⨂ - Forest

- ▲ - Test P+ W/ Oil
- △ - Test P- W/O Oil
SHORELINE ECOLOGICAL SUMMARY

Segment ST: EV07; Subdivision: B; Date (mo/day/yr): 3/31/90

Time (24 hr) 1030 hrs; Biologist: Ambrose

Substrate type and % of segments:
1. Bedrock 20
2. Boulder 35
3. Cobble 20
4. Pebble 10
5. Sand 5
6. Silt 5

Overall % cover of biota (% of segment): Dense 50; Moderate 20; Low 30

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

BARNACLES

<table>
<thead>
<tr>
<th></th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
<th>Not Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>1U</td>
<td>1M</td>
<td>1L</td>
<td></td>
<td>1U</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>4</td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>5</td>
<td></td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>6</td>
<td></td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

MYTILUS

<table>
<thead>
<tr>
<th></th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
<th>Not Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>1U</td>
<td>1M</td>
<td>1L</td>
<td></td>
<td>1U</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>4</td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>5</td>
<td></td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>6</td>
<td></td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

GASTROPODS

<table>
<thead>
<tr>
<th></th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
<th>Not Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>1U</td>
<td>1M</td>
<td>1L</td>
<td></td>
<td>1U</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>4</td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>5</td>
<td></td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>6</td>
<td></td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

FUCUS

<table>
<thead>
<tr>
<th></th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Wildlife Observations/ General Comments:

See addendum

Ecological Considerations:

ST-5: A mature bald eagle seen, but no nests.

Several beaches have established or beginning mussel beds, with mussels embedded in pebbles; these would be susceptible to trampling (but no oil was found on these beach areas). One stream might possibly be important for salmon. (These are noted on OG's map.)
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.

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)
Sewmill 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 unoiled 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 2/20)
Invertebrate harvesting

For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
Shoreline Ecological Survey
Segment EV071B

Addendum

Wildlife Observations:
2 mature bald eagles, 18 crows, 4 otters, 7 Harlequin ducks;
1 porcupine, 2 common murres, 14 cormorants, 1 gull;
1 sea lion, 5 deer. Also noted a possible bear trail
leading to the beach!

General comments:
EV071B is a long and diverse section. Portions of the segment,
especially the rock walls and high-angle beaches, have dense cover
(with Fucus in the high intertidal and red algae down low). However,
cobble and other low-angle beaches have sparse cover.
Laminaria was very dense in the shallow subtidal off of this section.
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-71

SUBDIVISIONS: C (3 OF 3)
SEGMENT ST/ EV-71 SUBDIVISION C (3 OF 3) DATE 4/1/90

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)
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 105 m: No Oil 2020 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 FOSC: __________ DATE: __________
NOAA
USCG
Salmon stream mouth - fry outmigration (4/1 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 unoiled 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 600m 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
Door 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.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EV-71 SUBDIVISION: C DATE 4/1/96

NOAA NAME: Gary Shigenaka SIGNATURE: Gary Shigenaka

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Subdivision consisted of 2 islands off the west central portion of Evans Island. Perimeters of both were completely surveyed and six beach landings were made as well. Oilings was sporadic and consisted of stain and coating, mostly well-weathered.

ADEC NAME: John Hayes SIGNATURE: John Hayes

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Two small islands west of beach segment EV-71. We made six landings at pocket beaches on islands. Oilings observed were very light and consisted of thin sheens and sticky wetland oil on surface sand. Also observed staining on bedloads. Area is annually weathered and no SS contamination was observed.

LAND MANAGER

NAME: ____________________ SIGNATURE: ____________________

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

NAT'L FOREST REP. NOT AVAILABLE

REVISION NO. 5-24-93
SHORELINE OILING SUMMARY

**SHORELINE OILING SUMMARY**

- **OG:** Mike Foget
- **NOAA:** Gary Shigenaka
- **BIO:** Richard Ambrose
- **LAND REP:** Subdivision EV-71
- **EXXON:** Larry Olson
- **ADEC:** John Hayes
- **TIME:** 9:05 to 10:30
- **DATE:** 4/11/90

**TEAM NO.:** 11
**TIDE LEVEL:** 6.9 to 2.6
**EST. SUBDIVISION LENGTH:** 2.3 km
- **Sun**
- **Clouds**
- **Fog**
- **Rain**
- **Snow**

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

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

**WORKING DIRECTION:**
- **N**

**SLOPE:**
- **Lang:** 30%
- **Hang:** 40%
- **Vert:** 30%

**WAVE EXPOSURE:**
- **Low**
- **Med**
- **High**

**OIL CATEGORIES LENGTH:**
- **W**
- **M**
- **N**
- **V**
- **L**

---

**SURFACE OIL**

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASPHALT PAVEMENT</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>POOL ED</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>COVER</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>COAT</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>STAIN</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>MOUSSE</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>PATTIES</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>TARBALLS</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>FILM</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>NO OIL</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

**PAVEMENT:**
- **H**
- **F**
- **S**
- **sq. m by cm**
- **BAGS**
- **P**
- **TARBALLS**

**NEAR SHORE SHEEN?**
- **BR**
- **RW**
- **SL**
- **TL**

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

**DEBRIS COLLECTED:**
- **YES**
- **NO**
- **Clean:**
- **Random:**

**TYPE:**
- **S**
- **D**
- **C**
- **S**

**Photographs:**
- **Roll No.**
- **Frame**

**SUBSURFACE OIL**

<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>ANA</th>
<th>SUBSURFACE SEDIMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>C, P (400 to 1200)</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>C, P, M (400 to 500)</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>P, S, G, C</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>P, S, M, C</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>G, S (water up to 5 cm)</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**COMMENTS:**

Only some oiling was observed, the oil was weathered and was a splattered distribution in the Hitz. The two island shore consisted mostly of bedrock, boulders. Some pocket cobble beaches were observed.

---

**REVIEWED:** [Signature]
**DATE:** 4/1/90

Page 1 of 2
### Subsurface Oil (Continued)

<table>
<thead>
<tr>
<th>Pit No.</th>
<th>Pit Depth (cm)</th>
<th>Subsurface Oil Character</th>
<th>Oiled Interval (cm/cm)</th>
<th>Below Oil</th>
<th>Oil Film Color</th>
<th>Pit Zone</th>
<th>Ana</th>
<th>Subsurface Sediments</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>G, S (H, O S cm)</td>
</tr>
<tr>
<td>8</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>G</td>
</tr>
<tr>
<td>9</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>P, G, S</td>
</tr>
<tr>
<td>10</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>G, S</td>
</tr>
</tbody>
</table>

**Comments**
OG 175, Forest
SEGMENT ST/EU-71
SUBDIVISION C
DATE 4/1/90

CHECKLIST

N Ascr.
Append. Scale
Seg/Sub Brkry
Oil Dist.
Width
Length
% Cover
Substrate Character
Est./Hw/Lwl
SSL
Profile Location(s)
Photo(s)
Phl Location(s)

LEGEND

1 ▲ PR - No Subsurface Oil

2 ▲ PR - Subsurface Oil

CT/C Contact Oil Distribution
CT/B Broken Distribution
CT/P Patchy Distribution
CT/S Splashed Distribution

Oiled Vegetation

Oil Character Length (m): AP PO CV CT 30 ST 30 MS PT TB FL NO 2280
SHORELINE ECOLOGICAL SUMMARY

Segment ST1 EVO71 Subdivision C Date (mo/day/yr) 4/1/90

Time (24 hr) 0910 hrs Biologist Ambrose

(A) Substrate type and % of segments:
(1) Bedrock 35 (2) Boulder 20 (3) Cobble 15 (4) Pebble 10 (5) Sand 20 (6) Silt

(B) Overall % cover of biota (% of segment): Dense 50 Moderate 20 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

<table>
<thead>
<tr>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td>1U 1M 1L</td>
<td>2 2 2</td>
<td>2 2 2</td>
<td>2 2 2</td>
</tr>
<tr>
<td>3 3 3</td>
<td>3 3 3</td>
<td>3 3 3</td>
<td>3 3 3</td>
</tr>
<tr>
<td>4 4 4</td>
<td>4 4 4</td>
<td>4 4 4</td>
<td>4 4 4</td>
</tr>
<tr>
<td>5 5 5</td>
<td>5 5 5</td>
<td>5 5 5</td>
<td>5 5 5</td>
</tr>
<tr>
<td>6 6 6</td>
<td>6 6 6</td>
<td>6 6 6</td>
<td>6 6 6</td>
</tr>
</tbody>
</table>

MYTILUS

<table>
<thead>
<tr>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td>1U 1M 1L</td>
<td>2 2 2</td>
<td>2 2 2</td>
<td>2 2 2</td>
</tr>
<tr>
<td>3 3 3</td>
<td>3 3 3</td>
<td>3 3 3</td>
<td>3 3 3</td>
</tr>
<tr>
<td>4 4 4</td>
<td>4 4 4</td>
<td>4 4 4</td>
<td>4 4 4</td>
</tr>
<tr>
<td>5 5 5</td>
<td>5 5 5</td>
<td>5 5 5</td>
<td>5 5 5</td>
</tr>
<tr>
<td>6 6 6</td>
<td>6 6 6</td>
<td>6 6 6</td>
<td>6 6 6</td>
</tr>
</tbody>
</table>

GASTROPODS

<table>
<thead>
<tr>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td>1U 1M 1L</td>
<td>2 2 2</td>
<td>2 2 2</td>
<td>2 2 2</td>
</tr>
<tr>
<td>3 3 3</td>
<td>3 3 3</td>
<td>3 3 3</td>
<td>3 3 3</td>
</tr>
<tr>
<td>4 4 4</td>
<td>4 4 4</td>
<td>4 4 4</td>
<td>4 4 4</td>
</tr>
<tr>
<td>5 5 5</td>
<td>5 5 5</td>
<td>5 5 5</td>
<td>5 5 5</td>
</tr>
<tr>
<td>6 6 6</td>
<td>6 6 6</td>
<td>6 6 6</td>
<td>6 6 6</td>
</tr>
</tbody>
</table>

FUCUS

<table>
<thead>
<tr>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td>1U 1M 1L</td>
<td>2 2 2</td>
<td>2 2 2</td>
<td>2 2 2</td>
</tr>
<tr>
<td>3 3 3</td>
<td>3 3 3</td>
<td>3 3 3</td>
<td>3 3 3</td>
</tr>
<tr>
<td>4 4 4</td>
<td>4 4 4</td>
<td>4 4 4</td>
<td>4 4 4</td>
</tr>
<tr>
<td>5 5 5</td>
<td>5 5 5</td>
<td>5 5 5</td>
<td>5 5 5</td>
</tr>
<tr>
<td>6 6 6</td>
<td>6 6 6</td>
<td>6 6 6</td>
<td>6 6 6</td>
</tr>
</tbody>
</table>

Wildlife Observational/General Comments:
10 crows, 1 eagle, 4 Harlequin ducks, 3 auklets, 3 oystercatchers, 1 great blue heron, 2 sea lions.
Dense cover on high-angle beaches/rock walls. At one beach, many dead mussels noted still in place, with valves showing at surface (location noted on OB's map).

Ecological Considerations:
711 ST-6: 1 mature bald eagle seen, but no nests.

Mussel bed found on one pocket beach (noted on OB's map), but no oil seen there. Specific location of bed within pocket beach:

* Much of this section surveyed by boat.
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/EV-071 B STREAM NO: 226-40-16484 DATE 4/30/90

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)
ST-2 All Bald Eagle nests (3/1 to 6/1)
7II Subsistence area: Deer harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: [Signature] DATE: 5/25/90

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

Other (see comments)

COMMENTS: Recommend manual removal of tarmat as indicated on the attached sketch map. Work from 6/2 to 7/9 with approval of USFWS due to eagle nest.

TAG COMMENTS: Bioremediation (customized) As required following tarmat removal.

TAG APPROVAL DATE: 5/23/90
ADEC [Signature] DATE: 5/23/90
EXXON [Signature] DATE: 5/23/90
NOAA [Signature] DATE: 5/23/90
USCG [Signature] DATE: 5/23/90
SEGMENT S/T EV071A
STREAM 226-40-16484
DATE 21/A1980

CHECKLIST
- N Arrow
- Approx. Scale
- Seg/Blk/Section
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. NML/ML
- SBL
- Profile Location(s)
- Plot(s)
- Plot Location(s)
- Photo Location(s)

LEGEND
1 △
- Ph - No Subsurface Oil
2 △
- Ph - Subsurface Oil

CT/C
- Continuous Distribution
CT/B
- Broken Distribution
CT/P
- Patchy Distribution
CT/S
- Splashed Distribution

Oil Vegetation
1
- Photo location, direction, and number

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

DESCRIPTION

46 OIL DISTRIBUTION DIAGRAM

Band of asphalt

Vegetation
SHORELINE EVALUATION

SEGMENT ST/ EV-71 SUBDIVISION A (1 OF 3) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADFG anadromous stream no 226-40-16475, 16484, 16477.
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
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. 1 eagle nest on border with EV-68.

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

SHPO SIGNATURE: ________________ DATE: 4/23/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 494 m: No Oil 258 m
Subsurface Oil Observed: Yes X No Maximum Depth 5+ cm

RECOMMENDATIONS:

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

COMMENTS: __________________________________________

TAG COMMENTS: Due to the minimal amount of oil and the richness of the intertidal mtr it is recommended

TAG APPROVAL DATE: 4/21/90

ADEC Art Weiner Art Weiner
EXXON A. Wilen K. Wilen FOSC: L
NOAA B. Less heart C. Less heart
USCG Kenneth Keane Kenneth Keane

DATE: 4-27-90
LEGEND
1 Δ
- No Subsurface Oil
2 Δ
- Subsurface Oil
CT/C Continuous Distribution
CT/B Broken Distribution
CT/TP Patch Distribution
CT/CS Splashed Distribution
Cited Vegetation
1 ◊
- Please location, direction, and number

Oil Character Length (m): AP— PO— CV— CT— YP— ST— MG— PT— TB— FL— NO— 120
SEGMENT ST/ EV-71 SUBDIVISION B (2 OF 3) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
ADF&G anadromous stream no 226-40-16494, 16484, 16477.
1A  Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B  Salmon stream mouth - spawning (7/10 to 8/31)
5T-2  All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOCLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. 1 eagle nest in EV-70, near border with Subdivision B.

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

SHPO SIGNATURE: 4/23/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 118 m: No Oil 4957 m
Subsurface Oil Observed: Yes X No Maximum Depth_______

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/21/90
ADEC Art Werner Art Werner
EXXON Andy Ford
NOAA Paul Wernh Hal Hammar
USCG Ken Wernic Ken Wernic

FOSC: 4-17-90
Point - Bedrock / Boulders

Legend:

1△
Po - No Subsurface Oil

2△
Pt - Subsurface Oil

Continuous Distribution

Broken Distribution

Patchy Distribution

Splashed Distribution

Oil Vegetation

Forest and snow

Trees

Boulders

Legend

Oil Character Length (m): AP - PO - CV - CT 100 ST - MB - PT - TB - FL - NO 5675
ECOLOGY MAP

Wide

 integers

EV-71

Medium

ADEC Segment Length: 8115m

Narrow

Map Key: PWS-271a

Very Light

Name: Mike Fritz

---

Date: 4/7/90

---

Date Entered:

100 200 300 400 500

Anadromous Stream
226-90-16477

Anadromous Stream
226-90-1675

Eagle Nest SWS
ECOLOGY MAP

EV-71

Anadromous stream 226-40-16484

Map Key: PWS-271
Name: Mike Foote
Date: 4/1/90
Data Entered:

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

ADEC Segment Length: 8115m

0 100 200 300 METERS
SHORELINE EVALUATION

SEGMENT ST/ EV-71  SUBDIVISION C (3 OF 3) DATE  4/1/90

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)
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:  4/23/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 105 m: No Oil 2020 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:  4/21/90
ADEC Art Weiner  Art Weiner  FOSC:  DATE:  4-27-90
EXXON Away  ________________
NOAA Russ Wescott  Russ Wescott
USCG Kenneth Hoffman  Kenneth Hoffman
I. Bedrock / Boulder
II. Forest

**Legend**

- Bedrock / Boulder
- Forest
- Pebble
- Boulder
- Granule
- Cobble
- Sand

**Sketch Map**

1. 3m wide sand band
2. 1m x 30m

**Legend**

- 1: No Subsurface Oil
- 2: Subsurface Oil

**Legend**

- CT/C: Continuous Distribution
- CT/B: Broken Distribution
- CT/S: Splash Distribution

**Legend**

- Cited Vegetation

**Scale**

300 meters

**Oil Character Length (m):**

AP PO CV CT SB MS PT TB FL NO 2280
Ecology Map

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

EV-71B

Map Key: PWS-271d
Name: Mike Feyer
Date: 4/1/90

ADEC Segment Length: 8115m

0 200 400 600
1991 MAYSAP EVALUATION

SEGMENT: EV 071 SUB: C REGION: PWS SURVEY DATE: 5/25/91

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: Timothy Ashland Date: 6/07/91

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: JUNE 6 1991 FOSC APPROVAL DATE: 6/10/91

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. 2  SEGMENT EV 71  SUBDIVISION C  DATE 5/25/91

<table>
<thead>
<tr>
<th><strong>TREATMENT RECOMMENDED</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>A small portion of this segment went unsurveyed due to an Eagle Nest. Sigificantly more oil found than reported by ASAP, most of which was either B1a or B1b - Treatment complete. A dead oil pup was found ad flagged in area &quot;E.&quot;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>EXXON</strong></th>
</tr>
</thead>
</table>
| NAME | FRANK CHI | SIGNATURE | CARL P.

<table>
<thead>
<tr>
<th><strong>LANDMANAGER</strong></th>
</tr>
</thead>
</table>
| NAME | Norm S. Kennedy of USFS | SIGNATURE | K. S. Kennedy

<table>
<thead>
<tr>
<th><strong>USCG/NOAA</strong></th>
</tr>
</thead>
</table>
| NAME | P. J. Leavitt | SIGNATURE | P. J. Leavitt

<table>
<thead>
<tr>
<th><strong>TREATMENT RECOMMENDED</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Observed &quot;Sore&quot; was recollected on string wacker. VECO removed three bags of colonized sediments. Pile, elevation of the newface sediments, renewable bearding remaining. &quot;Sore&quot; would be difficult 12/12</td>
</tr>
</tbody>
</table>
**Maysap Shoreline Oiling Summary**

**Team No.** Reimer  
**Bio** Bar  
**ADEC** Montasano  
**EXXON** Box  
**Date** 5/25/91

**Segment** EV  
**Subdivision** C

**Surveyed From:** Foot Boat Helo  
**Weather:** Sun Clouds Fog Rain Snow

**Total Length Shoreline Surveyed:** 2125 m  
**Near Shore Sheen:** BR RB SL None

**Est. Oil Category Length:** W 0 m M 25 m N 46 m V 310 m Y 1784 m US 0 m

<table>
<thead>
<tr>
<th>LO</th>
<th>Surface Oil Character</th>
<th>Surface Sediment</th>
<th>Shore Slope</th>
<th>Width</th>
<th>Length</th>
<th>Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>S</td>
<td>V</td>
<td>2</td>
<td>2</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>B</td>
<td>S</td>
<td>P</td>
<td>H</td>
<td>2</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>C</td>
<td>T</td>
<td>F</td>
<td>20</td>
<td>80</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>D</td>
<td>S</td>
<td>B</td>
<td>H</td>
<td>1/00</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>E</td>
<td>T</td>
<td>B</td>
<td>H</td>
<td>1/00</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>F</td>
<td>T</td>
<td>B</td>
<td>H</td>
<td>3</td>
<td>20</td>
<td>X</td>
</tr>
<tr>
<td>G</td>
<td>T</td>
<td>F</td>
<td>1</td>
<td>5</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>H</td>
<td>S</td>
<td>B</td>
<td>H</td>
<td>4</td>
<td>4</td>
<td>X</td>
</tr>
<tr>
<td>I</td>
<td>P</td>
<td>B</td>
<td>H</td>
<td>1</td>
<td>2</td>
<td>X</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-2  
**Frames:** 7-11

<table>
<thead>
<tr>
<th>Pit No.</th>
<th>Pit Depth (cm)</th>
<th>Subsurface Oil Character</th>
<th>Oiled Zone</th>
<th>Clean Below</th>
<th>H20 Level</th>
<th>Sheen Color</th>
<th>Pit Zone</th>
<th>Surface-Subsurface Sediments</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/10</td>
<td>2.0</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>Y</td>
<td>B-OP</td>
<td>X</td>
<td>B-OP</td>
<td></td>
</tr>
<tr>
<td>2/20</td>
<td></td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>Y</td>
<td>B-OP</td>
<td>X</td>
<td>B-OP</td>
<td></td>
</tr>
<tr>
<td>3/70</td>
<td>X</td>
<td>0-3</td>
<td>Y</td>
<td>X</td>
<td>B-OP-C</td>
<td>X</td>
<td>B-OP-C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/20</td>
<td></td>
<td>X</td>
<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:** Two small rocky islands with small pocket beaches and wide low rock platform on eastern shoreline. Oilings is sporadic and consists of Bath Tub ring (BTR) on rocky sections. Some small pockets of AP were found along the north shore of both islands in vertical shale. Scattered Tb were found across platform.

**Revised:** MC 5/24/91  
**Revised:** 5/29 Oy
OG SKETCH
EV 71C
MAY 25-26, 1991
19:30 - 20:23
6:20 - 7:25
Doug Reimer

CT < 5 %
1 x 100 m

CT < 17%
SOR < 17%
TB < 17%
Rck/Bld
3 x 20 m

AP 10 %
1 x 2 m

AP 80 %
12 m/
Shale

CT/CV 15 %
API 5 %
P/c18-Vent.
Shale
1-% x 25 m

High Rck
(skiff)

High Rck
(skiff)

Enlargement
of area

2 x 2
CT 5 %
AP 15 %
Shale

TB < 17 %
Scattered
20 x 30 m
Low Platform

Pit # 3
1 x 3
SOR (light) 27 %
CT < 17%
TB < 17%
Rck/Bld

Vertical Rck
(skiff)

2 TB (broken up)
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2  DATE 05-26 May 91

SEGMENT # 3U-71 C  TIDAL HEIGHT (Range) 4-6 ft, -1 ft
SUBDIVISION C  BIOLOGIST Sm
SEA STATE LE ft  WIND SPEED/DIRECTION LE Kt

PHOTOGRAPHS: ROLL #  FRAME #

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):
A-1-1  TR/1/AP on isolated shore - Fixica recruits & lumps of Fixica adults at within the oiled zone.  Lichen is nearby.  Higher zones support dense Fixica barnacles, patchy mussels.
D.  AP removed (from area with no oils.  Center TR on low platform in Fixica barnacle, li lichene assembly. Small mussels & amphipods found under rocks.  No oiled organisms.
E.  CT in green algae zone, Fixica recruits nearby.
F.  CT high in Fixica zone, lichen zone.  Sp (P.+3) in Fixica zone, with lichene, barnacles & li lichene nearby.
G.  CT/Sp high in Fixica - lichen x moss nearby, P.+1 on cobble beach
H.  Amphipods

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS  # OF SPECIES  TOTAL BIRDS  FISH OBSERVED

| Eagles | Q | 0 | 0 |
| Seabirds | | | |
| Waterfowl | | | |
| Gulls/Kittiwakes | ± 10 | | |
| Shorebirds | | | |
| Corvids | | | |
| Other Birds | | | |

LAND MAMMALS

<table>
<thead>
<tr>
<th>SPECIES</th>
<th># OBSERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sea Otters</td>
<td></td>
</tr>
<tr>
<td>Pinnipeds (specify)</td>
<td></td>
</tr>
<tr>
<td>Whales (specify)</td>
<td></td>
</tr>
</tbody>
</table>

Shoreline subdivision map showing important biological features attached.
OG SKETCH
EV 71C
MAY 25-26, 1991
19:30 - 20:13
6:20 - 7:25
Doug Reimer
Eagle nest survey

Eagle nest survey. Distorted monitored the west while team 2 proceeded with survey. 

The eagle was not disturbed.

SMB

Segment Reference Map
Map Key: EV071

Eagle Nest

EV071
1991 MAYSAP EVALUATION

SEGMENT: EV 071 SUB: A REGION: PWS SURVEY DATE: 5/15/91

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

Ecological/Constraints (see page two for details) Eagle nest, Fish harvest area, Anadromous stream

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

SHPO Signature: ______________________ Date: __________________

RECOMMENDATIONS:

<table>
<thead>
<tr>
<th>INITIAL</th>
<th>TAG</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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.

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

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.
**MATSAP FIELD SHORELINE COMMENT SHEET**

TEAM NO. 5  SEGMENT EV-71  SUBDIVISION 19H8  DATE 5/15/91

*Note: This was done as part of EV-71 B survey and includes information.*

ADEC

NAME: John Hays  ADSC#  SIGNATURE: 

- **NTR** Spontaneous Band of A/P/SO in water column. Between both streams and along the southern shoreline of the cove. Remediation local response seen for manual filling and removal. Remaining oil deposits in vicinity of stream areas. Stream A: 226-40-16418 and 226-40-16437. NO TREATMENT RECOMMENDED FOR THIS STREAM SITE (6402). TRUE

Agree with ADSC comments for treatment in vicinity of streams, only stream area of segment were surveyed by our team.

EXXON

NAME: John Dean  SIGNATURE: 

- **NTR** 1 bag of very slightly oiled sediments were recovered. No other oil in recoverable state was observed.

LANDMANAGER

NAME: Steve Ward  OF CVC/FL  SIGNATURE: 

- **NTR** Chumna Land Selected but Not Conveyed.

Manual Required in these stream areas to protect the fish. Team 5 picked up a lot but a lot of oil is still there to be picked up. Good for chumna local response.

USCG/NOAA

NAME: Deeher/Cline  SIGNATURE: 

- **NTR** The very small amount of AP found was picked up and removed. ADSCG representative concurred that no further treatment was necessary.

I agree with the ADSCG representative for all three streams. DEE
**MAYSAP SHORELINE OILING SUMMARY**

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

**LANDMANAGER**
WARD for CUC

**USCG/NOAA**
DREHER/CLINE

**SEGMENT**
EV-71

**SUBDIVISION**
A

**DATE/MAY 15 1991**

**TIME**
09:58 to 11:19

**TIDE LEVEL**
-2.0 ft. to +2.0 ft.

**ENERGY LEVEL**

**WEATHER**

**SURVEYED FROM**

**TOTAL LENGTH SHORELINE SURVEYED:** 252 m

**NEAR SHORE SHEEN:**

**EST. OIL CATEGORY LENGTH:**

<table>
<thead>
<tr>
<th>LENGTH</th>
<th>M</th>
<th>M</th>
<th>M</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>60</td>
<td>35</td>
<td>167</td>
<td>500</td>
</tr>
</tbody>
</table>

**DISTRIBUTION:**

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE OIL AREA</th>
<th>AREA</th>
<th>ZONE</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>\</td>
</tr>
</tbody>
</table>

|          |                        |                  |      |      | \     |

**SURFACE SEDIMENT CHARACTER**

<table>
<thead>
<tr>
<th></th>
<th>SURFACE SEDIMENT SLOPE</th>
<th>WIDTH</th>
<th>LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>V</td>
<td>H</td>
<td>M</td>
</tr>
</tbody>
</table>

**ZONE**

|          |          |          |          |          |          |          |          |          |          |          |          |          |

**NOTES**

**PIT PIT SUBSURFACE OILED CLEAN H2O SHEEN PIT SURFACE-NO.**

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

**PHOTO ROLL MAYSAP - 5 NO PHOTOS WET CAMERA FRAMES**

**PIT NO.**

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>subsurface oil character</th>
<th>Oil zone</th>
<th>clean oil</th>
<th>H2O sheen</th>
<th>color</th>
<th>pit type</th>
<th>SURFACE-</th>
<th>subsurface</th>
<th>sediments</th>
<th>notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<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:**

FEW RANDOM PATTIES AP BEHIND PROTECTIVE BOULDERS AT LOCATIONS INDICATED ON SKETCH MAPS. THIS SURVEY INCLUDES PART OF EV-71 A & B BECAUSE IT IS AN ANADROMOUS FISH STREAM.

**REVISED:** 6/15/91

**REVISED FROM:** EV-71 B, 5/19/91 48
ANAD. STREAM NUMBERS
PROVIDED BY TOM CROW
ADFG

LEGEND

<table>
<thead>
<tr>
<th>BEDROCK</th>
<th>BOULDER B</th>
<th>FINE BED.</th>
<th>DRIFT LOG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gravely</td>
<td>O / O</td>
<td>Y / Y</td>
<td>X / X</td>
</tr>
<tr>
<td>Grass</td>
<td>O / O</td>
<td>G / G</td>
<td></td>
</tr>
<tr>
<td>Forest</td>
<td>O / O</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oiled Pit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tree Line</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Photo</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Scale: 50 METERS

1x15m
AP 2%
SOR 2%
CV, CT TRACE

1x50m
AP 5%
SOR 5%
CV 1%
CT 1%

BAND PATTIES IN BOULDERS

POORLY DEFINED CHANNEL

3x20
SOR, CV, CT
TRACE

SMALL PATCHES BEHIND BOULDERS

DATE: MAY 15, 1991
AIR P. # G-1527

ANAD.
226-40-16477

note segment boundary
TEAM #5  
DATE 15 May 1991

SEGMENT # EV-71  
TIDAL HEIGHT (Range) -2 - 2

SUBDIVISION B (part of Aull) I Anad Stream I 
WIND SPEED/DIRECTION 10 knots/11

BIODIVER city  
PHOTOGRAPHS: ROLL #  

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

(A) Area is located high in the ULTZ and in the SUPRA. Within the site there are
masses, Fucus sporelings, rye grass, white and black lichen and
Littorina. Biota cover is ~1%. On background site there is a
2 x 15 m patch of sparsely concentrated Fucus sporelings covering ~20%

of the sediments. The MITZ has moderate concentrations of
Fucus and Penicillus, Fucus juvenile, and mature Penicillus
shells. There are dense patches of Littorina and sparse mussels. F ...  
cover is ~50%. The LITZ has dense mussel with various size
classes. Barnacles are still moderate, ~ 40% of the adult shells are
empty. The `empties` are being eaten by littorina. Approx. 10% of the cod are not
Fucus concentration in the LITZ are `starling`2. Biota cover is 40-60%.

(B) Area is located high in the ULTZ on bedrock and boulders. Black lichen encrusted
in 30% of the sediments. Moss and white lichen are also present covering
<1% of the sediments. The MITZ below site is a granular sand beach with
a small (1 x 3 m) low bedrock outcrop. On the bedrock there is dense Fucus
and sparse barnacles.

(C) Area is located 2 km offshore in the ULTZ. Black lichens encrusted
into 20% of the sediments. Barnacles and oligochete worms are also present,
covering <1%.

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>
</tr>
</thead>
<tbody>
<tr>
<td>Eagles</td>
<td></td>
<td></td>
<td>None observed</td>
</tr>
<tr>
<td>Seabirds</td>
<td></td>
<td></td>
<td>Anad Stream</td>
</tr>
<tr>
<td>Waterfowl</td>
<td></td>
<td></td>
<td>226-40-16476</td>
</tr>
<tr>
<td>Gulls/kittiwakes</td>
<td></td>
<td></td>
<td>226-40-16477</td>
</tr>
<tr>
<td>Shorebirds</td>
<td></td>
<td></td>
<td>226-40-11484</td>
</tr>
<tr>
<td>Cormorants</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Birds</td>
<td></td>
<td></td>
<td></td>
</tr>
</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>Deer</td>
<td>1</td>
</tr>
<tr>
<td>Pinnipeds(specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wesc(specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Shoreline subdivision map showing important biological features attached.
The UITZ below areas B is characterized by sparse to rare concentrations of barnacles, moderate Littorina and limpets, and rare mussels on cobbles. Most of the sediment surface directly below this site is granular. At the stream mouth, in the minus tide level there are pebbles and cobbles with a 60% biota cover including moderate barnacles, moderate Littorina with egg masses, inter-pebble mussel bed, and sparse Fucus sporlings.

Area (D) is in the UITZ on the west side of anad stream 226-40-14474. Black lichen encrusts about 20% of the sediments. Barnacles, rye grass, and white lichen cover less than 1%. 15m below the site there is dense Fucus, moderately concentrated barnacles, mussels, and Littorina. Biotac cover is ~70%.

Area (E) is located in the UITZ, 10 m north of anad. stream 226-40-16484. Black lichen is encrusted into ~30% of the sediments. Barnacles, rye grass, seasonal plants, and oligochaete and polychaete worms cover ~1% of sediments. Fifteen meters below site, in the UITZ through the LITZ, there is a moderate concentration of Fucus with maturing coenoptases and sporlings, sparse to moderate barnacles, moderate to dense mussels and dense Littorina, and limpets. Littorina egg masses and nudibranch egg masses were present. Biotac cover is ~80%.
Area is located in the ULTZ among boulders, 15 m from the stream bank. Black lichen encrusts 60% of the sediments. Rye grass, tar spot algae, yellow and white lichen with fruiting bodies, moss and filamentous green algae cover 5% of the surface. Two meters below the site to the stream, there is dense Fucus and moderately concentrated barnacles. Biota cover is ~80%.

This subdivision has 3 anadromous streams #226-40-16477/16477/16484. Gulls were feeding in the mouth of stream #16477. The intertidal biota appears to be healthy and not adversely affected by present oiling conditions.

Reviewed: MC 5/24/91
Tahoe from EV.718
5.19.91 GG
Eagle nests were not observed.

Survey extended into subdivision (A) as part of an anadromous stream survey with ADF&G representative.

EV071(3) A

Segment Reference Map
Map Key: FYE071

EAGLE NEST

taken from EV-71 B, 5-17-91 GF
ANAD STREAM NUMBERS
PROVIDED BY TOM CROW

LEGEND

SCALE

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

50 METERS
ROUGHLY

ANAD
226-40-16'76

TREES

ANAD
226-40-16'76

TREES

PRINCE OF WALES
PASSAGE

IN THE MINUS TIDE LEVEL, PEBBLES AND COBBLES AT THE STREAM MOUTH HAVE 100% BIOTA COVERAGE. IN THE PLUS TIDE LEVELS MOST OF THE SURFACE IS GRANULAR = LOW BIOTA COVERAGE.

BAND PATTIES IN BOULDER

1X15m
AP 2%
SOR 2%
CV, CT
TRACE

1X50m
AP 5%
SOR 5%
CV 1%
CT 1%

3X50m
CT TRACE
SPORADIC SPLATTERS

3X20
SOR, CV, CT
TRACE
SMALL PATCHES BEHIND BOULDERS

STRAIT

ANAD
226-40-16'77

NOTE SEGMENT
BOUNDARY


MAYRAP 1991
DG SKETCH MAP/ BIO MAP
6: CHANEY/CRA%K
TEAM 5
SEGMENT: EV71(A & B)
DATE: MAY 15, 1991
AIR P.H.: 6-1587- NO 110
1991 MAYSAP EVALUATION

SEGMENT: EV 071 SUB: B REGION: PWS SURVEY DATE: 5/15/91

ENVIRONMENTAL SERVICES:
Work Window(s) I ED 3/1 - 9/15

Ecological/Constrains: (see page two for details) Eagle nest, Fish harvest area, Nenius 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) N INITIAL TAG FOSC
Manual Pickup (Check as Req.) _______ _______ _______
Spot Washing _______ _______ _______
Bio-Customblen Only _______ _______ _______
Bio-Inipol/Custmblen _______ _______ _______
Other ___________________ _______ _______
Other ___________________ _______ _______

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. USFWS 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.

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>TEAM NO.</th>
<th>SEGMENT</th>
<th>SUBDIVISION</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>EV-71</td>
<td></td>
<td>5/15/91</td>
</tr>
</tbody>
</table>

*Note - this includes information on Segment EV-71A*

**ADEC**

<table>
<thead>
<tr>
<th>NAME</th>
<th>ADEC+</th>
<th>SIGNATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>John Hoye</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

☐ NTR **Anadromous Streams in Seg EV-71A 226-40-16476 and EV-71B 226-40-16477** had **a**

☐ NTR Saphatic bank of AP/SOE in LIKE occurring between both streams and along the southern shoreline of this Cove. Recommend local response crew for manual tilling and removal of remaining oil deposits in proximiy of stream areas. Stream 226-40-16478 and CIP Cutline in LIKE

**Agree with ADF&G contacts for treatment in vicinity of streams, only stream area of segment were surveyed by our team.**

**EXXON**

<table>
<thead>
<tr>
<th>NAME</th>
<th>SIGNATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>John Dean</td>
<td></td>
</tr>
</tbody>
</table>

☐ NTR **1 bag of very slightly oiled sediments were recovered, no other oil in recoverable state was observed.**

**LANDMANAGER**

<table>
<thead>
<tr>
<th>NAME</th>
<th>OF CVC/FS</th>
<th>SIGNATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steve Ward</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

☐ NTR **Changes to Land Selected but Not Conveyed.**

Manual required in those Stream Areas to Protect the Fish, Team 5 picked up a lot of oil is still there to be picked up. Good for changes to Land Resource.

**USCG/NOAA**

<table>
<thead>
<tr>
<th>NAME</th>
<th>SIGNATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deere/Cline</td>
<td></td>
</tr>
</tbody>
</table>

☒ NTR The very small amount of AP found was picked up and removed. ADF&G representative concurred that no further treatment was necessary.

**I agree with the ADF&G representative for all three streams.**
OG: CHANEY
ADCO: HAYES
EXXON: DEAN

TEAM NO.: __________
CRANK

LANDMANAGER: WARD

U.S.C.G./NOAA DREHER/CLINE

SEGMENT: EV-71
SUBDIVISION: A(B)
DATE: MAY 15, 91

TIME: 09:58 to 11:19
TIDE LEVEL: -2.0 ft. to +2.0 ft.

ENERGY LEVEL: □ H □ M □

WEATHER: □ SUN □ CLOUDS □ FOG □ RAIN □ SNOW

TOTAL LENGTH SHORELINE SURVEYED: 745 m
NEAR SHORE SHEEN: □ BR □ RB □ SL □ NONE

EST. OIL CATEGORY LENGTH: W—m M—m N—m Vi.90m NO855.1US4220 m

---

**SURFACE OIL CHARACTER**

<table>
<thead>
<tr>
<th>LOC</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT</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>T</td>
<td>BR M</td>
<td>3</td>
<td>50</td>
<td>□</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>T</td>
<td>BC M</td>
<td>5</td>
<td>10</td>
<td>□</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>T</td>
<td>B H</td>
<td>3</td>
<td>20</td>
<td>□</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**PHOTO ROLL # A45SAP-5** NO PHOTOS, WET CARE FRAMES

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

**DISTRIBUTION:** C = 91-100%; B = 51-60%; P = 11-60%; S = 1-10%; T = <1%

**PIT PIT SUBSURFACE OILED CLEAN H20 SHEEN**

<table>
<thead>
<tr>
<th>NO.</th>
<th>OILED ZONE</th>
<th>CLEAN BELOW</th>
<th>H2O LEVEL</th>
<th>SHEEN COLOR</th>
<th>PIT ZONE</th>
<th>SUBSURFACE- SEDIMENTS</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20</td>
<td>Y</td>
<td>-</td>
<td>-</td>
<td>□</td>
<td>C-CGB</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>30</td>
<td>Y</td>
<td>-</td>
<td>-</td>
<td>□</td>
<td>CP-CP</td>
<td></td>
</tr>
</tbody>
</table>

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

**OG COMMENTS:** FEW RANDOM PATTIES AP BEHIND PROTECTIVE BOULDERS AT LOCATIONS INDICATED ON SKETCH MAPS. THIS SURVEY INCLUDES PART OF EU71-A BECAUSE IT IS AN ANADROMOUS FISH STREAM.

Revised: May 15, 91
Revised 5/19/91 4:47

to only reflect segment B
PRINCE OF WALES PASSAGE

MAP 2 of 2

ANAD. STREAM NUMBER PROVIDED BY TOM CROW
ADF&G

EVAN'S ISLAND

LEGEND

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

SCALE
ROUGHLY 1
METERS

30

E

F

ANAD STREAM
22G -40 -16484

5 x 10 m
RANDOM DRIPS
CT ON BOULDERS TRACE

3 x 30 m
BOULDERS AT BASE OF
BEDROCK
CT 2% C U 2%
ST 1% AP < 1%
ON BACK OF
BOULDERS
VERY SMALL
PATCHES AP
TOTAL LESS
THAN 1 m²

SNOW

REVIEWED:
5/2/1992

DATE: MAY 15, 1991
AIR P.#: None
SEGMENT: EY71B

MAYSAP 1991
OG SKETCH MAP
GREG CHANEY
TEAM 5
KAYSAP BIOLOGICAL SUMMARY FORM

TEAM #5

SEGMENT #: EV-71

TIDAL HEIGHT (Range) -2 \( \rightarrow +2 \)

SUBDIVISION B (part of A w/Amid Stream)

BIOLOGIST CRANK

SEA STATE 1

WIND SPEED/DIRECTION 10 knots/N

PHOTOGRAPHS: ROLL # 1

FRAME # 1

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

(A) Area is located high in the UITZ and in the SUPRA. Within the site there are masses of Fucus sporelings, eelgrass, white and black lichen and lithoria. Blanca cover is \( \sim 1\% \). 1.5 m below site there is a 2 x 15m patch of sparsely concentrated Fucus sporelings covering \( \sim 20\% \) of the sediments. The MITZ has moderate concentrations of Fucus and barnacles. Eels sporeling are moderate in concentration. Barnacles are present. There are dense pockets of lithoria and sparse mussels. 

Cover is \( \sim 50\% \). The UITZ had dense mussels with various species classes. Barnacles are still moderate, \( \sim 40\% \) of the adult shells are empty. The "empties" are being used by littorinids. Approx. 10\% of the mollusks are Fucus individuals in the MITZ are still present. Blanca cover is \( 40-60\% \).

(B) Area is located high in the UITZ on bedrock and boulders. Black lichen encrusts \( \sim 30\% \) of the sediment, moss and while lichen are also present covering \( <1\% \) of the sediments. The MITZ below site is a granular sand/beach with a small (1\%) low bedrock exposure. On the bedrock there is dense Fucus and sparse barnacles.

(C) Area is located near cobble in the MITZ. Black lichens encrusted into 20\% of the sediments. Barnacles and oligostracan worms are also present, coloring <1%.

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>30</td>
<td>None observed</td>
</tr>
<tr>
<td>Seabirds</td>
<td>1</td>
<td>30</td>
<td>Anad Streams:</td>
</tr>
<tr>
<td>Waterfowl</td>
<td>1</td>
<td>3</td>
<td>226-40-104-1b</td>
</tr>
<tr>
<td>Gulls/Kittiwakes</td>
<td>1</td>
<td>50</td>
<td>226-40-164-77</td>
</tr>
<tr>
<td>Shorebirds</td>
<td>1</td>
<td>17</td>
<td>226-40-164-84</td>
</tr>
<tr>
<td>Crows</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Other Birds</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

MARINE MAMMALS

<table>
<thead>
<tr>
<th>SPECIES</th>
<th># OBSERVED</th>
<th>FISH OBSERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sea Otters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pinnipeds (specify)</td>
<td></td>
<td>Deer</td>
</tr>
<tr>
<td>Whales (specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

LAND MAMMALS

<table>
<thead>
<tr>
<th>SPECIES</th>
<th># OBSERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deer</td>
<td>1</td>
</tr>
</tbody>
</table>

Shoreline subdivision map showing important biological features attached.

Reviewed: M.B. 5/10/91
Comments (cont.)

The UITZ below areas B & C has a sparse to rare concentration of barnacles, moderate Littorina and limpets, and rare mussels or cobbles. Most of the sediment surface directly below these sites is granular. At the stream mouth, in the minus tide level there are pebbles and cobbles with a 60% biota cover including: moderate barnacles, moderate Littorina with egg masses, inter-pebble mussel bed, and sparse Fucus sporocystae.

Area is in the UITZ on the west side of anad stream 226-40-16474. Black lichen encrusts about 20% of the sediments. Barnacles, rye grass and white lichen cover less than 10%. 15m below the site there is: dense Fucus, moderately concentrated barnacles, mussels and Littorina. Biota cover is ~70%

Area is located in the UITZ, 10m north of anad stream 226-40-16484. Black lichen is encrusted into ~30% of the sediments. Barnacles, rye grass, seasonal plants, and oligochaete and polychaete worms cover ~1% of sediments. Fifteen meters below site, in the UITZ though to UIT2 there is a moderate concentration of Fucus with maturing conceptacles and sporocystae, sparse to moderate barnacles, moderate to dense mussels and dense Littorina and limpets. Littorina egg masses and nudibranch egg masses were present. Biota cover is ~80%.
Comments (cont.)

Area is located in the UITZ among boulders, 15 m from the SW stream bank. Black lichen encrusts 60% of the sediments. Rye grass, turf spot algae, yellow and white lichen with fruiting bodies, moss and filamentous green algae cover 5% of the surface. Two meters below the site to the stream, there is dense Fucus and moderately concentrated barnacles. Biota cover is ~80%.

This subdivision has 3 anadromous streams #226-40, 16476/16477/16484. Gulls were feeding in the mouth of stream #16477. The intertidal biota appears to be healthy and not adversely affected by present oiling conditions.
PRINCE OF WALES PASSAGE

ANAD STREAM NUMBERS PROVIDED BY TOM CROW

SEGMENT: EV 71 A & B
DATE: MAY 15, 1991

LEGEND

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

SCALE: 50 METERS

ANAD 226-40-16477

STREAM

- Poorly Defined Channel
- Sporadic Spatiers
- Dense Root Structures in Stream Bank
- Small Patches Behind Boulders

ANAD 226-40-16477

*Note segment boundary
PRINCE OF WALES PASSAGE

MAP 2 of 2

ANAD. STREAM NUMBER
PROVIDED BY TOM CROW
ADFEG

MITZ and LITZ have ~80% bivalve cover. Fucus
is the dominant species. Recruitment is occurring on
the dikes, barnacle, mussel, littleneck and limpet populations

3 x 30m
BOULDERS AT BASE OF
BEDROCK
CT 2% CV 2%
ST 1% AP <1%
ON BACK OF
BOULDERS
VERY SMALL
PATCHES AP
TOTAL LESS
THAN 1 m²

5 x 10m
RANDOM DRIPS
CT ON BOULDERS
TRACE

ANAD STREAM
22G - 40 - 16484

EVAŃ'S ISLAND

LEGEND

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

SCALE
ROUGHLY
30
METERS

5 x 10m
RANDOM DRIPS
CT ON BOULDERS
TRACE

ANAD STREAM
22G - 40 - 16484

EVAŃ'S ISLAND
Eagle nests were not observed.

Survey extended into subdivision (A) as part of an anadromous stream survey with ADF&G representative.
1991 MAYSAP EVALUATION

SEGMENT: EV 071  SUB: C  REGION: FWS  SURVEY DATE: 5/25/91

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:

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

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

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. 2  SEGMENT EU 71  SUBDIVISION C  DATE 5 25/91

**TADEC**

Peter Montesano  SIGNATURE  [Signature]

- **NTR**  TREATMENT RECOMMENDED
  A small portion of this segment went unsurveyed due to an Eagle Nest. Significantly more oil found than reported by ASAP, most of which was either being removed (areas A,B,C) - Treatment complete.
  A dead otter was found and flagged in area "E".

**EXXON**

NAME  [Signature]  [Signature]

- **NTR**
  To be left... due to light oiling & heavy breeze.
  A site Eagle activity

**LANDMANAGER**

NAME  [Signature]  [Signature]  [Signature]

- **NTR**
  Found more oil than is reported.
  Many sea otters with pups around islands.
  One dead baby salmon found on beach [E].
  Oil was removed from any potential work area.
  Eagle on nest at another island.

**USCG/NOAA**

NAME  [Signature]  [Signature]  [Signature]

- **NTR**
  Observed "Sor" was prevalent on shoreline washes. VECO removed all large collected sediments. Dust & sedimentation
  of the shoreline sediments, removed to help remove remaining "Sor".
  Would be difficult 1/5/12

- **NTR**  TREATMENT RECOMMENDED
MAYSAP SHORELINE OILING SUMMARY

TEAM NO. 2
OG Reimer BIO Ban
ADEC Montesano LANDMANAGER Kennedy for USFS
EXXON Box LANDMANAGER USCG/NOAA
TIME 6:30 to 7:33 TIDE LEVEL -0.93 ft. to -0.97 ft.
SURVEYED FROM: FOOT BOAT HELO DATE 5/25/91
TOTAL LENGTH SHORELINE SURVEYED: 2125 m NEAR SHORE SHEEN: BR RB SL NONE
EST. OIL CATEGORY LENGTH: W 0 m M 25 m N 46 m VL 310 m NO 1784 m US 0 m

<table>
<thead>
<tr>
<th>L</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT</th>
<th>SHORE SLOPE</th>
<th>AREA</th>
<th>ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>R V 2</td>
<td>P M 2 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>P V 1</td>
<td>B M 1 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>T V 20</td>
<td>B H 1 100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>T S 7</td>
<td>B H 1 100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>T T 1</td>
<td>B H 3 20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>T T 1</td>
<td>B H 4 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>T T 1</td>
<td>B H 1 2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

DISTRIBUTION: C = 91-100%; B = 51-60%; P = 11-50%; S = 1-10%; T = 0%
SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE
PHOTO ROLL # MAYSAP-2__22 FRAMES 7-11

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>SURFACE OIL CHARACTER</th>
<th>OILED</th>
<th>CLEAN</th>
<th>H2O LEVEL</th>
<th>SHEEN COLOR</th>
<th>PIT ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10</td>
<td>X</td>
<td>0 - 3</td>
<td>Y</td>
<td>X</td>
<td>B - PC</td>
</tr>
<tr>
<td>2</td>
<td>20</td>
<td>X</td>
<td>0 - 3</td>
<td>Y</td>
<td>X</td>
<td>B - PC</td>
</tr>
<tr>
<td>3</td>
<td>20</td>
<td>X</td>
<td>0 - 3</td>
<td>Y</td>
<td>X</td>
<td>B - PC</td>
</tr>
</tbody>
</table>

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

OG COMMENTS: Two small Rocky Islands with small pocket beaches and wide low rock platform on eastern shoreline. Oiling is sparse and consists of Bath Tub ring (CTR) on rocky sections. Some small pockets of_AP were found along the north side of both Islands in Ultradeck Shale. Scattered To were found across platform.

REVISED: MC 5/29/91
REVISED 5/29 08
OG SKETCH
EV 71 C
MAY 25-26, 1981
19:30 - 20:33
6:20 - 7:25
Doug Reimer

CT 2%
SOR C17%
TB C17%
4x4 - BLD

CT 6%
1 x 5m

CT/C 15%
AP/I 5%
P/C/B - VENT
shale 1-7 x 25m

CT/C 17%
SOR C17%
RcC/Bld
3 x 20L

AP 80%
1 x 2m

AP 10%
1 x 2m

TB C17%
Scattered
20 x 30m
Low Platform

CT < 5%
1 x 100m

Pit #3
1 x 3 - 4
SOR (light) 27%
CT C17%
TB C17%
RcC/Bld

Enhancement of Area

High Rock
(Skiff)

High Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Vertical Rock
(Skiff)

Verti
MAYSAP BIOLOGICAL SUMMARY FORM

| TEAM # | 2 |
| TEAM # | 2 |
| SEGMENT # | E2-71C |
| Segment | C |
| SEA STATE | <1 ft |
| WIND SPEED/DIRECTION | C1Kt |
| PHOTOGRAPHS: ROLL # | |
| FRAME # | |

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

- A+B+B+C+B on isolated stands - Fucus, barnacles, clumps of Fucus, algae, shells
- No visible oil on shell zone - Fucus is nearby, however, barnacles support dense Fucus on barnacles, patchy mussels

- C1O: AP removed 1000yds with no biofilm, surface TR on low platform, no barnacles, no Christmas tree, small mussels, small amphipods, found under rocks, no oiled organisms

- E3: CT in green algae zone, focus on Biofilm nearby

- H4: CT high in Fucus zone, SOC (Pit 1) in Fucus zone, barnacles + Fucus zones

- H5: CT in lichen zone, focus on barnacles nearby

- H6: CT in lichen zone, focus on barnacles nearby, Pit 1 on cobble beach, barnacles + amphipods

- I: CT in lichen zone - shingle beach below supported by barnacles, lichens, + lichens + egg masses

- J: CT in lichen zone - barnacle zone with lichens, limpets + mussels, shingle beach to west had an extremely dense bed of small mussels, along in lower zones of shingle beach

**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>
</tr>
</thead>
<tbody>
<tr>
<td>Eagles</td>
<td>9</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Seabirds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waterfowl</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gulls/Kittiwakes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shorebirds</td>
<td></td>
<td></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>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MARINE MAMMALS</th>
<th># OBSERVED</th>
<th>LAND MAMMALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sea Otters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pinnipeds(specify)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Ales(specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Shoreline subdivision map showing important biological features attached.

Reviewed 6/3/91/91
OG SKETCH
EV 71 C
MAY 25-26, 1981
19:30 - 20:23
6:20 - 7:25
Doug Reimer

[Diagram with various annotations and symbols indicating different zones and areas, such as "Lichen Zone", "Moss Mat", "Limpets", "Mussels", etc.]

Notes:
- SOIL (P + M): 1
- EVAC zone
- Limpets bound near CT/TB in lichen zone
- Beachhead

[Signatures and dates on the bottom of the page]
Eagle interest

depting survey.

D. Stine monitored

the nest while team A

proceeded with survey.

The eagle was not disturbed.

SMB.
1991 MAYSAP EVALUATION

SEGMENT: EV 071 SUB: A REGION: PWS SURVEY DATE: 5/15/91

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

Ecological/Constraints (see page two for details) Eagle nest, Fish harvest area, Anadromous stream

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

SHPO Signature: Timothy A. Smith Date: 5/31/91

RECOMMENDATIONS:

TREATMENT REQUIRED (Y or N) INITIAL TAG FOSC

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

COMMENTS:
INITIAL: ________________________________________________________

TAG: ____________________________________________________________

FOSC: __________________________________________________________

TAG APPROVAL DATE: MAY 31 1991 FOSC APPROVAL DATE: 6/7/91

ADEC
EXXON
USCG
NOAA

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.

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.
MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5  SEGMENT EV-71  SUBDIVISION A+B  DATE 5/15/91

Note: This was done as part of EV-71 B survey and includes information of ADEC.

NAME: John Dean  ADEC SIGNATURE: JH

☐ NTR Anomalous streams in Seq EV-71A 226-40-64476 and EV-71B 226-40-16437 had a sporadic band of AP/SCC in upright occurring between both streams and along the northern shoreline of this cove. Recommend local response crew for manual filling and removal of remaining oil deposits in prox-ity of stream areas. Stream 226-40-64474 NO CIF. also in upright.

☐ NTR No treatment recommended for this stream site (6/18/91)

Agree with ADF&G comments for treatment in vicinity of streams, only stream area of segment were surveyed by our team.

NAME: Steve Ward  OF CVC/RS SIGNATURE: SW

☐ NTR Changes Land Selected but not conveyed.

☐ NTR Manual required in these stream areas to protect the fish. Team S picked up a lot but a lot of oil is still there to be picked up. Good for changes Local Response.

☐ NTR High Priority- this team did only streams

☐ NTR The very small amount of AP found was picked up and removed. ADF&G representative concurred that no further treatment was necessary.

NAME: Deesher Cline  SIGNATURE: SW

Taken from EV-71B 5/14/91 4LY
CHANEY
CRANK
HAYES
WARD
DEAN
DREHER/CLINE

TIME 09 : 58 to 11 : 19
TIDE LEVEL -2.0 ft. to +2.0 ft.
ENERGY LEVEL: □ H □ M □ L

SURVEYED FROM: □ FOOT □ BOAT □ HELO
WEATHER: □ SUN □ CLOUDS □ FOG □ RAIN □ SNOW

TOTAL LENGTH SHORELINE SURVEYED: 252 m
NEAR SHORE SHEEN: □ BR □ RB □ SL □ NONE

EST. OIL CATEGORY LENGTH: W_ _ m M_ _ m N_ 50 m V_ 35 m NO_ 167 m US_ 500 m

DISTRIBUTION: C = 91-100%; B = 81-90%; P = 71-80%; S = 1-10%; T = 0%

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE
PHOTO ROLL # MAYSAP- 5 - NO PHOTOS WET CAMERA FRAMES

OG COMMENTS:
FEW RANDOM PATTIES AP BEHIND PROTECTIVE BOULDERS AT LOCATIONS INDICATED ON SKETCH MAPS. THIS SURVEY INCLUDES PART OF EV-71 # B BECAUSE IT IS AN ANADROMOUS FISH STREAM.

REVISED: MG 5/2/91
REvised from EV-71 B, 8/1791 41
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #5  DATE 15 May 1991
SEGMENT # EV-71  TIDAL HEIGHT (Range) -2 → +2
SUBDIVISION B (part of A) - (Anad Stream)  BIOLOGIST Frank
SEA STATE 1  WIND SPEED/DIRECTION 10 knots/N
PHOTOGRAPHS: ROLL #  FRAME #

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):
(A) Area is located high in the ULTZ and in the SUPRA. Within the site there are two types of growths. Equisetum sporelings, rye grass, white and black lichen and littorina. Brittle cover is ~10%. 14 m below site there is a 2 x 15 m patch of sparsely concentrated Fucus sporelings covering ~20% of the sediments. The MITZ has moderate concentrations of Fucus and barnacles. Equisetum sporelings and more concentrated on the former, there are dense packets of littorina and sparse mussels. Equisetum cover is ~50%. The MITZ has dense mussels with various 2nd classes. Barnacles are still moderate, ~45% of the adult shells are empty. The "empties" are now used by littorina. Approx. 10% of the and dense Fucus concentration in the MITZ are "stipe-only". Brittle cover is 40-60%.

(B) Area is located high in the ULTZ on bedrock and boulders. Black lichen encrusts <1% of the sediments. The MITZ below site is a granular sand/mud with a small (1x3m) low bedrock outcrop. On the bedrock there is dense Fucus and sparse barnacles.

(C) Area is located among cobbles in the MITZ. Black lichen is encrusted into 20% of the sediments. Barnacles and oligochaete worms are also present, covering ~1%.

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>
</tr>
</thead>
<tbody>
<tr>
<td>Eagles</td>
<td>1</td>
<td>30</td>
<td>None observed.</td>
</tr>
<tr>
<td>Seabirds</td>
<td>1</td>
<td>3</td>
<td>Anad Stream;</td>
</tr>
<tr>
<td>Waterfowl</td>
<td>1</td>
<td>5</td>
<td>220-40-164748</td>
</tr>
<tr>
<td>Gulls/Kittiwakes</td>
<td>1</td>
<td>5</td>
<td>220-40-164748</td>
</tr>
<tr>
<td>Shorebirds</td>
<td>1</td>
<td>17</td>
<td>220-40-164748</td>
</tr>
<tr>
<td>Corvids</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Other Birds</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

MARINE MAMMALS

<table>
<thead>
<tr>
<th>SPECIES</th>
<th># OBSERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sea Otters</td>
<td></td>
</tr>
<tr>
<td>Pinnipeds (specify)</td>
<td></td>
</tr>
<tr>
<td>Whales (specify)</td>
<td></td>
</tr>
</tbody>
</table>

LAND MAMMALS

<table>
<thead>
<tr>
<th>SPECIES</th>
<th># OBSERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deer</td>
<td>1</td>
</tr>
</tbody>
</table>

Shoreline subdivision map showing important biological features attached.

REVIEWED: MC 5/14/91 taken from EV.71B, 5/19/91 4A
The U172 below areas B1C has a sparse to rare concentration of barnacles, moderate Littorina and limpets and rare mussels on cobbles. Most of the sediment surface directly below these sites is granular. At the stream mouth, in the minus tide level there are pebbles and cobbles with a 60% biota cover including moderate barnacles, moderate Littorina with egg masses, inter- pebble mussel bed, and sparse Fucus sporangia.

Area is in the U172 on the west side of anad stream 226-40-16476. Black lichen encrusts about 20% of the sediments. Barnacles, rye grass and white lichen cover less than 10%. 15m below the site there is: dense Fucus, moderately concentrated barnacles, mussels and Littorina. Biota cover is ~70%.

Area is located in the U172, 10 m north of anad stream 226-40-16484. Black lichen is encrusted into ~30% of the sediments. Barnacles, rye grass, seasonal plants, and oligochaete and polychaete worms cover ~1% of sediments. Fifteen m below site, in the MITZ through the LITZ there is a moderate concentration of Fucus with maturing conceptacles and sporangia, sparse to moderate barnacles, moderate to dense mussels and dense Littorina and limpets. Littorina egg mass and nudibranch egg masses were present. Biota cover is ~80%.
Comments (cont.)

(F) Area is located in the U1TZ among boulders, 15 m from the stream bank. Black lichen encrusts 60% of the sediments. Rye grass, turf spot algae, yellow and white lichen with fruiting bodies, moss and filamentous green algae cover 5% of the surface. Two meters below the site to the stream, there is dense Fucus and moderately concentrated barnacles. Biota cover is ~80%.

This subdivision has 3 anadromous streams #246.40.141.476, 116477, 116484. Gulls were feeding in the mouth of stream #16477. The intertidal biota appears to be healthy and not adversely affected by present oiling conditions.

Reviewed: MC 5/24/91
taken from EV.71B 5/19/91 GY
Eagle nests were not observed.

Survey extended into subdivision (A) as part of an anadromous stream survey with ADF&G representative.

taken from EV-71 B, 5-19-91
PRINCE OF CALES
PASSAGE

ANAD. STREAM NUMBERS
PROVIDED BY TOM CROW

LEGEND

BAND PATTIES
IN BOULDERS

1x15m
AP. 2%
SOR 2%
CV, CT
TRACE

1x50m
AP 5%
SOR 5%
CV 1%
CT 1%

STREAM
(2) 15m patches at
Sporadic
SPLATTERS

3x50m
CT TRACE

3x20
SOR, CV, CT
TRACE

SMALL PATCHES BEHIND BOULDERS

ANAD.
226-40-16477

note segment boundary

taken from EV.718, 5/19/91 48 REVIENOW: MC.5/12/91
(taken from EV-71B maps, done together)

<table>
<thead>
<tr>
<th>XXXX</th>
<th>Wide</th>
<th>EV071 A</th>
</tr>
</thead>
<tbody>
<tr>
<td>////</td>
<td>Medium</td>
<td>ADEC Subsegment Length: 752m Meters</td>
</tr>
<tr>
<td>----</td>
<td>Narrow</td>
<td></td>
</tr>
<tr>
<td>TTTT</td>
<td>Very Light</td>
<td></td>
</tr>
<tr>
<td>0000</td>
<td>No Oil</td>
<td></td>
</tr>
</tbody>
</table>

Subdivision Field Map
Map Key: PWSEV071A
Name: Chaney (J-Y)
Date: 5.15.91
Data Entered:

Revised: 5/22/91
Revised from EV-71B, 5.19.91 CY
1991 MAYSAP EVALUATION

SEGMENT: EV 071   SUB: B  REGION: PWS   SURVEY DATE: 5/15/91

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

Ecological/Constraints (see page two for details) Eagle nest, Fish harvest area, Anadromous stream, Subsistence - Deer harvesting

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

SHPO Signature: Timothy A. Smith  Date: 5/31/91

RECOMMENDATIONS:

TREATMENT REQUIRED (Y or N)  INITIAL  TAG  FOSC

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 51 1991  FOSC APPROVAL DATE: 6/18/91

ADEC  EXXON  USCG  NOAA

FOSC  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.

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.
**MAYSAP FIELD SHORELINE COMMENT SHEET**

TEAM NO. 5  SEGMENT EV-71  SUBDIVISION 10  DATE 5/15/91

*Note: this includes information on Segment EV-71A*

**ADEC**

NAME: John Hoy  ADJACENCY: Field Shoreline  SIGNATURE: [Signature]

- [ ] NTR. Anomalous streams in Seg EV-71A 226-40-16436 and EV-71B 226-40-16437 had a sporadic band of AP/SOC in Suite 6C12. Occurring between both streams and along the southern shoreline of this cove, recommend local response crew for manual tiling and removal of remaining oil deposits in proximity of stream areas. Stream 226-40-16438 had CIVP CVC/LC in suite.

- [ ] NTR. Treatment recommended for this stream site (226-40-16434). NO.

Agree with ADFG comments for treatment in vicinity of streams; only stream areas of segment were surveyed by our team.

**EXXON**

NAME: John Dean  SIGNATURE: [Signature]

- [ ] NTR. 1 bag of very slightly oiled sediments were recovered. No other oil in recoverable state was observed.

**LANDMANAGER**

NAME: Steve Ward  SIGNATURE: [Signature]

- [ ] NTR. Chenaqo Land selected but not conveyed.

  Manual required in these stream areas to protect the fish.

  Team 5 picked up lot but bulk of oil is still there to be picked up. Good for chenaqo local resource.

  NO-Bio.

  High Priority - this team 100 only stream.

  No Survey on Eu-70 on N1.

**USCG/NOAA**

NAME: DEPHER/CLINE  SIGNATURE: [Signature]

- [ ] NTR. The very small amount of AP found was picked up and removed. ADFG representative concurred that no further treatment was necessary.

  I agree with the ADFG representative for all three streams. DEPHER.

---
**MAYSAP SHORELINE OILING SUMMARY**

**TEAM NO.**

<table>
<thead>
<tr>
<th>OPE</th>
<th>CRANK</th>
<th>ADEC</th>
<th>HAYES</th>
<th>USCG/NOAA</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHANEY</td>
<td>CRANK</td>
<td>DEAN</td>
<td>DEAN</td>
<td>DREHER/CLINE</td>
</tr>
</tbody>
</table>

**SEGMENT**

| EV - 71 |

**SUBDIVISION**

| A (B) |

**DATE**

| MAY 15, 1991 |

**TIME**

| 09:58 to 11:19 |

**TIDE LEVEL**

| -2.0 ft. to +2.0 ft. |

**ENERGY LEVEL**

| H M |

**WEATHER**

| ☑️ SUN ☑️ CLOUDS ☑️ FOG ☑️ RAIN ☑️ SNOW |

**SURVEYED FROM**

| ☑️ FOOT ☑️ BOAT ☑️ HELO |

**TOTAL LENGTH SHORELINE SURVEYED**

| 745 m |

**NEAR SHORE SHEEN**

| BR RB SL NONE |

**EST. OIL CATEGORY LENGTH**

| W - m M - m N - m VL 90 m NO 855 m US 4,220 m |

**LOCAL SHORELINE SURVEY**

<table>
<thead>
<tr>
<th>L</th>
<th>OIL</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT</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>A</td>
<td>T</td>
<td>BR M 3</td>
<td>50</td>
<td>✓</td>
<td></td>
<td></td>
<td>SPORADIC SPLATTERS</td>
</tr>
<tr>
<td>E</td>
<td>E</td>
<td>T</td>
<td>BC M 5</td>
<td>10</td>
<td>✓</td>
<td></td>
<td></td>
<td>RANDOM DRIPS ON BEDS</td>
</tr>
<tr>
<td>F</td>
<td>F</td>
<td>S S S</td>
<td>R H 3</td>
<td>20</td>
<td>✓</td>
<td></td>
<td></td>
<td>LESS THAN 1 m² AP</td>
</tr>
</tbody>
</table>

**SHEEN COLOR**

| B = BROWN; R = RAINBOW; S = SILVER; N = NONE |

**PIT No.**

| 1 20 |
| 3 30 |

**SUBSURFACE OIL CHARACTER**

<table>
<thead>
<tr>
<th>OILED ZONE</th>
<th>CLEAN BELOW</th>
<th>OIL COLOR</th>
<th>PIT</th>
<th>ZONE</th>
<th>SUBSURFACE SEDIMENTS</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>✓</td>
<td>C-CGB</td>
<td>✓</td>
<td></td>
<td></td>
<td>C-CGB</td>
</tr>
<tr>
<td>✓</td>
<td>✓</td>
<td>CP-CP</td>
<td>✓</td>
<td></td>
<td></td>
<td>CP-CP</td>
</tr>
</tbody>
</table>

**OG COMMENTS:**

Few random patties at A behind protective boulders at locations indicated on sketch maps. This survey includes part of EV - 71 - A because it is an anadromous fish stream.

**REVISED:**

MAY 15, 1991

To only reflect segment B.
PRINCE OF WALES PASSAGE

ANAD. STREAM NUMBERS
PROVIDED BY TOM CROW
ADFG

LEGEND

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

SCALE

50 METERS

REVISED: NO 5/19/91
revised 6-19-91 (CN)
LEGEND

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

SCALE ROUGHLY 30 METERS

MAYSAP 1991
OG SOTCH MAP
GREG CHANEY
TEAM 5
SEGMENT: EV71B
DATE: MAY 15, 1991
AIR P.N.: NONE

PRINCE OF WALES PASSAGE

MAP 2 of 2

ANAD. STREAM NUMBER
PROVIDED BY TOM CROW
ADF G

3 × 30m BOULDERS AT BASE OF BEDROCK
CT 2% CV 2%
ST 1% AP < 1%
ON BACK OF BOULDER
VERY SMALL PATCHES AP TOTAL LESS THAN 1m²

5 × 10m RANDOM DRIPS CT ON BOULDERS TRACE

ANAD STREAM 22G - 40 - 16484

EVAN'S ISLAND

Reviewed: 5/1991 MC
reviewed: 5/1991

Provided by Tom Crow
ADF G
TEAM # 5  DATE 15 May 1991
SEGMENT EU-71  TIDAL HEIGHT (Range) -2 to +2
SUBDIVISION B (part of A w/Amid Stream) BIOLOGIST Crank
SEA STATE 1  WIND SPEED/DIRECTION 10 knots N
PHOTOGRAPHS: ROLL # FRAME #

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

(A) Area is located high in the UIITZ and in the SUPRA. Within the site there
are masses of Fucus sporangia, reed grass, white and black lichen and
Littorina. Biota cover is ~ 1%. 5' in below site there is a
2x15m patch of sparsely concentrated Fucus sporangia covering ~20%
of the sediments. The UIITZ has moderate concentrations of
Fucus and barnacles. Fucus sporangia and mature sporangia are
present. There are dense patches of Littorina and sparse mussels. 86%
Moter is ~ 50%. The UIITZ has dense mussels with various size
classes. Barnacles are still moderate ~ 40% of the adult shells are
empty. The "empties" are being used by Littorina. Approx. 10% of the endozoic
Fucus concentrations in the UIITZ are "live only". Biota cover is 40-60%.

(B) Area is located high in the UIITZ on bedrock and boulders. Black lichen encrusts
~ 80% of the sediment. Moss and white lichen are also present covering
<1% of the sediments. The UIITZ below site is a granular sand/silt with
a small (1x3m) low bedrock outcrop. On the bedrock there is dense Fucus
and sparse barnacles.

(C) Area is located among cobbles in the UIITZ. Black lichen encrusted
into 20% of the sediments. Barnacles and oligochaete worms are also present,
covering <1%.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>SPECIES OBSERVED</th>
<th>SPECIES PRESENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eagles</td>
<td></td>
<td></td>
<td></td>
<td>None observed.</td>
</tr>
<tr>
<td>Seabirds</td>
<td>1 Ploceus</td>
<td>30</td>
<td>Anad Stream</td>
<td></td>
</tr>
<tr>
<td>Waterfowl</td>
<td>1 Ducks</td>
<td>3</td>
<td>226-49-164-76</td>
<td></td>
</tr>
<tr>
<td>Gulls/Kittiwakes</td>
<td>1 Gulls</td>
<td>50</td>
<td>226-49-164-77</td>
<td></td>
</tr>
<tr>
<td>Shorebirds</td>
<td>1 Sanderling</td>
<td>17</td>
<td>226-49-164-84</td>
<td></td>
</tr>
<tr>
<td>Corvids</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Birds</td>
<td>1 Warbler</td>
<td></td>
<td></td>
<td></td>
</tr>
</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>Deer</td>
<td>1</td>
</tr>
<tr>
<td>Piglpends(specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whales(specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

LAND MAMMALS

Shoreline subdivision map showing important biological features attached.
The U172 below areas B1C has a sparse to rare concentration of barnacles, moderate Littorina and limpets and rare mussels on cobbles. Most of the sediment surface directly below these sites is granular. At the stream mouth, in the minus tide level, there are pebbles and cobbles with a 60% biota cover including moderate barnacles, moderate Littorina with egg masses, inter-pebble mussel bed, and sparse Fucus sporocysts.

Area is in the U172 on the west side of anad stream 226-40-16476. Black lichen encrusts about 20% of the sediments. Barnacles, rye grass and white lichen cover less than 1%. 15 m below the site there is a dense Fucus, moderately concentrated barnacles, mussels and Littorina. Biota cover is ~ 70%.

Area is located in the U172, 10 m north of anad stream 226-40-16484. Black lichen is encrusted into ~30% of the sediments. Barnacles, rye grass, seasonal plants, and oligochaete and polychaete worms cover ~1% of sediments. Fifteen meters below site, in the U172 through U172, there is a moderate concentration of Fucus with maturing conceptacles and sporocyst. Sparse to moderate barnacles, moderate to dense mussels and dense Littorina and limpets. Littorina egg mass and nudibranch egg masses were present. Biota cover is ~80%.

Comments (cont.)

Area is located in the U172, 10 m north of anad stream 226-40-16484. Black lichen is encrusted into ~30% of the sediments. Barnacles, rye grass, seasonal plants, and oligochaete and polychaete worms cover ~1% of sediments. Fifteen meters below site, in the U172 through U172, there is a moderate concentration of Fucus with maturing conceptacles and sporocyst. Sparse to moderate barnacles, moderate to dense mussels and dense Littorina and limpets. Littorina egg mass and nudibranch egg masses were present. Biota cover is ~80%.

Area is in the U172 on the west side of anad stream 226-40-16476. Black lichen encrusts about 20% of the sediments. Barnacles, rye grass and white lichen cover less than 1%. 15 m below the site there is a dense Fucus, moderately concentrated barnacles, mussels and Littorina. Biota cover is ~ 70%.

Comments (cont.)
Area is located in the UITZ among boulders, 15 m from the SW stream bank. Black lichen encrusts 60% of the sediments. Rye grass, tar spot algae, yellow and white lichen with fruiting bodies, moss and filamentous green algae cover 5% of the surface. Two meters below the surface to the stream, there is dense Fucus and moderately concentrated barnacles. Biotla cover is ~80%.

This subdivision has 3 anadromous streams #226-40-16476/16477/16484. Gulls were feeding in the mouth of stream #16477. The intertidal biota appears to be healthy and not adversely affected by present oiling conditions.
MITZ and LITZ have ~80% bista cover. Fucus is the dominant species. Recruitment is occurring in the Fucus, barnacle, mussel, littorina and limpet populations.

3 x 30m
Boulders at base of bedrock
CT 2% CV 2%
ST 1% AP < 1%
ON back of boulders
Very small patches AP
Total less than 1 m²

5 x 10m
Random drips CT on boulders trace

ANAD STREAM
22G-40-16484

Evans' Island
Eagle nests were not observed.

Survey extended into subdivision (A) as part of an anadromous stream survey with ADF&G representative.
ANADROMOUS FISH STREAM EVALUATION ADDENDUM
CONTRASTS FOR STREAM NO. 226-40-16484
SEGMENT EV-71 SUBDIVISION B

WORK WINDOW

<table>
<thead>
<tr>
<th>Tarmat Removal</th>
<th>OPEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioremediation Less Than 100m From Stream</td>
<td>WORK PRIOR TO 7/10 (ADF&amp;G MONITOR REQ.)</td>
</tr>
<tr>
<td>Bioremediation More Than 100m From Stream</td>
<td>WORK PRIOR TO 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 ADF&G catalogued anadromous stream (226-40-16484) 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 tarmat removal.

5T Bald Eagle Nest NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision B work site.

7II Subsistence: Deer Harvesting Closed to bioremediation after 8/15. No constraint to tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS
No disturbance to stream bed or banks. No flushing of pollutants or sediments into stream drainage; do not allow Inpol to enter stream flow. On-site examination and consultation by ADF&G monitor is required prior to bioremediation in order to authorize a setback distance from the stream during chemical application; if ADF&G monitor's presence is impossible, authorization may be given by the ADEC monitor. Restrict boat and air traffic and beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SEE SUBDIVISION CONSTRAINT ADDENDUM EV-71B FOR ADDITIONAL CONSTRAINT INFORMATION

FOSC

Prepared by

Date

Date

6/12/90
ECOLOGY MAP
SEGMENT EV-71
SUBDIVISION B (2013)

Exxon Company, USA
Map Key: P&G-EV-71

EXxon

0 00000 00000

METERS

100m buffer zone

WORK AREA

ANADROMOUS STREAM
(226-40-16484)

ANADROMOUS STREAM
(226-40-16477)

ANADROMOUS FISH STREAM EVAL.

★ Seabird Colony
△ Active Eagle Nest
△ Inactive Eagle Nest

1 in. = 2000 feet
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ EV-071 B STREAM NO: 226-40-16484 DATE 4/30/90

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)
2A-2 All Bald Eagle nests (3/1 to 6/1)
7II Subsistence area: Deer harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: [Signature] DATE: 5/25/90

Subsurface Oil Observed: Yes____ No X Maximum Depth________

RECOMMENDATIONS:

____No Treatment Recommended _______Share/Absorbent Booms
____Treatment Recommended _______Oil Snare's (pom poms)
____Manual Pickup _______Absorbents (pads, rolls, etc)
____Bioremediation _______Spot Washing: Wands
____Tarmat Removal _______Beach Cleaner
______Other (see comments)

COMMENTS: Recommend manual removal of tarmat as indicated on the attached sketch map. Work from 6/2 to 7/9 with approval of USFWS due to eagle nest.

TAG COMMENTS: Bioassymes (customary) as required following tarmat removal

TAG APPROVAL DATE: 5/23/90
ADEC Exxon NOAA USCG

FOSC: [Signature] DATE: 5/31/90

ADEC Exxon NOAA USCG
ANADROMOUS FISH STREAM ASSESSMENT

REGION: PWS
SEGMENT: ST/EV-071
SUBDIVISION: B
STREAM NO: 226-40-16484
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/EV-071 ST STREAM NO: 226-40-16484 DATE 4/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-2 All Bald Eagle nests (3/1 to 6/1)
7II Subsistence area: Deer harvesting

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 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 (Anchorage) or 229-1508
(24 hrs.).

SHPO SIGNATURE: ___________________ DATE: ___________________

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
____ Spot Washing: _____ Other (see comments)

COMMENTS: Recommend manual removal of tarmat as indicated on the
attached sketch map. Work from 6/2 to 7/9 with approval of USFWS due to
eagle nest.

TAG COMMENTS: _______________________________________________

TAG APPROVAL DATE: ________
ADEC _________________________ FOCS: __________ 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 oilpil 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 oilpil 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 oilpil 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

1J Gill net area (6/7 to 8/31)
1K Purse seine area (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 oilpil application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G James Brady 424-3122

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 unclogged intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or oilpil application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3233

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (6/15 to 9/15)
   Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of oilpil 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 566-7235
   ADF&G Don Calkins 267-2403

3R Seal herd (6/1 to 9/1)
   Restrict air and boat traffic to essential minimum. No personnel within 600m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S Shorebird/waterfowl concentration (4/1 to 5/15)
   Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
   ADF&G Tom Roth 257-2206

5T Bald Eagle nests (9/1 to 9/1)
   Active Bald Eagle nests (9/1 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)
   Deer harvesting
   Fish harvesting
   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 oilpil 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

226-40 -

SEGMENT 1EV071A SUBDIVISION: 16484 DATE 4/31/90

USCG NAME AWRD MEULATION SIGNATURE

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

1. MANUAL REMOVAL OF ASPHALT & DIRT

ADF&G

NAME MICHAEL WISDOM

SIGNATURE

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

REFER TO ADF&G OBSERVATION AND TREATMENT COMMENTS FOR THIS DATE.

LAND MANAGER

NAME 

SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS
**SHORELINE OILING SUMMARY (ANAD.)**

**FROM:** EXXON CORDOVA

**TO:** SCAT TEAM

**DATE:** APR-22-1991

---

**Team No.:** 15

**Tide Level:** 5.5 ft

**Est. Subdivision Length:** 60 m

**Surf Oil**: 30%

**Subsurface Oil**: Yes / No

**Surface Sediments**: Not Applicable

**Slope**: 10% Hang, 10% Vertical

**Wave Exposure**: Low / Med / High

---

### Surface Oil

<table>
<thead>
<tr>
<th>Character</th>
<th>Distribution</th>
<th>Oil / Film Color</th>
<th>Impacted Zones</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt Pavement</td>
<td>XXX</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Pooled</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cover</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coat</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stain</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Mousse</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patties</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tarballs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Film</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>No Oil</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Subsurface Oil

<table>
<thead>
<tr>
<th>Pit No.</th>
<th>Pit Depth (cm)</th>
<th>Subsurface Oil Character</th>
<th>Oiled Interval</th>
<th>Below Oil / Film Color</th>
<th>Impacted Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>28</td>
<td>X</td>
<td>0.5</td>
<td>X</td>
<td>N</td>
</tr>
<tr>
<td>2</td>
<td>15</td>
<td>X</td>
<td>0.5</td>
<td>X</td>
<td>N</td>
</tr>
<tr>
<td>3</td>
<td>15</td>
<td>X</td>
<td>0.5</td>
<td>X</td>
<td>N</td>
</tr>
<tr>
<td>4</td>
<td>15</td>
<td>X</td>
<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

**Comments:**

* Oiled interval (5 cm) in Pits 1, 2 and 3 does not constitute subsurface oil.

**Reviewed:** [Signature] Date: 4-23-91
ADFG MULTI-ASSESSMENT DATA FORM

**1.** SURVEY TYPE: ES OS DS TS AS AVE SCFA HOMES PTA 2 REGION: FNS KP, CI, KAP

- **Method:** Aerial Ground

- **Date:** 4/21/90

- **Start Time:** 1425

- **Stop Time:** 1440

- **Segment:** EV-GH

- **Station:** 22G-40-16484

- **Tide HT at Survey:** 5:23

- **X-Unit:** 

- **Station Area:** Seward A3

- **Lat:** 

- **Long:** 

- **Source:** NoLoren

- **Location:** West Shore Evans Is.

- **Description:**

---

**EXTENT OF OIL**

<table>
<thead>
<tr>
<th>Shoreline</th>
<th>Stream</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>W</td>
</tr>
<tr>
<td>100</td>
<td>30</td>
</tr>
</tbody>
</table>

**27. Surface Coverage:**

- **Surface Thickness:** 0.1 mm, 2 mm, 0.1 mm

- **Penetration:** 5 cm, 5 cm, 5 cm

- **Overall Oil Impact:** N, V, L, N, N

- **Oil Type:** Pooled Tar Asphalt Sticky Stain

- **Oiled Debris:** Y

- **Shoreline Type:** Headland Laying Rocks Beach Cave

- **Wave Exposure:** High Moderate Low

- **Substrate Type:** Bedrock Boulder 15 Cobble 15

- **Gravel:** 40 Sand Mud/silt

---

**Recommend Manual Removal of all Oiled Substrates**

**Remarks:** Ring of 1 m Wide Asphalt along Upper Intertidal Zone. Ring extends 15 m North of Stream and 50 m South/West of Stream.
Segment EV 7/A
Stream 226-40-16484
Ecologist's Summary

This stream mouth lies on a boulder/cobble/gravel beach in a sheltered bay. There are dense populations of Fucus, barnacles, littorines, and associated animals including large, old limpets (Collisella pelta) in MTZ and LTZ. A band of tar was found on the surface in UTZ, and manual pickup recommended. There are no ecological constraints on cleanup operations.

Michael Fawcett
ECOLOGY MAP

EV-71

Wide

IVO Medium

Narrow

Very Light

XXX Wide

/// Medium

----- Narrow

TTTT Very Light

ADEC Segment Length: 8115 m

Anadromous Stream
226-90-1675

Anadromous Stream
226-90-1677

Eagle Nest SWS

Map Key: PWS-271

Mike Foster

4/11/10

Data Entered:
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-72

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION

SEGMENT ST/ EV-72 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T All Bald Eagle nests (3/1 to 6/1)
5T Active Bald Eagle nests (3/1 to 9/1) located within 400m
7HM Subsistence area: Finfish harvesting
7II Subsistence area: Deer harvesting (8/15 to 2/28)
Sensitivity code and general time constraints. See attached Ecological sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. (See above)

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 (564-3274 (Anchorage) or 229-1508 (24hrs.)).

SHPO SIGNATURE: __________________ DATE: __________________

OILING CATEGORIZATION:

Wide__ m: Medium__ m: Narrow__ m: V.Light___ m: No Oil____ m
Subsurface Oil Observed: Yes X No____ Maximum Depth__ 10cm

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: 1) Manual removal of tarmats in areas shown on attached sketch maps. Work should be conducted between 6/1 and 8/15 with approval of USFWS regarding eagle nests and consultation with ADF&G regarding specific dates of finfish harvesting.

TAG COMMENTS:_____________________________________

TAG APPROVAL DATE: __________ ADEC
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 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 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 Peltz 424-3214

1D Esthers 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 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: ADF&G Larry Peltz 424-3214

1l Gill net area (6/7 to 8/31)
1j Purse seine area (7/20 to 9/30)
1k Purse seine hook-and-line (7/20 to 9/30)
1l Sot 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 (1) restrict beach operations to essential minimum as authorized by ADF&G. 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

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 unoolled 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 and USFWS 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 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 inpil 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 586-7235

5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6S 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

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 5/1. 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 786-3377

6U Recreation:
6V Tent sites (6/1 to 9/15)
6W Anchorage (6/1 to 9/15)
6X Forest Service cabin (6/1 to 9/15)
6Y Lodge (6/1 to 9/15)
6Z Special use destination

7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
7HH Purple fishing harvesting
7HH Smoke harvesting
7HH 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 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 257-2359
SEGMENT ST  EV-72  SUBDIVISION:  A  DATE 26 MAR 19

USCG
NAME  SHAWNA MAAE  SIGNATURE  D. ROBERT ALEX

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS
RECOMMEND MANUAL REMOVAL OR ASHTRAY/PATIENTS AND PARTIES BIOTREATMENT IN ANGLE BEACHES
WHERE SUBSURFACE OILS INTERSECT
SUBSURFACE OILS PRESENT. FURTHER EVALUATION NEEDED.

ADEC
NAME  DAVID M. SALL  SIGNATURE

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS
1. MANUALLY REMOVE TAR MATS AND TAR BALLS, AND PARTIES AND ASPHALTS
2. REMOVE AND/OR CLEAN SPOTTED SPOT SURFACE TO
   DEPTH OF PENETRATION, PARTICULARLY, DO NOT MASS COCOES
   AND SPOTTED SPOT BETWEEN BOULDERS. (BEACH FACING 90° TO
   90° NEAR) (MAN, PP. 24)
3. REMOVE OIL SPOTTED SPOT AND COCOES OILSPOT ON BEACH Next
   THIS BEACH REQUIRES FURTHER TREAT EVAUATION.

LAND MANAGER
NAME  DON KAMPKOFF  SIGNATURE  DONALD P. KAMPKOFF, JR.

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

40841
**SHORELINE OILING SUMMARY**

**OIL**
- SURFACE OIL: Impacted Zones
  - Asphalt Pavement: P
  - Pooled Oil: P
  - Cover: P
  - Stain: P
  - MOOSE: P
  - Patties: P
  - Tarsalls: P
  - Film: P
  - No Oil: X

**SUBSURFACE OIL**

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERNAL</th>
<th>OILED BENEATH</th>
<th>OIL/FILM COLOR</th>
<th>PIT ZONE</th>
<th>ANA</th>
<th>FOL</th>
<th>YIEL</th>
<th>SURFACE - SUBSURFACE SEDIMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>18</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>35</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>34</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>25</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>45</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**COMMENTS**
Most of the high oil concentrations are found at or above the H.T.W.S. line in the backs of crabs and small pocket beaches.

29-41
## 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>Anal.</th>
<th>Surface Sediments</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>51</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>Y</td>
<td>Y Y</td>
<td>47</td>
<td>P-GSV</td>
</tr>
<tr>
<td>8</td>
<td>40</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td>N</td>
<td>N P-P</td>
<td></td>
</tr>
</tbody>
</table>

**Comments:**

30/47

**Reviewed:**

[Signature]

**Date:** 5-28-90
Boulder beach with patchy coat, 2m wide, in UITZ. The oil is tarry and becomes heavier under the surface. Boulders. Downward movement limited by granules filling the interstices.

Prior beah with PATCHY COAT as described above.

Pebble, gravel, boulder beach. Fine sediments are well sorted. Minor oiled debris recovered.

Well sorted pebbles, cobble beach. NO OIL.

Boulder beach with SPLATTERED COAT.

[No text in this section]

[/No text in this section]

Patchy stain on rocks

Pebble, gravel, beach. NO OIL. STZ is sand covered.

Rock face with PATCHY COAT.

High angle rock with a PATCHY BAND OF COAT (0.5m).

Pebble, gravel, beach. NO OIL. STZ is sand covered.

Rock face with PATCHY COAT.

(stm)² area of ASPHALT: 6 cm thick.

Pebble, gravel, beach. NO OIL.
SHORELINE ECOLOGICAL SUMMARY

Segment ST/10/6v 72 Subdivision A Date (mo/day/yr) 4/25/91

Time (24 hr) 7:30 - 1:30 Biologist: Lemen

(A) Substrate type and % of segments:

(B) Overall % cover of biota (% of segment): Dense 90% 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 (G)

Photographs: Roll No. S1/10/15
Frames 0 - 26

<table>
<thead>
<tr>
<th>BARNACLES</th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1U</td>
<td>1M</td>
<td>1L</td>
<td>1U</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>2</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td>5</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MYTILUS</th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1U</td>
<td>1M</td>
<td>1L</td>
<td>1U</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GASTROPODS</th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1U</td>
<td>1M</td>
<td>1L</td>
<td>1U</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FUCUS</th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1U</td>
<td>1M</td>
<td>1L</td>
<td>1U</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>0</td>
</tr>
</tbody>
</table>

Wildlife Observations/General Comments: Fucus reproductive in all zones, lacks density in low zone because
of dense mussels. Water column is clearer than a few days ago. Much life in bay.

Ecological Considerations: Subsidence, finish of deer harvest area. 7 eggs nests reported, but
only 2 were confirmed on 25 Apr. 91 surveys see map.
XXX Wide
/// Medium
---- Narrow
TTTT Very Light
0000 No Oil

EV-72

Map Key: PWS-272a
Name: P. Marty
Date: 26 April 1990
Date Entered:
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT EV-72 SUBDIVISION A (1 of 1)

WORK WINDOW

<table>
<thead>
<tr>
<th>Manual Pickup</th>
<th>Bioremediation</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPEN</td>
<td>WORK PRIOR TO 7/1</td>
</tr>
</tbody>
</table>

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

<table>
<thead>
<tr>
<th>No.</th>
<th>Species/Activity</th>
<th>Constraints</th>
</tr>
</thead>
<tbody>
<tr>
<td>5T</td>
<td>Bald Eagle Nest</td>
<td>NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work sites.</td>
</tr>
<tr>
<td>7HH</td>
<td>Subsistence: Finfish Harvesting</td>
<td>Closed to bioremediation after 7/1. No constraint to manual pickup and tarmat removal.</td>
</tr>
<tr>
<td>7II</td>
<td>Subsistence: Deer Harvesting</td>
<td>Closed to bioremediation after 8/15. No constraint to manual pickup and tarmat removal.</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. Restrict boat and beach disturbance to essential minimum after 7/1. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

FOSC

Prepared by

Date 6/4/90
SHORELINE EVALUATION

SEGMENT ST/ EV-72 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

- 5T All Bald Eagle nests (3/1 to 6/1)
- 5T Active Bald Eagle nests (3/1 to 9/1) located within 400m
- 7HH Subsistence area: Finfish harvesting
- 7II Subsistence area: Deer harvesting (8/15 to 2/28)

Sensitivity code and general time constraints. See attached Ecological sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. (See above)

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 (564-3274 (Anchorage) or 229-1508 (24hrs.)).

SHPO SIGNATURE: Rachel Ann O'Neal DATE: 5/13/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 1898 m: V.Light 1802 m: No Oil 864 m
Subsurface Oil Observed: Yes X No Maximum Depth 10cm

RECOMMENDATIONS:

No Treatment Recommended Snare/Absorbent Booms
X Treatment Recommended Oil Snakes (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 tarmats in areas shown on attached sketch maps. Work should be conducted between 6/1 and 8/15 with approval of USFWS regarding eagle nests and consultation with ADFG regarding specific dates of finfish harvesting.

TAG COMMENT: Bioremediation (Customized) to as required following Tarmat Removal

TAG APPROVAL DATE: 5/17/90
ADEC Art Weiner Art Weiner
Exxon 

Date 6-5-90
SHORELINE EVALUATION

SEGMENT ST/ EV-72 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T All Bald Eagle nests (3/1 to 6/1)
5T Active Bald Eagle nests (3/1 to 9/1) located within 400m
7HH Subsistence area: Finfish harvesting
7II Subsistence area: Deer harvesting (8/15 to 2/28)
Sensitivity code and general time constraints. See attached Ecological sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. (See above)

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 (564-3274 (Anchorage) or 229-1508 (24hrs.)).

SHPO SIGNATURE: Rachel Jan Oar DATE: 5/18/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 1898 m: V.Light 1802 m: No Oil 864 m
Subsurface Oil Observed: Yes X No Maximum Depth 10cm

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 tarmats in areas shown on attached sketch maps. Work should be conducted between 6/1 and 8/15 with approval of USFWS regarding eagle nests and consultation with ADF&G regarding specific dates of finfish harvesting.

TAG COMMENTS: Bioremediation (Custom/Inet) PER AS REQUIRED FOLLOWING
TARMAT REMOVAL

TAG APPROVAL DATE: 5/17/90
ADEC ART WEINER Art Weiner

NOTIFY CRC AT TIME OF CLEANUP
EV-72

TAR PATTIES back in rocks and splattered COAT

Boulder, cobble, beach

NO OIL

TAR PATTIES and PATCHY TAR COAT

Rocks and boulders

NO OIL

Pebble, granule, beach PATCHY COAT in UITZ

1m band of PATCHY COAT

Boulder, cobble pocket

Beach, PATCHY COAT
gelling increases with depth, but remains very tarry. Small tar mats (3m\(^2\) x 4m) at HHWS

Cobble, pebble beach

Continued on page 3

MANUAL PICKUP
OF TAR MAT

Rock with 1m band of PATCHY COAT on protected side
EV-19

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

EV-72

ADEC Segment Length: 4420m

Map Key: PWS-272b
Name: R. Marty
Date: 26 April 1990
1991 MAYSAP EVALUATION

SEGMENT: EV 072 SUB: A REGION: PWS SURVEY DATE: 5/25/91

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

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

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

SHPO Signature: __________________________ Date: 6/1/91

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

COMMENTS:
INITIAL: ______________________________________

TAG: ______________________________________

FOSC: ______________________________________

TAG APPROVAL DATE: JUNE 6, 1991 FOSC APPROVAL DATE: 6/1/91
ADEC John Barnes FOSC E. E. Page, CDR, USCG
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 Gray  
**SIGNATURE:** John Gray  
**NTR:** Invaid Survey, team did not survey pocket beaches and area 3/4 mile of boulder shoreline. Oil, observed was SOFLY, MS, CVC, E and AP. Recommended manual pickup of pooled oil in area H. Additionally recommended addingArthur survey during a tide window that is sufficient time for other long segments.

## EXXON

**NAME:** John Dean  
**SIGNATURE:** John Dean  
**NTR:** No oil observed in recoverable quantity, character, or location.

## LANDMANAGER

**NAME:** A. F. Stor of CVC  
**SIGNATURE:** Steve Walsh  
**NTR:** Pooled oil in one section of subdivision. Should be recovered. thee must be sound asphalt band. Asphalt positive - channel local response.

## USCG/NOAA

**NAME:** DREHER/CLINE  
**SIGNATURE:** G. O. & R. E.  
**NTR:** Observed only minute traces of CV, CR, CS - no recoverable quantity. 

**NTR:** no subsurface oiling was observed. Surface oiling included CV + CT, and one isolated area of fluid mousse. AP was observed in some difficult to work in (beneath large boaters).
**MAYSAP SHORELINE OILING SUMMARY**

**SEGMENT:** EV 22  
**TEAM NO.:** CHANEY  
**BIO:** CRANK  
**ADEC:** HAYES  
**LEADMANAGER:** WARD  
**EXxon:** DEAN  
**USCG/NOAA:** DREHER/CLINE  

**DATE:** MAY 25, 1991  
**TIME:** 00:30 to 10:40  
TIDE LEVEL -0.5 ft. to +4 ft.  
ENERGY LEVEL: [ ] H [ ] M [ ] L  

SURVEYED FROM: [ ] FOOT [ ] BOAT [ ] HELO  
WEATHER: [ ] SUN [ ] CLOUDS [ ] FOG [ ] RAIN [ ] SNOW  

TOTAL LENGTH SHORELINE SURVEYED: 1700 m  
NEAR SHORE SHEEN: [ ] BR [ ] RB [ ] SL [ ] NONE  

EST. OIL CATEGORY LENGTH: W - m M - m N 75 m V 178 m NO 1447 m US 2864 m  

---

### 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>SLOPE</th>
<th>V</th>
<th>H</th>
<th>M</th>
<th>L</th>
<th>AREA</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>T</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>KB</td>
<td>V H</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>T</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>KB</td>
<td>V H</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>P</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B</td>
<td>V</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>T</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B</td>
<td>V</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>T</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B</td>
<td>V</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>P</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B</td>
<td>V</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>P</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B</td>
<td>V</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>T</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B</td>
<td>V</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTES:**
- Random drops on the water  
- Massive Boulders lee  
- Protected Side of Boulders  
- Around Boulders  
- Protected Boulder  
- Pitted AP collected  
- MS up to 5 cm in rocks  
- Apit under massive boulders

---

### DISTRIBUTION

- C = 81-100%;  
- B = 61-80%;  
- P = 11-60%;  
- S = 1-10%;  
- T = <1%

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

**PHOTO ROLL #:** MAYSAP-5-23  
**FRAMES:** 1W 19

---

### SUBSURFACE OIL CHARACTER

<table>
<thead>
<tr>
<th>PIT</th>
<th>PIT</th>
<th>NO.</th>
<th>DEPTH</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>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>0</td>
<td>120</td>
<td>OP</td>
<td>H</td>
<td>MOR</td>
<td>LOR</td>
<td>TR</td>
<td>NO.</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>0</td>
<td>40</td>
<td>OP</td>
<td>H</td>
<td>MOR</td>
<td>LOR</td>
<td>TR</td>
<td>NO.</td>
</tr>
</tbody>
</table>

**NOTES:**
- OP-C-PG  
- PB-PG  
- PG-PG  
- P-P  
- P-P-G  
- PG-PG  
- PG-PG  

---

### SURFACE-OIL SUBSURFACE SHEEN

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

---

**OG COMMENTS:**

**FIVE LOCATIONS WHICH REQUIRED TREATMENT IN 1990 WERE SURVEYED. MOST OF THE OIL OBSERVED WAS IN THE FORM OF CUT CT ON PROTECTED SIDES OF BOULDERS.**

---

**REVISED:** May 30, 1991
**REVISED:** May 30, 1991
<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT 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-OIL CHARACTER</th>
<th>SEDIMENTS</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PE-PCG</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PE-PC</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PE-PCG</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PE-PCG</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>BP-BC</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PC-PCB</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PE-PGB</td>
<td></td>
</tr>
</tbody>
</table>

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

OG COMMENTS:
MAYSAP 1991
OG SKETCH MAP
GREG CHANEY
TEAM 5
SEGMENT: EV-72 A SITE 2
DATE: MAY 25, 1991
AIR P. #: NONE

INSET #2

Evan's Island

Shelter Bay

1x10m
CT 10%
ST 30%
Protected Side of Boulders

0.8m x 5m
CT 60%
ST 20%
Back Side of Massive Boulder
MAYSAP 1991
DG SKETCH MAP
GREG CHANEY
TEAM 5
SEGMENT: E72 A SITE 3
DATE: MAY 25 1991
AIR P. #: NONE

5.5 GAL DRUM
STREAM
OLD TIRE

E 1 x 40 m
CV <1% CT <1%
AROUND LARGE BOULDERS
ROUGHLY 20 METERS
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 5
SEGMENT # EV-72
SUBDIVISION A
SEA STATE 0

DATE 25 May 1991
TIDAL HEIGHT (Range) -0.5 to +0.5

PHOTOGRAPHS: ROLL # FRAME #

BIOLOGIST Crank
WIND SPEED/DIRECTION <5 knots N/W

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

(A) Area is in the UITZ. Within the site, black licorice and moss cover approximately 50% of the surface area.
In the UITZ, the moderately concentrated Fucus is the dominant species. Shorelignies and mature conceptacles are present. There are sparse concentrations of barnacles, limpets, and dead spot algae is present. Biota cover is ~ 70%.

In the UITZ, algae dominates. There are bladed and filamentous green algae, bladed red algae, coralline algae and a moderate concentration of Fucus with epiphytes. Plaster (Sea star). Nucellus (whelk) and a rare concentration of barnacles are also present. Biota cover is approximately 90%.

(B) Area is located on the northern side of a pebble beach, on bedrock in the backshore. Within the site, there is a rare concentration of barnacles. Biota cover is ~5%.

Below the site, there is a sparse concentration of Fucus and rare concentrations of barnacles and mussels. Biota cover is ~50%.

In the UITZ, on the beach, there is a sparse inter-tidal mussel bed. Filamentous green algae is also present. Biota cover is ~10%.

In the UITZ there is a moderate concentration of Fucus and a sparse to moderate concentration of mussels and barnacles. Filamentous green algae is present. Biota cover is ~80%.

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>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seabirds</td>
<td>2</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waterfowl</td>
<td>3</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gulls/kittiwakes</td>
<td>1</td>
<td>23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shorebirds</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corvids</td>
<td>1</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Birds</td>
<td>3</td>
<td>8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

MARINE MAMMALS
# OBSERVED SPECIES # OBSERVED

<table>
<thead>
<tr>
<th>Sea Otters</th>
<th>Mink(s) track</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pinnipeds(specify)</td>
<td>2 Seals</td>
</tr>
<tr>
<td>Seals(specify)</td>
<td></td>
</tr>
</tbody>
</table>

Shoreline subdivision map showing important biological features attached.

Reviewed: MC 5/30/91
Comments (cont.)

(B cont.) In the northern portion of the site, there is a bedrock face. Biota on the bedrock includes: Piaster (seastar); anemones in small tidepools; Katherina tunicata (leather chiton); Scytozephyra, Halosaccion; Filumens, and Blasia green algae; moderate concentrations of barnacles with spat, mussels of various age classes, and Fuca and sparse to moderate concentrations of Littorina and limpets, majority were juveniles. Biota cover 780%. On the granule beach area in the LITZ in front of the bedrock, there are sparse concentrations of Littorina and limpets.

(c) Area is a 0.8m band on the lee side of a large boulder in the LITZ. In the lower 0.2m there is a moderate concentration of adult, juvenile and spat barnacles. Barnacles with oil contaminated shells tightly sealed their inner plates when stimulated; a rare concentration of Littorina were also present. There is no biota in the top 0.6m of the band. Biota cover in the lower 0.2m is ~70%.

Reviewed: MC 5/30/91
(D) Area is the UITZ on boulders at the northern end of a cobble/pebble beach. Within the site, there are rare concentrations of barnacles, Fucus sporelings, Littorina, limpets and mussels. Biota cover is approximately 1%.

In the MITZ, Fucus has a dense to moderate concentration. Barnacle adults are in moderate patches and barnacle spat has a continuous distribution with a dense concentration. Littorina and limpets have a moderate concentration, many juvenile Littorina are present. Mussels are in sparse patches. Scytosiphon and filamentous green algae are present. Biota cover is >80%.

(E) Area is located in the UITZ on the lee side of a boulder. No macrobiota was located in the site. Directly below the site, there are rare to sparse concentrations of Fucus (with sporelings), Littorina and limpets. Biota cover ranges from 1% to 10%. The beach in the MITZ is sand/granule with some cobble and boulder. There is fresh water runoff. Barnacles, Fucus, mussels and Scytosiphon cover 10-20% on the cobble and boulder and <1% on the sand/granule.

Area is located on the lee side of a large boulder in the UITZ. No macrobiota was found within the oil band. 20 cm below the site rare barnacles and limpets cover ~5% of the boulder surface. In the MITZ on the beach, moderate concentrations of Fucus, Littorina and limpets and rare barnacles cover ~10% of the boulders.
Comments (cont.)

1. Area is located high in the UITZ. No macrobiota was found within the site. Five meters below the site, there is a 1x2 m patch of dense Fucus sporelings. In the MITZ there are: moderate concentrations of Littorina and limpets; sparse barnacles with spat; sparse, patchy mussels and a rare concentration of Fucus sporelings. Biota cover is ~30%.

2. Area is in the UITZ. Patches of sparsely concentrated Fucus sporelings cover ~20% of the surface sediments within the site. There is one 15 x 4 cm patch of oil mousse covered by an encrustose green algae. The MITZ is similar to area (G).

3. Area is located on backshore bedrock in the UITZ. Encrustose green algae covers ~50% of the sediments in the site. Below the site there is a 3m² patch of sparsely concentrated Fucus sporelings. In the MITZ, barnacles, mussels, Littorina and limpets are sparsely concentrated. Enteromorpha (filamentous green algae) is also present. Biota cover is ~30%. On the pebble beach there is <1% biota cover.

4. Area is in the UITZ, under drift logs. No macrobiota was found in the site. Below the site, filamentous green algae is dominant and sparse concentrations of Fucus, barnacles and tar spot algae is present. Biota cover is ~70%.
### U.S. FISH AND WILDLIFE SERVICE (FWS)
#### SHORELINE ACTIVITY/BALD EAGLE IMPACT EVALUATION

<table>
<thead>
<tr>
<th>Date</th>
<th>5/25/91</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shoreline Segment/Subdivision</td>
<td>EV 72A</td>
</tr>
<tr>
<td>Shoreline activity</td>
<td>Assessment Team Survey</td>
</tr>
<tr>
<td>FWS Observer</td>
<td></td>
</tr>
<tr>
<td>Surveyors/workers</td>
<td></td>
</tr>
</tbody>
</table>

**Shoreline activity**

<table>
<thead>
<tr>
<th>Time</th>
<th>Begin</th>
<th>End</th>
</tr>
</thead>
</table>

**FWS Observer**

<table>
<thead>
<tr>
<th>Time</th>
<th>Type of human activity/eagle response</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Four abandoned nests were shown on the eagle survey map. One additional abandoned nest was found on the north end. One adult bird was sitting on the shoreline 400 yds north of the active nest. An active nest was located with a female in the nest. The survey crew worked on a pocket beach 200 yds from the nest. The bird was not disturbed.</td>
</tr>
</tbody>
</table>

**Survey/work activities completed:**

- [Y] N

**Personnel withdrawn due to eagle conflict:**

- [Y] N

**Recommendations:**

- A monitor is required around the active nest. However, the bird seemed calm and no problems were encountered.

**FWS Observer**

- [Name]

**Date**

- 5/26/91
LEGEND

<table>
<thead>
<tr>
<th>BEDROCK</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOULDERS</td>
<td>O</td>
</tr>
<tr>
<td>FINE BED</td>
<td>□□□□□□□□</td>
</tr>
<tr>
<td>DRIFT LOG</td>
<td>□□□□□□□□</td>
</tr>
<tr>
<td>GRASS</td>
<td>□□□□□□□□</td>
</tr>
<tr>
<td>BRUSH</td>
<td>□□□□□□□□</td>
</tr>
<tr>
<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

0 ---- 100

MR. LAP 1991
06 SKETCH MAP/190
GREG CHANEY/ DON CLINE/CRAIG
TEAM 5
SEGMENT: EV72-A
DATE: MAY 25 1991
AIR P.#: 45-16

INSET #1
BIO MAP
P.C. CRAWK.
Evan's Island

Shelter Bay

1x10m
CT 10%
ST 30%
Protected side of boulders

0.8m x 5m
CT 60%
ST 20%
Back side of massive boulder

SMALL WATERFALL

80% BITE COVER IN MTZ
MAYSAP 1991
DG SKETCH MAP
GREG CHANEY
TEAM 5
SEGMENT: EV 72A SITE 3
DATE: MAY 25 1991
AIR P.#: ING02

Big Map
P. CRANK

55 GAL DRUM
STREAM
OLD TIRE

E 1X40m
CV<1% CT<1%
AROUND LARGE BOULDERS

10-20% biota cover on cobbles and boulders
<1% on sand and gravel

ROUGHLY 20 METERS
1991 MAYSAP EVALUATION

SEGMENT: EV 072  SUB: A  REGION: PWS  SURVEY DATE: 5/25/91

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

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

ARCHEOLOGICAL 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>N</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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  __________________________
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 72  SUBDIVISION A  DATE MAY 25 1991

ADEC
NAME: John Hughe  SIGNATURE: [signature]

☐ NTR  Unsuitable terrain, terrain not suitable for active beach and approx 1/2 mile of
beach shoreline.

Oiling observed was SOFTH, MS, CTC. and M. Recommend manual
pumping of pooled oil in Area H. Additionally recommend adding salt surveying during
a tide window that is sufficient time for the long segment.

EXXON
NAME: John Dean  SIGNATURE: [signature]

☐ NTR  No CIL Observed in Recoverable Quantity, character, or location.

LANDMANAGER
NAME: [Signature]  OF CUC  SIGNATURE: Steve Wigg

☐ NTR  Pooled oil in one section of Subdiv. should be recovered. recommend
Asphalt Bases and asphalt patches. check out local response

USCG/NOAA
NAME: [Signature]  SIGNATURE: K.E. Dohm

☑ NTR  Observed only minute traces of C1, C2, D5 no recoverable quantity. XPD

No subsurface oiling was observed. Surface oiling included
C1+C2, and an isolated area of fluid mousse. AP was
observed in areas difficult to work in (beneath large boulders).
TEAM NO. ______________ 

CHANEY ______________ 

HAYES ______________ 

DEAN ______________ 

TEAM NO. ______________ 

CRANK ______________ 

WARD ______________ 

USCG/NOAA ______________ 

DATE MAY 25 1991

TIME 00:30 TO 10:30

TIDE LEVEL 0:5 ft. TO 16 ft.

ENERGY LEVEL: H M D

SURVEYED FROM: FOOT BOAT HELO

WEATHER: SUN CLOUDS FOG RAIN SNOW

TOTAL LENGTH SHORELINE SURVEYED: 1700 m

NEAR SHORE SHEEN: BR RB SL NONE

EST. OIL CATEGORY LENGTH: W __ m M __ m N 75 m VL 178 m NO 147 m US 286 m

<table>
<thead>
<tr>
<th>LOC</th>
<th>SURFACE OIL CHARACTER</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED ZONE</th>
<th>OILED BELOW</th>
<th>OILED COLOR</th>
<th>PIT ZONE</th>
<th>SURFACE-SUBSURFACE SEDIMENTS</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>T</td>
<td>RB V H</td>
<td>2</td>
<td>30</td>
<td></td>
<td></td>
<td>RANDOM DROP CT</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>T</td>
<td>RB V H</td>
<td>2</td>
<td>35</td>
<td></td>
<td></td>
<td>MASSIVE BOULDER LEE</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>P</td>
<td>B V</td>
<td>3</td>
<td>5</td>
<td></td>
<td></td>
<td>PROTECTED SIDE BOULDER</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>S</td>
<td>B V</td>
<td>1</td>
<td>10</td>
<td></td>
<td></td>
<td>BEHIND BOULDER</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>P</td>
<td>B V</td>
<td>1</td>
<td>10</td>
<td></td>
<td></td>
<td>PROTECTED BOULDER</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>S</td>
<td>B V</td>
<td>1</td>
<td>20</td>
<td></td>
<td></td>
<td>NORTH AP COLLECTOR</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>P</td>
<td>B H</td>
<td>1</td>
<td>5</td>
<td></td>
<td></td>
<td>MASS UP TO 5 cm IN ROCK</td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>S</td>
<td>B H</td>
<td>1</td>
<td>25</td>
<td></td>
<td></td>
<td>AP Under Massive Boulders</td>
<td></td>
</tr>
<tr>
<td>J</td>
<td>S</td>
<td>B H</td>
<td>1</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SURFACE OIL CHARACTER: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE

SUBSURFACE OIL CHARACTER: OP = OIL PONDER; H = HORIZONTAL; MOR = MEDIUM; LOR = LARGE OIL

OILED ZONE: S = SAND; M = MUD; L = LOAM; H = HUMUS

OILED BELOW: B = BOTTOM; R = RICH; W = WATER

OILED COLOR: S = SILVER; R = RAINBOW; B = BROWN

PIT ZONE: S = SAND; M = MUD; L = LOAM; H = HUMUS

SURFACE-SUBSURFACE SEDIMENTS: CBP-CPG

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

OG COMMENTS: FIVE LOCATIONS WHICH REQUIRED TREATMENT IN 1990 WERE SURVEYED. MOST OF THE OIL OBSERVED WAS IN THE FORM OF CUT CT ON PROTECTED SIDES OF BOULDERS.

Revised: MC 5/30/91

Revised 5/30/91
<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED ZONE</th>
<th>CLEAN BELOW H2O</th>
<th>SHEEN COLOR</th>
<th>PIT ZONE</th>
<th>SURFACE-SUBSURFACE SEDIMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<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:**
ORIENTATION MAP 1 OF 3

LOCATION
INSET 1

INSET 2
MAYSAP 1991
OG SKETCH MAP
GREG CHANEY
TEAM 5
SEGMENT: EV-72 A  SITE 2
DATE: MAY 25, 1991
AIR P.N.: NONE

INSET # 2

Evans Island

SHELTER BAY

C 0.8m X 5m
CT 60% ST 20%
BACKSIDE OF MASSIVE BOULDER

1x10m
CT 10%
ST 30%
PROTECTED SIDE OF BOULDERS

SMALL WATERFALL
SMALL SIDE

REPELLED SIDE OF
ROUGHLY
20 METERS

E 1 x 40 m
CV < 1%  CT < 1%
AROUND LARGE BOULDERS

MAYSAP 1991
DG SKETCH MAP
GREG CHANEY
TEAM 3
SEGMENT: EV 72 A  SITE 3
DATE: MAY 25 1991
AIR P. #: NOVE

INSET
# 3

55 GAL DRUM
STREAM

OUTLINE

Boulder

ROUGHLY
20 METERS

E 1 x 40 m
CV < 1%  CT < 1%
AROUND LARGE BOULDERS
MAYSAP 1991
DG SKETCH MAP
GREG CHANEY / DON CLING
TEAM 5
SEGMENT: EV72A
DATE: MAY 25, 1991
AIR P.H.: E6W C.005-236

LEGEND

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

SCALE

0 50

MAY 25, 1991
GREG CHANEY / DON CLING
TEAM 5
SEGMENT: EV72A
DATE: MAY 25, 1991
AIR P.H.: E6W C.005-236

LEGEND

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

SCALE

0 50

INSET #4
KNIGHT ISLAND
PASSAGE

1. AP PATTIE COLLECTED
2. (G) 2 x 10 m, 3 m² SOR
   CV 4 m², CT 2 m²
   NEAR RED & WHITE BOULDER

3. F 1 x 3 CV<1% ON PROTECTED BOULDERS

4. H 2 x 25 m
   MS TRACE UP TO 5 cm
   DEEP IN BEDROCK CRACKS
   CV 10% CT 10%

5. NO SURVEY

EVANS ISLAND
MAYBAP 1991
OG SKETCH MAP
GREG CHANEY/DON CLINE
TEAM 5
SEGMENT: EV72 A
DATE: MAY 25 1991
AIR P. #: PIM.C-056-236

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

SCALE
0 50 m

DISCONTINUOUS BAND ON ROCK FACE CT 10%
1 x 25 m
4 x 10 m
1/2 m² AP UNDER MASSIVE CT 5%
BOULDERS

TREES
ISLAND
PASSENGER
MAYSAP BIODIVERSITY SUMMARIZED FORM

TEAM # 5  
SEGMENT # EV-72  
SUBDIVISION A  
SEA STATE 0  
PHOTOGRAPHS: ROLL #  

DATE 25 May 1991  
TIDAL HEIGHT (Range) -0.5 → 1.0  
BIOLGIST Crank  
WIND SPEED/DIRECTION <5 knots / NW  

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

(A) Area is in the U1/2. Within the site, black scuren and moss cover approximately 50% of the surface area. In the U1/2, the moderately concentrated Fucus is the dominant species. Sporelings and mature congenetics are present. There are sparse concentrations of barnacles, Littorina and limpets. The spot algae is present. Biot capture is ~70%. In the U1/2, algae dominates. There are blades and filamentous green algae, bladed red algae, coralline algae and a moderate concentration of Fucus with epiphytes. Plaster (Geaster), Nucella (whelk) and a rare concentration of barnacles are also present. Biot capture is approximately 90%.

(B) Area is located on the northern side of a pebble beach, on bedrock in the backshore. Within the site, there is a rare concentration of barnacles. Biot capture is ~50%. Below the site, there is a sparse concentration of Fucus and rare concentrations of barnacles and mussels. Biot capture is ~30%.

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>
</tr>
</thead>
<tbody>
<tr>
<td>Eagles</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Seabirds</td>
<td>2</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Waterfowl</td>
<td>3</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Gulls/kittiwake</td>
<td>1</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td>Shorebirds</td>
<td></td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Corvids</td>
<td>1</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Other Birds</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
</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>2</td>
<td>Seals</td>
<td>Other Seal</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>Mink (I) track</td>
<td></td>
</tr>
</tbody>
</table>

Shoreline subdivision map showing important biological features attached.
Comments (cont.)
(B cont.) In the northern portion of the site, there is a cobbled face. Biot at on the bedrock includes: Piaster (sea star); anemones in small tidepools; Katerina tumida (leather chiton); Scolopsis nigromarginata; Halosaccion; Cladopus and a mix of green algae; moderate concentrations of barnacles with spat, mussels of various age classes, and Fucales, and sparse to moderate concentrations of Littorina and limpets, majority were juveniles. Biot at cover 78%. On the granulate beach area in the LITT in front of the bedrock, there are sparse concentrations of Littorina and limpets.

(c) Area is a 0.8m band on the lee side of a large boulder in the LITT. In the lower 0.2m there is a moderate concentration of adult juvenile and spat barnacles. Barnacles with oil contaminated shells tightly sealed their inner plates when stimulated; a rare concentration of Littorina were also present. There is no biota in the top 0.6m of the band. Biot at cover in the lower 0.2m is ~70%.
Comments (cont.)

(D) Area is the UITZ on boulders at the northern end of a wooded pebble beach. Within the site, there are rare concentrations of barnacles, Fucus sporelings, Littorina, limpets and mussels. Biota cover is approximately 1%.

In the MITZ, Fucus has a dense to moderate concentration. Barnacle adults are in moderate patches and barnacle spat has a continuous distribution with a dense concentration. Littorina and limpets have a moderate concentration, many juvenile Littorina are present. Mussels are in sparse patches. Scytosiphon and filamentous green algae are present. Biota cover is >80%.

(E) Area is located in the UITZ on the lee side of a boulder. No macrobiota was located in the site. Directly below the site there are rare to sparse concentrations of Fucus (with sporelings), Littorina and limpets. Biota cover ranges from 1 to 10%. The beach in the MITZ is sand/gravel with some cobble and boulder. There is fresh water runoff. Barnacles, Fucus, mussels and Scytosiphon cover 10-20% on the cobble and boulder and <1% on the sand/gravel.

(F) Area is located on the lee side of a large boulder in the UITZ. No macrobiota was found within the oil bead. 20 cm below the site rare barnacles and limpets cover ~5% of the boulder surface. In the MITZ on the beach moderate concentrations of Fucus, Littorina and limpets and rare barnacles cover ~10% of the boulders.

Reviewed: MC 5/30/91
Comments (cont.)

(G) Area is located high in the UITZ. No macrobiota was found within the site. Five meters below the site, there is a 1x2m patch of dense Fucus sporelings. In the MITZ there are moderate concentrations of Littorina and limpets; sparse barnacles with spat; sparse, patchy mussels and a rare concentration of Fucus sporelings. Biotica cover is ~30%.

(H) Area is in the UITZ. Patches of sparsely concentrated Fucus sporelings cover ~20% of the surface sediments within the site. There is one 15x4m patch of oil mousse covered by an encrustose green algae. The MITZ is similar to area (G).

(I) Area is located on backshore bedrock in the UITZ. Encrustose green algae covers ~50% of the sediments in the site. Below the site there is a 3m² patch of sparsely concentrated Fucus sporelings. In the MITZ, barnacles, mussels, Littorina and limpets are sparsely concentrated. Enteromorpha (filamentous green algae) is also present. Biotica cover is ~30%.

On the pebble beach there is <1% biota cover.

(J) Area is in the UITZ, under drift logs. No macrobiota was found in the site. Below the site, filamentous green algae is dominant and sparse concentrations of Fucus, barnacles and far spot algae is present. Biotica cover is <70%.

Reviewed: Ms 5/30/91
**U.S. FISH AND WILDLIFE SERVICE (FWS)**

**SHORELINE ACTIVITY/BALD EAGLE IMPACT EVALUATION**

<table>
<thead>
<tr>
<th>Date</th>
<th>Shoreline Segment/Subdivision</th>
<th>Shoreline activity</th>
<th>Time - Begin</th>
<th>Time - End</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/25/91</td>
<td>EV 72A</td>
<td>Assessment Team Survey</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FWS Observer</th>
<th>Surveyors/workers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Nest in view/monitored: | Adult in nest: | Adult left nest: |
| Y | N | Y | N | Unk. |

<table>
<thead>
<tr>
<th>Time</th>
<th>Type of human activity/eagle response</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Four abandoned nests were shown on the eagle survey map. One additional abandoned nest was found on the north end. One adult bird was sitting on the shoreline 400 yds. north of the active nest. An active nest was located with a female in the nest. The survey crew worked on a pocket beach 200 yds from the nest. The bird was not disturbed.</td>
</tr>
</tbody>
</table>

| Survey/work activities completed: | Personnel Withdrawn due to eagle conflict: |
| Y | N | Y | N |

**Recommendations:** A monitor is required around the active nest. However, the bird seemed calm and no problems were encountered.

**FWS Observer:** Mike Ruby  
**Date:** 5/26/91
INSET *2

MAYSAP 1991
OG SKETCH MAP
GREG CHANEY
TEAM 5
SEGMENT: EV-72 A SITE 2
DATE: MAY 25, 1991
AIR P. #: NONE

Evan's Island

SHELTER BAY

1x10m
CT 10%
ST 30%
Protected Side of Boulders

0.8m × 5m
CT 60%
ST 20%
Back Side of Massive Boulder
55 GAL DRUM

STREAM

OLD TIRE

10-20% biota cover on raine and boulders
<1% on sand and gravel

ROUGHLY
20 METERS

E

1 X 40 M

CV < 1%

CT < 1%

AROUND LARGE

BOULDERS

MAYSAP 1991
06 SKETCH MAP
GREG CHANEY
TEAM 5
SEGMENT: EV 72 A  SITE 3
DATE: MAY 25, 1991
AIR P. #: NO V.

Boulberson
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ EV-100

SUBDIVISIONS: A (1 OF 2)
SHORELINE EVALUATION

SEGMENT ST/ EV-100 SUBDIVISION A (1 OF 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Four active Bald Eagle nests (5T) - 3/1 to 6/1; Near Sawmill Bay Hatchery (1F) - 4/15 to 6/1; Deer harvesting (7II) 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Same as above

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 0 m: No Oil 1066 m
Subsurface Oil Observed: Yes X No
Maximum Depth

RECOMMENDATIONS:
X No Treatment Recommended
T Treatment Recommended
Manual Pickup Snare Booms/Sorbents Tarmat Breakup/Removal
Bioremediation SPOT WASHING Other
Wands Beach Cleaner

Comments: Recommend no treatment of this subdivision. Very few traces of light, weathered oil found which appeared to be diminishing naturally. See Field Shoreline Comment Sheet.

TAG COMMENTS:

TAG APPROVAL DATE: _____________
ADEC ____________________________ FOSC: ____________ DATE: ____________
EXXON ____________________________
NOAA ____________________________ USCG ____________________________

FOSC: ____________________________ DATE: ____________
FIELD SHORELINE COMMENT SHEET

SEGMENT ST  EV-100  SUBDIVISION:  B  DATE: 3/28/90

☐ NOAA
NAME: GARY SHIGENAKA  SIGNATURE

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

Boulder and large cobbles, EV-100A showed no evidence of oiling. EV-100B had some boulders stained by highly weathered oil. Occurrence was very patchy, over a widespread (75-100m) area. One small (2 cm) tar spot observed in this area. No evidence of oil beyond this infrequent occurrence on boulders. Lots Fucus and barnacles.

☐ NOAA
NAME: John Hayes  SIGNATURE

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

We found some intermittent staining on small patches of very weathered oil on lee side of boulders in U172. Oil was in coat form and approx 1 mm thick, very sparse, almost 10 cm wide band. No treatment recommended. Oil is normally weathering and very sparse.

LAND MANAGER

NAME:  SIGNATURE

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS
SHORELINE OILING SUMMARY

OG: Mike Forest  
NOA:  
BIO:  
USSA: Jerry Shigenda  
SEGMENT ST:  
EV - 100  

REVIEWED NO. 03/23/90

TEAM NO.:  
TIDE LEVEL: 2 to 3  
DATE 3/30/90

EST. SUBDIVISION LENGTH: 110 m  
SUN:  
CLOUDS:  
FOG:  
RAIN:  
SNOW:  
UPPLANDS DESCRIPTION:  
GRASS:  
FOREST:  
ROCK:  
SLOPE: Lang 70 % Hang 70 % Vert - %  
WAVE EXPOSURE:  
LOW:  
MED:  
HIGH:  

OIL CATEGORY LENGTH: W - m M - m N - m VL - m

SURFACE OIL

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

PAVEMENT: H F S _ sq. m by ___ cm

PATTIES / TARBALLS_ BAGS

NEAR SHORE SHEEN? ( ) NO BR RW SL TL

OILED DEBRIS AMOUNT

<table>
<thead>
<tr>
<th>OILED DEBRIS</th>
<th>AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logs</td>
<td>SM MD LG</td>
</tr>
<tr>
<td>Vegetation</td>
<td></td>
</tr>
<tr>
<td>Trash</td>
<td></td>
</tr>
<tr>
<td>Debris</td>
<td></td>
</tr>
</tbody>
</table>

DEBRIS COLLECTED ( ) YES ( ) NO

TYPE

PHOTOGRAPHS:
Roll No. _
Frames _

SUBSURFACE OIL

<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>ANALYSIS</th>
<th>SUBSURFACE SEDIMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

COMMENTS
The N. end of the segment contains a low angle cobble stone beach. Going south the shoreline becomes steeper and consists of Boulders and Cobble.

N. 1

Page 1 of _

REVIEWED _ DATE _
SHORELINE ECOLOGICAL SUMMARY

Segment ST EV 100 Subdivision A __________________________ Date (mo/day/yr) 3/30/90

Time (24 hr) 1200 hrs Biologist Ambrose

(A) Substrate type and % of segments:
1) Bedrock 10 (2) Boulder 25 (3) Cobble 35 (4) Pebble 20 (5) Sand 10 (6) Silt

(B) Overall % cover of biota (% of segment): Dense 5 Moderate 35 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)

BARNAeCLcS

<table>
<thead>
<tr>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td>1U</td>
<td>1M</td>
<td>1L</td>
<td>1U</td>
</tr>
<tr>
<td>2 2 2</td>
<td>2 2 2</td>
<td>2 2</td>
<td>2 2 2</td>
</tr>
<tr>
<td>3 3 3</td>
<td>3 3 3</td>
<td>3 3</td>
<td>3 3 3</td>
</tr>
<tr>
<td>4 4 4</td>
<td>4 4 4</td>
<td>4 4</td>
<td>4 4 4</td>
</tr>
<tr>
<td>5 5 5</td>
<td>5 5 5</td>
<td>5 5</td>
<td>5 5 5</td>
</tr>
<tr>
<td>6 6 6</td>
<td>6 6 6</td>
<td>6 6</td>
<td>6 6 6</td>
</tr>
</tbody>
</table>

MYTILUS

<table>
<thead>
<tr>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td>1U</td>
<td>1M</td>
<td>1L</td>
<td>1U</td>
</tr>
<tr>
<td>2 2 2</td>
<td>2 2 2</td>
<td>2 2</td>
<td>2 2 2</td>
</tr>
<tr>
<td>3 3 3</td>
<td>3 3 3</td>
<td>3 3</td>
<td>3 3 3</td>
</tr>
<tr>
<td>4 4 4</td>
<td>4 4 4</td>
<td>4 4</td>
<td>4 4 4</td>
</tr>
<tr>
<td>5 5 5</td>
<td>5 5 5</td>
<td>5 5</td>
<td>5 5 5</td>
</tr>
<tr>
<td>6 6 6</td>
<td>6 6 6</td>
<td>6 6</td>
<td>6 6 6</td>
</tr>
</tbody>
</table>

GASTROPODS

<table>
<thead>
<tr>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td>1U</td>
<td>1M</td>
<td>1L</td>
<td>1U</td>
</tr>
<tr>
<td>2 2 2</td>
<td>2 2 2</td>
<td>2 2</td>
<td>2 2 2</td>
</tr>
<tr>
<td>3 3 3</td>
<td>3 3 3</td>
<td>3 3</td>
<td>3 3 3</td>
</tr>
<tr>
<td>4 4 4</td>
<td>4 4 4</td>
<td>4 4</td>
<td>4 4 4</td>
</tr>
<tr>
<td>5 5 5</td>
<td>5 5 5</td>
<td>5 5</td>
<td>5 5 5</td>
</tr>
<tr>
<td>6 6 6</td>
<td>6 6 6</td>
<td>6 6</td>
<td>6 6 6</td>
</tr>
</tbody>
</table>

FUCUS

<table>
<thead>
<tr>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td>1U</td>
<td>1M</td>
<td>1L</td>
<td>1U</td>
</tr>
<tr>
<td>2 2 2</td>
<td>2 2 2</td>
<td>2 2</td>
<td>2 2 2</td>
</tr>
<tr>
<td>3 3 3</td>
<td>3 3 3</td>
<td>3 3</td>
<td>3 3 3</td>
</tr>
<tr>
<td>4 4 4</td>
<td>4 4 4</td>
<td>4 4</td>
<td>4 4 4</td>
</tr>
<tr>
<td>5 5 5</td>
<td>5 5 5</td>
<td>5 5</td>
<td>5 5 5</td>
</tr>
<tr>
<td>6 6 6</td>
<td>6 6 6</td>
<td>6 6</td>
<td>6 6 6</td>
</tr>
</tbody>
</table>

Wildlife Observations/General Comments:
6 otters, 4 Harlequin ducks, 1 sea lion

Ecological Considerations:
IF, T-11, S-4: No bald eagles, or nests, seen in this segment.

* Most of the subdivision surveyed by boat; Fucus could be observed from the boat, but not other species.
Wide

Medium

Narrow

Very Light

No Oil

ADEC Segment Length: 1239m

Map Key: PWS-178

Name: Mike Forrest

Date: 3/30/46

Data Entered:
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ EV-100

SUBDIVISIONS: B (2 OF 2)
SHORELINE EVALUATION

SEGMENT ST/ EV-100  SUBDIVISION B (2 OF 2)  DATE  3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Four active Bald Eagle nests (5T) - 3/1 to 6/1; Near Sawmill Bay Hatchery (1F) - 4/15 to 6/1; Deer harvesting (7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Same as above.

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

SHPO SIGNATURE: ________________________ DATE: ________________

OILING CATEGORIZATION:
宽0m: Medium 0m: Narrow 0m: V.Light 21 m: No Oil 152m
Subsurface Oil Observed: Yes  No X Maximum Depth ______

RECOMMENDATIONS:

X No Treatment Recommended
____ Treatment Recommended
____ Manual Pickup  ____ Snare Booms/Sorbents  ____ Tarmac Breakup/Removal
____ Bioremediation  ____ SPOT WASHING  ____ Other

Wands
Beach Cleaner

Comments: Recommend no treatment of EV-100 B as only sporadic coat found on lee side of boulders in UIZ. Appears to be weathering naturally and is very isolated.

TAG COMMENTS: ______________________________________

TAG APPROVAL DATE: ____________________

ADEC
EXXON
NOAA
USCG

FOSC: ________________ DATE: ________________
FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EV-100  SUBDIVISION:  B  DATE 3/20/90

USEG  NOAA
NAME  GARY SHIGENAKA  SIGNATURE  

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED
COMMENTS

BOULDER AND LARGE COBBLES. EV-100A SHOWED NO EVIDENCE OF OILING. EV-100B HAD
SOME BOULDERS STAINED BY HIGHLY WEATHERED OIL. OCCURRENCE WAS VERY PATCHY, OVER
A WIDESPREAD (75-100M) AREA. ONE SMALL (2 CM) TAR SPOT OBSERVED IN THIS AREA.
NO EVIDENCE OF OIL BEYOND THIS INFREQUENT OCCURRENCE ON BOULDERS.
LOTS FUCUS AND BARNACLES.

ADEC
NAME  John Hayes  SIGNATURE  

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED
COMMENTS

We found some intermittent staining of small patches of very weathered oil on lee under-side of boulders in Unit 2.
The oil was in coat form and approx 1 mm thick. Very spotted along low rays band. No treatment recommended. Oil is normally
weathering and very sparse.

LAND MANAGER
NAME  __________________________  SIGNATURE  

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED
COMMENTS
**SHORELINE OILING SUMMARY**

OG: Mike Forget, USCG, Gary Shigera, SEGMENT ST: EV-100

BIO: Richard Hamblet, LAND REP: John Harris

EXXON: Larry Olson, ADEC: John Harris

TEAM NO.: 11, TIDE LEVEL: +0.5 to -0.5, DATE: 3/30/90

EST. SUBDIVISION LENGTH: 159 m, ☐ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow

UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☐ Rock, The Backshore consists of Rocky Spatulated Hillocks.

SURVEYED FROM: ☐ Foot ☐ Boat ☐ Helo, WORKING DIRECTION: N to S

SURFACE SEDIMENTS: R (%), B (%), C (%), P (%), G (%), S (%), M (%), V (%)

SLOPE: Lang 30 %, Hang 50 %, Vert 30 %, WAVE EXPOSURE: ☐ Low ☐ Med ☐ High

OIL CATEGORY LENGTH: W (m), M (m), N (m), VL 15 m, NO 144 m

**SURFACE OIL**

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

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

PATTIES / TARBALLS ___________ BAGS

NEAR SHORE SHEEN? ☐ BR RW SL TL

OILED DEBRIS AMOUNT

Logs SM MD LG

Vegetation

Trash

Debris

DEBRIS COLLECTED

☐ YES ☐ NO

TYPE ___________

#BAGS ___________

Photographs:

Roll No. 57-11-1

Frames ___________

**SUBSURFACE OIL**

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>BELOW OIL / FILM COLOR</th>
<th>PIT ZONE ANA</th>
<th>SUBSURFACE SEDIMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>30</td>
<td>☐ ☐ ☐ ☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐ ☐ ☐ ☐</td>
</tr>
</tbody>
</table>

Oiling is located in the Northern end of Sub-division EV-100: B in the upper intertidal zone. Two locations were found. The boulder had a splattered distribution on the eastern side (facing the water). The oil was highly weathered and dehydrated. Nearby to the north of this boulder was an area of oil with a splattered distribution (15 m x 2 m). Located in the upper intertidal zone, the oil was of the same nature. Also a few stains, averaging 1mm in diameter were observed.
**LEGEND**

1. ▲ Pit - No Subsurface Oil
2. ▲ Pit - Subsurface Oil
   - CT/C Continuous Distribution
   - CT/B Broken Distribution
   - CT/P Patchy Distribution
   - CT/S Splashed Distribution
   - C/P Dead Vegetation

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

**SKETCH MAP**

Legend:
- Steep Rocky Backslope
- Forested
- Large Boulders

---

1) Splashed distribution of oil in HTZ on 1.0 m Boulder
2) 15-12 m area with a splatter distribution (<10%)

High angle B/C/P Beach
SHORELINE ECOLOGICAL SUMMARY

Segment ST / EV 100 Subdivision 12

Date (mo / day / yr) 3/30/70

Time (24 hr) 1240 hrs Biologist Ambrose

(A) Substrate type and % of segments:
   (1) Bedrock 40 (2) Boulder 20 (3) Cobble 20 (4) Pebble 15 (5) Sand 5 (6) Silt

(B) Overall % cover of biota (% of segment): Dense 0 Moderate 35 Low 65

(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)

<table>
<thead>
<tr>
<th>SUBSTRATE</th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1U</td>
<td>1M</td>
<td>1L</td>
<td>1U</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Photographs:

Roll No. ______ Frames ______

Wildlife Observations/General Comments:

Generally sparser biota than EV 100 A, although Fucus still achieves moderate densities in mid-intertidal. One boulder had oiled barnacles, with about 1/3 of the barnacles dead (incl. lower barnacles 4/6 oil).

Ecological Considerations:

1F, 7T, 5T-4: No bald eagles, or nests, seen in this segment.
SHORELINE EVALUATION

SEGMENT ST/ EV-100   SUBDIVISION A (1 of 2)   DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Four active Bald Eagle nests (5T) - 3/1 to 6/1; Near Sawmill Bay Hatchery (1F) - 4/15 to 6/1; Deer harvesting (7II) 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Same as above

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

SHPO SIGNATURE: [Signature]   DATE: April 6, 1990

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

RECOMMENDATIONS:
X No Treatment Recommended
_____ Treatment Recommended
_____ Manual Pickup _____ Snare Booms/Sorbents _____ Tarmat Breakup/Removal
_____ Bioremediation   SPOT WASHING   _____ Other
_____ Wands
_____ Beach Cleaner

Comments: Recommend no treatment of this subdivision. Very few traces of light, weathered oil found which appeared to be diminishing naturally. See Field Shoreline Comment Sheet.

TAG COMMENTS:

TAG APPROVAL DATE: 4/19/90
ADEC [Signature]   DATE: 4/19/90
TXXON [Signature]
NOAA [Signature]
USCG [Signature]
SHORELINE EVALUATION

SEGMENT ST/ EV-100  SUBDIVISION B (2 OF 2)  DATE  3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Four active Bald Eagle nests (ST) - 3/1 to 6/1: Near Sawmill Bay Hatchery (1F) - 4/15 to 6/1; Deer harvesting (1II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Same as above.

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

SHPO SIGNATURE: Charles  DATE: April 6, 1990

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 21 m: No Oil 152 m
Subsurface Oil Observed: Yes___ No X  Maximum Depth____

RECOMMENDATIONS:

X No Treatment Recommended
Treatment Recommended
Manual Pickup Snare Booms/Sorbents Tarmat Breakup/Removal
Bioremediation SPOT WASHING Other
Wands
Beach Cleaner

Comments: Recommend no treatment of EV-100 B as only sporadic coat found on lee side of boulders in UITZ. Appears to be weathering naturally and is very isolated.

TAG COMMENTS:--------------------------------------------------

TAG APPROVAL DATE:  4-6-90
ADEC  John                           John
EXXON  Tony                           Tony
NOAA  Busi Wofford Sandmeyer
USCG  C. A. Reiter C. A. Reiter

DATE: 4-9-90
Legend:
/// - Steep rocky shoreline
Δ - Forested
○ - Large Boulders

80 meters of very rocky wall
w/small high angle B/C
Pocket beaches to end of segment

1) splash distribution of oil in H212 on 1.0 m Boulder
2) 15 m/2 m area with a splash distribution (<10%)

High angle B/C/P Beach

Oil Character Length (m): AP --- PO --- CV --- CT.15 --- ST. --- MS. --- PR. --- TB. --- FL. --- NO. ---
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-500

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION

SEGMENT ST/ EV-500 SUBDIVISION A (1 OF 1) DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)

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 0 m: No Oil 11390 m
Subsurface Oil Observed: Yes ___ No ___ 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
EXXON ___________________________ FOSC: __________ DATE: __________
NOAA ____________________________
USCG ____________________________
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 bio remediation 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 Sewnill 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)
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.

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 Fish harvesting
7I Deer harvesting (8/15 to 2/28)
7JJ Invertebrate harvesting
For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST1  EV-500     SUBDIVISION: A (1061)     DATE 4-22

IDAA
NAME Michael Buchanan SIGNATURE Michael Buchanan

☐ NO TREATMENT RECOMMENDED    ☐ TREATMENT SUGGESTED

COMMENTS

ADEC
NAME John Hayes SIGNATURE John Hayes

☐ NO TREATMENT RECOMMENDED    ☐ TREATMENT SUGGESTED

COMMENTS

Walked 90% of segment and skiffed the vertical rock walls. Only oil observed was 1 small asphalt putty that we manually picked up.

Observed band of oil at Port Ashton in the old cannery area. Land rep. who accompanied us stated it was from a fuel spill prior to the Exxon Valdez Spill.

LAND MANAGER
NAME Steve Weidman-Smee SIGNATURE Jeff Hand

☐ NO TREATMENT RECOMMENDED    ☐ TREATMENT SUGGESTED

COMMENTS

Only oil observed was from previous spill years ago at Port Ashton. Oil the oil is in immediate cannery area.
**SHORELINE OILING SUMMARY**

**NOAA:** Mike Buckman  
**LAND REP:** Mike Dugan  
**SEGMENT ST:** EU-500  
**EXXON:** John Hayes  

**DATE:** 4/27/90  
**TIME:** 15:15 to 19:15  
**TEAM NO.:** 11  
**TIDE LEVEL:** T6' to T2'  

**EST. SUBDIVISION LENGTH:** 1724 m  
**UPLANDS DESCRIPTION:** Grass, Forest, Rock Backshore composed of forest w/ some marshes  
**SURVEYED FROM:** Foot, Boat, Helo  
**WORKING DIRECTION:** N to S  
**SURFACE SEDIMENTS:** 10% Grass, 5% Forest, 30% Rock, 30% Mud, 15% Grass, 5% Mud, 0% V. O.  
**SLOPE:** Lang 65% Hang 30% Veer 5%  
**WAVE EXPOSURE:** Low, Med, High  
**OIL CATEGORY LENGTH:** W 0 m M 0 m N 0 m VL 0 m NO 724 m

### SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASPHALT</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>POOLED</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>COVER</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>COAT</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>STAIN</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>MOUSSE</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>PATTIES</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>TARBALLS</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>FILM</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>NO OIL</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

**PAVEMENT H F S 0 sq. m by 0 cm**  
**PATTIES / TARBALLS 1 to 1.5 m BAGS**

**NEAR SHORE SHEEN? NO 0 BR RW SL TL**

**OILED DEBRIS AMOUNT**

<table>
<thead>
<tr>
<th>TYPE</th>
<th>SM</th>
<th>MD</th>
<th>LG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logs</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Vegetation</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

**DID YOU COLLECT DEBRIS? NO**

**TYPE 65+ BAGS 2**

**Photographs:**
- Roll No.: 0
- Frames: 0

### SUBSURFACE OIL

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED SUBSURFACE</th>
<th>BELOW</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>A N A SHEEN (VAN)</th>
<th>SURFACE-SUBSURFACE SEDIMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>40</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>N</td>
<td>30</td>
<td>P, G, S</td>
</tr>
<tr>
<td>2</td>
<td>40</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>N</td>
<td>35</td>
<td>P, G, S</td>
</tr>
<tr>
<td>3</td>
<td>20</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>N</td>
<td>10</td>
<td>P</td>
</tr>
<tr>
<td>4</td>
<td>20</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>N</td>
<td>15</td>
<td>P</td>
</tr>
<tr>
<td>5</td>
<td>30</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>N</td>
<td>-</td>
<td>P, G, S, M</td>
</tr>
<tr>
<td>6</td>
<td>25</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>N</td>
<td>-</td>
<td>S, P, C</td>
</tr>
</tbody>
</table>

**COMMENTS**

1. Tar Patches were found (secure) and removed. A side from some oil and debris (secure) collected in the upper 20 cm, no oiling was observed in this segment. The shore zone consists mostly of low angle cobbled pebble beaches with a few high angle beaches and some rock outcrops.

The only oil observed was a 1m x 1m zone weathered. The oil appeared to be from a temporary spill point.

**STIP DISTRIBUTION ON B/Y IN THE UPPER 30 CM.**

**REVIEWED:** J.W. DATED: 4/24/90
### SHORELINE OILING SUMMARY (PAGE 2)

**SEGMENT ST/ EV-500  SUBDIVISION A**

#### 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>ANA</th>
<th>SHEET</th>
<th>SURFACE SUBSURFACE SEDIMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>30</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>N</td>
<td>10</td>
<td>P</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>30</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>N</td>
<td>10</td>
<td>P</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>35</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>N 30</td>
<td>P</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>20</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>N 10</td>
<td>P</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>30</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>N P C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>30</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>N 10</td>
<td>P</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>20</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>N 10</td>
<td>P</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>40</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>N P</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### COMMENTS

Reviewed [Signature] Date 4-21-90
SEGMENT: SV-27
SUBDIVISION: A
DATE: 4/22/90
CHECKLIST
- N Arrow
- Approx. Scale
- Site/Subdivision
- Oil Dis.
- Width
- Length
- % Cover
- Substrate Character
- Est. HW/AWL
- SSL
- Photo Location(s)
- Profiles(s)
- Pt Location(s)
- Photo Location(s)

LEGEND
1 P
Pe - No Subsurface Oil
2 P
Pe - Subsurface Oil
CT/C
Continuous Distribution
CT/B
Broken Distribution
CT/P
Patchy Distribution
CT/S
Splashed Distribution
Oiled Vegetation

Photo location, elevation, and number

Recovered Oiled Debris in the Supra ITZ
Recovered Oiled Reef, 5m of seaward room in the Supra ITZ
In 100m STIP in Supra ITZ
(From previous spill at Port Ashton)

Legend
- trees
- building
- site (village)
- stream

Oil Character Length (m): AP  PO  CO  CV  CF  ST  MS  PT  TB  FL  NO  724
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST EV 800 Subdivision A (10E1)  
Date (mo / day / yr) 04/22/90

Time (24 hr) 1500-  
Biologist K. CONLAN

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

(B) Overall % cover of biota (% of segment): Dense 10 Moderate 80 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)

<table>
<thead>
<tr>
<th>BARNACLES</th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>U</td>
<td>M</td>
<td>L</td>
<td>U</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MYTILUS</th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>U</td>
<td>M</td>
<td>L</td>
<td>U</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GASTROPODS</th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>U</td>
<td>M</td>
<td>L</td>
<td>U</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FUCUS</th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>U</td>
<td>M</td>
<td>L</td>
<td>U</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

Wildlife Observations/ General Comments:

Ecological Considerations:
3 SEA OTTERS
2 GOLDEN EYE
1 BALD EAGLE

GASTROPOD EGGS 0
PWS-250K

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

EV-500

ADEC Segment Length: 9724m

Map Key: PWS-250K
Name: Mike Foster
Date: 4/22/40
Date Entered:

100 200 300 METERS
XXXX Wide
/// Medium
---- Narrow
TTTT Very Light
0000 No Oil

EV-500

ADEC Segment Length: 9724m

Map Key: PWS-250k
Name: Mike Foote
Date: 4/22/90
Data Entered:
SHORELINE EVALUATION

SEGMENT ST/ EV-500 SUBDIVISION A (1 OF 1) DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
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: 5/1/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 11390 m
Subsurface Oil Observed: Yes ___ No ___ 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: 5/1/90
ADEC___ Neil Wright, Director___ FOSC: ___ DATE: 5/5/90
EXXON___ Alan E. Huennekens
NOAA___ Nancy T. Proctor
USCG___ Kenneth F. Paine
Map Key: PWS-250c
Name: Mike Forst
Date: 4/72/90
Date Entered:

XXXXX Wide
/// Medium
--- Narrow
TTTT Very Light
0000 No Oil
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EV-900

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION

SEGMENT ST/ EV-900 SUBDIVISION A (1 OF 1) DATE 4/8/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 226-40-16650 and 226-40-16652
1A Salmon stream mouth – fry outmigration (3/1 to 5/15)
1B Salmon stream mouth – spawning (7/10 to 8/31)
5T-4 All bald eagle nests (3/1 to 6/1) – Active eagle nests (3/1 to 9/1)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
7HH Subsistence area: Finfish harvesting
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7JJ Subsistence area: Invertebrate harvesting
7Z Subsistence area: Salmon harvesting (5/1 to 9/30)

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 __ m: Medium __ m: Narrow __ m: V.Light 1180 __ m: No Oil 6718 __ 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: ______ Breakup ______ Beach Cleaner

_____ Removal ______ Other (see comments)

COMMENTS:

________________________________________________________

________________________________________________________

________________________________________________________

________________________________________________________

TAG COMMENTS:

________________________________________________________

________________________________________________________

________________________________________________________

________________________________________________________

TAG APPROVAL DATE: __________________

ADEC EXXON NOAA USCG

FOSC: __________ 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. 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 5/1)

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 unveiled 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
Anchorage (6/1 to 9/15)

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

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

6Y
Special use destination

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

7HH
Finfish harvesting

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

7JJ
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-980  SUBDIVISION:  DATE 4/8/90

USCG  NOAA  DEFENSE
NAME  GARY SHIGENAKA  SIGNATURE  GARY SHIGENAKA

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

■ COMMENTS


ALTHOUGH THIS SEGMENT WAS LISTED AS BEING WIDELY OILED BY THE ARMS, MAN IN GENERAL, SPORADIC OCCURRENCES OF WEATHERED SPILL AND STAIN WERE OBSERVED ALONG MOST OF THE EAST END OF THE SHORELINE, NEAR THE NORTHERN END OF THE SEGMENT, A SIZEABLE ANADROMOUS STREAM FED INTO A WIDE EMBAYMENT. IN THE AREA OF THE SHORELINE WERE OBSERVED REMNANTS OF THE SPILL. A SIZEABLE ANADROMOUS STREAM FED INTO A WIDE EMBAYMENT (A STATE OF ALASKA CECSLA TEST SITE WAS LOCATED HERE). A SOMEWHAT HEAVIER DISTRIBUTION OF STAIN AND COAT (WITH MORE COVERS) WAS OBSERVED IN THE UPPER INTERDIAL ON AND AMONG BOULDERS; BUT THIS WAS LIGHT RELATIVE TO MANY OTHER OILED AREAS. ACCORDING TO THE CUC REPRESENTATIVE, THIS SEGMENT WAS IN FACT PERI PERIEXTENSION OILED, BUT STORM EXPOSURE HAS APPARENTLY WASHED MUCH OF WHAT REMAINED.

ADEC

NAME  JOHN HAYES  SIGNATURE

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

■ COMMENTS

OILING AROUND THE BEACH WITH THE EXCEPTIONS OF

OIL SPILL FORMATION AND LIGHT BANDING ALONG IN VICINITY OF AN

ANADROMOUS STREAM. THE SPILL WAS WASHED AWAY AND THE

SPILL FADED TO APOX. 5CM FROM THE STREAM BANK. NO OIL WAS

OBSERVED IN OR AROUND THE SPILL. OIL BODIES AMONG RUINS OF THE

STREAM.

■ COMMENTS

STARTING N. OF SAWMILL BAY LSSAT TEAM MOVED N INTO JOHNSON COVE.
WE OBSERVED A BATHTUB EMBAYMENT 3-8CM WIDTH ALONG THE TOP
TIDE MARK. STAIN WAS INTERMITTENT, LENGTH VARIED FROM 1-10M
STRETCHES. MOVING N. WEATHERED TAR PATCHES (CRUSHED WEATHERED TAR) WERE FOUND
IN COASTAL AREAS. MOST AREAS OF THIS SEGMENT CONTAINED NO
TRACES OF OIL. PHYSICAL ACTION AND WEATHERING HAVE SIGNIFICANTLY
CLEANED THE BEACHES FROM THIS SEGMENT.

REVISION NO. 03/21/90
**SHORELINE OILING SUMMARY**

**OG** Mike Foy Jr. **U.S.G.** Gary Shiggyara **SEGMENT** EV-400

**BIO** Richard Ambrose  **LAND REP**  James S. Dorsen  **SUBDIVISION** A

**EXXON** Larry Olson  **ADEC** John Davies  **TIME** 5:00 to 7:00

**EST. SHELVING LENGTH:** 773.5 m

**DATE** 4/1/90

**UPLANDS DESCRIPTION:**
- Grass
- Forest
- Rock

**SURFACE OIL**

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

**PAVEMENT:** H F S q. m by cm

**PATTIES / TARBALLS**

**NEAR SHORE SHEEN?**

**SURFACE SEDIMENTS:**
- GRP: % B 35 % C 30 % P 10 % G 5 % S 8 % M 4 % V 0 %

**SLOPE:**
- Land 60 % Hang 30 % Ven 10 %

**WAVE EXPOSURE:**
- Low 15 % Med 75 % High 10 %

**OIL CATEGORY LENGTH:**
- W 6 m M 0 m N 0 m V 8100 m NO 5630 m

**SUBSURFACE OIL**

<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>SUBSURFACE SEDIMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>S</td>
</tr>
<tr>
<td>2</td>
<td>30</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>P, G, S</td>
</tr>
<tr>
<td>3</td>
<td>25</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>P, G, S</td>
</tr>
<tr>
<td>4</td>
<td>40</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>S</td>
</tr>
<tr>
<td>5</td>
<td>30</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>C, P, G, S</td>
</tr>
<tr>
<td>6</td>
<td>15</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>C, P (H2O 20%)</td>
</tr>
</tbody>
</table>

**COMMENTS:**

Oiling was observed in the southern end of the segment as a 0.1m discontinuous splattered stain in the H172 among Bedrock / Boulders and Cobble. To the North in the core their was a 2m x 150m discontinuous splattered stain distribution with a few tar patties. This was located in the H172. This beach was a low energy C/B beach. For the whole segment, most of the shore zone consists of low energy Cobble / Boulder beach with some Vegetation.

**REVIEWED**

DATE 4/13/90
## Subsurface Oil (Continued)

<table>
<thead>
<tr>
<th>Pit No.</th>
<th>Pit Depth (cm)</th>
<th>Subsurface Oil Character</th>
<th>Oiled Interval (cm/cm)</th>
<th>Below Oil / Film Color</th>
<th>Pit Zone</th>
<th>Ana</th>
<th>Subsurface Sediments</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>20</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td></td>
<td>C, S, C</td>
</tr>
<tr>
<td>8</td>
<td>40</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td></td>
<td>P</td>
</tr>
<tr>
<td>9</td>
<td>30</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td></td>
<td>C, P, S</td>
</tr>
<tr>
<td>10</td>
<td>20</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td></td>
<td>C, P</td>
</tr>
<tr>
<td>11</td>
<td>20</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td></td>
<td>C, P, S</td>
</tr>
<tr>
<td>12</td>
<td>30</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td></td>
<td>P, G, S</td>
</tr>
<tr>
<td>13</td>
<td>20</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td></td>
<td>C, P, G</td>
</tr>
<tr>
<td>14</td>
<td>10</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td></td>
<td>C, P, C</td>
</tr>
</tbody>
</table>

**Comments**

REVIEWED: 

DATE: 4/13/80
### SHORELINE ECOLOGICAL SUMMARY

**Segment ST/EV900**  
**Subdivision:** A  
**Date:** 4/8/90

**Time:** (24 hr) **1030 hrs**  
**Biologist:** Anorove

#### (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: 15%
- Moderate: 25%
- Low: 60%

#### (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa:
- **Barnacles**
  - **Dense**
    - 1U 1M 1L
    - 2 2 2
  - **Moderate**
    - 1U 1M 1L
    - 3 3 3
  - **Sparse**
    - 1U 1M 1L
    - 5 5 5
  - **Rare**
    - 1U 1M 1L
    - 6 6 6

- **Mytilus**
  - **Dense**
    - 1U 1M 1L
    - 2 2 2
  - **Moderate**
    - 1U 1M 1L
    - 3 3 3
  - **Sparse**
    - 1U 1M 1L
    - 5 5 5
  - **Rare**
    - 1U 1M 1L
    - 6 6 6

- **Gastropods**
  - **Dense**
    - 1U 1M 1L
    - 2 2 2
  - **Moderate**
    - 1U 1M 1L
    - 3 3 3
  - **Sparse**
    - 1U 1M 1L
    - 5 5 5
  - **Rare**
    - 1U 1M 1L
    - 6 6 6

- **Fucus**
  - **Dense**
    - 1U 1M 1L
    - 2 2 2
  - **Moderate**
    - 1U 1M 1L
    - 3 3 3
  - **Sparse**
    - 1U 1M 1L
    - 5 5 5
  - **Rare**
    - 1U 1M 1L
    - 6 6 6

**Wildlife Observations/General Comments:**
- 14 others, 2 seals, 12 mergansers, 15 surf scoters, 2 gulls
- Buffleheads, 2 black, 2 grebes, dark tracks
- Cormorant and eider ducks were dense to moderate; in embayments and bays, less so
- Beaches were generally sparse. Although mussels were sparse, overall, they were dense in a few discrete patches in which they occurred

**Ecological Considerations:**
- **THH, TII, TIS, T2, IF:** No relevant observations

- **9 bald eagles seen:** 3 pairs of mature eagles plus two other matures and one immature
  - With one pair, one eagle chased away a third mature eagle. At another site, a mature eagle raced near a nest while an immature soared nearby
  - Two anadromous streams occur in this segment (see next page)
SHORELINE EVALUATION

SEGMENT ST/ EV-900  SUBDIVISION_A (1 OF 1)  DATE  4/8/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 226-40-16650 and 226-40-16652

1A  Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B  Salmon stream mouth - spawning (7/10 to 8/31)
5T-4  All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
1F  Sawmill Bay Hatchery release (4/15 to 6/1)
7HH  Subsistence area: Finfish harvesting
7II  Subsistence area: Deer harvesting (8/15 to 2/28)
7JJ  Subsistence area: Invertebrate harvesting
7Z  Subsistence area: Salmon harvesting (5/1 to 9/30)

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:  4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 1180 m: No Oil 6718 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:  4/20/90

ADEC  ART WEINER  DATE:  4/1/90

EXXON  ANDY CAR  DATE:  5/1/90

NOAA  Beryl Wescott  DATE:  5/1/90

USCG  ___________________________________________________________________
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: 5/9/91

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>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
</tbody>
</table>

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

COMMENTS:

INITIAL:

TAG:

FOSC:

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.
ADEC
NAME John Hayes SIGNATURE

X NTR Oiling observed by survey team consisted of spillage E1/CV/18 in UTZ most of which was at southeastermost part of segment. TB: observed were P.U. oil remaining oiling is too light to warrant treatment at this time. We surveyed 225 meters of this segment that had been previously identified as heavily oiling.

EXXON
NAME Mariner N.J. SIGNATURE

X NTR Area had a few asphalt patches which team picked up. I don't believe there is anything else we should do.

LANDMANAGER
NAME Steve Ward of EUC SIGNATURE

X NTR Been has no history of Subsurface oil. The spill from Pott's Point Lateral was removed during survey. Nothing else can be done in this area. As all oil waxes gone no further treatment recommended at this time.

USCG/NOAA
NAME Dreher Hodges SIGNATURE

X NTR Majority of beach showed no sign of oil. what oil was found was heavily weathered spatter oil or around large rocks in southern portion of beach. oil was not recoverable.
**MAYSAP SHORELINE OILING SUMMARY**

**TEAM NO.**

OG: Chaney  
ADEC: Hayes  
EXXON: Martinez

**CRANK**  
LANDMANAGER: Ward

USCG/NOAA: Dreher/Hodges

**SEGMENT:** EV 900  
**SUBDIVISION:** A  
**DATE:** April 27, 1991

**TIME:** 17:55 to 19:15  
**TIDE LEVEL:** 2 ft. to 1.5 ft.  
**ENERGY LEVEL:** ☑️ H  ☑️ M  ☑️ L

**SURVEYED FROM:** ☑️ Foot  ☑️ Boat  ☑️ Helo

**WEATHER:** ☑️ Sun  ☑️ Clouds  ☑️ Fog  ☑️ Rain  ☑️ Snow

**TOTAL LENGTH SHORELINE SURVEYED:** 1300 m  
**NEAR SHORE SHEEN:** ☑️ BR  ☑️ RB  ☑️ SL  ☑️ None

**EST. OIL CATEGORY LENGTH:**  
- W - m  
- M - m  
- N - m  
- V -  m

**SURFACE OIL CHARACTER**  

<table>
<thead>
<tr>
<th>LOCATION</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>DEPTH</th>
<th>OILED ZONE</th>
<th>CLEAN</th>
<th>WATER LEVEL</th>
<th>SHEEN COLOR</th>
<th>PIT ZONE</th>
<th>SURFACE-SUBSURFACE</th>
<th>SEDIMENTS</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>+</td>
<td>T</td>
<td>T</td>
<td>C</td>
<td>L</td>
<td>0.3</td>
<td>0.3</td>
<td>☑️</td>
<td>☑️</td>
<td></td>
<td>Splatters on cobble stones</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>+</td>
<td>T</td>
<td>T</td>
<td>R</td>
<td>C</td>
<td>L</td>
<td>1</td>
<td>15</td>
<td>☑️</td>
<td>☑️</td>
<td>Splatters on boulders</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>+</td>
<td>T</td>
<td>T</td>
<td>B</td>
<td>R</td>
<td>L</td>
<td>1</td>
<td>5</td>
<td>☑️</td>
<td>☑️</td>
<td>Vertical rock bedding</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>T</td>
<td>S</td>
<td>B</td>
<td>R</td>
<td>L</td>
<td>5</td>
<td>15</td>
<td>☑️</td>
<td>☑️</td>
<td>Vertical rock bedding and lee of boulders</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>T</td>
<td>T</td>
<td>T</td>
<td>B</td>
<td>R</td>
<td>L</td>
<td>1</td>
<td>5</td>
<td>☑️</td>
<td>☑️</td>
<td>A Few new Valdez Oil</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FT</td>
<td>T</td>
<td>T</td>
<td>T</td>
<td>B</td>
<td>R</td>
<td>L</td>
<td>0.3</td>
<td>3.0</td>
<td>☑️</td>
<td>☑️</td>
<td>Mixed with General Splatters and AP Patties</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></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 - 3**  
**FRAMES 1-6**

**OG COMMENTS:**

Most oil located was in the form of random coats and covers splattered on boulders and bedrock on the beach south of the large estuary. A few AP patties were located and recovered at location "F."

Reviewed: F.W. 5/3/91  
Revised: M.C. 5/4/91
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM 5  DATE 27 Apr '91
SEGMENT # EV-900  TIDAL HEIGHT (Range) +2.5 → 1.5
SUBDIVISION A  BIOLOGIST Cranke
SEA STATE  "  WIND SPEED/DIRECTION 10 - 20 knots/SE
PHOTOGRAPHS: ROLL #  FRAME #

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):
(A) Area in the WITZ. Race barnacles in the immediate vicinity. Ten meter SE downshore:
   there is a moderate Fucus bed on a rock bench. Rock bench has small tidepools with dense
   Lithium and sparse limpets.
(B) Area is located in the WITZ S-R M SE of A. In the immediate vicinity Lithium
   empty shells only. No live macro-biota were observed in the WITZ. In the WITZ there
   is a rock bench (with a moderate Fucus concentration (mature conceptacles and
   sporangios present) sparse Lithium and sparse limpets present. Would not be
   not be beneficial to the rockbench inhabitants to remove the few remaining for splinters.
(C) Area is located high in the WITZ. There are white and black lichens on boulders,
    appear to be healthy. Rare Lithium and limpets also present. Three meters
    downshore a continuation of rockbench is present. Biotas appears to be healthy.
(D) Area is located high in the WITZ in boulders. Small (<5mm) Fucus sporangios
    found deep in boulder cracks. Fucus band begins 5m downshore, mild concentration.
(E) Area is located in the WITZ. Rare barnacle, limpets and Lithium present. A sparse,
    recent barnacle set is also present. Five meters downshore Fucus band is present
    thinning from moderate concentration to rare at the SE end of area.

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>4</td>
<td></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>26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gulls/Kittiwakes</td>
<td>2</td>
<td>17</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>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Birds</td>
<td>3</td>
<td>2 - Heard calls</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

MARINE MAMMALS # OBSERVED SPECIES # OBSERVED

| Sea Otters |             | Bear tracks in snow, old |
| Pinnipeds(specify) | 3 | Seal track |
| Whales(specify) |          | Bear tracks: scar |

LAND MAMMALS

Shoreline subdivision map showing important biological features attached.
(F) Area is located in a rock bench from low SUPRA to high MITZ. White, yellow and black lichens present appear healthy. Rare *Littorina* and filamentous green algae are in close proximity to oil. Below site in the MITZ *Fucus* is dense and there is a healthy mussel bed with a moderate concentration. *Odenthalia* (*algae*) is also prominent and there are rare patches of *Gloiopeitris* (*algae*).

A mature *Bald Eagle* sat in top of tree approx. 50m behind site E. Eagle observed our group. There was a large dark shadow in a limb on the SE side of tree about 1/3 way down. Could not confirm as nest.

Small shrimp were found in driftline near site A, assumed to be recently wash-up as eyes were present.

The *Intertidal biota* appear to be healthy. Recruitment is occurring in both *Barnacles* and *Fucus*.
## 1991 Maysap Evaluation

**Segment:** EV 900  **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.

<table>
<thead>
<tr>
<th>SHPO Signature:</th>
<th>Date:</th>
</tr>
</thead>
</table>

### 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></td>
<td></td>
</tr>
<tr>
<td>Spot Washing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bio-Custombien Only</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bio-Inipol/Custombien</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:**

---

**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.
Oil observed by survey team consisted of sporadic criles in U/S 2 most of which were at southernmost part of segment. This observed area P.U. of remaining oil is too light to warrant treatment at this time. We surveyed 25 meters of other segment that had been previously identified as heavily oiled.

Area had a few asphalt patches which team picked up. I don't believe there is anything else we should do.

Been this no history of Subsurface oil. The asphalt patch located lace.

Remove using survey. Nothing else can be done in this area. All oil patches gone. No further treatment recommended at this time.

Majority of beach showed no sign of oil. what oil was found was heavily weathered spatter on or around large rocks in southern portion of beach. Oil was not recoverable.
**MAYSAP SHORELINE OILING SUMMARY**

TEAM NO. 6

CHANEY  CRANK

HAYES

MARTINEZ  WARD  DREHER/HODGES

SEGMENT EV 900

SUBDIVISION A

DATE April 12, 1991

TIME 17:55 to 19:15

TIDE LEVEL 2 ft. to 1.5 ft.

ENERGY LEVEL: □ H □ M □ L

SURVEYED FROM: □ FOOT □ BOAT □ HELO

WEATHER: □ SUN □ CLOUDS □ FOG □ RAIN □ SNOW

TOTAL LENGTH SHORELINE SURVEYED: 1300 m

NEAR SHORE SHEEN: □ BR □ RB □ SL □ NONE

EST. OIL CATEGORY LENGTH: W. - _ m M. - _ m N. - _ m VL. 116 m NO. 1184 m US. 6598 m

<table>
<thead>
<tr>
<th>L</th>
<th>OIL CHARACTER</th>
<th>SEDIMENT TYPE</th>
<th>SLOPE</th>
<th>AREA</th>
<th>WIDTH</th>
<th>LENGTH</th>
<th>ZONE</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>TT</td>
<td>CL</td>
<td>0.3</td>
<td>0.3</td>
<td></td>
<td></td>
<td></td>
<td>Splatters on boulders</td>
</tr>
<tr>
<td>B</td>
<td>TT</td>
<td>BC</td>
<td>1</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td>Splatters on boulders</td>
</tr>
<tr>
<td>C</td>
<td>TT</td>
<td>BR</td>
<td>L</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td>Algae on CT &amp; CV</td>
</tr>
<tr>
<td>D</td>
<td>TS</td>
<td>R</td>
<td>L</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td>Vertical rock bedding and lee of boulders</td>
</tr>
<tr>
<td>E</td>
<td>TT</td>
<td>BR</td>
<td>L</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td>A few Valdez oil, mixed with general splatters and AP patties</td>
</tr>
<tr>
<td>F</td>
<td>TT</td>
<td>BR</td>
<td>L</td>
<td>0.3</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

DISTRIBUTION: C = 01-100%; B = 81-90%; 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 1 - 6

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED ZONE</th>
<th>CLEAN BELOW</th>
<th>SHEEN H2O</th>
<th>PIT ZONE</th>
<th>SUBSURFACE SEDIMENTS</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2.5</td>
<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:

Most oil located was in the form of random coats and covers splattered on boulders and bedrock on the beach south of the large estuary. A few AP patties were located and recovered at location "F."

Reviewed: F.L. 5/24/91

REVIEWED: R.C. 5/14/91
MAYBAY 1991
OOG SKETCH MAP
GREG CHANEY
TEAM 5
SEGMENT: EV-900 A
DATE: APRIL 27, 91
AIR P. #: 157

LEGEND

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

SCALE
APPROXIMATELY
225 METERS

POSSIBLE
EAGLE NEST SITE
**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>
</tr>
</thead>
<tbody>
<tr>
<td>Eagles</td>
<td>1</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Seabirds</td>
<td>1</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Waterfowl</td>
<td>8</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Gulls/Kittiwakes</td>
<td>3</td>
<td>3</td>
<td>? - Heard calls</td>
</tr>
<tr>
<td>Shorebirds</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Corvids</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Other Birds - Terns/Kids</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**MARINE MAMMALS**

<table>
<thead>
<tr>
<th># OBSERVED</th>
<th>SPECIES</th>
<th># OBSERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sea Otters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pinnipeds (specify)</td>
<td>3 Steller</td>
<td>Bear tracks: scar</td>
</tr>
<tr>
<td>Whales (specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**LAND MAMMALS**

<table>
<thead>
<tr>
<th># OBSERVED</th>
<th>SPECIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sea Otters</td>
<td></td>
</tr>
<tr>
<td>Pinnipeds</td>
<td>Steller</td>
</tr>
<tr>
<td>Whales</td>
<td></td>
</tr>
</tbody>
</table>

Shoreline subdivision map showing important biological features attached.
Area is located in a rock bench from low SUPRA to high UITZ. White, yellow and black lichens present appear healthy. Rare Littoria and filamentous green algae are in close proximity to oil. Below site in the MITZ Fucus is dense and there is a healthy mussel bed with a moderate concentration. Odonthalia (algae) is also prominent and there are rare patches of Gloiopeitris (algae).

A mature Bald Eagle sat in top of tree approx. 50m behind site E, Eagle observed our group. There was a large dark shadow in a limb on the SE side of tree about 1/3 way down. Could not confirm as nest. Small shrimp were found in driftline near site H, assumed to be recently wash-up as eyes were present.

The intertidal biota appear to be healthy. Recruitment is occurring in both barnacles and Fucus.
ARLIS
Alaska Resources
Library & Information Services
Anchorage, AK