[Shoreline evaluations, 1991].

Prince William Sound ER-01 to ER-08
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ER-01

SUBDIVISIONS: A (1 OF 3)
SEGMENT ST/ ER-01  SUBDIVISION A (1 OF 3) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 226-40-16715.
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)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7JJ Subsistence area: Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOCLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: ______________________   DATE:_____________________

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 127 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommend removal of mousse patties manually from area shown on sketch map. Work should be conducted between 5/1 and 8/15.

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 sites

Gill net area (6/7 to 6/31)

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

SEGMENT ST/FR-01  SUBDIVISION:  A  DATE 06 APRIL 90

USCG
NAME  LARRY FLETCHER  SIGNATURE  Larry Fletcher

☑ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED
COMMENTS
1. BIO-REMEDiate.

ADEC
NAME  DAVID M. SALEM  SIGNATURE  David M. Salem

☑ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED
COMMENTS
1. Remove oil from underlying sediments below biodegraders.
2. Assure oil cover on rocks is not mobile.
3. BIO REMEDIATE.

LAND MANAGER
NAME  LEIGH CARLSON  SIGNATURE  Leigh Carlson ADNR

☑ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED
COMMENTS
Uses for the segment include subsistence deer and invertebrate harvesting. Treatment as suggested by ADEC above.
## SHORELINE OILING SUMMARY

**CG**: Rich Mart

**USCG**: Larry Fletcher

**BIO**: Bob Lemon

**LAND REP**: Leigh Carson

**EXXON Oil**

**ADEC**: Dave Sale

**TIME**: 19:00 to 19:30

**DATE**: 1 April 1990

---

**TEAM NO.**: 10

**TIDE LEVEL**: +0.2m (as) to +0.8m (at)

**DATE**: 04/01/90

**EST. SUBDIVISION LENGTH**: 111 m

**UPLANDS DESCRIPTION**: □ Grass □ Forest □ Rock

**SURVEYED FROM**: Foot □ Boat □ Helo

**WORKING DIRECTION**: SW to NE

**SURFACE SEDIMENTS**: R 60 % B 15 % C 10 % P 10 % G 5 % S % M % V %

**SLOPE**: Lang % Hang % Vent %

**WAVE EXPOSURE**: □ Low □ Med □ High

**OIL CATEGORY LENGTH**: W m M m N 111 m VL m NO m

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### SURFACE OIL

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<th>DISTRIBUTION</th>
<th>OIL/FILM COLOR</th>
<th>IMPACTED ZONES</th>
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### PAVEMENT:

**H F S** sq. m by cm

**PATTIES/TARBALLS**: < BAGS

**NEAR SHORE SHEEN?**: No BR RW SL TL

---

**OILED DEBRIS**: Log

**AMOUNT**: SM MD LG

**DEBRIS COLLECTED**: □ YES □ NO

**TYPE**: Tar Ball

**NUMBER**: 

**BAGS**: < !

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**Photographs**: Roll No: ST 10/9 Frames 33, 34

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### SUBSURFACE OIL

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**COMMENTS**: All observed tar balls were removed during the survey

**Revision**: RM 7 April 1990

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**Page 1 of**

**REVIEWED**

**DATE**
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST/10/ERI  Subdivision A  Date (mo/day/yr) 4/6/80  
Time (24 hr) 0700-0840 4 1100-1930  
Biologist Lemon  

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

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

Photographs:  Roll No. ST/10/8  
Frames 33, 34  

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Wildlife Observations/General Comments: Onchidella baradis is included in the gastropod county. 
Diatomaria (Asterida) was occasionally present underwater. The water has been very clear 
around this island, perhaps 4°C from the shore. 

Ecological Considerations: Invertebrate harbor area, adult hatching release.
### Table

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<td>Very Light</td>
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### Map Details
- **ADEC Segment Length:** 4875m
- **Map Key:** PWS-1970
- **Name:** 07 April 1990
- **Date:** Richard Marky
- **Date Entered:**
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ER-01

SUBDIVISIONS: B (2 OF 3)
SHORELINE EVALUATION

SEGMENT ST/ ER-01 SUBDIVISION B (2 OF 3) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
ADF&G anadromous stream no. 226-40-16715.
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
ST-1 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)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7JJ Subsistence area: Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

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

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 588_ m: No Oil 2423_ m
Subsurface Oil Observed: Yes__ No X__ Maximum Depth_____

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

COMMENTS:

______________________________________
______________________________________
______________________________________

TAG COMMENTS:_________________________

TAG APPROVAL DATE:_________________
ADEC ________________ FOSC:______________ DATE:__________
EXXON ______________________________
NOAA ______________________________
USCG ______________________________
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

Salmon stream mouth - fry outmigration (3/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage.
No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

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

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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.
SEGMENT ST1    ER-01  SUBDIVISION:  B  DATE 06 APRIL 90

USCG
NAME  LARRY FLETCHER  SIGNATURE  [Signature]

☐ NO TREATMENT RECOMMENDED  ☒ TREATMENT SUGGESTED

COMMENTS

ADEC
NAME  David M. Sale  SIGNATURE  [Signature]

☐ NO TREATMENT RECOMMENDED  ☒ TREATMENT SUGGESTED

COMMENTS

1. ASSURE ALL THE PATTIES ARE REMOVED.

2. DETERMINE SOURCE OF SILVER SHEEN WATER AT RED MCCABE UPPER LIMIT.

3. CLEAN OIL FROM SLATE SLAGSTONES ON BEACH WITH COUR.
   NOTES AREA WHERE COUR SHOWN ON "CLATS, CLIPPOOOL O N PEBBLES, SHELLS"

LAND MANAGER
NAME  Leigh Carlson  SIGNATURE  Leigh Carlson  ADIVR

☐ NO TREATMENT RECOMMENDED  ☒ TREATMENT SUGGESTED

COMMENTS

Uses for the segment includes subsistence deer and invertebrate harvesting. Treatment as suggested by ADEC above.
SHORELINE OILING SUMMARY

OG  Rick Mart  USCG Larry Fletcher  SEGMENT ST/ ER-01
BIO Bob Lemon  LAND REP. Leigh Carson  SUBDIVISION B (253)
EXXON Jon Carpenter  ADEC Dave Sale  TIME 17:30 to 20:00
TEAM NO.: 10  TIDE LEVEL: +0.2 m (0.67) +0.8 m (25°) DATE 02/1 April/90
EST. SUBDIVISION LENGTH: 30.65 m ☑ Sun ☑ Clouds ☑ Fog ☑ Rain ☑ Snow
UPLANDS DESCRIPTION: ☑ Grass ☑ Forest ☑ Rock
SURVEYED FROM: ☑ Foot ☑ Boat ☑ Helo  WORKING DIRECTION: SW to NE
SURFACE SEDIMENTS: R 70  % B 10  % C 10  % P 5  % G 5  % S 5  % M 5  % V 5  %
SLOPE: Lang 30  % Hang 70  % Vert 0  % WAVE EXPOSURE: ☑ Low ☑ Med ☑ High
OIL CATEGORY LENGTH: W _____ m M _____ m N _____ m VL 600 m NO 244.5 m

SURFACE OIL

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<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
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PAVEMENT: H F S None sq.m by cm
PATTIES/TARBALLS 1 < BAGS
NEAR SHORE SHEEN? NO
BR RW SL TL

SURFACE DEBRIS AMOUNT
Logs Z
Vegetation
Trash
Debris

Photographs:
Roll No. ST/10/9 Date ST/10/9
Frames 1-13 35-37

SUBSURFACE OIL

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COMMENTS All observed tar balls were removed during revision
the survey

& Does not constitute subseafloor oil.

Page 1 of _ REVIEWED _ DATE ___

RM 9 April 1990

4/01/90
SEGMENT ST/ER OIL
8 (part)
SUBDIVISION B (part)
DATE 27 Apr 1900

CHECKLIST
- Flow
- Approx. Scale
- Seep/Silt Boundary
- Oil Dist.
- Water
- Length
- % Cover
- Substrate Character
- Fish
- Stn.
- Profile Location(s)
- Plotting
- Pt Location(s)
- Photo Location(s)

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

Concentrations
CT/C
- Concentrated Distribution
CT/B
- Brine Distribution
CT/P
- Patches Distribution
CT/S
- Spattered Distribution

Oil/Fat Vegetation

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

Segment ST/10/ER1  Subdivision B  Date (mo/day/yr) 4/6/90

Time (24 hr) 10/10/90  Biologist Lemon

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

(B)  Overall % cover of biota (% of segment): Dense 80% Moderate 10% Low 10%  ST/10/9 Frames 35-37

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

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<tr>
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Wildlife Observations/General Comments: Mix of red algae covers the low zone about 90% not reflected above. Laminaria dense below. Ochridella boerae makes a significant contribution to the gastropod population on the beach. Other species frequent: Asterosoma, Hexabrancha, Pyura, and Lyceかけて Hancock.

Ecological Considerations: Protothaca and Solenostreon shells are common along the shore. Infant rock crabs are possible commercial potential for these bluffs at lower levels. Clean beach south end of subdivision found no fish or fish food or oil. Clean stream out north end of subdivision by cabin, found insect larvae, no fish and no oil. Investigate banks and fishing regulations.
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ER-01

SUBDIVISIONS: C (3 OF 3)
SHORELINE EVALUATION

SEGMENT ST/ ER-01 SUBDIVISION C (3 OF 3) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 226-40-16715.
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)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7JJ Subsistence area: Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. (5T) Bald eagle nest in Subdivision C.

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 279 m: No Oil 1432 m

Subsurface Oil Observed: Yes ___ No ___ X ___ Maximum Depth ______

RECOMMENDATIONS:

X ___ No Treatment Recommended ___ Snare/Absorbent Boom
___ 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 (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 unveiled intertidal and subtidal algae and seagrass.
Contact ADF&G for specific dates and locations.

3N, 3P Harbor seal and sea lion pupping (6/15 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 from nests. Contact ADF&G and USFWS prior to treatment.

55 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
7HI Deer harvesting (9/15 to 2/28)
7JJ Invertebrate harvesting
For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
SEGMENT ST1 ER-01 SUBDIVISION: C DATE 07 APRIL 90

USCG NAME LARRY FLETCHER SIGNATURE Larry R. Fletcher
☑ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

ADEC NAME DAVID SAIE SIGNATURE David O.
☑ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

LAND MANAGER NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR
☑ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
**SHORELINE OILING SUMMARY**

**OIL**  K. Marty  **USCG**  Larry Fletcher  **SEGMENT ST**  ER-01  
**BIO**  Bob Lemon  **LAND REP**  L. Carlson  **SUBDIVISION**  C  
**EXXON**  Jan Crawford  **ADEO**  Dave Sahl  **TIME**  07:30 to 07:30  
**TEAM NO.**  10  **TIDE LEVEL**  +0.8m(2.64)+1.1m(3.6 )  **DATE**  27/  April/ 90  
**EST. SUBDIVISION LENGTH:**  1499 m  
**UPLANDS DESCRIPTION:**  □ Grass □ Forest □ Rock  
**SURVEYED FROM:**  □ Foot  □ Boat  □ Helo  **WORKING DIRECTION:**  S to N  
**SURFACE SEDIMENTS:**  R 50 %  B 25 %  C 15 %  P 5 %  G 5 %  S 5 %  M 5 %  V 5 %  
**SLOPE:**  Lang 50 %  Hang 30 %  Vert 20 %  
**WAVE EXPOSURE:**  □ Low □ Med □ High  
**OIL CATEGORY LENGTH:**  W m  M m  N m  

### SURFACE OIL

<table>
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<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<tr>
<td>ASPHALT PAVEMENT</td>
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<td>NEAR SHORE SHEEN?</td>
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**OILED DEBRIS**  AMOUNT  
Logs  SM MD LG  
Vegetation  Y  
Trash  
Debris  

**Photographs:**  
Roll No. 55/10/9  
Frames 14-17  

**Subsurface Oil**

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<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
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**Comments:**  All observed tar balls were removed during the survey  

**Review:**  RM 7 April 1990
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST/10/ER1  Subdivision C  Date (mo/day/yr) 4/17/90

Time (24 hr)  0700 - 0830  Biologist Lemon

(A) Substrate type and % of segments:
1. Bedrock 50%
2. Boulder 25%
3. Cobble 15%
4. Pebble 5%
5. Sand 5%
6. Silt

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

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

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**Wildlife Observations/General Comments:** Mixed red algae makes up much of the low zone cover. Also seen in the low zone were gastropods (30% cover), Demosterales (asteroidae) epibions, and free-living polychaete worms. 5 Waterfowl and 1 deer. Loter, 2 eagles were sighted.

**Ecological Considerations:** Investigate harvest at hatchery release area.
ECOLOGY MAP
SEGMENT ER-1
SUBDIVISION C

Map Keys: PWS-1970
Name: Richard Marks
Date: 27 April 1970
Date Entered:
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT ER-1 SUBDIVISION A (1 of 3)

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>Activity</th>
<th>Constraints</th>
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<tr>
<td>1A, 1B</td>
<td>Salmon Stream</td>
<td>ADF&amp;G catalogued anadromous stream (226-40-16715) is located in adjacent Subdivision B. No constraint to manual pickup.</td>
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<tr>
<td>1F</td>
<td>Sawmill Bay Hatchery Release</td>
<td>No constraint to manual pickup.</td>
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<tr>
<td>1K</td>
<td>Purse Seine Hook-off</td>
<td>No constraint to manual pickup.</td>
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<tr>
<td>5T</td>
<td>Bald Eagle Nest</td>
<td>NO CONSTRAINT. Nest is located in Subdivision C, more than 400m from recommended treatment area.</td>
</tr>
<tr>
<td>7II</td>
<td>Subsistence: Deer Harvesting</td>
<td>No constraint to manual pickup.</td>
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<tr>
<td>7JJ</td>
<td>Subsistence: Finfish Harvesting</td>
<td>No constraint to manual pickup.</td>
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OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum prior to 6/15 and after 7/25. Restrict beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unceded biota and substrate.

TAG ADDENDUM DATE 5/21/90
ADEC Art Weller, Ben Jolliford
EXXON T. E. Trask, Alton Tauscher
NOAA Joseph L. Talbot, Dr. J. Halpin
USCG

Prepared by: Andrea May

Date: 5/19/90
SEGMENT ST/ER-01 SUBDIVISION A (1 OF 3) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 426-40-16715.

1A Salmon stream mouth - dry 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)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7JJ Subsistence area: Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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: 4/23/90

OILING CATEGORIZATION:

Wide 0_m: Medium 0_m: Narrow 127_m: V.Light 0_m: No Oil 0_m
Subsurface Oil Observed: Yes No X Maximum Depth

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: Breakup Beach Cleaner
--- Removal Other (see comments)

COMMENTS: Recommend removal of mousse patties manually from area shown on sketch map. Work should be conducted between 5/1 and 8/15.

TAG COMMENTS:

---

TAG APPROVAL DATE: 4/21/90

ADEC Art Weiner Art Weiner
EXXON Art Weiner Art Weiner
NOAA Art Wescott Gail Wescott
USCG

FOSC: DATE:
SHORELINE EVALUATION

SEGMENT ST/ ER-01 SUBDIVISION A (1 OF 3) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
ADF&G anadromous stream no. 226-40-16715.
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
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7II Subsistence area: Deer harvesting (8/15 to 2/28)
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See attached Ecological Constraint sheet for specific constraints and contacts.

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

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

SHPO SIGNATURE: Charles T. Ho DATE: 4/23/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 127 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Minimum Depth_______

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: _____ Breakup _____ Beach Cleaner
_____ Removal _____ Other (see comments)

COMMENTS: Recommend removal of mousse patties manually from area shown on sketch map. Work should be conducted between 5/1 and 8/15.

TAG COMMENTS: ________________________________

TAG APPROVAL DATE: 4/21/90
ADEC Art Weiner DATE: 4/23/90
EXXON Dr. Turi DATE: 4/23/90
NOAA Bud Westcott DATE: 4/23/90
USCG Kenneth Kelner DATE: 4/23/90
SHORELINE EVALUATION

SEGMENT ST/ ER-01 SUBDIVISION B (2 OF 3) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
ADF&G anadromous stream no. 226-40-16715.
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)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7JJ Subsistence area: Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

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

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 588 m: No Oil 2423 m
Subsurface Oil Observed: Yes ___ No X ___ Maximum Depth _______

RECOMMENDATIONS:
X ___ No Treatment Recommended ___Snare/Absorbent Booms
____ Treatment Recommended ___Oil Snare(s) (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 Weimer ____________ DATE: __________
EXXON Amy Tune ____________ FOSC: __________
NOAA Steve W. McMath ____________ DATE: 4/27/90
USCG Kenneth Keane ____________
SHORELINE EVALUATION

SEGMENT ST/ ER-01 SUBDIVISION C (3 OF 3) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
ADFG anadromous stream no. 226-40-16715.
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)
1F  Sawmill Bay Hatchery release (4/15 to 6/1)
7II  Subsistence area: Deer harvesting (8/15 to 2/28)
7JJ  Subsistence area: Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. (5T) Bald eagle nest in Subdivision C.

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

SHPO SIGNATURE: [Signature] DATE: 4/23/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 279 m: No Oil 1432 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: ______ Breakup _____ Beach Cleaner
____ Removal _____ Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/21/90
ADEC ART WEINER ART WEINER
EXXON ANDY TAE
NOAA Burt Weissflur
USCG Kenneth Keane
ECOLOGY MAP
SEGMENT ER-1
SUBDIVISION C

XXXWide
///Medium
----Narrow
TTTTVery Light
0000No Oil

ER-1

Map Keys: PWS-197b
Name: Richard Marcy
Date: 02 April 1990
Date Entered:

ADEC Segment Length: 4875m
ER-1

ADEC Segment Length: 4875 m

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

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Map Key: PWS-197a
Name: 07 April 1990
Date: Richard Marty
Date Entered: 
XXXX Wide
/// Medium
---- Narrow
TTTT Very Light
0000 No Oil

ER-1

Map Keys: PWS-1976
Name: Richard Marley
Date: 03 April 1970
Date Entered:

ADEC Segment Length: 4875m

100 1200 1500 METERS

PWS 1971 →
PWS 1975 4/5
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ER-02

SUBDIVISIONS: A (1 OF 2)
SEGMENT ST/ ER-02 SUBDIVISION A (1 OF 2) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1F Sawmill Bay Hatchery release (4/15 to 6/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7JJ Subsistence area: Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

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

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_73 m: V.Light_336 m: No Oil_252 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 ____________
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 uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

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

3O, 3Q
Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

5R
Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.

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

5T
All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 400m. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

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

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

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

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

6Y
Special use destination

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

7HH
Finfish harvesting

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

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

SEGMENT ST  FR-02  SUBDIVISION:  A  DATE 4/2/90

USCG
NAME  LARRY FLETCHER    SIGNATURE  Larry B. Fletcher

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED
COMMENTS

ADEC
NAME  David M. Saci    SIGNATURE  David M. Saci

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED
COMMENTS

 Some splash on rocks, nesting on occasional "lattitude ring" does not require clearing as it seems immobile, stable and in a small quantity.

LAND MANAGER
NAME  Leigh Carlson    SIGNATURE  Leigh Carlson ADNR

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED
COMMENTS

Uses include subsistence deer and invertebrate harvesting.
Tar balls were picked up while surveying the subdivision. The remaining splash on the rocks is stable and is hard to pick out because of the coloring of the rocks.
**SHORELINE OILING SUMMARY**

**OG:** R. Martz  
**USCG:** LARRY FLETCHER  
**SEGMENT STI:** ER-02  
**EXXON:** J. Czernicki  
**DATE:** Day: Sat.  
**TIME:** 10:10 to 16:00  
**TEAM NO.:** 10  
**TIDE LEVEL:** (6) 10 t/2m (3:3)  
**DATE:** 04/10/90  
**EST. SUBDIVISION LENGTH:** 604 m  
**UPLANDS DESCRIPTION:**  
- Grass  
- Forest  
- Rock  
**SURVEYED FROM:**  
- Foot  
- Boat  
- Helo  
**WORKING DIRECTION:** S.W. to N.E.  
**SURFACE SEDIMENTS:**  
- R. 5%  
- B 10%  
- C 16%  
- P 30%  
- G 15%  
- S 5%  
- M 10%  
- V 10%  
**SLOPE:**  
- Lang 60%  
- Hang 20%  
- Vert 20%  
**WAVE EXPOSURE:**  
- Low fill  
- Med  
- High  

**OIL CATEGORY LENGTH:**  
- W m  
- M m  
- N m  

**SURFACE OIL**

<table>
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<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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**PAVEMENT:** H F S  
**PATTIES / TARBALLS:** 1  
**NEAR SHORE SHEEN:** NO  
**BR RW SL TL:**  
**OILED DEBRIS AMOUNT**  
- Logs  
- Vegetation  
- Trash  
- Debris  
**DEBRIS COLLECTED TYPE**  
- Tar balls  
- Bags 1  
**Photographs:**  
- Roll No. 57/10/9  
- Frames 24, 25, 26  

**SUBSURFACE OIL**

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<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL (cm+cm)</th>
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**COMMENTS**  
*Note: all visible tar balls removed during survey.*

- *Time is estimate for two generations of tar balls.*
- 1. Pre-efm Valley tar which is hard and prints, with more tar than before.
- 2. Effect Valley tar which is soft and lacks more cover.

**Supplementary note:** Surplus tar was snow covered during survey.

**Revision**  
**RM 4/6/90**  
**REVIEWED**  
**DATE 4/10/90**
**SHORELINE ECOLOGICAL SUMMARY**

**Segment ST/10/ER2**  
**Subdivision** A  
**Date (mo/day/yr)** 4/6/90

**Time (24 hr)**  
**Biologist** Lemon  
**Sunny, round 8°C**

(A)  
**Substrate type and % of segments:**  
1. Bedrock 5%  
2. Boulder 10%  
3. Cobble 40%  
4. Pebble 30%  
5. Sand 15%  
6. Silt

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

(C)  
**Density, substrate preference (by number from A, above), & vertical zonation of major taxa:**  
1. Juveniles/adults (X), new settlement (3)

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**Photographs:**  
**Roll No. 31/10/8**  
**Frames 24-32**

**Wildlife Observations/General Comments:**  
Low zone occupied by mixed Reds at Greens for about 80% coverage; key groups above don't show this. Gammon amphipods sparse in drift line; obvious NEMERTEANS sparse under rocks in drift line.

**Ecological Considerations:**  
Inspected stream, no fish, fish food or oil. Invertebrate harvest area, deer harvest area, hatchery release.
ER-02

No. 0.25 m band of broken coal as digitate dullcastane. The coal grades NE to spread.
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ER-02

SUBDIVISIONS: B (2 OF 2)
SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1F  Sawmill Bay Hatchery release (4/15 to 6/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7JJ Subsistence area: Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

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

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 95 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes No

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

COMMENTS: Recommend the manual removal of sporadic tar balls and bio-remediate the pocket beach as shown on sketch map. Work should be conducted after 6/1.

TAG COMMENTS: ______________________________

TAG APPROVAL DATE: __________
ADEC EXXON NOAA USCG
FOSC: __________ DATE: __________
PWS, SEWARD AND HOMER ECOCLOGICAL 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 6/31)

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

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

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

2M  Herring spawning (4/1 to 6/15)
    Restrict boat traffic to essential minimum. Avoid damage to unvegated intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

3N, 3P  Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q  Harbor seal and sea lion molting (6/15 to 9/15)
    Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

5R  Seabird colony (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)

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

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

6Y  Special use destination

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

7H  Finfish harvesting

7II  Invertebrate harvesting (8/15 to 9/23)

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

SEGMENT ST  ER-02  SUBDIVISION:  B  DATE 4/2/90

USCG
NAME LARRY FLETCHER  SIGNATURE Larry J. Fletcher

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED
COMMENTS
1. BIO - REMEDIATE OIL COAT.

ADEC
NAME DAVID M. SABLE  SIGNATURE David M. Self

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED
COMMENTS
1. Remove manually any tar balls, tar mats.
2. Need to remove tar oil from surface sediments, just below pebbly/robbly piles. Sheen noted on water and in water in pits shows mobility of emulsified oil entering estuaries. Top 2 cm of sandy soil.
3. Bio-remediate

LAND MANAGER
NAME Leigh Carlson  SIGNATURE Leigh Carlson ADNR

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED
COMMENTS
Uses include subsistence, deer and invertebrate harvesting.
Recommend treatment outlined by ADEC above.

1/28/98
### SHORELINE OILING SUMMARY

**OG E. Moody**  USCG  **LARRY FLETCHER**  SEGMENT ST/ IE- 02  
**Bio B. Landis**  LAND REP  Length Control  SUBDIVISION B  
**EXXON L. Czernich**  ADEC  Date Serve  

**Team No.**: 10  
**Tide Level**: +1.2 m (+3.35 ft) to +1.2 m (+3.95 ft)  
**Date**: 04/1/90  

**Est. Subdivision Length**: 107 m  
**Surf Level**: Sun  
**Clouds**: Fog  
**Fog**: Rain  
**Snow**:  

**Uplands Description**:  
- Grass  
- Forest  
- Rock  

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

**Working Direction**: SW to NE  

**Surface Sediments**:  
- R 10%  
- B 80%  
- V 10%  
- P 2%  
- G 0%  
- M 0%  
- V 0%  

**Slope**:  
- Low  
- Med  
- High  

**OIL CATEGORY LENGTH**:
- W 0 m  
- M 104 m  
- N 104 m  
- V 104 m  

### SURFACE OIL

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

**Pavement**: H F S sq. m by cm  
**Patties/Tarballs**: 1 Bags  
**No Near Shoreballs**:  

### 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>6</td>
<td>X</td>
<td>0 - 2</td>
<td>X</td>
<td>X</td>
<td>N</td>
<td>S, G, C, M</td>
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<tr>
<td>2</td>
<td>8</td>
<td>X</td>
<td>0 - 2</td>
<td>X</td>
<td>X</td>
<td>N</td>
<td>S, G, C, M</td>
</tr>
</tbody>
</table>

**Comments**  
Surface oil is fairly low, but increases immediately beneath, and on the bottom of the surface veneer.  

**Revision**: RM 4/6/90  

**Reviewed**: Dil  
**Date**: 4/10/90  

Page 1 of  

**Reviewed**: Dil  
**Date**: 4/10/90
Shoreline Ecological Summary

Segment ST/10/ER 2 Subdivision B Date (mo/day/yr) 4/6/90
1600 - 1700 Time (24 hr) Biologist Lemon Clear

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

(B) Overall % cover of biota (% of segment): Dense 45% Moderate 5% Low

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

<table>
<thead>
<tr>
<th>Substrate Type</th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
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<tbody>
<tr>
<td>Barnacles</td>
<td></td>
<td></td>
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<td>U</td>
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<tr>
<td></td>
<td>6</td>
<td>6</td>
<td>6</td>
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<tr>
<td>Mytilus</td>
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<td>U</td>
<td>M</td>
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<tr>
<td></td>
<td>6</td>
<td>6</td>
<td>6</td>
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<tr>
<td>Gastropods</td>
<td></td>
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<td>U</td>
<td>M</td>
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</tr>
<tr>
<td>Fucus</td>
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<td>6</td>
<td>6</td>
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</tr>
</tbody>
</table>

Wildlife Observations/General Comments: Low zone only had mixed red algae and some green for approx 80% coverage not indicated above.

Ecological Considerations: Investigate harvest area, deer harvest, hatching release.
ER-02

Map Key: PWS-156
Name: R. Marry
Date: 3 April 1992
Date Entered:

Wide
Medium
Narrow
Very Light
No Oil

ER-2

ADEC Segment Length: 756m
ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1F  Sawmill Bay Hatchery Release  No constraint to manual pickup; closed to bioremediation prior to 6/1.
1K  Purse Seine Hook-off  No constraint to manual pickup; closed to bioremediation after 7/25.
7II  Subsistence: Deer Harvesting  No constraint to manual pickup; closed to bioremediation after 8/15.
7JJ  Subsistence: Invertebrate Harvesting  No constraint to manual pickup. No constraint to bioremediation.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 7/25. Restrict beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unclipped biota and substrate.

Prepared by: ____________________________  Date: 6/9/90

FOSC ____________________________  DATE 6-16-90
ECOLOGY MAP
SEGMENT ER-2

SUBDIVISION B (2 of 2)

METERS

0 375 749

1 inch = 1229 feet

Exxon Company, USA
Map Key: PMS-ER-2
May 11, 1990

EXON

EXON

Seabird Colony
Eagle Nest

USFWS G1/20 Map indicates no eagle nests

TREATMENT AREAS

ER-02

ER-03
SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1F Sawmill Bay Hatchery release (4/15 to 6/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7JJ Subsistence area: Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to 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 a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE:

OILING CATEGORIZATION:
Wide 0 m; Medium 0 m; Narrow 95 m; V.Light 0 m; No Oil 0 m
Subsurface Oil Observed: Yes No Maximum Depth_____

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

COMMENTS: Recommend the manual removal of sporadic tar balls and bioremediate the pocket beach as shown on sketch map. Work should be conducted after 6/1.
See Constraint Addendum dated 6/9/90.

TAG COMMENTS: Monitor to check presence of tar balls as indicated on sketch map prior to treatment.

TAG APPROVAL DATE: 4/23/90
ADEC Art Werner DATE: 4/23/90
EXXON Andrew ten DATE: 4/23/90
NOAA Joseph Talanton DATE: 4/23/90
USCG Kenneth Kimes DATE: 4/23/90
SEGMENT ST/ER-02 SUBDIVISION A (1 OF 2) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1F Sawmill Bay Hatchery release (4/15 to 6/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7JJ Subsistence area: Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

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

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

SHPO SIGNATURE: [Signature] DATE: 4/23/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 73 m: V.Light 336 m: No Oil 252 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: 4/23/90
ADEC [Signature] DATE: 4-27-90
EXXON [Signature] FOSC [Signature]
NOAA [Signature] USCG [Signature]

[Signature] DATE: 4-27-90
SEGMENT ST/ER-02 SUBDIVISION B (2 OF 2) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1F Sawmill Bay Hatchery release (4/15 to 6/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7JJ Subsistence area: Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

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

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: D. Milliken DATE: 4/23/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 95 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes__ No X__ Maximum Depth____

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

COMMENTS: Recommend the manual removal of sporadic tar balls and bioremediate the pocket beach as shown on sketch map. Work should be conducted after 6/1.

TAG COMMENTS: MONITOR TO CHECK PRESENCE OF TARBALLS AS INDICATED ON SKETCH MAP PRIOR TO TREATMENT.

TAG APPROVAL DATE: 4/23/90
ADEC Art Wenzel DATE: 4-27-90
EXXON	DATE: 4-27-90
NOAA	DATE: 4-27-90
USCG	DATE: 4-27-90
1991 MAYSAP EVALUATION

SEGMENT: ER 002 SUB: B REGION: FWS SURVEY DATE: 5/16/91

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

Ecological/Constraints (see page two for details) Fry release, Fish harvest area, Subsistence - Deer harvesting, Subsistence - Invertebrate harvesting

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

SHPO Signature: [Signature] Date: 6/04/91

RECOMMENDATIONS:
TREATMENT REQUIRED (Y or N) N Y

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

COMMENTS:
INITIAL: Survey includes approximately 65 m of ER-1A (Location E).

TAG:

FOSC:

_TAG APPROVAL DATE: JUNE 4, 1991 FOSC APPROVAL DATE: 6/10/91

ADEC John Bauer
EXXON
USCG
NOAA

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


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.

Subsistence, Invertebrate Harvesting: Unlimited treatment except avoid disturbance of clam/mussel beds unless specifically directed by TAG Work Order.
MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5  SEGMENT ER-2  SUBDIVISION B  DATE 5/16/91

ADEC
NAME: John Heyer  SIGNATURE: 

☐ NTR: TREATMENT RECOMMENDED

 Recommended manual pick up of AP boat that continues from ER-003-A.

EXXON
NAME: Jean Dean  SIGNATURE: 

☑ NTR: No oil observed in recoverable quantity or state.

 see Comments ER-2-A

LANDMANAGER
NAME: Steve Ward  OF: CUC-FS  SIGNATURE: 

☐ NTR: This area has asphalt that needs picked up. It is right near to ER-2-1A. Where a manual oar is needed. The same oiling on this sub just extends over to ER-2-A. So one crew could do both. Chenega Local Res. No Bio.

USCG/NOAA
NAME: Breher/Cline  SIGNATURE: 

☐ NTR: Observed no recoverable oil.

 Area 10 (30% SOA) should be cleaned - the rest of the oiling is very light. WEC
**MAYSAP SHORELINE OILING SUMMARY**

**TEAM NO.** 5

**OG** CHANEY  
**BIO** CRANK  
**DEC** HAYES  
**EXXON** MARTINEZ

**LANDMANAGER** WARD for CVC  
**USCG/NOAA** DREHER/HODGES

**DATE** MAY 16, 1991

**SEGMENT** ER 2  
**SUBDIVISION** B

**TIME** 12:55 to 13:20  
**TIDE LEVEL** 4.5 ft. to 6.0 ft.  
**ENERGY LEVEL** ☐ H ☐ M ☐ L

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

**TOTAL LENGTH SHORELINE SURVEYED:** 160 m  
**NEAR SHORE SHEEN:** ☐ BR ☐ RB ☐ SL ☑ none

**EST. OIL CATEGORY LENGTH:** W - m  M - m  N - m  V - 80 m  NO - 15 m  US - 0 m

<table>
<thead>
<tr>
<th>LOCATION</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>A</td>
<td>T T T</td>
<td>BC M</td>
<td>2</td>
<td>60</td>
<td></td>
<td>V</td>
<td>Patches Between Sm Bldgs</td>
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<tr>
<td>B</td>
<td>T T</td>
<td>RR H</td>
<td>2</td>
<td>20</td>
<td></td>
<td>V</td>
<td>Drip marks on rocks</td>
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<tr>
<td>C</td>
<td>T T</td>
<td>RR VH</td>
<td>1</td>
<td>10</td>
<td></td>
<td>V</td>
<td>Well defined bathtubs?</td>
</tr>
<tr>
<td>D</td>
<td>T P</td>
<td>R V</td>
<td>1</td>
<td>20</td>
<td></td>
<td>V</td>
<td>Random Splatters</td>
</tr>
<tr>
<td>E</td>
<td>P</td>
<td>BC H</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td>Patch of SOR/M</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 - 17 FRAMES 23-24

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED ZONE CLEAN H2O BELOW LEVEL</th>
<th>SHEEN COLOR</th>
<th>PIT ZONE</th>
<th>SURFACE-SUBSURFACE SEDIMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

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

**OG COMMENTS:** NO PITS DUE TO ANGULAR PACKED BOULDERS.

**DUE TO THE SHORT LENGTH OF THE SUBDIVISION & THE CRUDE NATURE OF DUAL SHORELINE MAP AT THIS SCALE, OUR TEAM SURVEYED APPROXIMATELY 160 m TO INSURE PROPER COVERAGE. IT IS PROBABLE THAT 65 m OF THIS WAS IN ERODIA.**

**Reviewed:** 5-20-91 MC
MAYSAP 1
OG SKETCH IP: Bro May
GREG CHANEY: Crust.
TEAM S
EGMENT: ER 3B
DATE: MAY 16 1991
IR P. #: PMC. 005-116

LEGEND
DROCK
BULDER
NE BED.
RIFT LOG
RAB
RUSH
REST
LED PIT
OIL PIT
HOH

EL RINGTON
PASSAGE
ER-2B
ER-2A

A M. B.
SOR <1% IN FORM
OF DISTINCT PATCHES
BETWEEN SMALL ANGULAR
BOULdERS. ALSO AP, CT, CV
<1%

2X60m

S

2X20m

CT <1%

SOR 30% SMALL
ANGULAR BOULDERS
AND COBBLES

1AP PATTIE PU

1X3m

1X10m

CT <1%

SOR TRACE
BAND ON BEDROCK

D 1X20m

CT <1%

REMNANT GENER
BEDROCK FACE

C

2X20m

CT <1%

DIP MARKS ON
BOULdERS AND BEDROCK

B

4也因此

GREG CHANEY

T M

= n

ER-1-A
ER-2-B

PERSON

STREAM

AVE. BEACH
WIDTH 20m
Maysap Biological Summary Form

Team #5
Segment # ER-2
Subdivision B
Sea state 0
Photographs: Roll #

Date 16 May 1991
Tidal height (range) 5'6
Biologist Crank
Wind speed/direction No wind

Comments/Observations (to be completed in oiled subdivisions only):
Sites A, B, C are located in the MITZ on a single beach separation from ER-2A by a stream. Within the sites, biota cover is ~10%
There are smelt, salmon, herring, and smelt fry present. Herring fry are in tussing and tussing mode. There are also
many Fucus species and dense aggregations of littorina and limpets present. Below the sites 1m to the water in the MITZ, biota cover ranges from 80% near the stream to 50% below site C. Fucus is
dense near the stream tapering to sparse ~15m from stream bank. In
most of the MITZ, barnacles are the dominant species. Adult, juvenile and
spat age classes are present. Gastropods are thriving and are reproductively
active. Littorina are found in dense aggregations with eggs visible.
Several age classes of limpets are present in dense concentrations and
spatially variable. Nucella are present. Arrowworms are abundant.
Mussels are sparsely distributed and spatially variable. Limpets are
abundant in the cracks and crevices of rocks. LIPZ was not exposed during survey.

Wildlife Observations
To be completed in all subdivisions

Birds

<table>
<thead>
<tr>
<th>Bird</th>
<th># of Species</th>
<th>Total Birds</th>
<th>Fish Observed Species Present</th>
</tr>
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<tbody>
<tr>
<td>Eagles</td>
<td></td>
<td></td>
<td>Pink Gy</td>
</tr>
<tr>
<td>Seabirds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waterfowl</td>
<td></td>
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</tr>
<tr>
<td>Gulls/Kittiwakes</td>
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<td>2</td>
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</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>
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</tr>
</tbody>
</table>

Fish Observed Species Present
Pink Gy

Marine Mammals

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

Land Mammals

Shoreline subdivision map showing important biological features attached.
1991 MAYSAP EVALUATION

SEGMENT: BR 002  SUB:  A  REGION: PWS  SURVEY DATE: 5/16/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) OPEN

Ecological/Constraints (see page two for details) Fish harvest area

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

SHPO Signature: __________________________  Date: __________________________

RECOMMENDATIONS: INITIAL  TAG  FOSC

TREATMENT REQUIRED (Y or N)  N  ______  ______  ______

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

COMMENTS:
INITIAL: ____________________________________________________________

________________________
TAG: ______________________________________________________________

________________________
FOSC: _____________________________________________________________

________________________
TAG APPROVAL DATE: ________  FOSC APPROVAL DATE: ________

ADEC __________________________  FOSC __________________________

EXXON __________________________

USCG __________________________

NOAA __________________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.
NATCAP NEED SHORELINE COMMENT SHEET
TEAM NO. 5  SEGMENT ER-2  SUBDIVISION A  DATE 5/16/91

ADEC
NAME John Haynes  SIGNATURE

☐ NTR ☑ TREATMENT RECOMMENDED

Recommends small manual crew pick up AP observed in section E
and continue into ER-002B recommends both sites be worked together.

EXXON
NAME John Dean  SIGNATURE

☑ NTR Tracks of Cost & Stain can be found behind & between
boulders and in Bedrock cracks, any work would yield
insignificant oil with likely harm to abundant & healthy
flora.

LANDMANAGER
NAME Steve Ward  OF CWC/FS  SIGNATURE

☐ NTR Section E or this Sub-Div. can use some manual
pick-up by chenega or vacuum; there is a thin band
of asphalt that doesn't need to be left there. Quick work
and this Sub. will be OK again. Also Sub-Surface oil
in RT#5 is in this section. So again it needs work.

USCG/NOAA
NAME Dreher/Cline  SIGNATURE CWO K. Lindsten

☑ NTR Observed hard, very weathered, stable asphaltic band. Further removal attempts would
be more harmful to the environment than the oil residue to be removed.

Very little oil in this subdivision - the only feasible treatment that
would be helpful is in area #3. However note the photo on this area,
(hermit crab). Care should be used if this oil is treated. Datc
<table>
<thead>
<tr>
<th>LOC</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT TYPE</th>
<th>SHORE SLOPE VERTICAL</th>
<th>AREA WIDTH</th>
<th>LENGTH</th>
<th>ZONE</th>
<th>NOTES</th>
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<td>T T</td>
<td>B C H</td>
<td>1 15</td>
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<td>BEHIND BOULDER</td>
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<tr>
<td>C</td>
<td>T T</td>
<td>B R L</td>
<td>3 70</td>
<td></td>
<td></td>
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<td>IN BEDROCK CRACKS</td>
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<tr>
<td>D</td>
<td>T T</td>
<td>B M L</td>
<td>1 30</td>
<td></td>
<td></td>
<td></td>
<td>PATCHES BETWEEN BOULDER</td>
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</table>

**DISTRIBUTION:** C = 91-100%; 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:** 5-17 FRAMES 18-25

<table>
<thead>
<tr>
<th>PIT NO</th>
<th>OILED SUBSURFACE OIL CHARACTER</th>
<th>OILED OIL ZONE</th>
<th>CLEAN H2O BELOW</th>
<th>SHEEN COLOR</th>
<th>PIT ZONE</th>
<th>SURFACE-OILED SEDIMENTS</th>
<th>NOTES</th>
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<td>B-RCSM Starts Upper Rgs</td>
</tr>
</tbody>
</table>

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

**OG COMMENTS:** Narrow defined band patches sor to AP. Angular matrix of pebbles and granual. Photo #21 of one patch, photo #22 of another patch which is also Pit #5. Hor is very limited in extent. It is confined to small patches in a band under boulders.

**REVIEWED:** AC Spring 98 (Revised 5/9)
LEGEND

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>DESCRIPTION</th>
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<tr>
<td>☐</td>
<td>FINE BED.</td>
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<tr>
<td>☑</td>
<td>BEDROCK</td>
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<td>☐</td>
<td>BOULDERS</td>
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<tr>
<td>☑</td>
<td>DRIFT LOG</td>
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<td>☐</td>
<td>GRASS</td>
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<td>☑</td>
<td>BRUSH</td>
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<td>☐</td>
<td>FOREST</td>
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<td>DILED PIT</td>
</tr>
<tr>
<td>☑</td>
<td>NO OIL PIT</td>
</tr>
<tr>
<td>☐</td>
<td>PHOTO</td>
</tr>
</tbody>
</table>

SCALE

1 metre = 200
# MAYSAP BIOLOGICAL SUMMARY FORM

<table>
<thead>
<tr>
<th>TEAM</th>
<th>DATE</th>
<th>SEGMENT</th>
<th>TIDAL HEIGHT (Range)</th>
<th>BIOLGIST</th>
<th>SUBDIVISION</th>
<th>SEA STATE</th>
<th>WIND SPEED/DIRECTION</th>
<th>PHOTOGRAPHS: ROLL</th>
<th>FRAME</th>
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<tr>
<td>5</td>
<td>16 May 1991</td>
<td>ER-2</td>
<td>+1 to +5</td>
<td>Crank</td>
<td>A</td>
<td>0</td>
<td>no wind</td>
<td></td>
<td></td>
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**COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):**

(A) *Site is in the MIZ. Several species of gulls and terns are feeding.*
- Large flocks of terns and gulls are present. The site has increased in size, and the MIZ has increased in size.

(B) *Site is in the MIZ. Fish are present.*
- The site has increased in size, and the MIZ has increased in size.

(C) *Site is in the MIZ. Fish are present.*
- The site has increased in size, and the MIZ has increased in size.

**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>
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<tbody>
<tr>
<td>Eagles</td>
<td>1</td>
<td>2</td>
<td>Pinnipeds</td>
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<tr>
<td>Seabirds</td>
<td>1</td>
<td>2</td>
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</tr>
<tr>
<td>Waterfowl</td>
<td>2</td>
<td></td>
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</tr>
<tr>
<td>Gulls/Kittiwakes</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shorebirds</td>
<td>1</td>
<td></td>
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</tr>
<tr>
<td>Corvids</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Birds</td>
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**MARINE MAMMALS**

<table>
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<tr>
<th>MARINE MAMMALS</th>
<th># OBSERVED</th>
<th>SPECIES</th>
<th># OBSERVED</th>
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<tr>
<td>Sea Otters</td>
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</tr>
<tr>
<td>Pinnipeds</td>
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<td></td>
<td></td>
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<tr>
<td>Les</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Shoreline subdivision map showing important biological features attached.

**REMARKS:**

*MC/5-64*

*Cdrd 5/15/71*
Comments (cont.)

(D) Area is located in the U172, biota is similar to area C.

(E) This area is located in the U172. Black liocene encrusts approximately 40% of the surface sediments; sparse limpets and Littorina cover <10% of the sediment surface. Two meters below the site, approximately at the 76 ft. tide level, there is a 1m. band of moderately concentrated Fucus with maturing Conceptacles. Comb jels have a sparse to moderate

in coverage. There are dense Littorina with egg masses and some limpets. A sparse concentration of juvenile dog whelks (Nucella) is also present. Mussels are moderate to sparse. Hermit crabs are present near the water's edge.

This subdivision has a strong recruitment in the gastropod populations. Recruitment is also present in the barnacle, mussel and algal populations. Biota does not appear to be adversely affected by present oiling conditions.
1991 MAYSAP EVALUATION

SEGMENT: ER 002  SUB: B  REGION: PWS  SURVEY DATE: 5/16/91

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

Ecological/Constraints (see page two for details) Fry release, Fish harvest area, Subsistence - Deer harvesting, Subsistence - Invertebrate harvesting

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

SHPO Signature: _________________________ Date: __________________

RECOMMENDATIONS:

TREATMENT REQUIRED (Y or N)    INITIAL    TAG    FOSC
N                                    ____________  ____________  ____________

Manual Pickup (Check as Req.)    ____________  ____________  ____________
Spot Washing                      ____________  ____________  ____________
Bio-Customblend Only             ____________  ____________  ____________
Bio-Inipol/Customblend           ____________  ____________  ____________
Other______________________________  ____________  ____________  ____________
Other______________________________  ____________  ____________  ____________

COMMENTS:
INITIAL: Survey includes approximately 65 m of ER-1A (Location E).

_TAG: ____________________________________________________________

_FOSC: __________________________________________________________

_TAG APPROVAL DATE: ____________  FOSC APPROVAL DATE: ____________

ADEC____________________________  FOSC____________________________

EXXON__________________________

USCG___________________________

NOAA___________________________

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.

Subsistence, Invertebrate Harvesting: Unlimited treatment except avoid disturbance of clam/mussel beds unless specifically directed by TAG Work Order.
# MAYSAP FIELD SHORELINE COMMENT SHEET

**Team No.** 5  **Segment** ER-2  **Subdivision** B  **Date** 5/16/91

## ADEC

**Name:** John Hayes  
**Signature:** [Signature]

- **NTR:** [ ] Treatment recommended

  Recommend manual pickup of AP boil that continues from ER-002A.

## EXXON

**Name:** John Dear  
**Signature:** [Signature]

- **NTR:** [ ] No oil observed in recoverable quantity or state.  
  See comments ER-2-A

## Landmanager

**Name:** Steve Ward  
**Signature:** [Signature]

- **NTR:** [ ] This area has asphalt that needs picked up. It is right next to ER-2-A where a manual crew is needed. The same oiling on this sub just extends over to ER-2-A. So one crew could do both. Cheonega Local Res = NO BIO.

## USCG/NOAA

**Name:** Dreher / Cline  
**Signature:** [Signature]

- **NTR:** [ ] Observed no recoverable oil.

  Area E (30% SRH) should be cleaned - the rest of the oiling is very big in WEC.
MAYSAP SHORELINE OILING SUMMARY

SEGMENT ER 2
SUBDIVISION B
DATE MAY 16, 1991

TIME 13:35 to 13:20
TIDE LEVEL 4.5 ft. to 6.0 ft.
ENERGY LEVEL: H M L

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

TOTAL LENGTH SHORELINE SURVEYED: 160 m
NEAR SHORE SHEEN: BR RB SL NONE
EST. OIL CATEGORY LENGTH: W m M m N m VL 80 m NO 15 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>
</tr>
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<tr>
<td>A</td>
<td>BC M 2 60</td>
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</tr>
<tr>
<td>B</td>
<td>RB H 2 20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>RB VH 1 10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>R V 1 20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>BC H 1 3</td>
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</tbody>
</table>

DISTRIBUTION: C = 91-100%; B = 81-90%; P = 51-80%; S = 1-10%; T = <1%
SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE

OG COMMENTS: NO PITS DUE TO ANGULAR PACKED BOULDERS.

DUE TO THE SHORT LENGTH OF THE SUBDIVISION & THE CRUDE NATURE OF DUAL SHORELINE MAP AT THIS SCALE, OUR TEAM SURVEYED APPROXIMATELY 160 m TO INSURE PROPER COVERAGE. IT IS PROBABLE THAT 65 m OF THIS WAS IN EROD1A.
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #5
SEGMENT # ER-2
SUBDIVISION B
SEA STATE 0
PHOTGRAPHS: ROLL #

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):
Sites A, B & C are located in the MITZ on a single tidal elevation.

Subdivision A: The site is a sandy beach with sparse grass and few plants.
Subdivision B: The area is a mix of grass and sand dunes with occasional trees.
Subdivision C: The site is a rocky shore with boulders and seaweed.

WIND SPEED/DIRECTION: No wind

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS

<table>
<thead>
<tr>
<th>Eagles</th>
<th># of Species</th>
<th>Total Birds</th>
<th>Fish Observed Species Present</th>
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<tbody>
<tr>
<td></td>
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<td>Pink Fry</td>
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<td>Seabirds</td>
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<td>Waterfowl</td>
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<tr>
<td>Gulls/Kittiwakes</td>
<td>1</td>
<td>2</td>
<td></td>
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<tr>
<td>Shorebirds</td>
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<tr>
<td>Corvids</td>
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<td>Other Birds</td>
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MARINE MAMMALS

<table>
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<tr>
<th>Marine Mammals</th>
<th># Observed</th>
<th>Species</th>
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<tbody>
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<td>Sea Otters</td>
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<tr>
<td>Whales</td>
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LAND MAMMALS

Shoreline subdivision map showing important biological features attached.
1991 MAYSAE EVALUATION

SEGMENT: ER 002  SUB: A  REGION: PWS  SURVEY DATE: 5/16/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s)  OPEN

Ecological/Constraints (see page two for details)  Fish harvest

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

SHPO Signature: Charles E. Holmes  Date: 5/30/91

RECOMMENDATIONS:

TREATMENT REQUIRED (Y or N)  N  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 29, 1991

FOSC APPROVAL DATE: 6/15/91

ADEC

EXXON

USCG

NOAA

The state will evaluate the need for further treatment.
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.
Recommends small manual crew pick up AP observed in section E and
bond container into ER-002 B. Recommend both sites be worked together.

Recs of Coa + Stain can be found behind & between
buildings and in Boardrock cracks. Any work would yield
insignificant oil with likely harm to abundant & healthy
flora.

Section E of this subdiv. can use some manual
pick-up by cheney or Doco, there is a thin band
of asphalt that doesn’t need to be left there. Quick work
and this subdiv. will be ok again. Also sub-surface oil
in W # 8 is in this section. So again it needs work.

Observed hard, very weathered, stable asph ratic band. Further removal attempts would
be more harmful to the environment than the oil residue to be removed.

Very small oil in this subdiv. The only further treatment that
might be helpful is in oiling site C1 to burn or to the bio-mop by this area (chemical coag). Care should be taken if this site is treated. Date
MAYSAP SHORELINE OILING SUMMARY

TEAM NO. CHANEY
BIO CRANK
ADEC HAYES
WARD for CUC
DOXON DEAN
USCG/NOAA DREHER/CLINE

SEGMENT ER-2
SUBDIVISION A
DATE MAY 16, 1991

TIME 11:45 to 12:50
TIDE LEVEL 1 ft. to 5 ft.
ENERGY LEVEL: □ H □ M □ L
WEATHER: □ SUN □ CLOUDS □ FOG □ RAIN □ SNOW
TOTAL LENGTH SHORELINE SURVEYED: 662 m
NEAR SHORE SHEEN: □ BR □ RB □ SL □ NONE
EST. OIL CATEGORY LENGTH: W _ m; M _ m; N _ m; V _ 131 m; NO _ 531 m; US _ 0 m

<table>
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<tr>
<th>LOC</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT TYPE</th>
<th>SLOPE</th>
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<th>LENGTH</th>
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<td>B</td>
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<td>IN BEDROCK CRACKS</td>
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<td>PATCHES BETWEEN BLODS</td>
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<td>B</td>
<td>M</td>
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DISTRIBUTION: C = 91 - 100%; B = 51 - 80%; P = 11 - 50%; S = 1 - 10%; T = <1%
SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>OIL CHARACTER</th>
<th>OILED ZONE</th>
<th>CLEAN H2O LEVEL</th>
<th>SHEEN COLOR</th>
<th>PIT ZONE</th>
<th>SURFACE-SEDIMENT NOTES</th>
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<td>cm-cm</td>
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<td>✓</td>
<td>cm-cm</td>
<td>□</td>
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</tr>
</tbody>
</table>

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

OG COMMENTS: © NARROW DEFINED BAND PATCHES SOR TO AP. ANGULAR MATRIX OF PEBBLES AND GRANULAR. PHOTO #21 OF ONE PATCH, PHOTO #22 OF ANOTHER PATCH WHICH IS ALSO PIT #5. HOR IS VERY LIMITED IN EXTENT. IT IS CONFINED TO SMALL PATCHES IN A BAND UNDER BOULDERS.
**Map 1991**
OG Sketch Map
Greg Chaney/Don Cline
Team 5
Segment: EP2-A
Date: May 16, 1991
Air P. #: PIM-C 005-116

**Legend**
- **Bedrock**
- **Booulders**
- **Fine Bed.**
- **Drift Log**
- **Grass**
- **Brush**
- **Forest**
- **Oiled Pit**
- **No Oil Pit**
- **Photo**

**Scale**

---

**Map Details**

- **ERINGTON PASSAGE**
  - 1 x 30 m
  - AP, SNR, ST > 1%
  - CT 5% narrow but distinct band along high tide line

- **EP2-A**
  - 3 x 70 m
  - CT & ST < 1%
  - In bedrock cracks

- **EP3-A**
  - 1 x 1 m
  - CT & ST < 1%
  - Behind boulder

- **3 x 15 m Splatters Between Boulders CV & CT < 1%**

- **Trees**

- **55 Gal Drums**

- **Small Streams**

- **Rock Face**

- ** Fallen Tree**

- **ER 2**

- **ER 3 - A**

- **Small Streams**

- **Elrington Island**

---

**Reviewed**: May 5/94

55 Gallon 5/19
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 5

SEGMENT # ER-2

SUBDIVISION: A

SEA STATE: 0

PHOTOGRAPHS: ROLL

DATE: 16 MAY 1991

TIDAL HEIGHT (Range): +1 to +5

BIOLIGIST: ['name']

WIND SPEED/DIRECTION: No wind

FRAME:

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

(A) Area is very silted in the MITZ where the steep angular boulder beach border

Within the site, there are sparsely concentrated Lithoreia and limpets, rare

Barnacles (adults and juveniles) and black lichen covering <1% of the surface.

Below the site in the MITZ, fucus, mussels and barnacles are sparsely concentrated.

Lithoreia and limpets are dense, and Endocladia (algae) is rare. Bioterror estimated at 5%. In the MITZ, bioterror cover is 5-10%. Fucus is dominant, Bladder and Fan corals, reds and greens are present as well as Odonthalia and sparse Fucus.

(B) Site is in the MITZ. Bioterror is low. Juveniles of present within

Site much increased to sparse and in the MITZ has increased to moderate.

Bioterror cover is 5-10%

(C) Site is low. Juveniles on steep graded boulders and brecce. Area is shaded

and protected. Barnacles and kelp are found on the underside of robbie kelp. The spot algae are

Endocladia are present. Fucus is sparse and Lithoreia and limpets are rare.

Bioterror cover is 5-10%. Directly below the site, Odonthalia (an alga) is dense.

Fucus is sparse to moderate and Halsosaccion (an alga) is present. Limpets are

Lithoreia are close and barnacles are sparse. Bioterror cover is 5-10%.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED</th>
<th>SPECIES PRESENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eagles</td>
<td>1</td>
<td>2</td>
<td>Pricklybacks</td>
<td></td>
</tr>
<tr>
<td>Seabirds</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waterfowl</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gulls/Kittiwakes</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shorebirds</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corvids</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Birds</td>
<td></td>
<td></td>
<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></td>
<td></td>
</tr>
<tr>
<td>Pinnipeds (Specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>.....les (Specify)</td>
<td></td>
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</table>

LAND MAMMALS

<table>
<thead>
<tr>
<th></th>
<th># OBSERVED</th>
<th>SPECIES</th>
<th># OBSERVED</th>
</tr>
</thead>
</table>

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

(D) Area is located in the U1TZ, Biota is similar to area C.
(E) Area is located in the U1TZ. Black lichen encrusts approximately 40% of the surface sediments; sparse limpets and littorina cover <10% of the sediment surface. Two meters below the site, approximately at the +1' tide level, there is a 1m band of moderately concentrated Fucus with maturing conceptacles. Barnacles have a sparse to moderate concentration. There are dense littorina with egg masses and sparse limpets. A sparse concentration of juvenile dog whelks (Nucella) is also present. Mussels are moderate to sparse. Hermit crabs are present near the waters edge.

This subdivision has a strong recruitment in the gastropod populations. Recruitment is also present in the barnacle, mussel and algae populations. Biota does not appear to be adversely affected by present oiling conditions.
MA' 1991
OG SKETCH MAP/Bio Map
GREG CHANEY/DON CLINE/Crunk
TEAM 5
SEGMENT: ER2-A
DATE: MAY 16 1991
AIR P.N.: EIM-C OSIS-II6

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

SCALE
0 200 METRES
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ER-03

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION

SEGMENT ST/ ER-03 SUBDIVISION A (1 OF 1) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1F Sawmill Bay Hatchery release (4/15 to 6/1)
7JJ Subsistence area: Invertebrate harvesting
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 unoi1ed 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 48 m: No Oil 2934 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 _________________________
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 bioaugmentation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

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

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

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

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

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

1H Remote release site

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

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

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

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

2M Herring spawning (4/1 to 5/15)
Restrict boat traffic to essential minimum. Avoid damage to unoolied intertidal and subtidal algae and seagrass.
Contact ADF&G for specific dates and locations.

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

3O, 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.

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 600m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

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

7I Deer harvesting (9/15 to 2/28)

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

SEGMENT ST 12-3 SUBDIVISION: A DATE 06 April 90

USCG NAME LARRY FLETCHER SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

ADEC NAME DAVID M. SHE SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

LAND MANAGER NAME LEIGH CARLSON SIGNATURE LEIGH CARLSON ADVR

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

30/9/90
**SHORELINE OILING SUMMARY**

**OG:** R. **END**
**USCG:** LARRY FLETCHER
**SEGMENT STI:** ER-03
**BIO:** R. **END**
**LAND REP:** LINDA CUMMINS
**SUBDIVISION:** A

**EXXON:** J. Czapkiewicz
**ADEC:** DAVE SALS
**TEAM NO.:** 10
**TIDE LEVEL:** 12 m (39 ft) (3.5 ft) (4.5 ft)
**DATE:** 04/16/90

**EST. SUBDIVISION LENGTH:** 2072 m
**SURFACE OIL DISTRIBUTION:**
- Sun
- Clouds
- Fog
- Rain
- Snow

**SURVEYED FROM:**
- Grass
- Forest
- Rock

**WORKING DIRECTION:** SW to NE

**SURFACE SEDIMENTS:**
- R 50%
- B 20%
- C 10%
- P 10%
- G 5%
- S 5%
- M 5%
- V 5%

**SLOPE:**
- Long
- Hang
- Vert

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

**OIL CATEGORY LENGTH:**
- W
- M
- N
- VL
- YL
- NO
- 3024 m

### SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL/FILM COLOR</th>
<th>IMPACTED ZONES</th>
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</thead>
<tbody>
<tr>
<td>ASPHALT</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>PAVEMENT</td>
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<tr>
<td>POOLED</td>
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<td>COVER</td>
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<tr>
<td>TARBALLS</td>
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<tr>
<td>FILM</td>
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<td></td>
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<tr>
<td>NO OIL</td>
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<td><strong>X</strong></td>
<td><strong>X</strong></td>
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### PIT S

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<thead>
<tr>
<th>PIT NO.</th>
<th>DEPTH (cm)</th>
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<tbody>
<tr>
<td>1</td>
<td>16</td>
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<tr>
<td>2</td>
<td>13</td>
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</table>

### OILED INTERVAL (cm)

<table>
<thead>
<tr>
<th>OILED INTERVAL (cm/in)</th>
<th>OIL F / FILM CO</th>
<th>IMPACTED ZONES</th>
</tr>
</thead>
</table>

### OIL/ZONE

<table>
<thead>
<tr>
<th>OILED ZONE</th>
<th>AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>SM</td>
<td>MD</td>
</tr>
</tbody>
</table>

### DEBRIS COLLECTED

- Logs
- Vegetation
- Trash
- Debris

### DEBRIS TYPE

- Pump

### PAVEMENT:

- HFS

### OILED AMOUNT

- M B NL

### DEBRIS

- S S

### OIL

- M

### COMMENTS

Oiling in very lightly oiled portion of segment is quite minor.

**REVIEWED BY ALL DATE 4/10/90**
### SHORELINE ECOLOGICAL SUMMARY

**Segment ST/10/ER 3**  
**Date (mo/day/yr):** 4/6/90  
**Biol.**  

**Time (24hr):** 0750 - 5950  
**Date:** 4°C, w. 26 mph NE, cloudy  

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

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

(C) **Density, substrate preference (by number from A, above), & vertical zonation of major taxa:**  

#### BARNACLES
- **Density:**  
  - 1U: 2, 2, 2  
  - 1M: 2, 2, 2  
  - 1L: 2, 2, 2  
- **Moderate:**  
  - 1U: 3, 3, 3  
  - 1M: 3, 3, 3  
  - 1L: 3, 3, 3  
- **Sparse:**  
  - 1U: 4, 4, 4  
  - 1M: 4, 4, 4  
  - 1L: 4, 4, 4  
- **Rare:**  
  - 1U: 5, 5, 5  
  - 1M: 5, 5, 5  
  - 1L: 5, 5, 5  
- **NOT PRESENT:**  
  - 1U: 5, 5, 5  
  - 1M: 5, 5, 5  
  - 1L: 5, 5, 5  

#### MYTILUS
- **Density:**  
  - 1U: 2, 2, 2  
  - 1M: 2, 2, 2  
  - 1L: 2, 2, 2  
- **Moderate:**  
  - 1U: 3, 3, 3  
  - 1M: 3, 3, 3  
  - 1L: 3, 3, 3  
- **Sparse:**  
  - 1U: 4, 4, 4  
  - 1M: 4, 4, 4  
  - 1L: 4, 4, 4  
- **Rare:**  
  - 1U: 5, 5, 5  
  - 1M: 5, 5, 5  
  - 1L: 5, 5, 5  
- **NOT PRESENT:**  
  - 1U: 5, 5, 5  
  - 1M: 5, 5, 5  
  - 1L: 5, 5, 5  

#### GASTROPODS
- **Density:**  
  - 1U: 2, 2, 2  
  - 1M: 2, 2, 2  
  - 1L: 2, 2, 2  
- **Moderate:**  
  - 1U: 3, 3, 3  
  - 1M: 3, 3, 3  
  - 1L: 3, 3, 3  
- **Sparse:**  
  - 1U: 4, 4, 4  
  - 1M: 4, 4, 4  
  - 1L: 4, 4, 4  
- **Rare:**  
  - 1U: 5, 5, 5  
  - 1M: 5, 5, 5  
  - 1L: 5, 5, 5  
- **NOT PRESENT:**  
  - 1U: 5, 5, 5  
  - 1M: 5, 5, 5  
  - 1L: 5, 5, 5  

#### FOCUS
- **Density:**  
  - 1U: 2, 2, 2  
  - 1M: 2, 2, 2  
  - 1L: 2, 2, 2  
- **Moderate:**  
  - 1U: 3, 3, 3  
  - 1M: 3, 3, 3  
  - 1L: 3, 3, 3  
- **Sparse:**  
  - 1U: 4, 4, 4  
  - 1M: 4, 4, 4  
  - 1L: 4, 4, 4  
- **Rare:**  
  - 1U: 5, 5, 5  
  - 1M: 5, 5, 5  
  - 1L: 5, 5, 5  
- **NOT PRESENT:**  
  - 1U: 5, 5, 5  
  - 1M: 5, 5, 5  
  - 1L: 5, 5, 5  

**Wildlife Observations/General Comments:**  
- Intertidal exotics: *Pycnopodia helianthoides* (asteroidea)  
- *Gammarus* amphipods, *equisetum* (arnoldia)  
- All described in low zones but included 50% cover of mead zone.  
- Sighting included 5 deer, 2 eagle, 2 seagulls, 2 otters, and 12 gulls on head crowns.  

**Ecological Considerations:**  
- Three streams were checked; no fish or fish food or oil in pits was found.  
- Deer harassed area, input, harvest, hatchery release.
R-03

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

Map Key: PWS-167b
Name: Dick Marty
Date: 6 April 1990
Date Entered:
SHORELINE EVALUATION

SEGMENT ST/ER-03 SUBDIVISION A (1 OF 1) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1F Sawmill Bay Hatchery release (4/15 to 6/1)
7JJ Subsistence area: Invertebrate harvesting
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.

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

SHPO SIGNATURE: [Signature] DATE: 4/20/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 48 m: No Oil 2984 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: 4/13/90
ADEC JOHN BAUER [Signature] DATE: 4-25-90
EXXON [Signature] DATE: 4-25-90
NOAA Bu[signatures]
USCG [Signature]
SEGMENT ST/ ee-3
SUBDIVISION A (el)
DATE C / April 90

CHECKLIST
- Oil Type
- Approx. Scale
- Subsurface Entry
- Oil Dist.
- GH
- Length
- % Cover
- Subsector Character
- Est. FHLALML
- SSL
- Profile Location(s)
- Pll Location(s)
- Photo Location(s)

LEGEND
- 1 A
  - Downward extent
  - of oiling determined
- 2 A
  - Bottom of oiling occurs

1
- CT/C
  - Correlation Distribution
- CT/B
  - Broken Distribution
- CT/P
  - Patchy Distribution
- CT/S
  - Splashed Distribution

Oiled Vegetation
- Photo location, direction, and number

Granule pebble beach with
cottles and boulders - sediments
gray-orange - angular, but
fairly well sorted. Larger size
Granule pebble beach with
cottles and boulders - sediments
gray-orange - angular, but
fairly well sorted. Larger size
rock headlands with vertical
pillow basalt - green-gray
pocket beach: pebbles, cobbles, and agger
high angle rocks
rock headland and area "dissociate"

Oil Character Length (m): AP________PO________CV________CT________ST________MS________FT________TB________FL________NO________
ER-3:

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

Map Key: PWS-1674
Name: Rich Murray
Date: 6 April 1990
Date Entered:

No 19.1" 2005m 3924
Y Light 0.3" 45m 48
2910 3072
R-03

PWS 167A

Map Key: PWS-167b
Name: Rich Marty
Date: 6 April 1990
Data Entered:

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

ER-3

ADEC Segment Length: 3031m

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

100 200 300 METERS
1991 MAYSAP EVALUATION

SEGMENT: EV 003  SUB:  A  REGION: PWS  SURVEY DATE: 4/26/91

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: Charles E. Johnson  Date: 5/10/91

RECOMMENDATIONS:

TREATMENT REQUIRED (Y or N)  n  TAG  FOSC

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

COMMENTS:
INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: 5/10/91  FOSC APPROVAL DATE: 5/15/91

ADEC  EXXON  USCG  NOAA

E. E. PAGE, CDR, USCG
CHIEF OF STAFF, FOSC

The State will evaluate for the need for treatment at this subdivision.
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 EY-3  SUBDIVISION A  DATE 4/12/91

ADEC

NAME John Hayer  SIGNATURE

☐ NTR ☑ Team recomend

Portion of segment observed consisted of three pocket beaches, 2 pocket beaches to the north; new additional AP pickup in areas A, F, G identified on sketch map. Recommend sites for cleaning LAR or AP+TB's are easily recoverable & both sites have debris which may still have CSR debris, team does not have time for debris search.

EXXON

NAME Marcia Mileners  SIGNATURE

☐ NTR ☑ Beach coming back a lot. Would suggest a little pick up work for local response group. Outside of that, good. Think no other work is needed.

LANDMANAGER

NAME Steve Ward  OF C U C  SIGNATURE

☐ NTR ☑ Very little sub-surface remains. Amount of asphalt and debris makes this area as perfect local response project. See ADEC notes for location.

USCG/NOAA

NAME Hodges Doremer  SIGNATURE  cwo K. J. Webster

☑ NTR Observed no mobile oil nor sheening. Any additional cleaning would be detrimental to the local ecology.

Small 2 x 4cm tar ball and oiled sediment within a rock layer was the only oil observed. Considering the area of this segment, very little oil noted.
# MAYSAP SHORELINE OILING SUMMARY

**TEAM NO.**

- OG: CHANEY
- BIO: CRANK
- ADEC: WAYS
- EXXON: MARTINEZ

**LANDMANAGER:** WARD for CVC

**USCG/NOAA:** DREHER/HODGES

**DATE:** April 26, 1991

**TIME:** 16:15 to 17:50

- **TIDE LEVEL:** 5 ft. to 1 ft.
- **ENERGY LEVEL:** H

**SURVEYED FROM:**
- [ ] FOOT
- [ ] BOAT
- [ ] HELO

**WEATHER:**
- [ ] SUN
- [ ] CLOUDS
- [ ] FOG
- [ ] RAIN
- [ ] SNOW

**TOTAL LENGTH SHORELINE SURVEYED:** 240 m

**NEAR SHORE SHEEN:**
- [ ] BR
- [ ] BR
- [ ] SL
- [ ] NONE

**EST. OIL CATEGORY LENGTH:**
- [ ] W
- [ ] M
- [ ] N

---

### SURFACE OIL CHARACTER

<table>
<thead>
<tr>
<th>LOC</th>
<th>AP</th>
<th>MS</th>
<th>TB</th>
<th>ST</th>
<th>FL</th>
<th>DB</th>
<th>DB</th>
<th>SEDIMENT</th>
<th>SLOPE</th>
<th>WIDTH</th>
<th>AREA</th>
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<tbody>
<tr>
<td>A</td>
<td>T</td>
<td>S</td>
<td>B</td>
<td>L</td>
<td>1</td>
<td>1</td>
<td>M</td>
<td>Asphalt, patchy PU</td>
<td>R, M</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>B</td>
<td>T</td>
<td>B</td>
<td>1</td>
<td>0.3</td>
<td>5</td>
<td></td>
<td></td>
<td>in bedrock cracks</td>
<td>B, M</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>C</td>
<td>T</td>
<td>T</td>
<td>L</td>
<td>4</td>
<td>10</td>
<td></td>
<td></td>
<td>Bedrock face</td>
<td>R, M</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>D</td>
<td>T</td>
<td>T</td>
<td>R</td>
<td>4</td>
<td>10</td>
<td></td>
<td></td>
<td>in cracks on boulders</td>
<td>R, M</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>E</td>
<td>T</td>
<td>T</td>
<td>R</td>
<td>4</td>
<td>10</td>
<td></td>
<td></td>
<td>on boulder</td>
<td>R, M</td>
<td>1</td>
<td>15</td>
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<tr>
<td>F</td>
<td>T</td>
<td>T</td>
<td>R</td>
<td>4</td>
<td>10</td>
<td></td>
<td></td>
<td>on bedrock crevice distinct patches</td>
<td>R, M</td>
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<td>15</td>
</tr>
<tr>
<td>G</td>
<td>T</td>
<td>T</td>
<td>R</td>
<td>4</td>
<td>10</td>
<td></td>
<td></td>
<td>coat on bedrock face</td>
<td>R, M</td>
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<td>15</td>
</tr>
<tr>
<td>H</td>
<td>B</td>
<td>B</td>
<td>B</td>
<td>0.5</td>
<td>10</td>
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<td>large boulders</td>
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<tr>
<td>I</td>
<td>T</td>
<td>T</td>
<td>M</td>
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<td>10</td>
<td></td>
<td></td>
<td>distinct patches coat on bedrock face</td>
<td>R, M</td>
<td>1</td>
<td>15</td>
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<tr>
<td>J</td>
<td>T</td>
<td>T</td>
<td>B</td>
<td>0.5</td>
<td>1</td>
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<td></td>
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</tr>
<tr>
<td>K</td>
<td>T</td>
<td>T</td>
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<td>L</td>
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<td></td>
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<td></td>
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<tr>
<td>M</td>
<td>T</td>
<td>T</td>
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<td></td>
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</tr>
</tbody>
</table>

**SURFACE SEDIMENT:** Y, M

**SHORE ZONE:** E

**NOTES:**
- Asphalts, patchy PU
- In bedrock cracks
- Bedrock face
- In cracks on boulders
- On boulder
- On bedrock crevice distinct patches
- Coat on bedrock face
- Large boulders

**DISTRIBUTION:**
- C = 10-100%
- B = 10-50%
- P = 1-10%
- T = <1%

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

**PHOTO ROLL:** MAYSAP

**FRAMES:** 1-12

---

### SUBSURFACE

<table>
<thead>
<tr>
<th>PIT</th>
<th>OIL CHARACTER</th>
<th>OILED ZONE</th>
<th>CLEAN</th>
<th>H2O LEVEL</th>
<th>SHEEN COLOR</th>
<th>PIT ZONE</th>
<th>SURFACE-SUBSURFACE SEDIMENTS</th>
<th>NOTES</th>
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<td>0</td>
<td>S</td>
<td>P-PCG</td>
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<td>0</td>
<td>S</td>
<td>S-SPG</td>
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<td>PER-PCG</td>
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</tr>
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<td>4</td>
<td>15</td>
<td>0-10</td>
<td>0</td>
<td>S</td>
<td>P-PCG</td>
<td>1</td>
<td>PER-PCG</td>
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<td>5</td>
<td>20</td>
<td>0-10</td>
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<td>S</td>
<td>B-SPG</td>
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<td>PER-PCG</td>
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<tr>
<td>6</td>
<td>10</td>
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<td>0</td>
<td>S</td>
<td>B-SPG</td>
<td>1</td>
<td>PER-PCG</td>
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<td>7</td>
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<td>S</td>
<td>C-C</td>
<td>1</td>
<td>GB-GB</td>
<td></td>
</tr>
</tbody>
</table>

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

**OPM: HOR: MOR: LOR: OF: TR: NO**

**OPM: CM-CM**

**HOR: CM-CM**

**MOR: CM-CM**

**LOR: CM-CM**

**OF: CM-CM**

**TR: CM-CM**

**NO: CM-CM**

---

**OG COMMENTS:**

---

**REVISED:** Mc 5/7/91

**REVIEWED:** F.W. 5/7/91
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #5

DATE 26 Apr '91

SEGMENT # EV-3

TIDAL HEIGHT (Range) ~ +6 → +2

SUBDIVISION A

BIOLeST C. Rank

SEA STATE < 1'

WIND SPEED/DIRECTION 0 → 5 mph, direction unknown

PHOTOGRAPHS: ROLL # FRAME #

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

(A) Area located high in UI12; no intertidal organisms in immediate vicinity. Mussels are present on
rock face and boulder shoulder ranging in color from green to dark red. Some mussels picked-up
by wave worker with no ecological disturbance.

(B) Area located low in UI12 along a cliff face and boulder shoulder. There is a sparse to moderate adult
harbor seal population with a new set present. Patches of Furcail with maturing conceptacles;
a continuous 10cm wide band of mussels along cliff face with several age classes,
and a sparse littorina population with a new set. Biotic appears healthy.

(C) Area located low in UI12 among boulders. There is a dense Furcail population. Maturing
conceptacles are present. Area is also being heavily recrystallized by barnacles as well as being
recrystallized by mussels. A sparse to rare harpactis population is present.

(D) Area located in UI12. Sparse barnacles (adults and new set present). Mussel patch with
several age classes, Patch (60cm) of Sargassum and algae. Aspshait was picked by wave
worker with no ecological disturbance.

(E) Area is located on S rock outcrop and boulder shoulder. There is a moderate to dense Furcail bed
with maturing conceptacles. Patches of mussels are located at the boulder bases and
in the cobble next to the boulders, various age classes. There is a moderate barnacle
population with rare to sparse recruitment. There are patches of Rhodomea laria (benthic algae)
and rarely Sea urchins and Littorina. Ribbon wrasse are present under cobble.

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>
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</thead>
<tbody>
<tr>
<td>Eagles</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Seabirds</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Waterfowl</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Gulls/Kittiwakes</td>
<td>1</td>
<td>1</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>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MARINE MAMMALS</th>
<th># OBSERVED</th>
<th>SPECIES</th>
<th># OBSERVED</th>
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<tbody>
<tr>
<td>Sea Otters</td>
<td>1</td>
<td>(Deer)</td>
<td>(Sea lion)</td>
</tr>
<tr>
<td>Pinnipeds(specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whales(specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Shoreline subdivision map showing important biological features attached.
Areas A→E are located on a single pocket beach. Sparse biota coverage in the MITZ consisting mainly of barnacles, mussels, *Fucus* and filamentous greens and *Scytosiphon* on angular cobbles and boulders. Barnacles were not tightly sealing their inner plates when stimulated. Other biota appeared to be healthy.

(F) Area is located in the MITZ on the protected side of the N cliff. Dominant biota present is barnacles; *Littorina* are rare. Biota appears healthy.

(G) Area is located in the SUPRA. There are rare masses and lichens. No intertidal biota present.

(H) Area is located low in the MITZ on the protected S. cliff face. There is a moderate to dense *Fucus* band (1/2 → 1 m wide) directly below the oil. There is moderate *Fucus* sporings and sparse to rare mature plants/maturing. Barnacles are rare to sparse and rare mussels are found at the boulder bases and in cracks and crevices. *Littorina* and limpets are sparse with pockets of moderate concentrations.

(I) Site is located low in the MITZ on the exposed side of the S. cliff face. There is a moderate to dense barnacle population; sparse limpets and rare (with sparse pockets) mussels and *Fucus*. 
Area is located low in the UITZ. There is a sparse 1/2 m wide mussel band and a sparse 1 m wide barnacle band in the area. Only a few Fucus plants are present and they have maturing conceptacles. Littorina and limpets were also present.

Areas F to J are located on a single pocket beach. There is a continuous 1 m mussel band on the exposed side of N cliff face with various age classes. Majority of barnacle did tightly seal their inner plates when stimulated. Area Stream 226-40-16590 is located on this beach. Deer scat present adjacent to stream in the low SUPRA. Intertidal biota appears healthy.

Area is located in UITZ boulders. There is a tide pool 1 m west of site with 5 anemones, rare coralline algae, mussels. Within the site barnacles are rare. Mussels are also rare and the majority are juveniles. Filamentous green algae present in small patches (<10 cm). Below the site MITZ has moderate coverage of Fucus with maturing conceptacles present. Moderate barnacles with spat and moderate Littorina are found underneath Fucus plants. Mussels are present in the cobble near the boulder bases.

Area is located at the bottom edge of the SUPRA and upper edge of the UITZ. Intertidal biota is not present.
Area is a rock outcrop low in the ULZ. There are sparse barnacles and a 1x2 m patch of *Fucus* at the base of the rock. Sparse *Littorina* and limpets are present and rare mussels are found in the crevices.

Areas K–M are on a single pocket beach. The rock outcrops at +2 to +4 tidal range have a dense biota coverage. Adult and juvenile barnacles are present as well as new set. Both *Fucus* sporelings and mature plants with active conceptacles are present. Mussels are present in patches found mainly along cracks and crevices. There is a sparse to moderate *Littorina* and limpet population. Along the angular cobble beach there are sparse adult barnacles with moderate recruits. *Littorina* and limpets are also moderate. *Littorina* egg cases are found on the undersides of cobble. Mussels are rare. Small (<3cm) *Oligochaete* worms are present under cobble.

The beach appears healthy. Barnacle did tightly seal their inner plates when stimulated. *Bosta* on this beach does not appear to be adversely impacted by present oil conditions.
MAYBAP 1991
OG SKETCH MAP
GREG CHANEY
TEAM 5
SEGMENT: EV-3-A
DATE: April 26, 91
AIR P.#: DMC-005-236

LEGEND

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>B</td>
<td>BEDROCK</td>
</tr>
<tr>
<td>O</td>
<td>BOULDERS</td>
</tr>
<tr>
<td>F</td>
<td>FINE BED.</td>
</tr>
<tr>
<td>D</td>
<td>DRIFT LOG</td>
</tr>
<tr>
<td>G</td>
<td>GRABB</td>
</tr>
<tr>
<td>B</td>
<td>BRUSH</td>
</tr>
<tr>
<td>F</td>
<td>FOREST</td>
</tr>
<tr>
<td>P</td>
<td>OILED PIT</td>
</tr>
<tr>
<td>N</td>
<td>NO OIL PIT</td>
</tr>
<tr>
<td>P</td>
<td>PHOTO</td>
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</tbody>
</table>

SCALE
Approx. 100 Meters

- **Dense Focus Concentration**
- **AP 0.2 x 0.3**
- **100% PU**
- **New Set of Barnacles Present**
- **Mass Color Green to Dark Red**
- **Sparse MTTZ bio-coverage, Barnacles Not Tightly Sealing Their Shell Plates When Sketched**
- **AP 0.5 x 0.5**
- **50% PU**
- **Area Dominated by Barnacles**
- **Anad Stream 220-40-1139**
- **Tidepool with 5 anemones, coralline algae and mussels also present**
- **Beach is being recruited by barnacles, mussels, Fucus and gastropods**
- **Name Batts were anouchina in**
- **Zoomed in for mussels in**

**Legend**
- **Legend**
- **Scale**
- **Approx. 100 Meters**
- **Legend**
- **Scale**
- **Approx. 100 Meters**
1991 MAYSAP EVALUATION

SEGMENT: ER 004  SUB: A  REGION: PWS  SURVEY DATE: 5/16/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) OPEN

Ecological/Constraints (see page two for details) Fish harvest area

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

SHPO Signature: Dale Helmsa Date: 5/30/91

RECOMMENDATIONS:

TREATMENT REQUIRED (Y or N) INITIAL TAG FOSC

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

COMMENTS:
INITIAL: ____________________________

TAG: ____________________________

FOSC: ____________________________

TAG APPROVAL DATE: May 29 1991
FOSC APPROVAL DATE: 6/8/91

ADEC: ____________________________
EXXON: ____________________________
USCG: ____________________________
NOAA: ____________________________

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

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.
MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO.  5  SEGMENT  ER-4   SUBDIVISION  A   DATE  5/1/91

NAME  John Hayter   SIGNATURE  

☑ NTR  Very lightly oiled CTS observed. No treatment recommended at this time.

NAME  John Dean   SIGNATURE  

☑ NTR  Only oil observed consisted of traces of coat and stain.

NAME  Steve Wood   SIGNATURE  

☑ NTR  No Sub-Surface oil. Surface oil is scattered coat + stain very lite. No trash observed. No Bio

NAME  Dreher Cline   SIGNATURE  

☑ NTR  No subsurface oiling observed. Only minute traces of CT & ST observed. Any further attempt at clean up of this segment would be counter productive, both environmentally and financially, N/A

Surface oiling was restricted to trace and sporadic coat and stain. No subsurface oiling was located. No further treatment is necessary. DUE

☐ NTR

☐ NTR
**MAYSAP SHORELINE OILING SUMMARY**

**DATE**: May 16, 1991

**TIME**: 08:30 to 10:45

**TIDE LEVEL**: -2 ft. to -3.5 ft.

**ENERGY LEVEL**: [ ] H [ ] M [ ] L

**WEATHER**: [ ] SUN [ ] CLOUDS [ ] FOG [ ] RAIN [ ] SNOW

**TOTAL LENGTH SHORELINE SURVEYED**: 2292 m

**NEAR SHORE SHEEN**: [ ] BR [ ] RB [ ] SL [ ] NONE

**EST. OIL CATEGORY LENGTH**: W __ m M __ m N __ m VL __ m NO __ m

---

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

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

**PHOTO ROLL**: # MAYSAP-5 __ 17 FRAMES 10-16

---

**OG COMMENTS**: OILING ALONG THIS SUBDIVISION CONSISTED PRIMARILY OF SPLATTERED COAT & STAIN ON BOULDERS AND BEDROCK.
<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>OIL CHARACTER</th>
<th>OILED ZONE cm-cm</th>
<th>CLEAN BELOW cm</th>
<th>SHEEN COLOR</th>
<th>PIT ZONE</th>
<th>SURFACE- SUBSURFACE SEDIMENTS</th>
<th>NOTES</th>
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<td></td>
<td></td>
<td></td>
<td>S-PC83</td>
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</table>

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

OG Comments:
MAP 1 of 2

SEGMENT: ER A
DATE: MAY 16 1991

AIR P.#:

T M
N

LEGEND

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

5x25m
SCATTERED DRIPS ON BOULDERS
CT<1%

5x10m
SCATTERED DRIPS
CT<1%
ST<1%

WHITE BEDROCK OUTCROP

1x10m
CT<1%
PATCHY CT ON BEDROCK

1x5m
15% CT
PATCHY COAT ON BEDROCK

ELRINGTON PASSAGE

SCALE

0
60
120

ERSA A
ERYA
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 5
SEGMENT # ER-4
SUBDIVISION A
SEA STATE 0
PHOTOGRAPHS: ROLL # FRAME #

DATE 16 May 1991
TIDAL HEIGHT (Range) -2.7 -3.5
BIOLOGIST Crunk
WIND SPEED/DIRECTION No wind

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

(A) Area is located low in the UITZ, in freshwater runoff. Within 2 ft... Focus, Litorina, and limpets have a moderate concentration. Barnacles have a sparse density; limpets are abundant and far shot algae is present. Biotidal cover is ~40%. In the MITZ, focus is densely concentrated. Barnacles increase up to a moderate density. Litorina and limpets remain moderate and there is an occasional mussel. Barnacle spat and Focus spatelings are present. The LITZ is dominated by Usnea: dense Coditntalia. Space Focus with spatelings; Laminariae. kelp. And blades and filamentous reds and greens are present. Fauna is present on and above the sea water. A sparse to moderate concentration of barnacles ( Cameroon and great aaron); rare mussels, dense Litorina. limpets and whelks (Mollusca). and abundant isopods and amphipods. Biotidal cover in both MITZ and LITZ is ~80%.

(B) The area is located high in the UITZ. Black tunic covers ~10% of the sediment surfaces. Below the side is a sandy granular beach with no to low surface biota cover.

Most of the subdivision has a rich LITZ. Accessing the granular beach at Site B would cause the least ecological disturbance.

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>2</td>
<td>species present</td>
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<tr>
<td>Seabirds</td>
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<tr>
<td>Waterfowl</td>
<td>2</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>Gulls/kittiwakes</td>
<td>3</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>Shorebirds</td>
<td>1</td>
<td>1</td>
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</tr>
<tr>
<td>Corvids</td>
<td>1</td>
<td>1</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></td>
<td></td>
</tr>
<tr>
<td>Seals (specify)</td>
<td>1</td>
<td>Sea</td>
<td>Neighbor</td>
</tr>
<tr>
<td>Whales (specify)</td>
<td>1</td>
<td>Harbor</td>
<td></td>
</tr>
</tbody>
</table>

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

(c) Area is located on the leeside of a bedrock outcrop, next to freshwater runoff, in the U172. In the site, barnacles have a moderate concentration; adults, juveniles and spat are present and the animals tightly sealed their inner plates when stimulated. Limpets have a moderate concentration; several age classes are present and live animals were observed directly on oil. Juvenile Littorina are dense. A rare concentration of Fucus sporelings and juvenile (post-spill) mussels are present. Biota cover is ~50%.

The exposed face of the rock has the same biota. Fucus concentration is increased to moderate with both reproductively active mature plants and sporelings. Biota cover is ~80%. In addition, the small boulder U172 has Halosaccion, Odonthalia and Palmaria algae, dense gastropods (Nucella also present) and sparse mussels. More than half of the mussels present are post-spill age. Biota cover is ~50%. In the U172, algae is dominant covering >95% of the surface. Some of the species present include: Costaria, Lamanaria, Alaria, Desmarestia, Ulva, Enteromorpha, Odonthalia, Phodoglossum, Membranoptera, Ptilota, Palmaria, Halosaccion Rhodymenia, Cryptopleura and Coralines. Sunflower sea stars (Pycnopodia) were present and amphipods were abundant.
Comments (cont.)

(I) Area is located high in the UITZ. Biota cover is ~5% with dense Littorina and limpets and rare Fucus sporelings. The MITZ and LITZ are similar to site 'C'.

(E) Area is a 1x1m boulder located high in the UITZ, next to a runoff stream. Approx. 20 cm from the oil splatter there are barnacles, Littorina, limpets and Fucus sporelings covering ~19% of the boulder surface. The MITZ and LITZ are similar to site 'C'.

(F) Area is located high in the UITZ. Moss, white and black lichen cover ~19% of the bedrock surface. In the MITZ there is a 4m wide filamentous green algal band covering ~2.5% of the surface. Sparingly concentrated Fucus, barnacles and mussels and moderately concentrated Littorina and limpets are also present. LITZ is similar to site C.

(G) Fucus located in the UITZ along bedrock and small boulder substrate. Barnacles are dominant within the site with a sparse to moderate concentration (several age classes present). Littorina and limpets are distributed in dense patches and rare Fucus. Biota cover ranges from 30-50%. The MITZ has dense Littorina, moderate barnacles, sparse mussels and rare Fucus. Biota cover is ~50%. LITZ is similar to site C.
With the exception of the granular beach located below site B, this subdivision has a rich algal community in the lower intertidal with several species of kelps, bladed reds and greens and coraline algae. Biota cover 80-100% of bedrock outcrop.

Live limpets observed on bedrock. Juvenile Littorina are dense within site C. Post-spill age mussels are present. Biota cover 15% of bedrock outcrop.

Freshwater runoff from waterfalls, biota cover is ~60% within site A.
1991 MAYSAP EVALUATION

SEGMENT: ER 004  SUB: B  REGION: PWS  SURVEY DATE: 5/16/91

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

Ecological/Constraints (see page two for details) Fry release, Fish harvest area, Anadromous stream, Subsistence - Deer harvesting, Subsistence - Invertebrate harvesting, Subsistence - Finfish harvesting

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

SHPO Signature: _______ Date: 5/31/91

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>Manual Pickup (Check as Req.)</td>
<td>N</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>Spot Washing</td>
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<tr>
<td>Bio-Customblen Only</td>
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<tr>
<td>Bio-Initpol/Customblen</td>
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<td>Other</td>
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<tr>
<td>Other</td>
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</tbody>
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COMMENTS:
INITIAL: ____________________________________________________

TAG: _______________________________________________________

FOSC: ____________________________________________________

TAG APPROVAL DATE: 5/31/91  FOSC APPROVAL DATE: 6/15/91

ADEC  
EXXON  
USCG  
NOAA

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

**Fry Release:** Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.

**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.

**Subsistence, Invertebrate Harvesting:** Unlimited treatment except avoid disturbance of clam/mussel beds unless specifically directed by TAG Work Order.

**Subsistence, Finfish Harvesting:** Unlimited treatment.
MAYSAP FIELD SHORELINE COMMENT SHEET

<table>
<thead>
<tr>
<th>TEAM NO.</th>
<th>SEGMENT</th>
<th>SUBDIVISION</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>ER-4</td>
<td>B</td>
<td>5/16/91</td>
</tr>
</tbody>
</table>

**DEC**

- **NAME**: John Hayes
- **SIGNATURE**:
- **NTR**: Small patches of AP below breakers here. This is overall a lightly oiled segment although a small manual crew could recover the AP and make it a very lightly oiled segment in short order.

**EXXON**

- **NAME**: John Dean
- **SIGNATURE**:
- **NTR**: All recoverable are observed picked up by survey.

**LANDMANAGER**

- **NAME**: Steve Charno
- **SIGNATURE**:
- **OF CUC-FS**:
- **NTR**: Very few asphalt patches, picked up by crew.

- **Area**: Has enough oil that a crew needs to pick it up.

**USCG/NOAA**

- **NAME**: DREHER/Cline
- **SIGNATURE**:
- **NTR**: Observed only very small inert patches of AP in one area and some scattered stain. Need:

  AP patches occur at regular intervals (approx 2m apart) in a line corresponding to the high tide line for a distance of 90m. These patches, each 5-25 cm in diameter, were not recovered during the survey, they are susceptible to remobilization, they are:

  - Extracted: DWC
**MAYSAP SHORELINE OILING SUMMARY**

**Team No. 5**

**C.G. Chaney** - Bio. Crank

**ADEC HAYES** - Landmanager Ward for CVC

**Exxon DEAN** - USCG/NOAA DREHER/CINE

**Time 10:45 to 11:30**

**Tide Level** -2.0 ft. to 0.0 ft.

**Energy Level:** H M Y

**Surveyed From:** ☑ Foot ☑ Boat ☑ Helo

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

**Total Length Shoreline Surveyed:** 819 m

**Near Shore Sheen:** ☑ BR ☑ RB ☑ SL ☑ None

**Est. Oil Category Length:** W. m M. m N. m V. 140 m NO. 679 m US. 0 m

---

**Surface Oil Character**

<table>
<thead>
<tr>
<th>LO CO AP MS TB SOH CV CT ST FL DB NO</th>
<th>Surface Sediment Type</th>
<th>Shore Slope VHM L</th>
<th>Width m</th>
<th>Length m</th>
<th>Zone S</th>
<th>UI MI LI</th>
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</thead>
<tbody>
<tr>
<td>A T</td>
<td>B H 1 40</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>SMALL PATCHES ST ON BOULDERS</td>
<td></td>
</tr>
<tr>
<td>B T</td>
<td>B H 3 100</td>
<td>✓</td>
<td></td>
<td>✓</td>
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</tbody>
</table>

**Notes**

**Distribution:** C = 91-100%; B = 81-90%; P = 71-80%; S = 1-10%; T = <1%

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

**Photo Roll # MAYSAP - 5 - 17 Frames 17**

**Pit No.**

<table>
<thead>
<tr>
<th>Pit</th>
<th>Depth (cm)</th>
<th>Subsurface Oil Character</th>
<th>Oiled Zone</th>
<th>Clean</th>
<th>H20 Below</th>
<th>Sheen Color</th>
<th>Pit Zone</th>
<th>Surface-Subsurface Sediments</th>
<th>Notes</th>
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<tr>
<td>1</td>
<td>2.8</td>
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<td>0 - 9 Y</td>
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<td>✓</td>
<td>P - PM</td>
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<tr>
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<td>-</td>
<td>✓</td>
<td>P - PM</td>
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</table>

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

**OG Comments:** MAJORITY OF OIL OBSERVED IN THIS SUBDIVISION WAS IN AREA A. THERE SMALL PATCHES OF AP WERE OBSERVED BETWEEN SMALL BOULDERS ALONG THE HIGH TIDE LINE. ALL OTHER OIL WAS IN THE FORM OF SPLATTERED STAINS ON BOULDERS.
LEGEND

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

SCALE

0   200

MAYSAP 1991
DO 7TH MAP
GREG HANLEY/ DON CLINE
TEAM 5
SEGMENT: ER 4B (2.052)
DATE: JAP 16 1991
AIR P. #: PIAA-006-113

ELRINGTON PASSAGE

SMALL
BEDROCK
ISLAND WITH
TREES

B) 3x10m
ST<1%
ON BOULDERS

A) 1x40m
AP<1%
BETWEEN
SMALL
BOULDERS
SMALL
PATCHES

FALLEN TREES

ER 3A
ER 4B

ELRINGTON ISLAND

FALLEN TREE

Reviewed 5.20 91
ORIGIN: CIM 5/1/91
**MAYSAP BIOLOGICAL SUMMARY FORM**

**TEAM #** 5  
**SEGMENT #** ER-4  
**SUBDIVISION** B  
**SEA STATE** 0  
**DATE** 16 May 1991  
**TIDAL HEIGHT (Range)** -2 to 0  
**BIOLOGIST** Granik  
**WIND SPEED/DIRECTION** no wind

**PHOTOGRAPHS: ROLL #**  
**FRAME #**

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

(A) Area is located from the middle to the high part of the UITZ. Sparsely concentrated barnacles, rare mussels, Oligochaete worms and black limpets are present on site. Biotaa cover ranges from 10-20%. The UITZ begins 1m below the site. There is a 1m wide band of Fucus with mature cordiacies, F. spiralis and Littorina have a moderate concentration. Mussels of various age classes have a sparse to moderate concentration increasing further north up the beach. Biotaa cover is 15-70%. The LITZ has a rich, kelp, bladed red and green and filamentous red and green algae cover. There are also dense gastropods (whelks, limpets) Space to moderate barnacles (acorn and giant acorn); rare mussels and common amphipods and isopods. Biotaa cover is ~50%

(B) Area is in the UITZ. Within the site there are rare barnacles, moderate limpets and densely concentrated juvenile Littorina. At the North end of the site, there is a sparse concentration of Fucus. Biotaa cover range from 10-20%. Three meters below the site, barnacles and mussels with many juveniles have a sparse to moderate concentration. Fucus at the southern end of the site has a sparse concentration, approx 80% of the plants prevent exc. 'stipe only'. At the northern end of the site Fucus concentration increases and only 10% of the plants are 'stipe only'. Biotaa cover is ~50%. LITZ is a continuation of the UITZ in site A.

**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>9</td>
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<tr>
<td>Seabirds</td>
<td>1</td>
<td>40</td>
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<tr>
<td>Waterfowl</td>
<td>2</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Culls/Kittiwakes</td>
<td>1</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>Shorebirds</td>
<td>2</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Corvids</td>
<td>2</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Other Birds</td>
<td>1</td>
<td>40</td>
<td></td>
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</tbody>
</table>

**MARINE MAMMALS**

<table>
<thead>
<tr>
<th>SPECIES</th>
<th># OBSERVED</th>
<th>LAND MAMMALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Se Otters</td>
<td>River otter tracks</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>

Shoreline subdivision map showing important biological features attached.
The LITZ has a rich algal cover with several species of kelps and bladed and filamentous red and green algae. Biota cover is at least 80%.

Biota cover in the site ranges from 10-20%; in the MITZ cover is 50%.

In the site, biota cover ranges from 10-20%; in the MITZ cover is 70%.

ER 3A
ER 4B

FALLEN TREE

MODERATE Barnacle Concentration in the MITZ

1m wide Fuca Band is replaced by barnacles.

North of Site

Small Bedrock Island With Trees

FALLEN TREE

3 x 100m ST < 1% on Boulders

LEGEND

<table>
<thead>
<tr>
<th>BEDROCK</th>
<th>BOULDERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>FINE BED</td>
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</tr>
<tr>
<td>DRIFT LOG</td>
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<tr>
<td>GRASS</td>
<td>Y</td>
</tr>
<tr>
<td>BRUSH</td>
<td>O</td>
</tr>
<tr>
<td>FOREST</td>
<td>O</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>
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</tbody>
</table>

SCALE

0  200 m

DATE: MAY 16 1991
AIR P. #: EM-5-015-113

MA.P 1991
GREG CHANEY / DON CLINE
TEAM 5
SEGMENT: ER4B (2 of 2)

ERINGTON PASSAGE

ELRINGTON ISLAND
1991 MAYSAP EVALUATION

SEGMENT: ER 004  SUB: A  REGION: PWS  SURVEY DATE: 5/16/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) OPEN

Ecological/Constraints (see page two for details) 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>
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<tbody>
<tr>
<td>Manual Pickup (Check as Req.)</td>
<td>______</td>
<td>______</td>
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<tr>
<td>Spot Washing</td>
<td>______</td>
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<tr>
<td>Bio-Customblen Only</td>
<td>______</td>
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<td>Bio-Inipol/Customblen</td>
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<tr>
<td>Other</td>
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COMMENTS:
INITIAL: __________________________________________________

TAG: _______________________________________________________

FOSC: _________________________________________________

TAG APPROVAL DATE: ______________ FOSC APPROVAL DATE: ______________

ADEC  FOSC
EXXON  
USCG  
NOAA  
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.
MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5  SEGMENT ER-4  SUBDIVISION A  DATE 5/11/91

ADEC
NAME John Henry  SIGNATURE

☑ NTR  Very lightly oiled CTS observed no treatment recommended at this time.

EXXON
NAME John Ocn  SIGNATURE

☑ NTR  Only oil observed consisted of traces of coat and stain.

LANDMANAGER
NAME Steve Ward  OF  CUC/FS  SIGNATURE

☑ NTR  No Sub-Surface oil. Surface oil is smattered, cover and stain very light, no trash observed.

☐ NTR

USCG/NOAA
NAME DREHER/CLINE  SIGNATURE

☑ NTR  No subsurface oiling observed. Only minute traces of CTS st observed. Any further attempt at cleanup of this segment would be counter productive, both environmentally and financially.

Surface oiling was restricted to trace and sporadic coat and stain. No subsurface oiling was located. No further treatment is necessary. An
**MAYSAP SHORELINE OILING SUMMARY**

**TEAM NO.**

**OG CHANEY**

**BIO CRANK**

**ADEC HAYES**

**LANDMANAGER WARD for CVC**

**DEAN**

**USCG/NOAA DREHER/CLINE**

**SEGMENT**

**SUBDIVISION**

**DATE**

**TIME**

**TIDE LEVEL**

**ENERGY LEVEL**

**SURVEYED FROM**

**WEATHER**

**TOTAL LENGTH SHORELINE SURVEYED:**

**EST. OIL CATEGORY LENGTH:**

**L OC**

<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>S</th>
<th>UI</th>
<th>MI</th>
<th>LI</th>
<th>NOTES</th>
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</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**

**FIT | PIT NO. DEPTH | SUBSURFACE OIL CHARACTER | OILED ZONE | CLEAN | H2O LEVEL | SHEEN COLOR | PIT ZONE | SURFACE-SUBSURFACE SEDIMENTS | NOTES |
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<td>BC-PCG</td>
</tr>
<tr>
<td>8</td>
<td>25</td>
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<td>PG-BGR</td>
</tr>
</tbody>
</table>

**SHEEN COLOR:**

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

**OG COMMENTS:**

**OILING ALONG THIS SUBDIVISION CONSISTED PRIMARILY OF SPLATTERED COAT & STAIN ON BOULDERS AND BEDROCK.**

**REVISED:**

**Reviewed:**

**F.W. 5/24/91**
<table>
<thead>
<tr>
<th>NO.</th>
<th>DEPTH(cm)</th>
<th>OIL CHARACTE</th>
<th>OILED ZONE</th>
<th>CLEAN BELOW</th>
<th>H2O LEVEL</th>
<th>SHEEN COLOR</th>
<th>PIT ZONE</th>
<th>SURFACE-SUBSURFACE SEDIMENTS</th>
<th>NOTES</th>
</tr>
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<tbody>
<tr>
<td>01</td>
<td>2.8</td>
<td></td>
<td></td>
<td>Y</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>S-PBRS</td>
</tr>
</tbody>
</table>

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

OG COMMENTS:

Reviewed by: F.W. 5/20/91

Date: May 16, 1991

Team No. 2
Segment ER 4
Subdivision A
KAYSAP BIOLOGICAL SUMMARY FORM

TEAM #: 5  DATE: 16 May 1991
SEGMENT #: ER-4  TIDAL HEIGHT (range) = -2 to -3.5
SUBDIVISION #: A  BIOLOGIST: Crank
SEA STATE: 0  WIND SPEED/DIRECTION: No wind

PHOTOGRAPHS: ROLL #:  FRAME #

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

(A) Area is located low in the UITZ, in freshwater run-off. Within this area, grass, Salicornia, and limets have a moderate concentration. Barnacles have a sparse density; however, they are abundant and far shorter algae are present. Bacteria cover is ~10%. In the MIZ, Fucus is densely concentrated, barnacles increase up to a moderate density; Littorina and limets remain moderate and there is an occasional mussel.

Barnacle spat and Fucus sporelings are present. The LITZ is dominated by algae: grass Salicornia, and Fucus. Fauna is present on and around algae. Some barnacles are present. The seagrass is dominated by Zostera marina and G. fontana. Barnacle spat and Fucus sporelings are present. Bacteria cover in both MIZ and LITZ is ~10%.

(B) The area is located high in the UITZ. Black licorice covers ~10% of the seagrass. The sea grass is a solid granular beach with no visible surface features.

Most of the subdivision has a rich LITZ. Accessing the granular beach at Site B would cause the least ecological disturbance.

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>
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</thead>
<tbody>
<tr>
<td>Eagles</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Seabirds</td>
<td>3</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Waterfowl</td>
<td>2</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>Gulls/kittiwakes</td>
<td>3</td>
<td>57</td>
<td></td>
</tr>
<tr>
<td>Shorebirds</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Corvids</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Birds</td>
<td></td>
<td></td>
<td></td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>MARINE MAMMALS</th>
<th># OBSERVED</th>
<th>SPECIES</th>
<th># OBSERVED</th>
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<tbody>
<tr>
<td>Sea Otters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phocidae(specify)</td>
<td>1</td>
<td>Steller's</td>
<td>3</td>
</tr>
<tr>
<td>Otaria(specify)</td>
<td>1</td>
<td>Harbor Seal</td>
<td></td>
</tr>
</tbody>
</table>

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

(c) Area is located on the lee side of a bedrock outcrop, next to freshwater runoff, in the UIIZ. In the site, barnacles have a moderate concentration; adults, juveniles and spat are present and the animals tightly sealed their inner plates when stimulated. Limpets have a moderate concentration; several age classes are present and live animals were observed directly on oil. Juvenile Littorina are dense. A rare concentration of Fucus sporelings and juvenile (post-spill) mussels are present. Biota cover is ~50%. The exposed face of the rock has the same biota. Fucus concentration is increased to moderate with both reproductively active mature plants and sporelings. Biota cover is ~80%. In addition, the small boulder UIIZ has Halosaccion, Odonthalia and Palmaria algae, three gastropods (Nucella also present) and sparse mussels. More than half...of the mussels present are post-spill age. Biota cover is ~50%. In the UIIZ, algae is dominant covering >95% of the surface. Some of the species present include: Costaria, Lamanaria, Alaria, Desmarestia, Ulva, Enteromorpha, Odonthalia, Phaeoglosum, Membranoptera, Ptilota, Palmaria -algseum, Rhodymenia, Hypothallus and Corallina. Sunflower sea stars (Pycoscyas) were present and specimens were
Comments (cont.)

(D) Area is located high in the UlTZ. Bista cover is ~5% with dense Littorina and limpets and rare Eucus sporelings. The MITZ and LITZ are similar to site 'C'.

(E) Area is a 1x1m boulder located high in the UlTZ, next to a runoff stream. Approx. 20 cm from the oil splatter there are barnacles, Littorina, limpets and Eucus sporelings covering ~1% of the boulder surface. The MITZ and LITZ are similar to site 'C'.

(F) Area is located high in the UlTZ. Moss, white and black lichen cover ~1% of the bedrock surface. In the MITZ there is a 1m wide filamentous green algae band covering ~2.2% of the surface. Sparsely concentrated Eucus, barnacles and mussels and moderately concentrated Littorina and limpets are also present. LITZ is similar to site C.

(G) Site is located in the UlTZ along bedrock and small boulder debris. Barnacles are dominant within the site with a sparse moderate concentration (several are class present). Littorina and limpets are distributed in dense High and rare Eucus. Biotica cover ranges from 30-50%. The MITZ has dense Littorina, moderate barnacle sparse mussels and rare Eucus. Biotica cover is ~50%. LITZ is similar to site C.
With the exception of the granular beach located below site B, this subdivision was a rich algal community in the lower intertidal with several species of kelps, bladdered reds and green as and coralline algae. Biotica cover 80-100%. 

ELRINGTON PASSAGE

LEGEND

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>O</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>GRASS</td>
</tr>
<tr>
<td>✡️</td>
<td>BRUSH</td>
</tr>
<tr>
<td>❌</td>
<td>FOREST</td>
</tr>
<tr>
<td>⬤</td>
<td>OILED PIT</td>
</tr>
<tr>
<td>✡️</td>
<td>NO OIL PIT</td>
</tr>
<tr>
<td>📸</td>
<td>PHOTO</td>
</tr>
</tbody>
</table>

SCATTERED DRIPS ON BOULDERS CT <1%

5x25m

15% CT

PATCHY COAT ON BEDROCK

1x3m

1x10m

CT <1%

POTTY CT ON BEDROCK

CT <1%

ST <1%

ELRINGTOM ISLAND

Live limpets observed on (oil). Juvenile littorina are dense within site C. Poss. Sp. age mussels are present. Biotica cover in the site ~5%.
**LEGEND**

<table>
<thead>
<tr>
<th>Type</th>
<th>Symbol</th>
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<tbody>
<tr>
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<td><img src="symbol" alt="Bedrock" /></td>
</tr>
<tr>
<td>Boulders</td>
<td><img src="symbol" alt="Boulders" /></td>
</tr>
<tr>
<td>Fine Bed.</td>
<td><img src="symbol" alt="Fine Bed." /></td>
</tr>
<tr>
<td>Drift Log</td>
<td><img src="symbol" alt="Drift Log" /></td>
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<tr>
<td>Grass</td>
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<td>Brush</td>
<td><img src="symbol" alt="Brush" /></td>
</tr>
<tr>
<td>Forest</td>
<td><img src="symbol" alt="Forest" /></td>
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<tr>
<td>Oiled Pit</td>
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<tr>
<td>No Oil Pit</td>
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</tr>
<tr>
<td>Photo</td>
<td><img src="symbol" alt="Photo" /></td>
</tr>
</tbody>
</table>

**SCALE**

1 meter = 200 meters

---

**MAP 2 of 2**

- **ER 4A**: The LITZ is continuous with a rich, diverse algal community.
- **ER 4B**: Biotas cover on the boulders in site E is 1%.
- **ER 4C**: Biotas cover on the boulders in site E is 1%.
- **ER 4D**: Biotas cover on the boulders in site E is 1%.
- **ER 4E**: Biotas cover on the boulders in site E is 1%.
- **ER 4F**: Biotas cover on the boulders in site E is 1%.
- **ER 4G**: Biotas cover on the boulders in site E is 1%.

**NOTE**: The site is located high on the bank, with approximately 1% of sediment.
SHORELINE EVALUATION

SEGMENT ST/ER-04 SUBDIVISION A (1 OF 2) DATE 4/5/90

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

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

ARCHAEOLOGICAL CONSTRAINTS:
If 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 367 m: No Oil 1925 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 _______ Absorbsents (pads, rolls, etc)
_____ Bioremediation _______ Spot Washing: _______ Wands
_____ Tarmac: _____ Removal _______ Beach Cleaner
______ Other (see comments)

COMMENTS: __________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

TAG COMMENTS: _________________________________________________________
_________________________________________________________________
_________________________________________________________________

TAG APPROVAL DATE: 4/25/90
ADEC  [Signature] FOSC: [Signature] DATE: 5-3-90
EXXON  [Signature]
NOAA  [Signature]
USCG  [Signature]
Subsegment A continued on next page

Map Key: PWS-1700
Name: R. Marty
Date: 5 April 1990
Date Entered:

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

ER-4

ADEC Segment Length: 5110m

METERS
SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

<table>
<thead>
<tr>
<th>Segment</th>
<th>Description</th>
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<tbody>
<tr>
<td>1A</td>
<td>Salmon stream mouth - fry outmigration (3/1 to 5/15)</td>
</tr>
<tr>
<td>1B</td>
<td>Salmon stream mouth - spawning (7/10 to 8/31)</td>
</tr>
<tr>
<td>1F</td>
<td>Sawmill Bay Hatchery release (4/15 to 6/1)</td>
</tr>
<tr>
<td>7HH</td>
<td>Subsistence area: Finfish harvesting</td>
</tr>
<tr>
<td>7II</td>
<td>Subsistence area: Deer harvesting (8/15 to 2/28)</td>
</tr>
<tr>
<td>7JJ</td>
<td>Subsistence area: Invertebrate harvesting</td>
</tr>
</tbody>
</table>

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoined biota and substrate. Other constraints as listed above. ADF&G catalogued anadromous stream in Subdivision A.

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).

OILING CATEGORIZATION:

<table>
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<tr>
<th>Category</th>
<th>Description</th>
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<tr>
<td>Wide</td>
<td>Medium 43 m: V. Light 272 m: No Oil 269 m</td>
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<tr>
<td>Subsurface Oil Observed</td>
<td>Yes</td>
</tr>
<tr>
<td>Maximum Depth</td>
<td></td>
</tr>
</tbody>
</table>

RECOMMENDATIONS:

- [ ] No Treatment Recommended
- [x] Treatment Recommended
- [ ] Manual Pickup
- [x] Bioremediation
- [ ] Tarplant: Removal
- [ ] Other (see comments)

COMMENTS: Recommend bioremediation between 6/2 and 7/9. Bioremediation may not be conducted within 100m of anadromous fish stream without prior permission of ADF&G.

TAG COMMENTS:

TAG APPROVAL DATE: 4/25/90

ADEC: Art Williams
EXXON: N/A
NOAA: Robert Shriver
USCG: Kenneth Keane

DATE: 5/3/90
XXX Wide
/// Medium
---- Narrow
TTTT Very Light
0000 No Oil

ER-4

Map Key: PWS-1704
Name: R. Marty
Date: 5 April 1990
Data Entered:

12/12
1991 HAYSAP EVALUATION

SEGMENT: ER 004 SUB: B REGION: PWS SURVEY DATE: 5/16/91

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

Ecological/Constraints (see page two for details) Fry release, Fish harvest area, Anadromous stream, Subsistence - Deer harvesting, Subsistence - Invertebrate harvesting, Subsistence - Finfish harvesting

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

SHPO Signature: __________________________ Date: __________________

RECOMMENDATIONS:

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

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

COMMENTS:
INITIAL: ________________________________________________________

TAG:__________________________________________________________

FOSC:________________________________________________________

TAG APPROVAL DATE:__________ FOSC APPROVAL DATE:__________

ADEC ________________________ FOSC ________________________

EXXON ______________________

USCG ________________________

NOAA ________________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES


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.

Subsistence, Invertebrate Harvesting: Unlimited treatment except avoid disturbance of clam/mussel beds unless specifically directed by TAG Work Order.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5 SEGMENT ER-4 SUBDIVISION B DATE 5/14/91

ADEC
NAME John Heyer SIGNATURE

☐ NTR Small patches of AP present besides here, this is overall a lightly oiled segment although a small manual crew could recover the AP and make it a very lightly oiled segment in short order.

EXXON
NAME Jane Doe SIGNATURE

☐ NTR All recoverable are observed picked up by survey.

LANDMANAGER
NAME Steve Johnson OF CUC-FS SIGNATURE

☐ NTR Very few Asphalt patches, picked up by crew.

USCG/NOAA
NAME Dreher Cline SIGNATURE

☒ NTR Observed only very small inert patches of AP in one area and some scattered clumps.

AP patches occur at regular intervals (approx 2m apart) in a line corresponding to the high tide line for a distance of 40m. These patches, each 5-25 cm in diameter, were not recovered during the survey; they are susceptible to re-mobilization, therefore should be retrieved. DUE
**MAYSAP SHORELINE OILING SUMMARY**

**TEAM NO.** 5
**OG** CHANEY  **BIO** CRANK  **SEGMENT** ER-4
**ADEC** HAYES  **LANDMANAGER** WARD  **SUBDIVISION** B  **DATE** MAY 16/91
**EXXON** DEAN  **USCG/NOAA** DREHER/CLINE

**TIME** 10:45 to 11:30  **TIDE LEVEL** -2.0 ft. to 0.0 ft.  **ENERGY LEVEL**: □ H □ M □

**SURVEYED FROM**: ✔ FOOT □ BOAT □ HELO  **WEATHER**: □ SUN ✔ CLOUDS □ FOG □ RAIN □ SNOW

**TOTAL LENGTH SHORELINE SURVEYED**: 819 m  **NEAR SHORE SHEEN**: □ BR □ RB □ SL □ NONE

**EST. OIL CATEGORY LENGTH**: W __ m M __ m N __ m V __ m 140 m  **NO.** 679 m  **US. O.** __ m

### Surface Oil Character

<table>
<thead>
<tr>
<th>NO.</th>
<th>AP</th>
<th>MS</th>
<th>TB</th>
<th>SOR</th>
<th>CV</th>
<th>CT</th>
<th>ST</th>
<th>FL</th>
<th>DB</th>
<th>NO</th>
<th>Surface 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></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B</td>
<td>H</td>
<td>1</td>
<td>40</td>
<td>✔</td>
<td></td>
<td>SMALL PATCHES</td>
</tr>
<tr>
<td>B</td>
<td>T</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>B</td>
<td>H</td>
<td>3</td>
<td>100</td>
<td>✔</td>
<td></td>
<td>STON BOULDERS</td>
</tr>
</tbody>
</table>

**Surface-Oil Character**: C • 81-100%, B • 51-90%, P • 11-50%, S • 1-10%, T • <1%

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

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

**Notes**: SMALL PATCHES

### Pit Observations

<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-SUBSURFACE SEDIMENTS</th>
<th>NOTES</th>
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<td>28</td>
<td>□</td>
<td>0-4</td>
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<td>✔</td>
<td>PC-PGC SURFACE OIL</td>
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<tr>
<td>2</td>
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<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td>✔</td>
<td>P-PM</td>
<td></td>
</tr>
</tbody>
</table>

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

**OG Comments**: **Majority of oil observed in this subdivision was in area A. There small patches of AP were observed between small boulders along the high tide line. All other oil was in the form of splattered stains on boulders.**

**Reviewed 5/20/94**

**Reviewed F.W. 5/21/94**
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 5  DATE 16 May 1991
SEGMENT # ER-4  TIDAL HEIGHT (Range) -2 to 0
SUBDIVISION B  BIOLOGIST Grant
SEA STATE 0  WIND SPEED/DIRECTION No wind
PHOTOGRAPHS: ROLL # FRAME #

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):
(A) Area is located from the middle to top part of the UITZ.
- Sparsely concentrated barnacles, rare mussels, oligochaete worms
- A black, tinge are present
- Brita cover ranges from 10-20%

The UITZ begins 1m below the site. There is a 1m wide area of Fucus
- with motoring concretaries Fucus and Littorina have a moderate
cancentration. Mussels of various age classes have a sparse to moderate
cancentration increasing further north up the beach. Brita cover is
- 70%
- The UITZ has a rich kelp, bladed red and green and filamentous
red and green algae cover. There are also dense gastropods (wholes, Littorina
- and limpets). Sparse to moderate barnacles (tors and short-awn)
- rare mussels and common amphipods and 130 species. Brita cover is
- 80%

(B) Area is in the UITZ. Within the site there are rare barnacles, moderate
- limpets and densely concentrated juvenile Littorina. At the North end
of site there is a sparse concentration of Fucus. Brita cover
- range from 10-20%
- Three meters below the site, barnacles and mussels
- with many juveniles have a sparse to moderate concentration. Fucus at the
- southern end of the site has a sparse concentration. Approx 80% of the plants
- present are 'stage only'. At the northern end of the site, Fucus concentration
- increased and only 10% of the plants are 'stage only'. Brita cover is 50%
- UITZ is a continuation of the UITZ in site A.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED SPECIES PRESENT</th>
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<tbody>
<tr>
<td>Eagles</td>
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<tr>
<td>Seabirds</td>
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<td></td>
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</tr>
<tr>
<td>Waterfowl</td>
<td>1</td>
<td>40</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>2</td>
<td>7</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>River Otter Tracks</td>
<td></td>
</tr>
<tr>
<td>Pinnipeds (specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whales (specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Shoreline subdivision map showing important biological features attached.
The LiTZ has a rich algal cover with several species of kelps and bladed, und filamentous red and green algae. Biota cover is at least 80%.

Biota cover in the site ranges from 10-20%, the MITZ cover is 50%.

In the site, biota cover ranges from 10-20%. In the MITZ cover is 70%.
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ER-04

SUBDIVISIONS: A (1 OF 2)
SHORELINE EVALUATION

SEGMENT ST/ ER-04 SUBDIVISION A (1 OF 2) DATE 4/5/90

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)
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
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 367 m: No Oil 1925 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 _____Absorbsents (pads, rolls, etc)
_____Bioremediation _____Spot Washing: Wands
_____Tarmat: _____Removal _____Beach Cleaner
_____ Other (see comments)

COMMENTS: ______________________________________________________
_________________________________________________________________
_________________________________________________________________

TAG COMMENTS:____________________________________________________
_________________________________________________________________
_________________________________________________________________

TAG APPROVAL DATE:________
ADEC _______________________ FOSC:_________ DATE:________
EXXON _______________________
NOAA _______________________
USCG _______________________
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A. Salmon stream mouth - fry exportation (3/1 to 5/15)
1B. Salmon stream mouth - spawning (7/10 to 8/31)
   - No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

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

2M. Herring spawning (4/1 to 6/15)
   - Restrict boat traffic to essential minimum. Avoid damage to 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 (8/1 to 9/15)
6V. Anchorages (6/1 to 9/15)
6W. Forest Service cabins (6/1 to 9/15)
6X. Lodge (6/1 to 9/15)
6Y. Special use destination

7Z. Subsistence area: Salmon harvesting (5/1 to 9/30)
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.
USCG
NAME: LARRY FLETCHER
SIGNATURE: Larry P. Fletcher
☑ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS:

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

ADEC
NAME: DAVID M. SAGE
SIGNATURE: David M. Sage

COMMENTS:

OIL SPILL ON ROCKS DOES NOT SEEM MOBILE.
NO TREATMENT NECESSARY.

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

LAND MANAGER
NAME: Leigh Carlson
SIGNATURE: Leigh Carlson

COMMENTS:

PUBLIC USES FOR THE SEGMENT INCLUDE SUBSISTENCE DEER, FINNISH AND INVERTEBRATE HARVESTING.

4 of 12
# SHORELINE OILING SUMMARY

**SURFACE OIL**

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<td>Pooled</td>
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<td>X</td>
<td>X X</td>
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<tr>
<td>Cover</td>
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<td></td>
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</tr>
<tr>
<td>Coat</td>
<td>X</td>
<td></td>
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<tr>
<td>Stain</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mousse</td>
<td>X</td>
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</tr>
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<td>Patties</td>
<td>X</td>
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</tr>
<tr>
<td>Tarballs</td>
<td>X</td>
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<td></td>
</tr>
<tr>
<td>Film</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Oil</td>
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**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>
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<tr>
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<td>32</td>
<td></td>
<td>X</td>
<td>X</td>
<td>N</td>
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<tr>
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<td>35</td>
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<td>3</td>
<td>32</td>
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<td>X</td>
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<tr>
<td>4</td>
<td>50</td>
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<td>5</td>
<td>8</td>
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<td>6</td>
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</table>

**COMMENTS**

*Photographs:*

- Roll No. 30/1/98
- Frames 1-5

**REVISION**

- RM 4/5/90
- 30/5

**REVIEWED**

- DIL 4/8/90
SHORELINE ECOLOGICAL SUMMARY

Segment ST/10/ERA  Subdivision A  Date (mo/day/yr) 4/5/90
(24 hr) 1400 - 1630  Biologist Lemon  Snowing with 7 mph NE

(A) Substrate type and % of segments:
1) Bedrock  5  2) Boulder  10  3) Cobble  40  4) Pebble  30  5) Sand  15  6) Silt

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

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

BARNACLES

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<tr>
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<th>Sparse</th>
<th>Rare</th>
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<tr>
<td>1U</td>
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<tr>
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<tr>
<td>1L</td>
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MYTILUS

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<tr>
<td>1M</td>
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GASTROPODS

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FUCUS

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<tbody>
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<td>1</td>
</tr>
<tr>
<td>1M</td>
<td>2</td>
<td>2</td>
<td>X</td>
<td>1</td>
</tr>
</tbody>
</table>

Wildlife Observations/General Comments:
Other noteworthy marine biota: gymnurid amphipods present under every stone, all zones, but not under drift line:
Ossyris actua (brown algae), encrable bivalve, Nucella se., Patella (molluscs) all present:
Haliotis in foliose red algae shared the low zone w/ Fucus. Patella ochracea, ortontes kochii and selea stimpsoni (asteroida) occasionally present in the low zone.
Ecological Considerations:
Fucuses to cause occasional cast up in drift. Fish eggs in low zone.

Terrestrially: deer, bear, and other tracks and scat common on snow and sand.

Checked 2 streams, 3rd one had a cave. Did not check j no fish or good food. Deer harvest, reindeer harvest, hatchery release, finfish harvest, stream spawn.

30/12
XXX Wide
/// Medium
----- Narrow
TTTT Very Light
0000 No Oil

ER-04

Map Key: PWS-170D
Name: R. Marti
Date: 5 April, 1990
Data Entered:
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ER-04

SUBDIVISIONS: B (2 OF 2)
SHORELINE EVALUATION

SEGMENT ST/ER-04 SUBDIVISION B (2 OF 2) DATE 4/5/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Anadromous stream no. 226-50-16436
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
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
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Other constraints as listed above. ADF&G catalogued anadromous stream in Subdivision A.

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 43 m: Narrow 234 m: V.Light 272 m: No Oil 269 m
Subsurface Oil Observed: Yes__ No__ X__ Maximum Depth________

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

COMMENTS: Recommend bioremediation between 6/2 and 7/9. Bioremediation may not be conducted within 100m of anadromous fish stream without prior permission of ADF&G.

TAG COMMENTS: ______________________________________________________
____________________________________________________
____________________________________________________
____________________________________________________

TAG APPROVAL DATE:______________
ADEC ____________________________ FOSC: __________ DATE: __________
EXXON __________________________
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)

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.

Heron nesting (4/1 to 6/15)

Restrict boat traffic to essential minimum. Avoid damage to unveiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

Harbor seal and sea lion pupping (5/15 to 7/1)
Harbor seal and sea lion molting (6/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 600m. 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 ER-04 SUBDIVISION: B DATE 05 APRIL 90

NAME LARRY FLETCHER SIGNATURE

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

1. BIO-REMEDIEATE, OIL COAT AND SPLASH.

ADEC

NAME DAVID M. SABE SIGNATURE

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

THIS BEACH SEGMENT REQUIRES SOME SORT OF TREATMENT:

1. THE UNDERLYING SEDIMENTS (SATURATED TO APPROX. 2 CM) NEED TO BE REMOVED, OIL SHEEN ON ROCK SURFACE SHOWS MOBILITY OF OIL AT THIS TEMPERATURE (49°C).

2. BIO-REMEDIEATE LARGE ROCKS FOR REMOVAL OR COVER.

LAND MANAGER

NAME Leigh Carlson SIGNATURE Leigh Carlson ADRN

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

Public uses for the segment include subsistence deer, finfish and invertebrate harvesting. Recommend bioremediation of oil coat and splash as the oil is not of a consistency to be recovered by manual methods short of removing a portion of the beach.

7 of 12
SHORELINE OILING SUMMARY 06/00/00

USCG: LAND REP: LAND REP: SUBDIVISION: B

AM NO.: 10  TIDE LEVEL: +1m (6) to +0.3m (17) DATE: 04/16/90

ST. SUBDIVISION LENGTH: 7.92 m

UPLANDS DESCRIPTION: Grass: Forest; Rock

SURVEYED FROM: Foot: Boat: Helo

WORKING DIRECTION: S to N

SURFACE SEDIMENTS: R 10%: B 20%: C 40%: P 20%: G 10%: S 10%: M 10%

SLOPE: Lang: Hang: Vert:

WAVE EXPOSURE: Low: Med: High

OIL CATEGORY LENGTH: W: M: Y: N: VL: 3.3 m

SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<tr>
<td>ASPHALT PAVEMENT</td>
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<td>X</td>
<td>V</td>
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PAVEMENT: H: F: G: None sq. m by cm

PATTIES / TARBALLS: <1 bags

NEAR SHORE SHEEN: NO:

WR: RW: SL: TL

NEAR SHORE OIL

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<tr>
<th>OILED DEBRIS</th>
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<td>Trash</td>
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<td>Debris</td>
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Photographs:

Roll No.: 57/10/8
Frames: 9-13

SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | OILED INTERVAL (cm) | Oiled interval <5 cm does not constitute subsurface oil.

COMMENTS

Revision
RM: 4/5/90
20/5

Reviewed: Date: 12/12
### Shoreline Ecological Summary

**Segment:** ST/10/ER 4  
**Subdivision:** B  
**Date:** 4/5/90  
**Time:** 1630 - 1800  
**Biologist:** Lemon  
**Weather:** Snowing; wind 7 mph NE

#### 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
- Moderate
- Low

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

### Barnacles

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### Mytilus

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### Fucus

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**Photographs:**  
**Roll No.:** ST/10/8  
**Frames:** 9-13

**Wildlife Observations/General Comments:**  
Other noteworthy marine biota: Pectenamsis (on bedrock), Solaster sp., Ophiura, clathrates, and Pycnopodium berteri.  
Agerastron sp. were all seen at about 2 meter intervals along the shore.  
Small anemones were found on mid-tidal rocks.  
New settlement found along the drift line and annelid worms in the lower zone.  
One high zone area was left

**Ecological Considerations:**  
1 meter wide and 3 long had a dense mussel cover, otherwise as reported above.

- **Mammals:** deer tracks and other footprints on shore, otter track and bear trails in water.
- **Fish:** many small fish, e.g., salmon, seabirds, seals, and otters.
- **Shells:** common on beach, suggest a nearby bed of shells, perhaps of subsistence value.
- **Deer harvest:** insect from harvest, hatching season, finfish harvest, stream spawning.

**NOTES:**
- Annulare
- 8 of 12
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT ER-4 SUBDIVISION B (2 of 2)

WORK WINDOW

| Bioremediation More Than 100m From Stream | WORK PRIOR TO 7/1 |
| Bioremediation Less Than 100m from stream | WORK PRIOR TO 7/1 (ADF&G MONITOR REQ.) |

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

ADF&G catalogued anadromous stream (226-50-16436 is located in adjacent Subdivision A more than 100m from recommended treatment area. An uncatalogued stream is present in Subdivision B. 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.

1F Sawmll Bay Hatchery Release

Closed to bioremediation prior to 6/1.

7HH Subsistence: Finfish Harvesting

Closed to bioremediation after 7/1.

7II Subsistence: Deer Harvesting

Closed to bioremediation after 8/15.

7JJ Subsistence: Invertebrate Harvesting

No constraint to bioremediation.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or bank. No flushing of pollutants or sediment into stream drainage. Restrict boat and air traffic and beach disturbance to essential minimum after 7/1. Avoid any unnecessary disturbance or damage to unolled biota and substrate.

FOSC ___________________________ Date 6-10-90
Prepared by ___________________________ Date 6/10/90
ECOLOGY MAP
SEGMENT ER-4
SUBDIVISION B (3 of 3)

METERS
0 515 1028
1 inch = 1683 feet

Exxon Company, USA
Map Key:  PWS-ER-4
May 11, 1990 6/4/90

Star: Seabird Colony

Triangle: Eagle Nest

UNCHANGING ANADROMOUS STREAM
TREATMENT AREAS
ANADROMOUS STREAM (R66-50-16436)
ACTIVE NEST
587

EV-61
EV-62
EV-100
ER-0
ER-04
ER-05
ER-06
ER-30

Exxon
SHORELINE EVALUATION

SEGMENT ST/ER-04 SUBDIVISION B (2 OF 2) DATE 4/5/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Anadromous stream no. 226-50-16436
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Other constraints as listed above. ADF&G catalogued anadromous stream in Subdivision A.

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 43 m: Narrow 234 m: V.Light 272 m: No Oil 269 m
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
Tarmat: Removal Beach Cleaner

Other (see comments)

COMMENTS: Recommend bioremediation between 6/2 and 7/9. Bioremediation may not be conducted within 100m of anadromous fish stream without prior permission of ADF&G.

TAG COMMENTS:

TAG APPROVAL DATE: 4/25/90
ADEC [Signature] DATE: 5/3/90
EXXON [Signature]
NOAA [Signature]
USCG [Signature]
1991 MAYSAP EVALUATION

SEGMENT: ER 005 SUB: A REGION: PWS SURVEY DATE: 5/26/91

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

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

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

SHPO Signature: 

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: JUNE 4, 91 FOSC APPROVAL DATE: 6/18/91

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.

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.
I

EXXON

NAME: Wesley Givens 
SIGNATURE: Wesley Givens 

TREATMENT RECOMMENDED

Due to time limits I did not take part in this segment survey, but according to survey members on site, remaining oil was removed.

EXXON

NAME: Ray Sotelo 
SIGNATURE: Ray Sotelo 

TREATMENT RECOMMENDED

No treatable oil remains on this segment so further work recommended or required.

LANDMANAGER

NAME: Dave Blanchett
SIGNATURE: 

TREATMENT RECOMMENDED

Moderate energy environment. Primarily Boulders, Cobble beach, with some High Ancle Ahawaia Boulder/Cobble shoreline. Primarily about 20 Tarballs found in one section of beach. Are Tarballs found were broken up. Very limited possibilities for campsites.

USCG/NOAA

NAME: Mahlin/ Moore 
SIGNATURE: 

TREATMENT RECOMMENDED

Comprised of Boulder, Cobble, Pealess, Gravel Shoreline. 5 pits due to "no subsurface oil." Removed and title tar ball andatty areas. No further treatment required.
**MAYSAP SHORELINE OILING SUMMARY**

**TEAM NO. 3**
OG:  **J. Harper**  
ADEC:  **G. Hume**  
EXXON:  **R. Wetzel**  

**BIO:  **Z. Stolzer**  
**LANDMANAGER:  **M. Blanchet** for USFS  
**USCG/NOAA:  **S. Mooney/J. Dahlia**

**TIME:** 08:00 to 08:30  
**TIDE LEVEL:** 0.3 ft. to 0.8 ft.  
**ENERGY LEVEL:**  

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

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

**TOTAL LENGTH SHORELINE SURVEYED:** 820 m  
**NEAR SHORE SHEEN:**  
- BR
- RB
- SL
- None

**EST. OIL CATEGORY LENGTH:**  
- W 0 m  
- M 0 m  
- N 0 m  
- V 0 m  
- L 0 m  
- US 820 m

### SURFACE OIL CHARACTER

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<td>X</td>
<td>X</td>
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</table>

### DISTRIBUTION:
- C = 10-100%  
- 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:  
- NONE

### SURFACE-SUBSURFACE SEDIMENTS:

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED ZONE CM-CM</th>
<th>CLEAN BELOW (cm)</th>
<th>H2O LEVEL</th>
<th>SHEEN COLOR</th>
<th>PIT ZONE</th>
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### SHEEN COLOR:
- B = Brown  
- R = Rainbow  
- S = Silver  
- N = None

### OG COMMENTS:

An estimated 15 turbelles and patches were collected at the west end subdivision. Following this collection there was no "mapable" surface oil remaining within the segment.

No subsurface oiling was identified in any of the pits.
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 3 DATE 5/26/91
SEGMENT # E205 TIDAL HEIGHT (Range) 0 - 0.5
SUBDIVISION A BIOLOGIST STOKER
SEA STATE Calm WIND SPEED/DIRECTION Calm
PHOTOGRAPHS: ROLL # FRAME #

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

Generally low energy shoreline consisting of mixed substrate pebbles/cobble and cobble/boulder beaches.

Riata on pebbles/cobble beaches includes patches and variably sparse to dense Fucales, dense barnacles and sea urchins; moderately dense to sparse dense algal mats. Extensive and generally dense patches or attached and interbedded Mytilus, clusters of small Pogonias, Nereid worms, partially dense lepadid (Eldora), Scardalia, Nassa, and amphipods.

Riata on cobble/boulder includes in addition to the above, partially dense small holothurians, clusters of small cidarellods (cladocerans), small sea urchins, scolopendra (K. tunicata), Cal globosus, Eustrongylin, Rhynochodes, and small lepadid forms.

No mappable or traceable oil remains on this segment.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

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<th>BIRDS</th>
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</tr>
<tr>
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<tr>
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LAND MAMMALS

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<tr>
<td>Whales/specify</td>
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Shoreline subdivision map showing important biological features attached.
1991 MAYSAP EVALUATION

SEGMENT: ER 005  SUB: A  REGION: PWS  SURVEY DATE: 5/26/91

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

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

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

SHPO Signature: _________________________ Date: __________________

RECOMMENDATIONS:

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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.


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

TEAM NO. 3  SEGMENT E2-05  SUBDIVISION A  DATE 5/26/91

ADEC
NAME Wesley Ghermley  SIGNATURE Wesley Ghermley

☐ NTR  ☑ TREATMENT RECOMMENDED
Due to time limits I did not take part in the segment survey, but according to survey members on site, remaining oil was removed.

EXXON
NAME Rey Sotelo  SIGNATURE Rey Sotelo

☑ NTR
No treatable oil remains on this segment so further work recommended or required.

LANDMANAGER
NAME Dave Blanchett  OF USFS  SIGNATURE J. Reid Blanket

☑ NTR  Moderate energy environment. Primarily Boulder/Cobble Beach, with some high Annie/Average Boulder/Cobble shoreline. Probably about 20 Tarballs found in one section of beach. Are Tarballs found were broken up. Very limited possibilities for cleanups.

USCG/NOAA
NAME Darnell/Creaney  SIGNATURE Jim Creaney

☑ NTR  Comprised of Boulder, Cobble, Pebble, Gravel Shoreline.
5 PHS due to "no subsurface oil." Removed and piled the ball and poker areas. No further treatment required.
OG COMMENTS:
An estimated 15 Tarballs and patties were collected at the West end subdivision. Following this collection there was no "mapable" surface oil remaining within the segment.

No subsurface oiling was identified in any of the pits.
SHORELINE SUBDIVISION MAP SHOWING IMPORTANT BIOLOGICAL FEATURES ATTACHED.
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ER-05 STREAM NO: 226-50-16432 DATE 4/20/90

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)
1F  Sawmill Bay Hatchery release (4/15 to 6/1)
5T-1 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
6Y  Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Bald Eagle nest within 400M of stream 226-50-16432 - see ecology map. Subject stream is located in Subdivision A (1 of 1).

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

SHPO SIGNATURE: ______________________ DATE: 5/19/90

Subsurface Oil Observed: Yes ___ No X ___ Maximum Depth ______

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

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

TAG COMMENTS: ____________________________________________________________

TAG APPROVAL DATE: 5/7/90
ADEC  [Signature]  DATE: 5/15/90
EXXON  [Signature]  FOSC: __________________
NOAA  [Signature]  DATE: 5/15/90
USCG  [Signature]  [Signature]
ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-50-16432
SEGMENT ER-5 SUBDIVISION A

WORK WINDOW

| Tarmat Removal | CLOSED |

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

| 1A,1B Salmon Stream | No constraint to tarmat removal. |
| 1F Sawmill Bay Hatchery Release | No constraint to tarmat removal. |
| 5T Bald Eagle Nest | Closed to tarmat removal. USFWS bald eagle impact assessment completed on 5/26/90 by Mike Lockhart indicates an active nest within 400m of the work area. |
| 711 Subsistence: Deer Harvesting | No constraint to tarmat removal. |

OTHER ECOLOGICAL CONSIDERATIONS

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

SEE SUBDIVISION CONSTRAINT ADDENDUM ER-5A FOR ADDITIONAL CONSTRAINT INFORMATION.

TAG APPROVAL DATE 6/04/90
ADEC Ray Mague 6/04/90
EXXON Andy Ten 6/04/90
NOAA John C. Haff 6/04/90
USCG J. Michael 6/04/90
FOSC Date 6/04/90

Prepared by
date 6/3/90
Incorporates information from USFWS bald eagle survey 5/26/90.

Activated Eagle Nest

Ecology Map
Segment ER-5
Subdivision A

Meters

Exxon Company, USA
Map Key: FWS-ER-5
May 11, 1990

1 inch = 1346 feet
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ER-05  STREAM NO: 226-50-16432  DATE 4/20/90

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)
1F  Sawmill Bay Hatchery release (4/15 to 6/1)
5T-1 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
6Y  Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Bald Eagle nest within 400M of stream 226-50-16432 - see ecology map. Subject stream is located in Subdivision A (1 of 1).

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).

EHPO SIGNATURE:  DATE:
Subsurface Oil Observed: Yes No X  Maximum Depth

RECOMMENDATIONS:
_____ No Treatment Recommended
X  Treatment Recommended
_____ Manual Pickup
_____ Bioremediation
X  Tar mat Removal

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

COMMENTS: Recommended treatment is manual removal of tar mat as indicated on sketch map. Work should be conducted between 6/1 and 7/10 based on above constraints, with approval of USFWS regarding eagle nest.

TAG COMMENTS:

TAG APPROVAL DATE: 5/7/90
ADEC  EXXON  NOAA  USCG
ANT WILSON  M. L. PIEPER  J. F. HUGGINS  C. W. HETTER

FOSC:  DATE: 5/15/90
ANADROMOUS FISH STREAM ASSESSMENT

REGION: PRINCE WILLIAM SOUND
SEGMENT: ER-05
STREAM NO: 226-50-16432
SEGMENT ST/ER-05  STREAM NO: 226-50-16432  DATE 4/20/90

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)
1F  Sawmill Bay Hatchery release (4/15 to 6/1)
ST-1  All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
6Y  Recreation: Special use destination
7II  Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Bald Eagle nest within 400M of stream 226-50-16432 - see ecology map. Subject stream is located in Subdivision A (1 of 1).

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: __________________

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: Recommended treatment is manual removal of tarmat as indicated on sketch map. Work should be conducted between 6/1 and 7/10 based on above constraints, with approval of USFWS regarding eagle nest.

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 without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or lnlpol application, prior to at least July 1 unless authorized by ADF&G. Treatment which will affect nearshore oil or toxicity levels, such as manual or mechanical 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 lnlpol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

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

1D Esther Hatchery release (4/15 to 6/1)
1E Main Bay Hatchery release (4/20 to 6/10)
1F 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 lnlpol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Peitz 424-3214
PWS Aquaculture Association John McMillan or Bruce Suzomoto 424-7511

1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 8/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)

Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or lnlpol 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

3H Harling 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 uncold intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or lnlpol 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

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 and 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 Rothe 267-2206

All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6G 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

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

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

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

SEGMENT ST / ER-006  SUBDIVISION:  236-50-16432  DATE 4-20-96

USCG
NAME Kerwin L. Dreher  SIGNATURE  5002 H. R. Lischer

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

ADFC

NAME Amee Wessman  SIGNATURE  Amee Wessman

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

Manually remove scattered tar matts and sporadic asphalt patches on NW side of stream. Coverage includes an area 9ft x 4ft x 4cm of broken tar matt and 4ft x 1m x 4cm of sporadic tar matts. No bioremediation recommended.

LAND MANAGER

NAME  NAME  SIGNATURE

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS
## Shoreline Oiling Summary

**OG: CAL LARSON**
**USCG, Orygen, GW**
**TEAM NO:** 14

### 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>
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<td>✓</td>
</tr>
<tr>
<td>No Oil</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

**Pavement H F:** 2.5 sq. m by 1/c

**Patties/Tarballs:** BAGS

**Near Shore Sheen?** Yes

**Oiled Debris:** Log, Vegetation, Trash, Debris

**Did You Collect Debris?** Yes

**Type:** 1

**Photographs:**
- Roll No.: 2
- Frames: 1-10

### 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>Sheen</th>
<th>(Mm)</th>
<th>Surface Subsurface Sediments</th>
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</tbody>
</table>

**Comments:** Broken top mat, asphalt patch and oil in stream

**Reviewed:** SW Date: 4-24-90
**ADFG Multi-Assessment Data Form**

1 **Survey Type:** 3S, 05, TS, AVS, SCA, WIS, FTA  
2 **Region:**  
3 **Method:** Aerial  
4 **Date:** 4-20-90  
5 **Start Time:** 1510  
6 **Stop Time:** 1535  
7 **Segment:** ER-5  
8 **Station #:** 10  
9 **UTM:**  
10 **Station Area:** 20  
11 **Long:**  
12 **Source:**  
13 **Location:** Sitka, AK  
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>
</tbody>
</table>

27 **Surface Coverage:**  
28 **Surface Thickness:** 4.5 cm  
29 **Penetration:** 4.5 cm  
30 **Overall Oil Impact:** NVL | L | H | N  
31 **Oil Types:** Pooled, Mousse, Asphalts, Sticky, Seal  
32 **Oiled Debris:** Y | N  
33 **Shoreline Type:** Headland, Low-lying Rocks, Lagoon, Marsh, Cove  
34 **Wave Exposure:** High, Moderate, Low  
35 **Substrate Type:** Bedrock | Boulder | 20% | Cobble | 25% | Gravel | 55% | Sand | Mud/silt  

36 **Cataloged Aviad. Fish Presence:** Y | N  
37 **Catalog #:** 27-6-50-11432  
38 **Stream Name:**  
39 **Oil in Stream Bed:** Y | N  
40 **Oil on Stream Bank:** Y | N  
41 **Oil on Beach Adjacent to Mouth:** Y | N  
42 **Oil Within 1 Mile of Stream:** Y | N  
43 **Anomalous Fish Presence:** Y | N  
44 **Anomalous Fish Observation:**  

**Comments:**  
- Marine bird debris in upper water.  
- In oil slick.  
- Oil on shore from 0-10 feet to 1-2 feet.  
- 98m x 4m x 1m.  
- 4m x 1m x 10m.  
- Marine debris asphalt.
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT ER-5 SUBDIVISION A (1 of 1)

WORK WINDOW

<table>
<thead>
<tr>
<th>Manual Pickup &amp; Tarmat Removal</th>
<th>More Than 400m From Eagle Nest</th>
<th>OPEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual Pickup &amp; Tarmat Removal</td>
<td>Less Than 400m From Eagle Nest</td>
<td>CLOSED</td>
</tr>
<tr>
<td>Bioremediation More Than 400m From Eagle Nest</td>
<td>WORK PRIOR TO 8/15</td>
<td>CLOSED</td>
</tr>
<tr>
<td>Bioremediation Less Than 400m From Eagle Nest</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream
ADFG catalogued anadromous stream (226-50-16432) is present in Subdivision A. This subdivision is closed to bioremediation less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation is permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation more than 100m from stream. No constraint to manual pickup and tarmat removal.

1F Sawmill Bay Hatchery Release Area
No constraint to manual pickup and tarmat removal; closed to bioremediation prior to 6/1.

5T Bald Eagle Nest
USFWS bald eagle Impact assessment completed on 5/26/90 by Mike Lockhart indicates an active nest within 400m of the work area. Closed to manual pickup, tarmat removal and bioremediation less than 400m from active nest. No constraint to manual pickup, tarmat removal and bioremediation more than 400m from nest.

7II Subsistence: Deer Harvesting
No constraint to manual pickup and tarmat removal; closed to bioremediation after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. No flushing of pollutants or sediments into stream drainage; 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. No personnel or boats within 400m of active nest. Restrict boat and air traffic and all disturbance to essential minimum. Air approach and takeoff from and to seaward only; maintain horizontal, 300m vertical distance from nests. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM (STREAM NO. 226-50-16432) FOR ADDITIONAL CONSTRAINT INFORMATION

FOSC
DATE 6-10-90
Incorporates information from USTWOS bald eagle survey 5/26/90.

ECOLOGY MAP

SEGMENT ER-5

SUBDIVISION A ( _ of _ )

METERS

0 610 1220

1 inch = 1346 feet

Waters

EXXON

Exxon Company, USA

Map Key: PMS-ER-5

May 11, 1990

Eagle Nest

Seabird Colony

ANADROMOUS STREAM

226-50-16432

Work Area

ER-04

ER-05

ER-07

ER-09

ER-06

Active SBY

ANADROMOUS STREAM

226-50-16436

Inactive

Seabird Colony

Eagle Nest

EXXON

Exxon Company, USA

Map Key: PMS-ER-5

May 11, 1990

Eagle Nest

Seabird Colony
SEGMENT ST/ER-05  SUBDIVISION A (1 OF 1)  DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Salmon stream mouth (no. 16436): Salmon fry outmigration (1A) - 3/1 to 5/15 and spawning (1B) - 7/10 to 8/31; Sawmill Bay Hatchery release (1F) - 4/15 to 6/1. Contact ADF&G for dates and locations.
Deer harvest (7II) - 8/15 to 2/28. Special use area (6Y) - 6/1 to 9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: No disturbance of stream bed or banks unless authorized by ADF&G. Contact ADF&G Habitat Division prior to treatment for permit. Avoid disturbance/damage to unoiled biota and substrate.

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

SHPO SIGNATURE: Charles Z. Hines DATE: April 12, 1990

OILING CATEGORIZATION:
Wide 0 m; Medium 0 m; Narrow 342 m; V.Light 208 m; No Oil 270 m
Subsurface Oil Observed: Yes___ No X___ Maximum Depth_____

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


See Constraint Addendum Dated 6/9/90

TAG COMMENTS:

TAG APPROVAL DATE: 4/12/90

ADEC JOHN BAUER
EXXON
NOAA Buoy 1549
USCG M.J. Hall
SHORELINE EVALUATION

SEGMENT ST/...ER-05 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Salmon stream mouth (no. 16436); Salmon fry outmigration (1A) - 3/1
to 5/15 and spawning (1B) - 7/10 to 8/31; Sawmill Bay Hatchery re­
lease (1F) - 4/15 to 6/1. Contact ADF&G for dates and locations.
Deer harvest (TII) - 8/15 to 2/28. Special use area (6Y) - 6/1 to
9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: No disturbance of stream bed or
banks unless authorized by ADF&G. Contact ADF&G Habitat Division
prior to treatment for permit. Avoid disturbance/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 a member of Exxon's Cultural Re­
source Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: Charles Z. Holdman DATE: April 12, 1990

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 342 m: V.Light 208 m: No Oil 270 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:
X 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: __F Breakup ___Spot Washing: Wands
X Removal ___Beach Cleaner
___ Other (see comments)

COMMENTS: Breakup and remove tarmats. Manual pickup of scattered
tarballs. Bioremediation of coated area shown on sketch map. Work
between 5/15 - 7/10 based on constraints.

TAG COMMENTS: ________________________________

TAG APPROVAL DATE: 4/20/90

ADEC JOHN BAEK
EXXON
NOAA
USCG

TAG APPROVAL DATE: 4-19-90
SEGMENT ST/ER05
SUBDIVISION_A
DATE: 05 /April 90

CHECKLIST
- [ ] Amper
- [ ] Approx. Scale
- [ ] Beg/End Bedrock
- [ ] Ch Dist.
- [ ] Width
- [ ] Length
- [ ] % Cover
- [ ] Substrate Character
- [ ] Est. Haul/WL
- [ ] SSL
- [ ] Profile Location(s)
- [ ] Plot(s)
- [ ] Pit Location(s)
- [ ] Photo Location(s)

LEGEND
- [ ] Pr. No Subsurface Oil
- [ ] Pr. Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oiled Vegetation
- [ ]

Photo location, direction, and number

SKETCH MAP

- Sediments change suddenly at the creek, becoming well sorted, pebbles, granules, sand.
- 0.5m wide, 25% cover, calcite, layer with 3cm
- PAVEMENT: 2m wide asphalt, 50% cover, dark brown, in LITZ
- 2m wide asphalt, reappears in LITZ, runs ~30m and then disappears, 50%
- ER-05

PAVEMENT: 2m wide in LITZ, 65% cover, runs up under show in LITZ

油 Character Length (m): AP 370 PO CV CT 20 ST MS PT TB 135 FL NO

Area Calculations:
1. 46m x 2m x 0.65 = 31 m²
2. 60m x 1m x 0.50 = 30 m²
3. 30m x 2m x 0.50 = 30 m²
SEGMENT ST/ER-06  SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Salmon stream no. 226-50-16432 and 16430
1A  Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B  Salmon stream mouth - spawning (7/10 to 8/31)
1F  Sawmill Bay hatchery release (4/15 to 6/1)
5T  All bald eagle nest (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)
6U  Recreation: Tent sites (6/1 to 9/15)
7HH Subsistence area: Finfish harvesting
7II Deer harvesting (8/15 to 2/28)
7JJ Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

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

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

SHPO SIGNATURE: Charles E. Stone DATE: 4/18/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 125 m: V.Light 0 m: No Oil 415 m
Subsurface Oil Observed: Yes X No Maximum Depth 7+ 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
X Tarmat: Breakup ___ Beach Cleaner
X Removal ___ Other (see comments)

COMMENTS: Recommend removal of tarmat and bioremediation as shown on sketch map. Work should be conducted between 6/1 and 7/10 as a result of hatchery and salmon constraints and with the approval from ADF&G and USFWS regarding eagle nest.

TAG COMMENTS:

TAG APPROVAL DATE: 4/18/90
ADEC JOHN BAILEY  DATE: 4/22/90
EXXON ALAN W. HURST  DATE: 4/22/90
NOAA Brian Westcott  DATE: 4/22/90
USCG C.A. Beet  DATE: 4/22/90
Note:
Pit #1 7cm deep OP/UD
Rainbow sheen on water
at 6cm. Oil is dark brown. Basal sediments are dark brown.

ER-06

No oil in boulder veneer over bedrock

Bedrock, with a veneer of angular cobbles, boulder, pebble

Rock headland

 bolsters, cobbles!

No oil

<1%

1.8m

11.5m

EAST

WEST

0 100 200 300 METERS

LEGEND

1 Δ

Ft - No Subsurface Oil

2 Δ

Ft - Subsurface Oil

CT/E

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

Oiled Vegetation

1 Φ

Proto location, direction, and number

Oil Character Length (m): AP_90 PO_18 CV_18 OT_08 ST_02 MS_01 PT_01 TB_01 FL_01 NO_468
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ER-06

SUBDIVISIONS: A (1 OF 1)
SEGMENT ST/ER-06 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Salmon stream no. 226-50-16432 and 16430
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
1F Sawmill Bay hatchery release (4/15 to 6/1)
5T All bald eagle nest (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)
6U Recreation: Tent sites (6/1 to 9/15)
7HH Subsistence area: Finfish harvesting
7II Deer harvesting (8/15 to 2/28)
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See attached Ecological Constraint sheet for specific constraints and contacts.

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

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

SHPO SIGNATURE: ____________________ DATE: ____________________

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 125 m: V.Light 0 m: No Oil 415 m
Subsurface Oil Observed: Yes X No Maximum Depth 7+ 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: __ Breakup __ Beach Cleaner
 X Removal __ Other (see comments)

COMMENTS: Recommend removal of tarmat and bioremediation as shown on sketch map. Work should be conducted between 6/1 and 7/10 as a result of hatchery and salmon constraints and with the approval from ADF&G and USFWS regarding eagle nest.

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

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

1C. Salmon fry nursery area (4/31 to 7/31)
1D. Esther Hatchery release (4/15 to 6/1)
1E. Main Bay Hatchery release (4/20 to 5/10)
1F. Sawmill Bay Hatchery release (4/15 to 6/1)
1G. Cannery Creek Hatchery release (4/21 to 6/1)
1H. Remote release site
1I. Gill net area (6/7 to 8/31)
1J. Purse seine area (7/20 to 9/30)
1K. Purse seine hook-off (7/20 to 9/30)
1L. Set net sites (6/11 to 7/25)

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

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

Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

3N, 3P
3O, 3Q

Harbor seal and sea lion pupping (6/15 to 7/1)
Harbor seal and sea lion molting (8/15 to 9/15)

Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 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. Seabird/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. Special use destination
6V. Anchorages (6/1 to 9/15)
6W. Forest Service cabins (6/1 to 9/15)
6X. Lodge (6/1 to 9/15)
6Y. Special use destination

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

7H. Finfish harvesting
7I. Deer harvesting (6/15 to 2/28)
7J. Invertebrate harvesting

For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
SEGMENT ST 1 FR-06  SUBDIVISION: A   DATE 04 APRIL 90

USCG
NAME  LARRY FLETCHER  SIGNATURE
☐ NO TREATMENT RECOMMENDED  ☒ TREATMENT SUGGESTED

COMMENTS
1. MANUALLY REMOVE ASPHALT.
2. BIO-REMEDiate.

ADEC
NAME  DAVID M. SACE  SIGNATURE
☐ NO TREATMENT RECOMMENDED  ☒ TREATMENT SUGGESTED

COMMENTS
1. MANUALLY REMOVE TAR BALLS, ASPHALT AND SATURATED
   SEDIMENTS TO 3-4 CM.

LAND MANAGER
NAME  LEIGH CARLSON  SIGNATURE  LEIGH CARLSON ADNR
☐ NO TREATMENT RECOMMENDED  ☒ TREATMENT SUGGESTED

COMMENTS
Public uses for the segment include recreation and tent sites
and subsistence harvesting of deer, finfish and invertebrates.
Recommend manual removal followed by bioremediation.
### SHORELINE OILING SUMMARY

**OG:** 6, NO2  
**USCG:** LARRY FLETCHER  
**SEGMENT:** ST  
**ER:** 06  
**BIO:** 6, Lumber  
**LAND REP:** Land Rep.  
**CENTR:** Center  
**SUBDIVISION:** A  
**EXXON:** J. Carro Del.  
**DATE:** 1990  
**TIDE LEVEL:** 0.3 m (1.1 ft)  
**DATE:** 04/18/90  
**TIME:** 00:30  
**TEAM NO.:** 10  
**WORKING DIRECTION:** W to E  
**UPLANDS DESCRIPTION:**  
- Grass  
- Forest  
- Rock  
**SURVEYED FROM:**  
- Foot  
- Boat  
- Helo  
**SLOPE:**  
- Lang 90%  
- Hang 0%  
- Ven 10%  
**WAVE EXPOSURE:**  
- Low  
- Med  
- High  
**OIL CATEGORY LENGTH:**  
- W 0 m  
- M 0 m  
- N 11.9 m  
- VL 0 m  
- NO 408 m  

#### SURFACE OIL

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**PAVEMENT:** H F  
**SURFACES:** Oiled  
**PATTIES / TARBALLS:** 0  
**BAGS:** 2  
**NEAR SHORE SHEEN?** NO  
**BR:** RW SL TL  

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

**DEBRIS COLLECTED:**  
- YES  
- NO  

**OILED AMOUNT:**  
- 3 M  
- 6 M  
- LG  

**PHOTOS:**  
- Roll No. 5T/10/7  
- Frames 25-28  

### SUBSURFACE OIL

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**REVIEWED**  
**DATE:** 4/9/90  

**COMMENTS**  
**Page 1 of**
Note:
Pit #1 7cm deep OP/UD
Rainbow sheen on water
at 6cm. Oil is dark brown.
Basal sediments are dark brown.

ER-06

No oil in boulder veneer over bedrock

Bedrock with a veneer of angular cobble, boulder, pebble

Rock headland

Bedrock, clean

Coves: light brown
becomes incipient
pavement

Covers: oil
< 10%.

No oil in
bedrock

CT/C
Continous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oiled Vegetation

Photo location, direction, and number

Oil Character Length (m): AP_90_ PO_ CV_118_ CT_ ST_ MS_ PT_ TB_ FL_ NO_408
SHORELINE ECOLOGICAL SUMMARY

Segment ST/10 ER's Subdivision: AT Date (mo/day/yr): 4/4/90
Time (24 hr): 1300 - 1600 Biologist: Lemon Rain

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

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

(C) Density, substrate preference (% of segment):
Vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (3)

BARNACLES

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NOT PRESENT

Wildlife Observations/General Comments: Anthodesma xanthogrammatica in high tide pool; lots of Rhodophyta in low zone includes Halosaccion; also sparrow (Amelida)

Ecological Considerations: Invertebrate harvest, spawning, deer harvest, hatchery release, fish harvest, Tent spots, bald eagle nest
ER-07

ER-06

ER-09

No 2.6 390 408
Light 0.75 113 18 526

Map Key: PWS-172
Name: Richard Marty
Date: 4 April 1990
Date Entered:

WIDE

MEDIUM

NARROW

VERY LIGHT

N0 OIl

100 200 300 400
METERS

ADEC Segment Length: 560m
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT ER-6 SUBDIVISION A (1 of 1)

WORK WINDOW

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<tr>
<th>Constraint</th>
<th>Status</th>
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<tr>
<td>Tarmat Removal More Than 400m From Eagle Nest</td>
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<td>Tarmat Removal Less Than 400m From Eagle Nest</td>
<td>CLOSED</td>
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<tr>
<td>Bioremediation Less Than 400m From Eagle Nest</td>
<td>CLOSED</td>
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<tr>
<td>Bioremediation More Than 400m From Eagle Nest and Less Than 100m From Stream</td>
<td>WORK PRIOR TO 7/10 (ADF&amp;G MONITOR REQ.)</td>
</tr>
</tbody>
</table>

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B  Salmon Streams
ADFG catalogued streams (226-50-16430, 16432) are present in Subdivision A. This subdivision is closed to bioremediation less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation is permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation more than 100m from stream. No constraint to tarmat removal.

1F  Sawmill Bay Hatchery Release
No constraint to tarmat removal; closed to bioremediation prior to 6/1.

1K  Purse Selne Hook-off
No constraint to tarmat removal; closed to bioremediation after 7/20.

5T  Bald Eagle Nest
USFWS bald eagle impact assessment completed on 5/26/90 by Mike Lockhart indicates an active nest within 400m of the work area. Closed to tarmat removal and bioremediation less than 400m from active nest. No constraint to tarmat removal and bioremediation more than 400m from nest.

7HH  Subsistence: Finfish Harvesting
No constraint to tarmat removal and bioremediation.

7II  Subsistence: Deer Harvesting
No constraint to tarmat removal; closed to bioremediation after 8/15.

7JJ  Subsistence: Invertebrate Harvesting
No constraint to tarmat removal and bioremediation.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or bank. 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 all disturbance to essential minimum. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Avoid any unnecessary disturbance or damage to uncollected biota and substrate.

SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM (STREAM NO. 226-50-16430)
FOR ADDITIONAL CONSTRAINT INFORMATION

FOSC  DATE 6-10-90
Incorporates information from USFWS bald eagle survey 5/26/90.

ECOLOGY MAP
SEGMENT ER-6
SUBDIVISION A_ (_ of _) Meters

EXxon Company, USA
Map Key: PWS-ER-6
May 11, 1990

1 inch = 1251 feet

- Seabird Colony
- Eagle Nest
SHORELINE EVALUATION

SEGMENT ST/ER-06 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Salmon stream no. 226-50-16432 and 16430
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
1F Sawmill Bay hatchery release (4/15 to 6/1)
5T All bald eagle nest (3/1 to 6/1) - Active eagle nest (3/1 to 9/1)
6U Recreation: Tent sites (6/1 to 9/15)
7HH Subsistence area: Finfish harvesting
7II Deer harvesting (8/15 to 2/28)
7JJ Invertebrate 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 a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: Charles E. Jensen DATE: 4/18/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 125 m: V.Light 0 m: no Oil 415 m
Subsurface Oil Observed: Yes X No Maximum Depth 7+ 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
X Tarmat: Breakup --- Beach Cleaner
X Removal --- Other (see comments)

COMMENTS: Recommend removal of tarmat and bioremediation as shown on sketch map, Work should be conducted (between 6/1 and 7/10) as a result of hatchery and salmon constraints and with the approval from ADF&G and USFWS regarding eagle nest.

TAG COMMENTS:

---

TAG APPROVAL DATE: 6/18/90
ADEC JOHN BAILEY DATE:
EXXON DATE:
NOAA DATE:
USCG DATE:
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ER-6 A STREAM NO: 226-50-16430 DATE 4/20/90

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)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
6U Recreation: Tent sites (6/1 to 9/15)
7HH Subsistence area: Finfish harvesting
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7JJ Subsistence area: Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Bald eagle nest is possibly within 400 M of stream 226-50-16430- see ecology map.

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

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

Subsurface Oil Observed: Yes ___ No X ___ Maximum Depth _____

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

COMMENTS: Recommended treatment includes manual removal of tarmat and manual pickup of mousse patties. Work should be conducted between 6/1 and 7/10 based on constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 5/15/90
ADEC Art Werner DATE: 5/15/90
EXXON [Signature] D. D. Rome
NOAA Bar (Wasson) [Signature] NOAA
USCG [Signature] NOAA

[Handwritten notes and signatures]
DATE 1/18/80

CHECKLIST
- N Areas
- Approx. Scale
- Seg/Sec/Block
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. NR/ALWL
- SSL
- Profile Location(s)
- Portion(s)
- Pt Location(s)
- Photo Location(s)

LEGEND
- Δ
  - Pt - No Subsurface Oil
- PT
  - Pt - Subsurface Oil

CT/C
Concentration Distribution

CT/B
Broken Distribution

CT/D
Pocky Distribution

CT/S
Splashed Distribution

 freelance
Old Vegetation

N
North

Oil Character Length (m): AP OC CV CT ST MS PFT TB FL NO
Comments by Ken Critchlow:
I agree with ADFC's recommendation. KRC

Sample taken
Photo frame # and
ER-07

ER-06

ER-09

ER-

SUBJECT
ANOMALOUS
STREAM

ER-06-A
(LOF B)

Map Keys: PWS-172
Name: Richard Nery
Date: 4 April 1990
Date Entered:

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

ADEC Segment Length: 540m

0 100 200 300 400 METERS
ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-50-16430

SEGMENT ER-6 SUBDIVISION A

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B. Salmon Stream

ADF&G catalogued anadromous streams (226-50-16430 and -16432) are on the two boundaries of Subdivision A. No constraint to manual pickup and tarmat removal.

1F. Sawmill Bay Hatchery Release

No constraint to manual pickup and tarmat removal.

1K. Purse Seine Hook-off

No constraint to manual pickup and tarmat removal.

5T. Bald Eagle Nest

NO CONSTRAINT. Bald eagle nest is more than 400m from work site.

7HH. Subsistence: Finfish Harvesting

No constraint to manual pickup and tarmat removal.

7II. Subsistence: Deer Harvesting

No constraint to manual pickup and tarmat removal.

7JJ. Subsistence: Invertebrate Harvesting

No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Restrict boat and air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 300m horizontal, 300m vertical distance from active nests. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

SEE SUBDIVISION CONSTRAINT ADDENDUM ER-6A FOR ADDITIONAL CONSTRAINT INFORMATION.
Incorporates information from USFWS bald eagle survey 5/26/90.

**Exxon Company, USA Map Key: Pho-ER-6 May 11, 1990**

**ECOLOGY MAP**

**SEGMENT ER-6**

**SUBDIVISION A** (of I)

**METERS**

[Diagram showing locations labeled ER-05, ER-06, ER-07, ER-08, ER-09, with symbols for seabird colony and eagle nest.]

Anadromous Stream Evaluation: 226-50-16450

1 inch = 1251 feet
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ER-6 A  STREAM NO: 226-50-16430  DATE  4/20/90

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)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
6U Recreation: Tent sites (6/1 to 9/15)
7HH Subsistence area: Finfish harvesting
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7JJ Subsistence area: Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. Bald eagle nest is possibly within 400 M of stream 226-50-16430 - see ecology map.

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

SHPO SIGNATURE: __________________________ DATE: 5/9/90

Subsurface Oil/Observed: Yes___ No X___ Maximum Depth_____

RECOMMENDATIONS:

<table>
<thead>
<tr>
<th></th>
<th>No Treatment Recommended</th>
<th>Snare/Absorbent Booms</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>Treatment Recommended</td>
<td>Oil Snares (pom poms)</td>
</tr>
<tr>
<td></td>
<td>Manual Pickup</td>
<td>Absorbents (pads, rolls, etc)</td>
</tr>
<tr>
<td></td>
<td>Bioremediation</td>
<td>Spot Washing: Wands</td>
</tr>
<tr>
<td>X</td>
<td>Tarmat Removal</td>
<td>Beach Cleaner</td>
</tr>
</tbody>
</table>

___ Other (see comments)

COMMENTS: Recommended treatment includes manual removal of tarmat and manual pickup of mousse patties. Work should be conducted between 6/1 and 7/10 based on constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 5/9/90
ADEC Art Werneke
EXXON                        DATE: 5/15/90
NOAA Basil Warten
USCG D. D. Rome
ANADROMOUS FISH STREAM ASSESSMENT

REGION: PRINCE WILLIAM SOUND

SEGMENT: ER-06 A

STREAM NO: 226-50-16430
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ ER-6 A STREAM NO: 226-50-16430 DATE 4/20/90

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)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
6U Recreation: Tent sites (6/1 to 9/15)
7HH Subsistence area: Finfish harvesting
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7JJ Subsistence area: Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Bald eagle nest is possibly within 400 M of stream 226-50-16430- see ecology map.

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: ___________________

Subsurface Oil Observed: Yes__ No X__ Maximum Depth ______

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

COMMENTS: Recommended treatment includes manual removal of tarmat and manual pickup of mousse patties. Work should be conducted between 6/1 and 7/10 based on constraints.

TAG COMMENTS: _____________________________________________________

TAG APPROVAL DATE: __________
ADEC  ___________________________  FOSC: _______________ DATE: ______
EXXON  ___________________________  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 without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or lnipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.

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

1C Salmon fry nursery area (4/31 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or lnipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

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

1D Esther Hatchery release (4/15 to 6/1)
1E Main Bay Hatchery release (4/20 to 6/10)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/12 to 6/1)
1H Remote release sites
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or lnipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.

AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214 1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzomoto 424-7511

1I Gill net area (6/7 to 6/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or lnipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

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

2M Herring spawning (4/1 to 6/15)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unooled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or lnipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

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

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of lnipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235 ADF&G Don Calkins 267-2403

5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377 ADF&G Tom Rothy 267-2206

5Tf All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6A Recreation: Tent sites (8/1 to 9/15)
6B Anchorage (8/1 to 9/15)
6C Forest Service cabins (8/1 to 9/15)
6D Lodge (8/1 to 9/15)
6E Special use destination

6F Subsistence area: Salmon harvesting (5/1 to 9/30)
6G Finish harvesting
6H Deer harvesting (9/15 to 2/28)
6I Invertebrate harvesting

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

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

SEGMENT 58-008 A  SUBDIVISION: 226-50-16930  DATE 4-20-90

USCG
NAME  Kerwin L. Dreherr  SIGNATURE  CWO 2 R. L. Dreherr

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

ADF
NAME  Rick Gusti  SIGNATURE  Richard J. Gusti

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

Our recommendations include shoveling and bagging of mossy paddies and picking up any oiled debris (grasses etc.)
If any finer sediments are found with oil in them, remove these.
No bio remediation recommended.

The upper intertidal small storm berm on the south side of creek has oil paddies and some oiled sediments.
Oiled sediments/mossy paddies continue in broken bands up to stream edge. There are some paddies at the base of the bluff and the large upper intertidal log.
The south side of stream upper intertidal layer has broken paddies and mats.
<table>
<thead>
<tr>
<th>Surface Oil</th>
<th>Subsurface Oil</th>
<th>Pavement</th>
<th>Upland Description</th>
<th>Surface Sediments</th>
<th>Oiled Amount</th>
<th>Debris Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pit No. 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pit No. 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pit No. 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Oil Category:
- W: Water
- M: Mud
- N: Mud
- V: Viscous
- N: Near

Surface Sediments:
- R: Rock
- B: Boulders
- H: Halloysite
- G: Gravel

Oiled Amount:
- Low
- Medium
- High

Debris Type:
- Bags
- Bales
- Debris

Upland Description:
- Hard
- Soft
- Forest
- Bog
- Slough
- Mud
- Sand
- Snow

Pavement:
- Paved
- Unpaved

Comments:
- Oiled interval < 5 cm
- No Shoreline Oil

Photographs:
- Roll No. 18-24

OLR: 6-28-16
REVIEWED: 6-28-16
**AFDAM MULTI-ASSESSMENT DATA FORM**

<table>
<thead>
<tr>
<th>Method</th>
<th>Aerial</th>
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<tbody>
<tr>
<td>Date</td>
<td>9-20-40</td>
</tr>
<tr>
<td>Start Time</td>
<td>14:26</td>
</tr>
<tr>
<td>Stop Time</td>
<td>16:30</td>
</tr>
<tr>
<td>Station</td>
<td>19</td>
</tr>
<tr>
<td>Tide Ht at Survey</td>
<td>Flood Stack</td>
</tr>
<tr>
<td>Ebb</td>
<td>Stack</td>
</tr>
<tr>
<td>Roll 1</td>
<td>12.64</td>
</tr>
<tr>
<td>Frames</td>
<td></td>
</tr>
<tr>
<td>Stat Area</td>
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<tr>
<td>USCG Quad</td>
<td></td>
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<tr>
<td>Lat</td>
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<td>Source</td>
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<tr>
<td>Location</td>
<td>Shingleton Jr.</td>
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<td>Description</td>
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**Extent of Oil**

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<tr>
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<th>Stream</th>
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<tbody>
<tr>
<td>L</td>
<td>N</td>
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**Surface Coverage**

<table>
<thead>
<tr>
<th>27 Surface Coverage</th>
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<tbody>
<tr>
<td></td>
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**Surface Thickness**

<table>
<thead>
<tr>
<th>28 Surface Thickness</th>
<th></th>
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<tbody>
<tr>
<td>20</td>
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**Penetration**

<table>
<thead>
<tr>
<th>29 Penetration</th>
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<tbody>
<tr>
<td>8 mm</td>
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**Overall Oil Impact**

<table>
<thead>
<tr>
<th>30 Overall Oil Impact</th>
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<tbody>
<tr>
<td>High</td>
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**Oil Type**

<table>
<thead>
<tr>
<th>31 Oil Type</th>
<th></th>
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<tbody>
<tr>
<td>Pooled House</td>
<td>Asphalt</td>
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**Oiled Debris**

<table>
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<tr>
<th>32 Oiled Debris</th>
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<tbody>
<tr>
<td>0</td>
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</tbody>
</table>

**Shoreline Type**

<table>
<thead>
<tr>
<th>33 Shoreline Type</th>
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<tbody>
<tr>
<td>Headland</td>
<td></td>
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</table>

**Wave Exposure**

<table>
<thead>
<tr>
<th>34 Wave Exposure</th>
<th></th>
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<tbody>
<tr>
<td>High</td>
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**Substrate Type**

<table>
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<tr>
<th>35 Substrate Type</th>
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<tbody>
<tr>
<td>Gravel 25</td>
<td>Sand</td>
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**Cataloged Abad. Fish Present**

<table>
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<th>36 Cataloged Abad. Fish Present</th>
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<tbody>
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**Oil in Stream Bed**

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<th>37 Oil in Stream Bed</th>
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<tbody>
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**Oil on Stream Banks**

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<tr>
<th>38 Oil on Stream Banks</th>
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**Oil on Beach Adjacent to Mouth**

<table>
<thead>
<tr>
<th>39 Oil on Beach Adjacent to Mouth</th>
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<tbody>
<tr>
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**Miles from Beach**

<table>
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<th>40 Miles from Beach</th>
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<tbody>
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**Anomalous Fish Present**

<table>
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<tr>
<th>41 Anomalous Fish Present</th>
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</thead>
<tbody>
<tr>
<td>0</td>
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**Anomalous Fish Observation**

<table>
<thead>
<tr>
<th>42 Anomalous Fish Observation</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Species</td>
<td></td>
</tr>
<tr>
<td>Aerial</td>
<td>Ground</td>
</tr>
</tbody>
</table>

**Comments**

- Upper intertidal area with broken, boulder, cobble and sand, and vegetation.
- Ephemeral coastal beach and dunes with little vegetation.
- Upper intertidal area with broken, cobble, and sand, and vegetation.
**Comments by Ken Critchlow:**

I agree with ADFG's recommendation. KRC

---

**Description**

- Red mud/land surface, slight uneven, end bagResume:
- Powder pickup in arid. Allied grimes e.t.
- Any fine grinding break with bag & resume then.
- No binder/latex recommended.
ASAP TAG REVIEW SHEET

Segment: ERO7  Subd:  Site: 2  Date
PRE-Review 11/08/90

Priority For Addressing In 1990

HIGH  MEDIUM  LOW  NTR

Treatment Recommended: MANUAL REMOVE ASPHALT ON BOS

Mattys Calls for

MIP Of Asphalt

ON Broken

Priority Site For Reassessment In 1991

YES NO YES NO YES NO

CG ADEC EXXON LAND MGR

TAG 13 AUG 90

Additional TAG MT removal of CUSTOMBLEN
ASAP TAG REVIEW SHEET

Segment: ERO7  Subd: A  Site: 1  Date  PRE-Review  11 AUG 90

Priority For Addressing In 1990

___ HIGH  ___ MEDIUM  X LOW  ___ NTR

Treatment Recommended: **MATURE REVERSE ASPHALT MATTES & TAEBALLS**

...only because of site 2 clean-up

...but MATRIX calls...for NTR...

Priority Site For Reassessment In 1991

YES NO  YES ADEC NO  YES EXXON NO  YES LAND MGR NO

__ CG x  X ADEC  __ EXXON  __ LAND MGR x

TAG 13 AUG 90

NTR
WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT ER-01  SUBDIVISION A  DATED 8-1-90

MODIFICATION  CLASS I     CLASS II  V  CLASS III

1. REASON FOR MODIFICATION
   Some Friable Asphalt Mat still on segment.

2. SUGGESTED ADJUSTMENT TO WORK PLAN
   Manually Remove Asphalt Mat / Patches.

3. TIMING ISSUES

ADEC
EXXON
USCG

LAND MANAGER (If field rep is on scene)
ASAP TEAM 1

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT ER-07 SUBDIVISION A DATED 8-1-90

MODIFICATION CLASS I ______ CLASS II V CLASS III ______

1. REASON FOR MODIFICATION
   Some Friable Asphalt Mat Still on Segment.

2. SUGGESTED ADJUSTMENT TO WORK PLAN
   Manually Remove Asphalt Mat / Patches.

3. TIMING ISSUES —

ADEC
EXXON
USCG

LAND MANAGER (If field rep is on scene)
SEGMENT AS 1  SUBDIVISION: A  SITE: 1  DATE 8/1/90

JSCG
NAME: Michael J. Brown  SIGNATURE: Mark D. Ross
□ YES  □ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:

ADEC
NAME: John Hay  SIGNATURE:  
□ YES  □ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON: Work order modification sent in for AP manual pickup on this segment. Should be reassessed following additional treatment. Heather AP found adjacent to total site.

LAND MANAGER
NAME: DOUGLAS GIBSON  SIGNATURE: Douglas Gibson
□ YES  □ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:

EXXON
NAME:  Martineau  W.J.  SIGNATURE:  Nicholas G. Martineau
□ YES  □ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON: To check for asphalt.
SEGMENT AS ER-7  SUBDIVISION:  A  SITE:  2  DATE  5/1/90

USCG
NAME: Michael D. Brown  SIGNATURE: Michael D. Brown

☐ YES  ☒ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:

ADEQ
NAME: John Hysa  SIGNATURE: John Hysa

☒ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:

LAND MANAGER
NAME: Douglas Gibson  SIGNATURE: Douglas Gibson

☒ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:

EXXON
NAME: Markward, Nick  SIGNATURE: Nick Markward

☒ YES  ☒ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON: To check for asphalt.
# ASAP Shoreline Oil Spill Survey

**Date:** 8/1/90  
**Time:** 10:15 to 10:40  
**Tide Level:** 7.10 ft.

**Total Est Length of Shoreline Surveyed:** 590 m

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

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

**Oil Category Length:**  
- W 0 m  
- M 0 m  
- N 250 m  
- V 150 m  
- NO 90 m

## Surface Oil

<table>
<thead>
<tr>
<th>Site</th>
<th>Distribution</th>
<th>Oiled Zones</th>
<th>Site</th>
<th>Distribution</th>
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<tbody>
<tr>
<td>Site 1</td>
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<td>Site 2</td>
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<td>Site 3</td>
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### Subsurface Oil

<table>
<thead>
<tr>
<th>Site No.</th>
<th>Pit No.</th>
<th>Pit Depth (cm)</th>
<th>Subsurface Oil Character</th>
<th>Oiled Interval (cm)</th>
<th>Clean Below (Y/N)</th>
<th>Pit Zone</th>
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### Comments

- The only significant oiling on this subdivision is the Tarmat remaining on site #2. This area was manually worked and Tarmat removed. The most present is in and around the trenches left by previous work.
- The current oiling may represent more oiling being brought to surface in warm weather.

**Photographs:**  
- Roll No. ASAP-01-01  
- Frames 16-17
GENERAL DATA

SEG ID: ER-7 SBDV: A SITE: 1 TEAM: 1 DATE: 8/1/90
SITE LGTH 340 OIL CATEGORIES: W M O NS80 YL 150 NO 190 U E 432.

SURFACE DATA

CHAR #: 1 OIL CHAR: AR OIL DIST: CONT BRKNO PTCH SPLH
TIDAL ZONE: SU UI I MI LI

CHAR #: 2 OIL CHAR: CT OIL DIST: CONT BRKNO PTCH SPLH
TIDAL ZONE: SU UI I MI LI

CHAR #: 3 OIL CHAR: NT OIL DIST: CONT BRKNO PTCH SPLH
TIDAL ZONE: SU UI X MI X LI

CHAR #: 4 OIL CHAR: NO OIL DIST: CONT BRKNO PTCH SPLH
TIDAL ZONE: SU X UI MI LI X

CHAR #: 5 OIL CHAR: _____ OIL DIST: CONT BRKNO PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 6 OIL CHAR: _____ OIL DIST: CONT BRKNO PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 7 OIL CHAR: _____ OIL DIST: CONT BRKNO PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 8 OIL CHAR: _____ OIL DIST: CONT BRKNO PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 9 OIL CHAR: _____ OIL DIST: CONT BRKNO PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 10 OIL CHAR: _____ OIL DIST: CONT BRKNO PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 11 OIL CHAR: _____ OIL DIST: CONT BRKNO PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 12 OIL CHAR: _____ OIL DIST: CONT BRKNO PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 13 OIL CHAR: _____ OIL DIST: CONT BRKNO PTCH SPLH
TIDAL ZONE: SU UI MI LI
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<th>Oil Character</th>
<th>Oil Interval: From</th>
<th>To</th>
<th>Clean Below</th>
<th>Pit Zone: SU UI MI LI</th>
<th>Subsurf Sediment: BRK BLD COB PEB GRN SAN MUD VEG</th>
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ASAP DATA ENTRY FORM

SEG ID: ER-7  SBDV: A  SITE: 2  TEAM: 1  DATE: 8/1/90
SITE LGTH 250  OIL CATEGORIES: W 0  N  AQVL  150  NO 190  U 432  F.U.
1991 REASSESSMENT: USCG:  Y  ADEC:  Y  LDMGR:  -  EXXON:  

GENERAL DATA

SURFACE DATA

CHAR #: OIL CHAR: AR  OIL DIST: CONT  BRAK  PTC  SPLH
TIDAL ZONE: SU  UI  MI  LI

CHAR #: OIL CHAR: TB  OIL DIST: CONT  BRAK  PTC  SPLH
TIDAL ZONE: SU  UI  MI  LI

CHAR #: OIL CHAR: NO  OIL DIST: CONT  BRAK  PTC  SPLH
TIDAL ZONE: SU  UI  MI  LI

CHAR #: OIL CHAR: MR  OIL DIST: CONT  BRAK  PTC  SPLH
TIDAL ZONE: SU  UI  MI  LI

CHAR #: OIL CHAR: MR  OIL DIST: CONT  BRAK  PTC  SPLH
TIDAL ZONE: SU  UI  MI  LI

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CHAR #: OIL CHAR: MR  OIL DIST: CONT  BRAK  PTC  SPLH
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CHAR #: OIL CHAR: MR  OIL DIST: CONT  BRAK  PTC  SPLH
TIDAL ZONE: SU  UI  MI  LI

CHAR #: OIL CHAR: MR  OIL DIST: CONT  BRAK  PTC  SPLH
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1991 MAYSAP EVALUATION

SEGMENT: ER 007  SUB: A  REGION: PWS  SURVEY DATE: 5/14/91

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

Ecological/Constraints (see page two for details) Fry release, 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: Charles E. Brice  Date: 5/30/91

RECOMMENDATIONS:

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

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

COMMENTS:
INITIAL: Set aside site covers locations F, G, and H. Signs marking limits of the site are in the backshore.

TAG:

FOSC:

TAG APPROVAL DATE: 4/1/29/91  FOSC APPROVAL DATE: 6/13/91

ADEC
EXXON
USCG
NOAA

E. E. PAGE, CDR, USCG
The Chief of Staff FOSC evaluate the need for further treatment.
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES


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.
I

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 5   SEGMENT ER-7   SUBDIVISION A   DATE 5/14/91

ADEC
NAME: John Haydu                     SIGNATURE:

☐ NTR   □ IMPLEMENT RECONSTRUCTION

Recommended that AP outside of test site can be manually removed.

EXXON
NAME: John Dowd                       SIGNATURE:

☐ NTR   □ OILING PRESENT IS LIGHT, SOME LIMITED AMOUNT COULD POSSIBLY BE RECOVERED, BUT I DO NOT RECOMMEND IT. I FEEL THE DAMAGE TO ABUNDANT + HEALTHY BIOTA WOULD BE MUCH GREATER THAN ANY POSSIBLE BENEFIT.

LANDMANAGER
NAME: Steve Ward                       SIGNATURE:

☐ NTR   □ OIL FROM OIL CAN AND PICKED-UP FROM TEST SITE. ALSO A BUNCH OF TRASH IN ARSEN. THIS IS A TEST SITE SO IT IS ALREADY AGREED TO BE CLEANED. THIS ASPHALT IS SEVERAL HUNDRED FEET IN LENGTH AND COVERS MOST OF THE SUB-OFF. CHANESNO CANT RESP.

NO-OIL AT ALL.

USCG/NOAA
NAME: DREHER/CLINE                     SIGNATURE:

☒ NTR   □ OBSERVED ONLY SMALL SPORADIC HARDENED ASPHALTS. NO PROBABILITY OF MOBILIZATION OR SHEARING IS LEFT UNDISTURBED.

Very light oiling occurs as indicated on the sketch map. Most of the AP could be removed easily by manual crews. DSC.
MAYSAF SHORELINE OILING SUMMARY

TEAM NO. 6
OG CHANEY
ADEC HAYEB
OXON DEAN
BIO CRANK
LANDMANAGER WARD for CUC
USCG/NOAA DREHER/CLINE

SEGMENT ER T
SUBDIVISION A
DATE May 14, 1991

TIME 07:15 to 8:45
TIDE LEVEL -2 ft. to -3.5 ft.
ENERGY LEVEL: ☐ H ☐ M ☑ L

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

TOTAL LENGTH SHORELINE SURVEYED: 822 m
NEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☑ NONE

EST. OIL CATEGORY LENGTH:

---

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<tr>
<th>LOC</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT</th>
<th>SHORE SLOPE</th>
<th>AREA</th>
<th>ZONE</th>
<th>NOTES</th>
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<td>P</td>
<td>BC M 0.5 4</td>
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<td>S</td>
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<td>S</td>
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<td>PC B M 2 15</td>
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</table>

DISTRIBUTION: C = 91-100%; B = 81-90%; A = 71-80%; P = 61-70%; S = 1-10%; T = <1%
SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE
PHOTO ROLL # MAYSAF-5 14 22-27
PHOTO ROLL # MAYSAF-6 15 FRAMES 1-6

PIT NO. DEPTH (cm)
P1 3.5
P2 3.5
P3 3.5
P4 3.5
P5 3.5
P6 3.5

SUBSURFACE OIL CHARACTER
OP HOR MOR LOR OF TR NO

OILED ZONE (cm-cm)
CLEAN cm-cm
WATER LEVEL YN (cm)
SHEEN COLOR B R S N S
PIT ZONE UI MI LI

SURFACE/SUBSURFACE SEDIMENTS
NOTES

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

OG COMMENTS: RANDOM PATCHES ON TIDE FLATS, MORE CONCENTRATED AS PATCHES IN BOULDERS ALONG U ITZ. NO PICKUP WAS CONDUCTED ALONG THE SOUTHERN PORTION OF THE SEGMENT DUE TO CONFUSION ABOUT NOAA TEST SITE RESTRICTIONS, ACTUAL LOCATION OF NORTHERN BOUNDARY OF ER-07A MAY BE FARTHER SOUTH THAN SHOWN ON COMPUTER MAP, WE STOPPED SURVEYING WHERE PEbble BEACH CHANGED TO MASSIVE BOULDERS AS OG NOTES INDICATED BUT THIS WAS SOUTH OF COMPUTER BOUNDARY.
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>
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SCALE

MAYSAP 1991
OG SKETCH MAP
GREG CHANEY
TEAM S
SEGMENT: E.E-07 A
DATE: MAY 14, 1991
AIR P. #: PIM-C 005-071
PIM-C 005-08S

MAP

1. 2x15 m AP PATCHES
   20% BETWEEN BOULDERS

2. 1m² AP WHITE QUARTZ BOULDERS

3. 3x100 m AP ON PEBBLES & VERTICAL BEDDING PLANES
   2% DISTINCT PATCHES

4. LARGE DRIFT TREE ROOTS

5. SMALL SLIDES

6. BORING Trace AP Trace
   2m² AP PU

7. 0.5x15 m AP PATCHES IN BOULDERS
   5%

8. 1x25 m AP PATCHES IN BOULDERS
   5%

9. AP PATCHES 0.5x4 m
   40%

10. MASSIVE BOULDER WITH MOSS ON TOP

ER-8A

ER-6A

ER-5A

ER-4A

ER-3A

ER-2A

ER-1A

ELRINGTON ISLAND

REVIEWED @ 15 MAY 2000
WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
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<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED SPECIES PRESENT</th>
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<tr>
<td>Seabirds</td>
<td>3</td>
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<td>Waterfowl</td>
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<tr>
<td>Gulls/Kittiwakes</td>
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<td>~35D</td>
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<tr>
<td>Shorebirds</td>
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<td>~5</td>
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<tr>
<td>Corvids</td>
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<tr>
<td>Other Birds</td>
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<table>
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<th>LAND MAMMALS</th>
<th># OBSERVED</th>
<th>SPECIES</th>
<th># OBSERVED</th>
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<td>~10-20</td>
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<tr>
<td>Pinnipeds(specific)</td>
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<td>~10-20</td>
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<tr>
<td>Seals(specific)</td>
<td>~10-20</td>
<td></td>
<td>~10-20</td>
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</tbody>
</table>

Shoreline subdivision map showing important biological features attached.

Reviewed by: [Name]
[Date]

---
This subdivision has a large tidal flat. Fucus beds cover ~50 - 70% of the MZ1 surface sediments. barnacles cause a focal curvature and a moderate concentration. There is recent parrotfish impact. Inorganic mussel rakes range in density from rare to more with various age structures.

The Litz has a rich algal growth. Above the mean low water level, cover is ~60%; below the mean low water level, cover is ~80%. Some of the species present are: Fucus, Siliquastrum, Pilaria, Adiantella, Halosaccion, Alaria, Lambraria, Ulva... A clam bed is also present in the Litz. Kelp bed is located nearshore.

This area is utilized by wildlife. Bulls, sandpipers, and oystercatchers were observed feeding in the Litz. Other foraging birds were also present in the clam beds.

Mechanical equipment, including 4-wheelers, could create a net-environmental loss. If tidal flat is accessed, it should be restricted to manual pick-up.
ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRANTS FOR STREAM NO. 226-50-16428
SEGMENT ER-7 SUBDIVISION A

WORK WINDOW

| Manual Pickup | Tarmat Removal | OPEN |

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream  
ADF&G catalogued anadromous stream (226-50-16428) is in Subdivision A. No constraint to manual pickup and tarmat removal.

1F Saw Mill Bay Hatchery Release  
No constraint to manual pickup and tarmat removal.

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

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

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. 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.

SEE SUBDIVISION CONSTRAINT ADDENDUM ER-7A FOR ADDITIONAL CONSTRAINT INFORMATION.

TAG APPROVAL DATE  
ADEC 6/04/80  
EXXON  
NOAA  
USCG  
Prepared By: [Signature]  
Date 6/3/90

FOSCO  
DATE  
[Signature]  
Date 6/3/90
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)
1F  Sawmill Bay Hatchery release (4/15 to 6/1)
6Y  Recreation: Special use destination
7II  Subsistence area: Deer harvesting (8/15 to 2/28)
9EE  Set aside

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Subject stream is located in Subdivision A (1 of 1).

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).

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes manual removal of pavement and musse patties as indicated on sketch map. Work should be conducted between 6/1 and 7/10 based on constraints.

TAG COMMENTS: ________________________________________________________

TAG APPROVAL DATE: 5/7/90
EC  EXXON  FOSC: ___ DATE: 5/15/90
NOAA  ZEHR  ___
USCG  ___
ANADROMOUS FISH STREAM ASSESSMENT

REGION: PRINCE WILLIAM SOUND
SEGMENT: ER-07
STREAM NO: 226-50-16428
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ ER-07 STREAM NO: 226-50-16428 DATE 4/20/90

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)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)
9EE Set aside
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Subject stream is located in Subdivision A (1 of 1).

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: __________________

Subsurface Oil Observed: Yes X No No Maximum Depth 6 cm

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

COMMENTS: Recommended treatment includes manual removal of pavement and mousse patties as indicated on sketch map. Work should be conducted between 6/1 and 7/10 based on constraints.

TAG COMMENTS: ______________________________________________________

TAG APPROVAL DATE: ________
ADEC ________________ DATE: ________
EXXON __________________________
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 without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inpol application, prior to at least July 1 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitats Division prior to treatment for consultation and/or permit application.

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

1C Salmon fry nursery area (4/31 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inpol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

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

1D Esther Hatchery release (4/15 to 6/1)
1E Main Bay Hatchery release (4/20 to 6/10)
1F Seal Island Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inpol application, prior to at least July 1 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

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

1I Gill net area (6/7 to 6/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net site (6/11 to 7/25)
Contact ADF&G for specific dates, locations, and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inpol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3236

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

AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3236

3N, 3P Harbor seals and sea lions pupping (5/15 to 7/1)
3O, 3Q Harbor seals and sea lions molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inpol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31).

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 566-7235
ADF&G Don Calkins 267-2403

5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Roby 267-2206

5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m. 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U, 6V, 6W, 6X Special use destination

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
Finfish harvesting
Deer harvesting (8/15 to 2/28)
Invertebrate harvesting
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inpol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.

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

SEGMENT ST  FR-007  SUBDIVISION: 226.50-16426  DATE 4.20.90

USCG
NAME  Kerwin L. Drohen  SIGNATURE  cwoz K. L. Drohen

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

 COMMENTS

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

 COMMENTS

We recommend removal and bagging of mouse paddies, oiled grasses and other oiled debris when found in upper intertidal and lower half of upper intertidal to top of mid intertidal.

No bioremediation recommended.

This stream consists of small bands of broken tar mat on the upper intertidal on the South bank extending into grass area almost to the stream mouth.

LAND MANAGER
NAME  Rick Gustin  SIGNATURE  Rick Gustin

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

 COMMENTS

The north bank has small broken bands of tar mat in the lower 1/3 of upper intertidal (spattered distribution)
**SHORELINE OILING SUMMARY (ANAD)**

**SEGMENT ST/ER 007**

**STREAM: MILLE LAC**

**DATE: 4/20/90**

**TIDE LEVEL: VLT**

**UPLANDS DESCRIPTION:**
- Grass
- Forest
- Rock

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

**SURFACE SEDIMENTS:**
- R: 5%
- S: 5%
- C: 45%
- P: 25%
- O: 20%
- G: 8%
- M: 3%
- V: 2%

**SLOPE:**
- Lang: 2%
- Hang: 2%
- Vert: 2%

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

**OIL CATEGORY LENGTH:**
- W: 14 m
- M: 14 m
- N: 14 m
- V: 17 m
- L: 2 m
- N: 63 m

### SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL/FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<tbody>
<tr>
<td>Asphalt Pavement</td>
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</tr>
<tr>
<td>Pooled</td>
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<td>Cover</td>
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<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Mousse</td>
<td></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Patties</td>
<td></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Tarballs</td>
<td></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Film</td>
<td></td>
<td>Yes</td>
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</tr>
<tr>
<td>No Oil</td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
</tbody>
</table>

**PAVEMENT:**
- H: 3
- F: 3
- M: 2

**PATTIES/TARBALLS:**
- Bags

**NEAR SHORE SHEEN:**
- No
- Br
- RW
- ST

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

**Did You Collect Debris:**
- Yes
- No

**TYPE:**

**Photographs:**
- ANAD-14-2
- Roll No.
- Frames: 11-17

### 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>PIT ZONE</th>
<th>ANA SHEEN (cm)</th>
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<tr>
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<td>12</td>
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<td>0-6</td>
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<td>10</td>
<td></td>
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</tbody>
</table>

**COMMENTS:**

Very small amounts of asphalt observed at site.

Observed one pin tail duck.

Oiled interval < 5 cm in Pit No. 1 does not constitute subsurface oil.

**REVIEWED:**

**DATE:** 4-24-96
Remove Mousse & Pavement

\[ \text{Oil Character Length (m): AP} \]
**AD & FG MULTI-ASSESSMENT DATA FORM**

<table>
<thead>
<tr>
<th>1 SURVEY TYPE:</th>
<th>BS 28 OS TS AVS SDCA HOMS PTA</th>
<th>2 REGION:</th>
<th>PHE</th>
<th>KP, CI</th>
<th>RAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>METHOD:</td>
<td>Aerial Group</td>
<td>Best</td>
<td>3 DATE:</td>
<td>8/26-90</td>
<td>18 HIGH TIDE TIMES:</td>
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<td></td>
<td>4 START TIME:</td>
<td>1550</td>
<td>18 HIGH TIDE HT:</td>
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<td></td>
<td>5 STOP TIME:</td>
<td>1620</td>
<td>17 LOW TIDE TIMES:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>6 SECT CUT:</td>
<td>CR OUT</td>
<td>18 LOW TIDE HT:</td>
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<td></td>
<td></td>
<td>7 STATION #:</td>
<td>TIDE HT AT SURVEY:</td>
<td>Roll #:</td>
</tr>
<tr>
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<td></td>
<td>8 X-UNIT:</td>
<td>Egg Stack Flood Stack</td>
<td>Frame:</td>
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<td></td>
<td>9 STAT AREA:</td>
<td>20 USCG QUAD:</td>
<td>25 VIDEO TAKEN:</td>
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<td></td>
<td></td>
<td></td>
<td>10 LAT:</td>
<td>11 LONG:</td>
<td>26 SAMPLES TAKEN:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>12 SOURCE:</td>
<td>Loban</td>
<td>27 CATALOGED ANAD. FISH BREED</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>13 LOCATION:</td>
<td>Elwha J.</td>
<td>28 CATALOG #:</td>
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<td>14 DESCRIPTION:</td>
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<td>29 CATALOG #:</td>
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**EXTENT OF OIL**

<table>
<thead>
<tr>
<th>SHORELINE</th>
<th>STREAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>N</td>
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<table>
<thead>
<tr>
<th>27 SURFACE COVERAGE</th>
<th>28 SURFACE THICKNESS</th>
<th>29 PENETRATION</th>
<th>30 OVERALL OIL IMPACT</th>
<th>31 OIL TYPE:</th>
<th>32 Oiled Descent</th>
<th>33 SHORELINE TYPE:</th>
<th>34 WAVE EXPOSURE:</th>
<th>35 SUBSTRATE TYPE:</th>
<th>36 CATALOGED ANAD. FISH BREED</th>
<th>37 CATALOG #:</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>2-3.0 mm</td>
<td>0-100%</td>
<td>N</td>
<td>Pooled</td>
<td>Y</td>
<td>Headland</td>
<td>High</td>
<td>Bedrock</td>
<td>Boulder 75</td>
<td>65% Gravel</td>
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</table>

**COMMENTS:** Small bands broken star most upper inter-tidal & South Banks.  Int & small bands towards y stream.  North has some broken bands towards lower inter-tidal (spalled distribution) random.
Comments by Ken Critchlow:
I agree with ADFS recommendations
KRC

Sample taken
Photo frame 6 and
1991 MAYSAP EVALUATION

SEGMENT: ER 007  SUB: A  REGION: FWS  SURVEY DATE: 5/14/91

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

Ecological/Constraints (see page two for details) Fry release, 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: ___________________________ Date: __________________

RECOMMENDATIONS:

TREATMENT REQUIRED (Y or N)  INITIAL  TAG  FOSC

N

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

COMMENTS:
INITIAL: Set aside site covers locations F, G, and H. Signs marking limits of the site are in the backshore.

TAG:

TAG APPROVAL DATE:  ___________________  FOSC APPROVAL DATE:  ___________________

ADEC  ___________________________  FOSC  ___________________________

EXXON  ___________________________

USCG  ___________________________

NOAA  ___________________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES


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 ER-N  SUBDIVISION A  DATE 5/14/91

ADEC
NAME  John Hayes  SIGNATURE

[NTR]  Acreage that AP outside of test site can be
  manually removed.

EXXON
NAME  John Lopez  SIGNATURE

[✓ NTR]  Oiling present is light, some limited amount could
  possibly be recovered but I do not recommend it.
  I feel the damage to abundant & healthy biota would
  be much greater than any possible benefit.

LANDMANAGER
NAME  Steve Ward  OF CUS-FS  SIGNATURE

[☐ NTR]  Lots of oil can be picked up from this site. Also a
  bunch of trash in arsenal. This is a test site so it is
  already agreed to be cleaned. This asphalt is several
  hundred feet in
  length and covers most of the subdivision Channel 1.
  Resp. NO-010 at all.

USCG/NOAA
NAME  Dreher/Cline  SIGNATURE

[✓ NTR]  Observed only small sporadic hardened asphalts. No
  probability of mobilization or
  sheening is left undisturbed.

Vary light oiling occurs as indicated on the sketch map. Most AP
  could be removed easily by normal means. DEC.
**MAYSAP SHORELINE OILING SUMMARY**

**ORIGINAL**

**TEAM NO.** 6

**BIO CRANK**

**LANDMANAGER** WARD for CUC

**USCG/NOAA** DREHER/CLINE

**DATE** May 14, 1991

**TIME** 07:15 to 8:45

**TIDE LEVEL** -2 ft. to -3.5 ft.

**ENERGY LEVEL:** 

- [ ] H
- [X] M
- [ ] L

**FOOT:** [ ]

**BOAT:** [ ]

**HELICOPTER:** [ ]

**WEATHER:**

- [ ] SUN
- [ ] CLOUDS
- [ ] FOG
- [ ] RAIN
- [ ] SNOW

**TOTAL LENGTH SHORELINE SURVEYED:** 822 m

**NEAR SHORE SHEEN:** [ ] BR [ ] AR [ ] SL [ ] NONE

**EST. OIL CATEGORY LENGTH:**

- [ ] W
- [ ] M
- [ ] N
- [ ] 24 m
- [ ] 420 m
- [ ] NO. 378 m
- [ ] US. 200 m

---

**SURFACE OIL CHARACTER**

<table>
<thead>
<tr>
<th>LOC</th>
<th>AP</th>
<th>MS</th>
<th>TB</th>
<th>SO</th>
<th>CV</th>
<th>CT</th>
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<th>BC</th>
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<th>1ST PU-NOAA SITE CONFUSION</th>
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**SURFACE SEDIMENT TYPE**

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**DISTRIBUTION:**

- C = 91-100%
- B = 81-90%
- P = 71-80%
- S = 61-70%
- T = 1%

**SLOPE:**

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

**PHOTO POLL # MAYSAP-**

- 5 - 15 frames 1-6

---

**OG COMMENTS:**

**.getRandom Patches on tide flats. More concentrated AP patches in boulders along USIT. No pickup was conducted along the southern portion of the segment due to confusion about NOAA test site restrictions. Actual location of northern boundary of ER-07A may be farther south than shown on computer map. We stopped surveying where pebble beach changed to massive boulders as OGN notes indicated but this was south of computer boundary.**

---

**REVISED 5/19**

**REVIEWED CD 15 MAI**
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 5  DATE 14 May 1991

SEGMENT # ER-7  TIDAL HEIGHT (Range) -1.5 to -3.5

SUB DIVISION A  BIOL O G IST Crank

SEA STATE 0  WIND SPEED/DIRECTION 5 knots /N

PHOTOGRAPHS: ROLL #14  FRAME #22 23

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

(A) Field observation on 14 May 1991. Within the site there is a series of rocky outcrops with a recent soft sediment fan. The rock surfaces are covered with various species of seaweeds and moderate encrustation by articulated macrofauna. Eroded soft sediment fans extend from 10-20%.

(B) Hels: 40 m² area in the Hiltz section showing small boulders in the seabed. Local marine exposure over 41% of the exposed surface. Most of the site surfaces have ~50% benthic cover. Four species.

(C) -Site has a 30 m x 30 m area in the Hiltz. Some 10% bare open gravel ~50% of the site. There is a small gravel bar (~25).

(D) -Site a 30 m x 30 m area in the Hiltz. There is a moderate benthic cover of various species. A moderate concentration of bottom feeding animals. Cover is <5.

(E) Area: a 30 m x 30 m area in the Hiltz. Biota is similar to (D) corals ~20-50%.

(F-G-H-I) Areas are located in the Hiltz. There are boulders, black lines, and a few foot shells covering <1% of the surface.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

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LAND MAMMALS

Shoreline subdivision map showing important biological features attached.

REVIEWED CD 16 May
Paul Crnogorac
This subdivision has a large tidal flat. Focus
on the ~50 - 70% of the MZ surface sediments.
There is a dense population and a diverse
concentration. There is present organic matter
inorganic material range in density from rare to more
with various age dates.

The LITZ has a rich algal growth. Above the mean
low water level cover is ~60%; below the mean low
water level cover is ~80%. Some of the species present
are: Fucus, Scytosiphon, Palmaria, Mastocarpus, Lambis-
Alaria, Laminaria; Ulva. A clam bed is also
present in the LITZ. Kelp bed is located nearshore.
This area is utilized by wildlife. Gulls, sandpipers,
and oystercatchers were observed feeding in the
LITZ. Other foraging birds were also present in the
clam beds.

Mechanical equipment, including 4-wheeler, could cause
a non-environmental loss. If tidal flat is accessed,
it should be restricted to manual pick-up.
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ER-07  STREAM NO: 226-50-16428  DATE  4/20/90

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)
1F. Sawmill Bay Hatchery release (4/15 to 6/1)
6Y. Recreation: Special use destination
7II. Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. Subject stream is located in Subdivision A (1 of 1).

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

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

Subsurface Oil/Observed: Yes X  No  Maximum Depth: 6 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 manual removal of pavement and mousse patties as indicated on sketch map. Work should be conducted between 6/1 and 7/10 based on constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 5/7/90

ADEC  ART WHITTEN  Rich Weiss
EXXON  Andy Turner
NOAA  C. Beason  Layne
USCG  C. A. Peter  C. A. Peter
YING SOUND (D-4) QUADRANGLE
ALASKA
1:63,360 SERIES (TOPOGRAPHIC)
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ER-07

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION

SEGMENT ST/ER-07 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
ADF&G Anadromous stream no. 226-50-16428
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

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

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

SHPO SIGNATURE: ___________________ DATE: ____________________

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 93 m: V.Light 99 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth ___

RECOMMENDATIONS:
X Treatment Recommended
X Manual Pickup
X Bioremediation
X Tarmat: Breakup
X Removal
Snare/Absorbent Booms
Oil Snares (pom poms)
Absorbents (pads, rolls, etc)
Spot Washing: Wands
Beach Cleaner
Other (see comments)

COMMENTS: Recommend manual removal of tarmat and asphalt patches followed by bioremediation. Work should be conducted between 6/2 and 7/9 based on above salmon constraints. No treatment should be performed at the Special Study site (Exxon AP-16) on the east shore of the small islet (see sketch map); Contact SCAT office for specific restrictions (564-3660).

TAG COMMENTS:
______________________________________________________________
______________________________________________________________
______________________________________________________________

TAG APPROVAL DATE: __________
ADEC
EXXON
NOAA
USCG
TAG: ___________________ DATE: __________
FOSC: ___________________ DATE: __________
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A. Salmon stream (May-early July) spawning (3/1 to 9/15)
No disturbance of stream beds 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 (4/30 to 7/31)
1D. Ester 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 uncultured intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

3N, 3P
3Q, 3Q
Harbor seal and sea lion pupping (5/15 to 7/1)
Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

5R. Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.

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

5T. All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

6U. Recreation: Tent sites (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 designation

7Z. Subsistence area: Salmon harvesting (5/1 to 9/30)
7HH. Finfish harvesting
7II. Deer harvesting (5/15 to 2/25)
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 PTR-07  SUBDIVISION: A  DATE 04 APRIL 90

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

1. MANUALLY REMOVE ASPHALT AND TAR PATTIES.
2. BIO-REMEDICATE.

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

TOMBOLO NEEDS TO BE MANOURED/CLEANED AT A LOW TIDE TO ACCESS. TOMBOLO ALSO HAD A SHEEN OF OIL IN THE PIT, ESPECIALLY WHEN SURFACE SEDIMENTS FELL INTO PIT. THERE IS A COLOR DIFFERENCE (DARKER IN TOP 3-4CM) BETWEEN SURFACE AND SUBSURFACE. THERE MAY BE MINE OIL IN THE TOMBOLO THEN JUST TAR BALLS/PATTIES.

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

LISTED AS PRIORITY 1 BY PWSCA. LISTED AS PUBLIC USE AREA IN THE PWS AREA PLAN. AREA USED FOR RECREATION AND SUBSISTENCE DEER HARVESTING. RECOMMEND MANUAL REMOVAL FOLLOWED BY BIOREMEDIATION.
SHORELINE OILING SUMMARY

EST. SUBDIVISION LENGTH: 937 m

UPLANDS DESCRIPTION: Grass Forest Rock

SURVEYED FROM: Foot Boat Helo

SURFACE SEDIMENTS: R 20% B 15% C 10% P 15% G 15% S 10% M 10% V 10%

SLOPE: Long 100% Hang 90% Vert 90%

WAVE EXPOSURE: Low Med High

OIL CATEGORY LENGTH: W 248 m M 248 m N 293 m

SURFACE OIL

CHARACTER DISTRIBUTION OIL / FILM COLOR IMPACTED ZONES

- Asphalt Pavement -
- Pooled -
- Cover -
- Coat -
- Stain -
- Mousse -
- Patties -
- Tarballs -
- Film -
- No Oil -

PAVEMENT: H F 

PATTIES / TARBALLS BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS AMOUNT

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

DEBRIS COLLECTED YES NO

TYPE

Photographs:

Roll No. 57 / 10 / 17
Frames 24 - 24

SUBSURFACE OIL

PIT NO. PIT DEPTH (cm) SUBSURFACE OIL CHARACTER OILED INTERVAL (cm) BELOW OIL / FILM COLOR PIT ZONE A/N SUBSURFACE SEDIMENTS

1 15 -

2 20 -

3 10 -

4 25 -

5 7 -

Comments:

- Oiled interval less than 5 cm in G1s sediments does not constitute subsurface oil.

- Asphalt: 150 x 2 x 25% (e) = 75
- 210 x 3 x 35% (c) = 221
- 210 x 2 x 10% (c) = 42
- 263 x 3 x 20% (w) = 159

- 4.96 m²

- Page 1 of

- Revision RM 4/4/90

- Reviewed DIL DATE 4/8/90
SHORELINE ECOLOGICAL SUMMARY

Segment ST/10/ER-1 Subdivision A Date (mo/day/yr) 4/4/90
Time (24 hr) 1500 - 1600  
Biol ogist Lemon Rain

(A) Substrate type and % of segments:
(1) Bedrock 20 (2) Boulder 10 (3) Cobble 10 (4) Pebble 15 (5) Sand 55 (6) Silt

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

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Photographs:
Roll No. ST/10/1
Frames 20 - 24

Wildlife Observations/General Comments: In mid zone found mud branch eggs, annelid worms, sporocysts on Fucus. Deer excreta possibly winterbear tracks in snow.

Ecological Considerations: clam shells (Tectes sp.) from apparent raised bed as described for section B. Hatchery release, spawning, dear harvest, set aside. Checked stream and found no fish or potential food.
**Legend**

- ER-07

**Site:**

- Exxon Study Site AP-16

**Observations:**

- Patches on pavement band
  - 3m x 3.5% in ULZ
  - 2m x 10% in LIZ - Light Brown

- Patches in 2m band - about 0.5cm penetration

- Scattered asphaltic patches, patchy tan coat ~2m wide

- Tar patches and balls 
  - 'bag between streams

- Some coat on pebbles in ULZ

- Slag cobble, patchy asphalt in ULZ

- Some and tar balls

- Asphalts 3m band -20% coverage

- Dead Otter at LHWS

**DATE:** 09/22

**Subdivision:** A

**Plot Number:** 2A

**Plot Location:** 1A

**Plot Description:** Paved surface with asphaltic materials.
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT ER-7 SUBDIVISION A (1 of 1)

WORK WINDOW

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<td>Bioremediation More Than 100m From Stream</td>
<td>WORK 6/1 to 7/20</td>
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<tr>
<td>Bioremediation Less Than 100m From Stream</td>
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ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Streams
ADF&G catalogued anadromous streams (226-50-16428 and 16430) are present in Subdivision A. This subdivision is closed to bioremediation less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation is permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation more than 100m from stream. No constraint to manual pickup and tarmat removal.

1F Sawmill Bay Hatchery Release
No constraint to manual pickup and tarmat removal; closed to bioremediation prior to 6/1.

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

7II Subsistence:
No constraint to manual pickup and tarmat removal; closed to bioremediation after 8/15.

Deer Harvesting

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or bank. No flushing of pollutants or sediment into stream drainage. 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 unscathed biota and substrate.

SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM FOR (STREAM NO. 226-50-16428) FOR ADDITIONAL CONSTRAINT INFORMATION
SHORELINE EVALUATION

SEGMENT ST/ ER-07 SUBDIVISION A (1 of 1) DATE 4/4/90

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)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
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 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: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 923 m: V.Light 99 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

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: Breakup ___ Beach Cleaner
_ X Removal ___ Other (see comments)

COMMENTS: Recommend manual removal of tarmat and asphalt patches followed by bioremediation. Work should be conducted between 6/2 and 7/9 based on above salmon constraints. No treatment should be performed at the Special Study site (Exxon AP-16) on the east shore of the small islet (see sketch map). Contact SCAT office for specific restrictions (564-3660).

TAG COMMENTS:

TAG APPROVAL DATE: 4/19/90.
ADEC ART WEINZARTH CLAYTON EXXON AWYOT TROJAN
NOAA FOSC:
JSCG

DATE: 4-25-90
SHORELINE EVALUATION

SEGMENT ST/ ER-07 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADFG Anadromous stream no. 226-50-16428

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

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

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

6V Recreation: Special use destination

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: [Signature] DATE: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 23 m: V. Light 99 m: No Oil 0 m

Subsurface Oil Observed: Yes No X Maximum Depth_____

RECOMMENDATIONS:

___ No Treatment Recommended ___ Snare/Absorbent Booms

X Treatment Recommended ___ Oil Snare (pom poms)

X Manual Pickup ___ Absorbents (pads, rolls, etc)

X Bioremediation ___ Spot Washing: ___ Wands

X Tarmat: ___ Breakup ___ Spot Washing: ___ Wands

X Removal ___ Spot Washing: ___ Beachs Cleaner

___ Other (see comments)

COMMENTS: Recommend manual removal of tarmat and asphalt patches followed by bioremediation. Work should be conducted between 6/2 and 7/9 based on above salmon constraints. No treatment should be performed at the Special Study site (Exxon AP-16) on the east shore of the small islet (see sketch map); Contact SCAT office for specific restrictions (564-3660).

TAG COMMENTS:-------------------------------------------------------

TAG APPEAL DATE: 4/19/90.

ADEC ART WILSON

EXXON ART WILSON

NOAA Paul Nesbitt

USCG

TAG APPROVAL DATE: 4/15/90.

ADEC ART WILSON

EXXON ART WILSON

NOAA Paul Nesbitt

USCG
ER-07

ER-09

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

ER-7

Map Key: PWS-173
Name: Richard Marty
Date: 04/04/90
Data Entered:

ADEC Segment Length: 1022m
1991 MAYSAP EVALUATION

SEGMENT: ER 008  SUB: A  REGION: PWS  SURVEY DATE: 5/26/91

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

Ecological/Constraints (see page two for details) Eagle nest, Fry release, 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:

INITIAL  TAG  FOSC

TREATMENT REQUIRED (Y or N)  N  ______  ______

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

COMMENTS:
INITIAL: __________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

TAG: __________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

FOSC: __________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

TAG APPROVAL DATE:  ________  FOSC APPROVAL DATE:  ________

ADEC  __________________________
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.
**MAYSAF FIELD SHORELINE COMMENT SHEET**

**TEAM NO.** 3  **SEGMENT** EZ-08  **SUBDIVISION** A  **DATE** 5/26/91

<table>
<thead>
<tr>
<th>ADEC</th>
<th>Wesley Ghormley</th>
<th>SIGNATURE</th>
<th>Wesley Ghormley</th>
</tr>
</thead>
</table>

☐ NTR  ☐ TREATMENT RECOMMENDED

Due to time limits I did not partake in this survey, but according to survey members remaining oil was broken up or removed.

<table>
<thead>
<tr>
<th>EXXON</th>
<th>Rey Saltel</th>
<th>SIGNATURE</th>
<th>Rey Saltel</th>
</tr>
</thead>
</table>

☒ NTR

No reasonable oil remains on this segment. Segment looks good throughout with very healthy dense糊虫.

<table>
<thead>
<tr>
<th>LANDMANAGER</th>
<th>NAME</th>
<th>Dave Blanket</th>
<th>OF USFS</th>
<th>SIGNATURE</th>
<th>David Blanket</th>
</tr>
</thead>
</table>

☒ NTR

Low to Moderate Energy Environment. All Beaches Clear. No H. of Plants, Animals. Boulder/Cobble Shoreline. Southeast portion of segment is within a protected bay and has numerous (approxx 100) trees and/or pines. All S.O.A found was broken up - likely not all was found, but the majority was. No good campsites. Area this shoreline segment, and limited general recreation potential.

<table>
<thead>
<tr>
<th>USCG/NOAA</th>
<th>NAME</th>
<th>Rowena Sineky</th>
<th>SIGNATURE</th>
<th>__________</th>
<th>__________</th>
</tr>
</thead>
</table>

☒ NTR

Comprised of Boulder Cleft with a few pockets segment beaches of: Boulder, Rubble, Gravel. Northern portion comprised of Boulder, Rubble, Gravel, Pebble, Sand. All walkable areas walked. Remnants Sor and hillside areas. No subsurface oil or further treatment required.
MAYSAP SHORELINE OILING SUMMARY

TEAM NO. 3
OG HARPER
BIO STOKER
ADEC GHORMLEY
LANDMANAGER BLANCHET for USFS
EXXON SOTELO
USCG/NOAA MOONEY / DAHLI

SEGMENT ER-BA
SUBDIVISION A
DATE 26 MAY 1991

TIME 06:10 to 08:30
TIDE LEVEL +5 ft. to +7.5 ft.
ENERGY LEVEL:  □ H □ M □ L

SURVEYED FROM: □ FOOT □ BOAT □ HELO
WEATHER: □ SUN □ CLOUDS □ FOG □ DRIZZLE □ SNOW

TOTAL LENGTH SHORELINE SURVEYED: 2862 m
NEAR SHORE SHEEN: □ BR □ RB □ SL □ NONE

EST. OIL CATEGORY LENGTH:
- W 0 m M 0 m N 0 m V 3 m NO 359 m US 0 m

<table>
<thead>
<tr>
<th>L.O.</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT</th>
<th>SHORE SLOPE</th>
<th>AREA</th>
<th>ZONE</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>AP</td>
<td>MS</td>
<td>TB</td>
<td>BR</td>
<td>CV</td>
<td>CT</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 SUBSURFACE OIL CHARACTER OILED ZONE CLEAN BELOW H2O LEVEL SHEEN COLOR PIT ZONE SURFACE-SUBSURFACE SEDIMENTS NOTES

<table>
<thead>
<tr>
<th>PIT</th>
<th>No.</th>
<th>DEPTH</th>
<th>OIL CHARACTER</th>
<th>ZONE</th>
<th>CLEAN</th>
<th>BELOW</th>
<th>H2O</th>
<th>LEVEL</th>
<th>COLOR</th>
<th>ZONE</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

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

OG COMMENTS: This shoreline is located on a small island (Fox Farm Island) at the south end of Elrington F. Substrate is predominately sterile. Wave exposure is mostly low except for the northwestern corner which receives refracted swell through Elrington Passage.

On the southern portion of the island isolated, dry, friable mousse patches were present at about 5 m intervals; these patches were broken-up during the survey.

Revised 5/12/91 KG 06/10/95
Review: MC 12/20/91
<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>OILED ZONE cm-cm</th>
<th>CLEAN BELOW cm-cm</th>
<th>H2O LEVEL (cm)</th>
<th>SHEEN COLOR</th>
<th>PIT ZONE</th>
<th>SURFACE-SUBSURFACE SEDIMENTS</th>
<th>NOTES</th>
</tr>
</thead>
</table>

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

**OG COMMENTS:**

Another short stretch of 50R/4, comprised of about 12 patties, was broken up at the eastern end of the segment. The lee-side of onebuoy/counter had a 0.5 x 3 m oildrive.

No subsurface oil was noted - substrate on the western part of the island was either large boulder/subsile or bedrocks, preventing penetration. The eastern beach area was comprised of fine weathered shale and appeared to limit penetration of the mussel to less than 3 cm. Informal pits in this area, dug while treating the patties, revealed no subsurface oil.
WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED</th>
<th>SPECIES PRESENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eagles</td>
<td>1</td>
<td>1</td>
<td>sea mammals</td>
<td></td>
</tr>
<tr>
<td>Seabirds</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waterfowl</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gulls/Kittiwakes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shorebirds</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corvids</td>
<td>Raven</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Birds</td>
<td></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>4 + 1 bull</td>
<td>cow</td>
<td></td>
</tr>
<tr>
<td>Pinnipeds(specific)</td>
<td>60</td>
<td>lions - 7</td>
<td></td>
</tr>
<tr>
<td>Whales(specific)</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

LAND MAMMALS

Shoreline subdivision map showing important biological features attached.
ER008 A

Wide
Medium
Narrow
Very Light
No Oil

Subdivision Field Map
ADEC Subsegment Length: 2002m

ER008 A

Map Key: PUBER008A
Name: HARPER

Date: 26 MAY 91
Data Entered:

49 FT

SURFACE OILING SUMMARY MAP
WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT ER-08 SUBDIVISION A. DATED 8-1-90

MODIFICATION CLASS I _____ CLASS II ✓ CLASS III _____

1. REASON FOR MODIFICATION
   Asphalt Patties (Friable) starting at E End of Segment need to be removed.

2. SUGGESTED ADJUSTMENT TO WORK PLAN
   Manually Remove Asphalt Patties.
   Site #1 on Sketch Map.

3. TIMING ISSUES

ADEC
EXXON
USCG
LAND MANAGER Douglas Gibson (If field rep is on scene)
WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT ER-08  SUBDIVISION A  DATED 8-1-90

MODIFICATION CLASS I  CLASS II  √ CLASS III

1. REASON FOR MODIFICATION
Asphalt Patties (Friable) Starting at E End of Segment need to be removed.

2. SUGGESTED ADJUSTMENT TO WORK PLAN
Manually Remove Asphalt Patties. @ Site #1 on Sketch Map.

3. TIMING ISSUES

ADEC
EXXON
USCG

LAND MANAGER: Douglas Gibson (If field rep is on scene)
SEGMENT AS / ER-Y SUBDIVISION: A SITE: 1 DATE 8/1/90

USCG
NAME: Michael D. Brown SIGNATURE: Michael D. Brown

☐ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:

ADEC
NAME: John Heyer SIGNATURE: John Heyer

☐ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON: Work order modification sent in with this area.
Oiling consisted of a bank of API/PIE in USTZ needs manual R.U.
No further treatment recommended for this site beyond work order modification.

LAND MANAGER
NAME: Douglas Gibson SIGNATURE: Douglas Gibson

☐ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:

EXXON
NAME: Mark Wes N.J. SIGNATURE: Mark Wes N.J.

☐ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON: To see if any additional asphalt tumors.
SEGMENT AS / ER-Y  SUBDIVISION: A  SITE: 2  DATE: 8/1/90

SCG
NAME: Michael D. Brown  SIGNATURE: Michael D. Brown

☐ YES  ☒ NO  PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: No priority site for reassessment in 1991

ADEC
NAME: John Heyer  SIGNATURE: John Heyer

☐ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: No treatment at this time only remnants of oiling were CTS.

LAND MANAGER
NAME: Douglas Gibson  SIGNATURE: Douglas Gibson

☐ YES  ☒ NO  PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: No priority site for reassessment in 1991

EXXON
NAME: Matthew J. N.  SIGNATURE: Matthew J. N.

☐ YES  ☒ NO  PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: No priority site for reassessment in 1991
SEGMENT AS 1   SUBDIVISION:  A   SITE: 3   DATE 8/11/90

NAME: Michael D. Brown   SIGNATURE: Michael D. Brown

☐ YES   ☐ NO   PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

☐ YES   ☐ NO   PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

☑ YES   ☐ NO   PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

☑ YES   ☐ NO   PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

☑ YES   ☐ NO   PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

☑ YES   ☐ NO   PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

☑ YES   ☐ NO   PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

☑ YES   ☐ NO   PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:
SEGMENT AS: ER-8  SUBDIVISION: A  SITE: 4  DATE: 8/1/90

USCG
NAME: Michael D. Brown  SIGNATURE: Michael D. Brown

☐ YES  ☒ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:

ADEC
NAME: John Hayes  SIGNATURE: Jeffrey

☐ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON: No treatment recommended at this time. Pathways remaining are sparse and well weathered.

LAND MANAGER
NAME: Douglas Gibson  SIGNATURE: Douglas Gibson

☐ YES  ☒ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:

EXXON
NAME: Martino, N.J.  SIGNATURE: Nicholas J. Martino

☐ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
**ASAP SHORELINE OILING SUMMARY**

**TEAM NO.** ONE  |  **SEGMENT ASL.** ER-3  
**OIL REP.** Reimer  |  **USGS** Brown  
**ADEC** Hayes  |  **LAND REP.** Gibson  
**DATE:** 8/1/90  |  **TOTAL NO. SITES:** 4  
**TIME:** 10:30 to 11:30  |  **TIDE LEVEL:** 6.10.6  
**TOTAL EST. LENGTH OF SHORELINE SURVEYED:** 640 m  
**SURVEYED FROM:** Foot  |  **WEATHER:** Sun  
**OIL CATEGORY LENGTH:** W 0 m M 0 m N 340 m V 300 m NO 0 m US 0 m  
**PHOTOGRAPHS:** Roll No. ASAP-01-01  
**FRAMES:** 19, 20, 21

### SURFACE OIL

<table>
<thead>
<tr>
<th><strong>SITE 1</strong></th>
<th><strong>SITE 2</strong></th>
<th><strong>SITE 3</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CHARACTER</strong></td>
<td><strong>DISTRIBUTION</strong></td>
<td><strong>OILED ZONES</strong></td>
</tr>
<tr>
<td>ASPHALT</td>
<td>/C /B /P /S</td>
<td>SU /UI /MI /LI</td>
</tr>
<tr>
<td>S.O.R.</td>
<td>F</td>
<td>F</td>
</tr>
<tr>
<td>POOLED COVER</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COAT STAIN MOUSSE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PATTERNS</td>
<td>X X</td>
<td>X</td>
</tr>
<tr>
<td>FILM</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>NO OIL</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>EST. SITE LENGTH</td>
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### SUBSURFACE OIL

<table>
<thead>
<tr>
<th><strong>SITE NO.</strong></th>
<th><strong>PIT NO.</strong></th>
<th><strong>PIT DEPTH (cm)</strong></th>
<th><strong>OILED INTERVAL (cm)</strong></th>
<th><strong>CLEAN BELOW (Y/N)</strong></th>
<th><strong>PIT ZONE</strong></th>
<th><strong>SURFACE-SUBSURFACE SEDIMENTS</strong></th>
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<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>20</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>P-C-P</td>
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</tbody>
</table>

**COMMENTS:** Site #1 was previously worked with the same Tarmat according to Exxon Rep. The existing tarmat is in and around the tranching on the beach where material was removed. This is a bit of a mystery.

**REVISION NO.** 7/27/90
### Surface Oil (Continued)

<table>
<thead>
<tr>
<th>Character</th>
<th>Oiled Zones</th>
<th>Distribution</th>
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<tbody>
<tr>
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<td>S.O.R.</td>
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<td>/C /B /P /S</td>
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<td>POOLED</td>
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<td>/C /B /P /S</td>
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<tr>
<td>COVER</td>
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<td>/C /B /P /S</td>
</tr>
<tr>
<td>COAT</td>
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<td>/C /B /P /S</td>
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<td>MOUSSE</td>
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<tr>
<td>PATTIES/T.B.</td>
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<td>X X Y</td>
</tr>
<tr>
<td>FILM</td>
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<td>/C /B /P /S</td>
</tr>
<tr>
<td>NO OIL</td>
<td></td>
<td>X X</td>
</tr>
<tr>
<td>EST. SITE LENGTH</td>
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### Subsurface Oil (Continued)

<table>
<thead>
<tr>
<th>Site No.</th>
<th>Pit No.</th>
<th>Pit Depth (cm)</th>
<th>Subsurface Oil Character</th>
<th>Oiled Interval</th>
<th>Clean Below (Y/N)</th>
<th>Pit Zone</th>
<th>Surface-Subsurface Sediments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

**COMMENTS**
ER-08

CT/S 1%/ on Boulders MITZ-VITZ

SITE #2

SITE #3

YES

SITE #4

ALDERS CLIFF

CUT MS/SL on Bluffs, Rock

Rock ALDERS

Fucus

CUT/P CLIFF

Fucus

ALDERS

Subdivision Field Map

Map Key: PWSE-8A

Name: Reimer

Date: 8/19/90

Date Entered:

ER-8 A

ADEC Subsegment Length: 2862 m

METERS

Wide

Medium

Narrow

Very Light

No Oil

AK State Plane Zone 4

par-8a
ER-08

ADEC Subsegment Length: 2862m
METERS

ER-8 A

Subdivision Field Map
Map Key: PWSER-8A
Name: Reimer
Date: 8/1/90
Data Entered:

Wide
Medium
Narrow
Very Light
No Oil

XXX
////
-----
TTTT
0000

AK State Plane Zone 4 1:7202
per-8a
GENERAL DATA

SITE LGTH 200  OIL CATEGORIES: W O M N L340 VL300 NO 60 U-E

SURFACE DATA

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TIDAL ZONE: SU UI MI LI

CHAR #: 2  OIL CHAR: TB  OIL DIST: CONT BRKM PTCH SPLH
TIDAL ZONE: SU UI X MI X LI

CHAR #: 3  OIL CHAR: MARQ  OIL DIST: CONT BRKM PTCH SPLH
TIDAL ZONE: SU X UI MI LI X

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TIDAL ZONE: SU UI MI LI

CHAR #: 5  OIL CHAR: ___  OIL DIST: CONT BRKM PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 6  OIL CHAR: ___  OIL DIST: CONT BRKM PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 7  OIL CHAR: ___  OIL DIST: CONT BRKM PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 8  OIL CHAR: ___  OIL DIST: CONT BRKM PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 9  OIL CHAR: ___  OIL DIST: CONT BRKM PTCH SPLH
TIDAL ZONE: SU UI MI LI
ASAP DATA ENTRY FORM

SUBSURFACE DATA

SEGMENT ID: ER-Y SUBDIV: A SITE: 1

PIT #1 PIT DEPTH: 30 OIL CHARACTER: NO OIL INTVAL: FROM _____ TO _____
CLEAN BELOW: _____ PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT #2 PIT DEPTH: _____ OIL CHARACTER: NO OIL INTVAL: FROM _____ TO _____
CLEAN BELOW: _____ PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT #3 PIT DEPTH: _____ OIL CHARACTER: NO OIL INTVAL: FROM _____ TO _____
CLEAN BELOW: _____ PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT #4 PIT DEPTH: _____ OIL CHARACTER: NO OIL INTVAL: FROM _____ TO _____
CLEAN BELOW: _____ PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT #5 PIT DEPTH: _____ OIL CHARACTER: NO OIL INTVAL: FROM _____ TO _____
CLEAN BELOW: _____ PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT #6 PIT DEPTH: _____ OIL CHARACTER: NO OIL INTVAL: FROM _____ TO _____
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SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT #7 PIT DEPTH: _____ OIL CHARACTER: NO OIL INTVAL: FROM _____ TO _____
CLEAN BELOW: _____ PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT #8 PIT DEPTH: _____ OIL CHARACTER: NO OIL INTVAL: FROM _____ TO _____
CLEAN BELOW: _____ PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG
GENERAL DATA

SEG ID: E2-Y SBDV: A SITE: 2 TEAM: 1 DATE: 8/11/90
SITE LGTH: 400 OIL CATEGORIES: W M Q N U V L 360 NO 60 U D
1991 REASSESSMENT: USCG: 1 ADEC: 1 LDMGR: 1 EXXON: 1
2162 F.W.

SURFACE DATA

CHAR #: 1 OIL CHAR: S OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI X MI X LI

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CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
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GENERAL DATA

SEG ID: E2-Y SBDV: A SITE: 3 TEAM: 1 DATE: 8/1/90
SITE LNGTH: 350 OIL CATEGORIES: W M D N 340 VL 300 NO 60 U 0
1991 REASSESSMENT: USCG: N ADEC: LDMGR: EXXON:

SURFACE DATA

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TIDAL ZONE: SU UI TI MI LI

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TIDAL ZONE: SU UI TI MI LI

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### ASAP DATA ENTRY FORM

#### GENERAL DATA

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SHORELINE EVALUATION

SEGMENT ST/ER-08 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVIES AND TIME CONSTRAINTS:
1F Sawmill Bay Hatchery release (4/15 to 6/1)
6U Recreation: Tent sites (6/1 to 9/15)
7II Deer harvesting (8/15 to 2/28)

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 a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: DATE: 4/17/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 5-23 m: V.Light 10-26 m: No Oil 13-13 m
Subsurface Oil Observed: Yes No Maximum Depth

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

COMMENTS: The recommended treatment activities are as follows: 1) Manual break-up and removal of tarmats, 2) Bioremediation of areas shown on attached sketch map. Work after 6/1 based on above hatchery constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90
ADEC JOHN BAYLOR EXXON ANDY DAVE NOAA 3rd WALTER BUCKDATE USCG KENNETH KEAFE

DATE: 4/17/90
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ER-08

SUBDIVISIONS: A (1 OF 1)
SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1F  Sawmill Bay Hatchery release (4/15 to 6/1)
6U  Recreation: Tent sites (6/1 to 9/15)
7II Deer harvesting (8/15 to 2/28)

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

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

SHPO SIGNATURE:_______________________ DATE:_______________________

OILING CATEGORIZATION:
Wide_0 m: Medium_0 m: Narrow_523 m: V.Light_1026m: No Oil_1313 m
Subsurface Oil Observed: Yes___ No_X___ Maximum Depth_______

RECOMMENDATIONS:
___No Treatment Recommended ___Share/Absorbent Booms
X  Treatment Recommended  ___Oil Snares (pom poms)
X  Manual Pickup  ___Absorbents (pads, rolls, etc)
X  Bioremediation  ___Spot Washing: ___Wands
X  Tarmat: X Breakup  ___Beach Cleaner
   X Removal  ___Other (see comments)

COMMENTS: The recommended treatment activities are as follows: 1) Manual break-up and removal of tarmats, 2) Bioremediation of areas shown on attached sketch map. Work after 6/1 based on above hatchery constraints.

TAG COMMENTS:

TAG APPROVAL DATE:______________
ADEC ___________________________ FOSC:_______________ DATE:________
EXXON __________________________
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 7/26)
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 unclipped 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 (6/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.

Seabird/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)
Invertebrates harvesting
For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
SEGMENT ST 1 ER-8  SUBDIVISION: A  DATE 04 APRIL 90

USCG  NAME  LARRY FLETCHER  SIGNATURE  

☐ NO TREATMENT RECOMMENDED  ☒ TREATMENT SUGGESTED

1. REMOVE ASPHALT AND TAR PAPERS MANUALLY.
2. BIO-REMEDiate.

☐ NO TREATMENT RECOMMENDED  ☒ TREATMENT SUGGESTED

☐ Remove asphalt and tar papers manually.
☐ Move rocks where necessary to get all of asphalt.

☐ Bio-remediation

☐ NO TREATMENT RECOMMENDED  ☒ TREATMENT SUGGESTED

Listed as priority 1,3 by PWS CA. Listed in PWS area plan as public use area for anchorage, recreation and subsistence uses. Recommend manual removal followed by bio-remediation.

20/22
**SHORELINE OILING SUMMARY**

- **Team No.:** 10
- **Time:** 13:19 to 15:15
- **Tide Level:** +1.8 m to +2.6 m (18)
- **Date:** 04/04/90

**UPLANDS DESCRIPTION:**
- Clouds
- Fog
- Rain
- Snow

**SURFACE SEDIMENTS:**
- R: 40%
- B: 40%
- C: 20%
- P: 0%
- G: 0%
- S: 0%
- O: 0%
- M: 0%
- V: 0%

**SURFACE OIL**

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**OILED DEBRIS**

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**PAVEMENT:**
- H F 75 sq. m by 3 cm

**NEAR SHORE SHEEN?**
- No

**OILED AMOUNT**

**DEBRIS COLLECTED**

**Photographs:**
- Roll No. ST 10/7
- Frames 14-19

**SUBSURFACE OIL**

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<td>P, G</td>
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**COMMENTS:** Segment consists mainly of high angle 
cliffs. 
- Pavement is concentrated near junction with ER-07.
- Oiled interval ≤ 5 cm does not constitute subsurface oil.

**Revision:** RM 4/4/90

**Reviewed:** J W 4/9/90

**Page 1 of 1**
SHORELINE ECOLOGICAL SUMMARY

Segment ST/10/ER Subdivision At Date (mo/day/yr) 4/4/90

Time (24 hr) 7:30 - 15:00

Biologist Lemon Rain, wind 12 mph, waves 5-6

(A) Substrate type and % of segments:
(1) Bedrock 40% (2) Boulder 40% (3) Cobble 20% (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);

juvenile/adult (X), new settlement (G)

Photographs:
Roll No. ST/10/7 Frames 14-19

Wildlife Observations/General Comments:

Ecological Considerations:

Barnacles

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Mytilus

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Gastropods

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Wildlife Observations/General Comments: Greatest total coverage on bedrock was through the mid zone. Red mussels/Aristaeus and Halosaccion all mediate in low zone. Enidebra in high zone. Lepas nautica in mid - Lithocodium seen laying eggs.

Ecological Considerations: Beds of Tresus (bivalve) have apparently been uplifted and now die in the zones we see today. Deeper water may hold many more; important for subsistence and recreation. Odontobutis hemiscopus (deer), Mustela vison (mink) and bald eagle were sighted. A dead Enhydrina subrosa (scat) was found unspilled; only skin of brain remains.

Tent sites, deer harvest
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT ER-8 SUBDIVISION A (1 of 1)

WORK WINDOW

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1F Sawmill Bay Hatchery Release
Subdivision is closed to bioremediation prior to 6/1. No constraint to manual pickup or tarmat removal.

1K Purse Seine Hook-off
Subdivision is closed to bioremediation after 7/20. No constraint to manual pickup or tarmat removal.

711 Subsistence: Deer Harvesting
Subdivision is closed to bioremediation after 8/15. No constraint to manual pickup or tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS
Restrict boat and air traffic to essential minimum after 7/20. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

TAG ADDENDUM DATE: 5/18/80
PREPARED BY: [Signature]
DATE: 5/18/80
PREPARED BY: [Signature]
SHORELINE EVALUATION

SEGMENT ST/ER-08 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1F Sawmill Bay Hatchery release (4/15 to 6/1)
6U Recreation: Tent sites (6/1 to 9/15)
7II Deer harvesting (8/15 to 2/28)

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 a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

SHPO SIGNATURE: DATE: 4/17/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 523 m: V.Light 1026 m: No Oil 1313 m
Subsurface Oil Observed: Yes__ No X__ Maximum Depth_____

RECOMMENDATIONS:
X Treatment Recommended
X Manual Pickup
X Bioremediation
X Tarmat: X Breakup  X Removal

COMMENTS: The recommended treatment activities are as follows: 1) Manual break-up and removal of tarmats, 2) Bioremediation of areas shown on attached sketch map. Work after 6/1 based on above hatchery constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90
ADEC JOHN BAIRD
EXXON ANDY TAYLOR
NOAA
USCG

FOSC: DATE: 4/21/90
1991 MAYSAP EVALUATION

SEGMENT: ER 008 SUB: A REGION: PWS SURVEY DATE: 5/26/91

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

Ecological/Constraints (see page two for details) Eagle nest, Fry release, 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: 6/04/91

RECOMMENDATIONS:

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<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: June 4, 1991
FOSC APPROVAL DATE: 6/18/91

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. 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.

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.

C:/wp/segment/er008a.seg
**MAYSAP FIELD SHORELINE COMMENT SHEET**

**TEAM NO.** 3  **SEGMENT** ER-08  **SUBDIVISION** A  **DATE** 5/26/91

### ADEC
**NAME** Wesley Gherumley  **SIGNATURE** Wesley Gherumley

- **TREATMENT RECOMMENDED**

  > Due to time limits I did not partake in this survey, but according to survey members remaining oil was broken up or removed.

### EXXON
**NAME** Ray Sotelo  **SIGNATURE** Ray Sotelo

- **NTR**

  > No recoverable oil remain on this segment. Segment looks good throughout with very healthy dense macro.

### LANDMANAGER
**NAME** Dave Blankenship  **SIGNATURE** Dave Blankenship

- **NTR** Low To Moderate Energy Environment, All Boulder Cuts, OR, HUN, OR, MULL.

  Boulder/Cobble Shoreline. Southeast portion of segment is within a protected bay and has numerous (approx. 100) tarballs and/or patches. All S.O.R found was broken up - likely not all was found, but for majority was. No good campsites along this shoreline segment and limited General Recreation Potential.

### USCG/NOAA
**NAME** Daniel fountain  **SIGNATURE** Daniel fountain

- **NTR** Comprised of BACOCE cliff with a few percent segment beaches of: Boulder, Rascal, Cannel. Northern portion comprised of Boulder, Rascal, Cannel, &/or sand. All walkable areas walked. Removed Sor and Hilse area. No subsurface oil or further treatment required.
MAYSAP SHORELINE OILING SUMMARY

TEAM NO. 3
OG B. HARPER BIO STOLER
ADEC GHORMLEY LANDMANAGER BLANCHET for USFS
EXXON SOTELO USCG/NOAA MOONEY/DALLIN

SEGMENT ER-8A
SUBDIVISION A
DATE 26 JAN 1991

TIME 16:10 to 18:30 TIDE LEVEL 1.5 ft. to 1.75 ft. ENERGY LEVEL: [ ] H [ ] M [ ] L
SURVEYED FROM: [ ] FOOT [ ] BOAT [ ] HELICOPTER WEATHER: [ ] SUN [ ] CLOUDS [ ] FOG [ ] RAIN [ ] SNOW
TOTAL LENGTH SHORELINE SURVEYED: 2862 m NEAR SHORE SHEEN: [ ] BR [ ] RB [ ] SL [ ] NONE
EST. OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m V 3 m NO 2859 m US 0 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>LENGTH</th>
<th>ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
<td></td>
<td>X</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

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PITT SUBSURFACE OIL CHARACTER</th>
<th>OILED ZONE CLEAN</th>
<th>H2O BELOW SHEEN COLOR</th>
<th>PIT ZONE CLEAN</th>
<th>SURFACE-SUBSURFACE SEDIMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

OG COMMENTS: This shoreline is located on a small island (Fox Farm Island) at the south end of Edlington Bay. Substrate is predominantly gravel. Wave exposure is moderately low except for the northwestern corner, which receives refracted swell through Edlington Passage.

On the southern portion of the island, isolated, dry, friable mousse patties were present at about 5m intervals. These patties were broken up during the survey.
<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>OILED ZONE cm-cm</th>
<th>CLEAN BELOW</th>
<th>H2O LEVEL (cm)</th>
<th>SHEEN COLOR</th>
<th>PIT NO.</th>
<th>SURFACE-SUBSURFACE SEDIMENTS</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Y/N</td>
<td>B R S N S UI MI LI</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

OG COMMENTS:

Another short stretch of SHR/14, comprised of about 12 patties, was broken up at the eastern end of the segment. The lee-side of one boulder/cobble had a 0.5 x 3 m oil slick.

No subsurface oil was noted - substrate on the western part of the island was either large boulder/sublith or bedrock, preventing penetration. The eastern beach area was comprised of a fine weathered shale and appeared to limit penetration of the mousse to less than 3 cm. Informal pits in this area, dug while treating the patties, revealed no subsurface oil.
MAYSAP 1991
DG SKETCH MAP
GREG CHANEY / DON CLING
TEAM 5

SEGMENT: EP A A
DATE:

AIR P.#: PIM-E 005-155
PIM-E 005-156

SEGMENT: EP A A
DATE:

AIR P.#: PIM-E 005-155
PIM-E 005-156

ELRINGTON PASSAGE

ELRINGTON ISLAND

LEGEND

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

SCALE

0
200

END OF PHOTO
MAYSAP BIological SUMMARY FORM

TEAM # 3  DATE 5/24/91
SEGMENT #:  E0 28
SUBDIVISION:  A
SEA STATE:  Calm
PHOTOGRAPHS: ROLL #:  FRAME #

BIOLOGIST:  Taker
WIND SPEED/DIRECTION:  Calm

TIDAL HEIGHT (Range):  0 to 2'

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):
Segment includes part of an Island/dramatic. Shoreline consists of generally low energy mixed substrate beaches composed of varying ratios of sand/gravel/pellet-like or pebble/rock/pellet, with bedrock exposures and headlands.

Biota on beach consists primarily of dense Fucus, alga
Rhodymenia, Alerce, Gastroia, laminaria, Hedophyllum and various filamentous algae. Fanne include dense barnacles, patchy limpets and kelp seaweed

Biota on beaches varies somewhat depending on substrate composition, but is characterized overall by relatively dense Fucus, algae and filamentous algae, moderately dense to dense barnacles and spag

Biota on beaches includes various smaller species, generally sparse and patchy, attached and interbedded small bryozoans, bryozoans, dense clusters of small individuals, patchy dense small crustaceans (epibenthic). Nudibranchs, Scartella, Nereid worms, Saxidermus, Acanthodes, Dermatostom and small epifauna.

No recognizable or treatable oil remains on this segment. Biota overall is very diverse and abundant, with evidence of vigorous new growth and recruitment.

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>Pol blennias</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>Raven</td>
<td>1</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>LAND MAMMALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sea Otters</td>
<td>4 + 1 Fme</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pinnipeds(specify)</td>
<td>Sea Lions - 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whales(specify)</td>
<td></td>
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</tbody>
</table>

No evidence of the presence or impact of marine mammals.

Shoreline subdivision map showing important biological features attached.
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