[Shoreline evaluations, 1991].

Prince William Sound EL-58 to EL-106

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REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-59

SUBDIVISIONS: A (1 OF 4)
SHORELINE EVALUATION

SEGMENT ST/EL-58 SUBDIVISION A (1 OF 4) DATE 3/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M Herring spawning (4/1 to 6/15)
6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled substrate and biota. Avoid dense mussel beds in intertidal zone.

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 184 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth ______

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

COMMENTS: Recommend manual pick up of tar balls and bioremediation as shown on sketch map. Work should be conducted between 6/15 and 8/15 as a result of constraints.

TAG COMMENTS: ________________________________________________________________

TAG APPROVAL DATE: __________
ADEC ___________________________ FOSC: __________ DATE: __________
EXXON ___________________________ NOAA ___________________________
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 Harbor seal and sea lion pupping (5/15 to 7/1)
3P Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

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

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

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

6U Recreation: Tent sites (6/1 to 9/15)
6V Anchorage (6/1 to 9/15)
5W 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 / EL 8758 SUBDIVISION: A DATE 03/30/90

USCG
NAME AEC Vandepols SIGNATURE AEC Vandepols

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS
I concur with Land Manager, use caution not to step on mussels during cleaning/removal of tar balls.

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS
The beginning of this section is steep R headland and work must be performed in the stiff. A rich algae mat lies in a band along the face in the LTZ. Manual hand scrubbing of the rock face is recommended. Depending on the thickness & consistency of the coat in the band, hot water washing should also be considered. The remaining segment is primarily R, B, X a small amount of cobble. Oil was minimal through this area and cleanup could be accomplished through manual scraping and pickup of tarballs.

LANO MANAGER
NAME DAN LOGAN SIGNATURE Dan Logan

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS
MANUALLY SCRAPE TAR BALLS OFF BOULDER AND ROCKS. SMALL PATCHES OF COAT COULD BE SCRAPE OFF ON ROCK FACE however 90% IS STAIN. MOST TAR BALLS ARE LOCATED UNDER LARGE ROCKS, THE ROCK FACE IS A SLIPPERY HAZARDOUS TO WORK, THE AREA SHOULD BE WORKED AT LOW TIDE AND THE CREW SHOULD BE BRIEFED ABOUT NOT WALKING ON MUSSELS.

SUPRA TIDAL LEVEL WAS NOT SURVEYED DUE TO SNOW.
SHORELINE OILING SUMMARY

SURFACE OIL

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

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COMMENTS: No pits dug. Too many large boulders and intact bedrock. Few oily patches under boulders. Rare tarballs.
**SHORELINE ECOLOGICAL SUMMARY**

Segment S1EL 057 Subdivision A  
Date (mo/day/yr) 03/30/90

Time (24 hr) 0725-0830  
Biologist Crank

Tide Height: +2 to -1  
Length - 50 m

<table>
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<th>(A) Substrate type and % of segments:</th>
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<tr>
<td>(1) Bedrock</td>
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| (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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**Wildlife Observations/General Comments:**

1 Harbor Seal - Adult in water  
2 Kittiwake - on water  
3 Bald Eagle - Adult flying  
4 Marbled Murrelet - on water, winter plumage  
5 Crow - Flying  
6 Magpie - in trees  
7 II - Deer harvesting  
8 M - Herring Spawning  

See Attached Sheet

Ecological Considerations:
Additional Present Biota:

MITZ - Filamentous Green Algae - possible combination of several species including Spongomonas, Urosea.
- may also include Blue Greens and Diatoms
- Pterosiphonia and/or Polysiphonia may also be present with this cover.

Gloiopeptis
Enteromorpha
Rhodomela larix
Halosaccion

LITZ - Several species of bladed reds filamentsous reds
Enteromorpha
Laminaria
Pycnopodia sp.
Dermasteria sp.
Sepulid
Encrusting sponge
Encrusting coralline
Unknown clam

General Comments:
- Vertical rock face with boulder beach shoulder - boat surveyed
- Rich LITZ and upper subtidal
- LITZ/MITZ covered w/ an algae mat consisting of filamentous reds; greens coating barnacles
- Approx. 30% barnacle mortality
- Low LITZ and upper subtidal dense bladed reds concentration.
- Herring spawn area, no spawning observed at this time.
- Gastropod concentration in LITZ may be low due to boat survey, unable to make visible confirmation in cracks.
Wide paid of cover with subsurface oil in supratidal Zone.

Wave-cut rock with cliffs

Boulders

Subdivision A

all narrow oil

Vertical rock

Boulder, cobble beach

Pebble, cobble beach

Rocks
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-58

SUBDIVISIONS: B (2 OF 4)
SHORELINE EVALUATION

SEGMENT ST/ EL-58 SUBDIVISION B (2 OF 4) DATE 3/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M Herring spawning (4/1 to 6/15)
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 substrate and biota.

ARCHAEOLOGICAL CONSTRAINTS:
Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time.

SHPO SIGNATURE: __________________DATE: __________________

OILING CATEGORIZATION:
Wide 0 m: Medium 38 m: Narrow 124 m: V.Light 586 m: No Oil 34 m
Subsurface Oil Observed: Yes X No Maximum Depth 45 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pick up of tar balls and debris and bioremediation of areas shown on sketch map. Work should be conducted between 6/15 and 8/15 based on above herring and deer constraints.

TAG COMMENTS:

TAG APPROVAL DATE: ______________
ADEC EXXON FOSC: _______________ DATE: ______________
NOAA USCG
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

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

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

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

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

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

Remote release site

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

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

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

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

Herring spawning (4/1 to 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 (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 from nests. 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 (6/15 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  ELS SUBDIVISION: B DATE 03/30/90

USCG NAME AEC Vandepels SIGNATURE AEC Vandepels

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS
I suggest manual removal of tar balls and filling of upper intertidal area. Then bio.

ADEC NAME Michele Baer SIGNATURE

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS
The sub-segment is primarily exposed C & B beaches. The natural cleaning process and a high amount of fresh-water runoff has taken care of the majority of the sub-segment. Nowadays there are a few pockets that need additional attention. Suggested cleanup method are hand wiping of the B, manual removal of saturated C & P in pockets, and burning of oiled legs.

LAND MANAGER
NAME Dan Logan SIGNATURE

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS
THIS BEACH HAS THE POTENTIAL FOR A CAMP/RECREATION SITE BUT DOES NOT APPEAR TO BE USED FOR RECREATION AT THIS TIME. I RECOMMEND THAT THIS BEACH BE TREATED BY A COMBINATION OF 2 TREATMENTS:

1) MANUALLY REPE TARR BALLS
2) FILL UPPER INTERTIDAL AREAS WHERE OILING IS INDICATED ON SKETCH MAP WITH LIGHT MACHINERY (4-WHEELER) TO AERATE TO A DEPTH OF ~ 30CM. THEN APPLY FERTILIZER TO INCREASE BACTERIA GROWTH.
3) TILLED SITES WILL REQUIRE ARCHAEOLOGICAL SURVEY FIRST.
## SHORELINE OILING SUMMARY

**Ogilvie, J. Springer** | **USCG R. Vondenhoff** | **SEGMENT ST E154** | **BIO P. Crank** | **LAND REP D. Lisan** | **SUBDIVISION B (240)**

**DATE** | **TIME** | **DATE OF 24/01**
--- | --- | ---
03/13/19 | 10:30 | 12:35

### SURFACE OIL

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### SURFACE OIL

- **Pavement:** H F S 0 sq. m by 0 cm
- **PATTIES/TARBALLS:** 0 BAGS
- **NEAR SHORE SHEEN:** NO BR RW SL TL
- **OILED DEBRIS:**
  - Logs
  - Vegetation
  - Trash
  - Debris
- **DEBRIS COLLECTED:** YES NO
- **TYPE:**
  - Debris: #BAGS
- **Photographs:**
  - Roll No.: 5T:5-1
  - Frames: 2-3, 24

### COMMENTS

Pebbles and boulders on beach are rounded. Storm berm covered with snow.
## Subsurface Oil (Continued)

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<th>Pit No.</th>
<th>Pit Depth (cm)</th>
<th>Subsurface Oil Character</th>
<th>Oiled Interval</th>
<th>Below Oil Interval</th>
<th>Oil/Film Color</th>
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### Comments

REVIEWED: [Signature]  DATE: 4/30/00
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST EL 5.4  Subdivision B  Date (mo/day/yr) 03/30/90

Time (24 hr) 0830 - 1035  Biologist Crank  Tide Height: -1 to -2 ft

(A) Substrate type and % of segments:
- (1) Bedrock _5_ (2) Boulder _20_ (3) Cobble _35_ (4) Pebble _30_ (5) Sand _10_ (6) Shingle

(B) Overall % cover of biota (% of segment): Dense _10_ Moderate _50_ Low _40_

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

### BARNACLES

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### FUCUS

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Wildlife Observations/ General Comments:
- Sitka deer femur
- Deer and Bear tracks
- Gull - Flying
- Raven - Flying
- Rock outcrop only in MITZ & WITZ
- See attached sheet

Ecological Considerations:
- Deer harvesting
- Herring spawn
- Tent Sites
- Special Area Destination
June: 2100740
Time: 0830 - 1035
Tide Height: -1 to -2 Ft

**Rock Outcrop - Tidepools included**

**MITZ:** Enteromorpha

Cladophora

Filamentous greens

Fucus stipes in heavy concentrations

**LITZ:** Encrusting coralline

Opuntiella

Articulating coralline

Polychaete worm, unidentified

Aenones

Tidepool Sculpin

Serpulid

Urchin test

Odonthalia?

**Cobble Beach -**

**MITZ -** Drift Nereocystis with Lepas pacifica

**MITZ -** Clam Shells

Sepunculid worm

Black-tip (?) Crab - Juv.

Pynopodia

Salt Hyd Eel - Juv.

Urchin Test

Sea Star Exoskeleton

Nucella

**General Comments:**

- Subsection consists of cobble/pebble beach with 2 major rock outcroppings.

- Rock outcropping had several small tidepools.

- Tidepools had dense biota concentration.

- Fucus stipes although sparse throughout segment were in heavy concentrations along outcrops.

- Recruitment is high on outcrops for Balanus; Mytilus; Moderate for Fucus.
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-58

SUBDIVISIONS: C (3 OF 4)
SHORELINE EVALUATION

SEGMENT ST/ EL-58  SUBDIVISION C (3 OF 4) DATE 3/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M  Herring spawning (4/1 to 6/15)
6Y  Recreation: Special use destination
711  Subsistence area: Deer harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

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

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 32 m: Medium 38 m: Narrow 477 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No  Maximum Depth 30+ cm

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

COMMENTS: Recommend manual pick up of tar balls and oil spill related debris. Recommend bioremediation of areas shown on sketch map. Work should be conducted after 6/15 based on constraints.

TAG COMMENTS: ____________________________________________

TAG APPROVAL DATE: __________
ADEC  EXXON  NOAA  USCG
FOSC: ________________________  DATE: __________
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
   No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage.
   No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
1C Salmon fry nursery area (4/31 to 7/31)
1D Esther Hatchery release (4/15 to 6/1)
1E Main Bay Hatchery release (4/20 to 5/10)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release 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)
30, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
   Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

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

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

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

6U Recreation:
   Tent sites (6/1 to 9/15)
6V Anchorages (6/1 to 9/15)
6W Forest Service cabins (6/1 to 9/15)
6X Lodge (6/1 to 9/15)
6Y Special use destination

7Z Subsistence area:
   Salmon harvesting (6/1 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

USCG
NAME AEC Vandepels SIGNATURE AEC Vandepels

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS
I suggest cleaning 4m band on pebble/boulder beach by hand and wiping and turning rocks carefully due to large concentration of mussels.

ADEC
NAME Michelle Faer SIGNATURE

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS
The R headlands can be cleaned by manual scrubbing/scraping from a skiff. Hot water washing may be used in combination with the scrubbing for areas of heavy coating (i.e. cracks & crevices). A wide band of focus spotting inhabits the MIZ and should be considered in the selection process. On the B, C, & D beach the B should be hand wiped the upper oiled layer. Removal and the underlying sediment bio-remediated. Filling is recommended. However, the 30° incline of the beach may limit this option. Oiled logs should be burned.

LAND MANAGER
NAME Dan Logan SIGNATURE

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS
1) Manual scrape tar from rock face, where indicated on sketch map

2) On pebble boulder beach treat 4m wide oil band by turning/filling with hand tools (large concentration of mussels limit machine) then apply fertilizer.

SUPRA Tidal was not surveyed due to snow

☑
**SHORELINE OILING SUMMARY**

- **Ogilby J. Springer** USCG R. Van Derwels
- **BIO**: P. Crick
- **LAND REP**: M. B. Eagle
- **SUBDIVISION**: C (304')
- **TEAM NO.**: 5
- **TIDE LEVEL**: -2' to +1'
- **EST. SUBDIVISION LENGTH**: 240 m x 529
- **SURFACE SETLEMENT**: Snow
- **SLOPE**: Long
- **OIL CATEGORY**: SURFACED OIL
- **LENGTH**: SURFACE OIL
- **WAVE EXPOSURE**: Low
- **OIL CATEGORY LENGTH**: W 0 m M 58 m N 240 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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<td>No Oil</td>
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**Pavement**: H F S 0 sq. m by 0 cm

**Patties / Tarballs**: 2 bags

**Near Shore Shume?**: No BR (W) SL TL

**Oiled Debris**: Logs, Vegetation, Trash, Debris

**Debris Collected**: Yes

**Type**: Plastic bag

**Bags**: 1

**Photographs**:
- Roll No.: 51-5-1
- Frames: 14, 15, 23

### SUBSURFACE OIL

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**Comments**: Pit 1 - Brown sheen on groundwater
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST/EL 5  
Subdivision C  
Date (mo/day/yr) 3/30/90  
Tide Height: -1.5 m +1  
Length: 173 m

Time (24 hr) 1035-1130  
Biologist Crank

(A) Substrate type and % of segments:  
(1) Bedrock 80%  
(2) Boulder 15%  
(3) Cobble 5%  
(4) Pebble 0%  
(5) Sand 0%  
(6) Silt 0%

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

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

### Barnacles

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### Mytilus

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### Gastropods

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### Fucus

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Wildlife Observations / General Comments:  
Gull

Ecological Considerations:  
- *T*  
- *H* - Deer Harvesting  
- *M* - Herring spawn  
- *U* - Tent Sites  
- *Y* - Special Area Destination
Date: 3/30/90     Length: 173m
Time: 1035-1130
Tide Height: -1.5/6'

Additional Biota

**Rock**
- MITZ - Filamentous Algae cover on Barnacles
  - Syosiphon
- LITZ - Laminaria
  - Enteromorpha
  - Several bladed reds
  - Pycnopodia
  - Dermasteria
  - Sepulid
  - Evasteria

**Boulder/Cobble Beach**
- MITZ - Nucella - Adults and egg cases
  - Lithoria egg masses

- LITZ - Pycnopodia - Clam Shells
  - Dermasteria
  - Nucella
  - Reproductive filamentous red - Odontalia?

General Comments -
- Greatest concentrations of mussels located near outlet stream
- High adult barnacle mortality
  - Balanus scarring present
- Vertical Rock surveyed by boat - Gastropod concentrations may be reported lower
- Cobble beach foot surveyed
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-58

SUBDIVISIONS: D (4 OF 4)
SHORELINE EVALUATION

SEGMENT ST/EL-58 SUBDIVISION D (4 OF 4) DATE 3/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M Herring spawning (4/1 to 6/15)
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/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 47 m: Medium 0 m: Narrow 284 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 30+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pick up of tarballs and oil spill related debris. Bioremediate area shown on attached sketch map. Work should be conducted after 6/15 based on above herring constraints.

TAG COMMENTS:

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

SEGMENT ST EL 58 SUBDIVISION: D DATE 03/30/90

USCG
NAME AEC Vandepels SIGNATURE AEC Vandepels

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

Suggest cleaning 15 x 25 m area around pit 3 by manually removing pebbles & wiping boulders.

ADEC
NAME Michele Baer SIGNATURE M. Baer

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

A narrow 1 m band of stain exists on the R headland. Most of the problem area lies on the plateaux following the headland. In this area, I recommend manual pick-up of AP, TB, and PT, hand-wiping of the B, and removal of the heavily saturated surface lying adjacent to the supratidal region. The remaining layer of B is OF and should be bioremediated during cleanup operations. Caution should be used with the heavily populated band of fucus sporelings covering the front of plateaux.

LAND MANAGER
NAME Dan Logan SIGNATURE D. Logan

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

AT PIT 3 SITE REMOVE SMALL COBBLES AND SMALLER BY HAND
THEN HAND WIPING BOULDERS AND LARGER LEFT BEHIND. ALL WORK
SHOULD BE DONE BY SMALL (710) SIZE CREW. ACCESS SHOULD BE SOUTH
POINT TO AVOID SPORLING IN IMMEDIATE AREA.

SUPRA TIDAL AREA NOT SURVEYED DUE TO SNOW

REV: 03/21/90
### SHORELINE OILING SUMMARY

**Date:** 03/30/80 12:00 to 13:30

**Team No.:** 5

**Tide Level:** +2 to +6

**Surface Sediments:**
- 60% A
- 30% B
- 10% C

**Wave Exposure:**
- 3% G
- 0% S
- 0% M
- 0% V
- 0% W

**Surface Sediments:**
- 50% A
- 40% B
- 10% C

**Slope:**
- 15% Hang
- 45% Vert

**Subsurface Sediments:**
- 75% A
- 25% B

**Comments:** Pit 5 - Rainbow sheen on groundwater

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### SURFACE OIL

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<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<td>Mousse</td>
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<tr>
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**Pavement:** H F S 0 sq. m by 0 cm

**Patties / Tarballs:** 4 BAGS

**Near Shore Sheen?** No

---

### SUBSURFACE OIL

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<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>BELOW OIL / FILM COLOR</th>
<th>PIT ZONE</th>
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<td>B, C</td>
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**Comments:** Pit 5 - Rainbow sheen on groundwater
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST/FL 521  
Subdivision D  
Date (mo/day/yr) 3/30/90

Time (24 hr) 1200 - 1330  
Biolgist Crank

Tide Height: +2 to +7  
Length: 180 m

(A) Substrate type and % of segments:  
(1) Bedrock 20% (2) Boulder 30% (3) Cobble 7% (4) Pebble 3% (5) Sand 3% (6) Silt

(B) Overall % cover of biota (% of segment): Dense 30% Moderate 30% Low 40%

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

Photographs:  
Roll No. 55-5-1

Frames 16, 17, 21, 22

### BARNACLES

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### GASTROPODS

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</tr>
</tbody>
</table>

### Wildlife Observations/General Comments:

- Backcap Chickadee
- Harbor Seal - Adult
- Raven
- Bald Eagle -Adult
- Deer Skeleton in SUPRA

Ecodlogical Considerations:

- 7 11 - Deer harvesting
- 2 M - Herring spawn
- 6 U - Tent Sites
- 6 Y - Special Area Destination

LITZ covered by tide - observations made through H2O
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 oiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

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

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

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

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

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

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

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

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

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

6Y
Special use destination

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

7HH
Finfish harvesting

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

7JJ
Invertebrate harvesting

For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
Date: 3/30/90  
Time: 1200 - 1330  
Tide Height: +2 to +7

**Additional Biota:**

**HITZ:** Littorina  
Limpets

**MITZ:** Dense cover of Filamentous Greens  
Entomorpha  
Polychaete Worms

**LITZ:** Alaria  
Laminaria  
Costoria  
Oedogonium  
Pyura

**Comments:**

Filamentous greens can include several species including Spongomorpha, Diatoms,  
Blue-greens and/or other species  

- On rock plateau in MITZ dense Fucus stipes and sporlings, sparse mixture ph.

- All of LITZ and most of MITZ on northern most vertical rock wall to end of segment were covered by tide. Bat survey.
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT EL-58 SUBDIVISION A (1 of 4)

WORK WINDOW

<table>
<thead>
<tr>
<th>Manual Pickup</th>
<th>OPEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioremediation</td>
<td>WORK PRIOR TO 8/15</td>
</tr>
</tbody>
</table>

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M Herring Spawning
NO CONSTRAINT. Authorized by Claudia Slater/ADF&G on 5/10/90 to Exxon/Tom Kelley.

711 Subsistence: Deer Harvesting
No constraint to manual pickup; closed to bioremediation after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS
Restrict boat and air traffic and beach disturbance to essential minimum after 8/15. Avoid dense mussel beds in intertidal zone. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

TAG APPROVAL DATE 5/24/90
ADEC ART WETZEL Art Weimer
EXXON April 1092
NOAA B. Weiler
USCG" J. J. D.
Prepared By: Linda Nguyen
Date 5/22/90

FOSC DATE 5/24-90
SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M Herring spawning (4/1 to 6/15)
6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to uncoiled substrate and biota. Avoid dense mussel beds in intertidal zone.

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:
Wide 0 m: Medium 0 m: Narrow 184 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 ___ Beach Cleaner
___ Removal ___ Other (see comments)

COMMENTS: Recommend manual pick up of tar balls and bioremediation as shown on sketch map. Work should be conducted between 6/15 and 8/19 as a result of constraints.

TAG COMMENTS: Monitor to check survey. Snow covered during survey.

TAG APPROVAL DATE: 4/10/90
ADEC ___ John Bauer ___ John ___
EXXON ___ John ___ 
NOAA ___ Bud ___
USCG ___ C.A. ___
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT EL-58 SUBDIVISION B (2 of 4)

WORK WINDOW

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<tr>
<td>Bioremediation</td>
<td>WORK PRIOR TO 8/15</td>
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ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.
>>>
PHONE 564-3274 (Anchorage) OR 229-1508 (24 hrs.) <<<

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

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<th>2M</th>
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<th>NO CONSTRAINT. Authorized by ADF&amp;G/Claudia Slater to Exxon/Tom Kelley 5/10/90.</th>
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<tr>
<td>7II</td>
<td>Subsistence: Deer Harvesting</td>
<td>No constraint to manual pickup; closed to bioremediation after 8/15.</td>
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OTHER ECOLOGICAL CONSIDERATIONS

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

TAG ADDENDUM DATE 5/21/90
ADEC
EXXON
NOAA
USCG

Prepared by: Andrew May

Date: 5/19/90
SHORELINE EVALUATION

SEGMENT ST: EL-58  SUBDIVISION B (2 OF 4) DATE 3/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M  Herring spawning (4/1 to 6/15)
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 substrate and biota.

ARCHAEOLOGICAL CONSTRAINTS:
Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time.

SHPO SIGNATURE: __________________________     DATE: 4/18/90

OILING CATEGORIZATION:
Wide 0 m; Medium 38 m; Narrow 124 m; V.Light 586 m; No Oil 34 m
Subsurface Oil Observed: Yes X No ___  Maximum Depth 45 cm

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

COMMENTS: Recommend manual pick up of tar balls and debris and bioremediation of areas shown on sketch map. Work should be conducted between 6/15 and 8/15 based on above herring and deer constraints.

TAG COMMENTS: MONITORS TO ASSESS SUITABILITY DURING TREATMENT

TAG APPROVAL DATE: 4/18/90
ADEC JOHN BAYER
EXXON MARY FISHER
NOAA CAPT. W. MARGIE
USCG CAPT. VICKI MEYER

ADDITIONAL SIGNATURES:
FOSC: __________________________ DATE: 4/22/90
**ADDENDUM: SUBDIVISION CONSTRAINTS**

SEGMENT EL-58 SUBDIVISION C (3 of 4)

### WORK WINDOW

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<td>Bioremediation Manual Tilling Manual Raking</td>
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**ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.**

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

**APPLICABLE ECOLOGICAL TIME CONSTRAINTS**

- **2M** Herring Spawning
  
  NO CONSTRAINT. Authorized by ADF&G/Claudia Slater to Exxon/Tom Kelley 5/10/90.

- **711** Subsistence: Deer Harvesting
  
  No constraint to manual pickup; closed to bioremediation and manual tilling after 8/15.

**OTHER ECOLOGICAL CONSIDERATIONS**

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

---

TAG ADDENDUM DATE 5/21/90
ADEC [Signature] DATE 5/21/90
EXXON [Signature] FOSC [Signature]
NOAA [Signature]
USCG [Signature]

Prepared by: [Signature] Date: 5/20/90
SEGMENT ST/ EL-58  SUBDIVISION C (2 OF 4)  DATE   3/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M  Herring spawning (4/1 to 6/15)
6Y  Recreation: Special use destination
7II Subsistence area: Deer harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

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

ARCHAEOLOGICAL CONSTRAINTS: Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time.

SHPO SIGNATURE: __________________________ DATE: 4/18/90

CATEGORIZATION:
Wide 32 m: Medium 38 m: Narrow 477 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No____ Maximum Depth 30+ cm

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

COMMENTS:  Recommend manual pick up of tar balls and oil spill related debris. Recommend bioremediation of areas shown on sketch map. Work should be conducted after 6/15 based on constraints.

TAG COMMENTS: __________________________________________________________

TAG APPROVAL DATE: 4/18/90
ADEC: JOHN BAUER  DATE: 4/22/90
EXXON: [Signature]  DATE: [Signature]
NOAA: [Signature]  DATE: [Signature]
USCG: [Signature]  DATE: [Signature]
## ADDENDUM: SUBDIVISION CONSTRAINTS

- SEGMENT EL-58 SUBDIVISION D (4 of 4)

### WORK WINDOW

| Manual Pickup Inside Active Eagle Nest Buffer Zone | CLOSED |
| Manual Pickup Outside Active Eagle Nest Buffer Zone | OPEN |
| Bioremediation Inside Active Eagle Nest Buffer Zone | CLOSED |
| Bioremediation Outside Active Eagle Nest Buffer Zone | OPEN |

### ARCHAEOLOGICAL MONITOR REQUIRED ON SITE.

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

### APPLICABLE ECOLOGICAL TIME CONSTRAINTS

<table>
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<tr>
<td>5T</td>
<td>Bald Eagle Nest</td>
<td>USFWS 6/1/90 map indicates an active nest in Subdivision D. Closed to bioremediation and manual pickup within 400m of active nest.</td>
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<tr>
<td>711</td>
<td>Subsistence: Deer Harvesting</td>
<td>Closed to bioremediation after 8/15. No constraint to manual pickup.</td>
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### OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from active nests. Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

FOSC

**DATE 6-10-90**

Prepared By: **W. Kelley**

Date **6/9/90**
SHORELINE EVALUATION

SEGMENT ST/ EL-58 SUBDIVISION D (4 OF 4) DATE 3/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M Herring spawning (4/1 to 6/15)
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/damage to unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:
ARCHAEOLOGICAL CONSTRAINT: An Exxon archaeological monitor is required on-site during shoreline treatment.

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

SHPO SIGNATURE: Date: 4/3/90

OILING CATEGORIZATION:
Wide 47 m: Medium 0 m: Narrow 284 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes x No ___ Maximum Depth 30+ cm

RECOMMENDATIONS:
_____ No Treatment Recommended
x 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: Recommend manual pick up of tarballs and oil spill related debris. Bioremedicate area shown on attached sketch map. Work should be conducted after 6/15 based on above herring constraints.

TAG COMMENTS: MONITORS TO ASSESS SUITABILITY DURING TREATMENT

TAG APPROVAL DATE: 4/18/90
ADEC [Signature] DATE: 4-30-90
FOSC: [Signature]
EXXON [Signature]
NOAA [Signature]
USCG [Signature]
1991 MAYSAP EVALUATION

SEGMENT: EL 058  SUB: A  REGION: FWS  SURVEY DATE: 5/1/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s)  RESTRICTED 8/15 - 9/15

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

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

SHPO Signature: Charles E. Holm  Date: 5/10/91

RECOMMENDATIONS:

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

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

COMMENTS:

INITIAL: ____________________________________________________

TAG: ________________________________________________________

FOSC: ________________________________________________________

TAG APPROVAL DATE: 5/10/91  FOSC APPROVAL DATE: 5/14/91

ADEC  USCG  NOAA

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

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.
<table>
<thead>
<tr>
<th>ADEC</th>
<th>NAME: Peter Montesano</th>
<th>SIGNATURE: [Signature]</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEAM NO.</td>
<td>2</td>
<td>SEGMENT</td>
</tr>
<tr>
<td>NTR</td>
<td>☑ TREATMENT RECOMMENDED</td>
<td></td>
</tr>
<tr>
<td>☑ NTR</td>
<td>Good data provided by OG &amp; Bio reports.</td>
<td></td>
</tr>
<tr>
<td>EXXON</td>
<td>NAME: C.M. Katsamba</td>
<td>SIGNATURE: [Signature]</td>
</tr>
<tr>
<td>LANDMANAGER</td>
<td>NAME: Dennis S. Kennedy of USFS</td>
<td>SIGNATURE: D.S. Kennedy</td>
</tr>
<tr>
<td>NTR</td>
<td>Rock face - some erratic &amp; coast.</td>
<td></td>
</tr>
<tr>
<td>USCG/NOAA</td>
<td>NAME: Michael (NOAA) Ban Velchow</td>
<td>SIGNATURE: [Signature]</td>
</tr>
<tr>
<td>☑ NTR</td>
<td>Relatively exposed - only CT/CV remaining. Good survey</td>
<td></td>
</tr>
<tr>
<td>☑ NTR</td>
<td>Good OG report &amp; Bio report.</td>
<td></td>
</tr>
</tbody>
</table>
## MAYSAP SHORELINE OILING SUMMARY

### SEGMENT: ELOSB

**TEAM NO.:** 2

**Bio:** J. Benson

**ADEC:** P. Montesano

**Landman:** O. Kennedy for USFS

**Exxon:** C. Katsimpalis

**USCG/NOAA:** Jacqui Michel

**DATE:** May 1, 1991

**TIME:** 06:52 to 06:59

**TIDE LEVEL:** 4.22 ft. to 3.85 ft.

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

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

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

**TOTAL LENGTH SHORELINE SURVEYED:** 184 m

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

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

**TOTAL OIL SURVEYED:** 184 m

**TOTAL OIL SURVEYED NEAR SHORE:** [m]

**TOTAL OIL SURVEYED IN WATERS:** [m]

**EST. OIL CATEGORY LENGTH:** [m]

**TOTAL OIL SURVEYED NEAR SHORE:** [m]

**TOTAL OIL SURVEYED IN WATERS:** [m]

### LOCATION SURFACE OIL CHARACTER

<table>
<thead>
<tr>
<th>LOC</th>
<th>OIL CHARACTER</th>
<th>SEDIMENT SLOPE TYPE</th>
<th>VERTICAL</th>
<th>HORIZONTAL</th>
<th>MEDIUM</th>
<th>LOW ANGLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
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</tbody>
</table>

### SURFACE OIL DISTRIBUTION:

- **C = ≥100%**
- **B = ≥50%**
- **P = 1-50%**
- **S = 1-10%**
- **T = <1%**

### SUBSURFACE OIL CHARACTER

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>DEPTH (cm)</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>
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<tbody>
<tr>
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</tbody>
</table>

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

### OG COMMENTS:

- **SHORELINE:** 90° VERTICAL ROCK & 187° BOULDER TALUS AT BASE OF VERTICAL ROCK.
- **COVER:** COAT & COVER ARE FOUND IN 1 M WIDE BAND IN SURF ON ROCK FACE (BATH TUB RING)
- **ALSO:** BOULDER TALUS, ALSO BEHIND BOULDER TALUS, NOT TO BE CONFUSED WITH LICHEN
- **NO PITS:** VERTICAL ROCK & TALUS

**Reviewed:** 5/19/91 KG
**Reviewed:** 5/7/91 AC
OGI SKETCH MAP
EL058-A
1 MAY 91
0652 - 0659
BRYAN TRIMM
SURVEYED BY SKIFF

NORTHWEST BAY

VERTICAL ROCK

BOULDER TALUS

EL058-B

SURVEYED: 5/1991 KG
REVIEWED: 5/5/91 MC
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2  DATE 1 May 91
SEGMENT # E.58  TIDAL HEIGHT (Range) +4' to +4'
SUBDIVISION A  BIOLOGIST Benson
SEA STATE 0'  WIND SPEED/DIRECTION calm
PHOTOGRAPHS: ROLL # --  FRAME # --

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

I could not observe the MITZ.

(A) - The bedrock face was covered by a fairly typical
community on moderately exposed, cliff substrates.

MITZ - dense Fucus, mixed with other algae (e.g. Odontolina, 
Halia) and barnacles (here, Semibalanus cariosus).

S. cariosus is a potentially large barnacle, and if
where patches of bare rock were exposed (by impact
of floating logs?) in the barnacle bed, it could
be seen that the barnacles were up to 6" tall.

In the location of the CT & CV, filamentous green
algae & Enteromorpha could be seen washed
fresh water run down the rock face.

This rock wall community appears to be ecologically
natural, but any potential damage due to cleanup
activities would be ameliorated quickly due to fresh
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</th>
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</thead>
<tbody>
<tr>
<td>Eagles</td>
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<tr>
<td>Seabirds</td>
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<tr>
<td>Waterfowl</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gulls/Kittiwakes</td>
<td></td>
<td>1</td>
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<tr>
<td>Shorebirds</td>
<td></td>
<td>2</td>
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<tr>
<td>Corvids</td>
<td></td>
<td></td>
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<tr>
<td>Other Birds</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>MARINE MAMMALS</th>
<th># OBSERVED</th>
<th>LAND MAMMALS</th>
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</thead>
<tbody>
<tr>
<td>Sea Otters</td>
<td></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.

Reviewed MB 5/14/91
1991 MAYSAP EVALUATION

SEGMENT: EL 058  SUB: A  REGION: PWS  SURVEY DATE: 5/1/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) RESTRICTED 8/15 - 9/15

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

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

SHPO Signature: ________________________ Date: __________

RECOMMENDATIONS:

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

COMMENTS:

INITIAL: _______________________________________________________

TAG: ___________________________________________________________

FOSC: _________________________________________________________

TAG APPROVAL DATE: __________  FOSC APPROVAL DATE: __________

ADEC __________________________________________  FOSC _______________________

EXXON __________________________________________

USCG __________________________________________

NOAA __________________________________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.
| ADEC | NAME: PETER MONTESANO | SIGNATURE: 

- NTR: TREATMENT RECOMMENDED
- WE BROKE THIS SEGMENT AND BEGAN "B" WHERE THE BOULDER SHORELINE BEGAN, THUS THE SOR, ETC. FALLS INTO EL-58. OG DATA COMPLETE AND ACCURATE.

| EXXON | NAME: C.M. KATSIKARIS | SIGNATURE: 

- NTR: GOOD DATA PROVIDED BY OG & BIO REPORTS.

| LANDMANAGER | NAME: DENNIS S. KENNEDY OF USFS | SIGNATURE: D S KENNEDY |

- NTR: ROCK FACE - some 5 Tan & Coal

| USCG/NOAA | NAME: MICHEL B. Folen | SIGNATURE: 

- NTR: Relatively exposed - only CT/CV remaining. Good survey

**Team No.**

**Bio.**

**ADEC.**

**Exxon.**

**Time.**

**Tide Level.**

**Energy Level.**

**Surveyed From.**

**Weather.**

**Total Length Shoreline Surveyed.**

**Est. Oil Category Length.**

<table>
<thead>
<tr>
<th>L</th>
<th>Surface Oil Character</th>
<th>Surface Sediment</th>
<th>Shore Slope</th>
<th>Area Width</th>
<th>Length</th>
<th>Zone</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
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</tbody>
</table>

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

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

**Photo Roll #** MAYSAPE

**Kodak Frames**

**Pit Pit No.**

**Subsurface Oil Character**

**Oiled Zone**

**Clean Below**

**H2O Sheen Color**

**Pit Zone**

**Surface-Subsurface Sediments**

**Notes**

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

**OG Comments:**

- *Shoreline is 90°, vertical rock & 10% boulder talus at base of vertical rock.*
- *Coast & cover are found 1 m wide band in SUEA on rock face (BATH TUB ASS.) also behind boulder talus, not to be confused with lichen.*
- *No Pits, vertical rock & talus.*

**Reviewed:** 5/14/91

**Revised:** 5/15/91 MC
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2
SEGMENT # E-58
SUBDIVISION A
SEA STATE 0'

PHOTOGRAPHS: ROLL # — FRAME # —

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

I could not observe the LiTz.

(A) — The bedrock face was covered by a fairly typical community on moderately exposed, cliff substrates:

LiTz — nearly 100% cover of Vernucaria.

LiTz — dense Fucus mixed with other algae (e.g. Odontothalia) and barnacles (here, Semibalanus cariosus).

S. cariosus is a potentially large barnacle, and... where patches of bare rock were exposed (by impact of floating logs?) in the barnacle add, it could be seen that the barnacles were up to 4" tall.

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TO BE COMPLETED IN ALL SUBDIVISIONS

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<th>SPECIES</th>
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Shoreline subdivision map showing important biological features attached.
1991 MAYSAP EVALUATION

SEGMENT: EL 058  SUB:  B  REGION: PWS  SURVEY DATE: 5/1/91

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

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

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

SHPO Signature: ___________________________  Date: ______________________

RECOMMENDATIONS:

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COMMENTS:

INITIAL:  ________________________________________________________________

TAG:  _________________________________________________________________

FOSC:  ________________________________________________________________

TAG APPROVAL DATE:  __________________  FOSC APPROVAL DATE:  ____________

ADEC  __________________________  FOSC  __________________________

EXXON  __________________________

USCG  __________________________

NOAA  __________________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Subsistence – Deer Harvesting: Unlimited treatment prior to 8/15.
TEAM NO. 2
SEGMENT EL 058
SUBDIVISION B
DATE 5/1/91

ADEC
NAME Peter Makenzie
SIGNATURE

☐ NTR  ☑ TREATMENT RECOMMENDED

Oil persists throughout subdivision as depicted on the aerial map. Most of the oil is positioned in areas that make recovery extremely difficult. However, work is presently required in several areas. Standard manual removal of sediments is due in A100, C, D1, E, and around Pit 8. The Sor is simple twine/grade work. The area around Pit 8 is an oiled storm berm which was mostly covered with snow during survey. The Sor is in surf

EXXON
NAME C. M. Lottmayer
SIGNATURE

☐ NTR  ☐ HEAVIER OIL CONCENTRATIONS ARE SCATTERED SEEM TO BE IMPROVING FOR THE MOST PART. STORM BERM (PIT #8) NEEDS FURTHER EVALUATION AFTER SNOW MELTS.

☐ NTR

LANDMANAGER
NAME Dennis S. Kennedy of USFS
SIGNATURE D.S. Kennedy

☐ NTR

This subdivision should be a low priority for treatment as it has rich habitat components and good wave exposure. TAG should wait before trying any treatment.

USCG/NOAA
NAME M. Nickel (NOAA)
SIGNATURE

☐ NTR

This shoreline is relatively exposed to high wave energy, as evidenced by sub-rounded cobbles and boulders. Very little oil remains – there are only scattered patches of Sor with some light sheen (white oil) and in southernmost storm berm. Sheens were visible in runoff water throughout the area. Natural processes appear to be effectively removing the remaining oil. Good Survey – M. Nickel

CG COMMENT Pg. 2 COMMENT SHEET
AREA IN VICINITY OF PIT #8 IS AN OILED STORM BEACH PRESTY COVERED W/ SNOW.
I WAS WITH ADEC REP WHEN WE CAME UPON THIS AREA. CONCUR W/HIM THAT THIS
AREA COULD USE SOME SHOVEL & TROWEL WORK SOON AS SNOW MELTS AND AREA CAN
BE DELIMITED. THE REST OF THE SUBDIVISION IS CLEANING WELL ON IT'S OWN.
**MAYSAP SHORELINE OILING SUMMARY**

**TEAM NO.** 2  
**BIO** J. Benson  
**ADEC** P. Montesano  
**LANDMANAGER** D. Kennedy  
**USCG/NOAA** Jacqui Michel/MDA  
**TIME** 06:59 to 09:47  
**TIDE LEVEL** 3.85 ft. to 1.25 ft.  
**ENERGY LEVEL** H M L  
**SURVEYED FROM** FOOT BOAT HELO  
**WEATHER** SUN CLOUDS FOG RAIN SNOW  
**TOTAL LENGTH SHORELINE SURVEYED** 782 m  
**NEAR SHORE SHEEN** BR RB SL NONE  
**EST. OIL CATEGORY LENGTH** W_ D_ M_ L_  

### Surface Oil Character

<table>
<thead>
<tr>
<th>L</th>
<th>C</th>
<th>AP</th>
<th>MS</th>
<th>SB</th>
<th>OR</th>
<th>CV</th>
<th>CT</th>
<th>ST</th>
<th>FL</th>
<th>DB</th>
<th>NO</th>
<th>VM</th>
<th>S</th>
<th>UI</th>
<th>MI</th>
<th>LI</th>
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<td>1</td>
<td>A</td>
<td>S</td>
<td>S</td>
<td>M</td>
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<td>B</td>
<td>S</td>
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<td>5</td>
<td>B</td>
<td>HYVOSR INDEX BETWEEN B &amp; C</td>
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<td>B1</td>
<td>S</td>
<td>B-C</td>
<td>M</td>
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<td>S</td>
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<td>K</td>
<td>B</td>
<td>M</td>
<td>L</td>
<td>B</td>
<td>S</td>
<td>2</td>
<td>5</td>
<td>B</td>
<td>HYVOSR INDEX BETWEEN B &amp; C</td>
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<tr>
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<td>B5</td>
<td>P</td>
<td>B-C</td>
<td>M</td>
<td>P</td>
<td>S</td>
<td>E</td>
<td>K</td>
<td>B</td>
<td>M</td>
<td>L</td>
<td>B</td>
<td>S</td>
<td>1</td>
<td>5</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>C</td>
<td>P</td>
<td>B-C</td>
<td>M</td>
<td>P</td>
<td>S</td>
<td>E</td>
<td>K</td>
<td>B</td>
<td>M</td>
<td>L</td>
<td>B</td>
<td>S</td>
<td>1</td>
<td>5</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>D1</td>
<td>S</td>
<td>B-C</td>
<td>M</td>
<td>P</td>
<td>S</td>
<td>E</td>
<td>K</td>
<td>B</td>
<td>M</td>
<td>L</td>
<td>B</td>
<td>S</td>
<td>2</td>
<td>5</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>D2</td>
<td>S</td>
<td>B-C</td>
<td>M</td>
<td>P</td>
<td>S</td>
<td>E</td>
<td>K</td>
<td>B</td>
<td>M</td>
<td>L</td>
<td>B</td>
<td>S</td>
<td>2</td>
<td>5</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>D3</td>
<td>S</td>
<td>B-C</td>
<td>M</td>
<td>P</td>
<td>S</td>
<td>E</td>
<td>K</td>
<td>B</td>
<td>M</td>
<td>L</td>
<td>B</td>
<td>S</td>
<td>2</td>
<td>5</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>D4</td>
<td>S</td>
<td>B-C</td>
<td>M</td>
<td>P</td>
<td>S</td>
<td>E</td>
<td>K</td>
<td>B</td>
<td>M</td>
<td>L</td>
<td>B</td>
<td>S</td>
<td>2</td>
<td>5</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>D5</td>
<td>S</td>
<td>B-C</td>
<td>M</td>
<td>P</td>
<td>S</td>
<td>E</td>
<td>K</td>
<td>B</td>
<td>M</td>
<td>L</td>
<td>B</td>
<td>S</td>
<td>2</td>
<td>5</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>D6</td>
<td>S</td>
<td>B-C</td>
<td>M</td>
<td>P</td>
<td>S</td>
<td>E</td>
<td>K</td>
<td>B</td>
<td>M</td>
<td>L</td>
<td>B</td>
<td>S</td>
<td>2</td>
<td>5</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>D7</td>
<td>S</td>
<td>B-C</td>
<td>M</td>
<td>P</td>
<td>S</td>
<td>E</td>
<td>K</td>
<td>B</td>
<td>M</td>
<td>L</td>
<td>B</td>
<td>S</td>
<td>2</td>
<td>5</td>
<td>B</td>
<td></td>
</tr>
</tbody>
</table>

**DISTRIBUTION:** C = 91-100%; B = 61-90%; P = 31-60%; S = 1-10%; T = <1%  
**SLOPE:** V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE  
**PHOTO ROLL # MAYSAP** 2 - 3  
**FRAMES** 16-20

### Pit Depth

<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>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>19</td>
<td>OP</td>
<td>MOR</td>
<td>MOR</td>
<td>MOR</td>
<td>MOR</td>
<td>TR</td>
<td>NO</td>
<td>Y (cm)</td>
</tr>
<tr>
<td>2</td>
<td>10</td>
<td>OP</td>
<td>MOR</td>
<td>MOR</td>
<td>MOR</td>
<td>MOR</td>
<td>TR</td>
<td>NO</td>
<td>Y (cm)</td>
</tr>
<tr>
<td>3</td>
<td>11</td>
<td>OP</td>
<td>MOR</td>
<td>MOR</td>
<td>MOR</td>
<td>MOR</td>
<td>TR</td>
<td>NO</td>
<td>Y (cm)</td>
</tr>
<tr>
<td>4</td>
<td>19</td>
<td>OP</td>
<td>MOR</td>
<td>MOR</td>
<td>MOR</td>
<td>MOR</td>
<td>TR</td>
<td>NO</td>
<td>Y (cm)</td>
</tr>
<tr>
<td>5</td>
<td>18</td>
<td>OP</td>
<td>MOR</td>
<td>MOR</td>
<td>MOR</td>
<td>MOR</td>
<td>TR</td>
<td>NO</td>
<td>Y (cm)</td>
</tr>
<tr>
<td>6</td>
<td>21</td>
<td>OP</td>
<td>MOR</td>
<td>MOR</td>
<td>MOR</td>
<td>MOR</td>
<td>TR</td>
<td>NO</td>
<td>Y (cm)</td>
</tr>
<tr>
<td>7</td>
<td>10</td>
<td>OP</td>
<td>MOR</td>
<td>MOR</td>
<td>MOR</td>
<td>MOR</td>
<td>TR</td>
<td>NO</td>
<td>Y (cm)</td>
</tr>
</tbody>
</table>

**OG COMMENTS:**  
- Recovered several PomPons.  
- Oiled storm surge next to water runoff in South Corner of Beach. Pit "D1" in Storm surge.  
- Storm surge caused by high tide.  
- Pit "B" at exit and Lee side of Talus bed.  
- Pit "D1" verified that "B" was localized.  
- Custom bed was found in area.
**MAYSAP SHORELINE OILING SUMMARY**

**TEAM NO.** 2

**OG** B. Trim

**BIO** J. Benson

**ADEC** P. Montesano

**LANDMANAGER** D. Kennedy for USFS

**BM1 ZONE**

**USCG/NOAA** JACQUI MICHEL/NOAA

**SEGMENT** ELOSE

**SUBDIVISION** B

**DATE** MAY 1, 1991

**TIME**

**TIDE LEVEL**

**ENERGY LEVEL**

**SURVEYED FROM:** 

**WEATHER:**

**TOTAL LENGTH SHORELINE SURVEYED:**

**NEAR SHORE SHEEN:**

**EST. OIL CATEGORY LENGTH:**

**OIL CATEGORY**

<table>
<thead>
<tr>
<th>LOC</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT</th>
<th>SHORE AREA</th>
<th>ZONE</th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
<td>TYPE</td>
<td>VHML</td>
<td>Width</td>
</tr>
<tr>
<td>K</td>
<td></td>
<td>B</td>
<td>H</td>
<td>2</td>
</tr>
<tr>
<td>L</td>
<td></td>
<td>B</td>
<td>H</td>
<td>1</td>
</tr>
<tr>
<td>M</td>
<td></td>
<td>B</td>
<td>H</td>
<td>1</td>
</tr>
<tr>
<td>I</td>
<td></td>
<td>B</td>
<td>S</td>
<td>1</td>
</tr>
</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-**

**FRAMES**

**PIT NO.**

**PIT DEPTH**

**SUBSURFACE OIL CHARACTER**

**OILED ZONE**

**CLEAN ZONE**

**H2O LEVEL**

**SHEEN COLOR**

**PIT ZONE**

**SURFACE- SUBSURFACE SEDIMENTS**

**NOTES**

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

**OG COMMENTS:**
<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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<tbody>
<tr>
<td>9A</td>
<td>4.6</td>
<td></td>
<td>4-17</td>
<td>N</td>
<td>4 0</td>
<td>B</td>
<td>x</td>
<td>P- PG organic (steam burn)</td>
<td></td>
</tr>
<tr>
<td>9B</td>
<td></td>
<td></td>
<td>17-49</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>P- PG organic (Snow Covered)</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>9</td>
<td></td>
<td>3-7</td>
<td>Y</td>
<td>7</td>
<td>B</td>
<td>x</td>
<td>CPR- PG</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>2</td>
<td></td>
<td>11-17</td>
<td>Y</td>
<td>28</td>
<td>S</td>
<td>x</td>
<td>P- G</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>18</td>
<td></td>
<td>0-15</td>
<td>Y</td>
<td>10</td>
<td>S</td>
<td>x</td>
<td>P- PG Base of Snow</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>P- G</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>P- G</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td>P- G</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>55</td>
<td></td>
<td>45-55</td>
<td>Y</td>
<td></td>
<td></td>
<td></td>
<td>P- PG occasional light scattered</td>
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</tr>
<tr>
<td>16</td>
<td>15</td>
<td></td>
<td>0-15</td>
<td>Y</td>
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<td>B</td>
<td>x</td>
<td>B- G</td>
<td>Assoc. with Hvy SP</td>
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<tr>
<td>18</td>
<td>4</td>
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<td>x</td>
<td>B- G</td>
<td></td>
</tr>
<tr>
<td>19A</td>
<td>6</td>
<td></td>
<td>0-3</td>
<td>2</td>
<td>5</td>
<td>B</td>
<td>A</td>
<td>BCP- GPC Angulaar Veneer</td>
<td></td>
</tr>
<tr>
<td>19B</td>
<td>35</td>
<td></td>
<td>3-6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>BCP- GPC</td>
<td></td>
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</tbody>
</table>

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

OG Comments:
- Pit 9 located at base of rock face & associated with heavy sor oiling in location 'D2'. Two pits were excavated within 2m of Pit 9 and more was found.
- Pit 16 associated with heavy sor of location 'G'.
- Pits 18-20 on a high angled Boulder Pocket Beach.

Reviewer: 5/7/91
Review: 5/7/91 KC
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2  DATE 1 May 1991
SEGMENT # EL58  TIDAL HEIGHT (Range) +4' to -1'
SUBDIVISION B  BIOLOGIST Benson
SEA STATE calm  WIND SPEED/DIRECTION calm
PHOTOGRAPHS: ROLL #  FRAME #

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):
(A) - Filamentous green algae (FGA) grows on oiled surfaces in MIT.

(B) - FGA grows on oiled surfaces. FGA is also dense in

(C) - FGA dominates the intertidal here, resulting in low diversity & high % cover.

WILDLIFE OBSERVATIONS TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED SPECIES PRESENT</th>
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<tbody>
<tr>
<td>Eagles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seabirds</td>
<td></td>
<td></td>
<td>&quot;Sloppy cod&quot;</td>
</tr>
<tr>
<td>Waterfowl</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gulls/Kittiwake</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shorebirds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corvids</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Birds</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MARINE MAMMALS</th>
<th># OBSERVED</th>
<th>SPECIES</th>
<th># OBSERVED</th>
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<tbody>
<tr>
<td>Sea Otters</td>
<td></td>
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</tr>
<tr>
<td>[mammals] (specify)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whales (specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

LAND MAMMALS

Shoreline subdivision map showing important biological features attached.

[Signature] 5/7/91
Subdivision: EL 58 B
Team: 2
Bio: Benson

Comments (cont.):

(1) & 2, & Pits 3, 9, 10 — FGA is found throughout the intertidal zone. Verrucaria extends very high in Ultz. The Ultz & Litz resemble the boulder talus community (A) described above. In addition, more barnacle spots, a few blenny, eels & nudibranch egg masses were observed here. In the event of cleanup activities here, a reasonable effort to avoid the Ultz & Litz where possible should be sufficient to minimize damage to the biota.

(5), (6), (11), & Pits 11-16 — FGA is sparse except in the streams, where it is more abundant. Ultz: FGA & Verrucaria. In the Ultz, Fucus is dense only on boulders, where barnacles, littorina & limpets are moderately dense. Species diversity is low even in the Litz, where FGA & a few other algae form a high % cover. Overall, this is a beach of low diversity & moderate biotic cover & so is not highly sensitive to any potential cleanup activities.

(10), (12), (13), (14) & Pits 17 — Both the Ultz & Mitz are inhabited by primarily FGA & barnacles. The Litz is similar to that in (A).

(15), (16), (17) & Pits 18-20 — Verrucaria, FGA, rare barnacles occur near & on the oiled surfaces in the Ultz. The Mitz contains typical, common species, with the addition of Nucella & Bryozoa, perhaps because this beach receives higher wave exposure. It is not, however, biotically sensitive. This is a habitat-rich subdivision whose parts must be considered individually in the event that treatment is recommended.
ULTZ: Verrucaria, Nucella & bryozoans in MITZ of cove.

NORTHWEST BAY

FGA dominates MITZ & ULTZ. ULTZ similar to MITZ of A.

Low diversity & moderate % cover, perhaps because of pebble scouring. Productive & moderately diverse, somewhat sensitive.

FGA on oiled surfaces. Faunal diversity is moderately high, except on pebbles.

FGA dominated.
**1991 MAYSAP EVALUATION**

**SEGMENT:** EL 058  **SUB:** D  **REGION:** PWS  **SURVEY DATE:** 5/1/91

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

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

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

SHPO Signature: ___________________________  Date: ___________________________

**RECOMMENDATIONS:**

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

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

**COMMENTS:**

INITIAL:

_________________________________________

_________________________________________

TAG:_____________________________________

_________________________________________

FOSC:____________________________________

_________________________________________

TAG APPROVAL DATE:_______________________  FOSC APPROVAL DATE:_______________________

ADEC____________________________________  FOSC____________________________________

EXXON__________________________________

USCG____________________________________

NOAA____________________________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

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

TEAM NO. 2  SEGMENT EL-58  SUBDIVISION D  DATE 5/1/1981

<table>
<thead>
<tr>
<th>ADEC</th>
<th>NAME</th>
<th>PETER MONTESANO</th>
<th>SIGNATURE</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>NTR</td>
<td>TREATMENT RECOMMENDED.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>THE ENLARGED AREA ON THE SKETCH CONTAINS RECOVERABLE SOR+HOR, NEITHER OF WHICH ARE CONCENTRATED. THIS IS A LOW PRIORITY FOR TREATMENT, BUT WOULD FALL UNDER STANDARD MANUAL REMOVAL. THIS AREA IS A RAISED PLATEAU PROTECTED FROM HEAVY, STRAIGHT ON ENERGY; SHEENS WERE NOTED ON THE TIDE POOLS.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXXON</th>
<th>NAME</th>
<th>CM TATSIAUPLE</th>
<th>SIGNATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTR</td>
<td>ACCURATE INFO. IN OG &amp; BIO. REPORTS. VERY LITTLE BENEFIT WOULD BE GAINED FROM TREATMENT.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LANDMANAGER</th>
<th>NAME</th>
<th>DENNIS S. KENNEDY OF USFS</th>
<th>SIGNATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTR</td>
<td>I feel that the subdivision offers very little benefit from cleanup; I suggest that it would be better to direct efforts elsewhere.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>USCG/NOAA</th>
<th>NAME</th>
<th>MICHEL (NOAA) BOB ZENONE (CG)</th>
<th>SIGNATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTR</td>
<td>THE ONLY SIGNIFICANT OIL ON THIS SUBDIVISION IS A SMALL AREA OF HEAVY SOR IN BETWEEN BOULDERS IN A DEPRESSION BEHIND A ROCKY PENINSULA. ALTHOUGH SHELTERED FROM WAVE ATTACK, THE OIL POSES LITTLE ENVIRONMENTAL RISK TO ORGANISMS IN THE AREA. MICHEL</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CONCUR W/NOAA, USFS & EXXON REPS. OILED AREA POSES A VERY SMALL ENVIRONMENTAL RISK. 3
# Maysap Shoreline Oiling Summary

## Team No. 2
- **Team**: B. Trimm
- **Bio**: J. Benson
- **ADEC**: P. Montesano
- **Katsimpalis**: Exxon

## Segment
- **Segment**: EL058
- **Subdivision**: D

## Survey Details
- **Date**: May 1, 1991
- **Time**: 11:20 to 11:59
- **Tide Level**: 2.48 ft.
- **Energy Level**: M
- **Surface Oil Character**: Oil
- **Surface Sediment Type**: V
- **Area Width**: 2
- **Area Length**: 4
- **Zone**: STAN & COAT on Rock Face

## Distribution
- **T**: 51-60%
- **B**: 61-80%
- **P**: 81-100%
- **R**: 0%

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

## Photo Roll
- **Photo Roll**: 2 - 4

## Pit Details
- **Pit No.**: 3
- **Depth**: 6 cm
- **Subsurface Oil Character**: Oil
- **Niled Zone**: Clean
- **H2o Level**: Below
- **Sheen Color**: White
- **Pit Zone**: Clean

## Og Comments
- **Boundary Discrepancy**: See Sketch Map
- **EL058-D** is a high energy shore with a well-defined band of coat & stain through the subdivisions length.
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2  DATE 1 May 1991
SEGMENT # EL 58  TIDAL HEIGHT (Range) +1' to +2'
SUBDIVISION D  BIOLOGIST Benson
SEA STATE calm  WIND SPEED/DIRECTION calm

PHOTOGRAPHS: ROLL #  FRAME #

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

(1) - Verrucaria grows next to the oiled surfaces in the UITZ.
The benthic vegetation from UITZ down to the upper LITZ is:
Verrucaria (dense) - filamentous green algae (FGA - moderate
dense) - barnacles (dense) - Fucus + Odonthalia + Enteromorpha.
Total benthic cover was nearly 100%. These are
typical benthic features of moderate - wave - exposure,
suitable vertical substrates. These most - obvious species
have strong recruitment in most years & are not particularly
sensitive to damage that may be caused if treatment
is performed here.

(2) - Verrucaria grows next to PET#9 (Hor) & the oiled surfaces
Barnacles (sparse) also inhabit the lower UITZ. The LITZ
contains dense barnacles & Littoria on the boulders.
The barnacle typically in wave - exposed sites, Semibalanus
carpinius occurs here. FGA is also found in more
protected areas of the LITZ. Mytilus & limpet recruitment
has occurred recently. Several small, low-diversity
tidepools in the LITZ contain Rhodomela, Littoria &
Hildenbrandia. The LITZ on this section is dominated
by Fucus, FGA, & Halosaccion. I could not locate
the eagle nest that is mapped at the west end of this subdivision.

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>
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<tbody>
<tr>
<td>Eagles</td>
<td>1</td>
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</tr>
<tr>
<td>Seabirds</td>
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<tr>
<td>Waterfowl</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gulls/kittiwake</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Shorebirds</td>
<td></td>
<td></td>
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<tr>
<td>Corvids</td>
<td></td>
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<tr>
<td>Other Birds</td>
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</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>Sea Lions, Harbor Seal</td>
<td>3</td>
<td></td>
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</tr>
<tr>
<td>Whales(specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humback (2) outside</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Northwest Bay</td>
</tr>
</tbody>
</table>

Shoreline subdivision map showing important biological features attached.
**Bio Sketch Map**

**EL058-D**

**1128-1159**

**1 - May - 91**

**Benson**

---

**North**

- 1989 - 1990 Boundary
- 1991 GIS Boundary Foot

---

**Mytilus & limpet recruitment.**

Dense barnacles & limpets in the MITZ on boulders.

**Verrucaria next to sided surfaces. Vertical zonation:**

Fol - barnacles - mixed macroalgae.
1991 MAYSAP EVALUATION

SEGMENT: EL 058  SUB: C  REGION: PWS  SURVEY DATE: 5/1/91

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

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

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

SHPO Signature: ____________________________ Date: ____________________________

RECOMMENDATIONS:

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

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

COMMENTS:
INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: ______________  FOSC APPROVAL DATE: ______________

ADEC____________________  FOSC ______________________

EXXON__________________

USCG__________________

NOAA__________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

**TEAM NO.** 2  
**SEGMENT** EL 58  
**SUBDIVISION** C  
**DATE** 5/1/91

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

- **TREATMENT RECOMMENDED**

  **WE DO NOT HAVE THE COMPLETE ASAP WHEN SURVEYING THIS SUBDIVISION, SO**  
  **LOWBFAL CONCENTRATIONS OF OIL WERE NOT KNOWN.**  
  **AREAS D2 + B BOTH REQUIRE STANDARD MANUAL REMOVAL. THE SUB/SURFACE CONCENTRATION**  
  **IS NO TROUBLE TREATING THESE AREAS.**

<table>
<thead>
<tr>
<th>EXXON</th>
<th>NAME</th>
<th>CATHERINE HANSS</th>
<th>SIGNATURE</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

- **NTR**  
  **AREA "B" IS THE MAJOR CONCERN IN THIS SEGMENT & COULD**  
  **BENEFIT FROM TREATMENT THIS YEAR. (REMOVAL, BREAKUP &**  
  **BIOREMEDIATION)**

<table>
<thead>
<tr>
<th>LANDMANAGER</th>
<th>NAME</th>
<th>DRAMA S. KENNEDY OF USFS</th>
<th>SIGNATURE</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

- **NTR**  
  **The major area for any possible clean up would be**  
  **in Location [B]. A method discussed was to manually break**  
  **up and bioremediate, as breaking alone may just return**  
  **If action is taken, care must be shown around the**  
  **WET pools.**

<table>
<thead>
<tr>
<th>USCG/NOAA</th>
<th>NAME</th>
<th>MICHEL A. (NOAA) PAM ZENOWIE (CO)</th>
<th>SIGNATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>MICHEL A. (NOAA) PAM ZENOWIE (CO)</td>
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</tr>
</tbody>
</table>

- **NTR**  
  **The only area with significant amounts of oil is Location B, a high, sheltered**  
  **rock plateau behind a narrow headland peninsula. The SOF deposits filled**  
  **all the interstitial spaces between the pebbles and cobbles, so coverage was**  
  **100% of the available pore space. Location B3 has large boulders over-**  
  **part of the area. Since this area is very sheltered, a break-up-and-leave**  
  **applicable would most be very successful. Some people thought the imp-l**  
  **treatment helped a lot last year -- its superdual system would minimize**  
  **boll diversion.**

- **AREAS "B" COULD USE SOME WORK - REMOVAL & BIOREMEDICATION. OH WOULD BE THE KEY. OR AT LEAST**  
  **BREAK-UP. TREATMENT ON ANY OTHER PART OF THE SEGMENT WOULD REAP NO NET BENEFIT.**
# Maysap Shoreline Oiling Summary

**Team No.**
- B. Trimm
- P. Montesano
- C. Katimsalis

**Bio SEGMENT**
- J. Benson

**Subdivision DATE**
- LANDMANAGER: D. Kennedy
- USGS
- 7/1/91

**Surveyed From: Time**
- TIDE LEVEL: 1:13 R. 10:28 R.
- ENERGY LEVEL:
  - H
  - M
  - L

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

**Total Length Shoreline Surveyed:**
- NEAR SHORE SHEEN:
  - BR
  - RB
  - SL

**Est. Oil Category Length:**
- W 15 m M 0 m N 65 m V 467 m NO 0 m US 0 m

## Surface Oil Character

<table>
<thead>
<tr>
<th>Surface Oil Character</th>
<th>Surface Sediment</th>
<th>Area</th>
<th>Zone</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>R Y</td>
<td>200</td>
<td></td>
<td>Rock Face</td>
</tr>
<tr>
<td></td>
<td>B M</td>
<td>10</td>
<td></td>
<td>Lone Sheen in Total Pools</td>
</tr>
<tr>
<td></td>
<td>B C</td>
<td>6.5</td>
<td></td>
<td>LT SOR: Saddle</td>
</tr>
<tr>
<td></td>
<td>B P</td>
<td>12</td>
<td></td>
<td>Lithysor in Storm Gear</td>
</tr>
<tr>
<td></td>
<td>B H</td>
<td>1.5</td>
<td>250</td>
<td>LT SOR</td>
</tr>
<tr>
<td></td>
<td>B R</td>
<td>2</td>
<td>50</td>
<td>LT SOR on Top Rock '60mm'</td>
</tr>
<tr>
<td></td>
<td>B H</td>
<td>2</td>
<td>15</td>
<td>Under Border/Limited Access</td>
</tr>
</tbody>
</table>

## Subsurface Oil Character

<table>
<thead>
<tr>
<th>Pit</th>
<th>Pit</th>
<th>Subsurface Oil Character</th>
<th>Oiled Zone</th>
<th>Clean Below</th>
<th>Hydro Color</th>
<th>Sheen Color</th>
<th>Pit</th>
<th>Surface Sediment</th>
<th>Notes</th>
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<td></td>
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<td>10</td>
<td>10</td>
<td>S</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

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

## OG Comments:
- Location 1B2: light for under Boulder Veneer. On a 'bench' in the surficial.
- Pits 1 & 2 delineate a 3x7m 'mor' area in surficial in location 'B'.
- Customblen found in location 'G31 Storm Gear Deposit with light to heavy 'gor'. This storm deposit is well packed & very protected - not your typical storm gear.
- Mousse in location 'D3' is a very small deposit under Boulder Veneer.

**Revised 5/1/91 KB**
<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PITT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED ZONE</th>
<th>CLEAN BLOW</th>
<th>H20 LEVEL</th>
<th>SHEEN COLOR</th>
<th>PIT ZONE</th>
<th>SURFACE SUBSURFACE SEDIMENTS</th>
<th>NOTES</th>
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</thead>
<tbody>
<tr>
<td>B 12</td>
<td></td>
<td></td>
<td>2 - 10 Y</td>
<td>K</td>
<td></td>
<td></td>
<td></td>
<td>SGP - SG P</td>
<td></td>
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</tbody>
</table>

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

**OG COMMENTS:**

Reviewed 5/1991 SC.
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 1 May 91
SEGMENT # EL 58 TIDAL HEIGHT (Range) +1 to +1
SUBDIVISION C BIOLOGIST Benson
SEA STATE calm WIND SPEED/DIRECTION calm
PHOTOGRAPHS: ROLL # — FRAME # —

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

(A) We "skipped" along the bedrock cliff at the east end of this subdivision. Verrucaria was found on the wall near the oiled surfaces. From top to bottom, the biotic zonation changed from Verrucaria to barnacles (high MITZ) to Fucus plus filamentous green algae (FGA) to laminaria. Total biotic % cover was nearly 100%. Dermasterias is more common where wave exposure is higher. These are typical biotic features of moderate exposure, stable vertical substrates.

(B), (C), (D), PITS 1-4 - Verrucaria on oiled rocks in MITZ & FGA is found nearby. Unusually diverse biota was found in a tidepool at the MITZ, dense Rhodophyta & Littorina along with FGA, Fucus, coralline algae, & Nocardia (see SKETCH MAP). These organisms are common in other intertidal zones, but MITZ pools are nonetheless somewhat susceptible to damage in the event of cleanup activities. Below the MITZ, dense barnacles & Littorina and moderately dense Fucus are found in the MITZ along with a few small tidepools. The MITZ has high total biotic % cover and moderately diverse algae. The abundance of hermit crabs suggests high organic productivity. This is a moderately diverse biota with minor biological sensitivities (MITZ pools).

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eagles</td>
<td></td>
<td></td>
<td>&quot;blenny eel&quot;</td>
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<tr>
<td>Seabirds</td>
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</tr>
<tr>
<td>Waterfowl</td>
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<td></td>
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</tr>
<tr>
<td>Gulls/Kittiwakes</td>
<td></td>
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</tr>
<tr>
<td>Shorebirds</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Corvids</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Birds</td>
<td></td>
<td></td>
<td></td>
</tr>
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</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>Seals(specify)</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Shoreline subdivision map showing important biological features attached.

Reviewed: 5/7/91 MC
Subdivision: EL5BC
Team: 2
Bio: Benson

Comments (cont.) -

(2) - Sparse barnacles found on boulders near the CT & CV. FGA dominates the MITZ, though some Littorina adults & juveniles are found below the FGA. Species diversity is low.

(21) & Pit #5 - One-inch pink oligochaetes were found on silt. The MITZ biotic assemblage consists of dense FGA & barnacles and moderately dense Fucus. Recent recruitment was observed for Fucus, barnacles, Littorina, & Mytilus.

(23) & Pit #6 - Verrucaria grows near the oiled surfaces. The biota is of low diversity, with recruitment of Mytilus, barnacles & Fucus. This assemblage is not sensitive to possible cleanup activities.

Pit #8 - Relatively smaller sediments at west end of core support only sparse biota. Recent recruitment of Fucus & barnacles was observed. The large number of empty Saxidomus shells washed up suggests that a kelp clam bed lies here in the Subtidal.

This is a moderately wave-exposed site, but the biotic diversity seems generally low except at the tombolo approximately in the middle of the subdivision. This is also the location of somewhat sensitive ecological assemblages (MITZ tidepools). In the event that treatment is performed there, accessing the saddle from the north could help to minimize the chance of damaging the organisms or their habitat.

Reviewed: 5/1/91 nc
1991 MAYSAP EVALUATION

SEGMENT: EL 058  SUB: C  REGION: PWS  SURVEY DATE: 5/1/91

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

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

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

SHPO Signature: ____________________________ Date: ______________

RECOMMENDATIONS: INITIAL TAG FOSC

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

COMMENTS:
INITIAL:

TAG: ______________________________________

FOSC: ____________________________________

TAG APPROVAL DATE: __________  FOSC APPROVAL DATE: __________

ADEC_____________________________  FOSC__________________________

EXXON____________________________

USCG____________________________

NOAA__________________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

☐ NTR  ☑ TREATMENT RECOMMENDED

WE DID NOT HAVE THE COMPLETE ASAP WHEN SURVEYING THIS SUBDIVISION, SO
LOST FALLS CONCENTRATIONS OF OIL WERE NOT KNOWN.
AREAS D2 + B BOTH REQUIRE STANDARD MANUAL REMOVAL. THE SUBSURFACE CONCENTRATION
IS NOT TREATABLE TREATING THESE AREAS.

EXXON
NAME: C. M. HATSMAN
SIGNATURE: 

☐ NTR  ☑ AREA "B" IS THE MAJOR CONCERN IN THIS SEGMENT & COULD
BENEFIT FROM TREATMENT THIS YEAR. (REMOVAL, BREAKUP &
BIOREMEDIATION)

LANDMANAGER
NAME: DAVE S. KENNEY OF USFS
SIGNATURE: D. S. Kennedy

☐ NTR

The major area for any possible clean up would be
in location [B]. A method discussed was to manually break
up and bioremediate, as break up alone may just spread.
If action is taken, care must be shown around the
UNITZ pools.

USCG/NOAA
NAME: MICHEL (NAVY) PAUL ZENONE (COCA) SIGNATURE: 

☐ NTR

The only area with significant amount of oil is Location B/CA high, sheltered
reef plate behind a narrow beach peninsula. The SAR deposits filled
all the interstitial spaces between the pebbles and cobbles, so coverage was
100% of the available pore space. Location B3 has large boulders over
part of the area. Since this area is very sheltered, a break-up-and-leave
approach would not be very successful. Some people thought the LIPR
treatment helped a lot last year -- its superior potential would minimize
fertilization. Michel

CA:
AREA "B" COULD USE SOME WORK - REMOVAL & BIOREMEDIATION, • WOULD BE THE KEY, OR AT LEAST
BREAK-UP - TREATMENT ON ANY OTHER PART OF THE SEGMENT WOULD REAP NO NET BENEFIT.
MAYSAP SHORELINE OILING SUMMARY

SEGMENT ELO58

TEAM NO. 2

BIO J. Benson

LANDMANAGER D. Kennedy for USFS

USCG/NOAA JACQUI MICHEL RAY

TIME 09:59 to 11:19

SURVEYED FROM: □ FOOT □ BOAT □ HELO

WEATHER: □ SUN □ CLOUDS □ FOG □ RAIN □ SNOW

TOTAL LENGTH SHORELINE SURVEYED: 547 m

EST. OIL CATEGORY LENGTH: W 15 m M 0 m N 65 m V 467 m NO 0 m US 0 m

<table>
<thead>
<tr>
<th>LOC NO</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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SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE

PHOTO ROLL # MAYSAP-2 - 3 FRAMES 21-25

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

OG COMMENTS:

* Location '12' LIGHT SORE UNDER BOULDER VENER, ON A 'BENCH' IN THE SUPLEIAL.

* Pits 1 & 2 DELINEATE A 3x7'M' MOR' AREA IN SUPRALITHAL IN LOCATION '14'.

* Customoilen found in Location '13', STORM BERRY DEPOSIT WITH LIGHT TO HEAVY SORE. THIS STORM DEPOSIT IS WELL PACKED & VERY PROTECTED- NOT YOUR TYPICAL STORM BERRY.

* exhibits a small deposit under boulder veneer.
<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>DEPTH (cm)</th>
<th>SUBSURFACE 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>
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<tr>
<td>B</td>
<td>12</td>
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<td>Y</td>
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<td>X</td>
<td>BCP-SGP</td>
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Sheen color: B = Brown; R = Rainbow; S = Silver; N = None

OG COMMENTS:
OG SKETCH MAP
EL058-C
1. MAY-91
2. 950-1119
BRYAN TRUAN

No Field Data
Assume:
2x2 M HOR

No Field Data
Assume:
2x3 M HOR

D2 SOR-LT 25%
2x15m

D1 SOR-LT 15%
2x50m

CET 20% 320% CV10%
1.5 x 250m

D2 SOR-LT 60%
6.5 x 15m

B2 SOR-LT 60%
5.5 x 30m

FL (org) 57
Intermediate
3x6m

ALL PHOTOS WERE IN VICINITY OF B1-B3
22 overview
23 B2 closeup
24 B1 Pit 3
25 B1 Area of Pit 3

REVISION: 5/17/91 RC
reviewed 5/17/91 EL
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2  DATE 1 May 91
SEGMENT # EL 58  TIDAL HEIGHT (Range) 1' to +1'
SUBDIVISION C  BIOLOGIST Benson
SEA STATE calm  WIND SPEED/DIRECTION calm
PHOTOGRAPHS: ROLL #  FRAME #

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

A - We "skiffed" along the bedrock cliff at the east end of this subdivision. Verrucaria was found on the wall near the oiled surfaces. From top to bottom, the biotic zonation changed from Verrucaria to barnacles (high MIT3) to Fucus plus filamentous green algae (FGA) to barnacles. Total biotic & cover was nearly 100%. Dermasterias is more common where wave exposure is higher. These are typical biotic features of moderate exposure, stable, vertical substrates.

(B) (C) (D) (E) (F) (G) Pits 1-4 - Verrucaria on oiled rocks in MIT2 & FGA is found nearby. Unusually diverse biota was found in a tidepool in the MIT2 dense Rhodoma & littering along with FGA, Fucus, coralline algae, & Tridensbranica (see SKETCH MAPS). These organisms are common in other intertidal zones, but MIT2 pools are nonetheless somewhat susceptible to damage in the event of cleanup activities. Below the MIT2 dense barnacles & littering and moderately dense Fucuses are found in the MIT2 algae with a few small areas. The MIT2 has high total biotic & cover and moderately diverse algae. The abundance of hermit crabs suggests high organic productivity. This is a moderately diverse biota with minor biological sensitivity (MIT2 pools).

WILDLIFE OBSERVATIONS TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS

<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>Eagles</td>
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<td>&quot;Blenny Hall&quot;</td>
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<tr>
<td>Seabirds</td>
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<td>Waterfowl</td>
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<td>Shorebirds</td>
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<td>Corvids</td>
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<tr>
<td>Other Birds</td>
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LAND MAMMALS

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<tr>
<th>MARINE MAMMALS</th>
<th># OBSERVED SPECIES</th>
<th># OBSERVED</th>
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<tr>
<td>Sea Otters</td>
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<td>Pinnipeds(specify)</td>
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<td>Sables(specify)</td>
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Shoreline subdivision map showing important biological features attached.

REVIEWED: 1/17/91 MC
Subdivision: EL58C
Team: 2
Bio: Benson

Comments (cont.) -

○ - Sparse barnacles found on boulders near the CT & CV. FGA dominates the MITZ, though some Litterina adults & juveniles are found below the FGA. Species diversity is low.

○1, ○2 & Pit #5 - One-inch pink to goochaeckes were found on SSR. The MITZ biotic assemblage consists of dense FGA & barnacles and moderately dense Fucus. Recent recruitment was observed for Fucus, barnacles, Litterina, & Mytilus.

○3 & Pit #6 - Verrucaria grows near the oiled surfaces. The biota is of low diversity, with recruitment of Mytilus, barnacles & Fucus. This assemblage is not sensitive to possible cleanup activities.

Pit #8 - Relatively smaller sediments at west end of core support only sparse biota. Recent recruitment of Fucus & barnacles was observed. The large number of empty Saxidomus shells washed up suggests that a sheltered area lies here in the subtidal.

This is a moderately wave-exposed site, but the biotic diversity seems generally low except at the tombolo approximately in the middle of the subdivision. This is also the location of somewhat sensitive ecological assemblages (MITZ tidepools). In the event that treatment is performed there, accessing the saddle from the north could help to minimize the chance of damaging the organisms or their habitat.

Reviewer: 5/1/91
BIO SKETCH MAP
EL058-C
1-MAY-91
0950-1119
Benson

- Mytilus, barnacle & Fucus recruits, low species diversity.
- Diapauches on oiled surfaces. FGA, Fucus, Judea, Fucus, barnacles, Littorina & Mytilus.
- FGA is dominant. Sparse barnacles.
- Biotically diverse due to moderate wave exposure & tidepools in UITE & MITZ. Moderate to high % cover.

Pit #8
Butter clam shells. Fucus & barnacle recruitment.

Pits 1-4
High % cover & clear water. Verucaria grows near the oiled surfaces.
1991 MAYSAP EVALUATION

SEGMENT: EL 058 SUB: B REGION: FWS SURVEY DATE: 5/1/91

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

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

ARCHAEOLOGICAL CONSTRAINTS:
An Exxon archaeological monitor is required on-site during shoreline treatment. PHONE 564-3276; 564-3657; (Anchorage) or 229-1514 (24 hrs.).

RECOMMENDATIONS:

TREATMENT REQUIRED (Y or N)   N   Y   Y
Manual Pickup (Check as Req.)   ___   X   2
Spot Washing                    ___                  ___
Bio-Customblen Only            ___                  ___
Bio-Inipol/Customeblen         ___                  ___
Other _________________________ ___                  ___
Other _________________________ ___                  ___

COMMENTS:

INITIAL:________________________

TAG: MANUAL PICKUP OF HIGH SOR AT AREAS C, D2, + G

(DD)
MONITORS TO ASSESS STORM BARM DURING TREATMENT OF OTHER AREAS

FOSC:_________________________

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

ADEC: ________________________  FOSC: ________________________
EXXON: ________________________
USCG: _________________________
NOAA: _________________________

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

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.
TEAM NO. 2   SEGMENT EL 058   SUBDIVISION B   DATE 5/1/91

MAYSAP FIELD SHORELINE COMMENT SHEET

ADEC
NAME: Peter Montesano  SIGNATURE: Peter Montesano

TREATMENT RECOMMENDED

Oil pockets throughout subdivision as depicted on the scratch map. Most of the oil is positioned and in degrees that make recovery extremely difficult. However, work is presently required in several areas. Standard manual removal of sediments is due in Areas C, D, and E around Pit 8. The Sor is simple brush/shovel work. The area around Pit 8 has an oiled storm berm which was mostly covered with snow during survey. The Sor in that area has been removed, with the oiling continuing under snow. The Exxon NOA, USFS, PIPS were ached and missed seeing the berm could

EXXON
NAME: C. A. Kotsampas  SIGNATURE: C. A. Kotsampas

TREATMENT RECOMMENDED

Heavier oil concentrations are scattered seem to be improving for the most part. Storm berm (Pit # 8) needs further evaluation after snow melts.

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

TREATMENT RECOMMENDED

This subdivision should be a low priority for treatment as it has rich habitat components and good wave exposure. TAG should visit before rig any treatment.

USCG/NOAA
NAME: Michel (NOAA)  SIGNATURE: Michel

TREATMENT RECOMMENDED

This shoreline is relatively exposed to high wave energy, as evidenced by sub-rounded cobbles and boulders. Very little oil remains—there are only scattered patches of Sor in Areas 1, 2, 3, and in Southern most Storm berm. Sheens were visible in runoff water throughout the area. Natural processes appear to be effectively removing the remaining oil. Good Survey — Michel.

CG  COMMENT P. 2  COMMENT SHEET
<table>
<thead>
<tr>
<th>TEAM NO.</th>
<th>SEGMENT</th>
<th>SUBDIVISION</th>
<th>DATE</th>
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**ADEC**

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**EXXON**

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**LANDMANAGER**

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**USCG/NOA**

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<tbody>
<tr>
<td>Brian Zehone</td>
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Area in vicinity of Pit #8 is an oiled storm beam partly covered with snow. I was with ADEC rep when we came upon this area. Concur with him that this area could use some shovel and trowel work soon as snow melts and area can be delineated. The rest of the subdivision is cleaning well on its own.
MAYSAP SHORELINE OILING SUMMARY

TEAM NO. 2
OG B. Trimm
DEP P. Montesano
MAN C. Katsumalis

BIO J. Benson
LANDMANAGER: D. Kennedy for USFS
USCG/NOAA: JACQUES MICHEL MANA

DATE: MAY 1, 1991
TIME: 08:59 to 09:47
TIDE LEVEL: 3.85 ft to -1.25 ft.
ENERGY LEVEL: ☑ H ☑ M ☑ L

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

TOTAL LENGTH SHORELINE SURVEYED: 782 m
NEAR SHORE SHEEN: ☑ BR ☑ RB ☑ SL ☑ NONE

EST. OIL CATEGORY LENGTH:

L O C | SURFACE OIL CHARACTER | SURFACE SEDIMENT TYPE | SHORE SLOPE | AREA | ZONE | NOTES
--- | --- | --- | --- | --- | --- | ---
A | S | B-C | H | 3 | 35 m | X
B1 | S | B-C | H | 2.5 | 15 m | X
B2 | S | B-C | H | 1.5 | 15 m | X
B3 | S | B-C | H | 1 | 3 m | X
B4 | P | S | PC | M | 1.5 | 15 m | X
B5 | S | R | H | 1 | 5 m | X
C | P | B | M | 10 | 3 m | X
D1 | S | B-C | M | 2 | 40 m | X
D2 | B | B-C | M | 1.5 | 4 m | X
E | S | P-B | M | 2 | 25 m | X
F | B | S | P-B | M | 1.5 | 3 m | X
H2 | S | S | P-B | M | 1.5 | 5 m | X
H3 | S | S | P-B | M | 2 | 45 m | X
J | S | S | B-R | H | 1 | 5 m | X

DISTRIBUTION: C = 91-100%; B = 51-90%; P = 11-50%; S = 1-10%; T = <1%
SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE
PHOTO ROLL # MAYSAP-2 - 3 FRAMES 16-20

PIT NO. | DENSITY | SUBSURFACE OIL CHARACTER | OILED ZONE | CLEAN | H2O | SHEEN COLOR | PIT ZONE | SURFACE-SUBSURFACE SEEDMENTS | NOTES
--- | --- | --- | --- | --- | --- | --- | --- | --- | ---
1 | 19 | | | 1-8 | Y | 8 | S | X | BPC-PGC-BM
2 | 16 | | | 4-8 | 8 | 15 | X | BPC-PGC-B
3 | 11 | | | 1-15 | N | 8 | B | X | BC-G3PC-B
44 | 19 | | | 15-19 | 15 | Y | 14 | X | BPC-PGC-B
49 | 18 | | | 0-7 | Y | 14 | D | X | BCP-SP
5 | 16 | | | 0-7 | Y | 15 | N | X | BCP-SP
6 | 15 | | | 0-10 | N | 16 | S | X | BCP-SP
7 | 13 | | | 0-10 | N | 16 | S | X | BCP-SP

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

OG COMMENTS:
- RECOVERED SEVERAL POPS.
- OILED STORM BERA NEXT TO WATER RUNOFF IN SOUTH CORNER OF BEACH; PIT #8 IN STORM
- BEMA LOCATED 'HOR'; HOWEVER, SNOW COVERED BERM PREVENTED DelineATION OF SURFACE
- SUBSURFACE OIL
- PIT #3 AT BASE AND LEFT SIDE OF TALUS; PITS #1 & 2 VERIFY THAT 'HOR' IS LOCALIZED. CUSTOMOENE FOUND IN AREA
MAYSAP SHORELINE OILING SUMMARY

TEAM NO. 2
OG B. Trimm
ADEC P. Montesano
ONC C. Katシンプulis

BIO J. Benson
LANDMANAGER D. Kennedy
USCG/NOAA Jacqui Michel

SEGMENT ELOSE
SUBDIVISION B
DATE MAY 1, 1991

SURVEYED FROM: FOOT BOAT HELO
WEATHER: SUN CLOUDS FOG RAIN SNOW
TOTAL LENGTH SHORELINE SURVEYED: m
NEAR SHORE SHEEN: BR RB OL NONE

EST. OIL CATEGORY LENGTH: W m M m m N m V m m VI m m NO m US m

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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>WIDTH</th>
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DISTRIBUTION: C = 91-100%; B = 61-90%; P = 11-60%; E = 1-10%; T = <1%
SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE
PHOTO ROLL # MAYSAP--FRAMES

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

OG COMMENTS:

Rev 06/19/91 KG Revised

5/11/91 KG Revised
### MAYSAP SHORELINE OILING SUMMARY (cont.)

**TEAM NO. 2**

**SEGMENT EL058**

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<th>SUBSURFACE OIL CHARACTER</th>
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**NOTES**
- P - PG oozey (Snow Covered)
- PG oozey
- Coated/separated/viscous
- Sandy
- Lightly Contaminated
- Associated with HY520
- Angular Veneer
- No Oil

**OG COMMENTS:**
- Pit 9 located at base of rock face is associated with heavy SOR oiling. In location 'D2', two pits were excavated within 2 m of Pit 9 and more oil was found.
- Pit 16 is associated with heavy SOR of location 'G'.
- Pits 18-20 are on a high angled boulder pocket beach.
Sketch Map
ELOSB-B
1-MAY-91
O659-0947
BRYAN TRIMM

OG Sketch Map
ELOSB-B
1-MAY-91
O659-0947
BRYAN TRIMM

Sketch Map
ELOSB-B
1-MAY-91
O659-0947
BRYAN TRIMM

Sketch Map
ELOSB-B
1-MAY-91
O659-0947
BRYAN TRIMM

No Field Data Assume:
2 x 10 m HIGH

No Field Data Assume:
2 x 10 m HIGH

No Field Data Assume:
2 x 3 m HIGH

No Field Data Assume:
2 x 3 m HIGH

No Field Data Assume:
2 x 3 m HIGH

Northwest Bay

Scale: 25 m = 1

Scale: 25 m = 1

Scale: 25 m = 1

Scale: 25 m = 1
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2  DATE 1 May 1991
SEGMENT # ELS8  TIDAL HEIGHT (Range) +4' to -1'
SUBDIVISION B  BIOLOGIST Benson
SEA STATE calm  WIND SPEED/DIRECTION calm
PHOTOGRAPHERS: ROBERT FISH

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

A) - filamentous green algae (FGA) grows on oiled surfaces in MlT2.

F.G.A. Also, sparse barnacles in MlT2. In MlT2, FGA forms a thick cover. Small Fucus, rare barnacles & clathrates were found beneath the FGA. Other species in the MlT2:

- Lessingia (with egg masses), barnacle spat, Enteromorpha.
- The alcohol contains Ulva, Fucus, Porphyra, Pycnophora, hermit crabs, limpets, and a neritic polychaete. Algal diversity is low, overall diversity moderate & total benthic % cover is high. This species assembly should be resilient in the extent of damage caused by cleanup activities, due to their strong recrystallization.

B) - FGA grows on oiled surfaces. FGA is also dense in:

- Littorina (with egg masses), barnacles (including spat), Fucus (with recruits), Enteromorpha, Mytilus, limpets, clathrates. Nereid polychaete & hermit crabs. Although algal diversity on boulders is low, overall diversity is moderately high. Diversity on the nearby pebbles is low, probably due to high wave exposure & small rock size. In this well exposed location, re-recruitment of most of these species seems likely.

C) - FGA dominates the intertidal here, resulting in low diversity & high % cover.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED</th>
<th>SPECIES PRESENT</th>
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<tbody>
<tr>
<td>Eagles</td>
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<td>Seabirds</td>
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<tr>
<td>Waterfowl</td>
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<td>Gulls/Kittiwakes</td>
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<td>3</td>
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<tr>
<td>Shorebirds</td>
<td></td>
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<tr>
<td>Corvids</td>
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<tr>
<td>Other Birds</td>
<td></td>
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<td></td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>LAND MAMMALS</th>
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<tbody>
<tr>
<td>-Marine Mammals</td>
</tr>
<tr>
<td># OBSERVED</td>
</tr>
<tr>
<td>Sea Otters</td>
</tr>
<tr>
<td>Seals (specify)</td>
</tr>
<tr>
<td>Whales (specify)</td>
</tr>
</tbody>
</table>

Shoreline subdivision map showing important biological features attached.
Subdivision: EL 58 B
Team: Z
Bio: Benson

Comments (cont.) -

(2), (3), & Pits 9, 10 - FGA is found throughout the intertidal zone. Verrucaria extends very high in UITZ. The UITZ & LITZ resemble the boulder talus community (1), described above. In addition, more bivalve spat, a few blenny eels & nudibranch egg masses were observed here. In the event of cleanup activities here, a reasonable effort to avoid the MITZ & LITZ where possible should be sufficient to minimize damage to the biota.

(5), (6), (7), & Pits 11-16 - FGA is sparse except in the stream, where it is more abundant. UITZ: FGA & Verrucaria. In the MITZ, Fucus is dense only on boulders, where barnacles, Littorina & limpets are moderately dense. Species diversity is low even in the LITZ, where FGA & a few other algae form a high % cover. Overall, this is a beach of low diversity & moderate benthic cover & so is not highly sensitive to any potential cleanup activities.

(13), (14), (15) & Pit* 17 - Both the UITZ & MITZ are inhabited by primarily FGA & barnacles. The LITZ is similar to that in (4).

(10), (11), (12) & Pits 18-20 - Verrucaria, FGA, rare barnacles occur near & on the oiled surfaces in the UITZ. The MITZ contains typical common species, with the addition of Nucella & Bryozoa, perhaps because this beach receives higher wave exposure. It is not, however, biotically sensitive. This is a habitat-rich subdivision whose parts must be considered individually in the event that treatment is recommended.
UITZ: Verrucaria, Nucella & bryozoa in MITZ of cove.

NORTHWEST BAY

FGA dominates MITZ & UITZ. LITZ similar to LITZ of A.

Low diversity & moderate % cover, perhaps because of pebble scouring. Pebble scoured.

FGA on exposed surfaces. Faunal diversity is moderately high, except on pebbles.

FGA dominated.
1991 MAYSAP EVALUATION

SEGMENT: EL 058 SUB: D REGION: PWS SURVEY DATE: 5/1/91

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

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

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

SHPO Signature: __________________________ Date: 5/17/91

RECOMMENDATIONS:

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

TAG: ____________________________

FOSC: ____________________________

TAG APPROVAL DATE: May 17 1991

FOSC APPROVAL DATE: 25 May 1991

ADEC: ____________________________

EXXON: ____________________________

USCG: ____________________________

NOAA: ____________________________

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

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

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

TEAM NO. 2     SEGMENT EL-58     SUBDIVISION D     DATE 5/1/91

ADEC
NAME PETER MONTESANO     SIGNATURE

☐ NTR ☐ TREATMENT RECOMMENDED.

THE ENLARGED AREA ON THE SKETCH CONTAINS RECOVERABLE SOR BNG, NEITHER OF
WHICH AREA CONCENTRATED. THIS IS A LOW PRIORITY FOR TREATMENT, BUT WOULD FALL
UNDER STANDARD MANUAL REMOVAL. THIS AREA IS A RAISED PLATEAU PROTECTED FROM
HEAVY, STRAIGHT ON ENERGY; SHEENS WERE NOTED ON THE TIDE POOLS.

EXXON
NAME CM KATSIMPALIS     SIGNATURE CM KATSIMPALIS

☐ NTR ☐ ACCURATE INFO. IN O & BIO. REPORTS. VERY LITTLE

BENEFIT WOULD BE GAINED FROM TREATMENT.

LANDMANAGER
NAME DENNIS S. KENNEDY OF USFS     SIGNATURE D.S. KENNEDY

☐ NTR

I feel that the subdivision offers very little benefit
from cleanup, I suggest that it would be better to
seek efforts elsewhere.

USCG/NOAA
NAME MICHEL (NOAA) BRIAN ZEIGLE (CO) SIGNATURE MICHEL BRIAN ZEIGLE

☐ NTR The only significant oil on this subdivision is a small area of
heavy SOR in between boulders/bedrock in a depression behind
a rocky peninsula. Although sheltered from wave attack, the oil
poses little environmental risk to organisms in the area. Michel

CONCUR W/NOAA, USFS & EXXON REPS. OILED AREA POSES A VERY SMALL ENVIRONMENTAL
RISK. Z
MAYSAP SHORELINE OILING SUMMARY

TEAM NO.: 2
OG: B. Trimm  BIO: J. Benson
ADEC: P. Montesano
LANDMANAGER: D. Kennedy
USCG/NOAA: J. Acquiri, M. Michel
KATIP

DATE: May 1, 1991
SUBDIVISION: D
SEGMENT: ELOS B

TOTAL LENGTH SURVEYED: 331 m
SURVEYED FROM: FOOT BOAT HELO
WEATHER: Sun Clouds FOG Rain Snow
NEAR SHORE SHEEN: BR RB SL NONE

EST. OIL CATEGORY LENGTH:

<table>
<thead>
<tr>
<th>LOC</th>
<th>OIL CHAR</th>
<th>SEDIMENT TYPE</th>
<th>SLOPE</th>
<th>WIDTH</th>
<th>LENGTH</th>
<th>ZONE</th>
<th>NOTES</th>
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<tbody>
<tr>
<td>A</td>
<td>A-P</td>
<td>V 1</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>P</td>
<td>B M Z C</td>
<td></td>
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</tbody>
</table>

DISTRIBUTION: C = 91-100%; B = 81-90%; P = 11-80%; S = 1-10%; T = <1%
SLOPE: V = vertical; H = high angle; M = medium angle; L = low angle

SUBSURFACE OIL CHARACTER:

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>DEPTH</th>
<th>OIL CHARACTER</th>
<th>OILED ZONE</th>
<th>CLEAN ZONE</th>
<th>H2O LEVEL</th>
<th>SHEEN</th>
<th>PIT ZONE</th>
<th>SURFACE- SUBSURFACE</th>
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<tr>
<td>1A</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>MOTTLED</td>
</tr>
<tr>
<td>1B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Plate Bottom</td>
</tr>
</tbody>
</table>

OG COMMENTS:

BOUNDARY DISCREPANCY - SEE SKETCH MAP.

ELOS B-D IS A VERTICAL ROCK FACE, HIGH ENERGY SHORE WITH A WELL DEFINED BAND OF COAT STAIN THROUGH THE SUBDIVISIONS LENGTH.

Reviewed: MC 51 191
RGC 57/191 KG
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2
SEGMENT ELSE
SUBDIVISION D
SEA STATE calm

BIOLIST

PHOTOGRAPHS: ROLL # —
FRAME # —

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

(A) Verrucaria grows next to the oiled surfaces in the UTR. The benthic vegetation from UTR down to the upper UTR is: Verrucaria (dense) — filamentous green algae (FLA-modestly dense) — barnacles (dense) — Fucus + Ochotona + Enteromorpha. Total benthic % cover was nearly 100%. These are typical benthic features of moderate wave-exposure, stable vertical substrates. Most obvious species have strong recruitment in most years and are not particularly sensitive to damage that may be caused if treatment is performed here.

(B) Verrucaria grows next to P3 (MOR) in the oiled surfaces. Barnacles (sparse) also inhabit the lower UTR. The UTR contains dense barnacles & Littorina on the boulders. The barnacle typically in wave-exposed sites, Semibalanus cariosus, occurs here. FLA is also found in more protected areas of the UTR. Mytilus & Limpet recruitment has occurred recently. Several small, low-diversity tidepools in the UTR contain Rhodomenia, Littorina & Hilderkiondia. The UTR in this saddle is dominated by Fucus, FLA, & Haloscias. I could not locate the eagle nest that is mapped at the west end of this subdivision.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

| BIRDS         | # OF SPECIES | TOTAL BIRDS | FISH OBSERVED
<table>
<thead>
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</tr>
<tr>
<td>Gulls/kittiwakes</td>
<td>1</td>
<td>3</td>
<td>—</td>
</tr>
<tr>
<td>Shorebirds</td>
<td>—</td>
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</tr>
<tr>
<td>Corvids</td>
<td>—</td>
<td>—</td>
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<tr>
<td>Other Birds</td>
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<th># OBSERVED</th>
<th>SPECIES</th>
<th># OBSERVED</th>
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<tbody>
<tr>
<td>Sea Otters</td>
<td>—</td>
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<tr>
<td>#nnipeds(specify)</td>
<td>3</td>
<td>—</td>
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<tr>
<td>Sea lions</td>
<td>—</td>
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<tr>
<td>Harbor Seal</td>
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<tr>
<td>Whales(specify)</td>
<td>4</td>
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<tr>
<td>Humpbacked (2) (outside of Northwest Bay)</td>
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</tbody>
</table>

Shoreline subdivision map showing important biological features attached.
Mytilus & limpet recruitment. Dense barnacles & limpets in the MITZ on boulders.

Verrucaria next to sided surfaces. Vertical zonation: Fort - barnacles - mixed macroalgae.
1991 MAYSAF EVALUATION

SEGMENT:  EL 058  SUB:  C  REGION:  PWS  SURVEY DATE:  5/1/91

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

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

ARCHAEOLOGICAL CONSTRAINTS:
An Exxon archaeological monitor is required on-site during shoreline treatment.  PHONE 564-3276;  564-3657;  (Anchorage) or 229-1514 (24 hrs.).

SHPO Signature:  [Signature]  Date:  5/17/91

RECOMMENDATIONS:

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

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

COMMENTS:
INITIAL:

TAG:
MANUAL PICKUP OF EASILY ACCESSIBLEHSOR AND MANUALLY TILL AREA OF PIT 3, RAKE IN CUSTOMBLenen

FOSC:

TAG APPROVAL DATE:  MAY 17 1991  FOSC APPROVAL DATE:  6/20/91

ADEC  E. E. PAGE, CDR, USCG
EXXON  CHIEF OF STAFF, FOSC
USCG  
NOAA
Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.
# MAYSAP SHORELINE OILING SUMMARY

**Time:** 09:50 to 11:19  
**Tide Level:** -1.23 ft. to 0.86 ft.  
**Energy Level:**  
**Surveyed From:** Foot, Boat, Helo  
**Weather:** Sun, Clouds, Fog, Rain, Snow  
**Shoreline Surveyed:** 547 m  
**Near Shore Sheen:** None  
**Est. Oil Category Length:** W, 15 m, O, 65 m, N, 46.7 m, NO, 0, US, 0 m

| NO | AP | MS | SOR | CV | CT | ST | FL | DB | NO | SURFACE OIL CHARACTER | SURFACE SEDIMENT | SHORE SLOPE | WIDTH | LENGTH | ZONE | NOTES |
|----|----|----|-----|----|----|----|----|----|----|----------------------|------------------|-------------|--------|---------|-------|------|-------|
| A  | S  |     |     |    |    |    |    |    |    | Rock Face            |                  |             |        |         |       |      |
| B  | S  |     |     |    |    |    |    |    |    | Rainbow Sheen in Tidal Pools |                  |             |        |         |       |      |
| C  | S  | P   | P   |    |    |    |    |    |    | LT Sor Saddle        |                  |             |        |         |       |      |
| D1 | P  |     |     |    |    |    |    |    |    | LT Sor               |                  |             |        |         |       |      |
| D2 | P  |     |     |    |    |    |    |    |    | LT Sor on Top Rock 'Bend' |                  |             |        |         |       |      |
| D3 | C  |     |     |    |    |    |    |    |    | Under Border/Limited Access |                  |             |        |         |       |      |

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

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

**Photo Roll # MAYSAP-2 - 3 Frames 21-25**

**OG Comments:**
- Location 'B3', light Sor' under Boulder Veneer on a 'Bench' in the surficial.
- Pits 1 & 2 delineate a 3 x 2m 'Mor' area in surficial on location 'B'.
- Custom-milled found in location 'B3', Storm Bem deposit with light to heavy Sor'. This Storm Deposit is well packed & very protected - not your typical Storm Bem.
- Mousse in Location 'D3' is very small deposit under Boulder Veneer.

**Rev. 5/1991 EG**
MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2  SEGMENT EL 58  SUBDIVISION C  DATE 5/1/91

ADEC
NAME  PETER MONTESANO  SIGNATURE

☐ NTR  ☐ TREATMENT RECOMMENDED

WE DID NOT HAVE THE COMPLETE ASAP WHEN SURVEYING THIS SUBDIVISION, SO
LIFETRAS CONCENTRATIONS OF OIL WERE NOT KNOWN.
AREAS D2 + B BOTH REQUIRE STANDARD MANUAL REMOVAL. THE SUB/SURFACE CONCENTRATION
IS NO TROUBLE TREATING THESE AREAS.

EXXON
NAME  C.M.azzoMAUS  SIGNATURE

☐ NTR  AREA "B" IS THE MAJOR CONCERN IN THIS SEGMENT & COULD
BENEFIT FROM TREATMENT THIS YEAR. (REMOVAL, BREAKUP &
BIOREMEDIATION)

LANDMANAGER
NAME  DENNIS S. KENNEDY OF USFS  SIGNATURE  D.S. Kennedy

☐ NTR

The major area for any possible clean up would be
in location [B]. A method discussed was to manually break
up and bioremediate, as break up alone may just re-deposit.
If action is taken, care must be shown around the
UNIT pools.

USCG/NOAA
NAME  LIEUTENANT (N) BRIAN ZENOWE (CQ)  SIGNATURE

☐ NTR

The only area with significant amounts of oil is Location B, a high, sheltered
rock plateau behind a narrow beach peninsula. The SOR deposits filled
all the interstitial spaces between the pebbles and cobbles, so coverage was
100% of the available pore space. Location B3 has large boulders over
part of the area. Since this area is very sheltered, a break-up-and-leave
approach would most likely be very successful. Some people thought the trip
treatment helped a lot last year - the superficial pit access would minimize
local dilution. 3/3/91

AREA "B" COULD USE SOME WORK - REMOVAL & BIOREMEDIATION, ------ WOULD BE THE KEY, OR AT LEAST
BREAK-UP - TREATMENT ON ANY OTHER PART OF THE SEGMENT WOULD REAP NO NET BENEFIT.
<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED ZONE (cm/cm)</th>
<th>CLEAN LEVEL Y/N</th>
<th>H2O LEVEL (cm)</th>
<th>SHEEN COLOR</th>
<th>PIT ZONE</th>
<th>SURFACE-SSUBSURFACE SEDIMENTS</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>B 12</td>
<td></td>
<td></td>
<td>2 - 1 q</td>
<td>Y</td>
<td></td>
<td></td>
<td>X</td>
<td>BCP-SGP</td>
<td></td>
</tr>
</tbody>
</table>

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

OG Comments:
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #  2
SEGMENT # EL 58
SUBDIVISION  C
SEA STATE  calm

TIDAL HEIGHT (Range)  -1.5 to +1
BIOLOGIST  Benson
WIND SPEED/DIRECTION  calm

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

- We "skimmed" along the bedrock cliff at the east end of this subdivision. Verrucaria was found on the wall near the oiled surfaces. From top to bottom, the biotic zonation changed from Verrucaria to barnacles (high LITZ) to Fucus plus filamentous green algae (FGA) to laminaria. Total biotic cover was nearly 100%. Dermasterias is more common where wave exposure is higher. These are typical biotic features of moderate exposure, stable vertical substrates.

- (D), (E), (F), (G) - Verrucaria on oiled rocks in LITZ & FGA is found nearby. Unusually diverse biota was found in a tidepool in the LITZ with dense Rhodoma & Littorina along with FGA, Fucus, coralline algae & Hildenbrandia (see sketch maps). These organisms are common in other intertidal zones, but LITZ pools are nonetheless somewhat susceptible to damage in the event of cleanup activities. Below the LITZ, dense barnacles & Littorina and moderately dense Fucus are found in the MITZ along with a few small tidepools. The MITZ has high total biotic cover and moderately diverse algae. The abundance of hermit crabs suggests high organic productivity. This is a moderately diverse biota with minor biological sensitivities (LITZ pools).

(continued on the next page)

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

FLUSH OBSERVED

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<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>SPECIES PRESENT</th>
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<tbody>
<tr>
<td>Eagles</td>
<td></td>
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<td>&quot;blenny eel&quot;</td>
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<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>
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<tr>
<td>Shorebirds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corvids</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Birds</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

LAND MAMMALS

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

Shoreline subdivision map showing important biological features attached.

REVIEWED 5/7/91 MC
Subdivision: ELSEC
Team: 2
Bio: Benson

Comments (cont.): 

(2) - Sparse barnacles found on boulders near the CT & CV. FGA dominates the MITZ, though some Littorina adults & juveniles are found below the FGA. Species diversity is low.

(11,12) & Pit*5 - One-inch pink oligochaetes were found on SSR. The MITZ biotic assemblage consists of dense FGA & barnacles and moderately dense Fucus. Recent recruitment was observed for Fucus, barnacles, Littorina, & Mytilus.

(63) & Pit*6 - Veruccaria grows near the oiled surfaces. The biota is of low diversity, with recruitment of Mytilus, barnacles & Fucus. This assemblage is not sensitive to possible cleanup activities.

Pit*8 - Relatively smaller sediments at west end of cove support only sparse biota. Recent recruitment of Fucus & barnacles was observed. The large number of empty Saxicapa shells washed up suggests that a kelp & clam bed lies here in the subtidal.

This is a moderately wave-exposed site, but the biotic diversity seems generally low except at the tombolo approximately in the middle of the subdivision. This is also the location of somewhat sensitive ecological assemblages (MITZ tidepools). In the event that treatment is performed there, accessing the saddle from the north could help to minimize the chance of damaging the organisms or their habitat.
Bio Sketch Map
EL058-C
1-MAY-91
0950-1119
Benson

- **Pit #8**
  - Butter clam shells, Fucus & barnacle recruitment.

- **Pits 1-4**
  - Biotically diverse due to moderate wave exposure & tidepools in UITE & MITZ. Moderate to high % cover.

- **Point A**
  - High % cover & clearzonation. Verrucaria grows near the oiled surfaces.

- **Oligochaetes on oiled surfaces. FGA, Fucus. Juvenile Fucus barnacles, Littorina & Mytilus.**

- **Mytilus, barnacle & Fucus recruitment. Low species diversity.**

- **FGA is dominant. Sparse barnacles.**

- **25 meters**

Reference distances are in meters.
ASAP TAG REVIEW SHEET

Segment: EL58 Subd: C Site: 1 

Date PRE-Review 11/4/690

Priority For Addressing In 1990

HIGH MEDIUM LOW NTR

Treatment Recommended: NTR - Based on AVAIL INFO

NO OG SHEET/NO SKETCH

Priority Site For Reassessment In 1991

YES NO YES NO YES NO YES NO

CG ADEC EXXON LAND MGR

TAG 13/AUG/90

NTR

4m x 30cm asphalt oil under armor.
High pressure next spring.
ASAP FOLLOWUP RECOMMENDATIONS

Conditions Observed:
Anaerobic sediments down to 35 cm.; sediment profile indicates fine-grained material protected by heavy boulder armor. Several pits were dug, revealing heavy "or" and mobile "op". It appears that the boulder armor, protected location and fine sediments are interacting to maintain a reservoir of subsurface oil that is not weathering. This oil would be resistant to diagenesis because of its concentration and low subsurface oil concentration.

Followup Recommendations:
1. Decision tree calls for TAG evaluation.
2. Define extent and depth of subsurface reservoir.
3. Strip away armor; excavate and remove oiled sediments with adequate containment.
4. Treat area with custom blend.
5. Replace armor.

Completed by Pickup Crew:

ADEC
Wesley Ghormley

Priority for Addressing in 1990:
☐ High ☐ Modified ☐ Low

Notes:

Condition of surface oil is of great concern to ADEC. Highly recommended excavation of beach in 1990. Location of beach protected it from being exposed to a high energy environment.

USCG
PS1 Leo Bergsland

NOAA
Dr. Walter Weller

Land Rep.
John Abel

Comments:
1. The problem is localized at a cave besides a creek; it does not meet a high priority rating for 1990. The tide mark did not reveal a serious spill.
SEGMENT AS/EL-52  SUBDIVISION:  C  SITE:  1  DATE 8-6-90

NAME  Art Weiner  SIGNATURE  Art Weiner

☐ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:  Substantial amount of subsurface oil in anerobic environment. Physical conditions conducive to persistence.

ADEC
NAME  Wesley Giroumley  SIGNATURE  Wesley Giroumley

☐ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:  Excavation of sub-surface anaerobic environment is recommended for 1990. Reassessment necessary to evaluate site after work is completed. Also, heavy black band 1 ft/dk up to 3' in width is very noticeable three feet beneath to the eastern portion of site. Reasses this area to observe conditions after winter storm activity.

LAND MANAGER
NAME  John B.  SIGNATURE  John B.

☐ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:  Evaluate headland and beach if drift offers restoration techniques to remove oil.

EXXON
NAME  Rev. St.  SIGNATURE  Rev. St.

☐ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:  Recommend the reassessment of the site in 1991.
### SURFACE OIL

<table>
<thead>
<tr>
<th>SITE 1</th>
<th>SITE 2</th>
<th>SITE 3</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/U/M/L</td>
</tr>
<tr>
<td>S.O.R.</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>POOLED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COVER</td>
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<td>COAT</td>
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<td>STAIN</td>
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<tr>
<td>MOUSSE</td>
<td></td>
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<tr>
<td>PATTIES/T.B.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FILM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO OIL</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td><strong>EST. SITE LENGTH</strong></td>
<td>30</td>
<td></td>
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</table>

### 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</th>
<th>CLEAN BELOW (YN)</th>
<th>PIT ZONE</th>
<th>SURFACE-SUBSURFACE SEDIMENTS</th>
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<tbody>
<tr>
<td>1</td>
<td>1/35</td>
<td>35</td>
<td>X X</td>
<td>0.35</td>
<td>N</td>
<td>B-BCPM</td>
<td></td>
</tr>
</tbody>
</table>

**Photographs:**

- ASAP #2
- Roll No. R01 #2
- Frames R6

**Comments:**

This pit had a pungent aroma. Several team members indicated that it was hydrogen sulfide and suspected anaerobic conditions. Several other informal pits were dug which did not have the same smell. It is probable that the condition is localized. No custombina was observed at the site.
**ASAP TAG REVIEW SHEET**

Segment: EL58  Subd: D  Site: 1  Date: PRE-Review 11 Aug 90

Priority For Addressing In 1990

<table>
<thead>
<tr>
<th></th>
<th>HIGH</th>
<th>MEDIUM</th>
<th>LOW</th>
<th>NTR</th>
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<tr>
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</tbody>
</table>

Treatment

Recommended: MANUAL REMOVE (Harrow) SOIL B I G

---

Priority Site For Reassessment In 1991

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
<th>YES</th>
<th>NO</th>
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<th>YES</th>
<th>NO</th>
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</thead>
<tbody>
<tr>
<td>CG</td>
<td>YES</td>
<td>ADEC</td>
<td>✓</td>
<td>EXXON</td>
<td>✓</td>
<td>LAND MGR</td>
<td>NO</td>
</tr>
</tbody>
</table>

---

13 Nov 90 TAG

Apply Custom Blend

Reassess next year
ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/EL-55  Subj.: D  Site: 4  Date: 8/6 1990

Conditions Observed: "OF" OIL IN SUBSURFACE FROM 20-25 CM IN POROUS SUBSTRATE.
SOR IN WAVE SHADOW OF ROCK OUTCROP ADJACENT TO FRESHWATER DRAINAGE
RAINBOW SHEEN IN FRESHWATER DRAINAGE

Followup Recommendations: APPLY CUSTOM BLEND TO AREA AROUND PIT AND
AREA OF SOR ADJACENT TO FRESHWATER DRAINAGE.

Completed by Pickup Crew: ____________________________
Priority for Addressing in 1990: ☐ High ☒ Mod. ☐ Low

ASBC: Wesley Graham

Comments: If subsurface oil in the form of OP remains in 1991
then removal will be requested by ASBC.

Exxon: Ray Sotelo

Comments: Recommend the re-application of custom blend on this site.

USCG

NOAA: Art Weiler

Comments:

Land: John Riel

Comments: Note area high tide, high clay content, deeper water, nanometers gas, weather.
FIELD SHORELINE COMMENT SHEET

SEGMENT AS/ EL 58  SUBDIVISION: D SITE: 1 DATE 8-6-90

USCG/NOAA PS1 Leo Berzalka/ Leo Berzalka

NAME Art Weiner / SIGNATURE Art Weiner

☐ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON: Assess custom blend treatment of both surface + subsurface oil.

ADEC

NAME Wesley Ghoospery / SIGNATURE Wesley Ghoospery

☐ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON: To assess condition of oiled after winter activities. Observe the progress of bioremediation.

LAND MANAGER

NAME John Beal / SIGNATURE John Beal

☐ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON: To evaluate reclamation and possible additional treatment if necessary.

EXXON

NAME Ray Spratley / SIGNATURE Ray Spratley

☐ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON: If site is cleaned in '91, it should not be a priority site.

REASON:

REASON:

REASON:
**SURFACE OIL**

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OILED ZONES</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASPHALT</td>
<td>/C /B /P /S</td>
<td>SU UI MI LI</td>
</tr>
<tr>
<td>S.O.R.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>POOLED</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>COVER</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>COAT</td>
<td>X</td>
<td></td>
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<tr>
<td>STAIN</td>
<td>X</td>
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</tr>
<tr>
<td>MOUSSE</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>PATTIES/T.B.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>FILM</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>NO OIL</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

EST. SITE LENGTH: 55

**SUBSURFACE OIL**

<table>
<thead>
<tr>
<th>SITE NO.</th>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>CLEAN BELOW (Y/N)</th>
<th>PIT ZONE</th>
<th>SUBSURFACE-SUBSURFACE SEDIMENTS</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>25</td>
<td>X</td>
<td>Y</td>
<td>X</td>
<td>PCB-PCB</td>
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<tr>
<td>1</td>
<td>2</td>
<td>15</td>
<td>X</td>
<td>N</td>
<td>X</td>
<td>BCP-BCP</td>
</tr>
</tbody>
</table>

**COMMENTS**

Manual removal was conducted at this location. Majority of oiled sediment may have been removed however some pH were left in place. This location is behind a bedrock outcrop which seems to block most of the wave energy which would otherwise reach this oiled area. Custard-like was still evident.
GENERAL OILING TENDS INDICATED ON ORIGINAL SSAT SURVEY STILL GENERAL VALID.

CUSTOMBLLEN WAS FOUND ON THIS SIDE OF THE COVE.

NO CUSTOMBLLEN THIS SIDE OF COVE.

Cobble 60%

Boulder 30%

Pebble 20%

Sheen Near Shore

Raven Shores

Low Bedrock Outcrop

Cobble 60%

Boulder 40%

Low

Rock Face

2cm crude

Cobble

PDD

Sor/10 x 30 meter

Sor/H under

Boulders

Cve CT/1/H

BIO HERE

In wide CT/S on cobble beach

Confined Distribution

CT/S

Confined Distribution

Sor/H under

Boulders

Cve CT/1/H

Flagged oil

150

10x

150m

DFP

CV 25.

37%
Once sites were located which corresponded to sketch maps, no further attempt was made to investigate sites denoted on computer map.

Important note: Actual site locations were found to be different than noted on the computer map.

These locations were agreed upon by all ASAP team members and the skiff driver based on sketch maps.

ASAP #2
Greg Chaney
Aug 6 1990

Segment EL-58

Segment Location Map
Map Key: KNL-EL-58
July 10, 1990
1:53 PM
SHORELINE EVALUATION

SEGMENT ST/ EL-58 SUBDIVISION A (1 OF 4) DATE 3/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M Herring spawning (4/1 to 6/15)
6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOCLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled substrate and biota. Avoid dense mussel beds in intertidal zone.

ARCHEOLOGICAL 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: 4/18/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 184 m: V.Light 0 m: No Oil 0 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
Tarmat: Breakup Beach Cleaner
Removal Other (see comments)

COMMENTS: Recommend manual pick up of tar balls and bioremediation as shown on sketch map. Work should be conducted between 6/15 and 8/15 as a result of constraints.

TAG COMMENTS: Maintain to check supratidal snow covered during survey

TAG APPROVAL DATE: 4/18/90
ADEC John [Signature] FOSC: [Signature] DATE: 4/21/90
EXXON John [Signature] NOAA Bud [Signature] USCG S.A. [Signature]
CHECKLIST

LEGEND

1 Δ
Pit - No Subsurface Oil

2 Δ
Pit - Subsurface Oil

Continuous Distribution

Broken Distribution

Patchy Distribution

Splashed Distribution

Oiled Vegetation

Photo location, direction, and number

Oil Character Length (m): AP PO CV CT ST 80 MS PT TB FL NO 73
SHORELINE EVALUATION

SEGMENT ST/EL-58 SUBDIVISION B (2 OF 4) DATE 3/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M Herring spawning (4/1 to 6/15)
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 substrate and biota.

ARCHAEOLOGICAL CONSTRAINTS:
Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time.

SHPO SIGNATURE: [Signature] DATE: 4/18/90

OILING CATEGORIZATION:
Wide 0 m: Medium 38 m: Narrow 124 m: V.Light 586 m: No Oil 34 m
Subsurface Oil Observed: Yes X No Maximum Depth 45 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pick up of tar balls and debris and bioremediation of areas shown on sketch map. Work should be conducted between 6/15 and 8/15 based on above herring and deer constraints.

TAG COMMENTS: Monitors to assess suit during treatment.

TAG APPROVAL DATE: 4/18/90
ADEC JOHN BAUER
EXXON
NOAA
USCG
SUBDIVISION B

DATE 03/30/90

CHECKLIST

- Arrow
- Infotex Scale
- Seg/Sub Body
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- SSL
- Profile Location(s)
- Profile(s)
- Pt Location(s)
- Photo Location(s)

LEGEND

1. ▲ Pt - No Subsurface Oil
2. ▲ Pt - Subsurface Oil

OUTCROP

- CT/C Continuous Distribution
- CT/B Broken Distribution
- CT/P Patchy Distribution
- CT/S Splashed Distribution

Oiled Vegetation

- Photo location, direction, and number

Oil Character Length (m): AP PO CV CT 732 ST MS PT TB FL NO 39
Wide patch of creos with subsurface oil in supratidal Zone.

Medium

Rocky

Wave-cut rock with cliffs

Boulders

Pebble, cobble, beach

Vertical rock

Boulder, cobble, beach

XXX Wide

/// Medium

--- Narrow

TTTT Very Light

Oil

Map Key: PWS-141
Name: James Spring
Date: 04/01/90

ADEC Segment Length: 4845m

EL-58

1999
SEGMENT ST/ EL-58 SUBDIVISION C (3 OF 4) DATE 3/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M  Herring spawning (4/1 to 6/15)
6Y  Recreation: Special use destination
7III Subsistence area: Deer harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

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

ARCHAEOLOGICAL CONSTRAINTS: Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time.

SHPO SIGNATURE: Charles F. Adamer DATE: 4/18/90

OILING CATEGORIZATION:

Wide 32 m: Medium 38 m: Narrow 477 m: V. Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 30+ cm

RECOMMENDATIONS:

X Treatment Recommended
X Manual Pickup
X Bioremediation
Tarmat: Breakup
Removal

COMMENTS: Recommend manual pick up of tar balls and oil spill related debris. Recommend bioremediation of areas shown on sketch map. Work should be conducted after 6/15 based on constraints.

TAG COMMENTS: 

TAG APPROVAL DATE: 4/15/90

ADEC  JOHN BAUG B. HOLT
EXXON  JAY T. C. FOSS:  DATE: 4/22/90
NOAA  R. L. Weil
USCG  G.A. BESS
Wide paid of cover with subsurface oil in supratidal zone.

Wave-cut rock with cliffs

Boulders

Pebble, cobble, beach

Vertical rock

Boulder, cobble, beach

XXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil
SHORELINE EVALUATION

SEGMENT ST/EL-58 SUBDIVISION D (4 OF 4) DATE 3/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M Herring spawning (4/1 to 6/15)
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/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: 4/8/90

OILING CATEGORIZATION:
Wide 47 m: Medium 0 m: Narrow 284 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 30+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pick up of tarballs and oil spill related debris. Bioremediate area shown on attached sketch map. Work should be conducted after 6/15 based on above herring constraints.

TAG COMMENTS: MONITORS TO ABSESS SUIT Z DURING TREATMENT

TAG APPROVAL DATE: 4/18/90
ADEC [Signature]

EXXON [Signature] DATE: 4/30/90

NOAA [Signature]

USCG [Signature]
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-100

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION

SEGMENT ST/ EL-100 SUBDIVISION A (1 OF 1) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M Herring spawning (4/1 to 6/15)
6Y Recreation: Special use destination (6/1 to 9/15)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance/damage to unsoiled biota and substrate.

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

SHPO SIGNATURE:_________________________ DATE:_________________________

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 556 m
Subsurface Oil Observed: Yes X No Maximum Depth 40 cm

RECOMMENDATIONS:
___ No Treatment Recommended
_____ Treatment Recommended
_____ Manual Pickup
_____ Bioremediation
_____ Tarmat: ___ Breakup

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE:___________
ADEC ____________________________ FOSC:_________________ DATE:________
EXXON __________________________
NOAA __________________________
USCG __________________________
FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 EL 100 SUBDIVISION: A (101) DATE 05/31/90

USCG NAME AEC Vandepeels SIGNATURE AEC Vandepeels

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Lots (1000s x 10) of mussels & snails present on all areas.

ADEC NAME Michele Eater SIGNATURE M Eater

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

EL 100 was quite prolific in littorina, mytilus, balanus and fucoid beds. Like segment 101, this area has high exposure and is a high energy beach. OF was found on the SE furthest SE beach (3,0) in the SUTZ beginning at 23 cm and extending below 40 cm. The SUTZ has been showed no oil at 30 cm. An area of 1m x 1m ST lies in the back crevace of the beach. In addition a faint, broken blue stain tapered from 3 M to 3 cm line across the beach. Due to the low level polluting high exposure of this area I would recommend leaving the treatment to the high wave inc.

LAND MANAGER NAME Dan Logan SIGNATURE D Logan

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

I concur with ADEC: THE TWO BEACHES HAVE POTENTIAL AS RECREATION CAMP SITES.
**USCG** R. Vondeplees SEGMENT STI E1 100
**BIO.** J. Springer
**ECC.** T. Tamkin
**DATE.** 03/31/90
**TIME.** 11:10 to 12:00

**TIDE LEVEL.** -1 to 0
**DATE.** 03/31/90

**EST. SUBDIVISION LENGTH.** 632 m
**SURFACE SEDIMENTS.** R 70 % B 15 % C 10 % P 5 % G 9 % S 3 % M 3 % Y

**SURVEYED FROM.** Foot Boat Helo
**WORKING DIRECTION.** S to N

<table>
<thead>
<tr>
<th>SURFACE OIL</th>
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<tbody>
<tr>
<td>CHARACTER</td>
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<td>ASPHALT</td>
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<tr>
<th>OILED DEBRIS</th>
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<tr>
<td>Logs</td>
<td>Vegetation</td>
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<tr>
<th>NEAR SHORE SHEEN?</th>
<th>NO</th>
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<tr>
<td>BR</td>
<td>RW</td>
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<td>DEBRIS COLLECTED</td>
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<td>TYPE</td>
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Photographs:

- Roll No. __ __
- Frames __ __

**SURFACE SEDIMENTS.**

<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>
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<tbody>
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<tr>
<td>2</td>
<td>30</td>
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<td>3</td>
<td>30</td>
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<td>40</td>
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<tr>
<td>5</td>
<td>40</td>
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<td>X 5.40 X</td>
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<tr>
<td>6</td>
<td>20</td>
<td></td>
<td>X X X</td>
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</table>

**COMMENTS.**

* Not consensus. May be OIL OR.
SHORELINE ECOLOGICAL SUMMARY

Segment ST / EL 100 Subdivision A

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

Time (24 hr) 10:10 - 12:00 Biologist C. Rank

Tide Height: -1 to +0.5 ft

Segment Length: 632 m

(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 70, Moderate 15, Low 15

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

Wildlife Observations/ General Comments: Deer set in drift line

Ecological Considerations:
7-11 Deer Harvesting
A3M Herring Spawning
6Y Special Use Destination
Seg: EL 100A  
Time: 1010-1200  
Tide Height: -1 → +0.5 ft

---

Species List

**HITZ**
- *Fucus*
- *E. marina*
- *H. pusilla*
- *Cladophora*
- *Filamentous reds*

**MITZ**
- Halodule
- Lithothamnion
- Fiss. zona
- *S. ciliatum*
- *Fucus*
- Bladed reds
- Fine filamentous greens
- *A. terebra*
- *Laminaria*
- *Gelidium*
- *Botryllia*
- *Rhodomela larix*
- *Ulva fenestrata*
- Filamentous reds

**OLTZ**

---

Flora

- *Nucella*
- *Littorina*
- *Limpets*
- *Nysa*
- *Litorina*

- *Tonicella*
- *Littorina*
- *Limpets*
- *Antithereura xanthina*
- *grana*
- *A. artemisio*

Fauna

- *Porstar*
- *Kuritaia tunicata*
- *Serpulids*
- *Bryozoan*
- *Nucella*
- *Limpets*
- *Litorina*

---

Comments
- Barnacle scarring in LITZ cobble
- *Kathrina tunicata* ~ 6/m²
- Dense Littorina spat in HITZ bedrock
- Drift Neurocystis in SUPRA
- Laminaria in drift line
- Dense biotic cover on bedrock and vertical faces
- Moderate → sparse biotic cover on boulders
- Sparse → none biotic cover on cobble/pebble/gora due to high exposure
Comm (cont.)

- Vertical Rock faces were surveyed from ship.
- High recruitment seen.
- Tidalpools in brooks 1477Z, 1478Z.
- Dense faces of m. intergriculata.
- Filamentous growth is heavy in m. cin. Why film? spawings are not in higher concentrations.
PWS 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 (4/20 to 5/10)

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

1H
Remote release site

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

1J
Purse seine area (7/21 to 9/30)

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

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

2M
Hermit 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 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)

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 (6/15 to 2/28)

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

SEGMENT ST/EL-100 SUBDIVISION A (1 OF 1) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M  Herring spawning (4/1 to 6/15)
6Y  Recreation: Special use destination (6/1 to 9/15)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance/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: 4/13/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 556 m
Subsurface Oil Observed: Yes X No Maximum Depth 40 cm

RECOMMENDATIONS:
X No Treatment Recommended ____ Snare/Absorbent Booms
____ Treatment Recommended ____ Oil Snare (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 [Signature] [Signature] FOSC: [Signature] DATE: 4/22/90
EXXON [Signature] [Signature] NOAA [Signature] [Signature]
USCG [Signature] [Signature]
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-101

SUBDIVISIONS: A (1 OF 1)
SEGMENT ST/ EL-101  SUBDIVISION A (1 OF 1) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M  Herring spawning (4/1 to 6/15)
6Y  Recreation: Special use destination
7II Deer harvesting (8/15 to 2/28)

SUBDIVISION ECOLOGICAL CONSTRAINTS:
(2M) Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

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 21 m: No Oil 187 m
Subsurface Oil Observed: Yes X No Maximum Depth 60+ cm

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE:__________
ADEC _______________________
EXXON ________________________ POSC:_____________ DATE:__________
NOAA ________________________
USCG ________________________
FIELD SHORELINE COMMENT SHEET

SEGMENT ST1  EL/101  SUBDIVISION: A  DATE 03-31-90

USCG
NAME  AEC Vandepolk  SIGNATURE  AEC Vandepolk

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS
I recommend no cleaning just due to the amounts of mussels, snails, fucus, barnacles and algae present.

ADEC
NAME  Michele Baer  SIGNATURE  Michele Baer

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS  This high energy segment appears to have successfully benefitted from the natural cleaning process. A healthy bank of Mytilus and Balanidae exists throughout the segment on the R headlands. I would recommend treatment to the NE, C, P, & G beach (approx. 50 M in length), by tilling in the LITZ to expose the underlying OF. This layer begins at 45 cm and goes beyond 60 cm.

LAND MANAGER
NAME  DAN LOGAN (NPS)  SIGNATURE  DAN LOGAN

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS
I recommend tilling by hand the lower intertidal band to expose oil fouling zone to natural cleaning.
**SHORELINE OILING SUMMARY**

**NAME:** J. Springer  
**USCG:** R. Vandepeels  
**BIO:** R. Croark  
**LAND REP:** D. Logan  
**EXXON:** T. Ternblin  
**ADEC:** M. Bagg  
**TEAM NO.:** 5  
**TIME:** 09:00 to 10:00  
**DATE:** 03/31/90

**EST. SUBDIVISION LENGTH:** 312 m  
**TIDE LEVEL:** 0' to 1'  
**SURVEYED FROM:** Foot, Boat  
**WORKING DIRECTION:** N to S  
**SURFACE SEDIMENTS:** R 65%, B 10%, C 15%, P 5%, G 2%, S 5%, M 5%, V 5%, C 5%  
**SLOPE:** Lang 20%, Hang 40%, Vert 40%  
**WAVE EXPOSURE:** Low, Med, High

**SURFACE OIL**

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<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
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<td>S</td>
<td>U</td>
<td>M</td>
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<td>POOLED</td>
<td>S</td>
<td>U</td>
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**PAVEMENT:** HFS  
**OILED DEBRIS AMOUNT:** MD LG SM  
**DEBRIS COLLECTED:** YES NO  
**NEAR SHORE SHEEN?** NO  
**BR RW SL TL**

**OIL CATEGORY LENGTH:** W 0 m M 0 m N 0 m VL 0 m

**NEAR SHORE SHEEN?**

**OIL CATEGORY ZONES**

**OIL CATEGORY LENGTH:**

**SUBSURFACE OIL**

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<th>PIT NO.</th>
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<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL (CM-CM)</th>
<th>BELOW</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
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<td>PGS</td>
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**COMMENTS**

*Oil noted in subsurface of lower intertidal zone.*

**Roll No., Frames:** ST-5-1, 2-14

**REVIEWER:** M  
**DATE:** 4-5-90

Page 1 of 8
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST: E L: 01 Subdivision: A
Date (mo/day/yr): 3/31/91

Time (24 hr): 0900 Biologist: Crank

Tide Height: 0 > -1 ft
Seg Length: 313 m

(A) Substrate type and % of segments:
(1) Bedrock 65% (2) Boulder 10% (3) Cobble 15% (4) Pebble 8% (5) Sand 2% (6) Silt

(B) Overall % cover of biota (% of segment):
Dense 00% Moderate 20% Low 20%

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

**BARNACLES**

Dense Moderate Sparse Rare
2 2 2 2
3 3 3 3
4 4 4 4
5 5 5 5
6 6 6 6

**MYTILUS**

Dense Moderate Sparse Rare
2 2 2 2
3 3 3 3
4 4 4 4
5 5 5 5
6 6 6 6

**GASTROPODS**

Dense Moderate Sparse Rare
3 3 3 3
4 4 4 4
5 5 5 5
6 6 6 6

**FUCUS**

Dense Moderate Sparse Rare
1 1 1 1
2 2 2 2
3 3 3 3
4 4 4 4
5 5 5 5
6 6 6 6

Wildlife Observations/General Comments:

2 Birds, 01 H2O, 10
1 Diaper, 10 avian, 5
1 Crew - Flying

Ecological Considerations:

7 11 - Deer Harvesting
2 M - Herring Spawning
6 Y - Special Use Destination
Species List (Incomplete)

**Flora**

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<th>HITZ</th>
<th><strong>Sporosiphon</strong></th>
<th><strong>Green filamentous</strong></th>
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<td><strong>Odothalia sp.</strong></td>
<td><strong>Halosaccion</strong></td>
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<td><strong>Rophisia</strong></td>
<td><strong>Ectocladus</strong></td>
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<td><strong>Lithothamnium</strong></td>
<td><strong>Penicillus</strong></td>
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<td></td>
<td><strong>Enteromorpha</strong></td>
<td><strong>Bussiella</strong></td>
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<tr>
<td></td>
<td><strong>Filamentous Greens</strong></td>
<td><strong>Filamentous Reds</strong></td>
</tr>
<tr>
<td></td>
<td><strong>may include polysiphonia</strong></td>
<td><strong>Fucus</strong> and <strong>Porphyra</strong></td>
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**Fauna**

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<thead>
<tr>
<th>HITZ</th>
<th><strong>Balanus glandula</strong></th>
<th><strong>Mytilus</strong></th>
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<tbody>
<tr>
<td>MITZ</td>
<td><strong>Katharina tunicata</strong></td>
<td><strong>Searlesia dia</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Eore surmacet sea</strong></td>
<td><strong>Siphonaria thersites</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Limpets</strong></td>
<td><strong>Patella verrucosa</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Mytilus</strong></td>
<td><strong>Patella spp.</strong></td>
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**LITZ**

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<tr>
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<th><strong>Enteromorpha</strong></th>
<th><strong>Littoraria</strong></th>
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<tbody>
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<td></td>
<td><strong>Ulva linza</strong></td>
<td><strong>Limpets</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Small bladed ecos</strong></td>
<td><strong>Siphonaria thersites</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Lithothamnium</strong></td>
<td><strong>Scamonia glauca</strong></td>
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<td><strong>Alaria</strong></td>
<td><strong>E. coriaceus</strong></td>
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<tr>
<td></td>
<td><strong>Cladophora</strong></td>
<td><strong>E. serrata</strong></td>
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<tr>
<td></td>
<td><strong>Fucus</strong></td>
<td><strong>E. carinata</strong></td>
</tr>
</tbody>
</table>

Comments:

- Green filamentous algae may be impeding recruitment on boulders.
- Many tidepools in bedrock at MITZ and LITZ.
- Dense Katharina tunicata on boulders.
- Small bladed ecos constitute major percentage of LITZ cover.
- Flora and fauna in this segment appear healthy.
- High energy cobble beach, low biota due to moving (rolling) cobble.
- Snowpack runoff following contour of southern headland.
SHORELINE EVALUATION

SEGMENT ST/ EL-101 SUBDIVISION A (1 OF 1) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M Herring spawning (4/1 to 6/15)
6Y Recreation: Special use destination
7II Deer harvesting (8/15 to 2/28)

SUBDIVISION ECOLOGICAL CONSTRAINTS:
(2M) Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

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

SHPO SIGNATURE: [Signature] DATE: 4/17/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 21 m: No Oil 187 m
Subsurface Oil Observed: Yes X No Maximum Depth 60+ cm

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90
ADEC JOHN BAEER
EXXON ANDY TEST
NOAA [Signature]
USCG [Signature]

FOSC DATE: 4/21/90
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-102

SUBDIVISIONS: A (1 OF 2)
SHORELINE EVALUATION

SEGMENT ST/EL-102 SUBDIVISION A (1 OF 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M Herring spawning (4/1 to 6/15)
5T-3 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

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

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

SHPO SIGNATURE: __________________________ DATE: __________________________

OILING CATEGORIZATION:
Wide 0 m: Medium 40 m: Narrow 392 m: V.Light 0 m: No Oil 146 m
Subsurface Oil Observed: Yes No X Maximum Depth

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

COMMENTS: Recommend manual pick up of mousse as indicated on sketch map. Work should be conducted between 6/16 and 8/14 with ADF&G and USFWS approval regarding eagle nest constraint.

TAG COMMENTS:_________________________________________________________

TAG APPROVAL DATE: __________________________________
ADEC EXXON FOSC: ___________________ DATE:_________________
NOAA USCG: _____________________________
Salmon stream mouth - fry outmigration (3/1 to 5/15)
Salmon stream mouth – spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bio remediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

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 (5/11 to 7/25)

Harvesting 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.

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

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

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

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

Recreation: Tent sites (6/1 to 9/15)
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 (5/15 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 EL 102   SUBDIVISION: A    DATE: 03/31/90

JSCG
NAME: AEC Vanderpels   SIGNATURE: AEC Vanderpels

☒ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

I recommend no treatment for this area.

ADEC
NAME: Michelle Baer   SIGNATURE: M. Baer

☒ NO TREATMENT RECOMMENDED OR ☐ TREATMENT SUGGESTED

COMMENTS

Sub-segment A is a high energy beach with optimum conditions for natural cleaning to occur. A 1m band of mussels beds extends throughout the segment. There are patchy distributions of oil behind large boulders. If the oil lying in the upper 3cm of this area is of such high energy, I would recommend either manual removal or the patches be considered low priority for treatment.

LAND MANAGER
NAME: Dan Logan   SIGNATURE: Dan Logan

☐ NO TREATMENT RECOMMENDED  ☒ TREATMENT SUGGESTED

COMMENTS

I recommend concur with ADEC. I recommend manual removal of small boulders and smaller located between the large rocks referenced on sketch map as this area will clean naturally. I consider this area medium-poor camping potential.
**SURFACE OIL**

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<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
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**OIL CATEGORY**

- LENGTH: W ___ m M ___ m N ___ m V ___ m
- SURFACE SEDIMENTS: R ___% B ___% C ___% P ___% G ___% S ___% M ___% Y ___% R S
- SLOPE: Lang ___% Hang ___% Vert. ___% WAVE EXPOSURE: Low Med High
- OIL CATEGORY LENGTH: W ___ m M ___ m N ___ m V ___ m NO ___ m

**SURFACE SEDIMENTS**

| PIT NO. | PIT DEPTH (cm) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | OILED INTERVAL (cm-0) | Oiled Debris: Logs, Vegetation, Trash, Debris, Debris Collected: Yes, No

**PAMEMENT**

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**PATTIES / TARBALLS**

- 0 BAGS

**NEAR SHORE SHEEN?**

- NO

**OILED AMOUNT**

- SM Med LG

**DEBRIS COLLECTED**

- YES NO

**TYPE**

- BAGS

**Photographs:**

- Roll No. 24
- Frames 147, 148

**COMMENTS**

- Pit 3 Surface (0-5 cm) mousse or soft asphalt.

---

**Page 1 of**

---

**REVIEWED**

- 4-5-90

---

**DATE**

- 4-7-90
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST 10102  Subdivision A  Date (mo/day/yr) 3/31/90  
Time (24 hr) 1230-1245  Biologist CRAN

Tide Height: t2 - t6

(A) Substrate type and % of segments:  
(1) Bedrock 80  (2) Boulder 7  (3) Cobble 10  (4) Pebble 3  (5) Sand  (6) Silt

(B) Overall % cover of biota (% of segment): Dense 40  Moderate 20  Low 20

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

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Wildlife Observations/ General Comments:  
1 Harbor Seal - Adult 1 Bald Eagle - Mature  
2 Seals - Adult  
1 Scoter - on H2O  
Ecological Considerations:  
7 11 - Deer Harvesting  
2 M - Herring spawning  
ST-2 - Bald Eagle Nest
Segment: EL 102 B
Time: 1430-1530
Tide Height: +6.5 ft

Species List

**HITZ**
- Flora
  - Filamentous green
  - Fucus
- Fauna
  - Balanus
  - Lithorina
  - Mytilus

**MITZ**
- Enteromorpha
- Filamentous Greens
- Filamentous Reds
- Gloeopeltis
- Endocladina
- Fucus

Flora
- Balanus
- Lithorina
- Mytilus

Fauna
- Balanus
- Mytilus

Comments
- HITZ not observed due to covered by tide
- Most of MITZ not directly observed due to covered by tide
- Runoff flowing under cobble
- Eagle Nest reported but not seen
- Vertical rock face surveyed from skiff
- Recruitment is high
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-102

SUBDIVISIONS: B (2 OF 2)
SHORELINE EVALUATION

SEGMENT ST/EL-102 SUBDIVISION B (2 OF 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M Herring spawning (4/1 to 6/15)
5T-3 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

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

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

SHPO SIGNATURE: ______________________ DATE:____________________

OILING CATEGORIZATION:

Wide 0 m: Medium 21 m: Narrow 169 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No____ Maximum Depth 30+ cm

RECOMMENDATIONS:

X No Treatment Recommended ___Share/Absorbent Booms
--- Treatment Recommended ___Oil Snares (pom poms)
--- Manual Pickup ___Absorbents (pads, rolls, etc)
--- Bioremediation ___Spot Washing: ___Wands
--- Tarmat: ___Breakup ___Effect Beach Cleaner
--- Removal ___Other (see comments)

COMMENTS: Recommend tarmat removal and bioremediation of continuous cover and broken coat areas (see sketch map for location). Work should be conducted between 6/16 and 8/14 with approval of ADF&G and USFWS regarding eagle nest constraint.

TAG COMMENTS: ______________________________________________________

TAG APPROVAL DATE:______________ ADEC: _______________ NOAA: _______________
EXXON: _______________________ FOSC: _______________ 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)
Connery Creek Hatchery release (4/21 to 6/1)
Remote release site
Gill net area (6/7 to 8/31)
Purse seine area (7/20 to 9/30)
Purse seine hook-off (7/20 to 9/30)
Set net sites (6/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

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

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

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

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

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

Recreation:
Tent sites (6/1 to 9/15)
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 (5/15 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  EL 107  SUBDIVISION: B  DATE 3/31/90

USCG
NAME AEC Vandepels  SIGNATURE  AEC Vandepels

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS
I suggest hand cleaning of 25 X 2 M band on south end of Sub B. Till + bio. of 30 M cobble beach, near south end of Sub B. Remove by hand, pebbles among boulders and hand wipe boulders at north end of Sub B. Maybe bio.

ADEC
NAME Michele Baer  SIGNATURE  M. Baer

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS
The first B/C beach requires manual removal of mussel patches and hand wiping/scrubbing of the Cs. The second beach (B/C) requires more intensive cleaning. The patchy area that can be seen 60 cm down between the Cs on the far side of the beach require manual scrubbing, rock and/or bio-medication utilizing the rain that hits the beach. Further the process pits all the way down the beach reveals a 3 cm layer of CP that begins at 8 cm and is clean underneath, so remove this layer, filling in the beach as required, then bio-medication, etc.

LAND MANAGER
NAME Dan Logan  SIGNATURE  D. Logan

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS
I recommend manual scrubbing of rock face where tar exists as indicated on sketch map. The 4M X 30M patch should be treated by removing boulders/cobble/ and manually cleaning remaining rock. Fertilizer could be applied to the patch.

REVISION NO. 03/21/90

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### Surface Oil

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<th>Distribution</th>
<th>Oil/Film Color</th>
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<td>8 - 13</td>
<td>X</td>
<td>X</td>
<td>PM</td>
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<td>29 - 30</td>
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<td>X</td>
<td>CP</td>
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<td>C</td>
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</tbody>
</table>

### Comments

Lower intertidal zone is gone.

Page 1 of 4

Reviewed: [Handwritten] Date: 4-8-90
SEGMENT ST/12.2
SUBDIVISION B
DATE 03/31/90
CHECKLIST
• N Awon
• Approx. Scale
• 3.5cm Grid Entry
• Oil Dist.
• Waste
• Length
• % Cover
• Substrate Character
• Est. MRA/M., EL.
• SSL
• Profile Location(s)
• Profile(s)
• Pit Location(s)
• Photo Location(s)

LEGEND
1 Δ
Pt - No Subsurface Oil

2 Δ
Pt - Subsurface Oil

CT/C
Concentrated Distribution

CT/B
Broken Distribution

CT/D
Patchy Distribution

CT/I
Splashed Distribution

Oiled Vegetation

Photo location, direction, and number

Oil Character Length (m): AP 100 PO CV 30 CT 22 ST MS PT TB FL NO 126
| BARNACLES |        | Sparse |        | Dense | 1L | Moderate | 1L | Sparse |        | Dense | 1L | Moderate | 1L | Sparse |        | Dense | 1L | Moderate | 1L | Sparse |        | Dense | 1L | Moderate | 1L | Sparse |        | Dense | 1L | Moderate | 1L | Sparse |        |
|-----------|--------|--------|--------|-------|----|----------|----|--------|--------|-------|----|----------|----|--------|--------|-------|----|----------|----|--------|--------|-------|----|----------|----|--------|--------|-------|----|----------|----|--------|--------|-------|----|----------|----|--------|--------|-------|----|----------|----|--------|--------|-------|----|----------|----|--------|--------|-------|----|----------|----|--------|--------|-------|----|----------|----|--------|--------|-------|
|           |        |        |        |       |    |          |    |        |        |       |    |          |    |        |        |       |    |          |    |        |        |       |    |          |    |        |        |       |    |          |    |        |        |       |    |          |    |        |        |       |    |          |    |        |        |       |    |          |    |        |        |       |
| MYTILUS   |        |        |        |       |    |          |    |        |        |       |    |          |    |        |        |       |    |          |    |        |        |       |    |          |    |        |        |       |    |          |    |        |        |       |    |          |    |        |        |       |    |          |    |        |        |       |    |          |    |        |        |       |
| GASTROPODS |        |        |        |       |    |          |    |        |        |       |    |          |    |        |        |       |    |          |    |        |        |       |    |          |    |        |        |       |    |          |    |        |        |       |    |          |    |        |        |       |    |          |    |        |        |       |    |          |    |        |        |       |
| FUCUS     |        |        |        |       |    |          |    |        |        |       |    |          |    |        |        |       |    |          |    |        |        |       |    |          |    |        |        |       |    |          |    |        |        |       |    |          |    |        |        |       |    |          |    |        |        |       |    |          |    |        |        |       |

Wildlife Observations/ General Comments:

4 - Bald Eagles - Adults

Other Scat

Ecological Considerations:

7 11 - Deer Harvesting

2 M - Herring Spawning

5 T-2 - Bald Eagle Nest
<table>
<thead>
<tr>
<th>Species List</th>
<th>Flora</th>
<th>Fauna</th>
</tr>
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<tbody>
<tr>
<td>HITZ</td>
<td>Fucus</td>
<td>Littorina</td>
</tr>
<tr>
<td></td>
<td>Green Encrustose (Blue Green?)</td>
<td>Balanus glandula</td>
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<tr>
<td>MITZ</td>
<td>Fucus</td>
<td>Mutilus</td>
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<td>Endocladia</td>
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<td>Spongiospora</td>
<td>Limpets</td>
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<td>Halosaccion</td>
<td>Amphipods</td>
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<td></td>
<td>Cladophora</td>
<td>Seadecia dira</td>
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<td></td>
<td>Lithothamnion</td>
<td>Anthropleura sp.</td>
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<td></td>
<td>Petriecelus</td>
<td>Leptoestarius sp.</td>
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<tr>
<td>LITZ</td>
<td>Bladed reds - small</td>
<td>Katharina tunicata</td>
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<tr>
<td></td>
<td>Lithothamnion</td>
<td>Searlesia</td>
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<tr>
<td></td>
<td>Ulva</td>
<td>Katharina tunicata</td>
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<tr>
<td></td>
<td>Endocladia</td>
<td></td>
</tr>
</tbody>
</table>

Comments:
- Unable to make direct observations of LITZ (Tide Height)
- Dense Searlesia population - absence of Nucella
- High energy flow biotia on cobble/pebble
- Fresh H2O runoff flowing under cobble
- Round worm in Supra found at 40cm depth.
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-102 SUBDIVISION A (1 of 2)

WORK WINDOW

Manual Pickup  CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

| 2M | Herring Spawning | NO CONSTRAINT. Authorized by Claudia Slater/ADF&G on 5/10/90 to Exxon/Tom Kelley. |
| 5T | Bald Eagle Nest  | USFWS 6/1/90 map indicates an active nest in Subdivision B. Closed to manual pickup within 400m of active nest. |
| 7II | Subsistence: Deer Harvesting | No time constraint. |

OTHER ECOLOGICAL CONSIDERATIONS

If eagle nest constraint is removed, other ecological considerations will apply.
SEGMENT ST/ EL-102  SUBDIVISION A (1 OF 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M  Herring spawning (4/1 to 6/15)
5T-3  All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
7II  Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

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

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

SHPO SIGNATURE: ____________________ DATE: 4/23/90

OILING CATEGORIZATION:

Wide 0 m: Medium 40 m: Narrow 322 m: V. Light 0 m: No Oil 146 m

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

RECOMMENDATIONS:

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

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

COMMENTS: Recommend manual pick up of mousse as indicated on sketch map. Work should be conducted between 6/16 and 8/14 with ADF&G and USFWS approval regarding eagle nest constraint.

TAG APPROVAL DATE: 4/12/90

ADEC ___
EXXON ___
NOAA ___
USCG ___

FOSC: 4 ___ DATE: 4/27/90
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-102 SUBDIVISION B (2 of 2)

**WORK WINDOW**

<table>
<thead>
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<th>Work Type</th>
<th>Status</th>
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<tr>
<td>Tarmat Removal</td>
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<tr>
<td>Bioremediation</td>
<td>CLOSED</td>
</tr>
<tr>
<td>Manual Raking</td>
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</tr>
</tbody>
</table>

**ARCHAEOLOGICAL STANDARD CONSTRAINT**

If cultural resources are uncovered, PHONE 564-3274.

**APPLICABLE ECOLOGICAL TIME CONSTRAINTS**

- **2M** Herring Spawning
  - NO CONSTRAINT. Authorized by Claudia Slater/ADF&G on 5/10/90 to Exxon/Tom Kelley.

- **5T** Bald Eagle Nest
  - USFWS 6/1/90 map indicates an active nest in Subdivision B. Closed to tarmat removal, manual raking and bioremediation within 400m of active nest.

- **7Ill** Subsistence: Deer Harvesting
  - Closed to bioremediation and manual raking after 8/15. No constraint to tarmat removal.

**OTHER ECOLOGICAL CONSIDERATIONS**

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

Prepared By: ___________________________ Date: 6/7/95

FOSC: ___________________________ DATE: 6/10/90
SHORELINE EVALUATION

SEGMENT ST/EL-102   SUBDIVISION B (2 OF 2)  DATE  3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M  Herring spawning (4/1 to 6/15)
5T-3  All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
7II  Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

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

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

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

OILING CATEGORIZATION:
Wide 0 m: Medium 21 m: Narrow 162 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes  X  No  ___  Maximum Depth 30+ cm

RECOMMENDATIONS:

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

COMMENTS:  Recommend tarmat removal and bioremediation of continuous cover and broken coat areas (see sketch map for location). Work should be conducted between 6/19 and 8/14 with approval of ADF&G and USFWS regarding eagle nest constraint.  See Contract Amendment dated 6/19/90.

TAG COMMENTS:

TAG APPROVAL DATE:  4/23/90
ADEC  [Signature]  DATE:  4/23/90
EXXON  [Signature]
NOAA  [Signature]
USCG  [Signature]
SHORELINE EVALUATION

SEGMENT ST/ EL-102 SUBDIVISION A (1 OF 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M Herring spawning (4/1 to 6/15)
5T-3 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

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

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

SHPO SIGNATURE: DATE: 4/23/90

OILING CATEGORIZATION:

Wide 0 m: Medium 40 m: Narrow 392 m: V.Light 0 m: No Oil 146 m
Subsistence Oil Observed: Yes No X

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

COMMENTS: Recommend manual pick up of mousse as indicated on sketch map. Work should be conducted between 6/16 and 8/14 with ADF&G and USFWS approval regarding eagle nest constraint.

TAG COMMENTS:

TAG APPROVAL DATE: 4/21/90
ADEC
EXXON
NOAA
USCG

FOSC: DATE: 4/27/90
SHORELINE EVALUATION

SEGMENT ST/EL-102 SUBDIVISION B (2 OF 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M Herring spawning (4/1 to 6/15)
5T-3 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

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

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

SHPO SIGNATURE: DATE: 4/24/90

OILING CATEGORIZATION:
Wide 0 m: Medium 21 m: Narrow 169 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 30+ cm

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

COMMENTS: Recommend tarmat removal and bioremediation of continuous cover and broken coat areas (see sketch map for location). Work should be conducted between 6/16 and 8/14 with approval of ADF&G and USFWS regarding eagle nest constraint. MANUAL PUMP IN AREA OF PTD 1-4 PRIOR TO BIOREMEDIATION.

TAG COMMENTS:

TAG APPROVAL DATE: 4/30/90
ADEC Art Weder DATE: 4-17-90
EXXON疒 DATE: 4-17-90
NOAA Jack Westhoff DATE: 4-17-90
USCG Kenneth Ware DATE: 4-17-90
MANUAL RAKE IN AREA OF PITS 1-4 AND TO BIOREMEDIATION

1. 2m X 2m TARMAT REMOVAL

2. 2m WIDE BAND OF TAR WITH LIGHT OIL OIL PATCHED

3. 4m X 3m BAND OF COVER CV/C

4. BIORREMEDIATE BROKEN COAT AND SUBSURFACE OIL.

5. ST-2 (did not locate)

LEGEND

1 A
2 A

C.

C

C

C

C

C

C

Photo Location, direction, and number

Oil Character Length (m): AP 106 PO CV 30 CT 22 ST MS PT TB FL NO 126
1991 MAYSAP EVALUATION

SEGMENT: EL-102  SUB:  REGION: PWS  SURVEY DATE: 6/26/91

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

Ecological/Constraints (see page two for details) Eagle Nest, Subsistence, Deer Harvesting

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

SHPO Signature: __________________________ Date: __________________

RECOMMENDATIONS:

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

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

COMMENTS:
INITIAL: ________________________

TAG: ____________________________

FOSC: ____________________________

TAG APPROVAL DATE: ______________ FOSC APPROVAL DATE: ______________

ADEC __________________________ FOSC __________________________

EXXON __________________________

USCG __________________________

NOAA __________________________
MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 1 SEGMENT EL-102 SUBDIVISION B DATE 4/26/91

ADEC NAME Dianne Munson SIGNATURE Dianne Munson

☒ NTR ☐ Treatment Recommended.

Majority of oiling was located near pits #1, 2. 2 boc bag of oiled debris was removed. Significant oiling was broken up or removed.

EXXON NAME Mike Barker SIGNATURE Mike Re

☒ NTR

AREA looks very good. Lots of starfish,whelks,mussels,etc. Eagles were undisturbed. ¼ bag of LSR picked up, rest filled & broken up. Our BURRAS did a great job.

LANDMANAGER NAME OF SIGNATURE

☐ NTR

ORIGINAL COPY

USCG/NOAA NAME TUNI NAME LTJG NAME SIGNATURE NAME

☒ NTR NO FURTHER CLEANUP RECOMMENDED.
MAYSAP SHORELINE OILING SUMMARY

TEAM NO. __

OG  G. MACDONALD  BIO  D. MCCORMICK
ADEC  D. HUNSON  LANDMANAGER __ for __
EXXON  M. BARKEL  USCG/NOAA  I. NANCE

SEGMENT  EL-102
SUBDIVISION  B
DATE  6/26/91

TIME  08:15 to 09:00  TIDE LEVEL  -1.1 ft. to -0.2 ft.  ENERGY LEVEL:  H  X  M  L
SURVEYED FROM:  X FOOT  □ BOAT  □ HELO  WEATHER:  □ SUN  □ CLOUDS  □ FOG  □ RAIN  □ SNOW
TOTAL LENGTH SHORELINE SURVEYED:  200 m  NEAR SHORE SHEEN:  □ BR  □ RB  □ SL  □ NONE
EST. OIL CATEGORY LENGTH:  W _ m  M _ m  N _ m  VL _ m  P _ m  NO _ m  US _ m

<table>
<thead>
<tr>
<th>LOC</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT TYPE</th>
<th>SHORE SLOPE</th>
<th>AREA</th>
<th>ZONE</th>
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<td>P</td>
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</table>

DISTRIBUTION:  C = 91-100%;  B = 81-90%;  P = 71-80%;  S = 1-10%;  T = <1%
SLOPE:  V = VERTICAL;  H = HIGH ANGLE;  M = MEDIUM ANGLE;  L = LOW ANGLE  PHOTO ROLL # MAYSAP-

PIT NO.  PIT DEPTH (cm)  SUBSURFACE OIL CHARACTER  OILED ZONE  CLEAN BELOW  H2O LEVEL  SHEEN COLOR  PIT ZONE  SURFACE-SUBSURFACE SEDIMENTS
<table>
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<th>HOR</th>
<th>MOR</th>
<th>LOR</th>
<th>TR</th>
<th>OF</th>
<th>TR</th>
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<th>cm-cm</th>
<th>YAN (cm)</th>
<th>BR</th>
<th>SN</th>
<th>S</th>
<th>UI</th>
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<td>-</td>
<td>x</td>
<td>P-P</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

OG COMMENTS:  Steep R shore w/ occasional PB channel.  Surface oil only, as CT/B-S e up mtw2, swtw2 and lo sol e swtzw in RB traps.  CT is typically desiccated and easily scraped off, located on two west-facing vertical R walls.
**EL-102B**
C. MacDonald 6-28-91

**NO OIL**
"oil shadows"

**PC channel**

**eT - 70%**
1m x 3.2m
up HTZ, SUTZ

on vert. R wall.

**<2m² eT, 40%**
C up HTZ, SUTZ

**ct, lo SOR; <10%**
4 x 20m m:0.1

P1. local patches of SOR.

**ct, lo SOR in RB traps. - up HTZ - SUTZ.**
TEAM # 09
SEGMENT # EL 102
SUBDIVISION B
SEA STATE 2'
BILOGIST D. MCCORMICK
TIDAL HEIGHT (Range) -1.7 ~ -0.2'
WIND SPEED/DIRECTION None
PHOTOGRAPHS: ROLL # MYSAP-00-04 FRAME 49

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

This mostly steep rock/boulder substratum shows very distinct intertidal zonation: Wildflowers (chokeberry, bearberry, salmonberry, red cranberry, cowberry) occur throughout the subadjacent to the shoreline. A continuous band of black liverworts 30-40cm wide, grows across the A-6TTZ. Above this, variable growths occur in the lower tidal zone, becoming very dense on rocky areas. In the M-6TTZ, littorinids and muricids are common. In the upper tidal zone, this area is covered with algae species, which include: Fucus, Ulva, Sargassum, Haloparmenia, Chlorophyta, and other filamentous green algae. Germander, Salpax, various sedges, and bowers. An impressively diverse and diverse community.

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>
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<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>1</td>
<td>2</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>Pinnipeds (specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sleds (specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Shoreline subdivision map showing important biological features attached.
EL-102B
D. McCormick
Bio Sketch
C. 26. 91

Topo sketch

Barrel zone below bathtub ring, mussels and gastropods below.

No oil
"oil shadows"

Black lichen predominates near oiled zone. Biota increases in abundance, diversity from mid-to-lower zones. Species assemblage see AZ

only two here include mosses, lichens, vegetation. None in contact with CT.

CT, lost in RB treps. - up, HTRZ-SVHTRZ.

Profile
Eagle map (6/26/19) FWS monitor present

Active
2 adults
2 chicks

EL 102

Segment Reference Map
Map Key: PUSKL102

EAGLE NEST
1991 MAYSAP EVALUATION

SEGMENT: EL-102   SUB: B   REGION: PWS   SURVEY DATE: 6/26/91

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

Ecological/Constraints (see page two for details) Eagle Nest/Aquatic Habitat/Deer Harvesting

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

SHPO Signature: Timothy Adkins Date: 7/6/91

RECOMMENDATIONS:

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

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

COMMENTS:

INITIAL: _______________________________

TAG: ________________________________

FOSC: ________________________________

TAG APPROVAL DATE: July 2, 1991

ADEC ________________________________

EXXON ________________________________

USCG ________________________________

NOAA ________________________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.
<table>
<thead>
<tr>
<th>MAYSAP FIELD SHORELINE COMMENT SHEET</th>
</tr>
</thead>
</table>

**TEAM NO.** 1  
**SEGMENT** EL-102  
**SUBDIVISION** B  
**DATE** 6/26/91

<table>
<thead>
<tr>
<th>ADEC</th>
<th>NAME: Dianne Munson</th>
<th>SIGNATURE: Dianne Munson</th>
</tr>
</thead>
<tbody>
<tr>
<td>☒ NTR</td>
<td>Treatment Recommended.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Majority of oiling was located near pits #1,2. 16cg bag of oiled debris was removed. Significant oiling was broken up or removed.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXXON</th>
<th>NAME: Mike Barker</th>
<th>SIGNATURE: Mike R.</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑ NTR</td>
<td>AREA looked very good. Lots of starfish, whelks, mussels, etc. Eagles were undisturbed. ½ bag of LSOR picked up, rest tilted &amp; broken up. Our BUBBAS did a great job.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LANDMANAGER</th>
<th>NAME:</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ NTR</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>USCG/NOAA</th>
<th>NAME: Ivan Name, LTJG, USCGLentine</th>
</tr>
</thead>
<tbody>
<tr>
<td>☒ NTR</td>
<td>NO FURTHER Cleanup Recommended.</td>
</tr>
</tbody>
</table>
MAYSAP SHORELINE OILING SUMMARY

TEAM NO. 1
OG: G. MACDONALD
BIO: D. MCCORMICK
ADEC: D. MURSON
LANDMANAGER: ——— for ———
EXXON: M. BARKER
USCG/NOAA: T. NANCE

SEGMENT: EK-102
SUBDIVISION: B
DATE: 6/26/91

TIME: 08:15 to 09:00
TIDE LEVEL: 0.1 ft to -0.2 ft
ENERGY LEVEL: □ H □ M □ L

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

TOTAL LENGTH SHORELINE SURVEYED: 260 m
NEAR SHORE SHEEN: □ BR □ RB □ SL □ NONE

EST. OIL CATEGORY LENGTH:
W - m M - m N - m AS - m VL 20 m NO 120 m US 15 m

<table>
<thead>
<tr>
<th>L</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT</th>
<th>SHORE SLOPE</th>
<th>WIDTH</th>
<th>LENGTH</th>
<th>ZONE</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>AP MS TB SOR CV CT ST FL DB NO</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A1</td>
<td>P</td>
<td>R</td>
<td>Y</td>
<td>0</td>
<td>80</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>A2</td>
<td>S</td>
<td>Be</td>
<td>H</td>
<td>4</td>
<td>20</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>B</td>
<td>B</td>
<td>R</td>
<td>V</td>
<td>1</td>
<td>20</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>C</td>
<td>P</td>
<td>BeP</td>
<td>M</td>
<td>1</td>
<td>2</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

DISTRIBUTION: C = 91-100%; B = 61-90%; P = 11-50%; S = 1-10%; T = <1%
SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE
PHOTO ROLL # MAYSAP- ——— FRAMES

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>OIL CHARACTER</th>
<th>OILED ZONE</th>
<th>CLEAN BELOW</th>
<th>M2O LEVEL</th>
<th>SHEEN COLOR</th>
<th>PIT ZONE</th>
<th>SURFACE- SUBSURFACE SEDIMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-20</td>
<td>x</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>x</td>
<td>x</td>
<td>P8-P8</td>
</tr>
<tr>
<td>2-25</td>
<td>x</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>x</td>
<td>x</td>
<td>P8-P8</td>
</tr>
<tr>
<td>3-30</td>
<td>x</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>x</td>
<td>x</td>
<td>P-P</td>
</tr>
<tr>
<td>4-20</td>
<td>x</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>x</td>
<td>x</td>
<td>P-P</td>
</tr>
</tbody>
</table>

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

OG COMMENTS:
Steep L shore w/ occasional PB channel. Surface oil only, as ct/B-5 e up HTZ, SUTZ and lo sol e SUTZ in PB traps. ct is typically desiccated and easily scraped off, located on two west-facing vertical L walls.
WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS

<table>
<thead>
<tr>
<th>Species</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>4</td>
<td></td>
</tr>
<tr>
<td>Seabirds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waterfowl</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gulls/kittiwakes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shorebirds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corvids</td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Other Birds</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

LAND MAMMALS

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

Shoreline subdivision map showing important biological features attached.
**EL-102B**

**D. McCormick**

Bio SKETCH

6-26-31

---

**Profile**

- CT, 10 SOL in RB traps - up Hitz - SVTZ

---

**Barrel zone below bolthol ring, mussels and gastropods below.**

**A1**

- N WL
- N SSL

**A2**

- No fauna in S-UFTZ.
- Barnacles, mussels, limpets, littorines, whelks, diverse algae.
- Many tidal pools throughout - whale.

**A3**

- Local patches of SOL.

**B**

- Black lichen predominates near oiled zone. Biota increases in abundance diversity from mid to outer zones. Species assemblages - see A2 on vert. R wall.

---

**C**

- Only bio here include mosses, lichens + vegetation. None in contact with CT.

---

**NO OIL**

- "Oil shadows"
Eagle map 4/26/91
FWS monitor present

Active
2 adults
2 chicks

Segment Reference Map
Map Key: PWSEL102

EL102B

Δ

EAGLE NEST
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-103

SUBDIVISIONS: A (1 OF 1)
SEGMENT ST/ EL-103   SUBDIVISION A (1 OF 1) DATE  3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Herring spawning (2M) - 4/1 to 6/15; Active bald eagle nests (5T-3) - 3/1 to 9/1; Subsistence area for deer harvesting (7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
(2M) Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations. (5T) Restrict air traffic to an essential minimum. Air approach and takeoff from and to seaward only. Contact USFWS prior to treatment for confirmation of dates and avoidance minimums.

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 720 m: V.Light 0 m: No Oil 588 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 ____________________________ FOSC: __________ DATE: __________
EXXON ____________________________
NOAA ____________________________
USCG ____________________________
FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 EL 103 SUBDIVISION:

DATE 4/1/90

USCG NAME AFC Vandepels
SIGNATURE AFC Vandepels

☑ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

I recommend no treatment.

ADEC NAME Michele Bar
SIGNATURE Bar

☑ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

A broken stain, varying from 2 m wide to
a 3cm line runs along the R headlands
& B beach. The stain crosses some Balanu
beds. The degree of staining is light. Therefore,
I would recommend no treatment.

LAND MANAGER

NAME Dan Logan
SIGNATURE Dan Logan

☑ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS
**SHORELINE OILING SUMMARY**

**OG:** T. Springer  
**USCG:** R. Vandepels  
**BIO:** R. Rank  
**LAND REP:** D. Edgan  
**EXXON:** T. Tomalin  
**ADEC:** M. Baer  
**TIME:** 12:00 to 12:30  
**DATE:** 03/31/90

**TEAM NO.:** 5  
**TIDE LEVEL:** 0 to +1

**EAST. SUBDIVISION LENGTH:** 14.14 m  
**SURVEYED FROM:** Foot  
**WORKING DIRECTION:** S to N  
**WAVE EXPOSURE:** Low

**UPLANDS DESCRIPTION:**  
Grass ☐  
Forest ☐  
Rock ☐  
Sun ☐  
Clouds ☐  
Rain ☐  
Fog ☐  
Snow ☐

**SURFACE SEDIMENTS:**  
R 20%  
P 0%  
S 0%  
G 0%  
M 0%  
V 0%

**SLOPE:**  
Lang 2.0%  
Hang 0%

**OIL CATEGORY LENGTH:**  
W 0 m  
M 0 m  
D 0 m

**SURFACE OIL**

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

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

**PATTIES / TARBALLS:** 0 BAGS

**NEAR SHORE SHEEN?**  
NO

**OILED DEBRIS AMOUNT**

<table>
<thead>
<tr>
<th>TYPE</th>
<th>SM</th>
<th>MD</th>
<th>LG</th>
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<tbody>
<tr>
<td>Logs</td>
<td></td>
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</tr>
<tr>
<td>Vegetation</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Trash</td>
<td></td>
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**PHOTOGRAPHS:**

<table>
<thead>
<tr>
<th>Roll No.</th>
<th>Frames</th>
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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>OILED DEBRIS AMOUNT</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

**COMMENTS**

Mostly rock cliffs. Surveyed primarily by boat with one beach landing.

**REVIEWED**

Page 1 of 24
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST/EL 103 Subdivision A

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

Tide Height: +0.5 ft

Length: 1414

Time (24 hr) 1200 - 1230 Biologist C. Rank

(A) Substrate type and % of segments:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td>CS</td>
<td>BS</td>
<td>C</td>
<td>S</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>Taxa</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Barnacles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mytilus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GastroPods</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fucus</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Wildlife Observations/General Comments:

2 Harbor Seal - Adult
1 Bald Eagle - Adult
1 Brown Creeper

Ecological Considerations:

7 11 - Tidal Harrowing
2 M - Spawning
5T-2 - Bald Eagle Nest
**Seg**: EL 103 A  
**Time**: 1200-1230  
**Tide Height**: +0.5 to +2 ft

<table>
<thead>
<tr>
<th><strong>Biologist/Crank</strong></th>
<th><strong>Species List</strong></th>
<th><strong>Flora</strong></th>
<th><strong>Fauna</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Endocladiacea</td>
<td>Littorina</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rhaphissa</td>
<td>Limpets</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cladophoraceae</td>
<td>Balanus sp.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fucus</td>
<td>Piaster</td>
</tr>
</tbody>
</table>

**MITZ**

|                     | Halosaccion     | Sepulid worm |
|                     | Endocladiacea   | Bryozoaan   |
|                     | Syosiphon       | Littorina    |
|                     | Filamentous reds | Limpets     |
|                     | Fucus           | Mytilus      |

<table>
<thead>
<tr>
<th>LITZ</th>
<th>Bladed reds</th>
<th>Littorina</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Filamentous reds</td>
<td>Limpets</td>
</tr>
<tr>
<td></td>
<td>Alaria</td>
<td>Dermasterias</td>
</tr>
<tr>
<td></td>
<td>Laminaria</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plocamium</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Enteromorpha</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rhododendron</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Borella</td>
<td></td>
</tr>
</tbody>
</table>

**Comments**
- Did not see Eagle Nest
- Segment surveyed from skiff, vertical rock face and large, steep boulders
- Upper subtidal dense Laminaria
- Fucus stipes in LITZ
- Unable to make Mytilus spat determination from skiff
- Moderate barnacle scarring in MITZ
- Area appears healthy
Rock cliffs

Boulders/Rock Upland

Rock cliffs

XXX Wide

/// Medium

--- Narrow

TTTT Very Light

EL-103

ADEC Segment Length: 1300m

Map Key: PWS-123

Name: James Spring

Date: 03/31/90

Data Entered:
SHORELINE EVALUATION

SEGMENT ST/EL-103  SUBDIVISION A (1 OF 1)  DATE  3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Herring spawning (2M) - 4/1 to 6/15; Active bald eagle nests (5T-3) - 3/1 to 9/1; Subsistence area for deer harvesting (7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
(2M) Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations. (5T) Restrict air traffic to an essential minimum. Air approach and takeoff from and to seaward only. Contact USFWS prior to treatment for confirmation of dates and avoidance minimums.

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

SHPO SIGNATURE:  DATE:  4/16/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 720 m: V.Light 0 m: No Oil 588 m
Subsurface Oil Observed: Yes  No X  Maximum Depth

RECOMMENDATIONS:
X  No Treatment Recommended
___  Treatment Recommended
___  Manual Pickup
___  Bioremediation
___  Tarmat: breakup
___  Removal

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE:  4/16/90.
ADEC  EXXON  NOAA  USCG  FOSC:  DATE:  4/20/90
ASAP TAG REVIEW SHEET

Segment: EL104  Subd: C  Site: I  Date: PRE-Review 14 Aug 90

Priority For Addressing In 1990

[ ] HIGH  [ ] MEDIUM  [ ] LOW  [X] NTR

Treatment Recommended: NTR

ONLY Paley soil

Pit 12 of oil But

0-15 cm  "same as soil" ??

0-10 cm

Priority Site For Reassessment In 1991

YES  NO  YES  NO  YES  NO  YES  NO

CG  X  ADEC  X  EXXON  X  LAND MGR

TAG 15 Aug 90

BIO  + reassess 91
ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/EL-184  Subd.: C  Site: 1  Date: 8/8/90  1990

Conditions Observed:  Bedrock / Boulder /cobble beach  OR/OP Sediment front 0-10 cm in a 20 cm pit. Area is located at the up the ER.T. All observations made me believe there was a head there.

Followup Recommendations:  Manually remove heavy sO/P Sediments. Manually till area and add Custom blend.

Completed by Pickup:  YES  NO  Priority for Addressing in 1990:  High  Mod.  Low

ADSC  Wesley Gromley

Comments: The above recommendation is followed will put this beach back in fairly good shape. A follow up assessment should follow in 1991.

Exxon  REY SOTEO

Comments: Pick-up heavily raked sediments and apply custom blend.

USCG  P51 LED BERSOLAND

Comments: REMOVE ACCESSIBLE HEAVY SOR  REAPPLY CUSTOM BLEND.

This is a moderate priority problem for 1990.

Land Rep.  JOHN EREL

Comments: I concur with recommendation. Remove all spill debris from site. Recommend to roll boulders/cobbles - small enough - 12" size (basketball or smaller) to scrape covers expose sediments to custom blend + to weather.
FIELD SHORELINE COMMENT SHEET

SEGMENT AS / EL04  SUBDIVISION: C SITE: 1 DATE 8-8-90

USCG/NOAA PS1 Leo Berzalena Leo Berzalena
NAME Art Weiner SIGNATURE Art Weiner

☐ YES  ☒ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:  SMALL AMOUNT OF REMAINING OIL.

ADEC
NAME Wesley Ghormley SIGNATURE Wesley Ghormley

☐ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:  To assess the effectiveness of custom blend on subsurface oil.

LAND MANAGER
NAME John Abel SIGNATURE John Abel

☐ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:  To evaluate the effectiveness of bio treatment.

EXXON
NAME Rey Sotelo SIGNATURE Rey Sotelo

☐ YES  ☒ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:  No reassessment should be necessary on this site in '91.
**SURFACE OIL**

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OILED ZONES</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASPHALT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S.O.R.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POOLED</td>
<td></td>
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<tr>
<td>COVER</td>
<td></td>
<td></td>
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<tr>
<td>COAT</td>
<td></td>
<td></td>
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<tr>
<td>STAIN</td>
<td></td>
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</tr>
<tr>
<td>MOUSSE</td>
<td></td>
<td></td>
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<tr>
<td>PATIES/T.B.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FILM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO OIL</td>
<td></td>
<td>XX</td>
</tr>
</tbody>
</table>

**EST. SITE LENGTH**

12

**SUBSURFACE OIL**

<table>
<thead>
<tr>
<th>SITE NO.</th>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED ZONES</th>
<th>CLEAN BELOW (Y/N)</th>
<th>PIT ZONE</th>
<th>SURFACE/SSUBSURFACE SEDIMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>15</td>
<td>X</td>
<td></td>
<td>0-15 N</td>
<td>X</td>
<td>BCG-BCG</td>
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<tr>
<td>1</td>
<td>2</td>
<td>20</td>
<td>X</td>
<td></td>
<td>0-10 Y</td>
<td>X</td>
<td>BCG-BCG</td>
</tr>
<tr>
<td>1</td>
<td>3</td>
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<td>Y</td>
<td>X</td>
<td>P-PR</td>
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<tr>
<td>1</td>
<td>4</td>
<td>25</td>
<td>X</td>
<td></td>
<td>Y</td>
<td>X</td>
<td>P-PR</td>
</tr>
</tbody>
</table>

**REMARKS**

Customer is present. This is a very small site and is difficult to locate from offshore due to the cluttered rocks offshore. Large boulders shield most of the site. More oil may be present under these boulders. Very little oil was observed in the region which was supposed to have 50% cover. It seems unlikely that the...
NOTE: THIS COVE IS DIFFICULT TO SEE FROM OFFSHORE. IT IS THE MIDDLE ONE OF THREE.
There is no doubt that the site is located in the EL 1048 Subdivision. The sketch map is detailed and fits the site perfectly.
There is no doubt that the site is located in the El 104B Subdivision. The sketch map is detailed and fits the site perfectly.
1991 MAYSAP EVALUATION

SEGMENT: EL 104  SUB:  D  REGION:  PWS  SURVEY DATE:  5/1/91

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

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

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

SHPO Signature:  Rich  Date:  5/21/91

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 21, 1991  FOSC APPROVAL DATE:  5/25/91

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.
THE ENLARGED AREA ON THE SKETCH CONTAINS RECOVERABLE SORB MATERIAL, NIEHER OF
WHICH ARE CONCENTRATED. THIS IS A LOW PRIORITY FOR TREATMENT, BUT WOULD FALL
UNDER STANDARD MANUAL REMOVAL. THIS AREA IS A RAISED PLATEAU PROTECTED FROM
HEAVY, STRAIGHT ON ENERGY; SHEENS WERE NOTED ON THE TIDE POOLS.

ACCUATE INFO. IN CG & BIO. REPORTS. VERY LITTLE
BENEFIT WOULD BE GAINED FROM TREATMENT.

I feel that the subdivision offers very little benefit
from cleanup. It is suggested that it would be better to
direct efforts elsewhere.

The only significant oil on this subdivision is a small area of
heavy sor b in between boulders/bedrock in a depression behind
a rocky peninsula. Although sheltered from wave attack, the oil
poses little environmental risk to organisms in the area.
**MAYSAP SHORELINE OILING SUMMARY**

**TEAM NO. 2**

OG: B. TRIMM  BIO: J. Benson

ADEC P. MCATEE & COO: D. KENNELEY USCG/NOAA JACQUI MICHEL INAKA

EXXON G. KATSIMPALIS LANDMANAGER: D. ZENONE SUBDIVISION: D

TIME: 11:20 to 11:59  DATE: May 1, 1991

TIDE LEVEL: 0.90 ft. to 2.48 ft. ENERGY LEVEL: H M L

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

TOTAL LENGTH SHORELINE SURVEYED: 330 m

NEAR SHORE SHEEN: BR RB SL NONE

EST. OIL CATEGORY LENGTH:

<table>
<thead>
<tr>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT</th>
<th>SHORE SLOPE</th>
<th>AREA WIDTH</th>
<th>LENGTH</th>
<th>ZONE</th>
<th>NOTES</th>
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</tbody>
</table>

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-

OG COMMENTS:

- BOUNDARY DISCREPANCY - SEE SKETCH MAP.
- ELOSE-D IS A VERTICAL ROCK FACE, HIGH ENERGY SHORE WITH A WELL DEFINED BAND OF OIL & STAIN THROUGH THE SUBDIVISIONS LENGTH.

BOUNDARY ON SKETCH MAP & OILING MAP CORRECTED 5/14/91 W/C

REVIEWED CP 1A MAY
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2  DATE 1 May 1991
SEGMENT # EL 58 D  TIDAL HEIGHT (Range) +1' to +2'
SUBDIVISION D  BIOLOGIST Benson
SEA STATE calm  WIND SPEED/DIRECTION calm
PHOTOGRAPHS: ROLL #  FRAME # —

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

(A) - Verrucaria grows next to the oiled surfaces in the UI5Z.
The biotic detection from UI5Z down to the upper LTE is:
Verrucaria (dense), filamentous green algae (FGA - moderately dense),
barnacles (dense) - Fucus + Halimeda + Enteromorpha.
Total biotic % cover was nearly 100%.
These are typical biotic entities of moderate wave-exposure,
stable, vertical substrates. These most-obvious species
have strong recruitment in most years but are not particularly
sensitive to damage that may be caused if treatment
is performed here.

(B) - Verrucaria grows next to Pit-5 (CHS) of the oiled surfaces.
Barnacles (esp. Serpae) also inhabit the lower UI5Z. The LTE
contains dense barnacles & Littorina on the boulders.
The barnacle typically in wave-exposed areas, Semibalanus
cauratus, occurs here. FGA is also found in more
protected areas of the LTE. Mutilus & Limpet recruitment
has occurred recently. Several small, low-diversity
species in the LTE contain Rhodoma, Littorina &
Hildenbrandia. The LTE on this saddle is dominated
by Fucus, FGA, & Halosaccion. I could not locate
the eagle nest that is mapped at the west end of this subdivision.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED</th>
<th>SPECIES PRESENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eagles</td>
<td>1</td>
<td>1</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Seabirds</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Waterfowl</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Gulls/Kittiwakes</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Shorebirds</td>
<td>1</td>
<td>3</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>

LAND MAMMALS

<table>
<thead>
<tr>
<th>MARINE MAMMALS</th>
<th># OBSERVED</th>
<th>SPECIES</th>
<th># OBSERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sea Otters</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Pinnipeds (specify)</td>
<td>3</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>2 Sea Lions, 1 Harbor Seal</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Whales (specify)</td>
<td>4</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Humpbacks (2) Outside of Northwest Bay</td>
<td>—</td>
<td>—</td>
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</tbody>
</table>

Shoreline subdivision map showing important biological features attached.
Mytilus & limpet recruitment. Dense barnacles & limpets in the MITZ on boulders.

Verrucaria next to oiled surfaces. Vertical Extension: few barnacles - mixed macroalgae.
Note: Disregard Southern subdivision "D" (EL058)

Sent separately in EL-580 follow-up

---

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

Subdivision Field Map
Map Key: KNIEL0580
Name: TRIMM
Date: 1 MAY 91
Date Entered:

Surface Oil Category Map

Revised 5/14/91 KG - LC
Reviewed 5/14/91
No. 5 Corroded TIC 5/14/91
1991 MAYSAP EVALUATION

SEGMENT: EL 104  SUB: C  REGION: PWS  SURVEY DATE: 5/21/91

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

Ecological/Constraints (see page two for details)  Eagle nest, Subsistence - Deer harvesting, Subsistence - Salmon 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>
</tr>
</thead>
<tbody>
<tr>
<td>Manual Pickup (Check as Req.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spot Washing</td>
<td></td>
<td></td>
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<tr>
<td>Bio-Customblen Only</td>
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<tr>
<td>Bio-Inipol/Customblen</td>
<td></td>
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<tr>
<td>Other</td>
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<tr>
<td>Other</td>
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</tbody>
</table>

COMMENTS:

INITIAL: ______________________________________________________

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

FOSC:------------------------------------------------------------

TAG APPROVAL DATE: __________ FOSC APPROVAL DATE: __________

ADEC______________________ FOSC ____________________________

EXXON____________________

USCG____________________

NOAA_____________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.

Subsistence - Salmon Harvesting: 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.

TEAM NO. 7K  SEGMENT EL-104  SUBDIVISION C  DATE 5/21/91

ADEC
NAME: Peter Montesano  SIGNATURE: [Signature]

NTR  TREATMENT RECOMMENDED
The ASAP site on this Subdivision was not really on this Subdivision. EL104 has unassigned areas between EL104A/EL104B and EL104B/EL104C. I filed this coming up 1999 and it is well noted on the ASAP report.

The pocket was small and well protected from wind and/or oil which appears as if it will persist, however the oil is relatively inactive and will have remain.

EXXON
NAME: Frank Box  SIGNATURE: [Signature]

NTR  Not enough oil to warrant clean up activity.

ANDMANAGER
NAME: Dennis S. Kennedy  OF: USFS  SIGNATURE: [Signature]

NTR  The Subdivision as indicated on GIS map had little oiling. Site #1 was not within the boundary of EL104-C as per GIS map. We surveyed it and it appears cleaner than what is listed on ASAP report. This site needs to be corrected on the data base.

USCG/NOAA
NAME: Paul M. Z.  SIGNATURE: [Signature]

NTR  Give area oiling occurs between the boundaries/corners and mainly consists of foamy and sue. The areas of SOR and HOR are not readily obtainable, therefore, no treatment recommended. PD-13

CG - No TREATMENT RECOMMENDED. 3
**OG Comments:**

Vertical Rock and High Angle boulevarc shoreline with sporadic remains of BTR (Bath Tub Ring) along with. One Pocket Beach at East end of segment had some SOR and a small area I/ten where SOR was found in pits. **NOTES:** This beach indicated on both SSAT and ASAP Report. ASAP Report is not actually in Ellice as marked on GIS Maps.

This problem was noted on ASAP report. New boundary of Ellice or put this beach (site #1 or #1032) into a new subdivision E104.D.

**Response:** MC 6/3/91
NOTE: SITE #1 is not within boundary of EL 104 C as mapped on GIS - extend boundary or add new sub-div.
KN 104 D. This problem was described in ASAP Report as well.

OG SKETCH
EL 104 C
MAY 21, 1991
11:45 - 12:26
Doug Reimer
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2
SEGMENT 2L-604
SUBDIVISION C
SEA STATE Carlos

DATE 5/31/91
TIDAL HEIGHT (Range) +4 to -2 ft
BIOLOGIST JW
WIND SPEED/DIRECTION Calm

PHOTOGRAPHS: ROLL #
FRAME #

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

A+B: Oil/soil/st+soil oil in HIZ. Lichen nearby, soil in vicinity of beachgrass.

C: Area surrounding pits (through $ supports green algae+lichen only. Boulders seaward of the pits have dense adult and juvenile limities. Small clumps \plankworts+seaweed. Subtidal zones exhibit tufts clumps

D+E: Oil high in HIZ on rock+step boulder faces. Lower zones dense with plants+vegetation.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS # OF SPECIES TOTAL BIRDS FISH OBSERVED SPECIES PRESENT

| Eagles | 3 adults |
| Seabirds | |
| Waterfowl | |
| Gulls/Kittiwake | |
| Shorebirds | |
| Corvids | |
| Other Birds | Sandpipers |

MARINE MAMMALS # OBSERVED SPECIES # OBSERVED

| Sea Otters | |
| Pinnipeds (specify) | |
| Whales (specify) | |

LAND MAMMALS

Shoreline subdivision map showing important biological features attached.
Undocumented nest with 2 eggs.

Eagle left nest upon our approach but returned within minutes. Nest is easily visible from shore and may have an egg.

SMB 21 May '91
This Problem was
also noted in
ASAP Report

NOTE: Significant oiling area mapped on SSAT
and ASAP is NOT
within boundary of EL104C
as mapped by GIS -
mere boundary or
create new subdivision
EL104D.
1991 MAYSAP EVALUATION

SEGMENT: EL 104  SUB:  B  REGION:  PWS  SURVEY DATE:  5/21/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s)  OPEN

Ecological/Constraints (see page two for details)  NONE

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

SHPO Signature: _________________________  Date: ____________________

RECOMMENDATIONS:

<table>
<thead>
<tr>
<th>TREATMENT REQUIRED (Y or N)</th>
<th>INITIAL</th>
<th>TAG</th>
<th>FOSC</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
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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  ______________________
EXXON  ______________________
USCG  ______________________
NOAA  ______________________
In this pocket, we found previously undocumented subsurface oil on the southern half of the bench. The moss/lens is relatively thin in w/ gravel/pebbles over it in an area of a thin boulder cover. Considering the size of the oiled area and the relative inaccessibility, I recommend No treatment. The lens is protected from high energy.

This is a small subdivison with one sub. bench. The amount of oil does not warrant future work.
**OG Comments:** Small fissure in steep rocky shoreline, with a month of sandbars. Oil consists of CTLCV along HITE on vertical rock cliff on both sides of fissure. One pit dug at base of cliff in small 1x1m pocket found some trapped MOR.

---

**Survey Information:**
- **DATE:** 5/21/91
- **TIME:** 11:00 to 11:25
- **TIDE LEVEL:** 5.81 ft to 4.89 ft
- **ENERGY LEVEL:** V H M L
- **WEATHER:** SUN CLOUDS FOG RAIN SNOW
- **TOTAL LENGTH SHORELINE SURVEYED:** 209 m
- **NEAR SHORE SHEEN:** BR BB SL XNONE
- **EST. OIL CATEGORY LENGTH:** W 0 m M 0 m N 99 m V 50 m NO 60 m US 0 m

<table>
<thead>
<tr>
<th>L</th>
<th>C</th>
<th>AP</th>
<th>MS</th>
<th>TB</th>
<th>ST</th>
<th>FL</th>
<th>DB</th>
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<th>SLOPE</th>
<th>WIDTH</th>
<th>LENGTH</th>
<th>ZONE</th>
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<td>P</td>
<td>P</td>
<td>V</td>
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<td></td>
</tr>
<tr>
<td>B</td>
<td>P</td>
<td>P</td>
<td>V</td>
<td>1</td>
<td>50</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>S</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**DISTRIBUTION:** C = 91-100%; B = 61-90%; P = 11-50%; S = 1-10%; T = <1%

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

**PHOTO ROLL # MAYSAP-2:** 2 - 23 FRAMES 1-3

**PIT NO.**
<table>
<thead>
<tr>
<th>NO.</th>
<th>PIT NUMBER</th>
<th>DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED ZONE</th>
<th>CLEAN BELOW</th>
<th>H2O LEVEL</th>
<th>SHEEN COLOR</th>
<th>PIT ZONE</th>
<th>SURFACE- SUBSURFACE SEDIMENTS</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>15</td>
<td></td>
<td>X</td>
<td>Y</td>
<td>10</td>
<td>B</td>
<td>Y</td>
<td>B-PC</td>
<td>Brown droplets</td>
<td>No Field Data</td>
</tr>
</tbody>
</table>

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

---

**REVIEWED:** MC 5/30/91
**REVISED:** 5/28/91 KG
**MAYSAP BIOLOGICAL SUMMARY FORM**

<table>
<thead>
<tr>
<th>TEAM #</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEGMENT #</td>
<td>EL-164</td>
</tr>
<tr>
<td>SUBDIVISION</td>
<td>B 4</td>
</tr>
<tr>
<td>SEA STATE</td>
<td>Calm</td>
</tr>
<tr>
<td>WIND SPEED/DIRECTION</td>
<td>Calm</td>
</tr>
<tr>
<td>PHOTOGRAPHS: ROLL #</td>
<td>—</td>
</tr>
<tr>
<td>FRAME #</td>
<td>—</td>
</tr>
</tbody>
</table>

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

\[ \text{ARC: All BTE in and around (ichen) zones} \]

\[ \text{\textbullet Sporadic splatter (0.5\%) to lichen zone on Boulder beach} \]

\[ \text{Lower site supports dense biofilm as shown. Tree roots at} \]

\[ \text{base of rock cliff sustain salmon sculpins (small fish) mussels and} \]

\[ \text{algae.} \]

---

**WILDLIFE OBSERVATIONS**

**TO BE COMPLETED IN ALL SUBDIVISIONS**

<table>
<thead>
<tr>
<th>BIRDS</th>
<th>$#$ OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED</th>
<th>SPECIES PRESENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eagles</td>
<td></td>
<td></td>
<td></td>
<td>Salmon, etc.</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>gulls</td>
<td>± 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shorebirds</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corvids</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Birds</td>
<td>Arctic Tern</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**MARINE MAMMALS**

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

**LAND MAMMALS**

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

Shoreline subdivision map showing important biological features attached.
OG SKETCH
EL 104 B
MAY 21, 1991
11:00 - 11:25
Doug Reimer

SMB on May 91

[Diagram with annotations:
- Large log
- Lichen zone
- Bio pools with mussels and sculpins
- Rock cliff
- Small mammals (e.g., lillionnase)
- Water
- Occasional splatters down to lithotone zone
- Quenailet dirt bombs]
**1991 MAYSAP EVALUATION**

**SEGMENT:** EL 104  **SUB:** D  **REGION:** PWS  **SURVEY DATE:** 5/1/91

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

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

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

**SHPO Signature:** ___________________________  **Date:** ___________________________

**RECOMMENDATIONS:**

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

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

**COMMENTS:**
INITIAL: ___________________________

TAG: ___________________________

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.
### MAYSAP FIELD SHORELINE COMMENT SHEET

**TEAM NO.** 2  **SEGMENT** EL-58 11040  **SUBDIVISION** D  **DATE** 5/1/81

**ADEC**
- **NAME:** Peter Montesano  
- **SIGNATURE:** [Signature]

- **NTR**
- **TREATMENT RECOMMENDED.**

> THE ENHANCED AREA ON THE SKETCH CONTAINS RECOVERABLE SOR OR HMR, NEITHER OF WHICH AREA ACCUMULATED. THIS IS A LOW PRIORITY FOR TREATMENT, BUT WOULD FALL UNDER STANDARD MANUFACTURED REMOVAL. THIS AREA IS A RAISED PLATEAU PROTECTED FROM HEAVY, STRAIGHT ENERGY. SHEENS WERE NOTED ON THE TIDE POOLS.

**EXXON**
- **NAME:** CM Latsimposis  
- **SIGNATURE:** [Signature]

- **NTR**
- **ACCRUATE INFO. IN CG & BIO. REPORTS. VERY LITTLE BENEFIT WOULD BE GAINED FROM TREATMENT.

**LANDMANAGER**
- **NAME:** Dennis S. Kennedy  
- **SIGNATURE:** [Signature]

- **NTR**

> I feel that the subdivision offers very little benefit from cleanup; I suggest that it would be better to direct efforts elsewhere.

**USCG/NOAA**
- **NAME:** Michael (NOAA)  
- **SIGNATURE:** [Signature]

- **NTR**

> The only significant oil on this subdivision is a small area of heavy sor in between boulders/breaker in a depression behind a rocky peninsula. Although sheltered from wave attack, the oil poses little environmental risk to organisms in the area. Michael

---

**CONCOURS/W/NOAA, USFS & EXXON PEPs. OILED AREA POSES MARGINAL ENVIRONMENTAL RISK. 3-**
**MAYSAP SHORELINE OILING SUMMARY**

TEAM NO.: 2  
TEAM: B. Trim  
BIO: J. Benson  
ADEC: P. McGatesand  
LANDMANAGER: D. Kennedy  
BMT: ZENO  
USCG: D. Michel  
NAPA:

TIME: 11:20 to 11:59  
TIDE LEVEL: 0.90 ft to 2.48 ft  
ENERGY LEVEL: [ ] H [ ] M [ ] L

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

TOTAL LENGTH SHORELINE SURVEYED: 330 m  
NEAR SHORE SHEEN: [ ] BR [ ] RB [ ] SL [ ] NONE

EST. OIL CATEGORY LENGTH: W 20 m M 4 m N 326 m V 0 m NO 0 m US 0 m

<table>
<thead>
<tr>
<th>L</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE OIL TYPE</th>
<th>SLOPE</th>
<th>AREA</th>
<th>LENGTH</th>
<th>ZONE</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>AP</td>
<td>MS</td>
<td>TB</td>
<td>SB</td>
<td>OR</td>
<td>CV</td>
<td>CT</td>
</tr>
</tbody>
</table>

| B | P | 3 | M | 2 | 4 | X | HVY 50R |

**DISTRIBUTION:** C = 81-100%; B = 61-80%; P = 11-60%; A = 1-10%; T = <1%

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

**PHOTO ROLL # MAYSAP:** 2 - 4  
**FRAMES:** 3-4

**PIT DEPTH**

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED ZONE</th>
<th>CLEAN BELOW</th>
<th>H20 LEVEL</th>
<th>SHEEN COLOR</th>
<th>PIT ZONE</th>
<th>SURFACE-SUBSURFACE SEDIMENTS</th>
<th>NOTES</th>
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</thead>
<tbody>
<tr>
<td>1A</td>
<td>9</td>
<td></td>
<td>0 - S</td>
<td>Y</td>
<td>-</td>
<td>B - C</td>
<td>BE - BacB</td>
<td>MOTTLED</td>
<td>Plate Bottom</td>
</tr>
<tr>
<td>1B</td>
<td>9</td>
<td></td>
<td>5 - B</td>
<td></td>
<td>-</td>
<td></td>
<td>BacB</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

**OG COMMENTS:**

BOUNDARY DISCREPANCY - SEE SKETCH MAP.

CLOSED FIELD IS A VERTICAL ROCK FACE, HIGH ENERGY SHORE WITH A WELL DEFINED BAND OF COAT & STAIN THROUGH THE SUBDIVISIONS LENGTH.

BOUNDARY ON SKETCH MAP & OILING MAP CORRECTED 5/14/84.
DYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2  DATE 1 May 1991
SEGMENT # 56 1AB 160  TIDAL HEIGHT (Range) +1' to +2'
SUBDIVISION B  BIOLOGIST Benson
SEA STATE calm  WIND SPEED/DIRECTION calm
PHOTOGRAPHS: ROLL # —  FRAME # —

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

A — Verrucaria grows near to the oiled surfaces in the UITZ. The benthic barnacles from UITZ down to the upper UITZ is:
Verrucaria (dense), filamentous green algae (PFA—moderately dense), bryozoans (dense) — Fucus + Odonthalia + Enteromorpha. Total benthic % cover was nearly 100%. These are typical benthic features of moderate wave exposure, stable, vertical substrates. These most obvious species have strong recruitment in most years and are not particular sensitive to damage that may be caused if treatment is performed here.

B — Verrucaria grows near to P. tawha (HOR) & the oiled surfaces. Barnacles (boils) also inhabit the lower UITZ. The UITZ contains dense barnacles & Lottaria on the boulders. The barnacles typically in wave-exposed sites. Sessile barnacles occur here. FGA is also found in more protected areas of the UITZ. Kelping & impact recruitment has occurred recently. Several small, low-diversity tidal pools in the MITZ, contain Phymatioda, kelp, & Hildenbrandia. The UITZ on this saddle is dominated by Fucus, FGA, & Halosaccion. I could not locate the angle next that is mapped at the west end of this subdivision.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eagles</td>
<td>1</td>
<td>1</td>
<td>—</td>
</tr>
<tr>
<td>Seabirds</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Waterfowl</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Gulls/Kittiwakes</td>
<td>1</td>
<td>3</td>
<td>—</td>
</tr>
<tr>
<td>Shorebirds</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Corvids</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Other Birds</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MARINE MAMMALS</th>
<th># OBSERVED</th>
<th>SPECIES</th>
<th># OBSERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sea Otters</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Pinnipeds (specify)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sea lions, Harbor Seals</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Whales (specify)</td>
<td>4</td>
<td></td>
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</tr>
<tr>
<td>Humpbacks (2) (outside of Northwest Bay)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Shoreline subdivision map showing important biological features attached.

REVIEWED CD 14 MAY

[Signature]
Mytilus & limpet recruitment. Dense barnacles & limpets in the MITZ on boulders.

Veronicaea next to oiled surfaces. Vertical zonation: FA - barnacles - mixed macroalgae.
1991 MAYSAP EVALUATION

SEGMENT: EL 104  SUB: B  REGION: PWS  SURVEY DATE: 5/21/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) OPEN

Ecological/Constraints (see page two for details)  NONE

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

SHPO Signature: [signature] Date: 6/07/91

RECOMMENDATIONS: INITIAL  TAG  FOSC

TREATMENT REQUIRED (Y or 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: June 6, 1991  FOSC APPROVAL DATE: 6/10/91

EXXON [signature]  CHIEF OF STAFF, FOSC
USCG [signature]
NOAA [signature]
**MAYSAP FIELD SHORELINE COMMENT SHEET**

**TEAM NO.** 2  **SEGMENT** EL-104  **SUBDIVISION** B  **DATE** 5/31/91

### ADEC
**NAME** Peter Montesano  **SIGNATURE**

- **NTR**  □ TREATMENT RECOMMENDED

  In this pocket, we found previously undocumented subsurface oil on the southern half of the beach. The Maysap levs is relatively thin in w/ gravel/pebbles over it in an area of a thin boulder cover. Considering the size of the oiled area and the relative inaccessibility, I recommend no treatment. The levs is protected from high energy.

### EXXON
**NAME** Frank A. Ray  **SIGNATURE**

- **NTR**  □ Not enough evidence to warrant cleanup activity.

### LANDMANAGER
**NAME** Dennis S. Kennedy  **SIGNATURE**

- **NTR**  □ This is a small subdivision with one submerged. The amount of oil does not warrant future work.

### USCG/NOAA
**NAME** M. P. Zerdick  **SIGNATURE**

- **NTR**  □ No treatment recommended. Z.

---

**NTR**  □ No treatment recommended. Z.
**MAYSAP SHORELINE OILING SUMMARY**

**TEAM NO. 2**
- **OG Reimer**
- **ADEC Montesano**
- **USCG/NOAA O. Summert-Beatty**

**SEGMENT** EL104

**SUBDIVISION** B

**DATE** 5/1/91

**TIME** 11:00 to 11:25

**TIDE LEVEL** 5.81 ft. to 4.89 ft.

**ENERGY LEVEL**
- [X] H
- [ ] M
- [X] L

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

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

**TOTAL LENGTH SHORELINE SURVEYED:** 209 m

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

**EST. OIL CATEGORY LENGTH:**
- [ ] W 0 m
- [ ] M 0 m
- [X] N 99 m
- [X] V 50 m
- [X] L 60 m
- [X] US 0 m

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

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

**PHOTO ROLL**
- MAYSAP-2-23

**FRAMES** 1-3

**PIT NO.**
- 1
- 2

**PIT DEPTH**
- 15 cm

**SUBSURFACE OIL CHARACTER**
- **OILED ZONE**
- CLEAN BELOW
- **H2O LEVEL**
- **SHEEN**
- **COLOR**
- **PIT ZONE**

**SURFACE-SUBSURFACE SEDIMENTS**
- B-PC
- **NOTES**
- Brown droppings
- No Field Data

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

**OG COMMENTS:**
Small fissure in steep rocky shoreline with a month of boulders. Oil consists of CTLEV along HITE on vertical rock cliff on both sides of fissures. One pit dug at base of cliff in small 1x1 m pocket found some trapped MOR.
OG SKETCH
FL 104 B
MAY 21, 1991
11:00 - 11:25
Doug Reimer

CT/CU 15%
2 x 40 (BTR)
VERT. ROCK
UNITZ

CT/CU 20%
1 x 40 (BTR)
VERT ROCK
UNITZ

LARGE LOG

B

B

LARGE LOG

UNITZ

B

WATER

REVISED: MC. 5/23/91
REVIEWED 5/28/91 KG
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>
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<td>Corvids</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Other Birds</td>
<td>Arctic Tern</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MARINE MAMMALS</th>
<th># OBSERVED</th>
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</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>Spermals(specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Shoreline subdivision map showing important biological features attached.
SHORELINE EVALUATION

SEGMENT ST/ EL-104  SUBDIVISION A (1 OF 4)  DATE  4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M  Herring spawning (4/1 to 6/15)
5T-2  All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
6Y  Recreation: Special use destination
7HH  Subsistence area: Finfish harvesting
7II  Subsistence area: Deer harvesting (8/15 to 2/28)
7Z  Subsistence area: Salmon harvesting (5/1 to 9/30)

See attached Ecological Constraint sheet for specific constraints and contacts.

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

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

SHPO SIGNATURE: ___________________________ DATE: 4/28/90

OILING CATEGORIZATION:
Wide 0 m: Medium 14 m: Narrow 0 m: V.Light 0 m: No Oil 233 m
Subsurface Oil Observed: Yes  No  X  Maximum Depth: ________

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

COMMENTS: _________________________________________________

_________________________________________________________

TAG COMMENTS: ____________________________________________

_________________________________________________________

TAG APPROVAL DATE: 4/26/90
ADEC  JOHNN BAUER  DATE: 5-12-90
EXXON  ANTON GOUDE  FOSC: ______
NOAA  GARY NETTE  DATE: 5-12-90
USCG  KENNETH KENDALL  DATE: 5-12-90
Ecology Map

L-104

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

Map Key: PWS-124a
Name: J. Springer
Date: 04/04/70
Date Entered: 04/25/70

Eagle Nest (SWS)

Scale: 100 - 300 Meters
SHORELINE EVALUATION

SEGMENT ST/ EL-104  SUBDIVISION B (2 OF 4)  DATE  4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M  Herring spawning (4/1 to 6/15)
5T-2 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y  Recreation: Special use destination
7HH Subsistence area: Finfish harvesting
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7Z Subsistence area: Salmon harvesting (5/1 to 9/30)

See attached Ecological Constraint sheet for specific constraints and contacts.

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

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

SHPO SIGNATURE: ______________________ DATE: 6/20/90

OILING CATEGORIZATION:
Wide 0 m: Medium 20 m: Narrow 35 m: V.Light 0 m: No Oil 154 m
Subsurface Oil Observed: Yes____ No ____ Maximum Depth_____

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

COMMENTS: _______________________________________

__________________________________________________________________________

TAG COMMENTS: ____________________________________________

TAG APPROVAL DATE: ______ 7/26/90 ______
ADEC  JOHN BAUMER  DATE: 5-12-90
EXXON  MEAD  FOSC: __________
NOAA  Gary H. Ericson  DATE: 5-12-90
USCG  ____________________________
SHORELINE EVALUATION

SEGMENT ST/ EL-104 SUBDIVISION C (3 OF 4) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
5T-2 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
7HH Subsistence area: Finfish harvesting
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7Z Subsistence area: Salmon harvesting (5/1 to 9/30)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. Do not trample or otherwise damage mussel beds.

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: 4/28/90

OILING CATEGORIZATION:
Wide 0 m: Medium 6 m: Narrow 0 m: V.Light 0 m: No Oil 523 m
Subsurface Oil Observed: Yes X No  Maximum Depth 20+ Cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) bioremediation of the east end area of subdivision EL-104-C. Work should be conducted after 6/15 based on herring constraints after consulting with USFWS and ADF&G regarding eagle nest and CVC regarding subsistence harvesting times.

TAG COMMENTS:

TAG APPROVAL DATE: 4/26/90
ADEC John Banks
EXXON John Hahn
NOAA Gary Peterson
USCG Kenneth Hearn
FOSC: DATE: 5/14/90
SHORELINE EVALUATION

SEGMENT ST/ EL-104 SUBDIVISION D (4 OF 4) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M Herring spawning (4/1 to 6/15)
5T-2 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
7HH Subsistence area: Finfish harvesting
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7Z Subsistence area: Salmon harvesting (5/1 to 9/30)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. 2 bald eagle nests in unsurveyed coastline between subdivisions C and D.

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

SHPO SIGNATURE: Charles E. How DATE: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 15 m: V.Light 0 m: No Oil 284 m

Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

X No Treatment Recommended

Treatment Recommended

Manual Pickup

Bioremediation

Tarmat: Removal

Snare/Absorbent Booms

Oil Snares (pom poms)

Absorbents (pads, rolls, etc)

Spot Washing: Wands

Spot Washing: Wands

Spot Washing: Wands

Spot Washing: Wands

Spot Washing: Wands

Spot Washing: Wands

Beach Cleaner

Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/26/90

ADEC

EXXON

NOAA

USCG

FOSC: DATE: 5-9-90
Sketch Map

Segment: ST/EL 104
Subdivision: D
Date: 04/04/90

Checklist:
- N Arrow
- Approx. Scale
- Seg/Sub Boundary
- Oil Dirt
- Water
- Length
- % Cover
- Substrate Character
- Est. HWL/WL
- SSL
- Photo Location(s)
- Profile(s)
- Pt Location(s)
- Photo Location(s)

Legend:
1 - No Subsurface Oil
2 - Subsurface Oil

- Continuous Distribution
- Broken Distribution
- Patchy Distribution
- Splashed Distribution

Vegetation:
- Photo location, direction, and number

Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 20 MS 0 PT 0 T8 0 FL 0 NO 290
1991 MAYSAP EVALUATION

SEGMENT: EL 104  SUB: C  REGION: FWS  SURVEY DATE: 5/21/91

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

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

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

SHPO Signature:  Date: 6/17/91

RECOMMENDATIONS:

TREATMENT REQUIRED (Y or N)  INITIAL  TAG  FOSC

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

COMMENTS:

INITIAL: __________________________

TAG: __________________________

FOSC: __________________________

TAG APPROVAL DATE:  June 7 1991  FOSC APPROVAL DATE: 6/17/91

ADEC  EXXON  USCG  NOAA

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

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

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.

Subsistence - Salmon Harvesting: 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.

The ASAP site on this Subdivision was not really on this Subdivision. EL104 has unassigned areas between EL104A/EL104B and EL104B/EL104C. I read this coming up in 1989 and it is well noted in the ASAP report.

The pocket was small and well protected by a low slope which appears as if it would remain; however, the oil is relatively unreactive and will have

Not enough oil to warrant clean up activity.

The subdivision as indicated on GIS maps had little oiling. Site #1 was not within the boundary of EL104C as per GIS map. We surveyed it and it appears cleaner than what existed on ASAP report. This site needs to be converted on the data base.

An active eagle nest is located just west of end of Sub #5

Surface oiling occurs between the boundary coffles and mainly consists of moss and ferns. The area of SOR and HER are not readily obtainable, therefore, no treatment is recommended. No - No Treatment Recommended.
**MAYSAP SHORELINE OILING SUMMARY**

**TEAM NO.** 2  
**OG Reimer**  
**BIO Bam**  
**ADEC Montesano**  
**LANDMANAGER Kennedy** for USGS  
**SUBDIVISION SEGMENT** EL 104  
**DATE** 5.21.91

**TIME** 11:45 to 12:26  
**TIDE LEVEL** 4.16 ft. to 2.75 ft.  
**ENERGY LEVEL**  
- **FOOT**  
- **BOAT**  
- **HELO**  
**WEATHER**  
- **SUN**  
- **CLOUDS**  
- **FOG**  
- **RAIN**  
- **SNOW**  
**TOTAL LENGTH SHORELINE SURVEYED:** 564 m  
**NEAR SHORE SHEEN:**  
- **BR**  
- **RB**  
- **SL**  
- **NONE**  
**EST. OIL CATEGORY LENGTH:**  
- **W**  
- **D**  
- **M**  
- **N**  
- **O**  
- **V**  
- **L**  

<table>
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<tr>
<th>LOC</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT TYPE</th>
<th>SHORE SLOPE V.H.M.L</th>
<th>WIDTH</th>
<th>LENGTH</th>
<th>ZONE</th>
<th>NOTES</th>
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</tr>
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</table>

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

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

**PHOTO ROLL # MAYSA-- 2 - 23**  
**FRAMES 4-6**

**PIT NO.**  
- **OP**  
- **HOR**  
- **MOR**  
- **LOR**  
- **OF**  
- **TR**  
- **NO**  
- **CM-CM**  
- **Y/N**  
- **BRSN**  
- **S**  
- **U**  
- **M**  
- **I**  
- **LI**  
- **NOTES**  

**OG COMMENTS:**  
**Vertical Rock and High Angle Boulder Hay shoreline with sporadic Remains of BTR (Battlable Range) along UIRZ. One Pocket Beach at East end of Segment had some SOR and a small area 1/4 x 20 where SOR was found in Pits. **NOTES:** This Beach indicated on Both SSAT and ASAP Reports is **NOT** actually in ELI.04E as marked on GIS Maps. This problem was noted on ASAP report. New boundary of ELI.04E or Put this beach (Site#1 or Site#2) into a new subdivision ELI.04D.
OG SKETCH
EL 104 C
MAY 21, 1991
11:45 - 12:26
Doug Reimer

CT/CV 5% and/or Sides
of Boulders
SOR (Light - Moderate) 2%
3 x 6 meters
(Sub-surface options)
Nor = 1/2 x 2 m

CT/SST 20%
1 x 5 m
UFFT Rock

CT/CV 20%
(mostly under Sides - CV/Ref)
SOR (Light) 10%
3 x 1 m

Rock Ramp

(Water)

CT/BTR
1 - 10% Patch
Remains on Rock
and Boulder face
1 x 40 m

NOTE: SITE #1
Is not within boundary of EL 104 C as mapped on GIS. Extend boundary or add new sub-div.
KN 104 D. This problem was described on ASAP Report as well.
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2  DATE 3/01/91

SEGMENT # 2L - 104  TIDAL HEIGHT (Range)  +4 to +4

SUBDIVISION C  BIOLOGIST SMB

SEA STATE: CALM  WIND SPEED/DIRECTION: CALM

PHOTOGRAPHS: ROLL #  FRAME #

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

A+B: OR/IO/ST x SOR of 1 in HIZ. Lichen nearby, SOR in vicinity of hardcover.

C: Area surrounding Pits Through supports green algae & lichen only. Hardcover present of the oil have dense adult & juvenile lichen, small clumps & recent spot. Subtidal zones exhibit fusion clumps.

D+E: Biz high in HIZ on rock & steep boulder faces. Lichen covered with algae & barnacles.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS  # OF SPECIES  TOTAL BIRDS  FISH OBSERVED  SPECIES PRESENT

<table>
<thead>
<tr>
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<th># of Species</th>
<th>Total Birds</th>
<th>Eagles</th>
<th>3 adults</th>
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</tr>
<tr>
<td>Waterfowl</td>
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<tr>
<td>Gulls/kittiwakes</td>
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<td>Shorebirds</td>
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</tr>
<tr>
<td>Corvids</td>
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<tr>
<td>Other Birds</td>
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<td>Sandpipers</td>
<td>2</td>
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MARINE MAMMALS  # OBSERVED  SPECIES  # OBSERVED

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<th># Observed</th>
<th>Species</th>
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<td></td>
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</tr>
<tr>
<td>Cetaceans(specific)</td>
<td></td>
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</tbody>
</table>

LAND MAMMALS

Shoreline subdivision map showing important biological features attached.
A female left nest upon our approach but returned within minutes. Nest is easily visible from shore and may have an egg.

SMB 21 May 91

---

Subdivision Field Map
Map Key: KNIEL104C
Name: Sue Bar
Date: 5/21/91

EL104 C
ADEC Subsegment Length: 984m
WETERS

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

AK State Plane Zone A
40 ft/100
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-104

SUBDIVISIONS: C (3 OF 4)
SHORELINE EVALUATION

SEGMENT ST/EL-104 SUBDIVISION C (3 OF 4) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M  Herring spawning (4/1 to 6/15)
5T-2 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y  Recreation: Special use destination
7HH Subsistence area: Finfish harvesting
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7Z  Subsistence area: Salmon harvesting (5/1 to 9/30)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Do not trample or otherwise damage mussel beds.

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 6 m: Narrow 0 m: V.Light 0 m: No Oil 523 m
Subsurface Oil Observed: Yes X No Maximum Depth 20+ cm

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

COMMENTS: Recommended treatment includes 1) bioremediation of the east end area of subdivision EL-104-C. Work should be conducted after 6/15 based on herring constraints after consulting with USFWS and ADF&G regarding eagle nest and CVC regarding subsistence harvesting times.

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.
1M Herring spawning (4/1 to 6/15)
   Restrict boat traffic to essential minimum. Avoid damage to uncultured intertidal and subtidal algae and seagrasses.
   Contact ADF&G for specific dates and locations.
3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
   No personnel within 100m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
5R Seabird colony (5/1 to 9/1)
   Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance.
   Contact ADF&G and USFWS prior to treatment.
5S Shorebird/waterfowl concentration (4/1 to 5/15)
   Restrict all activity to essential minimum, especially air traffic.
5T All Bald Eagle nests (3/1 to 6/1)
   Active Bald Eagle nests (3/1 to 9/1)
   Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 5/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
6U Recreation: Tent sites (6/1 to 9/15)
   Anchorage (6/1 to 9/15)
6V Forest Service cabins (6/1 to 9/15)
6W Lodge (6/1 to 9/15)
   Special use destination
7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
   Finfish harvesting
7H Deer harvesting (8/15 to 2/28)
   Invertebrate harvesting
7J For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1  E104  SUBDIVISION: C  DATE  4-4-90

USCG NAME  AEC Vandegrift  SIGNATURE  AEC Vandegrift

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

I suggest bio.

ADEC NAME  Michele Beers  SIGNATURE  Michele Beers

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

A 10m x 7m CT/B mis in the second pocket C, B, F, G beach. The pit in this section revealed OR down to 20 cm with the UC. The larger BS make it difficult to pick up the patch up, therefore an initial application of fertilizers followed with a 2nd application in August would help penetrate into the surface layer (undertaking the BS). If possible, removal of the larger BS and pick up of the underlying area would be even better.

LAND MANAGER

NAME  Dan Kogan  SIGNATURE  Dan Kogan

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

I recommend hand tilling and fertilizer application to the 10m x 7m CT/B patch.
## SHORELINE OILING SUMMARY

**OG:** J. Springer  | **USCG:** R. Vandepels  | **SEGMENT:** EL 104

**BIO:** P. Craig  | **LAND REP:** D. Logan  | **SUBDIVISION:** C (304F)

**EXXON:** T. Tomblin  | **ADEO:** M. Bar  | **DATE:** 09/10/90

**TEAM NO.:** 5  | **TIDE LEVEL:** +1.5 to +1.5  | **TIME:** 16:00 to 17:00

**EST. SUBDIVISION LENGTH:** 550 m  | **SURFACE SEDIMENTS:**

**UPLANDS DESCRIPTION:**

- Foot  | **SURVEYED FROM:** Foot  | **WORKING DIRECTION:** E to W

- Boat  | **SURFACE SLOPE:**

- Helo  | **WAVE EXPOSURE:**

**UPLANDS DESCRIPTION:**

- Grass  | **PIT SUBSURFACE OILED:**

- Forest  | **PIT OIL CHARACTER:**

- Rock  | **PIT DEPTH (cm):**

- Pillow Lava

<table>
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<tr>
<th>SURFACE OIL CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL/FILM COLOR</th>
<th>IMPACTED ZONES</th>
<th>PAVEMENT:</th>
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**NEAR SHORE SHEEN?:** No  | BR RW SL TL

**OILED DEBRIS AMOUNT:**

- Logs (SM MD LG)
- Vegetation
- Trash
- Debris

DEBRIS COLLECTED:

- Yes
- No

**TYPE:** O

**Photographs:**

- Roll No.: 17.5-3
- Frames: 14, 15

**SUBSURFACE OIL**

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**COMMENTS**
### SHORELINE ECOLOGICAL SUMMARY

Segment ST 1

**Subdivision:** C

**Date (mo/day/yr):** 4/4/90

**Length (ft):**

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<th>Time (24 hr)</th>
<th>11:40-17:42</th>
<th><strong>Biologist:</strong></th>
<th><strong>Crank</strong></th>
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<tbody>
<tr>
<td><strong>Tide Height:</strong></td>
<td>+1.5</td>
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</tbody>
</table>

(A) **Substrate type and % of segments:**

1. Bedrock 10%
2. Boulder 20%
3. Cobble 10%
4. Pebble 7%
5. Sand 3%
6. Silt

(B) **Overall % cover of biota (% of segment):**

- Dense 50%
- Moderate 30%
- Low 20%

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

1. **Biota:**
   - (upper-U; mid-M; low tidal-L)
   - Juveniles/adults (X)
   - New settlement (G)

#### Photographs:

- **Roll No.:** ST-5-3
- **Frames:** 14

#### BARNACLES

<table>
<thead>
<tr>
<th>Density</th>
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#### MYTILUS

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**Wildlife Observations/General Comments:**

- 1 Eagle - Adult
- 1 Harbor Seal
- 8 Gulls
- 1 Cormorant
- 1 Magpie
- Subdivision is a high recruitment area
- Mussel beds are in discontinuous dense patches
- Most of LTR untapped
- Subdivision appears healthy

**Ecological Considerations:**

- 2M - Herring Spawning
- 7H - Deer Harvesting
- 7Z - Salmon Harvesting
- 7F - Finfish Harvesting
- ST - Eagle Nest - not observed.
<table>
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<tr>
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<td>CLADOPHORA SPP</td>
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<td>ENDCOCLADIA MUCICATA</td>
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<td>End - juveniles</td>
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REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-104

SUBDIVISIONS: D (4 OF 4)
SHORELINE EVALUATION

SEGMENT ST/ EL-104 SUBDIVISION D (4 OF 4) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M  Herring spawning (4/1 to 6/15)
5T-2  All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y   Recreation: Special use destination
7HH  Subsistence area: Finfish harvesting
7II  Subsistence area: Deer harvesting (8/15 to 2/28)
7Z   Subsistence area: Salmon harvesting (5/1 to 9/30)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. 2 bald eagle nests in unsurveyed coastline between subdivisions C and D.

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 15 m: V.Light 0 m: No Oil 284 m
Subsurface Oil Observed: Yes  No  X  Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: ____________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
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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)

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.
SEGMENT ST: EL 104

SUBDIVISION: 0

DATE: 4-4-90

USCG
NAME: AEC Vandepol
SIGNATURE: AEC Vandepol

☐ NO TREATMENT RECOMMENDED
☐ TREATMENT SUGGESTED

COMMENTS

I recommend no treatment.

ADEC
NAME: Michele Fees
SIGNATURE: Fees

☐ NO TREATMENT RECOMMENDED
☐ TREATMENT SUGGESTED

COMMENTS

EL 104-0 is a headland with occasional large b's. This is a high energy area and I would recommend no treatment on the 3 M x 20 M ST/8/DBR.

LAND MANAGER
NAME: Dan Hogan
SIGNATURE: Hogan

☐ NO TREATMENT RECOMMENDED
☐ TREATMENT SUGGESTED

COMMENTS

I concur with ADEC.

4

Revision No. 03-21/90
**SHORELINE OILING SUMMARY**

**OIL: J. Springer**  **USCG** R. Vandeplas  **SEGMENT** EL 104

**BIO:** B. Crank  **LAND REP:** D. Logan  **SUBDIVISION:** D (42F4)

**EXXON:** T. Vanshin  **ADEO** M. Baez  **TIME:** 17:00 to 17:11

**TEAM NO.:** 5  **TIDE LEVEL:** + 1/3 to + 1/2  **DATE:** 04/04/90

**EST. SUBDIVISION LENGTH:** 30 m  **Sun:** Clouds  **Fog:** Rain  **Snow:**

**UPLANDS DESCRIPTION:**  
- Grass
- Forest
- Rock
- Pillow lava

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

**WORKING DIRECTION:** NE to SE

**SURFACE SEDIMENTS:**  
- R: 90% B: 10% C: 0% P: 0% G: 0% S: 0% M: 0% V: 0%

**SLOPE:**  
- Lang: 0% Hang: 30% Vert: 20%  **WAVE EXPOSURE:**  
- Low: 0 Med: 0 High:

**OIL CATEGORY LENGTH:**  
- W 0 m M 0 m N 20 m V 0 m NO 250 m

## SURFACE OIL

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<tr>
<td>NO OIL</td>
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**PAVEMENT:** H F S 0 sq. m by 0 cm

**PATTIES / TARBALLS:** 0 BAGS

**NEAR SHOREBALLS?** NO: BR RW SL TL

**OILED DEBRIS**  
- Debris Collected: YES

**AMOUNT**  
- Bag: 0

**IMPACTED ZONES**  
- No photos

**ROLL NO.**

**FRAMES**

## SUBSURFACE OIL

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<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>BELOW</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>A N A</th>
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**COMMENTS**  
No test pits. All rock and boulder.

**REVIEWED**  **DATE:** 4/10/90
LEGEND

1
Pt - No Subsurface Oil

2
Pt - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

CYS
Splashed Distribution

Oilet Vegetation

1
Flora location, direction, and number

SKETCH MAP

ST - not observed

Canyon

Wave-cut bench

2 M
7 HH
77

Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 20 ST 0 MS 0 PT 0 TB 0 FL 0 NO 280
### SHORELINE ECOLOGICAL SUMMARY

**Segment ST / EL 104**  
**Subdivision D**  
**Date (mo/day/yr) 4/4/90**  
**Time (24 hr) 1:00 - 1:20**  
**Biolgist Crank**  
**Length 300 m**  
**Tide Height 1 L.S.**

**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 70  
- Moderate 15  
- Low 15

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

### BARNACLES

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### MYTILUS

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### GASTROPODS

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### FUCUS

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**Wildlife Observations/ General Comments:**

- 5 - Barrows Goldeneye  
- 7T - Eagle Nest (not observed)  
- 7L - Salmon Harvesting  
- 7H - Finfish Harvesting  
- 2M - Herring Spawn

**Ecological Considerations:**

- 5T - Eagle Nest (not observed)  
- 7T - Salmon Harvesting  
- 7H - Finfish Harvesting  
- 2M - Herring Spawn
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-104 SUBDIVISION C (3 of 4)

WORK WINDOW

<table>
<thead>
<tr>
<th>Bioremediation</th>
<th>WORK PRIOR TO 7/1</th>
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ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Constraint Details</th>
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<tbody>
<tr>
<td>2M</td>
<td>Herring Spawning</td>
<td>NO CONSTRAINT. Authorized by Claudia Slater/ADF&amp;G on 5/10/90 to Exxon/Tom Kelley.</td>
</tr>
<tr>
<td>5T</td>
<td>Bald Eagle Nest</td>
<td>NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision C work site.</td>
</tr>
<tr>
<td>7HH</td>
<td>Subsistence: Finfish Harvesting</td>
<td>Closed to bioremediation after 7/1</td>
</tr>
<tr>
<td>7II</td>
<td>Subsistence: Deer Harvesting</td>
<td>Closed to bioremediation after 8/15.</td>
</tr>
<tr>
<td>7Z</td>
<td>Subsistence: Salmon Harvesting</td>
<td>Closed to bioremediation after 7/1.</td>
</tr>
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</table>

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and beach disturbance to essential minimum. Restrict air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from active nests. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

Prepared by W. Kelley  Date 6/19/90
SHORELINE EVALUATION

SEGMENT ST/ EL-104 SUBDIVISION C (3 OF 4) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M  Herring spawning (4/1 to 6/15)
5T-2 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
6Y  Recreation: Special use destination
7HH Subsistence area: Finfish harvesting
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7Z  Subsistence area: Salmon harvesting (5/1 to 9/30)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Do not trample or otherwise damage mussel beds.

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: 4/28/90

OILING CATEGORIZATION:
Wide 0 m: Medium 6 m: Narrow 0 m: V. Light 0 m: No Oil 523 m
Subsurface Oil Observed: Yes X No Maximum Depth 20+ cm

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

COMMENTS: Recommended treatment includes 1) bioremediation of the east end area of subdivision EL-104-C. Work should be conducted after 6/15 based on herring constraints after consulting with USFWS and ADF&G regarding eagle nest and CVC regarding subsistence harvesting times.

TAG COMMENTS: ____________________________________________

TAG APPROVAL DATE: 4/24/90
ADEC  EXXON  NOAA  USCG
John Pauw  Amy Cahn  Gary Peterson  Kenneth Kramer
FOSC: L DATE: 5/12/90
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-104

SUBDIVISIONS: A (1 OF 4)
SHORELINE EVALUATION

SEGMENT ST/ EL-104 SUBDIVISION A (1 OF 4) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
5T-2 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
7HH Subsistence area: Finfish harvesting
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7Z Subsistence area: Salmon harvesting (5/1 to 9/30)

See attached Ecological Constraint sheet for specific constraints and contacts.

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

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

SHPO SIGNATURE: _____________________________ DATE:__________________________

OILING CATEGORIZATION:

Wide 0 m: Medium 14 m: Narrow 0 m: V.Light 0 m: No Oil 233 m

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

RECOMMENDATIONS:

___ No Treatment Recommended   ___ Snare/Absorbent Booms

___ Treatment Recommended     ___ Oil Snare (pom poms)

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

___ Bioremediation             ___ Spot Washing: ___ Wands

___ Tarmat: ___ Removal        ___ Beach Cleaner

___ Other (see comments)

COMMENTS: ______________________

______________________________

______________________________

______________________________

______________________________

______________________________

TAG COMMENTS:________________

______________________________

______________________________

______________________________

TAG APPROVAL DATE:___________

ADEC ____________________________ FOSC: ______________ DATE: __________

EXXON ____________________________

NOAA ____________________________

USCG ____________________________
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

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/ to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to unveiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

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

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

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

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

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

6U
Recreation: Tent sites (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.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST 14004 SUBDIVISION: A DATE 04/04/90

USCG NAME A.E.C. Vandepels SIGNATURE A.E.C. Vandepels

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

I suggest bio. if this beach is accessible.

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

Most of the segments 104 and 105 consist of patches that require fertilizer application. I would recommend a 1-2 man operation cover these areas applying fertilizer in the areas indicated on the maps.

This beach had a 5m x 10m CT/P. The coat was lite on the C, B beach. Bioremediation is recommended. (Refer to photos #9 v#10).

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

I recommend fertilizer application to the 5m x 10m patch CT/P.
# SHORELINE OILING SUMMARY

**OG: J. Spring**

**BIO: P. Crank**

**USCG: R. Vandepels**

**LAND REP: D. Logho**

**SEGMENT: STR EL 104**

**ADJACENT A 104 (104)**

**TIME: 15:00 to 15:20**

**DATE: 04/09/99**

**TIDE LEVEL:** +3 to +2

**EST. SUBDIVISION LENGTH:** 310 m

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

**SLOPE:** Lang 10 % Hang 70 % Vert 20%

**WAVE EXPOSURE:** Low, Med, High

## SURFACE OIL

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<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
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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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<tr>
<td>NO OIL</td>
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</table>

**PAVEMENT:** H F S.

**PATTIES/TARBALLS:**

**NEAR SHORE SHEEN?**

**OILED DEBRIS AMOUNT:**

**DEBRIS COLLECTED TYPE:**

**PHOTOS:**

Roll No. ST-5-3

Frames 9 - 11

## SUBSURFACE OIL

<table>
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<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>
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<th>SUBSURFACE SEDIMENTS</th>
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**COMMENTS**

No test pits. - boulders.

**REVIEWED:**

**DATE:** 4/10/99
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST/104  
Subdivision A  
Date (mo/day/yr) 1/14/90  
Time (24 hr) 1500 - 1540  
Biolologist Crank  
Length 216 m  
Tide Height +2.5 ft

(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 zonatation of major taxa: (upper-U; mid-M; low tidal-L), juveniles/adults (X), new settlement (C)

<table>
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<tr>
<th>Substrate Type</th>
<th>Dense</th>
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Wildlife Observations/General Comments:
Bald Eagle - Adult  
Sm. unident. shorebird  
Ecological Considerations:

14
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<th>Y</th>
<th>LITZ</th>
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<td>B. BALUNUS CARIOSEUS</td>
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REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-104

SUBDIVISIONS: B (2 OF 4)
SEGMENT ST/EL-104  SUBDIVISION B (2 OF 4) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M  Herring spawning (4/1 to 6/15)
5T-2 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y  Recreation: Special use destination
7HH Subsistence area: Finfish harvesting
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7Z Subsistence area: Salmon harvesting (5/1 to 9/30)

See attached Ecological Constraint sheet for specific constraints and contacts.

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

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

SHPO SIGNATURE:_________________________ DATE:_________________________

OILING CATEGORIZATION:

Wide 0 m: Medium 20 m: Narrow 35 m: V.Light 0 m: No Oil 154 m
Subsurface Oil Observed: Yes  No X  Maximum Depth

RECOMMENDATIONS:

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

Other (see comments)

COMMENTS:__________________________________________________________

__________________________________________________________

__________________________________________________________

TAG COMMENTS:________________________________________________________

_________________________
TAG APPROVAL DATE:________________________________

ADEC __________________________  FOSC:________________ DATE:__________
EXXON ________________________
NOAA ________________________
USCG ________________________
PWS, Seward and Homer Ecological Constraints

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

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

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

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

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

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

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

1H
Remote release sites

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

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

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

1L
Set net sites (4/11 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 seagrasses. Contact ADF&G for specific dates and locations.

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

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

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

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

5T
All Bald Eagle nests (5/1 to 6/1)
Active Bald Eagle nests (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 400m. 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:

6V
Tent sites (6/1 to 9/15)

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

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

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

6Z
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 ST1 ELDD SUBDIVISION: B DATE 4-4-90

USCG
NAME ___________________________ SIGNATURE ___________________________

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS
I recommend no treatment.

□ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS
An area of debris (7 x 5m) is trapped behind the upper BS in the UITZ. The beach is a V-notch, and is difficult to access. Burning is unrealistic for this area due to the inability to control where the burning oil flows to below. Manual removal of the debris and the upper surface layer of sand would be the best option. Please refer to photos #12 and #13 prior to deciding on sending people into this area.

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS
This is a very high energy beach and difficult/dangerous to access on anything other than a flat, calm day. The oiled debris is not visible from the water, the oiled debris could be removed on a high tide with good weather. This is a low priority.

REVISION NO. 03/21/10
SHORELINE OILING SUMMARY

OG: J. Springer
USCG: R. Vandeveer
OIL: 15 Creek
LAND REP: D. Logan
WATER REP: T. Tamanlin
TIME: 15:15 to 16:05
DATE: 04/14/1990

TEAM NO.: 5
TIDE LEVEL: +2 to +1
SURVEYED FROM: Foot
SURFACES DESCRIPTION: [Grass, Clouds, Fog, Rain, Snow]
SURFACE SEDIMENTS: [Grass, Forest, Rock, Pillow lava]
SLOPE: [Lang, Hang, Vert]
WAVE EXPOSURE: [Low, Med, High]
OIL CATEGORY LENGTH: [W, N, M, M, M, M]

SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<tr>
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PAVEMENT: [H, F, S] 0 sq. m by 0 cm
PATTIES / TAR BALLS: 0 BAGS
NEAR SHORE SHEEN? [No] BR RW SL TL

OILED DEBRIS AMOUNT

<table>
<thead>
<tr>
<th>DEBRIS</th>
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<td>Logs</td>
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<td>Trash</td>
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<tr>
<td>Debris</td>
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Photographs:
Roll No.: 5T-5-3
Frames: 12, 13

SUBSURFACE OIL

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<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL (cm-0cm)</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>ANA</th>
<th>SUBSURFACE SEDIMENTS</th>
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COMMENTS

Page 1 of

DRAWN

REVIEWED

4/13/90
SHORELINE ECOLOGICAL SUMMARY

Segment ST 104 Subdivision B

Date (mo/day/yr) 4/29/90

Time (24 hr) 15:40 - 16:10 Biologist Crank

Tide Height +4.5 ft

Length 153 m

(A) Substrate type and % of segments:
1) Bedrock 55 %
2) Boulder 10 %
3) Cobble 5 %
4) Pebble 15 %
5) Sand 6 %
6) Silt

(B) Overall % cover of biota (% of segment): Dense 40 Moderate 30 Low 30

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

### BARNACLES

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Wildlife Observations/General Comments:
- Marine mammal presence (seal or porpoise?)
- 50% U/T2 barnacle mortality on bedrock faces in oil band
- Difficult human access area

Ecological Considerations:
- 711 - Deer Harvesting
- 712 - Salmon Harvesting
- 714 - Finfish Harvesting
- 51T - Bald Eagle Nest - unable to locate
- 21M - Herring Spawning
<table>
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<tr>
<th>SPECIES</th>
<th>UITZ</th>
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REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-105

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION

SEGMENT ST/ EL-105 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
See attached Ecological Constraint Sheet for specific constraints and contacts.

6Y Special use destination
7II Deer harvest (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 10 m: Medium 80 m: Narrow 0 m: V.Light 9 m: No Oil 525 m
Subsurface Oil Observed: Yes X No___ Maximum Depth 50+ 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 ___Spot Washing: ___Beach Cleaner
---Removal ___Roadway: ___Spot Washing: ___Beach Cleaner
---Oil Snares (pom poms)
---Oil Snares (pom poms)
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COMMENTS: Recommend bioremediation of coat and subsurface oil areas as shown on attached sketch map. Also rake top 6-8 inches of 10m x 10m area delineated on sketch map prior to bioremediation. Work should be conducted before 8/15 based on above deer harvesting constraint.

TAG COMMENTS:

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

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

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

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

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

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

6Y
Special use destination

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

7HH
Finfish harvesting

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

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

SEGMENT ST  E  105  SUBDIVISION: A  DATE 04/14/90

USCG NAME  AEC Vandepek  SIGNATURE  AEC Vandepek

FEE  NO TREATMENT RECOMMENDED  □ TREATMENT SUGGESTED

COMMENTS

Enter:  I recommend no treatment. This is a high energy beach with lots of small mussels, barnacles, and algae.

AEC  I concur with land manager.

ADEC NAME  Michelle Bailey  SIGNATURE  Michelle Bailey

□ NO TREATMENT RECOMMENDED  □ TREATMENT SUGGESTED

COMMENTS

In the first 5 x 4 B.C. beach, a 5 x 4 m long OF patch exists on the surface layer only. On the main beach, to the left of the freshwater turnoff (facing the beach), lies an oily film layer beginning 4 cm down for 2 cm. This area is approximately 6 m wide x by 6 m long. The area is B.C. with bedrock underneath. This area is a high energy beach and the oil is primarily surface. I would recommend these patches be treated.

The high wave energy of the area. In the U12, behind the R headland lies a 10 x 10 m section. A pit #5 in this area revealed or beginning at 45 cm and continuing to 90 cm with SO and the water obstructing further v. In the R/C area, following the B.P.A. 4 x 3 beach lies a 5 x 3 m wide BT WOR on layer. This is under a large B and difficult to access. On the remaining R:C area, there is a 3 x 60 m OBT under the BS. In the Barents mentioned above, an applicator of the patches would assist the areas under the B:C.

LAND MANAGER NAME  Dan Logan  SIGNATURE  Dan Logan

□ NO TREATMENT RECOMMENDED  □ TREATMENT SUGGESTED

COMMENTS

I recommend A.P. fertilizer application to the 4x5m, 6x4m, 5x3m, and 3x60m patches indicated on sketch map. This will assist in the degradation of this high energy beach.

24
**SHORELINE OILING SUMMARY**

**SURFACE OIL**

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASPHALT PAVEMENT</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>POOLED</td>
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<tr>
<td>COVER</td>
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</tr>
<tr>
<td>PATTIES</td>
<td></td>
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</tr>
<tr>
<td>TARBALLS</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>FILM</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 SUBSURFACE SEDIMENTS</th>
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<tr>
<td>1</td>
<td>30</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>BCPGS</td>
</tr>
<tr>
<td>2</td>
<td>30</td>
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<td>-</td>
<td>X</td>
<td>X</td>
<td>PG5</td>
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<td>3</td>
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<td>4.6</td>
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**COMMENTS**

Pamper picked up by Prince William Sound Conservation Alliance personnel.
### SHORELINE OILING SUMMARY (PAGE 2 of 2)

#### SEGMENT ST/EL/05 SUBDIVISION A

#### SUBSURFACE OIL (CONTINUED)

<table>
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#### COMMENTS

REVIEWED: J W DATE: 4/10/90
SHORELINE ECOLOGICAL SUMMARY

Segment ST / EL 105 Subdivision A Date (mo/day/yr) 4/4/90

Time (24 hr) 13:10 - 15:10 Biologist Crank Tide Height 74.25

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

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

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

BARNACLES

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<th>Sparse</th>
<th>Rare</th>
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MYTILUS

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GASTROPODS

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FUCUS

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Wildlife Observations/General Comments:
- Deen porpoise left NW Bay in AM as fishing fleet was entering bay (Reported by Coastguard)
- 2 Ravens
- Cormorant
- Bald Eagle - Adult in tree, 3 flying (2 adults, 1 immature)
- LITZ unexposed for most of segment.

Ecological Considerations:
- 6Y - Special Use Destination
- 711 - Deer Harvesting
<table>
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<tr>
<th>SPECIES</th>
<th>LITZ</th>
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<th>LITZ</th>
<th>COMMENTS</th>
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<td>GLOCHIDIA SPP</td>
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<tr>
<td>COSTARIA spp</td>
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<td>ENDOCALADIA MURICATA</td>
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<td>FILAMENTOUS GREENS</td>
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<td>FILAMENTOUS REDS</td>
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<tr>
<td>GLOCHIDIAS PURJATA</td>
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<td>SALICACCA GLANDIFORME</td>
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<td>LAMINARIA spp</td>
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<td>RALPHSIA/HILDEBRANDIA</td>
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<td>RHODOMELA LARIX</td>
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<td>RHODOMENIA PALMATA</td>
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<td>SCOTOSIPHON spp</td>
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<tr>
<td>ULMATARNA spp</td>
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<td>ZOSTEREA MARINA</td>
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<td>Enteromorpha spp</td>
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**FLORA:**

**FAUNA:**

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<td>SEMI BALANUS CAROBUS</td>
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<td>B. GLANDULA</td>
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<td>BRYOZOANS</td>
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<td>Spot dense in angular 3</td>
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<tr>
<td>OCTONS (OTHER THAN K. TUNICA)</td>
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<td>In angular 3, not in rounded 3</td>
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<tr>
<td>CLAMS</td>
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<tr>
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Drift included Laminaria spp and pieces of Zostera.
Comments

- Mussel concentrations increase near and in fresh/free drainage.
- Vertical rock wall surveyed by boat; Fucus sporting observations may be low and unable to obs. gastropods.
- Recruitment for segment mod to low with an occasional high Barnacle recruited boulder.
- In the angular cobble recruitment is high for Lithophyta; Barnacle recruitment higher but still moderate.
- Porphyra and Filamentous greens are dense on boulders and cobble.
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-105 SUBDIVISION A (1 of 1)

WORK WINDOW

Bioremediation   CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5R Seabird Colony

Closed to all activities; work site is less than 800m from seabird colony.

7ll Subsistence: Deer Harvesting

Closed to bioremediation after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

If seabird colony constraint is removed, other ecological considerations will apply.

FOSC

Prepared by

Date 6/1/90

Date 6/8/90
SHORELINE EVALUATION

SEGMENT ST/ EL-105 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
See attached Ecological Constraint Sheet for specific constraints and contacts.
6Y Special use destination
7II Deer harvest (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: 4/17/90

OILING CATEGORIZATION:
Wide 10 m: Medium 80 m: Narrow 0 m: V.Light 9 m: No Oil 525 m: Subsurface Oil Observed: Yes X No Maximum Depth 50+ cm

RECOMMENDATIONS:
X Treatment Recommended
_____ Manual Pickup
_____ Bioremediation
_____ Tarmat: Breakup
_____ Removal
_____ Snare/Absorbent Booms
_____ Oil Snares (pom poms)
_____ Absorbents (pads, rolls, etc)
_____ Spot Washing: Wands
_____ X Other (see comments)

COMMENTS: Recommend bioremediation of coat and subsurface oil areas as shown on attached sketch map. Also rake top 6-8 inches of 10m x 10m area delineated on sketch map prior to bioremediation. Work should be conducted before 8/15 based on above deer harvesting constraint.

TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90
ADEC
EXXON
NOAA
USCG

FOSC: [Signature] DATE: 4/22/90
SHORELINE EVALUATION

SEGMENT ST/EL-105 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
See attached Ecological Constraint Sheet for specific constraints and contacts.
6Y Special use destination
7II Deer harvest (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: 4/7/90

OILING CATEGORIZATION:
Wide 10 m: Medium 80 m: Narrow 0 m: V.Light 9 m: No Oil 525 m
Subsurface Oil Observed: Yes X No Maximum Depth 50+ 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
____ Removal  ____ X Other (see comments)

COMMENTS: Recommend bioremediation of coat and subsurface oil areas as shown on attached sketch map. Also rake top 6-8 inches of 10m x 10m area delineated on sketch map prior to bioremediation. Work should be conducted before 8/15 based on above deer harvesting constraint.

TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90
ADEC  Art Wever  DATE: 4/12/90
EXXON  Amy Tien  FOSC:  DATE: 4/12/90
NOAA  Bull Watt  USCG  Kenneth Kenne
Comments

- Mussel concentrations increase near and in fresh/H2O drainage.
- Vertical rock wall surveyed by boat; Fucus sporting observations may be low and unable to obs. gastropods.
- Recruitment for segment mod → low with an occasional high Barnacle recruited boulder.
- In the angular cobble recruitment is high for Littorina; Barnacle recruitment higher but still moderate.
- Porphyra and Filamentous greens are dense on boulders and cobble.
Revised 4/7/90

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

EL-105

ADEC Segment Length: 751'

Map Key: PWS-125
Name: James Spring
Date: 4/7/90

Data Entered:
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-105 SUBDIVISION A (1 of 1)

WORK WINDOW

Bioremediation

WORK PRIOR TO 8/15
CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5R Seabird Colony

NO CONSTRAINT

Closed to all activities; work site is less than 800m from seabird colony.

711 Subsistence: Deer Harvesting

Closed to bioremediation after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

If seabird colony constraint is removed, other ecological considerations will apply.

FOSC

Date 6/28/89

Prepared by A. Phillips
Date 6/1/90
**SHORELINE EVALUATION**

**SEGMENT ST/EL-105**  **SUBDIVISION A (1 OF 1)**  **DATE: 4/4/90**

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**
See attached Ecological Constraint Sheet for specific constraints and contacts.

- 6Y Special use destination
- 7II Deer harvest (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: 4/17/90**

**OILING CATEGORIZATION:**

- Wide 10 m
- Medium 80 m
- Narrow 0 m
- V. Light 9 m
- No Oil 525 m

Subsurface Oil Observed: Yes X No____

**Maximum Depth: 50+ cm**

**RECOMMENDATIONS:**

- X Treatment Recommended
- X Bioremediation
- Manual Pickup
- Oil Snares (pom poms)
- Absorbs (rolls, etc)
- Spot Washing:
- Breakup
- Removal
- Snare/Absorbent Booms
- Spot Washing: Wands
- Beach Cleaner
- X Other (see comments)

**COMMENTS:**
Recommend bioremediation of coat and subsurface oil areas as shown on attached sketch map. Also rake top 6-8 inches of 10m x 10m area delineated on sketch map prior to bioremediation. Work should be conducted before 8/15 based on above deer harvesting constraint.

**SEE CONSTRAINTS ADDENDUM DATED 6/27/90**

**TAG COMMENTS:**

**DATE: 4/17/90**

**TAG APPROVAL DATE:**

ADEC
EXXON
NOAA
USCG

FOSC:

**DATE: 4/22/90**
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-106

SUBDIVISIONS: A (1 OF 3)
SHORELINE EVALUATION

SEGMENT ST/ EL-106 SUBDIVISION A (1 OF 3) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
30,3Q Harbor seal and sea lion molting (8/15 to 9/15)
5T 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 unoi1ed 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 40 m: V.Light 380 m: No Oil 6731 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 35+ cm

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

COMMENTS: Recommend bioremediation of area shown on attached sketch map. [ (c/p) pocket beach] Work should be conducted before 5/15 or between 7/1 and 8/15 due to eagle nesting constraints, contact USFWS before conducting treatment.

TAG APPROVAL DATE: ____________
ADEC  EXXON  FOSC: ____________ DATE: ____________
NOAA  USCG
I recommend no immediate treatment along this subdivision. Majority of discernible impact consists of a very light to light patchy stain along the UTZ and high-tide line. Site of extensive cobble/pebble beach should be reassessed after the snow melts for debris.

This entire subdivision is exposed to high energy wave action.

Field Shoeline Comment Sheet

Segment ST1 EL-106-A Subdivision: A Date 4/6/90

USCG Name: David A. Schneider Signature: David A. Schneider

☑ No Treatment Recommended ☐ Treatment Suggested

Comments:

[Handwritten text]

I agree with the ADEC comments. This beach has a high recreational value, easy access to the system with access to a fresh water lake. However, this would not necessarily be a good anchorage site. Beach appears to be high energy, treatment maintenance of UTZ and MTZ.
EST. SUBDIVISION LENGTH: 3900 m

SURVEYED FROM: Surface SEDIMENTS:
SURFACE SLOPE: Lang 2% Hang 120% Ven 33%

OIL CATEGORY LENGTH:

SURFACE OIL

<table>
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PAVEMENT: H F S 0 sq. m by 0

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS AMOUNT

- Logs
- Vegetation
- Trash
- Debris
debars 0

Photographs:
Roll No. St-6-3
Frames 5-7

SUBSURFACE OIL

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<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
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<th>BELOW</th>
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COMMENTS: SUBDIVISION CONSISTS OF ALL HANG AND VERT ROCK WITH ONE LONG, LANG COBBLE/PEBBLE BEACH. UITZ C/P BERM SHOWS EVIDENCE OF A SMALL, LOCALIZED PATCH OF OIL PENETRATION. TO AN UNDETERMINED DEPTH (>35 cm). THE SITZ IS COVERED WITH SNOW OVER A STORM BERM. IT IS POSSIBLE THIS AREA MAY BE OILED. THIS ENTIRE SUBDIVISION HAS HIGH ENERGY WAVE EXP.

Page 1 of 1  No Sketch Map. Oil Descriptions Reviewed 4/16/90 Shown on Computer Map.
**SHORELINE ECOLOGICAL SUMMARY**

Segment: ST/ELIOG Subdivision: A

Date (mo/day/yr): April 2 1990

Time (24 hr): 1430

Bioligist: Jim Barry

Length: 3900

(A) Substrate type and % of segments:

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

(B) Overall % cover of biota (% of segment): Dense (9) Moderate (6) Low (4)

(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)

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### GASTROPODS

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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 8/1)

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.

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

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

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

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

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

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

6Y  Special use destination

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

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

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

The majority of this subdivision is high angle cliffs with an open exposure to large waves. Recruitment of species in all the major categories (Barnacles... ) is high on these cliffs. Thus, the upper intertidal community shows strong evidence of recovery from both the mortality associated w/ oil contamination and that produced by cleaning procedures. Two factors may contribute to this pattern. First, highly exposed sites are cleaned more rapidly by high waves & water motion. Second, exposed sites often show high recruitment rates of for these common dominant intertidal species. Because most of the surveys were performed by boat, only 2 or 3 sites along the subdivision were used to judge the distribution of gastropods along the section.

II. Major Species

A. Barnacles

3 species (Balanus glandula, Semibalanus cariosus, Chthamalus dalli) are most abundant on cliff faces & boulder beaches. All 3 species have spat in moderate to high abundance.

B. Mussels

Mussels are particularly dense on boulders & cliff faces in the middle to high intertidal where recruitment of spat is small. Mussels, it is presently heavy. Cobble beaches have low densities of mussels (but some spat) due to the negative effects of wave disturbance.

C. Gastropods

Littorines (Periwinkles) are highly variable, but often dense in some areas. Moderate densities occurred on the cobble beaches.


E. A list of major & minor species follows:
MAJOR SPECIES

I. Marine Plants
   A. Diatoms/Blue Green Algae D123
   B. Green Algae - Chlorophyta
      Spore morph / Acrosiphonia m12
      Ulva m12
      Urospora D23
   C. Red Algae - Rhodophyta
      Petrocelis m12
      Porphyra D123
      Rhodomela laria m123
      Rhodymenia palmata m12*
   D. Brown Algae
      Alaria ptyaica m12
      Fucus distichus D123*
      Laminaria spp. m12
      Hildenbrandia spp. D123
      Ralfsia spp. m1

II. Animals
   A. Barnacles
      Chthamalus dalli D123
      Balanus glandula D123
      Semibalanus cariosus D1
   B. Hermit Crabs - Pugarridae D23
   C. Amphipods - Orchestia spp? m23
   D. Mussels - Mytilus edulis D123*
   E. Snails
      Littorina scutulata D123*
      L. obtusa D123*
      Nucella lamellosa M123*
      N. emarginata M123*
   F. Urpella
      Lotha digitalis D123*
      Tecta scutum m23*
   G. Sea Stars - Pseudechinus m123*
      Pisaster g12
II MINOR SPECIES

B. Animals

1. Worms -
   Polychaetae
   *Spirorbis* sp. D23
   *Serpula* sp. S12
   *Crosigera* sp. S12

2. Molluscs
   a) Snails / Limpets
      *Tachyhyphes* sp. m12
      *Loxia pernix* S12
      *Tectura pernix* S12
   b) Clams
      *Katharina unica* D12
      *Tonicella lineata* S12
      *Mopalia* sp. R12

3. Sea Stars
   *Dermasterias* m12
   *Henricia* R1
   *Leptasterias* M23
   *Orthasterias* S12

4. Scallops
   *Pododesmacea* Cepico S12

5. Mussels
   *Modiolus modiolus* R1

6. Anemones
   *Anthopleura xanthogrammica* S12
   *Tealia crassicornis* m12
   *Etaplites* sp. M12

7. Pulmonate Snails - *Siphonaria* sp. D1

8. Crabs
   *Acantholithodes* ? S12
   *Pagetia productus* S123

9. Bryozoa
   *Schizoporella* pp. m12

10. Beach Hoppers
    *Isopoda* S1

11. Fish
    *Pallidae* D23
    *Cottidae* S1

12. Hydrozoa
    *Hydantoea porphyra* S12

13. Reefs
    *Sclerocrinidae* S12


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<th>Juvenile present</th>
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II  MINOR SPECIES

A. MARINE PLANTS

1. GREEN ALGAE - CHLOROPHYTA
   Cladophora 5 12
   Enteromorpha 5 12

2. Red Algae - RHODOPHYTA
   Ahnfeltia plicata 5 12
   Bassiella spp. 5 12
   Callidryas spp. 5 12
   Corallina spp. 5 12
   Endoclados mucicata 5 12
   Halosaccion glandiforme 5 12
   Iridaea spp. 5 12
   Littorinastrum 77 5 12
   Membranipora platyphylla 5 12
   Microcladina (Microcladula) 5 12
   Odonthalia 5 12
   Planothidium 0 12
   Mastocarpus 0 12

3. Brown Algae
   Costaria 5 12
   Sertulariopsis 5 12

F  General Comment.

Oil effects on this subdivision are less evident than on some others. Cobble beaches show little evidence of
oil, sea and cliffs appear relatively clean (lightly oiled).

G  WILDLIFE

1) Seals - 8-10 seals in 2 haul out sites - Seal were skittish,
    6/18 jumped from the haul out site when ship was within 100 m
    or more.
2) Bald Eagles - Common
3) Common muruk gull
4) Ravens
5) Ovans
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-106

SUBDIVISIONS: B (2 OF 3)
SHORELINE EVALUATION

SEGMENT ST/ EL-106 SUBDIVISION B (2 OF 3) DATE 4/5/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3Q,3T Harbor seal and sea lion molting (8/15 to 9/15)
5T 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. Avoid disturbing unlisted seal haulouts on north end of EL-106 (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 408 m: Medium 69 m: Narrow 159 m: V.Light 604 m: No Oil 0 m
Subsurface Oil Observed: Yes X No____ Maximum Depth 30+ cm

RECOMMENDATIONS:

No Treatment Recommended Oil 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 X* Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of tarmats
2) manual pick up of oiled debris and logs, 3) bioremediation of areas
shown on attached sketch map. 4) *manual tilling of areas shown on
attached sketch map. Work should be conducted between 7/1 and 8/15 due
to pinniped constraints after approval by ADF&G and USFWS regarding
eagle nest.

TAG COMMENTS: ____________________________________________________________

TAG APPROVAL DATE: __________
ADEC __________________________
EXXON ________________________
NOAA _________________________
USCG _________________________
FOSC: __________________ DATE: __________
FIELD SHORELINE COMMENT SHEET

SEGMENT ST/EL-106-B  SUBDIVISION:  B  DATE 4/8/90

USCG  NAME  DAVID A. SCHNEIDER  SIGNATURE  David A. Schneider

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

Subdivision B consists of three large and one small boulder/coarse/gravel beaches. Extensive manual clean-up will be needed here to improve aesthetics of these sites. Areas of asphalt will be broken up and removed manually and extensive debris should be collected and removed. It is doubtful that bioremediation techniques will be very effective on the larger boulder fields, however I feel that some attempt should be made to treat smaller sediment pockets on these beaches by utilizing tilling and bioremediation. Application of bio-r agents on boulders may have some positive effect on coating and assist natural cleaning process.

ADEC  NAME  Peter Montana  SIGNATURE  Peter Montana

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

The small cobbled pocket by Pit #2 has ailing to be biored. The upper tidal oiled area should be pulled down to expose the thin oil layer before bio. The surface is clean to apply fertilizer now.

Area by Pit 1 is tidied up on top of some bedrock and can be steam cleaned. Below that (pit 4), there is oil of considerable significance below large cobbles and small boulders. These areas should be high-volume, hot water washed (Hot Flash with Hot Hobes or Omni). Surface sediments will have to be flipped to best reach oil. On the next beach (pit #5), the oiling is identical, but this boulder area is only covered by LEP because of rocky shoreline.

The last beach ( paraphrased) was washed extensively last summer. The Scott asphalt on E side should be removed. Both have a DBA dry surface with DBR below. The E side is bionite and the w side is underlaid by shallow bedrock and is borderline for bio. Both have penetrations of geotextile over the hump, which washes up. The complete effectiveness of continued washing is in question, though the last effective method.

LAND MANAGER  NAME  JANET HITCHCOCK  SIGNATURE  Janet Hitchcock

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

The beach on the land of this subdivision is not used and provides easy access to the uplands but is not necessarily a good recreation site. The U12 should be pulled down to bio site. The entire end of this beach is where pit 5 is located and is many boulders. These areas by aerial amount of salt. I recommend hot water wash. Some adjacent hot water wash must be picked up. Beach adjacent to EL107 is mostly a sloping 3/15 slope, which would provide excellent recreational use and a access to the uplands. Pit #8 area on both sides has salt in the ball. These should probably pick up prior to hot water washing. Hot water wash should be subjected to longer mix and then bioremediation of the two areas are recommended.

REVISION NO. 2/21/90
### SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<tbody>
<tr>
<td>ASPHALT PAVEMENT</td>
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<td>COVER</td>
<td>X</td>
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<td>COAT</td>
<td>X</td>
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</tr>
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<td>STAIN</td>
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</tr>
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<td>MOUSSE</td>
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<tr>
<td>PATTIES</td>
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</tr>
<tr>
<td>TARBALLS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FILM</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>NO OIL</td>
<td>Snow on last beach</td>
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### OILED DEBRIS

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<tr>
<th>AMOUNT</th>
<th>LOGS</th>
<th>VEGETATION</th>
<th>TRASH</th>
<th>DEBRIS</th>
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<tr>
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<td>X</td>
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### OILED DEBRIS COLLECTED

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<tr>
<th>TYPE</th>
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### Photographs:

- Roll No. ST-6-3 and ST-6-4
- Frames 2-4, Frame 19, 21, 34
- 26-28

### SUBSURFACE OIL

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL (cm)</th>
<th>OIL / FILM COLOR</th>
<th>SUBSURFACE SEDIMENTS</th>
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<td>15 - 30</td>
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**TIDE LEVEL:** +6 to +1

**DATE:** 4/1/96

**REVIEWED:** 7W

**DATE:** 4/1/96
SHORELINE ECOLOGICAL SUMMARY

Segment ST_E=106 Subdivision_B Date (mo/day/yr) April 6 1998

Time (24 hr) 1300-1830 Biologist JIM BARRY Length 650

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

(B) Overall % cover of biota (% of segment): Dense 30 Moderate 55 Low 15

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

BARNACLES

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<th>Sparse</th>
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GASTROPODS

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FUCUS

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Wildlife Observations/General Comments:
Crow - 5
Peale's Cormorant - 20
Common Loon - 3
Pistol Guller - 1

Ecological Considerations:
1) Deep mud area on island should not be disturbed.
2) Herring roving area on eel grass beds should not be disturbed.
3) Sand beach should not be raked due to active recovery of eelgrass bed.
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

- The survey suggests a need for more accurate data.
- Current data is outdated and requires updates.
- The survey indicates a need for better data collection methods.

By summarizing the above findings, you can focus on areas for improvement.

1. Conduct field tests in specific locations to gather more accurate data.
2. Implement new data collection methods.

I General Comments

April 7, 1990

E106-B
III. MAJOR SPECIES

A. Barnacles - composed of B. barnakorum, with lesser core of Semibalanus barnakorum (middle intertidal zone) and Chthamalus dalli (spat of Chthamalus and Balanus species).

B. Nudibranchs - see above.

C. Gastropods - mainly littorinids, but some moderate densities of limpets.

D. Fishes. Sparses or dead adults present at high oxides of some sites, apparently due to cleaning operations.

III. Other Species

A species list is found below. Noteworthy comments can be made on a couple of species:

1) Clams - Several species of clams are present as empty shells on most beaches. However, individuals of some species are found, but these generally are small or young juveniles. The source of the dead, empty shells is unknown, but it does appear related to predation. Mortality is contamination and cleanup operations may be the cause.

2) Seaweed - One juvenile individual of a green marine was found.
ELOS2-B

See index next page

A. Marine Plants

1) Dinoflagellates/Blue Green Algae
2) Green Algae - Chlorella
   - Symulomorpha/Alcosiphonia M23
   - Closiphora 512
   - Enteromorpha 512

B. Marine Animals

1) Barnacles
   - Scalpellum carinatum 512
   - Barnus campestris 812
   - Chthamalus dalli M12

2) Pteropoda - Hemi 557
   - Hemicylops oregonensis 525
   - Diveraster T33 R29
   - Pulexita spp. R29

3) Amphipods - Orchestra spp. M12
4) Mytilus - Mytilus edulis M12
5) Beach Hoppers - Nisella 523
6) Mysids - Mysidacea spp. R12
7) Limnoria - scutulata M112
   - Limnoria M112
   - Nucella lapillus 512
   - N. obtusata 512
   - Scaphidia alata M123
   - Tachyhyes 523
8) Ctenophora - Tetraulax M12
   - T. Ctenopina 512
   - L. seminulum 512
   - L. pyriformis 512
   - M. mitella R12
   - Siphonophora M12
   - Polyzoa spp. R12

B. Animals

1) Pteropoda - Hemi 557
   - Hemicylops oregonensis 525
   - Diveraster T33 R29
   - Pulexita spp. R29

12) Ammonites
   - Anthrachnena elegansimma M12
   - A. adamsi M12
   - A. kastriornicera M12
   - T. Trefeckeri 512
   - Spinoceras M12

A. Marine Plants

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   - Anthrachnena elegansimma M12
   - A. adamsi M12
   - A. kastriornicera M12
   - T. Trefeckeri 512
   - Spinoceras M12
13) Worms
- Echiurans
- Nereis sp.
- Phascolosoma sp.
- Polychaetes
- Serpulidae, R23
- Serpula crugiesera
- Spirorbidae, M-O, R23

14) Fish
- Cothidae, 3 spp., M-12
- Pholidae, 1-2 spp., M-23

15) Hydromedusae
- Synoides spp., proliferans

16) Others
- Natica clausa, nominal, R23A
- Amphissa colombiana, R23A
- Lamellodiscus, n/a, 7, M12
- Beroidea, n/a, 5123A
- Phyllorhiza, n/a, 5123A
- Schizoporella, n/a, 5123A
- Stomolophus, n/a, 5123A
EL-105

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

EL-106

Exxon Segment Length: 5524m
ADEC Segment Length: 5078m

EL-106-A
3900m

Down PWS 126A

Map Key: PWS-126c
Name: C. Dillon
Date: 4/2/90
Date Entered:
Mapping missed narrow category
Please check and revise
VRH 17 Feb 90

EL-106-A
3900 m

EL-106-B
650 m

VL patchy stain
1-2 m wide x 20 m long
on high tide line

EL-106-C
974 m

EL-106-A: Oil character lengths (m): CT 26 ST 75 NO3
EL-106-B: CV 55
EL-106-C:

Wide
Medium
Narrow
Very Light
No Oil

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

EL-106
Exxon Segment Length: 6524 m
ABEC Segment Length: 5073 m

Map Keys: PWS-126
Date: 2/90
Name: CD Dillon
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-106

SUBDIVISIONS: C (3 OF 3)
SHORELINE EVALUATION

SEGMENT ST/EL-106 SUBDIVISION C (3 OF 3) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
5T All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

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

ARCHAEOLOGICAL CONSTRAINTS:
If 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 228 m: V.Light 1121 m: No Oil 956 m
Subsurface Oil Observed: Yes X No Maximum Depth 40 cm

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: Recommended treatment includes 1) bioremediation of surface and subsurface oil in areas shown on attached sketch map. Work should be conducted between 7/1 and 8/15 based on pinniped constraints, after approval by ADF&G and USFWS regarding eagle nest.

TAG COMMENTS: ______________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________

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

SEGMENT ST 1 26 106 C SUBDIVISION C DATE 4/8/90

USCG
NAME DAVID A. SCHNEIDER SIGNATURE David A. Schneider

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

TILLING AND BIOREMEDIATION METHODS SHOULD BE UTILIZED ON THE TWO SMALL COBBLE/PEBBLE BEACHES LOCATED ON THE NORTHERN SHORE OF THIS ISLAND. CONCENTRATION OF CLEAN-UP RESOURCES IN SUBDIVISION B WILL ALLOW FOR EASY ACCESS/LOGISTICS TO THESE TWO BEACHES IN C.

SITE OF ISLAND NEEDS TO BE RE-EVALUATED AFTER SNOWMELT.

ADEC
NAME Peter Montesano SIGNATURE Peter J. Montesano

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS Refer to map for use directions:

New Beach: LITZ with a 70% stain, some on surface, but surface is too clean to be immediate. Any fertilizer would not reach subsurface oiling. The LITZ is extended and healthy. At 30 cm in Pit #5, there was a 1 LBR sheen on interstitial water.

NE Beach: The supratidal is snow covered and should be examined to determine extent of oiling. There is low energy beach also with an extended LITZ. APIT #7, 100°, there is considerable oil of significance. Any treatment would have to be preceded by tilling. After tilling a hotwater (root steam) wash is recommended, possibly to be substituted with bio. This be is most easily accessed by Levi’s at mid to high tides, low tide access is distant and not easy.

LAND MANAGER
NAME Janetta Pitchard SIGNATURE Janette Pitchard

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

A concurs with AOC recommendations. The NE beach has an absent biofilm which needs to be picked up. If additional debris is found after the snowmelts and a reevaluation of the site.
### DISTRIBUTION OIL

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

### SURFACE OIL

- PAVEMENT: 0 sq. m by 0
- PATTIES/TARBALLS: 0
- NEAR SHORE SHEEN?: Yes
- OILED DEBRIS AMOUNT: SM/MD/LG
- DEBRIS COLLECTED: Yes
- TYPE: O
- BAGS: 0

Photographs:
- Roll No. ST-6-4
- Frames: 32, 33

### SUBSURFACE OIL

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>BELOW</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>SUBSURFACE SEDIMENTS</th>
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<tbody>
<tr>
<td>1</td>
<td>25</td>
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<td>10</td>
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<td>X</td>
<td>C/P/G</td>
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<td>5</td>
<td>35</td>
<td>X</td>
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<td>X</td>
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<td>C/P/G</td>
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<tr>
<td>6</td>
<td>30</td>
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<td>X</td>
<td>X</td>
<td>C/P/G</td>
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<td>7</td>
<td>40</td>
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<td>X</td>
<td>C/P/G</td>
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<tr>
<td>8</td>
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<td>X</td>
<td>C/P/G</td>
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</tr>
<tr>
<td>9</td>
<td>40</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>Peat</td>
<td></td>
</tr>
</tbody>
</table>

Date: 4/10/90
SEGMENT ST/ EL-106
SUBDIVISION C
DATE 06/14/90

CHECKLIST
- N Arrow
- Approx. Scale
- Sey/Sub Endry
- Oil Distribution
- Wehn
- Length
- % Cover
- Subsurface Character
- Ext. Hi/Lo LR
- SSL
- Profile Location(s)
- Profile(s)
- Sub Location(s)
- Photo Location(s)

LEGEND
1 △
Pt - No Subsurface Oil

2 △
Pt - Subsurface Oil

- CT/C
Continuous Distribution
- CT/B
Broken Distribution
- CT/P
Patchy Distribution
- CT/S
Splashed Distribution

Oil Vegetation

Photo location, direction, and number

OIL CHARACTER LENGTH (m): AP ○ PO ○ CV ○ CT 25 ST 559 MS ○ PT ○ TB ○ FL ○ NO 390
SHORELINE ECOLOGICAL SUMMARY

Segment ST/EL-106  Subdivision C  Date (mo/day/yr)  April 6 1990

Time (24 hr)  1300-1445  Biologist  1445 - 1630

Length 974m

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

(B) Overall % cover of biota (% of segment): Dense 40%  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 (3)

<table>
<thead>
<tr>
<th></th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
<th>Not Present</th>
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<tr>
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<tr>
<td>MYTILUS</td>
<td></td>
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<tr>
<td>GASTROPODS</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>FUCUS</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Wildlife Observations/General Comments:
Crow 5  Pelican (guillemot) - 2  Seaweed - 2
Harbor Seal - 1  Common Loon - 1

Ecological Considerations:
1) Eagle nest on island should not be disturbed
2) Hunting, grazing or red grass bed should not be disturbed
3) Seal haul out area at south end of island should not be disturbed

Photographs:
Roll No. 57-6-4
Frames 28-34
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 (5/7 to 8/31)
Purse seine area (7/20 to 9/30)
Purse seine hook-off (7/20 to 9/30)
Set net sites (6/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

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

Harbor seal and sea lion pupping (5/15 to 7/1);
Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

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

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

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

Recreation:
Tent sites (6/1 to 9/15)
Anchorages (6/1 to 9/15)
Forest Service cabins (6/1 to 9/15)
Lodge (8/1 to 9/15)
Special use destination

Subsistence area:
Salmon harvesting (5/1 to 9/30)
Finfish harvesting
Deer harvesting (9/15 to 2/23)
Invertebrate harvesting
For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
General Comments

Habitat types --

Similar to 106-B - except there is not sandy beach on this subdivision. See comments for 52106-B.

Most of the subdivision is high angle cliffs with well defined intertidal situation: Hancock side is clearly visible below the barnacle zone, with a thick Pencos and other macroalgae zone below.

Major Species - See 106-B
III. SPECIES LIST

A. MARINE PLANTS

1) DIATOMS / BLUE GREEN ALGAE
   a) Green Algae - CHOROPHYTA
      Spongophora/Acrosiphonia M123
      Ulva S12
      Cladophora S12
      Enteromorpha S12

2) RED ALGAE
   a) Porphyra M12
   b) Petrocelis S12
   c) Rhodoma larix M12
   d) Rhodosiphonia punnata D12
   e) Bossiella spp. S12
   f) Callithamnion S12
   g) Corallina S12
   h) Enodocladia S12
   i) Halosaccion S12
   j) Ridaea S12
   k) Cryptosiphonia M12
   l) Membranoptera M12
   m) Mastocarpus S12
   n) Microcladia (Petrocladia M12
   o) Lithothamnion S12

3) BROWN ALGAE - PHAEOPHYTA
   a) Fucus distichus M123
   b) Laminaria olia
   c) Hildenbrandia M12
   d) Raccoonia M12
   e) Costaria M12
   f) Alaria M12
   g) Syrosiphon S12

4) HIGHER PLANTS - EEL GRASS - R3

B. ANIMALS

1) Barnacles
   a) Semibalanus cariosus M123
   b) Balanus balanoid M123
   c) Chthamalus M123

2) Peacorids - Harma spp. M123
   a) Hemigraphis oregansis 523a
   b) Harpocirrina Type R23a
   c) Pugettia spp. R23a

3) Mollusks
   a) Ula Picta M123
   b) Nucella lamellosa M123
   c) Lottia gigantea M123
   d) Lottia olum M123
   e) Lottia scabra M123
   f) Lottia annulata M123

4) Echinoderms
   a) Asterias callosa M123
   b) Acanthaster M123
   c) Urosomma callosa M123

5) Fishes
   a) Pomacentrus annularis M123
   b) Angelfish M123
   c) Surgeonfishes M123
   d) Runners M123

6) Crustaceans
   a) Crustaceans M123
   b) Shrimps M123
   c) Lobsters M123
   d) Crabs M123

7) Invertebrates
   a) Invertebrates M123
   b) Mollusks M123
   c) Echinoderms M123

8) Amphipods
   a) Amphipods M123
   b) Isopods M123
   c) Hymenoptera M123

9) Fishes
   a) Pomacentrus annularis M123
   b) Angelfish M123
   c) Surgeonfishes M123
   d) Runners M123

10) Lobsters
    a) Hymenoptera M123
    b) Isopods M123
    c) Echinoderms M123

11) Mollusks
    a) Crustaceans M123
    b) Shrimps M123
    c) Lobsters M123
    d) Crabs M123

12) Crustaceans
    a) Crustaceans M123
    b) Shrimps M123
    c) Lobsters M123
    d) Crabs M123

APRIL 1990
13) Worms

- Spiculids - *Phascolosoma* spp.
- Polychaetes -
  - Nereidae: R123
  - Nudibranch: R123
  - Others
- Sepulcridae: R123
- Terebralia
- Spirobranchus: M-D123
- Spirodiscus spp.

14) Fish -
- Cthidae: 3 spp. M123
- Pholididae: 1-2 spp. M234

15) Hydrozoa - *Stylometra porphyra*

16) Others
- Natica clausa: *Leontopilum* - R234
- Amphiilla colombiana: R234
- Lamellodola fusca: m123
- *Goniomorphaea* argunensis: S1230
- *Other impeds* - 2 spp.
- *Lebbeus* spp.: R234
- *Schizophyllum* spp.: M1234
- Stomolobenthus droebachiensis: R234

*Juveniles present*

*Den*:

- Moderate
- Sparse
- Rare

1. Bedrock
2. Boulder
3. Coralline
4. Pebble/sand
EL-106-A: Oil character lengths (m):
CT 25 ST 75 NO.
EL-106-B: CT 340 ST 335
EL-106-C: CT 25 ST 557 NO2

Map Key: PHS-126
Name: C. Dewan
Date: 4/2/90
Date Entered:

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

Wide 6524m
Medium 5078m
Narrow
Very Light
No Oil
EL-106

--- Narrow
TTTT Very Light

XXXX Wide

// / Medium

Map Key: PWS-1266
Name: C. Dillon
Date: 4/2/90

No Oil

Photo 5
Large LANG cobble/pebble beach
All Surface sediments unoiled.

Pit 1 shows what appears to be a localized subsurface oiled burn area about 2m x 2m in U1T2. Snow covered U1T2 may be oiled.

PWS 1266
Page 3 of 4
EL-105

EL-106-A
3900m

XXX Wide

/// Medium

---- Narrow

TTTT Very Light

0000 No Oil

Mapp Key: PWS-126c
Name: C. Dillon
Date: 4/2/90

Date Entered:
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT EL-106 SUBDIVISION B (2 of 3)

WORK WINDOW

<table>
<thead>
<tr>
<th>Manual Pickup</th>
<th>CLOSED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tarmat Removal</td>
<td>CLOSED</td>
</tr>
<tr>
<td>Bioremediation</td>
<td></td>
</tr>
<tr>
<td>Manual Tilling</td>
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</tr>
</tbody>
</table>

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

3N,O,P,Q  Harbor Seal & Sea Lion Pupping and Molting  NO TIME CONSTRAINT. Authorized per memorandum dated 5/14/90 from Kathryn Frost/ADF&G to Mark Kuwada/ADF&G.

5T  Bald Eagle Nests  USFWS bald eagle impact assessments conducted on 5/15/90 and 5/20/90 by Mike Lockhart indicate an active nest within 400m of the work area. Closed to manual pickup, tarmat removal, bioremediation and manual tilling.

5R  Seabird Colony  NO CONSTRAINT. Work area is over 800m from nearest seabird colony.

7I1  Subsistence: Deer Harvesting  No constraint to manual pickup or tarmat removal. Closed to bioremediation and manual tilling after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic and beach disturbance to essential minimum after 8/15. Do not apply bioremediation to specific areas where seals are observed to haulout. Do not chase or harass seals or sea lions, and do not approach pups under any circumstances. When working on or near haulouts, complete the job as quickly as possible with minimum personnel, equipment, noise and disturbance. Keep boats and personnel as far from actual haulouts as is practical to do the work specified. Minimize air traffic near haulouts, maintain elevation as practical, and avoid repeated overflights of the same haulout areas. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

FOSC [Signature] Date 6-10-90
SHORELINE EVALUATION

SEGMENT: ST/ EL-106 SUBDIVISION B (2 OF 3) DATE 4/5/90

ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
30,3Q Harbor seal and sea lion molting (8/15 to 9/15)
5T 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. Avoid disturbing unlisted seal haulouts on north end of EL-106 (A).

ARCHAEOLOGICAL CONSTRAINTS: Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time.

SHPO SIGNATURE: ___________________________ DATE: 4/25/90

OILING CATEGORIZATION:
Wide 408 m: Medium 69 m: Narrow 159 m: V. Light 604 m: No Oil 0 m
Subsurface Oil Observed: Yes X No____ Maximum Depth 30+ cm

RECOMMENDATIONS:
____ No Treatment Recommended
X Treatment Recommended
X Manual Pickup
X Bioremediation
X Tarmat: Breakup
X Removal

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

COMMENTS: Recommended treatment includes 1) manual removal of tarmats 2) manual pick up of oiled debris and logs, 3) bioremediation of areas shown on attached sketch map, 4) manual tilling of areas shown on attached sketch map. Work should be conducted between 7/1 and 8/13 due to pinniped constraints after approval by ADF&G and USFWS regarding eagle nest.

TAG COMMENTS: [MONITORS TO CHECK LOGS TO DETERMINE DEGREE OF OILING]

TAG APPROVAL DATE: [ ]
ADEC JOHN [Signature] DATE: 6/3/90
EXXON [Signature] DATE: 6/3/90
NOAA [Signature] DATE: 6/3/90
USCG [Signature] DATE: 6/3/90
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-106 SUBDIVISION C (3 of 3)

WORK WINDOW

Bioremediation
Manual Raking

CLOSED

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>
</tr>
</thead>
<tbody>
<tr>
<td>3N,O,P,Q</td>
<td>Harbor Seal &amp; Sea Lion Pupping and Molting</td>
<td>NO TIME CONSTRAINT. Authorized per memorandum dated 5/14/90 from Kathryn Frost/ADF&amp;G to Mark Kuwada/ADF&amp;G</td>
</tr>
<tr>
<td>7II</td>
<td>Subsistence: Deer Harvesting</td>
<td>Closed to bioremediation and manual raking after 8/15.</td>
</tr>
<tr>
<td>5T</td>
<td>Bald Eagle Nests</td>
<td>Closed to bioremediation and manual raking. USFWS bald eagle Impact assessment completed on 5/15/90 by Mike Lockhart indicates an active nest within 400m of the work area.</td>
</tr>
<tr>
<td>5R</td>
<td>Seabird Colony</td>
<td>NO CONSTRAINT. Work area is more than 800m from colony.</td>
</tr>
</tbody>
</table>

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 5/29/90

MAY 29 1990

Prepared by Andrew Meyer Date 5/29/90
Incorporates information from USFWS Bald Eagle survey 5/14/90.

Exxon Company, USA
Map Key: KNI-EL-106
May 11, 1990

ECOLOGY MAP 5/28
SEGMENT EL-106
SUBDIVISION C (3 of 3)

METERS

Seabird Colony
Eagle Nest

1 inch = 1767 feet
SHORELINE EVALUATION

SEGMENT ST/EL-106 SUBDIVISION C (3 OF 3) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
5T All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

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

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

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

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 228 m: V.Light 1121 m: No Oil 956 m
Subsurface Oil Observed: Yes X No Maximum Depth 40 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) bioremediation of surface and subsurface oil in areas shown on attached sketch map. Work should be conducted between 7/2 and 8/14 based on pinniped constraints, after approval by ADF&G and USFWS regarding eagle nest.

IF FEASIBLE TAKE PRIOR TO BIOREMEDIATION IN AREA OF TEST AT 7

TAG COMMENTS:

TAG APPROVAL DATE: 4/24/90
ADEC [Signature] DATE: 5/3/90
EXXON [Signature]
NOAA [Signature]
USCG [Signature]
SHORELINE EVALUATION

SEGMENT ST/ EL-106  SUBDIVISION A (1 OF 3) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
3N,3P  Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q  Harbor seal and sea lion molting (8/15 to 9/15)
5T  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.

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

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

OILING CATEGORIZATION:

<table>
<thead>
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<th>Category</th>
<th>Width</th>
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<tbody>
<tr>
<td>Wide</td>
<td>0 m</td>
</tr>
<tr>
<td>Medium</td>
<td>0 m</td>
</tr>
<tr>
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<td>40 m</td>
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<tr>
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<td>380 m</td>
</tr>
<tr>
<td>No Oil</td>
<td>6731 m</td>
</tr>
</tbody>
</table>

Subsurface Oil Observed: Yes X No
Maximum Depth 35+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommend bioremediation of area shown on attached sketch map. [(c/p) pocket beach] Work should be conducted before 5/15 or between 7/1 and 8/15 due to eagle nesting constraints, contact USFWS before conducting treatment.

TAG COMMENTS: MONITOR TO CHECK SUITZ - SNOW COVERED DURING SNOWY

TAG APPROVAL DATE: 4/24/90
ADEC ART WEINBERG M. W. DATE: 5-3-90
EXXON MONTGOMERY D. W. FOSC:
NOAA JASON YENTL C. D. NO
USCG M. J. HALL H. J.

Map Key: PWS-128c

Medium 11111
Exxon Segment Length: 5524 m
SHORELINE EVALUATION

SEGMENT ST/ EL-106  SUBDIVISION_B (2 OF 3) DATE 4/5/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
5T All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. Avoid disturbing unlisted seal haulouts on north end of EL-106 (A).

ARCHAEOLOGICAL CONSTRAINTS: Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time.

SHPO SIGNATURE: _______________________________ DATE: __________

OILING CATEGORIZATION:
Wide 408 m: Medium 69 m: Narrow 159 m: V.Light 604 m: No Oil 0 m
Subsurface Oil Observed: Yes X No____ Maximum Depth 30+ cm

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

COMMENTS: Recommended treatment includes 1) manual removal of tarmats 2) manual pick up of oiled debris and logs, 3) bioremediation of areas shown on attached sketch map, 4) *manual tilling of areas shown on attached sketch map. Work should be conducted between 7/1 and 8/15 due to pinniped constraints after approval by ADF&G and USFWS regarding eagle nest.

TAG COMMENTS: Monitors to check logs to determine degree of oiling.

TAG APPROVAL DATE: 4/24/90
ADEC JOHN BAUER ________________________ DATE: __________
EXXON ANN H. TAYLOR ________________________
NOAA JOSEPH TELLER ________________________
USCG M. J. HAL  ________________________
EL-106

- VL patch stain
  1-2m wide, 5-15m long on high tide line

- UITZ 3m wide x 25m long
  Patchy coat on Boulders

- Photo 6
  MITZ 5m wide x 25m long
  Vl sporadic dark brown stain on backside of bedrock

- Pit 1 shows what appears to be a localized subsurface oiled area about 2m x 2m on MITZ.
  Snow covered MITZ may be oiled.

- Photo 5
  Large LANG cobble/pebble beach
  All surface sediments unsoiled.

Map Key: PWS-126b
Name: C. Diven
Date: 4/2/90
Date Entered:

<table>
<thead>
<tr>
<th>Width</th>
<th>Width 106</th>
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<td>EL-106</td>
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<tr>
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<td>ADEC Segment Length: 5078 m</td>
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<tr>
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</table>

METERS
Mapping missed neuron category please check and revise VRH 17/90

VL patchy stain 1-2m wide x 20m long on high tide line

EL-106-A 3900 m
EL-106-B 650 m
EL-106-C 974 m

EL-106-A: Oil character lengths

CT 35 ST 75 NO.

EL-106-B:
CT 340 ST 525
CT 25 ST 557 NO.2

--- Narrow

XXXX Wide

/// Medium

TTTV Very Light

0000 No Oil

EL-106

EXEX Segment Length: 6524 m
ADEC Segment Length: 5978 m

Map Key: PNS-126c
Name: C. Dixon
Date: 12/90
SHORELINE EVALUATION

SEGMENT ST/ EL-106 SUBDIVISION C (3 OF 3) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
30, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
5T All bald eagle nests (3/1 to 6/1)—Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

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

ARCHAEOLOGICAL CONSTRAINTS:
If 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 A. Door Date: 4/25/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 228 m: V.Light 1121 m: No Oil 956 m
Subsurface Oil Observed: Yes X No Maximum Depth 40 cm

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

COMMENTS: Recommended treatment includes 1) bioremediation of surface and subsurface oil in areas shown on attached sketch map. Work should be conducted between 7/1 and 8/15 based on pinneped constraints. After approval by ADF&G and USFWS regarding eagle nest.

"IF FEASIBLE" RACE PRIOR TO BIOREMEDIATION IN AREA OF TEST AT 7

TAG COMMENTS:

TAG APPROVAL DATE: 4/24/90
ADEC Exxon NOAA USCG
Art Wetmire Art Wetmire Joseph Talbot M. J. Hall
FOSC: Date: 5/3/90
C. Dillon
SEGMENT STI EL-106
SUBDIVISION C
DATE 06 April 90

CHECKLIST
- N Arrow
- Approx Scale
- Seg/Sub Entry
- Oil Dist.
- Wharf
- Length
- % Cover
- Substrate Character
- Est. MHL/WL
- DML
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

LEGEND
1 ▲ Pit - No Subsurface Oil
2 ▲ Pit - Subsurface Oil
[CT/C] Continuous Distribution
[CT/D] Broken Distribution
[CT/P] Patchy Distribution
[CT/S] Sphered Distribution
Oiled Vegetation
- ---- Photo location, direction, and number

Sketch Map
- St/S in UITZ berm surface c/lp 1-2m wide x 5m long
- St/S in UITZ berm, surface c/lp 1-2m wide x 5m long
- Broken and patchy stain band, 1-2 m wide along high tide line in crevices and along low energy shoreline

Oil Character Length (m): AP O, PO O, CV O, CT 25, ST 5, 59, MS O, PT O, TB O, FL O, NO 390
EL-106
3900 m

VL patch stain 1-2m wide, 5-15m long on high tide line.

Photo 5
Large LAG cobbles/pebble beach
All surface sediments unoiiled.

Pit 1 shows what appears to be a localized subsurface oiled berm area about 2m x 2m on MITZ. Snow covered MITZ may be oiled.

MITZ 3m wide x 25m long
Patchy coal on Boulders

Photo 6
MITZ 5m wide x 25m long
VL sporadic dark brown stain on backsides of beds.

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

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

Map Key: PVS-126
Name: C. Dillon
Date: 4/3/90

ADEC Segment Length: 9078m
Exxon Segment Length: 5534m

METERS

Date Entered:
1991 MAYSAP EVALUATION

SEGMENT: EL 106  SUB: B  REGION: PWS  SURVEY DATE: 5/20/91

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

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

ARCHAEOLOGICAL CONSTRAINTS:
Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time. PHONE 564-3276; 564-3657; (Anchorage) or 229-1514 (24 hrs.)

RECOMMENDATIONS:

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

COMMENTS:
INITIAL: Manual pickup of easily accessible AP and HSOR at locations A and C, follow with Inipol and Customblen.

TAG:

FOSC:

TAG APPROVAL DATE: June 7, 1991  FOSC APPROVAL DATE: 6/17/91
ADEC  FOSC
EXXON  E. E. PAGE, CDR, USCG
USCG  CHIEF OF STAFF, FOSC
NOAA
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.
TREATMENT RECOMMENDED

ADNR lists this subdivision as a recreational destination. Area "A" has some thin but hard API which makes the sediments together - easy breakup. Area "C", sor/rap which I recall from sand - remove it. The oil in area "C" are spaced for easy access. Beaches on sketches #2, #3 are in extremely poor condition and will require more review. #3 is worst off and ASAP documented the oiling to 50cm. #2 is barely if at all accessible for mechanical work which is marginally appropriate. Mechanical treatment should be considered for #3; it would have to be extremely aggressive. These sites push the limits of available and deserved more treatment in 1989.

The only thing that was written over this page is that it would be difficult to bioremediate in the worst area of the beach, as indicated on sketch map #2 (section E). Also on fig. sketch #1 sec. A + C to include breakup of sor and biodegrade + custom blend.

This subdivision showed quite a bit of activity, but all would be hard to work. At location A, manual hard work and bioremediation would be possible, although work would be slow and results minimal.

Noticeable M & C contain sor and against that could be manually broken up, however, oil was found form the seaward tidal zone (beach grass) to the south (side pool and seagrass bed). Areas appear to be recovering some further cleanup may hamper the recovery.

Concur w/ Exxon rep. w/ consideration to NOAA rep comments. Manual work would be tedious and of questionable benefit. Minimal manual in terms of breakup of asphalt then bioremediate.
OG COMMENTS:

4: Day in heavy SOR area between BLD and Rock outcrop beach, similar subsurface oil character may be found in same area as surface oil, but will not be continuous due to nature of beach material. Irregular rocky coastline with cliff sections mostly in crevices or behind near shore rock. SOR across UMT on boulder beaches, Pebble/Cobble beach, sketch map is clean except for a few drops on Pebble/Cobble.
**OG Comments:**

---

**Reviewed 5/28/91 KG**
<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>
<th>SURFACE- SUBSURFACE SEDIMENTS</th>
<th>NOTES</th>
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<tr>
<td>G</td>
<td>20</td>
<td>X</td>
<td>5 - 10</td>
<td>9</td>
<td>B</td>
<td>X</td>
<td>0 - 40 S</td>
<td>drops</td>
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<td>X</td>
<td>0 - 9</td>
<td>N</td>
<td>10</td>
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<td>Y</td>
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<td>P - P</td>
<td>X</td>
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SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS:
OG SKETCH #3
EL 106B
MAY 20, 1991
12:00 - 14:25
Doug Reimer

CT < 1%
3 x 5m
(drops on Pebbles)

Beach width > 50m

CT/ST 60%
10 x 10m
(largely underside boulders)
SOR 10% (inset)

CT/ST 40%
2 x 15m
Vert. Rock

CT/CV 40%
1.5 x 6m
Vert. Rock Crevise

No Field Data: Assume 5 x 5m minimum

Continued on Sketch Map #2
(Slight overlap)

Reviewed 6/28/91 KG
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # A DATE 20 May 91
SEGMENT # El-106 TIDAL HEIGHT (Range) 1 ft
SUBDIVISION B BIOLOGIST S. Ban
SEA STATE calm WIND SPEED/DIRECTION calm
PHOTOGRAPHS: ROLL # - FRAME # -

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

At oil in the mapped area is found over a wide tidal range. GT/ST high in the ZE was observed in the lichen zone. A patch of sand was encountered in a greater area. Additional sand was scattered throughout the area. Various types of marine predators. This area supported birds as indicated on the map. Living oiled brentner shells were also observed here.

Five sediments near the area did not have evidence of. Living clams (no siphon holes). However, Scurimus and Protactella shells were scoured on the seafloor here.

BC DENG AS INDICATION ON MAP. Lower-intertidal Algae Dense & Diatoms on Rocks/Cliffs.

H: YK: Oil is GT/ST high in ZE, sporadic within lichen zone. No birds present at "X".

N: No biota in upper 1/3 of beach. Biota is well below lichen zone as indicated.

W: Biota high in ZE - Lichen Zone -

X: Lichens and green algae in oiled zone as indicated. Area appears clean. Numerous, dense bivalve shells & scads. No evidence of recent washing. However, hardon are dense in the area and some. Recent spot washes observed.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

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<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
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<th>FISH OBSERVED</th>
<th>SPECIES PRESENT</th>
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<tr>
<td>Gulls/kittiwakes</td>
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<tr>
<td>Shorebirds</td>
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</tr>
<tr>
<td>Corvids</td>
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<td>Seal</td>
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<td>Pinnipeds</td>
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<td>Seal</td>
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<tr>
<td>Sea Otters</td>
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</tbody>
</table>

Shoreline subdivision map showing important biological features attached.

REVIEWED: NC 5/30/91

(Handwritten notes and figures on the form indicating biological observations and characteristics.)
OG SKETCH #1
EL 106 B
MAY 20, 1991
12:00 - 14:25
Doug Reimer

Reviewed: ML 5/30/91
OC SKETCH #3
EL 10 G B
MAY 20, 1991
12:00 - 14:25
Doug Reimer
SMB 20 May 91

Q: CT/ST slope high in ITZ at Lichens & green algae zone.
No biota near Pits #5 and #9 (2012).

Many barnacle shells & scores near Pits #6 & #8.
Dense Lichens and moderate limpets.

P: No biota.

Q: Lichen zone.

Forest.

Lichen zone.

Log pile.

Spikes.

Continued on Sketch Map #2
(Slight overlap.)

Reviewed: MC 5/30/91.
As per USFWS direction, boats did not go within dashed line. Maytag crew walked headlands between dashed line. Bird began chirping when float plane flew overhead, but team was well out of sight of the nest.

EL-106

EL-106-2 INACTIVE

EL-106-1 OCCUPIED

No Boat Access

Boat Access

EL-107-1 GONE

Segment Reference Map
Map Key: PH3 EL106

EAGLE WEST

Attachment 1
1991 MAYSAP EVALUATION

SEGMENT: EL 106 SUB: B REGION: PWS SURVEY DATE: 5/20/91

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

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

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

SHPO Signature: ______________________ Date: __________________

RECOMMENDATIONS:

<table>
<thead>
<tr>
<th>TREATMENT REQUIRED (Y or N)</th>
<th>INITIAL</th>
<th>TAG</th>
<th>FOSC</th>
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<tr>
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<tr>
<td>Other</td>
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COMMENTS:
INITIAL: Manual pickup of easily accessible AP and HSOR at locations A and C, follow with Inipol and Customblen.

TAG: __________________________________________

TAG APPROVAL DATE:__________________________ FOSC APPROVAL DATE:__________________________

ADEC____________________ FOSC ____________________

EXXON____________________

USCG____________________

NOAA____________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

**Subsistence - Deer Harvesting:** Unlimited treatment prior to 8/15.
TREATMENT RECOMMENDED
ADNR lists this subdivision as a recreational destination area "A" has some thin but hard film which keeps the sediments together - easy break up. Area "C" sorvap which I recall from SSAT - remove it! The BC in area "C" are spaced for easy access. Beaches on sketches #2 & #3 are in extremely poor condition and will require the review. #3 is worst off and ASAP document the oiling to 50cm. #2 is barely visible at all accessible for mechanical work which is marginally appropriate. Mechanical treatment should be considered for #3; it would have to be extremely aggressive. These sites push the limits of available and needed more treatment in 1989.

EXxon
NAME: FRANK LAX
SIGNATURE:

AND MANAGER
NAME: DENNIS S. KENNEDY
SIGNATURE: D. S. KENNEDY

USCG/NOAA
NAME: CAL MEDEIROS
SIGNATURE: CAL MEDEIROS

NGT CONCUR w/EXXON REP, w/ consideration to NOAA REP comments. Manual work could be tedious and of questionable benefit. Minimal manual in terms of break up...
TOTAL LENGTH SHORELINE SURVEYED: 549 m
NEAR SHORE SHEEN: □ BR □ RB □ SL □ NONE
EST. OIL CATEGORY LENGTH: W 10 m M 20 m N 41 m V 115 m NO 243 m US 0 m

OG COMMENTS:
A4 Day in heavy SOR area between BID - very coarse BID/Rock outcrop beach,
Similar subsurface oil character may be found in same area as surface oil, but
will not be continuous due to nature of beach material. Irregular Rocky
coastline with cut/ev on cliff sections mostly in crevices or behind
near shore rock. SOR across U1T2 on boulder beaches. Pebble/Cobble beach.
Sketch map #1 is clean except for a few drops on Pebble/Cobble.

REVISED 5/23/91 KG
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<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT</th>
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<td>MS</td>
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<td>OR</td>
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<tr>
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<td>P</td>
<td></td>
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</table>

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

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

**Photo Roll #:** MAYSAP

**Frames:**

**Pit Pit No. Depth (cm)**

<table>
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<th>OP</th>
<th>HOR</th>
<th>MOR</th>
<th>LOR</th>
<th>OF</th>
<th>TR</th>
<th>NO</th>
<th>Oiled Zone Below Level</th>
<th>Clean</th>
<th>Hydrocarbon Color</th>
<th>Pit Zone</th>
<th>Surface Subsurface Sediments</th>
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<td></td>
<td></td>
<td></td>
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<td>cm - cm</td>
<td>cm - cm</td>
<td>B R S N</td>
<td>S</td>
<td>Ui</td>
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</tbody>
</table>

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

**OG Comments:**

---

Reviewed 5/28/91 KD
<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レベル (cm)</th>
<th>SHEEN COLOR</th>
<th>PIT ZONE</th>
<th>SURFACE-SUBSURFACE SEDIMENTS</th>
<th>NOTES</th>
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<tr>
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SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS:
OG-SKETCH #3
EL 10 G B
MAY 20, 1991
12:30 - 14:25
Doug Reimer

CT < 1%
3 x 5 m
(drops on Pebble)

Beach width = 50 m

CT/ST 60%
10 x 10 m
(largely underside boulders
Sor 10%)

CT/ST 40%
2 x 15 m
Vert. Rock

CT/SC 40%
1 1/2 x 6 m
Vert. Rock
Crevice

Segment Boundary

continued
on Sketch Map #2
(slight overlap)

Revised: MC 5/30/91
Reviewed 6/29/91 KG
WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

| BIRDS         | # OF SPECIES | TOTAL BIRDS | FISH OBSERVED
<table>
<thead>
<tr>
<th></th>
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<th></th>
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<tr>
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<td>Waterfowl</td>
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<td>Gulls/Kittiwake</td>
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<td>Shorebirds</td>
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MARINE MAMMALS

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<th># OBSERVED</th>
<th>SPECIES</th>
<th># OBSERVED</th>
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<tr>
<td>Sea Otters</td>
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<tr>
<td>Pinnipeds(specific)</td>
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<td></td>
<td>Seal</td>
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LAND MAMMALS

Shoreline subdivision map showing important biological features attached.
OG SKETCH #1
EL 106 B
MAY 20, 1981
12:00 - 14:25
Doug Reimer

[Map and Diagram: Forest, Grass, Pic Beach, etc.]

A: SCUBA, 40', in beach grass, lichen nearby
B: No Biofa, naturally repugnant beach
C: No Biofa

Critical Points:
- Peat
- Four clamshells
- No siphondea

A: SCUBA, barnacle spots, other barnacles, spider
- Foxie, tide pools with algae, lime
- Boundary

Continued on sketch map #2

Reviewed: MC 5/30/91
OG SKETCH #3
ÉL 1063
MAY 20, 1991
12:00 - 14:25
Doug Reimer
SMB 30 May 91

Q: CT/ST found high in pit at Lichen & green algae zone. No biota near pits #5 and #9 (soil)

Many Lichen Shells & scars near pits #6 & #8 Dense lichen and moderate limpets

Q: Lichen zone

Segment boundary

Forest

Large log pile

C/B

C/B stuck spot

continued on sketch map #2 (slight overlap)

Review soo: MC 5/30/91
As per USFWS direction, boats did not go within dashed line. May/Aug crew walked headlands between dashed line.

Bird began chirping when a float plane flew overhead, but team was well out of sight of the nest. 

EL-106-2 mapactive
EL-106-1 occupied
No boat access

MAELE NEST
Segment Reference Key
Map Key: P102100

Attachment 1
1991 MAYSAP EVALUATION

SEGMENT: EL 106 SUB: A REGION: PWS SURVEY DATE: 5/20/91

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

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

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

SHPO Signature: [Signature] Date: 6/07/91

RECOMMENDATIONS: INITIAL TAG FOSC

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

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

FOSC:__________________________________________________________

TAG APPROVAL DATE: June 6 1991 FOSC APPROVAL DATE: 6/11/91

ADEC: John [Signature] FOSC: E. E. PAGE, CDR, USCG

EXXON: Earl [Signature] CHIEF OF STAFF, FOSC

USCG: Ed [Signature]

NOAA: [Signature]
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

<table>
<thead>
<tr>
<th>TEAM NO.</th>
<th>SEGMENT</th>
<th>SUBDIVISION</th>
<th>DATE</th>
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<tbody>
<tr>
<td>2</td>
<td>SE 106</td>
<td>4</td>
<td>1/20/91</td>
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### ADEC

<table>
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<tr>
<th>NAME</th>
<th>SIGNATURE</th>
</tr>
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<tbody>
<tr>
<td>Peter Montesano</td>
<td></td>
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**TREATMENT RECOMMENDED**

The oiling is well documented. The only treatable area is a "F" with some surface AP/SAR and H& R over a 3x3m area very near the surface. This area is small and the shoreline presents difficult access for any sort of crew.

### EXXON

<table>
<thead>
<tr>
<th>NAME</th>
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</thead>
<tbody>
<tr>
<td>Frank Red</td>
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**TREATMENT RECOMMENDED**

Most of the segment is high energy shoreline with only remnants of remaining oil and that one wet blanket could be obtained with filter activities.

### ANDMANAGER

<table>
<thead>
<tr>
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<th>SIGNATURE</th>
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<tbody>
<tr>
<td>Dennis E. Kennedy</td>
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**TREATMENT RECOMMENDED**

This is a long vertical rock outcrop with mostly OT & S oiling. Area "F" has the most significant oiling. Though treatment is not recommended in this shoreline.

### USCG/NOAA

<table>
<thead>
<tr>
<th>NAME</th>
<th>SIGNATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bill M.P. Zicchino</td>
<td></td>
</tr>
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**TREATMENT RECOMMENDED**

Only small amounts of oil found along the segment. Since the shoreline consists of cliffs and large boulders, removal or break-up of SOR would be very difficult for clean-up crews. Our team surveyed the segment under ideal water conditions less than perfect weather (10 knot) could make the area unsuitable for crews. DS-5

- No TREATMENT RECOMMENDED.
**MAYSAP SHORELINE OILING SUMMARY**

**TEAM NO.** 2  
**OIL** Premier  
**BIO.** S. Ban  
**ADEC** P. Modica  
**LANDMANAGER** D. Kennedy  
**USCG/NOAA** O. Simonek-Balke  
**DATE** 5-120-91  
**TIME** 14:26 to 16:00  
**TIDE LEVEL** 1.13 ft. to 4.08 ft.  
**ENERGY LEVEL**  
**SURVEYED FROM:**  FOOT □ BOAT □ HELO  
**WEATHER:**  □ SUN □ CLOUDS □ FOG □ RAIN □ SNOW  
**TOTAL LENGTH SHORELINE SURVEYED:** 3325 m  
**NEAR SHORE SHEEN:**  □ BR □ RB □ SL □ NONE  
**EST. OIL CATEGORY LENGTH:**  W 0 m M 10 m N 25 m V 76 m NO 3214 m US 0 m

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<tr>
<th>L</th>
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**NOTES:**
- DISTRIBUTION: C = 91-100%; B = 51-90%; P = 11-50%; S = 1-10%; T = <1%
- SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE

**PIT NO. DEPTH**

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<th>OILED ZONE</th>
<th>CLEAN H2O LEVEL</th>
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<th>PIT ZONE</th>
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<td>Y</td>
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</table>

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

**OG COMMENTS:** High angle/vertical Rock coastline with small boulder beaches mostly in crevices. One larger beach (site #2) which has a mixture of high angle (high energy) pebble beaches and boulder banks. The most significant oiling found was in a small pocket beach (site #5) where some surf/spray was found. Other areas are CT/ST on sheltered sides by beds/rock. This is a very irregular shore line with numerous crevices and sheltered rock shoreline features. It is likely that several days of rock climbing would find more sporadic CT along the coast.

**REVISIONS:**
- MC 5/28-91
- revised 5/28-94
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2
SEGMENT # K1-106 A
TIDAL HEIGHT (Range) 1 to 4 ft
SUBDIVISION A
BIOLIGIST Jim
SEA STATE calm
WIND SPEED/DIRECTION calm
PHOTOGRAPHS: ROLL #  —  FRAME #  —

COMMENTS/ OBSERVATIONS (to be completed in oiled subdivisions only):
A: As characterized on the maps, lower DZ in clothing supports mussels, dense barnacles, Guinean Limpet barnacles
B: Small pebble beach is naturally depauperate. Nearshore rocks with CT support green algae + very few lianas
C: As indicated. Hi: lianas were not alive; most a lion lianas were alive. Mussels and barnacles spot below ocean zone and seaward of oil
DEFGHI: As indicated on map. Oil is high in DZ in lichen zone. Lower zones support dense, diverse plants

If oil is removed from boulders at "C", additional area for growth settlement would be provided. However, the small amount of area affected here may not be worth risking mussel beds seaward of boulders.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
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<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
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<td>-eq school</td>
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<td>-eq school</td>
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<td>Gulls/Kittiwakes</td>
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<td></td>
<td>salmon(?) Off</td>
<td>-eq school</td>
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<td>Shorebirds</td>
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<td>salmon(?) Off</td>
<td>-eq school</td>
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<tr>
<td>Corvids</td>
<td></td>
<td></td>
<td>salmon(?) Off</td>
<td>-eq school</td>
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<td>Other Birds</td>
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<td>-eq school</td>
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<th>SPECIES</th>
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<tr>
<td>Pinnipeds(specific)</td>
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Shoreline subdivision map showing important biological features attached.
OG SKETCH #1
EL 106 A
MAY 20, 1991
14:36 - 16:00
Doug Reimer

SMBS 20 May 91

OG-скетч #1
EL 106 A
МAY 20, 1991
14:36 - 16:00
Дог Реймер

СМБС 20 Май 91

OG sketch #1
EL 106 A
May 20, 1991
14:36 - 16:00
Doug Reimer

SMBS 20 May 91

OG скетч #1
EL 106 A
May 20, 1991
14:36 - 16:00
Doug Reimer

SMBS 20 May 91
1991 MAYSAP EVALUATION

SEGMENT: EL 106   SUB:    A   REGION: PWS   SURVEY DATE: 5/20/91

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

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

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

SHPO Signature: ___________________________ Date: __________________________

RECOMMENDATIONS:

TREATMENT REQUIRED (Y or N)  N

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

COMMENTS:

INITIAL:

TAG: ____________________________________________________

FOSC: ____________________________________________________

TAG APPROVAL DATE: __________  FOSC APPROVAL DATE: __________

ADEC________________________  FOSC________________________

EXXON________________________

USCG________________________

NOAA________________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Eagle Nest: Access restricted from 3/1 to 9/1. USF&WS authorization required. Maintain 1000' vertical and 1/4 mile horizontal buffer.
The oiling is well documented. The only treatable area is "F" with some surface AP50R and H8R over a 3 x 3m area. Very near the surface. This area is small and the shoreline prevents difficult access for any sort of crew.

Most of the segment is high energy shoreline with only remnants of remaining oil. If this area were reached could be achieved with further activities.

This is a long vertical rock embankment with mostly CT & S oiling. Area "F" has the most significant oiling. Though treatment is not recommended in this situation.

USCG/NOAA NAME: BILL M. JENSEN  
SIGNATURE: BILL M. JENSEN

Only small amounts of oil found along this segment due to the shoreline (rocks, cliffs) and large shoreline removal at break-up of SOR would be very difficult for clean-up crews. Our team surveyed the segment under ideal weather conditions less than perfect weather (i.e. rain) could make this area unrepeatable for crews. DS-2

"6- No Treatment Recommended."
**TEAM NO. 2**

**OG** Ramirez

**BIO** S. Bar

**ADEC** P. Maldonado

**LANDMANAGER** K. Kennedy for USES

**EXXON** F. Bay

**USCG/NOAA** D. Simoncik-Beatty

**DATE** 5-1-91

**SEGMENT** FL 106

**TIME** 14:26 to 16:00

**TIDE LEVEL** 1.13 ft to 4.08 ft

**ENERGY LEVEL** X M M L

**SURVEYED FROM**alfoot xboat xheco

**WEATHER** X SUN 0 CLOUDS 0 FOG 0 RAIN 0 SNOW

**TOTAL LENGTH SHORELINE SURVEYED:** 3325 m

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

**EST. OIL CATEGORY LENGTH:**
- W 0 m
- M 10 m
- N 25 m
- VI 76 m
- NO 3214 m
- US 0 m

---

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<th>Subsurface Oil Character</th>
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<td>P</td>
<td>M 2.0 10</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**DISTRIBUTION:**
- C = 91-100%
- B = 71-90%
- P = 51-70%
- S = 1-10%
- T = <1%

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

**PHOTO ROLL #:** MAYSAR 2 22 FRAMES 10-12

---

**OG COMMENTS:**

High angle/vertical rock coastline with small boulder beaches mostly in crevices. One larger beach (site #1) which had a mixture of high angle/rocky beach and boulder banks. The most significant oiling found was in a small pocket beach (site #5) where some sor/ap was found. Other areas are CT/ST on sheltered side of boulders.

This is a very irregular shore line with numerous crevices and sheltered rock shoreline features. It is likely that several days of rock climbing would find more sporadic CT along the coast.

**REVIEWED:**

**REVISED:** 5-28-91
OG SKETCH #1
EL 106 A
MAY 20, 1991
14:26 - 16:00
Doug Reimer
MAYASAP BIOLOGICAL SUMMARY FORM

TEAM # 2
DATE 26 Mar 91
SEGMENT # KN-106 A
TIDAL HEIGHT (Range) 1 to 4.6'
SUBDIVISION
BIOLOGIST
SEA STATE calm
WIND SPEED/DIRECTION calm
PHOTOGRAPHS: ROLL # ___ FRAME # ___

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):
A: As characterized on the maps, lower IRZ in oil flana supports mussels, dense barnacles, barnacle green algae, and urchin
B: Small pebble beach is naturally depopulated. Shoreline rocks with support green algae. See few littorines.
C: As indicated, barnacles were totally alive, most oiled barnacles were alive.
Mussels and barnacles spot-bleak oil field zone and smooth ice of oiler
Boulders

DEFGH: As indicated on map. Oil is high in IRZ in lichen zone.
Lower zone supports dense, diverse algae.

If oil is removed from boulders at "C", additional area for barnacle settlement would be provided. However, the small amount of area affected here may not be worth risking mussel beds secured of boulders.

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>immature, adult</td>
<td>3</td>
<td>salmon (?) fly</td>
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<tr>
<td>Seabirds</td>
<td></td>
<td></td>
<td>--ly school</td>
</tr>
<tr>
<td>Waterfowl</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gulls/kittiwaks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shorebirds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corvids</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Birds</td>
<td></td>
<td></td>
<td></td>
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<table>
<thead>
<tr>
<th>MARINE MAMMALS</th>
<th># OBSERVED</th>
<th>SPECIES</th>
<th># OBSERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sea Otters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pinnipeds (specify)</td>
<td></td>
<td>Seal</td>
<td></td>
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</table>

LAND MAMMALS

Shoreline subdivision map showing important biological features attached.

Review by M.B. 5/26/91
OG SKETCH #2
EL 106 A
MAY 20, 1991
14:26 - 16:00
Doug Reimer

Subdivision Field Map
Map Keys: SXEL1000AB
Name: Reimer
Date: 5/20/91

OG-0
biota

log file

CT/ST unclear
zone. Bedrock
in lower FTZ
Support recent
split to focus

lichens

lichens

lichens

vertical rock cliff
(Skiff)

vertical rock cliff
(Skiff)

vertical rock cliff
(Skiff)

vertical rock cliff
(Skiff)

high angle/vertical
rock cliff
(Skiff)

Beach Site #7

Beach Site #5

Beach Site #3
1991 MAYSAP EVALUATION

SEGMENT: EL 106  SUB: C  REGION: PWS  SURVEY DATE: 6/13/91

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

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

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

SHPO Signature: ___________________ Date: ___________________

RECOMMENDATIONS:

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

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

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.
EXXON COMPANY, U.S.A.
ALASKA OPERATIONS

MEMORANDUM

To: File
From: Julie Arin
Date: June 17, 1991
Subject: MAYSAP Subdivisions EL-106C, GR-103B, GR-103C, & KN-15A

Additional surveying was performed on the subdivisions listed above. These subdivisions were not completed during the initial survey due to eagles in the area. These survey reports are addenda to the survey information previously submitted (EL-106C was not previously surveyed).
ADEC
NAME: Marianne Profta           SIGNATURE: Marianne Profta

☐ NTR Beach is 10R under large cobble. Access is difficult due to depth a cobble cover. Steep slope beach.

EXXON
NAME: Rex Coulter             SIGNATURE: Rex Coulter

☐ NTR Evidence of surface oiling is minimal in character and distribution. Subsurface oil varied in character and depth but poses no threat to the biota in the area. Any attempt to remove subsurface oil would be more detrimental than beneficial. Only the three small pocket beaches are accessible and access is not easy.

LANDMANAGER
NAME         OF         SIGNATURE

☐ NTR LANDMANAGER NOT PRESENT.

USCG/NOAA
NAME: CWO R.P. Spurr          SIGNATURE: R.P. Spurr

☐ NTR 10R in area A and 50R in area F on 06 map is difficult to access and poses minimal environmental threat.
TEAM NO. 2  SEGMENT EL-106 C  SUBDIVISION C  DATE 5/10/91

ADEC NAME Peter Montesano  SIGNATURE

TREATMENT RECOMMENDED
SURVEY AFTER EAGLE RESTRICTIONS END.

EXXON
NAME Edith Lox  SIGNATURE

TREATMENT RECOMMENDED
Insufficient survey because of eagle constraint.

LANDMANAGER
NAME DENNIS E. KENEDY OF USFS  SIGNATURE 5/5/91

TREATMENT RECOMMENDED
Agree with USFS.

USCG/NOAA
NAME NOAH A. ZAHNTER, USCG  SIGNATURE

TREATMENT RECOMMENDED
Agree with USFS.
TEAM NO. 00

OG Bryan Trimm
BIO Deborah McCormick

ADEC Marianne Profla
LANDMANAGER (No representative)

EXXON Rex Coulter
USCG/NOAA CWO Spurr

DATE June/13/91

B<ON Rex Coulter USCG/NOAA CWO Spurr

TIME 10:40 to 12:30
TIDE LEVEL -2.12 ft. to 2.12 ft.
ENERGY LEVEL: X H X M L

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

TOTAL LENGTH SHORELINE SURVEYED: 1208 m
NEAR SHORE SHEEN: BR RB SL X NONE

EST. OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m V 222 m NO 986 m US 0 m

<table>
<thead>
<tr>
<th>SLOPE</th>
<th>VERTICAL</th>
<th>H HIGH ANGLE</th>
<th>M MEDIUM ANGLE</th>
<th>L LOW ANGLE</th>
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<tr>
<td>TYPE</td>
<td>VP</td>
<td>M</td>
<td>L</td>
<td>H</td>
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<td>WIDTH</td>
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<tr>
<td>LENGTH</td>
<td>m</td>
<td>m</td>
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</tr>
<tr>
<td>ZONE</td>
<td>S</td>
<td>U</td>
<td>M</td>
<td>L</td>
</tr>
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<td>NOTES</td>
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DISTRIBUTION: C = 01-100%; B = 01-90%; P = 11-60%; 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>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT</th>
<th>SHORE SLOPE</th>
<th>AREA WIDTH</th>
<th>LENGTH</th>
<th>ZONE</th>
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<tr>
<td>A</td>
<td>TS</td>
<td>BCP</td>
<td>M</td>
<td>4</td>
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<td>LOC FOUNDED BAND</td>
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<td>H</td>
<td>1</td>
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<td>X</td>
<td>MBR/MOR FOUNDED BAND</td>
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<tr>
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<td>X</td>
<td>LIGHT SORE BEHIND TALUS</td>
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<td>D</td>
<td>TS</td>
<td>CP</td>
<td>M</td>
<td>1</td>
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<td>SS</td>
<td>CP</td>
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<tr>
<td>F</td>
<td>SS</td>
<td>RB</td>
<td>H</td>
<td>1</td>
<td>10</td>
<td>X</td>
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<tr>
<td>G</td>
<td>SS</td>
<td>R</td>
<td>H</td>
<td>1</td>
<td>35</td>
<td>Y</td>
<td></td>
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<tr>
<td>H</td>
<td>SS</td>
<td>R</td>
<td>H</td>
<td>1</td>
<td>35</td>
<td>Y</td>
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<table>
<thead>
<tr>
<th>OG COMMENTS:</th>
</tr>
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<tbody>
<tr>
<td>* Three Pocket Beaches on Rock Shoreline of Isle.</td>
</tr>
<tr>
<td>* Subsurface Oil Trends with Surface Oiling at Locations A &amp; C.</td>
</tr>
<tr>
<td>* Sometimes difficult to distinguish stain &amp; Black Lichen, especially East Side of Isle.</td>
</tr>
<tr>
<td>PIT NO.</td>
</tr>
<tr>
<td>---------</td>
</tr>
<tr>
<td>29</td>
</tr>
</tbody>
</table>

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

OG COMMENTS:
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #: 00
SEGMENT #: EL.106
SUBDIVISION: C
STATE: 0.0

DATE: 6/13/91
TIDAL HEIGHT (Range): -2.0 ~ 2.0'
BIOLGIST: D. McCormick
WIND SPEED/DIRECTION: Calm

PHOTOGRAPHS: ROLL #
FRAME #

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

A. This pocket beach has no birds in the UITZ (Oiled area). Below this (220m) in the MITZ, mostly juvenile littorines + barnacles spatially were minimally sparse. LITZ algal cover included: laminaria, guine, Palmaria, Trentepohlia (Pithia), Helosaria, Hali, L. calirubra, kelpweed, other undetected brackish beds, and a dense subtidal Laminaria bed. An outcrop surfzone (at either ends of beach), dense barnacles occur (mostly juvenile) blue mussels, (mostly juvenile) littorines, barnacles, and many Nuella feeding on barnacles. The sea urchin Pyura and Pagurida were seen in association with the algal cover (some breaking eggs, others feeding on barnacles).

B. Stains observed from restart survey: Black lichen in UITZ; MITZ - Mussel / Fucus zone (assume littorines + limpets present here); LITZ - 100% algal cover.

C. This pocket beach has little to no birds in the mid-to-upper MITZ. The significant - individual communities occur on the bedrock smear beneath the beach bluff, among recruitment by littorines and mussels in evident algal + large dense barnacles. Cover. The MITZ on the beach itself contains the major indicator species (as described in A above) primarily in the 100% algal cover.

D. Stains above and/or within black lichen zone (hard to tell; same zonation as in B above).

E-F. No birds at all in the mid-to-upper intertidal zones on this beach. Minor concentration of barnacles, littorines, limpets + mussels. Algal cover LITZ to subtidal.

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>
<td></td>
<td></td>
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<tr>
<td>Seabirds</td>
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<tr>
<td>Waterfowl</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Gulls/Kittiwakes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shorebirds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corvids</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Birds</td>
<td></td>
<td></td>
<td></td>
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<tr>
<th>MARINE MAMMALS</th>
<th># OBSERVED</th>
<th>SPECIES</th>
<th># OBSERVED</th>
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<tbody>
<tr>
<td>Sea Otters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pinnipeds (specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ursus (specify)</td>
<td></td>
<td></td>
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</tbody>
</table>

Shoreline subdivision map showing important biological features attached.
Bedrock faces approximately 90% covered with adult barnacles and spat. In bedrock cracks and crevices, recently settled limpets, snails and mussel spat are abundant. Juveniles of limpets, limpets and mussels are well represented. Graysacratum on encrusting red algae (Hedistionstosa) in tidal pools associated with bedrock.

Same as "B-+D.

The remaining oil on this island is exerting no obvious adverse impact to the existing intertidal communities or to the successful recruitment and settlement of the major indicator species.
**EL106-C**
**SKETCH MAP**
13-Jun-91
1240-1420
Big Sketch

**A**
- **MITZ:** Black lichen zone (presumably grazers present also)
- **LITZ:** 100% algal cover

**B**
- **Mitiz:** Black lichen zone
- **LITZ:** 100% algal cover

**C**
- **No biota at all in LITZ near oil zone.**
- The lower-mid and lower ITZ support the same algal/fouling assemblage that described in A. Again, the seaweed at either end of the beach is covered with barnacles, mussel, littorines, limpets and algae in the lower zone.

**D**
- **Stain above/within (?) black lichen zone.**
- See B above for zonation description.

**E**
- **No biota in the MITZ.**
- **LITZ** has generally sparse mussel, barnacles and littorines. Algal cover LITZ to subtidal.

**F**
- **Many Pisaster on bedrock; some brooding.**
- Also dense Nucella seedling on barnacles.
1991 MAYSAP EVALUATION

SEGMENT: EL 106  SUB: C  REGION: PWS  SURVEY DATE: 6/13/91

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

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

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

SHPO Signature: Timothy Aedsmith  Date: 6/21/91

RECOMMENDATIONS:  INITIAL  TAG  FOSC
TREATMENT REQUIRED (Y or N)  N  N  7

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

COMMENTS:
INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: June 19, 1991  FOSC APPROVAL DATE: 6/21/91

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

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

Subsistence - Deer Harvesting: Unlimited treatment prior to 8/15.
To:          File
From:       Julie Arin
Date:       June 17, 1991
Subject:    MAYSAP Subdivisions EL-106C, GR-1038, GR-103C, & KN-15A

Additional surveying was performed on the subdivisions listed above. These subdivisions were not completed during the initial survey due to eagles in the area. These survey reports are addenda to the survey information previously submitted (EL-106C was not previously surveyed).
MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 00  SEGMENT EL 106  SUBDIVISION C  DATE 13 JULY 1991

ADEC  NAME: Marianne Profts  SIGNATURE: Marianne Profts

X NTR  Beach A 202 under large cobble. Access is difficult due to depth a cobble cover. Steep slope beach.

EXXON  NAME: Rex Coulter  SIGNATURE: Rex Coulter

☑ NTR  Evidence of surface oiling is minimal in character and distribution. Subsurface oil varies in character and depth but poses no threat to the biota in the area. Any attempt to remove subsurface oil would be more detrimental than beneficial. Only the three small pocket beaches are accessible and access is not easy.

LANDMANAGER

NAME ___________________________ OF ___________________________ SIGNATURE ___________________________

☐ NTR

LANDMANAGER NOT PRESENT.

USCG/MAA  NAME: CW0 R.P. Spurr  SIGNATURE: R.P. Spurr

☑ NTR  Lor in area A and sor in area F on ES map is difficult to access and poses minimal environmental threat.
TEAM NO. 2  SEGMENT EL-106 C  SUBDIVISION C  DATE 5/29/91

ADEC NAME Peter Montesano  SIGNATURE

☐ NTR  ☐ TREATMENT RECOMMENDED

SURVEY AFTER EAGLE RESTRICTIONS END.

EXXON NAME FRANK PEX  SIGNATURE

☐ NTR

LANDMANAGER NAME DENNIS S. KENNEDY OF USFS  SIGNATURE

☐ NTR  Agree with USFWS

USCG/NOAA NAME DOAR N. SHIVER, ENTY  SIGNATURE

☐ NTR  Review: 7/6/91 - 1234 - 7
MAYSAP SHORELINE OILING SUMMARY

TEAM NO. 00

OG Bryan Trimm
BIO Deborah McCormick

ADEC Marianne Profita
LANDMANAGER (No representative)

EXXON Rex Coulter
USCG/NOAA CWO Spurr

SEGMENT E1 106
SUBDIVISION C
DATE June/13/91

TIME 10:40 to 12:06
TIDE LEVEL -2.12 ft. to 2.12 ft.
ENERGY LEVEL: [H M L]
SURVEYED FROM: [ ]FOOT [ ]BOAT [ ]HELO
WEATHER: [ ]SUN [ ]CLOUDS [ ]FOG [ ]RAIN [ ]SNOW
TOTAL LENGTH SHORELINE SURVEYED: 1208 m
NEAR SHORE SHEEN: [ ]BR [ ]RB [ ]SL [ ]NONE

EST. OIL CATEGORY LENGTH:

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<tr>
<th>L</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>
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<td></td>
<td>BCP M</td>
<td>H</td>
<td>1</td>
<td>12</td>
<td>X</td>
<td>LOF from under band</td>
</tr>
<tr>
<td>B</td>
<td></td>
<td>R H</td>
<td>1</td>
<td>20</td>
<td></td>
<td>X</td>
<td>LOF from under band</td>
</tr>
<tr>
<td>C</td>
<td></td>
<td>CP M</td>
<td>H</td>
<td>1</td>
<td>12.5</td>
<td>X</td>
<td>Light surfacing tans</td>
</tr>
<tr>
<td>D</td>
<td></td>
<td>CP M</td>
<td>H</td>
<td>1</td>
<td>12.5</td>
<td>X</td>
<td>Light surfacing tans</td>
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<tr>
<td>E</td>
<td></td>
<td>CP M</td>
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<tr>
<td>F</td>
<td></td>
<td>CP M</td>
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<td>1</td>
<td>12.5</td>
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<td>Light surfacing tans</td>
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<td>KB H</td>
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<td>35</td>
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DISTRIBUTION: C = 91-100%; B = 21-90%; P = 11-60%; S = 0-10%; T = <1%
SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE

PHOTO ROLL: MAYSAP: 00 - 07 FRAMES 14-1B

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<th>OILED DEPTH (cm)</th>
<th>OILED OIL CHARACTER</th>
<th>OILED OP</th>
<th>ORS</th>
<th>LOR</th>
<th>OF</th>
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<th>Y (m)</th>
<th>BR</th>
<th>BS</th>
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SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS:

1. Trace pocket beaches on Rock Shoreline of Isle.
2. Subsurface oil trends with surface oiling at locations A & C.
3. Sometimes difficult to distinguish stain & black lichen, especially east side of Isle.
## MAYSAP SHORELINE OILING SUMMARY (cont.)

### SEGMENT: EL 16

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>OILED ZONE</th>
<th>CLEAN BELOW</th>
<th>H2O LEVEL (cm)</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:**
KAYSAP Biological Summary Form

Date: 6/13/91

Team: 00

Segment: 07106

Tidal Height (Range): 2.0 - 2.5

Biologist: D. McCoemick

Sea State: 0.0

Wind Speed/Direction: Calm

Photographs: Roll #

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

1. The pocket beach has no birds in the UITZ (oiled area). Below this (<20m) in the MITZ, mostly juvenile littorinids + barnacles are present on seaweed. MITZ algal cover included: filamentous green, Pseudomonas sp, Aiptasia, etc. Heteractis, other unspecified tunicetes, and a dense eelgrass (Zostera marina) laminaria bed. On the rocky outcrops (at either end of beach) these barnacles occur mostly juvenile blue mussels (mostly juvenile) and some juvenile clams and barnacles. The sea urchins (Tremocclia and Psamoderma) were seen in association with the algal cover (some breaking eggs; others feeding on barnacles).

2. Stains observed from oil survey: Black litter = MITZ; MITZ - Mussel/Flume zone (assume littorinids + clams present here); LITZ - 100% algal cover.

3. The pocket beach has little to no birds in the mid-to-upper ITZ. The significant intertidal communities occur on the intertidal areas bordering the beach. Here, along rockpools by littorinids and mussels. In sediment patches a dense barnacle cover. The LITZ on the beach itself contains the major indicator species (as described in "A" above) primarily on the 100% algal cover.

WILDLIFE OBSERVATIONS

To be completed in all subdivisions

Birds

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<td>Other Birds</td>
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Fish Observed

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(Cont.)

Marine Mammals

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Land Mammals

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Shoreline subdivision map showing important biological features attached.
Bedrock faces approximately 90% covered with adult barnacles and spat. In bedrock cracks and crevices, recently settled littorine snails and mussel spat are abundant. Juveniles of limpets, littorines and mussels are well represented. Grazers seen on increasingly red algae (Hildenbrandia) in tidal pools associated with bedrock.

Same as "B"+"D",

The remaining oil on the island is exerting no obvious adverse impact to the existing intertidal communities or to the successful recruitment and settlement of the major indicator species.
EL 126-C
SKETCH MAP
13-JUN-91
1240 - 1230
Bio Sketch
June McCormick

No biota at all in UITZ near oil zone. The lower-mid and lower ITZ support
the same x. algal/animal assemblages at that described in A. Again, the
beachrock at further end of the beach is covered
with barnacles, mussels
littorines, limpets, t
algae in the lower zones
Shrimp recruitment by
littorines and mussels at
this site.

No biota in the M-UITZ.
LITZ has generally sparse mussel
barnacles and littorines. Algal
cover LITZ to subtidal...

Reviewed MB 6/7/91
ASAP TAG REVIEW SHEET

Segment: FL106  Subd: B  Site: 1  Date: 14AUG90  PRE-Review

Priority For Addressing In 1990

HIGH  MEDIUM  LOW  X NTR

Treatment Recommended: NTR

SKETCH - Shows heavy SOR
OG SHEET - "Heavily SOR"

Rec. Sheet asks for STORM BEGM
Relocation and removal.

and TAG VISIT

If work is done on this segment,
it will require machinery to
move logs.  Rec. TAG VISIT.

Priority Site For Reassessment In 1991

YES  NO  YES  NO  YES  NO  YES  NO  YES  NO

CG  ADEC  EXXON  LAND MGR

TAG  15AUG90

BIO

already scheduled

reassess 91
ASAP TAG REVIEW SHEET

Segment: EL106  Subd: B  Site: 2  Date PRE-Review 14 AUG 90

Priority For Addressing In 1990

□ HIGH  □ MEDIUM  □ LOW  □ NTR

Treatment Recommended:
NTR

As per Recommendation:
OG Sheet — NTR

Rec. Sheet asks for storm RPPM Relation and tag nonblanco like site 1.

TAG VISIT

Rec. TAG VISIT

Priority Site For Reassessment In 1991

YES  NO  YES  NO  YES  NO  YES  NO
□ CG  □ LAND MGR  □ EADEC  □ EXXON  □

TAG 15 AUG 90

B10 already sched reassess 91
ASAP TAG REVIEW SHEET

Segment: EL106  Subd: B  Site: 3  Date: PRE-Review 14 Aug 90

Priority For Addressing In 1990

- HIGH
- MEDIUM
- LOW
- NTR

Treatment Recommended: Manual Pickup AP and HSIR of B10

Priority Site For Reassessment In 1991

- YES  NO  YES  NO  YES  NO  YES  NO
- CG  ADEC  EXXON  LAND MGR

TAG 15 Aug 90

B10 (already selected)

Reassess (AP patch thin?)

Scurry
Conditions Observed: **THERE ARE TWO(2) OIL__,__ STORM BARRIES ON THIS SITE.**
PERM ON SOUTHEAST SIDE OF BEACH CONTINUOUS "OR" DOES NOT HAVE A HIGHLY BURIED SUBSTRATE.
PERM ON SOUTHWEST SIDE IS OBSCURED BY A MASSIVE LOG JAM OF LARGE DRAFT LOGS. EXTENT
AND DEGREE OF OILING WAS NOT DETERMINED. ASSESSMENT DID REVEAL A MIXTURE OF
OR OF ORGANIC DEPOSITS.

Followup Recommendations:

1. **RELOCATE STORM BERRY ON SOUTHEAST SIDE TO MIZE.**
2. **OPEN UP LOG JAM ON SOUTHWEST BERM TO DETERMINE EXTENT & NATURE OF IMPACT.**
3. **REPLACE OILY LOGS**
4. **REPLACE OILY DEBRIS**
5. **TREAT AEME & SUBSIDIARY SETTLEMENTS BENEATH LOG JAM APPROPRIATE TO THE
   NATURE OF THE REVEALED IMPACT.**

[Signature]
Wesley Getherley

Comments:
I highly agree with relocating storm berm. In addition
I recommend (not in flooding this entire area. This is the only thing
that will mitigate oil. This is a tremendous amount of oil present.
Log Berm needs to be burned and moved to exposed oil and sediment.

Ray Sato

Comments: THIS SITE NEEDS TAG REVIEW! I don't agree with
the recommendation above above.

[Signature]
Art Weinert

Comments: AGREED TO RECOMMENDATIONS

[Signature]
Art Weinert

Comments: I concur with recommendation of relocating the storm berm
and to remove all oily logs and oil debris.
A-AP FOLLOWUP RECOMMENDATION

Segment AS17106  Subj:  B  Site:  2  Date:  8/8  1998

Conditions Observed: OILED AREA BEHIND DRIFT LOG JAM IN SUITZ. A 2 X 4 METER AREA WAS EXPOSED TO RUBBAGE COVERS ON BOULDER ARMOR AND A SUBSURFACE REFRACTION OF 0.0 (M) TO 5 CM. THE EXTENT OF OILING BEYOND THE REMAINDER OF THE LOG JAM WAS NOT DETERMINED. ASPHALT PAINT AND COVERS WAS FOUND IN THE SITE + SITEZ.

Followup Recommendations: DETERMINING EXTENT OF OILING IN SUITZ. REMOVE + DISPOSE OF OILED LOGS + DEBRIS. APPLY TURF TO ALL ACCESSIBLE SURFACES OF BOULDER + COBBLE ARMOR. REMOVE ALL TRASH. REPLACE CUSTOM BLEND TO AREAS OF SUBSURFACE OIL AND BETWEEN INTERSTICES OF BOULDER ARMOR.

Completed by Pickup Crew: [ ] YEA [X] NO  Priority for Addressing in 1998: [X] High  [ ] Mod.  [ ] Low

ADSC: Wesley Ghormley  Wesley Ghormley

Comment: This beach is severely oiled. A extensive clean up operation should be conducted due to environmental sensitive areas.

Base: Rey Stere  Rey Stere

Comment: My recommendation is this area is to still be continuously paid and monitored in 1991. If any work should be done in '90, this is important. The review help would be initiated.

USCG: PSI Leo Barcelo  Leo Barcelo

NOAA: [X] Art Weiner  [ ] Art Weiner

Comment: AGREE TO RECOMMENDATIONS

Land Map: [ ]

Comment: [ ]
ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS EL-106 Subd. V Site: 3 Date 5-8-90

Conditions Observed: Tar motts are observed in between berdis on N.E side of area. Sub surface oil present in center of area to 20-40 N.W side of area has a large area (50x100) of Heavy cr sediment.
The OIE survey (SSAI) did not do this area justice, it is much worse.

Followup Recommendations: Mechanical excavation of areas with sub surface oil, expose saturated sediments and remove or
or H from beach. Spreads custom blended then cut area in complete
possibly flush system to move all oil to water line. A custom bar
will be needed to contain oil in case.

Completed by Pickup: YES □ NO □ Priority for Addressing in 1990: □ High □ Mod. □ Low

ADEC Wesley Shuman Wesley S. Groomley

Comments: This area is a hazard to the environment due to the amount of oil present, needs matt and chisel out in area and are
in a considerable amount of danger due to the situation of this beach.
This area is also an ecological area.

USCG PSI LED BEROJALONA

NORR ART WEINER

Comments: Manually rake custom blend into impacted area.

Land Rep. JOHN EBEL

Comments: I concur with recommendation but advise treatment on asphalt
pavement. Sticky coats in area will cause scale & seepage problems. Act
must be taken to prevent further damage to marine mammals.
SEGMENT AS: 100  SUBDIVISION: B  SITE: 1  DATE 8-8-90

JSCG/NOAA PSI: Les Barcelona  Les Barcelona
NAME: Art Weiner  SIGNATURE: Art Weiner

☐ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:
To evaluate treatment on the two oiled stormberms.

ADEC
NAME: Wesley Ghormley  SIGNATURE: Wesley Ghormley

☐ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:
This site is severely impacted with Exxon Valdez oil.
Due to the extent of oiling, I foresee additional treatment at site in 1991.

- Mechanical Treatment a must -

LAND MANAGER
NAME: John Joel  SIGNATURE: John Joel

☐ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:
To evaluate effectiveness of chemical treatment. This site was recommended for a short-

term relocation and cleanup. High priority 90 treatment. Multiple

areas (fuel & water) affected by x-contat at this site. 3H, O.P.O.; S.T.R.; 07/31.

Concern by ADEC

EXXON
NAME: Ray Sotelo  SIGNATURE: Ray Sotelo

☐ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:
This site should he reassessed in '91 to decide what, if any

should be done - more harm than good scenario.
SEGMENT ASL EL106 SUBDIVISION: 3 SITE: 2 DATE 8-8-90

SCG/NOAA PS1 Leo Bereslaw Leo Bereslaw
NAME Art Weiner SIGNATURE Art Weiner

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
EVALUATE EFFECTIVENESS OF INITIAL CUSTOM BLEND
To inspect area under and adjacent to log jam in SITZ.

ADEC
NAME Wesley Glionley SIGNATURE Wesley Glionley

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
This site is severely impacted with Exxon Valdez oil.
Due to the extent of oiling I foresee additional treatment to site in 1991.

LAND MANAGER
NAME John Fed SIGNATURE John Fed

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
Sheens and surface oil present hazards to marine intertidal life forms and all animals using area.
The effects of storm sewer relocation is high priority for reassessment.

EXXON
NAME Ray Sotler SIGNATURE Ray Sotler

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
We should reassess this site to determine the extent of oiling after customblend and winter storms have washed the are.
SEGMENT AS/EL 106B  | SUBDIVISION:  B  | SITE:  3  | DATE:  8-8-90

USCG / NOAA  | PS1 Leo Bernstam  | Lea. Bernsalme
NAME:  Ant Weiher  | SIGNATURE:  Ant Weiher

☐ YES  | ☐ NO  | PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
1. Significant amount of oil remaining.
2. Evaluate custom & field effectiveness.

ADEC
NAME:  Wesley Gherbley  | SIGNATURE:  Wesley Gherbley

☐ YES  | ☐ NO  | PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
- Mechanical treatment is a must at this location -
I foresee additional treatment (follow up) a very likely suspect in 1991.

LAND MANAGER
NAME:  John Ebel  | SIGNATURE:  John Ebel

☐ YES  | ☐ NO  | PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
- Presence this site will damage wildlife, especially mammals, which perambulate through the impact zone.
- To evaluate effects of PA treatment.

EXXON
NAME:  Rex Vested  | SIGNATURE:  Rex Vested

☐ YES  | ☐ NO  | PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:
- This site should be reassessed to determine the effectiveness of custom made and impact of water elms to the area.
ASAP SHORELINE OILING SUMMARY

TEAM NO.
EXXON

SEGMENT AS

OG CHERRY
USCG/NOAH

ADEC GHOLMLEY
LAND REP. JOHN EGEL

TOTAL NO. SITES

DATE AUG 8/90
TIME 12 20 13:50
TIDE LEVEL 5.510 9.5

TOTAL EST LENGTH OF SHORELINE SURVEYED: 2.75 m
SURVEYED FROM: [Foot] [Boat] [Helo] WEATHER: [Sun] [Clouds] [Fog] [Rain] [Snow]

SURFACE OIL

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EST. SITE LENGTH

65

SUBSURFACE OIL

NOT OBSERVED

NOT OBSERVED

NOT OBSERVED

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COMMENTS

This subdivision has retained a large amount of oil relative to other beaches in Prince William Sound. This survey was too brief and the tide was too high.
ST1/ot1(1 OIL SMELL AROUND LOGS.

LEGEND

1. Oil
2. Oil and Water
3. Water
4. Sediments
5. Boulders
6. Oiled Vegetation
7. Photo location, direction, and number

CHECKLIST

1. Oiling extends under logs but difficult to determine extent.
2. Some oiled logs.
3. Boulders C/V/C/B/N/CT/G/U.
4. Rainbow Sheen.
5. Brown Beach Sheen.
7. Water.

TIME DID NOT ALLOW FOR EXTENSIVE SURVEY AND ALL OIL PRESENT WAS NOT DOCUMENTED.

SITE 2: OIL SMELL

PIT #3

LAYER OF OILED NEEDLES ETC. EXTENDS UNDER LOGS, HEAVY SOR UNDER LOGS.

SITE 3

TCH MAP

THIS SURVEY WAS CONDUCTED AT A HIGH STAND OF TIDE. THE OIL EXTENDED DOWN TO THE TIDE WATER. BOULDERS COMPRISE ~45% OF SURFACE. CT & CVB ON BOULDERS. BETWEEN BOULDERS SOR & AP - BOTH GRADE INTO ONE ANOTHER. AREA HAS DEFINITELY SEEN MAJOR EFFORT HOWEVER A THIN PATCHY PAVEMENT HAS FORMED ALONG WITH SOR SEDIMENTS BETWEEN.

SEE OG MAP FOR FURTHER OILING INFORMATION.

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