[Shoreline evaluations, 1991].

Prince William Sound KN-134 to KN-204

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ASAP TAG REVIEW SHEET

Segment: Yn 134  Subd: A  Site: 1  Date  
PRE-Review 14 Aug 90

Priority For Addressing In 1990

___ HIGH ___ MEDIUM ___ LOW  ___ NTR  X No

Treatment
Recommended: m/p of A Spotted Sea
Low energy beach

Not to be reassessed in 91
If work done the year?

Priority Site For Reassessment In 1991

YES CG NO  YES ADEC NO  YES EXXON NO  YES LAND MGR NO

TAG 21 Aug 6
Manual picking AP patches in vicinity
of stream & Bio area outside
of ANHA stream (low)
ASAP FOLLOWUP RECOMMENDATIONS

Conditions Observed: Bordeaux AP, OP, OR oiling appears 50 in. 20m across decades. Sample penetration to 4-5cm.


Completed by Pickup Crew: [Yes / No]

Priority for Addressing in 1990: [High / Mod. / Low]

ADBC
Name: Rob McCready
Signature: [Signature]

Comments: HP-40, with vacuum, is recommended for cleanup. Plan to leave Aquadart Beast with ms. Area is AP, OP, or OR, should be manually removed.

Exxon
Name: John Dean
Signature: [Signature]

Comments: Area would benefit from additional Manual Pick-Up. Bare up one repetition in 910.

USCG
Name: Dan Norris
Signature: [Signature]

Comments: Area area of cleanup (50x150) should be manually removed. Rake and trowel. Hot water washing would cause difficult recovery due to mud. Beach crude, could be identified in 1990.

Land Rep: Lora Johnson
Signature: [Signature]

SEGMENT AS XN-134  SUBDIVISION:  A  SITE:  1  DATE  6/24/91

USCG

REASON:  YES  NO  PRIORITY SITE FOR REASSESSMENT IN 1991

ADEC

NAME  REASON:  YES  NO  PRIORITY SITE FOR REASSESSMENT IN 1991

MANAGER

NAME  REASON:  YES  NO  PRIORITY SITE FOR REASSESSMENT IN 1991

EXXON

NAME  REASON:  YES  NO  PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:  YES  NO  PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:  YES  NO  PRIORITY SITE FOR REASSESSMENT IN 1991
TOTAL EST LENGTH OF SHORELINE SURVEYED: 170 m
SURVEYED FROM: □ Foot □ Boat □ Helicopter
WEATHER: □ Sun □ Clouds □ Fog □ Rain □ Snow
NUKULEA CATEGORY LENGTH: W: 65 m M: m N: m W: 60 m

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<tr>
<th>SURFACE OIL</th>
<th>SITE 1</th>
<th>SITE 2</th>
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<tbody>
<tr>
<td>CHARACTER</td>
<td>DISTRIBUTION</td>
<td>OILED ZONES</td>
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EST. SITE LENGTH 142 m

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COMMENTS:
- E consists of a small re-entrant with an anadromous stream (226-30-16865)
- S/O/G/C, and/or first cover present in the vicinity of the stream, whereas, C/Y/S occur on the vertical rock/large boulders that form the sites on the re-entrant.
SEGMENT ST/ KN-134  STREAM NO: 226-30-16865  DATE  4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A  Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B  Salmon stream mouth - spawning (7/10 to 8/31)
2M  Herring spawning (4/1 to 6/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Subject stream is located within subdivision A (1 of 1). Prevent oiled material from bleeding or falling into stream.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3276 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE:  

Subsurface Oil Observed:  Yes  No  

RECOMMENDATIONS:

X  Treatment Recommended  X  Bioremediation

--- Manual Pickup  X  Tarmat Removal

--- Snare/Absorbent Booms  --- Oil Snares (pom poms)

--- Absorbents (pads, rolls, etc)  --- Spot Washing:  --- Wands

--- Beach Cleaner  --- Other (see comments)

COMMENTS:  Recommended treatment: 1) manual removal of pavement and oiled debris and 2) bioremediation of coat and cover as indicated on attached sketch map. Work from 6/16 to 7/9.

TAG COMMENTS:  Bioremediation to include Neopod as indicated in ARPA of "Cover" + customed as required following Tarmat Removal.

TAG APPROVAL DATE:  5/18/90.

ADEC  Art Weiner  Art Weiner 
EXXON  
NOAA  
USCG  

FOSCA  MAY 25 1990
Pit # 1. 45 cm oil continues deeper than 45. Subsurface oil fine oil.

Pit # 2. 34 cm deep. Oil surging down 4 cm deep. Coat of oil.

Pit # 3. Weathered oil in some small gravel in hole 18 cm diameter.

Pit # 4: Some oil clumps rock Glad. Coated gravel random oil 20 cm

Oil on bottom of rocks: sticks on random fragments.

(Own shaded for pit # 1) on hill # 11

Sample taken:
- Photo frame # and

2.5 x 2.5 meters heavy oil

Another 10 meters of oil
XXX Wide
/// Medium
---- Narrow

ADEC Segment Length: 258m  
Exxon: 421

Note: 8/20/90

Map Key: PWS-317
Name: G. Macdonald

KN-134

Site Call

226-3C-16E6S
(15, 12/2/97)
Located within:
KN-134-A
(104L)

KN-12

KN-134

SUBJECT
ADECFRAC

2M
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-210

SUBDIVISIONS: B (2 OF 3)
SHORELINE EVALUATION

SEGMENT ST/ KN-210 SUBDIVISION B (2 OF 3) DATE 4/20/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
5T-1 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
6U Recreation: Tent sites (6/1 to 9/15)
6Y Recreation: Special use destination
See attached Ecological Constraint sheet for specific constraints and contacts.

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

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 469 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 ______________________
NOAA ________________________ USCG __________________________
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

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

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

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

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

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

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

1H
Remote release site

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

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

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

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

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

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

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

5R
Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from haulouts.

5S
Seabird/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 (6/1 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)

71H
Finfish harvesting

71I
Deer harvesting (8/15 to 2/28)

71J
Invertebrate harvesting
For Codes 7Z through 71J contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
FIELD SHORELINE COMMENT SHEET

SEGMENT 210 SUBDIVISION: 6 DATE 04/20/90

USCG NAME AEC Vandepeels SIGNATURE AEC Vandepeels

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

ADEC NAME Michele Baer SIGNATURE Baer

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

No oil was observed throughout the sub-segment.

LAND MANAGER NAME Carol S. Huber SIGNATURE Carol S. Huber

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

No oil observed. Resources sensitivities include: eagle nests (eagles observed) Special use destination and tenting (beware of beaches terminating at active avalanche shoots).
## SHORELINE OILING SUMMARY

**USCG:** R. Vandevels  
**LAND REP:** C. Huber  
**SEGMENT ST:** KN-210  
**TEAM NO.:** 5  
**DATE:** 04/22/90  
**TIME:** 14:53 to 15:55

**EST. SUBDIVISION LENGTH:** 5.5 m  
**TIDE LEVEL:** 2.5 ft to 1.5 ft  
**SURVEYED FROM:** Foot, Boat, Helo  
**WORKING DIRECTION:** N to S

**SURFACE SEDIMENTS:** R 39%, B 15%, C 25%, P 25%, G 0%, S 0%, M 0%, V 0%

**SLOPE:** 55% Lang, 35% Vert, 10%

**WAVE EXPOSURE:** Low, Med, High

**OIL CATEGORY LENGTH:** W 0 m, M 0 m, N 0 m, V 0 m, NO 5.5 m

### SURFACE OIL

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

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<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>OILED BELOW</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>ANA SHEEN (Y/N)</th>
<th>SURFACE SUBSURF / SEDIMEN</th>
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**COMMENTS**

**REVIEWED**

**DATE** 4/23/90
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST1, KN 210, Subdivision B

Date (mo/day/yr) 4/20/90

Length: 550 m

Tide Height: +3 \( \rightarrow +1.5 \) ft

(A) Substrate type and % of segments:

1. Bedrock 25%
2. Boulder 15%
3. Cobble 25%
4. Pebble 25%
5. Sand 10%
6. Silt

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

- Dense 30%
- Moderate 20%
- Low 50%

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

- Juveniles / adults (A), new settlement (3)
- Photographs: No photos
- Roll No.
- Frames

**BARNACLES**

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**MYTILUS**

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**GASTROPODS**

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Wildlife Observations/General Comments:

- A pair of Mergansers
- Eagle Nest
- Deer Skeleton in SUPRA

Ecological Considerations:

- U - Tenting
- WY - Special Use Destination
- ST - Active Eagle Nest

- Dense patches of Mussels in MITZ forming discontinuity
- 2m band of vertical rock faces and boulders
- Discontinuous dense Fucus band along MITZ w/spare spoons
- Barnacles continuous and dense with adults, new growth and recruitment
- Low mortality 5% or less in biota
- Subdivision appears healthy, similar to KN2
- No oil observed
ECOLOGY MAP

EAGLE NEST

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

KN-210

Map Key: PWS-412b
Name: James Smith
Date: 4/20/90
Date Entered:

ADEC Segment Length: 2626m

100 200 300 METERS
XXX Wide
/// Medium
---- Narrow
TTTT Very Light
0000 No Oil

KN-210

Map Key: PWS-412a
Name: James Smith
Date: 4/26/70
Date Entered:
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ KN-134

SUBDIVISIONS: A (1 OF 1)
SEGMENT ST/ KN-134 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
- Herring spawning (2M) - 4/1 to 6/15: Adjacent to medium use recreation area - 6/1 to 9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Same as above.

ARCHAEOLOGICAL CONSTRAINTS: Cultural resource survey in progress. Shoreline treatment cannot proceed until field data have been assessed and a formal archaeological constraint entered on the shoreline evaluation form.

SHPO SIGNATURE: __________________ DATE: ______________

OILING CATEGORIZATION:
- Wide 46 m: Medium 0 m: Narrow 0 m: V.Light 186 m: No Oil 26 m
- Subsurface Oil Observed: Yes X No __ Maximum Depth ______

RECOMMENDATIONS:
- X Treatment Recommended
- X Manual Pickup X Snare Booms/Sorbents X Tarmat (Breakup/Removal)
- X Bioremediation SPOT WASHING ______Other
- Wands
- Beach Cleaner

Comments: Pick up tar patties in area indicated on OG map. Recommend tar mat breakup and removal and manual cleanup with pom-pom sorbents in areas shown. Also recommend manual raking of sediments followed by bioremediation in all 3 areas as shown on sketch. Recommend all work begin after 6/15/90 based on ecological constraints.

TAG COMMENTS:--------------------------------------------------

TAG APPROVAL DATE:__________________________
- ADEC
- EXXON
- NOAA
- USCG

FOSC:__________________ DATE:____
FIELD SHORELINE COMMENT SHEET

SEGMENT ST1 KN-134  SUBDIVISION: A  DATE 3/30/90

USCG NAME Scott Rainsford  SIGNATURE Scott Rainsford 1957

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

This segment needs both manual and mechanical attention. The asphalt pattiess need to be physically removed. Do to the cobble,pebble make up of
the beach and a gradual grade I think a Hot H2O Flood system would work
excellent on this area. The surface Coverage consists of 4cm thick soft
mousse and should flow easily when the Hot H2O Flood system is applied.

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

Resurvey needed for uplands under snow.

"<10% cover" areas had substantial concentrations
that could raise percentage.
SHORELINE OILING SUMMARY

USCG: G. MACDONALD
LAND REP: L. JOHNSON
SEGMENT ST/ SUBDIVISION A
TIME: 07:40 to 09:00
DATE: 3/30/90

1. TIDE LEVEL: +4 ft
2. EST. SUBDIVISION LENGTH: 250 m
3. UP LANDS DESCRIPTION: Grass
4. SURVEYED FROM: Foot
5. SURFACE SEDIMENTS: R, B
6. SURFACE OIL: Asphalt Pavement
7. OIL CATEGORY LENGTH: W 50 m
8. OIL AMOUNT: PATTIES, TAR BALLS
9. OILED SHEEN: BR RW SL TL
10. NEAR SHORE SHEEN: NO
11. OIL FILM COLOR: H, F
12. PAVEMENT: NO
13. DEBRIS COLLECTED:
14. Photographs:

COMMENTS:

Surface oil as dusk. Soft mouse at oil film. Oil film soaked up. No subsurface oil except surface film which settled into pits. V. High water table over peat deposit. Beach face flushed by stream of seawater. Pits 2 & 4 had DN oil drop and sheen; pit 4 had silver sheen.
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST  | K-V/34 Subdivision A  | Date (mo/day/yr) 3/30/90  
--- | --- | ---  
Time (24 hr) | Biologist M. Smith  
--- | ---  

(A) Substrate type and % of segments:
- Bedrock: 20%
- Boulder: 5%
- Cobble: 30%
- Pebble: 30%
- Sand: 15%
- Silt: 5%  

(B) Overall % cover of biota (% of segment):
- Dense: 0%
- Moderate: 5%
- Low: 95%  

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

Wildlife Observations/ General Comments:
- Whale sightings
- 20:30 "Some birds" taking off from bed on small island

Ecological Considerations:
Map Key: PWS-317
Name: G. Macdonald
Date: 3/20/90

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

ADEC Segment Length: 258m
Map Legend:

KN-12

KN-134
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT KN-134 SUBDIVISION A (1 of 1)

WORK WINDOW

<table>
<thead>
<tr>
<th>Manual Pickup</th>
<th>OPEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tarmat Removal</td>
<td>OPEN</td>
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<tr>
<td>Other Approved Treatment</td>
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</tr>
<tr>
<td>Bioremediation More Than 100m From Stream</td>
<td>OPEN</td>
</tr>
<tr>
<td>Manual Raking</td>
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</tr>
<tr>
<td>Spot Washing</td>
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<tr>
<td>Bioremediation Less Than 100m From Stream</td>
<td>PERMIT REQUIRED</td>
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<tr>
<td>Manual Raking</td>
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</tr>
<tr>
<td>Spot Washing</td>
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</tr>
</tbody>
</table>

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream ADF&G catalogued anadromous stream (226-30-16865) is in the Subdivision. Subdivision is closed to bioremediation, manual tilling, and spot washing less than 100m from stream without ADF&G authorization. No constraint to bioremediation, manual tilling, and spot washing more than 100m from stream. No constraint to manual pickup, tarmat removal, and other approved treatment.

2M Herring Spawning NO CONSTRAINT. Authorized by Claudia Slater/ADF&G on 5/10/00 to Exxon/Tom Kelley.

OTHER ECOLOGICAL CONSIDERATIONS
No disturbance to stream bed or bank. No flushing of pollutants or sediment into stream drainage. Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

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

FOSC

DATE 5/21/90

Prepared by: Andrea Meyer
Date: 5/20/90
ECOLOGY MAP
SEGMENT KN-134

Subdivision A [1 of 1]

METERS
0 [330] 660

1 inch = 1082 feet

Exxon Company, USA
May 11, 1990

map keys: KN-134

Exxon

* Seabird Colony
\ Eagle Nest

Sea Bird Colony

ANADROMOUS STREAM 226-130-16865

Work AREA

-203
KN-136
KN-135
KN-134
KN-12

KN-04

KN-05

KN-15

KN-13

KN-204

KN-205
SHORELINE EVALUATION

SEGMENT ST/ KN-134 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Herring spawning (2M) - 4/1 to 6/15: Adjacent to medium use recreation area - 6/1 to 9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Same as above.

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: April 3, 1990

OILING CATEGORIZATION:
Wide 46 m: Medium 0 m: Narrow 0 m: V.Light 186 m: No Oil 26 m Subsurface Oil Observed: Yes X No Maximum Depth __

RECOMMENDATIONS:
X No Treatment Recommended
X Treatment Recommended
X Manual Pickup X Snare Booms Sorbents X Tarmat Removal
X Bioremediation SPOT WASHING Wands
X Beach Cleaner

Comments: Pick up tar patties in area indicated on OG map. Recommend tar mat displacement and removal and manual cleanup with pom-pom sorbents in areas shown. Also recommend manual raking of sediments followed by bioremediation in all 3 areas as shown on sketch. Recommend all work begin after 6/15/90 based on ecological constraints.

TAG COMMENTS: Add spot wash as necessary due to snow cover in SUITZ assess need to extend treatment to snow covered area unsurveyed.

TAG APPROVAL DATE: 4-6-90
ADEC JOHN BARKER DATE: 4-12-90
USCG C A Peiter DATE: 4-12-90
## ADDENDUM: SUBDIVISION CONSTRAINTS
### SEGMENT KN-134 SUBDIVISION A (1 of 1)

### WORK WINDOW

<table>
<thead>
<tr>
<th>Manual Pickup</th>
<th>OPEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tarmat Removal</td>
<td>OPEN</td>
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<tr>
<td>Other Approved Treatment</td>
<td>OPEN</td>
</tr>
<tr>
<td>Spot Washing</td>
<td>OPEN</td>
</tr>
<tr>
<td>Bioremediation and Manual Raking</td>
<td>WORK PRIOR TO 7/10 (ADF&amp;G MONITOR REQ.)</td>
</tr>
<tr>
<td>More Than 100m From Stream</td>
<td>OPEN</td>
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<tr>
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<tr>
<td>Less Than 100m From Stream</td>
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</tr>
</tbody>
</table>

### ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

### APPLICABLE ECOLOGICAL TIME CONSTRAINTS

**1A,1B Salmon Stream**

ADF&G catalogued anadromous stream (226-30-16865) is in the Subdivision. This subdivision is closed to bioremediation and manual raking less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation and manual raking are permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation and manual raking more than 100m from stream. No constraint to manual pickup, tarmat removal, spot washing, and other approved treatment.

**2M Herring Spawning**

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

### OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or bank. No flushing of pollutants or sediment into stream drainage. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

**SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM (STREAM NO. 226-30-16865) FOR ADDITIONAL CONSTRAINT INFORMATION**

---

**TAG ADDENDUM DATE**: 6/4/90  
**ADEC**: Ray Moore  
**EXXON**: Andy  
**NOAA**: [signature]  
**USCG**: [signature]  
**Prepared by**: [signature]  
**Date**: 6/4/90
SHORELINE EVALUATION

SEGMENT ST/ KN-134 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Herring spawning (2M) - 4/1 to 6/15; Adjacent to medium use recreation area - 6/1 to 9/15.

SUBDIVISION ECOCLOGICAL CONSTRAINTS: Same as above.

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: April 3, 1990

OILING CATEGORIZATION:
Wide 46 m; Medium_0 m; Narrow_0 m; V.Light_186 m; No Oil_26 m
Subsurface Oil Observed: Yes X No Maximum Depth

RECOMMENDATIONS:
- No Treatment Recommended
- Treatment Recommended
- Manual Pickup X Snare Booms/Sorbs X Tarmat Cleaning/Removal
- Bioremediation Spot Washing X Wands
- Beach Cleaner

Comments: Pick up tar patties in area indicated on OG map. Recommend tar mat removal and manual cleanup with pom-pom sorbents in areas shown. Also recommend manual raking of sediments followed by bioremediation in all 3 areas as shown on sketch. Recommend all work begin after 6/15/90 based on ecological constraints.

TAG COMMENTS: Add spot wash as necessary due to snow cover in Suitz Asses need to extend treatment to snow covered area unsurveyed.

TAG APPROVAL DATE: 4/6/90
ADEC [Signature] DATE: 4/22/90
USCG [Signature] DATE: 4/22/90

FASC: [Signature] DATE: 4/22/90
SHORELINE EVALUATION

SEGMENT ST/ KN-134 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Herring spawning (2M) - 4/1 to 6/15; Adjacent to medium
use recreation area - 6/1 to 9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Same as above.

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: April 8, 1990

OILING CATEGORIZATION:
Wide 46 m: Medium 0 m: Narrow 0 m: V.Light 186 m: No Oil 26 m
Subsurface Oil Observed: Yes X No ___ Maximum Depth _____

RECOMMENDATIONS:
No Treatment Recommended
X Treatment Recommended
X Manual Pickup X Snare Booms/Sorbents X Tarmat X Spot/Washing/Removal
X Bioremediation SPOT WASHING Other
X Wands
X Beach Cleaner

Comments: Pick up tar patties in area indicated on OG map.
Recommend tar mat removal and manual cleanup with
pom-pom sorbents in areas shown. Also recommend manual raking of
sediments followed by bioremediation in all 3 areas as shown on
sketch. Recommend all work begin after 6/15/90 based on ecological
constraints.

TAG COMMENTS: Add spot wash as necessary due to snow
cover in SUIT. Assess need to extend treatment to
snow covered area unsurveyed.

TAG APPROVAL DATE: 4/6/90
ADEC JOHN BARKER DATE: 4/1/90
EXXON BILL WHITE DATE: 4/1/90
AAA PML WASSOFF DATE: 4/1/90
USCG G.A. REITER DATE: 4/1/90
**Checklist**

- Oil Arrow
- Approx. Scale
- Seg/End:
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. HVW/LW.
- SSL
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

**Legend**

1 △
   - Pit - No Subsurface Oil

2 △
   - Pit - Subsurface Oil

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

- Old Vegetation
  - Photo location, direction, and number

**Oil Character Length (m):**

- AP 50 PO - CV 05 CT - ST - MS - PT 100 TB - FL 50 NO

**Note:** The diagram includes various symbols and annotations for geological and environmental features, such as streams, beaches, and specific locations with notes on cover and dimensions.
1991 MAYSAP EVALUATION

SEGMENT: KN 134  SUB: A  REGION: FWS  SURVEY DATE: 5/13/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) RESTRICTED 7/10 - 9/15

Ecological/Constraints (see page two for details) Anadromous stream

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

SHPO Signature: ___________________________ Date: __________________________

RECOMMENDATIONS:

<table>
<thead>
<tr>
<th>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

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

**TEAM NO:** 3  **SEGMENT:** KN134  **SUBDIVISION:** A  **DATE:** 5/13/91

---

**ADEC/ADFG**

**NAME:** Alene Wiseman / Wesley Shumley  **SIGNATURE:**

- **TREATMENT RECOMMENDED** - The treatment of the ANAD Fish Stream portion of this subsegment should consist of the manual removal / tilling of remnant mouse paties, tar / tar-like NSOR sediments in areas A7 / B8 sketched. Thou thoroughly filled in the fall of 90 by local response group, tar / tar-like have reformed overwinter. The other area of concern is small cove to south (D+E) which contains retrievable NSOR reddys sub-surface oil (CHOR). Manual removal of oil / oil sediments followed by manual tilling on incoming tides, using forbes / snare boom to recover oil is recommended.

**TREATMENT RECOMMENDED (ADEC)** - Follow ADFG TREATMENT RECOMMENDATIONS for ANAD portion and cove to the south. Removal of cobbles / tar / tar-like will have to be conducted to be sure all tar / tar-like is removed. Oiled clean-up debris were removed also (Por-puns) oil would be very easily retrieved, cobbles are small so work would not be difficult.

---

**EXXON**

**NAME:** Jon P. Czarnecki  **SIGNATURE:** Jon P. Czarnecki

- **TREATMENT RECOMMENDED** - The mouth of the stream appears to be clean. However there are some areas of so / oil that could have been picked up if man power was available. The stream bed is clean and smooth area near to the stream are clean. The Parties of so / oil are not on the stream bed. However the beach life in kit and miz appears healthy and thriving. I am not sure clean up would be in the best interest of the beach recovery.

---

**LANDMANAGER**

**NAME:** Ed Haltom of CAC  **SIGNATURE:**

- **TREATMENT RECOMMENDED** - The north portion of this segment where the mud, stream lies is still abundant in tar pools and remvable oil residue. The south portion is the most consistently oil surface I have come upon this survey to date.

---

**USCG/NOAA**

**NAME:** Peter J. Gleason  **SIGNATURE:**

- **TREATMENT RECOMMENDED** - There is still a measurable oil present, and the site is at an anadromous fish stream. I am not able to get a clean up shot of the oil due to the water being black. This site is an anadromous stream, there is recoverable oil present @ (USCG).
**OG HARPER**

**BIO STOKER**

**ADEC GORMLEY**

**LANDMANAGER HALTNESS for CAC**

**EXXON GERANEN**

**USCG/NOAA GLEASON/DAHLIN**

**SEGMENT KN-134**

**DATE 13 MAY 1991**

**TIME 11:30 to 12:30**

**TIDE LEVEL 6.28 ft. to 4.40 ft.**

**ENERGY LEVEL: □ H □ M □ C**

**SURVEYED FROM: □ FOOT □ BOAT □ HELO**

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

**TOTAL LENGTH SHORELINE SURVEYED: 204 m**

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

**EST. OIL CATEGORY LENGTH:**

- W 0 m M 30 m N 0 m V 95 m L 76 m US 31 m

---

### SURFACE OIL CHARACTER

| LOC | AP | MS | TB | SBQ | CV | CT | ST | FL | DB NO | SURFACE OIL | SEDIMENT | SLOPE | TYPE | WIDTH | LENGTH | ZONE | NOTES |
|-----|----|----|----|-----|----|----|----|----|-------|-------------|-----------|--------|-------|-------|-------|-------|-------|-------|
| A   | P  | S  |    |     |    |    |    |    |       | PG5 M 3 5 | PG5 M 5 5 |         | S     |       | x     |       | SORH  |
| B   | S  | S  |    |     |    |    |    |    |       | BR M 1 15 | BR, ACA M <1 15 |         | x     |       | x     |       | SORH  |
| D   | S  | C  |    |     |    |    |    |    |       | BR, CP M <1 15 |        |         | x     |       | x     |       | SORH  |
| E   | S  | T  |    |     |    |    |    |    |       | PC M 4 20 | PC, CB M 3 30 |        | x     |       | x     |       | PATIES COLLECT |
| G   | T  | S  |    |     |    |    |    |    |       | R 1 10 |        |        | x     |       |       | RESIDUAL COAL |

**DISTRIBUTION:** C = 81-100%; B = 51-60%; P = 11-50%; S = 1-10%; T = <1%

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

**PHOTO ROLL & MAYSAF-3 - 17**

**FRAMES 1-6**

### PIT NO. DEPTH

<table>
<thead>
<tr>
<th>PIT</th>
<th>NO.</th>
<th>OIL CHARACTER</th>
<th>OILED ZONE</th>
<th>OILED CLEAN</th>
<th>OILED</th>
<th>H2O</th>
<th>SHEEN</th>
<th>ZONE</th>
<th>SURFACE-SUBSURFACE SEDIMENTS</th>
<th>NOTES</th>
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<td>LMTS</td>
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<td></td>
<td>P/S G</td>
<td>SOR AREA</td>
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<tr>
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<td>15</td>
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<td>P/S G</td>
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<td>4</td>
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<td>O - 5</td>
<td>Y</td>
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<td>P/E/S G + PAK</td>
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</tbody>
</table>

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

---

**OG COMMENTS:**

This substation is primarily a low-wave exposure cobble/boulder pocket beach. An anadromous fish stream is located within the northern portion of the segment.

Surface oiling is complex with several areas of "significant" oil concentration. Two patches of cement-mousse patters occur near the stream; there is evidence of treatment in these areas such as overturned boulders and cobbles. Some of this...
<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 SHEEN</th>
<th>PIT ZONE</th>
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</table>

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

OG COMMENTS:

Material (at locations A, B) was recovered. Patties and tar mats were present within the small cove to the south (locations D, E); both locations included some "stiff" SOCP, which could be interpreted as PL on a "cooler" day—an estimated 30 m² of patties are located within these two areas.

An area of significant subsurface oiling was coincident with location E—4 x 5 m with near continuous coverage. The occurrence of a subsurface peat appears to have limited penetration and also complicates oiling identification.

The survey crew was accompanied by AEC officials and Associated Press photographer.
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #: 3
SEGMENT #: KN 134
SUBDIVISION: A
SEA STATE: calm

TIDAL HEIGHT (Range): 4-6'
BIOL elogist: Stoker
WIND SPEED/DIRECTION: E S

PHOTOGRAPHS: ROLL #: FRAME #

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

Segment consists of low energy core beaches of pebble/cobble/boulder
bounded and separated by bedrock headlands. An anadromous
stream (Pink Salmon) transects the NW beach.

Lower intertidal unobserved due to tide height. Mid and upper
intertidal biota on bedrock outcrops/headlands consists in general
of patchy and moderately dense to dense barnacles, sparse Fucus
and Mytilus moderately dense limpets. Pebble/cobble/boulder substrate
suggests patchy Fucus of variable density, filamentous green algae,
sparse Mytilus, sparse to moderate density Actinaria with egg masses,
sparse to moderate density limpets, and sparse amphipods. On all
substrates, abundance and diversity increases downslope and from
W to E.

The area of highest abundance in the segment is the low bedrock
outcrop and pebble/cobble tambolato the E, which suggests an aban-

to of dense Fucus, barnacles, actinaria with egg masses,
and interbedded Mytilus.

Biota within a proximal to enlarge oil areas A & B is sparse or
abent, and remains relatively sparse downslope to the mid intertidal.
Biota within proximal to enlarge oil areas C & G consists when present
at all of sparse barnacles, limpets, actinaria, amphipods and
oligochaetes, with the exception of the outcrop and tambola discussed
above, biota downslope remains relatively sparse.

If additional cleaning takes place, the outcrop + tambola should be

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS None Observed # OF SPECIES TOTAL BIRDS SPECIES PRESENT

Eagles
Seabirds
Waterfowl
Gulls/kittiwakes
Shorebirds
Corvids
Other Birds

MARINE MAMMALS

SPECIES # OBSERVED

Sea Otters
Pinnipeds (specify)
Whales (specify)

LAND MAMMALS

SPECIES # OBSERVED

Shoreline subdivision map showing important biological features attached.

Reviewed 6/16/91
Reviewed M. 13. 5/12/91
<table>
<thead>
<tr>
<th>XXXX</th>
<th>Wide</th>
<th>MEDIUM</th>
</tr>
</thead>
<tbody>
<tr>
<td>/////</td>
<td>Medium</td>
<td>32/30</td>
</tr>
<tr>
<td>------</td>
<td>Narrow</td>
<td>V/LIGHT: 100/95</td>
</tr>
<tr>
<td>TTTT</td>
<td>Very Light</td>
<td>NO OIL: 80/76</td>
</tr>
<tr>
<td>0000</td>
<td>No Oil</td>
<td>U.S.: 32/31</td>
</tr>
</tbody>
</table>

Subdivision Field Map
Map Key: KN1KNO134A
Name: HARPER
Date: 15 MAY 91
Data Entered: 05 1016
1991 MAYSAP EVALUATION

SEGMENT: KN 134  SUB: A  REGION: PWS  SURVEY DATE: 5/13/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s)  RESTRICTED 7/10 - 9/15

Ecological/Constraints (see page two for details) Anadromous stream

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

RECOMMENDATIONS:
TREATMENT REQUIRED (Y or N) N Y Y

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

COMMENTS:
INITIAL:

TAG: MANUAL PICKUP OF H + M SOR AT LOCATIONS A + B FOLLOWED BY RAKE IN CUSTOMBLEN
MANUAL PICKUP OF AP/H50R AT LOCATIONS DATE

FOSC:

TAG APPROVAL DATE: 4/29/91  FOSC APPROVAL DATE: 6/15/91

ADEC  E. E. PAGE, CSR, USCG
EXxon  CHIEF OF STAFF, FOSC
USCG
NOAA
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Anadromous Stream: Unlimited treatment up to stream bank between May 15 and July 10. ADF&G approval required for work after July 10. Fish Habitat Permit required for instream work. ADF&G approval required for bioremediation within 100 meters of anadromous stream after July 10.
TEAM NO. 3  SEGMENT  KN134  SUBDIVISION A  DATE 5/13/91

MAYSAP FIELD SHORELINE COMMENT SHEET

ADEC / ADPTG
NAME: Aimée Freeman / Wesley Sherman  SIGNATURE: Aimée Freeman / Wesley Sherman

☐ NTR  Treatment / Recommended: The treatment of the ADEP fish stream portion of this subsegment should consist of the manual removal of tilling of remnant mouse pads, tar mats, and NSOR sediments in Areas A1B, A2B, and A3B. Then, thoroughly flush this area with water. The other area of concern is small cove to south (A4E) which contains little NSOR sediments. Manual removal of oiled sediments followed by manual tilling on incoming tides using a sediment trap boom to recover oil is recommended.

EXXON
NAME: Jon P. Caroneckl  SIGNATURE: Jon P. Caroneckl

☐ NTR  The mouth of the stream appears to be clean. However, there are some areas of sediment that could have been picked up by man power. The stream bed is clean and remediation is not required. There are Patches of NSOR that are not on the stream bed. However, the beach life in this area is not appearing healthy and thriving. I am not sure clean up would be in the best interest at the beach recovery.

LANDMANAGER
NAME: Ed Haltness  SIGNATURE: Ed Haltness

☐ NTR  The north portion of this segment where the ADEP stream lies is still abundant in tar mats and removable oily residue. The south portion is the most consistently oiled surface I have come upon this survey to date.

USCG / NOAA
NAME: Jeff D. Hedges / Peter J. Gleason  SIGNATURE: Jeff D. Hedges / Peter J. Gleason

☐ NTR  There is still a small, recoverable oil present, and the site is at an anadromous fish stream. Therefore, treatment is necessary. The remainder of the stream appears to be the controlling factor for this subdivision. (Anadromous fish stream)

The site is an anadromous stream, there is recoverable oil present (47K/USCG)
MAYSAP SHORELINE OILING SUMMARY

SEGMENT: KN-134
SUBDIVISION: A
DATE: 13 May 1991

TIME: 16:30 to 17:30
TIDE LEVEL: 4.28 ft. to 4.40 ft.
ENERGY LEVEL: ☐ H ☐ M ☐ L
SURVEYED FROM: ☑ FOOT ☑ BOAT ☑ HELO
WEATHER: ☐ SUN ☐ CLOUDS ☐ FOG ☐ RAIN ☐ SNOW
TOTAL LENGTH SHORELINE SURVEYED: 201 m
NEAR SHORE SHEEN: ☑ BR ☑ RB ☑ SL ☑ NONE
EST. OIL CATEGORY LENGTH:

<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>AREA</th>
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<tr>
<td>A</td>
<td>P</td>
<td>PGS M</td>
<td>3</td>
<td>5</td>
<td>X</td>
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<tr>
<td>B</td>
<td>S</td>
<td>PGS M</td>
<td>5</td>
<td>5</td>
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<td></td>
</tr>
<tr>
<td>C</td>
<td>S</td>
<td>B,R,CE M</td>
<td>&lt;6</td>
<td>15</td>
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<td></td>
</tr>
<tr>
<td>D</td>
<td>S</td>
<td>B,C,P M</td>
<td>&lt;6</td>
<td>15</td>
<td>X</td>
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</tr>
<tr>
<td>E</td>
<td>C</td>
<td>AGB M</td>
<td>4</td>
<td>5</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>T</td>
<td>PC M</td>
<td>2</td>
<td>30</td>
<td>X</td>
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<tr>
<td>G</td>
<td>T</td>
<td>PC,M</td>
<td>5</td>
<td>30</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>S</td>
<td>R</td>
<td>1</td>
<td>10</td>
<td>X</td>
<td></td>
</tr>
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</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

<table>
<thead>
<tr>
<th>L</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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<tr>
<td>1</td>
<td>35</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td></td>
<td>X</td>
<td>PC/SG</td>
<td>LNTS</td>
</tr>
<tr>
<td>2</td>
<td>20</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td></td>
<td>X</td>
<td>PC/SG, SOR AREA</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>15</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td></td>
<td>X</td>
<td>PC/SG, SOR AREA</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>10</td>
<td>X</td>
<td>0-5</td>
<td>Y</td>
<td>-</td>
<td>X</td>
<td>PC/SG, PC/SG + PEAT</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>15</td>
<td>X</td>
<td>0-10</td>
<td>Y</td>
<td>-</td>
<td>X</td>
<td>PC/SG, PC/SG + PEAT</td>
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</tr>
<tr>
<td>6</td>
<td>20</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td></td>
<td>X</td>
<td>PC/SG, SOR AREA</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>20</td>
<td>X</td>
<td>0-5</td>
<td>Y</td>
<td>-</td>
<td>X</td>
<td>PC/SG, PC/SG + PEAT</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>15</td>
<td>X</td>
<td>0-15</td>
<td>N</td>
<td>-</td>
<td>X</td>
<td>PC/SG, PC/SG + PEAT</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>15</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td></td>
<td>X</td>
<td>PC/SG, PC/SG + PEAT</td>
<td></td>
</tr>
</tbody>
</table>

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

OG COMMENTS: This subdivision is primarily a low wave exposure cobble/boulder pocket beach. An anadromous fish stream is located within the northern portion of the segment.

Surface oiling is complex with several areas of significant oil concentration. Two patches of remnant mouse patties occur near the stream; there is evidence of treatment in these areas such as overturned boulders and cobble. Some of this...
OG COMMENTS:

Material (at locations A & B) was recovered. Patties and tar mats were present within the small cone to the south (locations D & E); both locations included some "stiff" SOP, which could be interpreted as HP or a "cooler" slag. An estimated 30 m² of patties are located within these two areas.

An area of significant subsurface oiling was coincident with location E - 4x5 m with near continuous coverage. The occurrence of a subsurface peat appears to have limited penetration and also complicates oiling identification.

The survey crew was accompanied by HTET officials and Associated Press photographer.
**MAYSAP BIOLOGICAL SUMMARY FORM**

**TEAM #** 3  
**DATE** 5/13/91  
**SEGMENT** KI 134  
**TIDAL HEIGHT (Range)** 4-6'  
**SUBDIVISION** A  
**BIOLOGIST** Stoker  
**SEA STATE** calm  
**WIND SPEED/DIRECTION** E 5  
**PHOTOGRAPHS:** ROLL 9  
**FRAME**

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

**Segment** consists of low energy core beaches of pebble/cobble/boulder banded and separated by bedrock headlands. An anadromous stream (pink salmon) transects the NW beach.

Lower intertidal unobssed due to tide height. Mid & upper intertidal birds on bedrock outcrops/headlands consists in general of patchy and moderately dense to dense barnacles, space Funaf, and Mytilus moderately dense limpets. Pebble/cobble/boulder substrates supports patchy Funaf or variable density, filamentous green algae, gross Mytilus, sparse to moderate density, Elishmera with egg masses, sparse to moderate density limpets, and sparse amphipods. On all substrates, abundance and diversity increases downslane and from or to E.

The area at highest abundance in the segment is the low bedrock outcrop and pebble/cobble Tamaha to the E, which supports an abundant community of dense Funaf, barnacle, Elishmera with egg masses, and interbedded Mytilus.

**Biotas within Z proximal to surface oil areas A & B is sparse or absent, and remains relatively sparse downslane to the mid intertidal**.

**Biotas within proximal to surface oil areas C & D consist, when present at all, of sparse barnacle, limpets, Elishmera, amphipods and oligochaetes with the exception of the outcrop and Tamaha discussed above, biota downslane remains relatively sparse**.

**If additional cleanup takes place, the outcrop T Tamaha should be avoided by personnel and equipment**.

**WILDLIFE OBSERVATIONS TO BE COMPLETED IN ALL SUBDIVISIONS**

**BIRDS** Listed Observed  # of SPECIES  TOTAL BIRDS  FISH OBSERVED  SPECIES PRESENT

<table>
<thead>
<tr>
<th>BIRDS</th>
<th>None Observed</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eagles</td>
<td></td>
<td></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>
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<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>
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<td></td>
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</tbody>
</table>

**LAND MAMMALS**

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

Shoreline subdivision map showing important biological features attached.

**REVIEWED** CPT MAY

**Reviewed** M.B. 5/17/91
Bio Map

Area of enhanced abundance (fouls, mussels, littoral barnacles)
ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-30-16865
SEGMENT KN-134 SUBDIVISION A

WORK WINDOW

<table>
<thead>
<tr>
<th>Manual Pickup</th>
<th>Tarmat Removal</th>
<th>OPEN</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

Bioremediation Less Than 100m From Stream WORK 6/15 to 7/10
(ADF&G MONITOR REQ.)

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

ADF&G catalogued anadromous stream (226-30-16865) is in Subdivision A. This subdivision is closed to bioremediation less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation is permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation more than 100m from stream. No constraint to manual pickup and tarmat removal.

2M Herring Spawning

Closed to bioremediation prior to 6/15. No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. No flushing of pollutants or sediments into stream drainage; do not allow Inpol to enter stream flow. On-site examination and consultation by ADF&G monitor is required prior to bioremediation in order to authorize a setback distance from the stream during chemical application; if ADF&G monitor's presence is impossible, authorization may be given by the ADEC monitor. Restrict boat traffic to essential minimum. Avoid any unnecessary disturbance or damage to unoiled substrate and biota especially Intertidal and subtidal algaes and seagrass.

SEE SUBDIVISION CONSTRAINT ADDENDUM KN-134A FOR ADDITIONAL CONSTRAINT INFORMATION.

FOSC

Date 6-10-90

Prepared by

Date 6/10/90
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ KN-134 STREAM NO: 226-30-16865 DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
2M Herring spawning (4/1 to 6/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Subject stream is located within subdivision A (1 of 1). Prevent oiled material from bleeding or falling into stream.

ARCHAEOLOGICAL CONSTRAINTS:
If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3276 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: __________________ Date: 5/22/90

Subsurface Oil Observed: Yes __ No X Maximum Depth ______

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

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

COMMENTS: Recommended treatment: 1) manual removal of pavement and oiled debris and 2) bioremediation of coat and cover as indicated on attached sketch map. Work from 6/16 to 7/9. SEE ANAD FISH APPENDIX DATE 6/16/90

TAG COMMENTS: Bioremediation to include INPOL as indicated in
Any of 'cover' & customarily as required following.

TAG APPROVAL DATE: 5/18/90
ADEC Art Weller Art Weller
EXXON
NOAA
USCG

DATE: __________________
ANADROMOUS FISH STREAM ASSESSMENT

REGION: PRINCE WILLIAM SOUND
SEGMENT: KN-134
SUBDIVISION: A
STREAM NO: 226-30-16865
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ KN-134  STREAM NO: 226-30-16865  DATE  4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1A  Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B  Salmon stream mouth - spawning (7/10 to 8/31)
2M  Herring spawning (4/1 to 6/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Subject stream is located within subdivision A (1 of 1). Prevent oiled material from bleeding or falling into stream.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3276 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: ___________________ DATE: ____________________

Subsurface Oil Observed: Yes____ No X  Maximum Depth__________

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment: 1) manual removal of pavement and oiled debris and 2) bioremediation of coat and cover as indicated on attached sketch map. Work from 6/16 to 7/9.

TAG COMMENTS: ______________________________________________________

TAG APPROVAL DATE: ___________
ADEC __________________________ FOSC: ______________ DATE: ___________
EXXON ________________________
NOAA _________________________
USCG _________________________
Salmon stream mouth - hy outmigraton (3/1 to 5/15)

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

No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxici1y levels, such as hot water wash or lnipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.

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

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

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

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

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

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

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

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

Remote release site

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

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

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

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

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

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

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

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3212

Herring spawning (4/1 to 6/15)

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

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

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

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

Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of lnipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31).

Contact ADF&G and USFWS prior to treatment for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 766-3377

Seabird colony (5/1 to 9/1)

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

AGENCY CONTACT PERSON: USFWS Jill Parker 766-3377

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 766-3377

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

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 766-3377

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)

Firfish harvesting

Deer harvesting (6/15 to 2/28)

Invertebrate harvesting

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

AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2259
FIELD SHORELINE COMMENT SHEET

SEGMENT ST1       KN-134       SUBDIVISION: 216-30-16866       DATE 22 APR 90

USCG
NAME Kerwin L. Drucker       SIGNATURE Enos K. Z. Drucker

☐ NO TREATMENT RECOMMENDED       ☑ TREATMENT SUGGESTED

COMMENTS
I agree with clean up methodology except I would also consider biomagnification.

ADDRESS
NAME Aimee Weseman       SIGNATURE Aimee Weseman

☐ NO TREATMENT RECOMMENDED       ☑ TREATMENT SUGGESTED

COMMENTS
Remove oiled tar mats, patties and crusted oiled gravels on intertidal flat on north side of stream - the majority lie in the M to UITZ
Remove oiled debris along banks - taking particular notice of UITZ and Supra ITZ - now snow covered
Remove oiled organic material from knoll on north side of stream - cut off stump & roots + other oiled parts of 2 trees

No bio remediation recommended.

LAND MANAGER
NAME ___________________________ SIGNATURE ___________________________

☐ NO TREATMENT RECOMMENDED       ☑ TREATMENT SUGGESTED

COMMENTS
SHORELINE OILING SUMMARY

FROM: EXXON CMD CORDOVA TO: SCAT TEAM

DATE: 4/22/90

SURFACE SEDIMENTS: A % B % C % P % C % S %

SURFACE OIL

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

OILED DEBRIS

- Log
- Vegetation
- Trash

AMOUNT

- Sm
- Md
- Lg

DID YOU COUNT

- YES
- NO

OILED DEBRIS TYPE

- BAGS

NEAR SHORE SHEEN?

- BR RW SL TL

SUBSURFACE OIL

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED DEBRIS</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>ANA SHEEN</th>
<th>SURFACE OIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 15</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 8</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 12</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SURFACE OIL

- CLIFF, SMALL BOLDER BEACH
- NEW SPAT SET IN LOWER INTERTIDAL ZONE
- UPPER SUBA ZONE SNOW COVERED WITH SOME OILED DEBRIS UNDER SNOW

COMMENTS

NO OIL OBSERVED IN STREAM BED, ON WEST SIDE OF SITE.
Remove oiled rope, grass

Bio CV/CT

B/CV 40X10X3M

Oil Delums

dle

Dead Fall

23X5X3 cm

Ja PT

Gap 6X2X2M

30X8

MITZ

Remove Paving

Bed Rock

Sub Surface Oil Study Marker

AP A75 70 CT 72 ST MS PT 3 TB FL 7

Only Rope Under Snow

5 character Length (m)
ADPEC MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: ES SS ES TS AGS SHA MHBS PTA
2 REGION: KJ, CI, K, AP

METHOD: Aerial Ground Bear

3 DATE: 4-22-90
4 START TIME: 1540
5 STOP TIME: 1707
6 SEQUENT #: KN211
7 STATION #: 19 TIDE HT AT SURVEY:
8 X-UNITs: Ebb Slack Flood Slack
9 STAT AREA: 20 USCQ Quad:
10 LAT: 
11 LONG:

12 SOURCE: Van Loren
13 LOCATION: More Bay Isles
14 DESCRIPTION: Knight Is.

EXTENT OF OIL

<table>
<thead>
<tr>
<th>SHORELINE</th>
<th>STREAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>W</td>
</tr>
<tr>
<td>60°F</td>
<td>20°F</td>
</tr>
</tbody>
</table>

27 SURFACE COVERAGE

28 SURFACE THICKNESS

29 PENETRATION

30 OVERALL OIL IMPACT: N Y L M H

31 OIL TYPES: Pool: Spangled Tip: Asphalt Sticky Stain

32 OILED DEBRIS: Y N

33 SHORELINE TYPE: Headland Low-lying Rocks Beach Cove Lagoon Marsh

34 WAVE EXPOSURE: High Moderate Low

35 SUBSTRATE TYPE: Bedrock Boulder 60.9% Cobble 40.9%
Gravel Sand Mud/Silt

36 CATALOGED ANAD. FISH STREAM: Y N
37 CATALOG #: 16875

38 STREAM NAME:

39 OIL IN STREAM BED: Y N
40 OIL ON STREAM BANKS: Y N

41 OIL ON BEACH ADJACENT TO MOUTH: Y N

42 OIL WITHIN 1 MILE OF STREAM: Y N

43 ANOMALOUS FISH PRESENT: Y N

44 ANOMALOUS FISH OBSERVATION

Species: Aerial Ground

COMMENTS: Outlet bay lake is choked with oil debris, water, mud near stream. Thick layer of oiled vegetation/lake silt. Some sheen also. Some sheen down stream from bay in braided stream mouths (Creagan) Oiled debris continues 6-1.75 miles on both sides.
p27

**DESCRIPTION**

- Pit #1: 45cm oil continua deeper than 45cm subsoil. Fine oil
- Pit #2: 34cm deep (oil surface down 4cm deep) containing oil.
- Pit #3: Weathered oil stained across ground in hole 18cm depth hole.
- Pit #4: Some oil stained rocks. Sand, silt, gravel, random oily. Scand oil on bottom rocks. Sand oil random, thickened.

**OIL DISTRIBUTION DIAGRAM**

- Oil mound
- Oil stocks

**Sample Taken**

- Photo frame # and another 10 meters of oil.
Recommendations:

Perform work during proper tidal window;
Remove as much oiled debris manually as possible prior to removing logs
Remove oiled logs, branches, needles, etc. debris from creek mouth and burn on site, preferably at a high ground site. A tracked c. tractor with which a blade or spring tooth rake would make this job quicker & more effective.
Shovel removal or other manual removal, after logs have been cleaned, of oiled gravels and finer gravels, particularly within 25 meters of either side of stream. Thrown larger oiled rocks after washing down up into supra tidal area.
Resurvey beach area and remove any oiled debris or obvious farmatts, patties etc.
- Lay out pumpain material if possible along banks of stream to prevent oil from bleeding into stream bed. Do this prior to beginning of work.

Main point to observe is to remove as much of the oiled debris between you and around the log jams before disturbing the logs. This will prevent a lot of oiled debris from falling into the stream.
debris between, on, and around the log jams before disturbing the logs. This will prevent a lot of oiled debris from falling into the stream. No bo remediation recommended.
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-135 SUBDIVISION A (1 of 2)

WORK WINDOW

<table>
<thead>
<tr>
<th>Bioremediation</th>
<th>Tar mat Removal</th>
<th>Spot Washing</th>
<th>Manual Tilling</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPEN PRIOR TO 8/15</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

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

3N,3P Pinniped Pupping
30,3Q Pinniped Molting

CONSTRAINT 8/15 to 9/15. 5/15 to 7/1 constraint waived for bioremediation and site monitoring by Lloyd Lowry, ADF&G, per conversation with Exxon/John Wilkinson, 5/8/90; vessels will navigate slowly staying near the north side of the entrance. Steve Zimmerman, USNMFS, deferred to ADF&G (phone conversation with Exxon/J. Wilkinson 5/8/90).

OTHER ECOLOGICAL CONSIDERATIONS

Restrict disturbance of unolled fucus, barnacles and gastropods in M and UITZ.

IF CULTURAL RESOURCES ARE UNCOVERED, PHONE 564-3274.

TAG APPROVAL DATE - 5/11/90
ADEC Art Weinberg  Art Weimer
EXXON Andy Tommes
NOAA Bruce Turner
USCG D.D. Brown

Prepared by: Claudia Mag Date: 5/10/90
SHORELINE EVALUATION

SEGMENT ST/ KN-135 SUBDIVISION A (1 OF 2) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Herring spawning (2M) - 4/1 to 6/15; May be near harbor seal and sea lion pupping areas (3N, P) - 5/15 to 7/1; May be near harbor seal and sea lion molting areas (30, Q) - 8/15 to 9/15. Ask ADF&G to clarify pupping and molting locations.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Restrict disturbance of unooled fucus, barnacles and gastropods in M and UITZ.

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: April 12, 1990

OILING CATEGORIZATION:
Wide 0 m; Medium 134 m; Narrow 0 m; V.Light 0 m; No Oil 151 m
Subsurface Oil Observed: Yes X No Maximum Depth 20 cm

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

COMMENTS: Recommend tarmat breakup and removal in areas as shown on sketch map. Manual tilling of area where subsurface oil found, and bioremediation of areas shown. All work between 7/1 and 8/15 based on constraints. Spot wash as indicated on sketch.

TAG COMMENTS:

TAG APPROVAL DATE: 4/10/90
ADEC JOHN BAUER
EXXON
NOAA
USCG

FOSC: DATE: 5-6-90
06/06 monitors survey UITZ and SITZ for oil during work. Provide 24 hour notice to CAC prior to beginning work; upon request, co-op supervises transport and berth CAC month.
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT .KN-135 SUBDIVISION B (2 of 2)

WORK WINDOW

Manual Pickup
Bioremediation
Tarmat Removal
Spot Washing
Small Mechanical Equipment

OPEN PRIOR TO 8/15

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

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

3N,3P Pinniped Pupping
3O,3Q Pinniped Molting
CONSTRAINT 8/15 to 9/15. 5/15 to 7/1 constraint waived for bioremediation and site monitoring by Lloyd Lowry, ADF&G, per conversation with Exxon/John Wilkinson, 5/8/90; vessels will navigate slowly staying near the north side of the entrance. Steve Zimmerman, USNMFS, deferred to ADF&G (phone conversation with Exxon/J. Wilkinson 5/8/90).

OTHER ECOLOGICAL CONSIDERATIONS

Restrict disturbance of unoiled fucus, barnacles and gastropods in M and U1TZ.

IF CULTURAL RESOURCES ARE UNCOVERED. PHONE 564-3274.

TAG APPROVAL DATE 5/11/90
ADEC Act. Director BO
EXXON Tom
NOAA J. Lowry
USCG D. D. Rowe
FOSC

Prepared by: Claudia Meyer Date: 5/10/90
SHORELINE EVALUATION

SEGMENT ST/ KN-135 SUBDIVISION B (2 OF 2) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15: May be near harbor seal and sea lion pupping areas (3N, P) - 5/15 to 7/1; May be near harbor seal and sea lion molting areas (3O, Q) - 8/15 to 9/15. Ask ADF&G to clarify pupping and molting locations.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Restrict disturbance of unoiled fucus and barnacles in MITZ.

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: April 12, 1990

OILING CATEGORIZATION:
Wide 77 m: Medium 112 m: Narrow 0 m: V. Light 70 m: No Oil 5 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: X Wands
X Tarmat: Breakup ____Beach Cleaner
X Removal _____Other (see comments)

COMMENTS: Recommend removal of tarmats, as well as manual pickup of oily debris in areas shown on sketch map. In addition, bioremediation is recommended in those areas where a coat is shown on sketch map. All work 7/1 to 8/15 based on pupping and molting constraints. Spot wash as required as indicated on sketch.

TAG COMMENTS: For TARMAT REMOVAL SMALL MECHANICAL EQUIPMENT MAY BE USED AS DETERMINED BY FIELD OPS.

TAG APPROVAL DATE: 4/0/90
ADEC JOHN RAUPE
EXXON
NOAA
USCG

FOSC: DATE: 5-6-90
CG/ ADEC monitors survey SITZ and URT during work. Provide 24 hour notice to CAC prior to work. C3 CACP supervisor transmit and brief CAC monitor upon arrival.
SHORELINE EVALUATION

SEGMENT ST/ KN-135  SUBDIVISION A (1 OF 2) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

- Herring spawning (2M) - 4/1 to 6/15: May be near harbor seal and sea lion pupping areas (3N, P) - 5/15 to 7/1; May be near harbor seal and sea lion molting areas (30, O) - 8/15 to 9/15. Ask ADF&G to clarify pupping and molting locations.

- SUBDIVISION ECOLOGICAL CONSTRAINTS: Restrict disturbance of unoiled fucus, barnacles and gastropods in M and UITZ.

- 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: April 12, 1990

OILING CATEGORIZATION:

- Wide 0 m: Medium 134 m: Narrow 0 m: V.Light 0 m: No Oil 151 m
- Subsurface Oil Observed: Yes X No Maximum Depth 20 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend tarmat breakup and removal in areas as shown on sketch map, manual tilling of area where subsurface oil found, and bioremediation of areas shown. All work between 7/1 and 8/15 based on constraints. Spot wash as indicated on sketch.

TAG COMMENTS:

TAG APPROVAL DATE: 4/10/90
ADEC  JOHN BAUER  FOSSC:
EXXON  ___________  DATE: 5-6-90
NOAA  ___________  CG/ADEC monitors survey UITZ and SITZ for oil during work. Provide 24 hour notice to CAC prior to begin work. Upon request, CG ICP supervision transport on berth CAC months.
USCG  ___________
SHORELINE EVALUATION

SEGMENT ST/ KN-135 SUBDIVISION B (2 OF 2) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15; May be near harbor seal and sea lion pupping areas (3N, P) - 5/15 to 7/1; May be near harbor seal and sea lion molting areas (30, Q) - 8/15 to 9/15. Ask ADF&G to clarify pupping and molting locations.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Restrict disturbance of uncoiled fucus and barnacles in MITZ.

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: April 13 1990

OILING CATEGORIZATION:
Wide 77 m: Medium 112 m: Narrow 0 m: V. Light 70 m: No Oil 5 m
Subsurface Oil Observed: Yes X No Maximum Depth 30 cm

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: X Wands
X Tarmat: ___ Breakup ___ Other (see comments)
X Removal ___ Beach Cleaner

COMMENTS: Recommend removal of tarmats, as well as manual pickup of tarballs in areas shown on sketch map. In addition, bioremediation is recommended in those areas where a coat is shown on sketch map. All work 7/1 to 8/15 based on pupping and molting constraints. Spot wash as required as indicated on sketch.

TAG COMMENTS: For TARMAT REMOVAL, SMALL MECHANICAL EQUIPMENT MAY BE USED AS DETERMINED BY FIELD OPS.

TAG APPROVAL DATE: 4/10/90
ADEC JOHN BAUER JOHN TAYLOR FOSC: DATE: 5-6-90
EXXON EXXON
NOAA NOAA
USCG G.A. MILLER G.A. MILLER

CG/ADEC/Noaa survey Sitz and Uitz during work. Provide 24 hour notice to Car prior to work. CG Ice supervisor, transport and broth Car monitor upon request.
SEGMENT ST/ KN-135  SUBDIVISION B (2 OF 2) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

- Herring spawning (2M) - 4/1 to 6/15; May be near harbor seal and sea lion pupping areas (3N, P) - 5/15 to 7/1; May be near harbor seal and sea lion molting areas (3O, Q) - 8/15 to 9/15. Ask ADF&G to clarify pupping and molting locations.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Restrict disturbance of unoiled fucus and barnacles in MITZ.

ARCHAEOLOGICAL CONSTRAINTS: Cultural resource survey in progress. Shoreline treatment cannot proceed until field data have been assessed and a formal archaeological constraint entered on the shoreline evaluation form.

SHPO SIGNATURE: ______________________ DATE: ______________________

OILING CATEGORIZATION:

- Wide_77 m: Medium_112 m: Narrow_0 m: V.Light_70 m: No Oil_5 m
- Subsurface Oil Observed: Yes X No Maximum Depth_30 cm

RECOMMENDATIONS:

- No Treatment Recommended
- Treatment Recommended
- Manual Pickup
- Bioremediation
- Tarmat: Breakup
- Removal

COMMENTS: Recommend breakup and removal of tarmats shown as well as manual pickup of tarballs. In addition, bioremediation is recommended in those areas where a coat is shown on sketch map. All work 7/1 to 8/15 based on pupping and molting constraints.

TAG COMMENTS:

TAG APPROVAL DATE: __________

ADEC
EXXON
NOAA
USCG

TAG APPROVAL DATE: ______________________

FOSC: __________ DATE: _______

NOAA
USCG
SHORELINE EVALUATION

SEGMENT ST/KN-135 SUBDIVISION B(2062) DATE 4/1/1990

ECOLOGICAL CONSTRAINTS:
TIME SENSITIVITY ________ TO ________

- Herring spawning (2m): 4/1-6/15; May be near harbor seal & sea lion pupping areas (3NP): 5/15-7/1; May be near harbor seal and sea lion molting areas (3GR): 8/15-9/15. Ask ADFG to clarify pupping/nesting locations. Restrict disturbance of unmarked eider & barnacle in MTZ.

ARCHAEOLOGICAL CONSTRAINTS:
Cultural resource survey in progress. Shoreline treatment cannot proceed until field data have been assessed and a formal archaeological constraint entered on the shoreline evaluation form.

SHPO SIGNATURE: ___________ DATE: ___________

OILING CATEGORIZATION:
- 77 m Wide, 112 m Medium, 0 m Narrow, 70 m V. Light, 5 m No Oil
- Oil Subsurface observed X Yes No Maximum Depth 30 cm

RECOMMENDATIONS:

- No Treatment Recommended
- Treatment Recommended
- Manual Pickup _______ Snare Booms/Sorbents _______ Tarmat Breakup/Removal
- Bioremediation _______ Spot Washing _______ Other
- Wands _______ Beach Cleaner

COMMENTS: Recommend Breakup & Removal of Tarmats shown as well as Manual Pickup of Tarballs. In addition, Bioremediation is recommended in those areas, where a coat is shown on 06 Map, Class 3-7/12.

All work 7/1 to 8/15 based on Pupping/Molting constraints

TAG COMMENTS: ____________________________

TAG APPROVAL DATE: ___________

ADEC:

EXXON:

NOAA:

USCG:

FOSC: ___________ DATED: ___________
1991 MAYSAP EVALUATION

SEGMENT: KN 135  SUB: B  REGION: PWS  SURVEY DATE: 5/3/91

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

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

COMMENTS:
INITIAL: Remove accessible asphalt at locations A and B. Rake Customblen and Inipol into sediments at locations A and B after asphalt removal.

TAG: ____________________________________________________________

FOSC:---------------------------------------------------------------

TAG APPROVAL DATE: __________________  FOSC APPROVAL DATE: ____________

ADEC________________________  FOSC________________________
EXXON________________________
USCG________________________
NOAA________________________
**ADEC**

<table>
<thead>
<tr>
<th>NAME</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wesley Cohnley</td>
<td>Wesley Cohnley</td>
</tr>
</tbody>
</table>

- **TREATMENT RECOMMENDED.** (Equipment easily unloaded, no biota in oiled zone)
- OG estimated 1600m² area of patchy AP. Area was boxed in, 1990. Once again, NOAA decision tree states remove AP. AP is in some places, 15cm thick. I imagine it will turn liquid in the hot summer sun if not removed.
- Recommendation: Manually remove all AP, roll cobble/boulders (or pile) to the side to expose patchy AP towards the N.W. side of beach.
- Aggressive mechanical Tilling/agitating w/incoming tide, collect oil w/snare boom, contain escaping oil with curtain boom. Rework numerous times to release very heavily oiled sediment. Two dead deer were found in beach with oiled area. It makes one wonder what they died from.

**EXXON**

<table>
<thead>
<tr>
<th>NAME</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jon Czenecki</td>
<td>Jon Czenecki</td>
</tr>
</tbody>
</table>

- This segment has recruitable AP and noticeable mor 100' or
in 3 of the 10 pits. The AP is on black map as 20 x 40 areas.

**LANDMANAGER**

<table>
<thead>
<tr>
<th>NAME</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>John Johnson of Beach</td>
<td></td>
</tr>
</tbody>
</table>

- [X] Treatment recommended to remove all oil.

**USCG/NOAA**

<table>
<thead>
<tr>
<th>NAME</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rodney</td>
<td></td>
</tr>
</tbody>
</table>

- [X] NTR This segment comprises of boulders, cobble, pebble with a large area of AP. Subsurface conditions range from loe to hoo. Manual tilling could enhance the recovery rate of the segment. Other dead carcasses have been observed on non-oiled beaches.
<table>
<thead>
<tr>
<th>L</th>
<th>LOC</th>
<th>AP</th>
<th>MS</th>
<th>TB</th>
<th>BOR</th>
<th>CV</th>
<th>CT</th>
<th>ST</th>
<th>FL</th>
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</table>

**SURFACE OIL CHARACTER**

<table>
<thead>
<tr>
<th>LOC</th>
<th>AP</th>
<th>MS</th>
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<th>BOR</th>
<th>CV</th>
<th>CT</th>
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**SURFACE SEDIMENT**

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<th>BOR</th>
<th>CV</th>
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**AREA**

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**ZONE**

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<th>CT</th>
<th>ST</th>
<th>FL</th>
<th>DB</th>
<th>NO</th>
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</thead>
</table>

**NOTES**

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

**OG COMMENTS:** This is a low-wave exposure site, which obviously received heavy oil loading during 1989.

Asphalt is relatively extensive at the site with an estimated 1000 m² area containing a patchy asphalt distribution. The asphalt was hard and in some places up to 15 cm thick (average thickness about 5 cm). An estimated 560 m² of asphalt is present.

OG 10/85
<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>Pit No.</th>
<th>Depth (cm)</th>
<th>Subsurface Oil Character</th>
<th>Oiled Zone cm-cm</th>
<th>Clean Below Level YN</th>
<th>H2O Zone cm</th>
<th>Sheen Color</th>
<th>Pit Zone</th>
<th>Surface Subsurface Sediments</th>
<th>Notes</th>
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<tbody>
<tr>
<td>8A</td>
<td>8</td>
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<tr>
<td>8B</td>
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<td>15-35 N</td>
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<td>7</td>
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<td>0-30 N</td>
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<td>10</td>
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<td>0-5 Y</td>
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<td>X</td>
<td>Y</td>
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</table>

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

OG COMMENTS:

Subsurface oiling is generally coincident with the asphalt distribution. Pits #3 and #8 identified HOR condition, which is assumed to underlie almost all of location B (cut: 20×40m area with broken distribution). Pits #5, 6, 7 delineate an MOR condition which is assumed to be coincident with location A (20×40, sporadic distribution: <80m²).
WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th>None observed</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED SPECIES PRESENT</th>
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<tbody>
<tr>
<td>Eagles</td>
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<td>Seabirds</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</th>
<th>SPECIES</th>
<th># OBSERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sea Otters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pinnipeds(specify)</td>
<td>(2 Deer Skeletons)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seals(specify)</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Shoreline subdivision map showing important biological features attached.
Increasing abundance/diversity:
Ven.  N. Paramela, Facies, Impoti,
Litter, Mytilus, etc.

Sparse biofa (Paramela, Litter)

Subdivision Field Map
Map Key: KN14NO135B
Name: S. Steiner
Date: 5/3/94

Wide
Medium
Narrow
Very Light
No Oil

ADEC Subsegment Length: 285m
METERS
## 1991 MAYSAP EVALUATION

**SEGMENT:** KN 135  **SUB:** A  **REGION:** PWS  **SURVEY DATE:** 5/3/91

### 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>Manual Pickup (Check as Req.)</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spot Washing</td>
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</tr>
<tr>
<td>Bio-Customblen Only</td>
<td></td>
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</tr>
<tr>
<td>Bio-Inipol/Custmblen</td>
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<tr>
<td>Other</td>
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<td></td>
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<tr>
<td>Other</td>
<td></td>
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</tr>
</tbody>
</table>

### COMMENTS:

**INITIAL:** Remove asphalt at locations A, B, C, D, and H. Apply Customblen and Inipol at locations A, B, C, D, E, F and H and in areas of pits 4, 5, 6, 8, 9, and 10.

**TAG:** ______________________________________________________

**FOSC:** ______________________________________________________

**TAG APPROVAL DATE:** ___________  **FOSC APPROVAL DATE:** ___________

**ADEC** ___________________________  **FOSC** ___________________________

**EXXON** ___________________________

**USCG** ___________________________

**NOAA** ___________________________
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<tr>
<th>ADEC</th>
<th>NAME: Wesley Ohannley</th>
<th>SIGNATURE: Wesley Ohannley</th>
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</thead>
<tbody>
<tr>
<td>NTR</td>
<td>TREATMENT RECOMMENDED</td>
<td></td>
</tr>
</tbody>
</table>
|      | THERE IS AP (ASPHALT MIXED w/GRAVEL) SCATTERED THRU OUT THIS SEGMENT. AP ADJACENT TO STREAM NEEDS REMOVED MANUALLY. WESTERN SIDE OF BEACH (PAST BEDROCK) HAS R. SIGNIFICANT AMOUNT OF ASPHALT. IT WAS ALSO HARD TO DETERMINE THE CONSISTENCY OF THE SUBSURFACE OIL IN THIS AREA DUE TO THE AMOUNT OF RUN-OFF FROM THE UPLANDS. HOWEVER, PITS FILL W/BLACK OIL SO I SUSPECT OP IS SUBSURFACE.  
RECOMMEND REMOVAL OF ALL AP. MECHANICALLY TILL AREA WHERE THE MAJORITY OF THE AP IS (WAS AFTER REMOVAL) BIOTA IS SPARSE IN OILED AREA. WORK WHEN LWZ IS COVERED BY WATER. AGITATE ON AN INCOMING TIDE. COLLECT OIL W/SHAVE BROOM. REWORK NUMEROUS TIMES DUE TO HEAVY OIL. |

<table>
<thead>
<tr>
<th>EXXON</th>
<th>NAME: Joni Cervone</th>
<th>SIGNATURE: Jon Cervone</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTR</td>
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</tr>
<tr>
<td></td>
<td>THIS BEACH HAS SOME RECOVERED AP. THE SUB-SURFACE OIL IS IN THE SAND AS OP MENTIONED. AP IS ON FISHER AS SHOWN ON THIS MAP.</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>MANAGER</th>
<th>NAME: Steve Olshey</th>
<th>SIGNATURE: Steve Olshey</th>
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</thead>
<tbody>
<tr>
<td>NTR</td>
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</tr>
<tr>
<td></td>
<td>All Remaining Oil Should Be Removed</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>USCG/NOAA</th>
<th>NAME: Mccoy Berts</th>
<th>SIGNATURE: Mccoy Berts</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTR</td>
<td>THIS SEGMENT HAS A STREAM ON THE WESTERN END WITH SWASH BASINS. THESE MAIN AREAS A, B, &amp; C HAVE EXTENSIVE ASPHALT COATING. 3-5 CM THICK AND SOME SUBSURFACE. Hoe &amp; OP, Manual Tilling And Removal Of This Area Would Enhance The Recovery Rate Of The Shoreline.</td>
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</table>
**SURFACE OIL CHARACTER**

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<tr>
<th>LO</th>
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<th>SOR</th>
<th>CV</th>
<th>CT</th>
<th>ST</th>
<th>FL</th>
<th>DB</th>
<th>NO</th>
<th>TYPE</th>
<th>VS</th>
<th>HML</th>
<th>S</th>
<th>UI</th>
<th>MI</th>
<th>LI</th>
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<tbody>
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</tbody>
</table>

**SURFACE SEDIMENT**

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

**AREA**

- **WIDTH**: m
- **LENGTH**: m

**ZONE**

- **S**: Sulfur
- **UI**: Uranium
- **MI**: Molybdenum
- **LI**: Lead

**NOTES**

- **BETWEEN OUTCROPS**

---

**DISTRIBUTION**

C = 91-100%; B = 61-90%; F = 11-60%; S = 1-10%; T = <1%

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

**PHOTO ROLL # MAYSAP**: 3 - 09

**FRAMES**: 18-20

---

**PIT NO. DEPTH (cm)**

<table>
<thead>
<tr>
<th>PIT</th>
<th>OIL CHARACTER</th>
<th>NORM</th>
<th>MOR</th>
<th>LOR</th>
<th>FREE</th>
<th>OILED</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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<tbody>
<tr>
<td>1</td>
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<td>Y</td>
<td>-</td>
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<td>X</td>
<td>P/SG</td>
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<td>Y</td>
<td>15</td>
<td>B</td>
<td>X</td>
<td>K/SG</td>
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<td>K/SG</td>
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</tbody>
</table>

**SUBSURFACE OIL CHARACTER**

- **OP**: Oil In Place
- **HOR**: Horizon
- **MOR**: Middle Oil
- **LOR**: Lower Oil
- **FREE**: Free Oil
- **OILED**: Oiled Zone
- **CLEAN**: Clean Below
- **H20 LEVEL**: H20 Level
- **SHEEN COLOR**: Sheen Color
- **PIT ZONE**: Pit Zone
- **SURFACE-SUBSURFACE SEDIMENTS**
- **NOTES**

---

**OG COMMENTS**

This low energy pebble/cobble beach has relatively extensive oil covers. An estimated 200 m² of the beach contains about 500 m² of asphaltenes and an additional 80 m² of beach contains about 10 m² of sand.

Horizon was identified in the subsurface at two locations (Band 3) with an estimated 3x3 m area at location B and an

**REVISED** 5/10/91

**REVISIONS** 5/10/91
<table>
<thead>
<tr>
<th>PIT NO</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED ZONE</th>
<th>CLEAN BELOW LEVEL</th>
<th>H2O COLOR</th>
<th>SHEEN COLOR</th>
<th>PIT ZONE</th>
<th>SURFACE-SUBSURFACE SEDIMENTS</th>
<th>NOTES</th>
</tr>
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</tbody>
</table>

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

OG COMMENTS:
Estimated 5 x 10 m area within location C. The latter area, location C, appears to be discontinuous as per the distribution of the AP.
DATE 5/3/91
TIDAL HEIGHT (Range) 0-0
BIOLOGIST 3tkor
WIND SPEED/DIRECTION Calm

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):
Low energy reach of pebbly/cobble/boulder/hardrock bordered on S. by an agenda water stream.
Biota generally sparse in the upper intertidal, increasing downslope in both abundance and diversity. Mid to lower intertidal flora consists of patches and moderately dense fucus, filamentous green and red algae, moderate to dense barnacles, patchy spirorbis, patchy mysids (interloched and attached), amphipods, echiurids and egg masses, limpets (some dense clusters), and patchy clusters of small gastropods. Biota within/adjacent to surface and subsurface oil (A-H, PIT S) consists of sparse densities of fucus, barnacles, mysids, echiurids and amphipods, with scattered clusters of limpets. Patches downslope from oiled zones similar in composition (with addition of gastropods and spirorbis) greater in overall abundance. Fairly extensive patches of dense interloched mysids occur downslope from breakout area in central portion of subdivision.
If treatment is planned, care should be taken to minimize disturbance/destruction of the more abundant down-slope community, particularly mussel beds described above.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS

<table>
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<td>Gulls</td>
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FISH OBSERVED

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LAND MAMMALS

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<tr>
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<td>Pinnipeds</td>
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<td>Walrus</td>
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MARINE MAMMALS

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<tr>
<th>Species</th>
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<tr>
<td>Walrus</td>
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</table>

Shoreline subdivision map showing important biological features attached.

REVIEWED BY: R. A. SEYBOLD
REVIEWED BY: R. A. SEYBOLD
### 1991 MAYSAP EVALUATION

**SEGMENT:** KN 135  **SUB:** A  **REGION:** PWS  **SURVEY DATE:** 5/3/91

**ENVIRONMENTAL SENSITIVITIES:**

- Work Window(s): OPEN

**Ecological/Constraints (see page two for details):** NONE

**ARCHAEOLOGICAL CONSTRAINTS:**

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find, and contact Exxon's Cultural Resource Program immediately:

- 564-3276
- 564-3657 (Anchorage)
- 229-1514 (24 hrs.)

**RECOMMENDATIONS:**

**TREATMENT REQUIRED (Y or N):** Y

<table>
<thead>
<tr>
<th>Manual Pickup (Check as Req.)</th>
<th>INITIAL</th>
<th>TAG</th>
<th>FOSC</th>
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<tbody>
<tr>
<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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<tr>
<td>Other Manual Till/RAKE</td>
<td>X</td>
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</table>

**COMMENTS:**

INITIAL: Remove asphalt at locations A, B, C, D, and H. Apply Customblen and Inipol at locations A, B, C, D, E, F, and H and in areas of pits 4, 5, 6, 8, 9, and 10.

**TAG:** Manual RAKE/TILL in areas of Pit 4, 5, 9+10

**FOSC:**

___

**TAG APPROVAL DATE:** MAY 17 1991  **FOSC APPROVAL DATE:** 25 MAY 1991

**ADEC**

**EXXON**

**USCG**

**NOAA**
TEAM NO. Three    SEGMENT KNO135    SUBDIVISION A    DATE 5/3/91

ADEC
NAME Wesley Ghormley    SIGNATURE Wesley Ghormley

☐ NTR  ☑ TREATMENT Recommended
there is AP (masse mixed w/gravel) scattered thru out this segment. AP adjacent
to stream needs removed manually. Western side of beach (Past Bedrock) has
a significant amount of Asphalt. It was also hard to determine the consistancy
of the subsurface oil in this area due to the amount of run-off from the
uplands. However pits fill w/black oil so I suspect OP is subsurface.
Recommend removal of all AP. Mechanically till area where the majority
of the AP is (was after removal) biota is sparse in oiled areas, work
when Litz is covered by water. Agitate on an incoming tide. Collect/
contain oil w/flare boom. Rework numerous times due to heavy oil.

EXXON
NAME Jon Godwalt    SIGNATURE Jon Godwalt

☐ NTR  ☑ TREATMENT Recommended
the beach has some recoverable AP. The subsurface
oil is in the sand as op noted. ☑ AP is in fine
gritty as shown on stake map.

LANDMANAGER
NAME Sh. Solar    SIGNATURE Sh. Solar

☐ NTR  ☑ TREATMENT Recommended
☒ All Remaining oil Should be Removal

USCG/NOAA
NAME J. Bremer    SIGNATURE J. Bremer

☐ NTR  ☑ TREATMENT Recommended
this segment has a stream on the western end with
swamp grass. Three main areas A, B, & C have extensive asphalt
covering 3-5 cm thick and some subsurface hoe & OP. Manual
Tilling and removal of this area would enhance the
recovery rate of the shoreline.
**MAYSAP SHORELINE OILING SUMMARY**

**TEAM NO. 3**

**SEGMENT**: KN-135

**DATE**: 3 MAY 91

**TIME**: 10:45 to 11:20

**TIDE LEVEL**: 53 ft to 1.32 ft

**ENERGY LEVEL**: □ H □ M □ L

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

**TOTAL LENGTH SHORELINE SURVEYED**: 140 m

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

**EST. OIL CATEGORY LENGTH**: W 30 m □ 40 m □ 5 m □ 10 m □ 55 m □ 103 m

<table>
<thead>
<tr>
<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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<tbody>
<tr>
<td>A</td>
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<tr>
<td>B</td>
<td>PG- M</td>
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<td>X-X</td>
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<tr>
<td>C</td>
<td>PG- M</td>
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<td>PG- L</td>
<td>2</td>
<td>10</td>
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</table>

**NOTES**: BETWEEN OUTCUPS

**DISTRIBUTION**: C = 0-100%; B = 1-30%; P = 31-50%; F = 51-100%; T = <1%

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

**PHOTO ROLL # MAYSAP-** 3 - 09

**FRAMES 18-20**

**OG COMMENTS:**

This low energy pebble/cobble beach was relatively extensive, oil covers an estimated 1200 m² of the beach. Part of the high energy part contains about 500 m² of asphalt and an additional 80 m². The beach contains about 10 m² of Spar."
<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>DEPTH (cm)</th>
<th>OIL CHARACTER</th>
<th>OILED ZONE</th>
<th>CLEAN HYDROCARBON LEVEL</th>
<th>SHEEN COLOR</th>
<th>ZONE</th>
<th>SUBSURFACE SEDIMENTS</th>
<th>NOTES</th>
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</table>

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

**OG COMMENTS:**
Estimated 5 x 5 m area within location C. The latter area, location C, appears to be discontinuous as per the distribution of the AP.
DATE 5/3/91

TIDAL HEIGHT (Range) 0-0

BIOLo'IST Stokor

WIND SPEED/DIRECTION Calm

PHOTOGRAPHS: ROLL # FRAME #

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

Low energy beach of pebble/cobble/handor/bedrock bordered on S. by an anadromous stream.

Busta generally sparse in the upper intertidal, increasing downslope in both abundance and diversity. Mid to lower intertidal busta consist of patella and moderately dense fucus, filamentous green and red algae, moderate to dense barnacles, patchy spirorbid, patchy Mytilus (intertidally and attached), amphipods, detritus and egg masses, limpets (some dense clusters), and patty clusters of small gastropods.

Busta within/adjacent to surface and subsurface oil (A-H, Pit 5) consist of sparse densities of Fucus, barnacles, Mytilus, detritus and amphipods, with scattered clusters of limpets. Busta downslope from oiled zone similar in composition (with addition of gastropods and spirorbids), greater in overall abundance. Fairly extensive patches or dense interbedded Mytilus occur downslope from brothel entrance in central portion of subdivision.

In treatment, care should be taken to minimize disturbance/destruction of the more abundant downslope community, particularly mussel beds described above.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED</th>
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<tr>
<td>Eagles</td>
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<tr>
<td>Gulls/kittiwakes</td>
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<td>Shorebirds</td>
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<td>Corvids</td>
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<td>Other Birds</td>
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<th>MARINE MAMMALS</th>
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<tr>
<td>Sea Otters</td>
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<td>Pinnipeds (specify)</td>
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<td>Sea Lions (specify)</td>
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Shoreline subdivision map showing important biological features attached.
1991 MAYSAP EVALUATION

SEGMENT: KN 135
SUB: B
REGION: PWS
SURVEY DATE: 5/3/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) OPEN

Ecological/Constraints (see page two for details) NONE

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

RECOMMENDATIONS:
INI~IAL TAG FOSC
TREATMENT REQUIRED (Y or N) Y Y Y
Manual Pickup (Check as Req.) X X A Y
Spot Washing
Bio-Customblen Only
Bio-Inipol/Customblen X X
Other_Manual Rake/Tilling X X
Other

COMMENTS: EASILY + HSOR BENEATH AP.
INITIAL: Remove accessible asphalt at locations A and B. Rake Customblen and Inipol into sediments at locations A and B after asphalt removal.

TAG: PRIOR TO BIOSREOATION ROLL SMALL BOULDERS TO EXPOSE AREA REQUIRING BIO.

TAG APPROVAL DATE: MAY 17 1991
ADEC

EXXON

USCG

NOAA

FOSC APPROVAL DATE: 25 MAY 1991
E. E. PAGE, CDR, USCG
CHIEF OF STAFF, FOSC
ADEC

NAME: Wesley Gorman
SIGNATURE: Wesley Gorman

TREATMENT RECOMMENDED: (equipment easily unloaded, no biota in oiled zone)
OG estimates 1600m² area of patchy AP. Area was oiled in 1990, once again. NOAA
decision tree states REMOVE AP. AP is in some places, 15cm thick. I imagine it will
turn liquid in the hot summer sun if not removed.
Recommendation- Manually remove all AP, roll cobble/boulders (or pile) to the
side to expose patchy AP towards the N.W. side of beach.
Aggressive Mechanical Tilling/agitating w/incoming tide, collect oil w/
Snaie boom, contain escaping oil with Curtain boom. Rework Numerous
times to release very heavily oiled Sediment. Two dead deer were found
on beach will oiled area. It makes one wonder what they died from.

EXXON

NAME: Jon Czarnecki
SIGNATURE: Jon Czarnecki

This segment has recoverable AP and non-recoverable AP in 8 of the 10 piles. The AP is on static map as 2-
20 x 40 Acres.

LANDMANAGER

NAME: John Johnson of Chevron, Inc.
SIGNATURE: John Johnson

Heatmat RECOMMENDED to remove All Oil

USCG/NOAA

NAME: Moroney/Parker
SIGNATURE: Moroney/Parker

This segment comprises of Boulders, Cabble, Pebble with a
large area of AP. Subsurface Conditions range from low to hoe.
Manual Tilling could enhance the recovery rate of the
Segment. Other dead carcasses have been observed on
non-oiled beaches.
**MAYSAP SHORELINE OILING SUMMARY**

**TEAM NO.** 3

**OG** HARPER

**BIG** STOKER

**ADEC** GHORMLEY

**LANDMANAGER** JOHNSON for CVC

**OXON** CRAWNECKI

**USCG/NOAA** MOONEY/BARRATT

**SEGMENT** KN-135

**SUBDIVISION** B

**DATE** 3 May 1991

**TIME** 11:30 to 12:30

**TIDE LEVEL** 1.64 ft. to 3.74 ft.

**ENERGY LEVEL** H M X

**SURVEYED FROM** FOOT BOAT HELO

**WEATHER** SUN CLOUDS FOG RAIN SNOW

**TOTAL LENGTH SHORELINE SURVEYED** 265 m

**NEAR SHORE SHEEN** BR RB SL NONE

**EST. OIL CATEGORY LENGTH** W 40 m M 40 m N m V m L m US 0 m

<table>
<thead>
<tr>
<th>LO</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT</th>
<th>SHORE SLOPE</th>
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<th>ZONE</th>
<th>NOTES</th>
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<td>CPG</td>
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<td>B</td>
<td>CPG</td>
<td>M</td>
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<td>40</td>
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</table>

**DISTRIBUTION:**

C - 91-100%; B - 81-90%; P - 61-80%; S - 1-10%; T - <1%

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

**PHOTO ROLL** # MAYSAP - 3 - 09 FRAMES 22-24

**OG COMMENTS:**

This is a low wave shoreline site, which obviously received heavy oil loading during 1989.

Asphalt is relatively extensive at the site with an estimated 1600 m² and containing a patchy asphalt distribution. The asphalt was hard and in some places up to 15 cm thick (average thickness about 5 cm). An estimated 560 m³ of asphalt is present.
**OG COMMENTS:**

Subsurface oiling is generally coincident with the asphalt distribution. Pits #3 and #8 identified MOR condition, which is assumed to underlie most of location B (30x40 m area with broken distribution). Pits #5, 6, 7 delineate an MOR condition which is assumed to be coincident with location A (20x40, sporadic distribution; <80 m²).
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 3  
DATE 5/3/91

SEGMENT # KN 135  
TIDAL HEIGHT (Range) 0-1

SUBDIVISION B  
BIOLGIST Stoker

SEA STATE Calm  
WIND SPEED/DIRECTION Calm

PHOTOGRAPHS: ROLL #  
FRAME #

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

Low energy beach at pebble/cobble/boulder/boulders/bedrock transected by a small stream.

Biota generally sparse in upper intertidal, increasing downslope in both abundance and diversity. Biota varies considerably across subdivision, probably due to substrata characteristics. Biota on SE third of subdivision (pebble/cobble) is relatively sparse, consisting primarily of barnacles and littorina. Biota increases rapidly in both abundance and diversity to NW on cobble/boulder/bedrock, characterized by patchily dense barnacles, Fucus, interbedded and attached Mytilus, Listerina with egg masses, single or in dense clusters, Scorbisia/Nucula in dense clusters, clusters or small gastropod shells, and clam shells (Saxidomus). Patches of seagull were observed scattered throughout this community.

Biota within/adjacent to surface oil area A and subsurface pits 2-10 consists of patchy barnacles and spat, moderately dense Listerina with egg masses, limpets, and interbedded Mytilus in the MTR. Biota increases in diversity and abundance from 6 to H and downslope.

Biota within/adjacent to area A (Subsurface Pit C) similar to above. If treatment is undertaken, it is suggested that the beach be accessed from the E. and/or the subdivision where biota is minimal.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th>None observed</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED</th>
<th>SPECIES PRESENT</th>
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<td>Seals(specify)</td>
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Shoreline subdivision map showing important biological features attached.
ASAP TAG REVIEW SHEET

Segment: Kn1J5  Subd: A  Site: 1  Date: 17 Aug 90

Priority For Addressing In 1990

HIGH  MEDIUM  LOW  NTR  X

Treatment Recommended: MIP or A. shut

1) 18 x 10 AP/B
2) 15 x 10 AP/B

3) Matrix on Spur A. Pruitt

Priority Site For Reassessment In 1991

YES / NO / YES / NO / YES / NO

CG  ADEC  EXXON  LAND MGR

TAG 23 Aug 90

(Already NTR, ReB10 - Reason 91)
FINDINGS OBSERVED:

- Band of contaminate cast along AP area for 120' N of SW corner of property extending to future SW and NE. A line of kiln dust from SW corner to NE corner may have prevented plume access near SW and NE segment.

FOLLOWUP RECOMMENDATIONS:

- Manual removal of AP, residual AP, MS, OP and OR on surface and subsurface. See below for comments and recommended treatments.

COMMENTS:

- This area would benefit from additional manual clean-up and retreatment of bedrock.

- A large area of subsurface oiling appears present in area of anomalous N. High water table could allow hot water washing.

- Lora Johnson, Bowdoin, for biological exercise in area.

- Opposed with ADEC. Refer to Satellite Sketch Map for all locations as well.

- Completed by Pickup Crew:
  - ADEC: Beth McNeely
  - Exxon: John Dean

- Priority for Addressing in 1990:
  - High

- Comments:
  - SWG: Don Davis
  - Comments: Agree with ADEC. Refer to Satellite Sketch Map for all locations as well.

- Date: 5-10-90

- Site: AS/KN-135

- Subd.: A

- Segment: AS/KN-135
SEGMENT AS/ 700-25  SUBDIVISION: A  SITE:  DATE: 12/1/90

YES □ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON: Color area of cast/stain appears intermittent in lower channel area. (U/I)
Some asphalt patches in exposed areas between rocks. Some areas appear to
have been treated but asphalt coat, film, and mound remains in cause.
Area approx. 40 x 20 cm. Several pits were dug at showing oiling at different
intervals. At core or analogous stream. Exposed bank shows a line of oiling
approx. 60 cm. This appears to show subsurface oiling in gravel, slough
between stream channels @ 8-10 am. Some treatment required. 1990.

ADEC
NAME: Bob McCarter  SIGNATURE: Robert McCarter

[Signature]

□ YES □ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON: 

[Handwritten text]

MANAGER: HP. 191
NAME: Cora Johnson  SIGNATURE: [Signature]

□ YES □ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON: 

[Handwritten text]

MANAGER: HP. 191
NAME: [Signature]

□ YES □ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON: 

[Handwritten text]

MANAGER: HP. 191
NAME: [Signature]
## Surface Oil

### Site 1

<table>
<thead>
<tr>
<th>Character</th>
<th>Distribution</th>
<th>Oiled Zones</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>S.O.R.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Pool</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>
</tr>
<tr>
<td>Stain</td>
<td>X</td>
<td></td>
</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></td>
<td></td>
</tr>
</tbody>
</table>

**Estimated Site Length:** 243 m

### Site 2

<table>
<thead>
<tr>
<th>Character</th>
<th>Distribution</th>
<th>Oiled Zones</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
<tr>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

## Subsurface Oil

### Table

<table>
<thead>
<tr>
<th>Area 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 Sediments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>8</td>
<td>X</td>
<td>No</td>
<td>P/B/C</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>5</td>
<td>X</td>
<td>No</td>
<td>P/B/C</td>
<td></td>
</tr>
</tbody>
</table>

## Comments

- Oil grades from where to none in a north-south direction. Subsurface oil occurs at each end of the site.
- The stream bank at the southern end of the site exhibits a lens of oil about 10 to 15 cm narrow.
ASAP TAG REVIEW SHEET

Segment: K0135  Subd: 1  Site: 1  Date: PRE-Review 14 Aug 90

Priority For Addressing In 1990

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

Treatment Recommended:

If NOT, then NTR

Sor. Only is 15 High!

Low energy beach

No to be reassessment if work is done.

Priority Site For Reassessment In 1991

YES  NO  YES  NO  YES  NO  YES  NO
CG     ADEC    EXXON    LAND MGR

TAG 21 Aug 90

B10
ASAP FOLLOWUP RECOMMENDATIONS

Document: AS1KN135 Subd.: F-B Site: 1 Date: 8-10-90 1990

Conditions Observed: Area has at MITZ-NITZ a large area of AP, residual AP/SP, and OP/DR subsurface oil t. 50m. Storm beam is saturated with OP or DR oil with subsurface penetration to 20m.

Followup Recommendations: Annual removal of AP or order. See below for additional recommendations regarding storm beam.

Completed by Pickup Crew: [ ] YES [ ] NO

Priority for Addressing in 1990: [ ] High [ ] Mod. [ ] Low

DEC

Comments: Complete removal of all AP or DR oil is recommended. Storm beam should be mechanically relocated with beamed oiling removed and residual oil cleaned.

Exxon

Comments: Time permitting, a limited amount of additional oil can be removed manually. Recommend retreatting of bid.

USCG


Land Rep. LORA JOHNSON

Comments: AGREE with ADEC comments. NEEDS MECHANICAL & MANUAL TREATMENT IN 1990. SEE SSAT SKETCH MAP ALSO.
FIELD SHORELINE COMMENT SHEET

SEGMENT AS 14N-135° SUBDIVISION: B SITE: 1 DATE 10/20/88

NAME DON OMINOr, USGS SIGNATURE David Cox

☑ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:
Segment contains a Pom-Pom Boom laying on beach which is totally inservice.

☑ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:
NAME Peter H. Haas SIGNATURE Robert E. Macay

☑ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:
NAME Lula Johnson SIGNATURE Lord L. Johnson

☑ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:
NAME John Deen SIGNATURE John Deen

☑ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:
**Surface Oil**

<table>
<thead>
<tr>
<th>SITE 1</th>
<th>SITE 2</th>
<th>SITE 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHARACTER</td>
<td>DISTRIBUTION</td>
<td>OILED ZONES</td>
</tr>
<tr>
<td>S.O.R.</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>POOLED</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>COVER</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>COAT</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>STAIN</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>MOUSSE</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>PATTIES/T.B.</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>FILM</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>NO OIL</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>EST. SITE LENGTH</td>
<td>100 m</td>
<td>100 m</td>
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**Subsurface Oil**

<table>
<thead>
<tr>
<th>SITE NO.</th>
<th>PIT NO.</th>
<th>RIT</th>
<th>OILED ZONES</th>
<th>CLEAN BELOW</th>
<th>PIT ZONE</th>
<th>SURFACE/ - SUBSURFACE SEDIMENTS</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>15</td>
<td>X</td>
<td>O:5</td>
<td>Y</td>
<td>G/S/P/C</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>10</td>
<td>X</td>
<td>O:2</td>
<td>Y</td>
<td>P/G/C</td>
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<td>3</td>
<td>3</td>
<td>20</td>
<td>X</td>
<td>O:18</td>
<td>Y</td>
<td>P/G/S</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>20</td>
<td>X</td>
<td></td>
<td></td>
<td>P/G/S</td>
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</tbody>
</table>

*Remarks*

A 10 m-wide zone of surf/first occurred in the rocky/cobbleocket beach at the southern extremity of the site. Oil distribution grabbed from medium to a wide distribution from the N to S.
ASAP TAG REVIEW SHEET

Segment: KN 136   Subd: A   Site: 1   Date PRE-Review 14 Aug 90

Priority For Addressing In 1990

- HIGH  X MEDIUM  ___ LOW  ___ NTR

Treatment Recommended: np of Aspen, SOR

WHAT Type of SOR??

Not to be reassessed in 91

If work done in this year

Priority Site For Reassessment In 1991

YES  NO  YES  NO  YES  NO  YES  NO
CG  ADEC  EXXON  LAND MGR

 TAG 21 Aug 90

NTR - Reassess 91
ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/KN-136 Subd.: A  Size: 1  Date: 8-10-90  1990

Conditions Observed: Areas of bilge segment. Boulder/boulder sections of beach have a bed of dense Coat and over 1447-1412 with diatoms, AFS and substrate or mud, oil, asphalt tar oil saturated with active Coating and is surrounded by cobble and boulders with dense coat and cover. These are the areas and boulders appear to have been placed there by the owner.

Followup Recommendations: Manual removal of all removeable AP, MS, OD and OR oil. See below comments for specific recommendation treatment techniques.

Completed by Pickup [ ] YES [X] NO  Priority for Addressing in 1990: [X] High [ ] Mod. [ ] Low

ADEC Bob McLaugh [Signature]

Exxon John Dun [Signature]

USCG Don Orvis [Signature]

Land Rep. Lora Johnson [Signature]

Comments: Extensive existing polluting requires a substantial commitment. HP, HE, and MC are in need of removal, manual removal alone will not be enough to effect a significant change to the segment. In addition, mechanized treatment should be seriously considered.


Comments: AGREE WITH ADEC. SEE SSAT SKETCH MAPS.

NAME: David Roe, NGA  SIGNATURE: ___________  PRIORITY SITE FOR REASSESSMENT IN 1991

☐ YES  ☑ NO  REASON:  This area contains several patches of "tar" with a light film on the surface of rock/gravel beach. In addition, this segment includes a large tidal wash basin with a gravel and flat area. The whole basin contains a light film on the surface water with an anomalous stream running down the middle. The surrounding banks were heavily oiled with oil and some asphalt and mousse. This area appears to be a candidate for hot water washing. High ground water would allow oiling to run down to small creeks for recovery.

ADEC  NAME: Bob McClelland  SIGNATURE: ___________

☐ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991  REASON:  Heavily oiled segment requiring further treatment. Oil is heavy and continuous throughout with AP, MS, CO, CT, OP, OR oil from 11/17/89. Despite efforts of cleaning crew in summer '90 cleaning up substantial commitment and effort will be required to adequately clean KN-136. The technician recommends areas H10, AP working with heater and burnt. Manual removal of AP, MS, OP, OR. Further manual removal of OP saturated peat in March. Reinforcement and long term monitoring. If further treatment is required it should occur until KN-136 is free of AP, MS, OP, and OR etc.

LAND MANAGER  NAME: Lora Johnson  SIGNATURE: ___________

☐ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991  REASON:  AGREE WITH ADEC COMMENTS. SEE SAT SKETCH MAPS.

EXXON  NAME: John Dean  SIGNATURE: ___________

☐ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991  REASON:  AGREE WITH USCG/NOAA COMMENTS ABOVE.
### SURFACE OIL SURVEY

**SITE 1**

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OILED ZONES</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASPHALT</td>
<td>X</td>
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</tr>
<tr>
<td>S.O.R.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>POOLED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COVER</td>
<td></td>
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</tr>
<tr>
<td>COAT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STAIN</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>MOUSSE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PATIEST/T.B.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FILM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO OIL</td>
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**SITE 2**

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**SITE 3**

<table>
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<th>DISTRIBUTION</th>
<th>OILED ZONES</th>
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<tbody>
<tr>
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</tbody>
</table>

**EST. SITE LENGTH**

259 m

---

### SURFACE OIL PIT SURVEY

<table>
<thead>
<tr>
<th>SITE NO</th>
<th>PIT NO</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED ZONES</th>
<th>CLEAN BELOW (Y/N)</th>
<th>PIT ZONE</th>
<th>SURFACE-SUBSURFACE SEDIMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>8</td>
<td></td>
<td>0.5</td>
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<td>S/M</td>
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<tr>
<td>2</td>
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<td>10</td>
<td></td>
<td>0.5</td>
<td>Y</td>
<td>P/G/S</td>
<td></td>
</tr>
</tbody>
</table>

---

**NOTES**

- Oil occurs throughout this site intermittently. Muddy sediments are the exception.
- Flat areas in the center of the site exhibit oil on the surface of the mud.
- Otherwise, the beaches are composed of clean sand.
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ KN-141

SUBDIVISIONS: B (2 OF 2)
SHORELINE EVALUATION

SEGMENT ST/KN-141 SUBDIVISION_B (2 OF 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Harbor seal and sea lion pupping (3N, 3P) - 5/15 to 7/1 and molting (30, 30) - 8/15 to 9/15. Restrict boat and air traffic to essential minimum. Contact ADF&G and USFWS prior to treatment.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid unnecessary disturbance of unoiied substrate and biota.

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_34 m: V.Light_201 m: No Oil_359 m
Subsurface Oil Observed: Yes___ No X___ Maximum Depth_____

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: _________________________
ADEC _______________________________________
EXXON ______________________________________
NOAA _______________________________________
USCG _______________________________________
FIELD SHORELINE COMMENT SHEET

SEGMENT ST / KN 141 SUBDIVISION: B DATE 3-31-90

NAME Patrick Moly SIGNATURE Patrick Moly

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

This subsegment consisted of 2 bedrock islands that had area of continuous and broken stain and weathered coating in the U.I. zone. Debris may exist in the storm zone but it is not evident at this time (due to the snow) so I can not recommend treatment.

ADEC NAME Michael Cunningham SIGNATURE Michael Cunningham

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

as per guidelines for "coat" (see p. 76 flow diagram)

LAND MANAGER NAME Steven Phillips SIGNATURE Steven Phillips

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

Manual pickup of debris in storm zone (under snow) watch bathtup runs for deterioration
SHORELINE OILING SUMMARY

TO P.T.

SHORELINE OILING SUMMARY

OG Greg Chaney USCG Patric Malay SEGMENT ST/ 141
BIO Jim Roth LAND REP Mike Cunningham SUBDIVISION B
EXXON Ray Soletto ADEC Steve Phillips

TEAM NO.: 7 TIME: 50 to 19:10
TIDE LEVEL: 5.4 to 5.5 FT DATE: Mar 17/ 90
EST. SUBDIVISION LENGTH: 580 m

SURVEYED FROM: ☐ Foot ☑ Boat ☐ Helo WORKING DIRECTION: N to S
UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☐ Rock ☐ Snow
SURFACE SEDIMENTS: 90% B 10% C
SURFACE SLOPE: Lang % Hang 50% Vert 40%
OIL CATEGORY LENGTH: W m M m N 35 m V 170 m NO 375 m

SURFACE OIL

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

PAVEMENT: H F S sq. m by cm

PATTIES/TARBALLS BAGS

NEAR SHORE SHEEN? ☐ BR R W S L T L

OILED DEBRIS AMOUNT

<table>
<thead>
<tr>
<th>DEBRIS COLLECTED</th>
<th>TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ YES ☐ NO</td>
<td>Net</td>
</tr>
</tbody>
</table>

Photographs:

Roll No: ST-7-1
Frames: 13, 14

SUBSURFACE OIL

No pits dug due to bedrock substrate.

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL (cm-deg)</th>
<th>BELOW OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>ANA</th>
<th>SUBSURFACE SEDIMENTS</th>
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</tr>
</tbody>
</table>

COMMENTS

Sub-segment consisted of 2 small islands which were very simple bedrock islands. Oil stains were evident but some cracks contained coated oil.
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST / KN-14 | Subdivision | B | Date (mo / day / yr) | 31 MAR 90

(A) Substrate type and % of segments:
- (1) Bedrock ........................................... 90%
- (2) Boulder ............................................ 10%
- (3) Cobble ............................................. 0%
- (4) Pebble ............................................. 0%
- (5) Sand ............................................... 0%
- (6) Silt ................................................ 0%

(B) Overall % cover of biota (% of segment):
- Dense ................................................. 50%
- 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

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

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### GASTRORPODS

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</tbody>
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Photographs:
- Roll No. ST-7-1
- Frames 13-14

Wildlife Observations/ General Comments:

- Tide was +4 ft. when we arrived - therefore no lower zone observations possible.
- Island was surveyed from boat only - Gastropods not visible.

Ecological Considerations:
Due to bedrock substrate no pits were dug.

100 meters

Oil Character Length (m): AP - PO - CV - CT 35 - ST 205 MS - PT - TB - FL - NO 375

LEGEND

1 △
- Pit: No Subsurface Oil

2 △
- Pit: Subsurface Oil

CT/C
- Continuous Distribution

CT/B
- Broken Distribution

CT/P
- Patchy Distribution

CT/S
- Splashed Distribution

Oil Vegetation

F ◄
- Plate location, direction, and number
KN-121

Map Key: PWS-321
Name: Grey Chaney
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-141 SUBDIVISION A (1 of 2)

<table>
<thead>
<tr>
<th>WORK WINDOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual Pickup</td>
</tr>
<tr>
<td>CLOSED</td>
</tr>
<tr>
<td>Bioremediation</td>
</tr>
<tr>
<td>Manual Raking/Tilling</td>
</tr>
<tr>
<td>CLOSED</td>
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</table>

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3N, P, O, Q</td>
<td>Harbor Seal and Sea Lion Pupping and Molting Area</td>
</tr>
<tr>
<td>5T</td>
<td>Bald Eagle Nest</td>
</tr>
</tbody>
</table>

NO TIME CONSTRAINT. Authorized per memorandum dated 5/14/90 from Kathryn Frost/ADF&G to Mark Kuwada/ADF&G.

USFWS 6/1/00 map indicates an active nest in Subdivision A. Closed to manual pickup, bioremediation and manual raking/tilling within 400m of active nest.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC __________ Date 6-10-90

Prepared by __________ Date 6-10-90

Date 6/10/90
SHORELINE EVALUATION

SEGMENT ST/KN-141 SUBDIVISION A (1 OF 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Harbor seal and sea lion pupping (3N, 3P) - 5/15 to 7/1 and molting (3Q, 3O) - 8/15 to 9/15. Restrict boat and air traffic to essential minimum. Contact ADF&G and USFWS prior to treatment.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid unnecessary disturbance of uncoiled substrate and biota.

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: April 12, 1990

OILING CATEGORIZATION:
Wide 26 m: Medium 161 m: Narrow 119 m: V. Light 712 m: No Oil 130 m
Subsurface Oil Observed: Yes X No Maximum Depth 30 cm

RECOMMENDATIONS:
No Treatment Recommended X Treatment Recommended
X Manual Pickup
X Bioremediation
Tarmat: Breakup
Removal
Other (see comments)

COMMENTS: Bioremediate areas shown on sketch map. Work before 5/15 or 7/1 to 6/15 based on pupping constraints.

TAG COMMENTS: Manually till/raise where appropriate prior to bioremediation

TAG APPROVAL DATE: 4/12/90
ADEC JOHN BAIRD
EXXON ANDY GRIFFITH
NOAA BRUCE WATSON
USCG M. J. HALL
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-141 SUBDIVISION A (1 of 2)

WORK WINDOW

<table>
<thead>
<tr>
<th>Manual Pickup</th>
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<tr>
<td>Bioremediation</td>
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<tr>
<td>Manual Raking/Tilling</td>
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ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

3N, P, O, Q Harbor Seal and Sea Lion Pupping and Molting Area

NO TIME CONSTRAINT. Authorized per memorandum dated 5/14/90 from Kathryn Frost/ADF&G to Mark Kuwada/ADF&G.

OTHER ECOLOGICAL CONSIDERATIONS

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

 TAG APPROVAL DATE 5/24/90
 ADEC Art Hargrave
 EXXON
 NOAA
 USCG

Prepared By: Andrew Meyer
 Date 5/22/90
SHORELINE EVALUATION

SEGMENT ST/ KN-141   SUBDIVISION A (1 OF 2) DATE   3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Harbor seal and sea lion pupping (3N, 3P) - 5/15 to 7/1 and molting (30, 30) - 8/15 to 9/15. Restrict boat and air traffic to essential minimum. Contact ADP&G and USFWS prior to treatment.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid unnecessary disturbance of uncoiled substrate and biota.

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 (564-3567; 564-3658 or 564-3276).

SHPO SIGNATURE:  DATE: April 2, 1990

OILING CATEGORIZATION:
Wide 26 m: Medium 161 m: Narrow 119 m: V.Light 712 m: No Oil 130 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
  Tarmat: Breakup             Spot Washing: Wands
  Removal                     X Other (see comments)

COMMENTS: Bioremediate areas shown on sketch map. Work before 5/15 or 7/1 to 8/15 based on pupping constraints.

TAG COMMENTS: MANUALLY TILL/RAKE WHERE APPROPRIATE PRIOR TO BIOREMEDATION

TAG APPROVAL DATE: 4/12/90

ADEC   07/18/90
EXXON   07/18/90
NOAA   07/18/90
USCG   07/18/90
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT KN-141 SUBDIVISION B (2 of 2)

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

3N, O, P, Q Harbor Seal and Sea Lion Pupping and Molting Area.
NO TIME CONSTRAINT. Authorized per memorandum dated 5/14/90 from Kathryn Frost/ADF&G to Mark Kuwada/ADF&G.

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

SEGMENT ST/ KN-141 SUBDIVISION B (2 OF 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Harbor seal and sea lion pupping (3N. 3P) - 5/15 to 7/1 and molting (3O. 3O) - 8/15 to 9/15. Restrict boat and air traffic to essential minimum. Contact ADF&G and USFWS prior to treatment.

SUBDIVISION ECOnOLOGICAL CONSTRAINTS: Avoid unnecessary disturbance of unoiled substrate and biota.

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: APRIL 14, 1990

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 34 m: V. Light 201 m: No Oil 359 m
No subsurface oil observed: Yes No X Maximum Depth

RECOMMENDATIONS:
X No Treatment Recommended
__ Treatment Recommended
X Manual Pickup
__ Bioremediation
__ Tarmat: Breakup
__ Removal
__ Other

COMMENTS: W 3/29/90 REC.

TAG COMMENTS: PRIOR CLEANUP TEAM MOVEMENT TO THIS LOCATION

TAG APPROVAL DATE:
ADEC John Bauer
EXXON
NOAA
USCG

FOSC: DATE:
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-141 SUBDIVISION B (2 of 2)

WORK WINDOW
Manual Pickup CLOSED

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

3N,O,P,Q Harbor Seal and Sea Lion Pupping and Molting Area
NO TIME CONSTRAINT. Authorized per memorandum dated 5/14/90 from Kathryn Frost/ADF&G to Mark Kuwada/ADF&G.

5T Bald Eagle Nest
USFWS 6/1/90 map indicates an active nest in Subdivision B. Closed to manual pickup within 400m of active nest. No constraint to manual pickup more than 400m from active nest.

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

Prepared by

Date 6/10/90
SHORELINE EVALUATION

SEGMENT ST/ KN-141  SUBDIVISION B (2 OF 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Harbor seal and sea lion pupping (3N, 3P) - 5/15 to 7/1 and molting (3O, 3O) - 8/15 to 9/15. Restrict boat and air traffic to essential minimum. Contact ADF&G and USFWS prior to treatment.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid unnecessary disturbance of uncoiled substrate and biota.

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: April 14, 1990

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 34 m: V.Light 201 m: No Oil 359 m

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

COMMENTS: Work Date Change: See Addendum

TAG COMMENTS: Prior Cleanup Team Movement to this location inspection by monitors for determination of presence of debris.

TAG APPROVAL DATE: 4/12/90
DEC: [Signature]  NOAA: [Signature]  USCG: [Signature]
SHORELINE EVALUATION

SEGMENT ST/KN-141 SUBDIVISION A (1 OF 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Harbor seal and sea lion pupping (3N, 3P) - 5/15 to 7/1 and molting (30, 30) - 8/15 to 9/15. Restrict boat and air traffic to essential minimum. Contact ADF&G and USFWS prior to treatment.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid unnecessary disturbance of unoiled substrate and biota.

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: April 12, 1990

OILING CATEGORIZATION:

Wide 26 m: Medium 161 m: Narrow 119 m: V. Light 712 m: No Oil 130 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
--- Tar mat: Breakup
--- Removal

X Other (see comments)

COMMENTS: Bioremediate areas shown on sketch map. Work before 5/15 or 7/1 to 8/15 based on pupping constraints.

TAG COMMENTS: MANUALLY TILL/PACE WHERE APPROPRIATE PRIOR TO BIOREMEDIATION

TAG APPROVAL DATE: 4/2/90
ADEC JOHN BAHLER
EXXON DEAN THOMAS
NOAA BETTY LEE
USCG M. J. HALL

FOSC: DATE: 4-19-80
SHORELINE EVALUATION

SEGMENT ST/ KN-141 SUBDIVISION B (2 OF 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Harbor seal and sea lion pupping (3N, 3P) - 5/15 to 7/1 and molting (30, 30) - 8/15 to 9/15. Restrict boat and air traffic to essential minimum. Contact ADF&G and USFWS prior to treatment.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid unnecessary disturbance of unoiled substrate and biota.

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: April 17, 1990

OILING CATEGORIZATION:
Wide 0 m; Medium 0 m; Narrow 34 m; V.Light 201 m; No Oil 359 m
Subsurface Oil Observed: Yes____ No X Maximum Depth_____

RECOMMENDATIONS:
- No Treatment Recommended
- Treatment Recommended
- Manual Pickup
- Bioremediation
- Tarmat: Breakup
- Removal

COMMENTS:

TAG COMMENTS: PRIOR CLEANUP TEAM MOVEMENT TO THIS LOCATION INSPECTION BY MONITORS FOR DETERMINATION OF PRESENCE OF DEBRIS.

TAG APPROVAL DATE: 4/1/90
ADEC: JOHN BAUCK
EXXON: INQUIRY
NOAA: BURWOOD
USCG: M. J. HILL
1991 MAYSAP EVALUATION

SEGMENT: KN 141  SUB: B  REGION: PWS  SURVEY DATE: 5/19/91

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>
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<th>INITIAL</th>
<th>TAG</th>
<th>FOSC</th>
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<tr>
<td>Other</td>
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COMMENTS:

INITIAL: ______________________________________

TAG: ______________________________________

FOSC: ______________________________________

TAG APPROVAL DATE: __________  FOSC APPROVAL DATE: __________

ADEC ______________________________________  FOSC ________________

EXXON ______________________________________

USCG ______________________________________

NOAA ______________________________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

NTR
No treatment; no oil.

EXXON
NAME Larry D. Olson
SIGNATURE

NTR
No treatable oiling conditions were found.

LANDMANAGER
NAME Marsh Hall of DNR
SIGNATURE Marsh Hall

NTR
No pocket beaches - all high angle rock - CT, start moist

USCG/NOAA
NAME Schultz
SIGNATURE

NTR
No treatable oil found

Two small islands w/high angle Romero Breakshorelines
D.G. reported trace of surface oil on N'ly Island @ Hi Zone
**MAYAF SHORELINE OILING SUMMARY**

**TEAM NO.** 1

**OG** G. MCDONALD  
**BIO** M. FAWCETT  
**ADEC** T. GINATAS  
**LANDMANAGER** M. HALL  
**EXXON** L. OLSON  
**USCG/NOAA SCHULTZ/CHOCKS**

**DATE** 5/19/91

**TIME** 10:30 to 11:00

**TIDE LEVEL** +0.4 ft. to -0.6 ft.

**ENERGY LEVEL**

- **H** High
- **M** Medium
- **L** Low

**SURVEYED FROM**
- **FOOT**
- **BOAT**
- **HELO**

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

**TOTAL LENGTH SHORELINE SURVEYED:** 594 m

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

**EST. OIL CATEGORY LENGTH:**
- **W** 20 m
- **M**
- **N**
- **VL**
- **L**

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<tr>
<th>LOC</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT TYPE</th>
<th>SHORE SLOPE</th>
<th>WIDTH</th>
<th>LENGTH</th>
<th>ZONE</th>
<th>NOTES</th>
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<tbody>
<tr>
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</table>

**DISTRIBUTION:**
- **C** 91-100%
- **B** 51-90%
- **P** 31-50%
- **S** 1-10%
- **T** <1%

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

**PHOTO ROLL**
- 

**OG COMMENTS:**
Two small rock islets; low relief; rounded R walls w/ local steep wall.

Trace of surface oil @ Schutz on north-islet. Evidence of prior oiling as "oil shadow" dripping @ Schutz lichen bond.

No pits possible here.
KN-141B

G. MARDONADO
5.19.91
TEAM # 1
DATE 19 May 91
SEGMENT # KN 141
TIDAL HEIGHT (Range) +0.2
SUBDIVISION B
BIOLOGIST Michael Fawcett
SEA STATE 1/4
WIND SPEED/DIRECTION NE 0-5 knots
PHOTOGRAPHS: ROLL # FRAME #

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):
No oil found except traces of CT in SUTZ on North
13° 1' N, above all bio's except lichen. The shoreline on both
13° 1' N is nearly all steep bedrock with dense barnacles and
rockweed in MTZ-UTZ.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS

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

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<th># OBSERVED</th>
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<tbody>
<tr>
<td>Sea Otters</td>
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<td>Pinnipeds(specify)</td>
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<tr>
<td>Whales(specify)</td>
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</table>

LAND MAMMALS

Shoreline subdivision map showing important biological features attached.
KN1410  5/19/91 Fawcett
1050-straffed around north island -
all sloping or waved BR on north
islet -
South islet - same as north
ance from, sounds, filed
no oil seen on either except #7 - 8 and 1100
1991 MAYSAP EVALUATION

SEGMENT: KN 141  SUB: A  REGION: FWS  SURVEY DATE: 5/19/91

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: Timothy Adkins  Date: 6/14/91

RECOMMENDATIONS:

TREATMENT REQUIRED (Y or N)  INITIAL  TAG  FOSC

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

COMMENTS:
INITIAL: ________________________________________________________

TAG: ____________________________________________________________

FOSC: __________________________________________________________

TAG APPROVAL DATE: June 4, 1991  FOSC APPROVAL DATE: 6/18/91

ADEC  EXXON  USCG  NOAA

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

Eagle Nest: Access restricted from 3/1 to 9/1. USF&WS authorization required. Maintain 1000' vertical and 1/4 mile horizontal buffer.
TEAM NO. 1 SEGMENT KN 141 SUBDIVISION A DATE 5/19/91

ADEC NAME JEFF GINNUTS SIGNATURE  

NTR TREATMENT RECOMMENDED
MANUAL TREATMENT AT CG MAP SITES C1 AND D. SITE C1 HAS
HIGH OIL ACROSS MOST OF ROCK/Cobble SITE. INTERMITTENT BEST TREATMENT
MIGHT BE TILLING RATHER THAN REMOVAL. WOULD RECOMMEND TILLING DOWN 5-15
CM TO RELEASE SUBSURFACE OIL. SAME PROCEDURE RECOMMENDED AT SITE
D, THOUGH OIL IS JUST BELOW SURFACE. SMALL CREW, PART OF A DAY,
EASY ACCESS.

EXXON NAME LARRY D. OLSON SIGNATURE  

NTR No treatable oiling conditions were located. Patches of oiling was found
as indicated on O. L. sketch map but any treatment efforts could
damage the already stable and healthy conditions that exist.

DNR MANAGER NAME MARSHA HALL OF DNR SIGNATURE  

NTR TREATMENT
Area C1 would improve greatly if a team could till
the surface sediments using manual crew. Till with tide,
until here is dense or vertical walls. Minimal life
in pocket. Area D could be addressed in similar
manner, possibly requiring a higher tide.

USCG/NOAA NAME SCHULTZ CHILDS SIGNATURE  

NTR Nothing of TREATABLE nATURE FOUND. FURTHER TREATMENT WOULD
NOT BE WARRANTED.

SMALL ISLAND W/ BIRD ROCK SHORELINE CONTAINING CBP POCKET BEACHES.
SURFACE OIL CONSISTED OF CT, ST & CV @ HE? ST OR VERTICAL RK FACES. ADDITIONALLY,
ON LOWER AREA, RK OCCURRED. HOLE OBSERVED IN "C" TO A DEPTH OF 1-2 CMS (PHOTO 6)
ASSOCIATED W/ OIL FROM 5-8 CM DEEP. OIL SORE IN "B" WAS 3-4 CM DEEP.
P IS PAINT OF A DRAIN OR OIL, WHICH IT IS 15-25 CM DEEP. THIS WAS ON TOP OF A MOSSY
ORGANIC LAYER. SUBSURFACE OILING WAS GENERALLY LINKED TO THE UZ ZONE.
MAYSAP SHORELINE OILING SUMMARY

TEAM NO._1

S. MACDONALD

M. FARNETT

J. GINSBURG

L. OLSON

ADEC

LANDMANAGER

USCG/NOAA

EXXON

SCHULTZ/CHILD

DATE: 5/19/91

SEGMENT: Kn-141

SUBDIVISION: A

TIME: 09:00 to 10:45

TIDE LEVEL: +5/2 ft. to +0.5 ft.

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

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

SURVEYED FROM: [ ] BOAT [ ] HELO

TOTAL LENGTH SHORELINE SURVEYED: 1150 m

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

EST. OIL CATEGORY LENGTH: W ___ m L 10 m N ___ m VL 410 m NO 730 m US ___ m

<table>
<thead>
<tr>
<th>L</th>
<th>C</th>
<th>AP</th>
<th>MS</th>
<th>TB</th>
<th>SOR</th>
<th>CV</th>
<th>CT</th>
<th>ST</th>
<th>FL</th>
<th>DB</th>
<th>NO</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT TYPE</th>
<th>SHORE SLOPE</th>
<th>WIDTH</th>
<th>LENGTH</th>
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<td>T</td>
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<td>1</td>
<td>10</td>
<td>x</td>
<td>grad into sol</td>
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<td>T</td>
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<td>L</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_ 1 _26 FRAMES 2/9

PIT NO. | DEPTH (cm) | SUBSURFACE OIL CHARACTER | OILED ZONE | CLEAN BELOW | H2O LEVEL | SHEEN COLOR | PIT ZONE | SURFACE-SUBSURFACE SEDIMENTS | NOTES |
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<td>B</td>
<td>R</td>
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<td>CB</td>
<td>M</td>
<td>0</td>
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<td>P</td>
<td>-</td>
<td>CB - PMV</td>
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<td>-</td>
<td>CB - PMV</td>
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</table>

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

OG COMMENTS:
- Low rocky island w/ deep CBP-filled channels.
- Surface oil as (i) CT, CV, ST up, HRTZ-SWZ in steep & low angle L.
- (ii) hi sol @ A, B, C1, HRTZ in R channel.
- (iii) hi sol @ D1, stranded in a curving band down the beachface; to a depth of 3 mins.
- "Oil shadows" in HRTZ litter band.
OG COMMENTS:

Subsurface oil @ B, C & D; typically as mud - TR; associated with salt deposits; ranging from 5-25 cm deep, with an average thickness of about 8 cm. Oil sheeted readily w/ some B globules amongst thinner sheens. The oil distribution was limited to the upper intertidal zones, and perched on top of a mud or peaty layer.

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PITT DEPT (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED ZONE</th>
<th>CLEAN LEVEL</th>
<th>H2O BELOW</th>
<th>SHEEN COLOR</th>
<th>PIT ZONE</th>
<th>SURFACE-SSUBSURFACE SEDIMENTS</th>
<th>NOTES</th>
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<tr>
<td>10</td>
<td>5</td>
<td>X</td>
<td>10-13 Y</td>
<td>15</td>
<td>S</td>
<td>X</td>
<td>R-C</td>
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<td>11</td>
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<td>X</td>
<td>5-8 Y</td>
<td>8</td>
<td>2 B</td>
<td>X</td>
<td>P-C-Pe</td>
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<td>12</td>
<td>15</td>
<td>X</td>
<td>2-5 Y</td>
<td>3 S</td>
<td></td>
<td>X</td>
<td>CP-CPMV</td>
<td>Habitat H12</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>20</td>
<td>X</td>
<td></td>
<td></td>
<td>15 N</td>
<td>X</td>
<td>CM-EM</td>
<td></td>
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<tr>
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<td>8</td>
<td>B B</td>
<td>X</td>
<td>CP-CPMV</td>
<td>Beat</td>
<td></td>
</tr>
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<td>15</td>
<td>20</td>
<td>X</td>
<td></td>
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<td>15 N</td>
<td>X</td>
<td>CP-CPMV</td>
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<td>15</td>
<td>X</td>
<td></td>
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<td>15 N</td>
<td>X</td>
<td>CP-CPMV</td>
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<td>17</td>
<td>10</td>
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<td>15 N</td>
<td>X</td>
<td>BE-CGB</td>
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<td>18</td>
<td>15</td>
<td>X</td>
<td></td>
<td></td>
<td>15 N</td>
<td>X</td>
<td>BE-CGB</td>
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<td>19</td>
<td>20</td>
<td>X</td>
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<td>15 N</td>
<td>X</td>
<td>CP-CPMV</td>
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<td>10</td>
<td>X</td>
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<td>15 N</td>
<td>X</td>
<td>P-G-GmV</td>
<td>Beat</td>
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<td></td>
<td>15 N</td>
<td>X</td>
<td>CP-CPMV</td>
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</table>

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

REVIEWED: F.W. 5/21/81
### MAYSAP BIOLOGICAL SUMMARY FORM

**TEAM #**

**DATE** 19 May 91

**SEGMENT #** KIN 141

**TIDAL HEIGHT (Range)** +0.5 to +5.6 ft MLLW

**SUBDIVISION** A

**BIOLOGIST** Michael Fawcett

**SEA STATE** 1/4-

**WIND SPEED/DIRECTION** NE 0-5 Knots

**PHOTOGRAPHS: ROLL #**

**FRAME #**

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

This subdivision encircles a small island--most steep or vertical rock shoreline, with several small pocket beaches. A small salt marsh and pool occurs in the supra-tidal area at site E on sketch map. Small sediment (gravel/pesse) portions of pocket beaches are rather depauperate except for algae and infaunal clams in LTZ. Biotas generally far more dense on larger boulders and rock walls. See sketch map for descriptions of biota near oiled areas.

---

### 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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<td>Eagles</td>
<td>1</td>
<td>flew over</td>
<td>black prickleback</td>
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<tr>
<td>Seabirds</td>
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<tr>
<td>Waterfowl</td>
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<tr>
<td>Gulls/kittiwakes</td>
<td>2 (Glaucous-winged gull)</td>
<td>6-8 (many kittiwakes in bay)</td>
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<tr>
<td>Shorebirds</td>
<td>1 (black oystercatcher)</td>
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<tr>
<td>Corvids</td>
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<tr>
<td>Other Birds</td>
<td>1 Arctic tern</td>
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### MARINE MAMMALS

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<td>Pinnipeds (specify)</td>
<td>3 Sea Lions</td>
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### LAND MAMMALS

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Shoreline subdivision map showing important biological features attached.

---
Dong Stine (USFWS) revision, Doug monitored nest during MAYSAP survey.

KN-414-1 Active

Not here

Here

KN0141 Segment Reference Map
Map Key: KN0141

KEY:

EAGLE NEST

attachment
KA/141A 19 May 91  Fawcett
Start 0900  NE 0.5, light rain

0900 pocket:
- S2, +2, CT 5
- on mud - no barnacles, except worms
- barnacles abundant - some barnacles to to
+4 ft on wall W
depth of pools
- sparse fauna on B/C below +1 ft
- more gravel below 1.0, depressions
- SOR down to +10 - scallop spawns
- quest core - infaunal barnacles

0915 N11;19: more exposed pocket
- shell layer - barnacles from 10
- MTZ-LTZ - 3 sea urchins
- Lithonidea breeding, dense eggs MTZ
- Amphipods, 1 krill, scattered musseled
- fil green algae MTZ-LTZ
- SOR-LOA, UTZ, BGP - no barnacles except one bivalve, mussel
- deep bones UTZ
- UTZ tide pool - Litho, many scallops
- large off shell in a mussel (50 mm)
- barnacles, hermits, surf percs
- CT on wall 8-10 ft above barnacles
- custom bulb polished UTZ
KW 1418 (cont)

3-8 a.m.

1025 - Trace small, sm pocket
      Kaff, walkers, deer...bar, deer
      Foss LTZ in vell

1030 - March toward pocket
      Sm pool w/ snags, 2, 3
      Mussel - & eagle flowern
      Oyster shell near nishi
      1st old nest near nishi
      Light shrub down 10 MZ mtn
      Red - dense muskets all along 10 T
      2nd boro. Foss, sandy muskets
      Alk. RH, wind
      C. N. quilled eagle
      - Tars
      - Clancy may there in LTZ
      - Kaff, Dept.
      and 1045

10 50 - in pod last pocket - small
      Pl/Cp. tech bed w/dense musket
      in MZ rounded, sloping hill
      wall, not cliff - Tense Fosses
      on BR - 10+ ft. also podbed
      dense young musket dense barb
      - some c. (Prette) in LTZ

11th - eggs MZ, some hatch.
      Men die in grass/field MZ -
      spire limp (skullum) LTZ - MZ
      mid. Lake 10:09 MZ
      SR-Mar-S572 - amph. worms
**Field Map**

- **Lithorids, limpets (old N. Scutum):**
- **Old mussels, sculpted surfgrass:**
- **Chitons, Lithorina (UTZ: tidpup):**
- **Gulls:**
- **Kiwiwampus:**
- **3 sea lions:**
- **095**
- **0915**
- **Marsh area - UTZ:**
  - **Salicornia - dense Lithorina:**
- **In pool:**
- **Eelgrass - mixed marsh grasses:**
  - **+1 br. marsh**
  - **+1 br. mixed sea grasses, Eelgrass MTZ:**
- **1010**
- **1030**
- **Eagle**
- **0900**
- **B/c/p:**
- **UTZ 30 R + 3 ft, no barn, except barnacles:**
- **Sparse barn, domes + 6 ft in B/c:**
- **Eel grass + 8 to 10 ft above barnacles:**
- **MTZ below 5 ft w/ dense Lithorina:**
- **Sparse limpets:**
- **1312:**
- **1400:**
- **1450**
- **1500:**
- **1515:**
- **1530:**
- **1545:**
- **1600:**
1991 MAYSAP EVALUATION

SEGMENT: KN 141   SUB: A   REGION: PWS   SURVEY DATE: 5/19/91

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-Customblend Only
Bio-Inipol/Customblend
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.
TEAM NO. 1    SEGMENT KN 141    SUBDIVISION A    DATE 5/19/91

ADEC
NAME JEFF GINAWAS   SIGNATURE
TREATMENT RECOMMENDED
MANUAL TREATMENT AT DG MAP SITES C1 AND D. SITE C1 HAS
HIGH ALK. MOST OF PEBBLE/COCOBO LITZ INTERMIXED. BEST TREATMENT
MIGHT BE TILLING, RATHER THAN REMOVE. WOULD RECOMMEND TILLING DOWN 5-7
CM TO REDUCE SUBSURFACE LENS. SAME PROCEDURE RECOMMENDED AT SITE
D, THOUGH OIL IS JUST BELOW SURFACE. SMALL CREW, PART OF A DAY.
EASY ACCESS.

EXXON
NAME LARRY O. CISON   SIGNATURE
No treatable oiling conditions were noted. Patch of oiling was found
as indicated on 0.6. Sketch map but any treatment efforts could
damage the already stable and healthy conditions that exist.

DNR
NAME MARSHA HALL OF DNR   SIGNATURE
TREATMENT
Area C1 would improve greatly if a team could till
the surface sediments using a manual till. Till with the
Biota here is dense or vertical walls, minimal life
in pocket. Area D could be addressed in similar
manner, possibly requiring a higher tide.

USCG/NOAA
NAME SCHULTZ / HENDERSON   SIGNATURE
Nothing of treatable nature found. Further treatment would
not be warranted.

SMALL ISLAND W/FID ROCK SHORELINE CONTAINING CBP POCKET BEACHES.
SURFACE OIL CONSISTED OF CT. STICK ON HEAT OR VERTI CLIF FRACED ADDITIONIALLY
A LOWER AMBER BOK COCOBO. HILL OBSERVED 4" TO A DEPTH OF ABOUT 2 INCH (PHOTO 6),
ASSOCIATED W/FRM FROM 5-8 CM DEEP. OIL SOR IN "A" WAS 3-THRU 6 CM DEEP
AND IS PART OF A BAK ON LOR WHICH IN 15-25 CM DEEP. THIS WAS ON TOP OF A MOSSY,
ORGANIC LAYER. SUBSURFACE OILING WAS GENERALLY LIMITED TO THE UZ ZONE.
MAYSAP SHORELINE OILING SUMMARY

TEAM NO. 1
OG _ G. MACDONALD  BIO  M. FAVILLE
ADEC  J. GIULIANI  LANDMANAGER  M. HALL
EXXON  L. OLSON  USCG/NOAA SCHMITZ/CHILD

TIME 09:00 to 10:45  TIDE LEVEL 8'/10  ENERGY LEVEL: □ H □ M □ L
SURVEYED FROM: □ FOOT □ BOAT □ HELO  WEATHER: □ SUN □ CLOUDS □ FOG □ RAIN □ SNOW
TOTAL LENGTH SHORELINE SURVEYED: 1150 m  NEAR SHORE SHEEN: □ BR □ RB □ SL □ NONE
EST. OIL CATEGORY LENGTH: W=m M=10 m N=m V=410 m NO=730 m US=m

<table>
<thead>
<tr>
<th>L</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT</th>
<th>SHORE SLOPE</th>
<th>AREA</th>
<th>ZONE</th>
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<tbody>
<tr>
<td>C</td>
<td>AP MS TB SOF CV CT ST FL DB NO</td>
<td>TYPE Y H M L</td>
<td>m</td>
<td>m</td>
<td>S UI MI LI</td>
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<tr>
<td>A1</td>
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<td>P 2 5 0</td>
<td>X X</td>
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<tr>
<td>A2</td>
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<td>CBV M 5 8</td>
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<td>A3</td>
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<td>CB 2 4</td>
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<tr>
<td>B1</td>
<td>S S</td>
<td>R H 10</td>
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<td>PBL M 14 2</td>
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<tr>
<td>G</td>
<td></td>
<td>L</td>
<td>2 13</td>
<td>X</td>
<td></td>
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</table>

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

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

PHOTO ROLL # MAYSAP- 1 - 26 FRAMES

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<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED SUBSURFACE SEDIMENTS</th>
<th>H20 LEVEL</th>
<th>SHEEN COLOR</th>
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<td>BC - CV</td>
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<td>CB - PMV</td>
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<tr>
<td>3 20</td>
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<td>CB - PMV</td>
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<td>CB - PMV</td>
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<td>8 10</td>
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<td>CB - PMV</td>
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<tr>
<td>9 25</td>
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<td></td>
<td></td>
<td></td>
<td>CB - PMV</td>
</tr>
</tbody>
</table>

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

OG COMMENTS:

Surface oil as (i) CT, CV, ST e up. HRTZ-SUITZ; on steep, low angle E.
(ii) 10 SOIL @ A, B, C, D, E, HRTZ in R channels.
(iii) hi sol @ C, stranded on a curving band down the beach face; to a depth of 3'--.
"Oil shadows" in SUITZ litho band.
OG COMMENTS:

Subsurface oil @ 3, 3, 5; typically as MOL - TR; associated with salt deposits; ranging from 5-25 cms deep, with an average thickness of about 8 cms. Pits sheened readily w/ some B globules amongst thinner sheens. The oil distribution was limited to the upper intertidal zones, and perched on top of a mud or peaty layer.

<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>
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<td>27</td>
<td>X</td>
<td>X</td>
<td>10 - 27</td>
<td>Y 15</td>
<td>S</td>
<td>X</td>
<td>R - C</td>
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<td>11</td>
<td>20</td>
<td>X</td>
<td></td>
<td>5 - 6</td>
<td>Y 15</td>
<td>B</td>
<td>R B</td>
<td>X</td>
<td>R - PC</td>
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<tr>
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<td>15</td>
<td>X</td>
<td></td>
<td>1 - 3</td>
<td>Y 15</td>
<td>S</td>
<td>X</td>
<td>CP - CPMV</td>
<td>Bush from H172</td>
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<td>X</td>
<td>CM - CM</td>
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<td>20</td>
<td>X</td>
<td></td>
<td>3 - 13</td>
<td>Y 15</td>
<td>B</td>
<td>R B</td>
<td>X</td>
<td>CP - CPMV devat</td>
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<td>-15</td>
<td>N</td>
<td>X</td>
<td>X</td>
<td>CP - PCH</td>
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<td>13</td>
<td>X</td>
<td></td>
<td>-4</td>
<td>N</td>
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<td>X</td>
<td>EA - PM</td>
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<td>X</td>
<td>BC - CGB</td>
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<td>15</td>
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<td>-</td>
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<td>X</td>
<td>BC - PGB</td>
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<td>X</td>
<td></td>
<td>0</td>
<td>N</td>
<td>X</td>
<td>X</td>
<td>CP - GEM</td>
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<td>10</td>
<td>X</td>
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<td>S</td>
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<td>X</td>
<td></td>
<td>0</td>
<td>S</td>
<td>X</td>
<td>X</td>
<td>CPM - MV</td>
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</table>
**MAYSAP BIOLOGICAL SUMMARY FORM**

**TEAM #**  
**SEGMENT #** KN 141  
**SUBDIVISION** A  
**DATE** 19 May 91

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

**TIDAL HEIGHT (Range):** +0.5 to +5.6 ft MLLW  
**BIOLGIST:** Michael Fawcett  
**SEA STATE** 1/6 ft  
**WIND SPEED/DIRECTION** NE 0-5 knots

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

This subdivision encloses a small island-mostly steep or vertical rock shoreline, with several small pocket beaches. A small salt marsh and pool occurs in the supra-tidal area at site E on sketch map. Small sediment (gravel-pellet) portions of pocket beaches are rather desolate except for algae and small infaunal clams in LT2. Biotas generally far more dense on larger boulders and rock walls, see sketch map for descriptions of biota near oiled areas.

---

**WILDLIFE OBSERVATIONS**  
**TO BE COMPLETED IN ALL SUBDIVISIONS**

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED</th>
<th>SPECIES PRESENT</th>
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<tbody>
<tr>
<td>Eagles</td>
<td>1</td>
<td>1 (flew over)</td>
<td>black pricketback</td>
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</tr>
<tr>
<td>Seabirds</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Waterfowl</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Gulls/kittiwakes</td>
<td>2 (Glaucous-winged gull)</td>
<td>6-8 (many kittiwakes in bay)</td>
<td></td>
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<tr>
<td>Shorebirds</td>
<td>1 (black oystercatcher)</td>
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</tr>
<tr>
<td>Corvids</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Other Birds</td>
<td>1 Arctic tern</td>
<td>3-4</td>
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<tr>
<th>MARINE MAMMALS</th>
<th># OBSERVED</th>
<th>SPECIES</th>
<th>LAND MAMMALS</th>
<th># OBSERVED</th>
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<tr>
<td>Sea Otters</td>
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</tr>
<tr>
<td>Pinnipeds(specific)</td>
<td>3 Sea Lions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whales(specific)</td>
<td></td>
<td></td>
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</tbody>
</table>

Shoreline subdivision map showing important biological features attached.
Doug Stime (USFS) revision. Doug monitored.

Pack Rat Nest during May/June survey.
START 0900  N.E. 0-5, C.P. 8+5

0900 pocket: B.F.P. 5/3 +3, C.T. 5T
- on wall: No beak, except worms
- barnacles: dense barn 40 to 4
- 4 ft on wall: 20% harvester
- 6-20 ft on wall: B/F below +1 ft
- more gravel below 10, deep pink
- surf. barn 40 to +10 - scallop, barn, mussel

0915 Newfield: more exposed pocket
- wall, low E: dense Ficus barn
- M.T.Z-L.T.Z. 3 sea, brown megalifer
- Lithornis breeding - dense eggs M.T.Z.
- Ampipods, barn, scattered mussel
- 1 of green algae M.T.Z-U.T.Z.
- M.T.Z-L.O.A. U.T.Z. RCIP - no data
- except rich barn, worms, and barn barn barn
- SCUP, barn, S.T.Z.
- U.T.Z. tide pool: Litho, many scallops
- large old scaling 9-10 mm
- Barn, harms, surf. grass

T.C. on wall: 5-10 ft above barnacle
- custom barn, less U.T.Z.
KW 141A (cont) 5/1971 - Fauvat

- 1040 - quest long pocket - side of pink
  - crawfish - stone walls - CT
  - wall
  - head each voice once - axe stub
  - nest not seen - brown stink bodies
- tunnel in PC/P down to
  - among sparse beach, breaking litter with
  - sk - but some rocks may scale on
  - bigger rocks, very sparse in C/P
  - vertical wall have de 15 ft. high
  - wheelers (Lamellid) breaking below (7-8)
  - vespine Eucus, dense full bed rood 10" x 10" 1-3-7
  - column 20" with LT2 hawkers

- 1010 - 50 m past last pocket - side
  - PC/P back and with dense median
  - in MTZ, rounded sloping BR
  - wall, not cliff - dense Eucus
  - on BR 0 to 6 ft - also pocketed
  - dense young median, dense barn
  - some claws (Protohara) in LTZ
  - bill, eggs MTZ, some hatchled
  - mod decoy - girl adult MTZ
  - space lim (Scleren) LTZ - MTZ
  - aid, barn spot MTZ
  - SOL Mob - MTZ - amph. worms

KW 141A (cont)
- 3 termites

- 1025 - Tract walls - sn pocket
  - kath, swallow, dense barn, dense
  - Feros LTZ - mud

- 1030 - March behind pocket - S, LTZ
  - pool w/ skyway, Fiction, lilter medal
  - mud wall - & eagle flew over
  - vanderwess head - neck
  - red upper medal
  - light SOL sown in MTZ median
  - red - dense medic along +1 to 2
  - jesso barn, Fiction, pocket, median
  - on BR - side +1 - 8 ft - also long
  - CL, "Skink" -
  - GW gall general
  - Tama
  - clay way - Ford in LTZ
  - kath, left
  - end and 1045
Lucet

KN141A field map
5/11/94

Protected pocket: B/c/p
Deadmail on wall & B. dead + 5' ft
Sparse algae except fl. red/green
bits of viva = SOR-UTZ-UTZ 1/16-1/24 in
d among worms. B/c = CT/ST on walls
above biota = SOR - 16th - 1st in c/lp
Down to QMTZ (44')

Lithophyds, limpets (old. stratum)
Old mussel, scallop, surfgrass
Chintz, Littorina (UTZ formation)

Eagle

Oyster catch

3 sea lions

0915

Marsh area - SOR-UTZ
Surfgrass - dead lithophyds
In flm. Pincus around edges mixed
with marsh grasses - 1/16 in. biota
dead mussel, elod/sor m/z

0900

B/c/p
CT/ST SOR + 9ft. no biota except worms
Sparse barn domes + 6ft in B/c
CT/ST on walls 8-10ft above barnacles
MTZ below 5' ft. dead. Lithophyds except
sparse limpet. Dead barnacle pucc
in B/c/p
1991 MAYSAP EVALUATION

SEGMENT: KN 141  SUB:  B  REGION: PWS  SURVEY DATE: 5/19/91

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:  Timothy A. Smith  Date: 6/3/91

RECOMMENDATIONS:

TREATMENT REQUIRED (Y or N)  N  N  7

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

COMMENTS:
INITIAL: 

TAG: 

FOSC: 

TAG APPROVAL DATE: 6/31/91  FOSC APPROVAL DATE: 6/3/91

ADEC  John Bing  FOSC  E. E. PAGE, COR, USCG
EXXON  [Signature]  CHIEF OF STAFF, FOSC
USCG  [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.
<table>
<thead>
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<td>JEFF GILLES</td>
<td>JG</td>
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Two small islands with high angle Romero Bearer shorelines. O.G. Reported trace of surface oil on N1/4 Island in H2 zone.
**MAYSAP SHORELINE OILING SUMMARY**

**TEAM NO.** 1  
**O.G.** M. MACDONALD  
**BIO** M. FAWCETT  
**ADEC** J. GINALAS  
**LANDMANAGER** M. HALI for BNK  
**EXxon** L. OLSON  
**USCG/NOAA SCHULTZ/CHUDES**  

**DATE** 5/19/94  
**TIME** 10:30 to 11:00  
**TIDE LEVEL** +0.4 ft. to +0.6 ft.  
**ENERGY LEVEL**  

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

**TOTAL LENGTH SHORELINE SURVEYED:** 594 m  
**NEAR SHORE SHEEN:**  
[ ] BR  
[ ] RB  
[ ] SL  
[ ] NONE  

**EST. OIL CATEGORY LENGTH:**  
W - m  
M - m  
N - m  
**VL** 20 m  
**NO** 574 m  
**US** - m  

**SURFACE OIL CHARACTER**  
LO | AP | MS | TB | SOR | CV | CT | ST | FL | DB | NO | SURFACE SEDIMENT | SLOPE | WIDTH | LENGTH | ZONE | NOTES
---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
A | T | R | M | L/ V | 20 | 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-1 - 26 FRAMES/1041**

**PIT NO.**  
**PIT DEPTH** (cm)  
**SUBSURFACE OIL CHARACTER**  
**OILED ZONE**  
**CLEAN H2O**  
**SHEEN ZONE**  
**PIT SEDIMENTS**  
**NOTES**

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

**OG COMMENTS:**  
Two small rock islets;  
low relief, rounded  
walls w/ local steep wall.  
Trace of surface oil @ SUTZ on north island.  
Evidence of  
bare oiling as "oil shadow" 
delineate @ SUTZ lichen bed.  
No pits possible here.
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 1
SEGMENT # KN 141
SUBDIVISION B
STATE 1/2 ft
PHOTOGRAPHS: ROLL # FRAME #

DATE 19 May 91
TIDAL HEIGHT (Range) +0.2
BIOLeGIST Michael Fawcett
WIND SPEED/DIRECTION NE 0-5 knots

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):
No oil found except traces of CT in STZ on North 1/4 ft, above all biofuels except lichen. The shoreline on both 1/4 ft is nearly all steep bedrock with dense barnacles and rockweed in MTZ-UTZ.

WILDLIFE OBSERVATIONS TO BE COMPLETED IN ALL SUBDIVISIONS

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<th>BIRDS</th>
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MARINE MAMMALS

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<tr>
<td>Whales(specify)</td>
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SHORELINE SUBDIVISION MAP SHOWING IMPORTANT BIOLOGICAL FEATURES ATTACHED.
KN/141 5/19/91 Fawcett

1650-1850 nm stripped around north island -
all slopes or uncle BR on north
islet -

south islet's - same as north

dino from, damock, fill up
no oil seen on either except CT
and 1100
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-144

SUBDIVISIONS: A (1 OF 2)
SHORELINE EVALUATION

SEGMENT ST/KN-144 SUBDIVISION A (1 OF 2) DATE 3/31/90

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

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

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

SHPO SIGNATURE: ___________________________ DATE: ___________________________

OILING CATEGORIZATION:
Wide 0 m: Medium 59 m: Narrow 91 m: V.Light 225 m: No Oil 305 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 ________________
Salmon stream mouth - fry outmigration (3/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage.
No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

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

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

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

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

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

Remote release site

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

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

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

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

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

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

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

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

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

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

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 (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 / KM 144    SUBDIVISION: None    DATE: 31 March

NAME: Patrick Mably    SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED    ☑ TREATMENT SUGGESTED

COMMENTS

Small pocket beach on W side of the island is the only area with a suitable condition. It has a continuous broken area of cover that is a candidate for bio-remediation. The other areas of broken crust and patchy sten are very weathered and would be impractical to remove.

ADEC

NAME: M. Cunningham    SIGNATURE: [Signature]

☑ NO TREATMENT RECOMMENDED    ☐ TREATMENT SUGGESTED

COMMENTS

Rich biological communities present w/ animals in and around oil contaminated sediments.

Moe harm than good scenario.

Debris pickup if evidence later warrants.

LAND MANAGER

NAME: Steve Phillips    SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED    ☑ TREATMENT SUGGESTED

COMMENTS

Search storm trench for trash/oiled debris.

Tons were getting baked on south exposures - need to scrape off when thicker than 2mm to speed up degradation.

Note that some hard layers were found on vertical rock.
**SHORELINE OILING SUMMARY**

**DESCRIPTION:**
- Rock

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

**WORKING DIRECTION:** South to North

**SURFACE SEDIMENTS:**
- R 70 %
- B 20 %
- C 10 %
- P
- G
- S
- % M
- % V

**SLOPE:**
- Lang 10 %
- Hang 20 %
- Vert 50 %

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

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

**OIL DISTRIBUTION OIL/FILM COLOR**
- SURFACE OIL
- POOLED
- COVER
- COAT
- STAIN
- MOUSSE
- PATTIES
- TARBALLS
- FILM
- NO OIL

**PAVEMENT:**
- H F S
- sq. m by

**PATTIES/TARBALLS**

**NEAR SHORE SHEEN?**
- No
- BR
- RW

**OILED DEBRIS AMOUNT**
- DEBRIS COLLECTED
- # YES
- # NO
- TYPE
- Rope

**TYPE OF DEBRIS**
- Logs
- Vegetation
- Trash
- Debris

**DEBRIS COLLECTED**
- # BAGS
- less than

**PHOTOGRAPHS:**
- Roll No. ST-7-1
- Frames 8, 9

**SUBSURFACE OIL**

- PIT NO.
- PIT DEPTH (cm)
- SUBSURFACE OIL CHARACTER
- OILED INTERVAL
- BELOW
- OIL/FILM COLOR
- PIT ZONE
- ANA
- SUBSURFACE SEDIMENTS

**COMMENTS**

**REVIEWED**
- MH
- DATE 4-4-90
SHORELINE ECOLOGICAL SUMMARY

Segment ST/KN-144 Subdivision ________________ Date (mo / day / yr) 31 May 20

ARR 0915 Time (24 hr) L1102 Biologist ____________

Substrate type and % of segments:
(1) Bedrock 70 (2) Boulder 20 (3) Cobble 10 (4) Pebble (5) Sand (6) Silt

(B) Overall % cover of biota (% of segment): Dense 20 Moderate 60 Low 20

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

BARNACLES

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Photographs:
Roll No. 57-71
Frames 8-?

MYTILUS

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Wildlife Observations/General Comments:

Many Mytilus < 1 cm
Many limpets, evidently newly settled (5/31)
Limpets moderate to dense on cobble in lower intertidal

Ecological Considerations:

3 N, P 7 sea lion and harbor seal, molted - Pupping

0,05
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-144

SUBDIVISIONS: B (2 OF 2)
SHORELINE EVALUATION

SEGMENT ST/ KN-144 SUBDIVISION B (2 OF 2) DATE 4/1/90

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)
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 308 m: V.Light 0 m: No Oil 473 m
Subsurface Oil Observed: Yes X No____ Maximum Depth 10 cm

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

COMMENTS: Recommended treatment includes 1) manual pick up of oiled vegetation and 2) bioremediation of areas shown on attached sketch map. Work should be conducted between 7/2 and 8/14.

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)
Remote release site
1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

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

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

5R Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.

5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 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 1

SUBDIVISION: B

DATE: 1 APR 94

NAME: Patrick Mably

SIGNATURE: Patrick Mably

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

Small bedrock island with weathered coat & stain. Removal would be impractical. There was one area in the U.S. zone of grass, about 10 m² that was oiled and should be removed, lightly tilled and bioremediated.

* There was a Bald Eagle on the island that fled before we reached the zodiac. There were no signs of nesting on the island but it should be taken into consideration.

NAME: M. Cunningham

SIGNATURE: M. Cunningham

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

Manual removal of oiled grass & weed at site where Pit #1 was dug. Till to aerate sediments then bioremediate area... (No more than 10 sq m)

Tar present on angular boulders & headlands well weathered & hardened making removal unlikely by current technology. No treatment is

NAME: Steven Phillips

SIGNATURE: Steven Phillips

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

Small bioremediation possible.

Tar on bedrock not currently treatable.

Could experiment with citrusol or other tar removal

This tar not thick enough to scrape and not worth using a harsh dissolvent.
SHORELINE OILING SUMMARY

REVISION NO. 05/09/99

OCG Greg Chaney USCG Patrick Malay SEGMENT ST/ KN-144
BIO J.J. Roth LAND REP Steve Phillips SUBDIVISION E (2042)
XXON Rey Soto ADEC Mike Cunningham TIME 10:00-10:30
TEAM NO.: 74 TIDE LEVEL: 4 ft 10 ft 3 ft DATE Apr. 11/1990
EST. SUBDIVISION LENGTH: 400 m ☑ Sun ☑ Clouds ☑ Fog ☑ Rain ☑ Snow
UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☑ Rock
SURVEYED FROM: ☑ Foot ☑ Boat ☑ Helo WORKING DIRECTION: East to West
SURFACE SEDIMENTS: R 100 % B 0 % C 0 % P 0 % G 0 % S 0 % M 0 % V 0 %
SLOPE: Lang 30 % Hang 20 % Vert 30 % WAVE EXPOSURE: ☑ Low ☐ Med ☐ High
OIL CATEGORY LENGTH: W—m M—m N180 m V—m NO220 m

SURFACE OIL

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PAVEMENT: H F S—sq. m by—cm

PATTIES / TARBALLS ——— BAGS

NEAR SHORE SHEEN? NO BR (RW SL TL

OILED DEBRIS AMOUNT DEBRIS COLLECTED SPORTYES NO

Logs Vegetation Trash

Debris

Photographs:

Roll No. ST-7-1
Frames 6/7/98

SUBSURFACE OIL

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>BELOW OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>ANA</th>
<th>SUBSURFACE SEDIMENTS</th>
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<tr>
<td>1 20</td>
<td></td>
<td>X</td>
<td>0 :10</td>
<td>X X</td>
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COMMENTS

Pit #1 was dug in small pocket of sediment at southern edge of hollow. Brown sheen observed in water which filled in the pit and on sediment. Total area of sediment roughly 7 square meters.
SHORELINE ECOLOGICAL SUMMARY

Segment ST/KN 1A44 Subdivision B Date (mo/day/yr) Aug 4, '90
Time (24 hr) 1V 1032 Biologist Roth

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

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

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

BARNACLES

<table>
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MYTILUS

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GASTROPODS

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FUCUS

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</table>

Wildlife Observations/General Comments:

1 BALD EAGLE PERCHED ON STUDY ISLET ON OUR ARRIVAL.
TIDE ~ 14.4, SO CANT SEE MUCH OF LOWER ZONE; THEREFORE ONLY Fucus ESTIMATED.
SOME MUSSELS VERY SMALL (CA. 5MM)
MANY LITTORINES TINY

Ecological Considerations:

3 N, P, O, SEA LION AND HARBOR SEAL DUNNING AND MOLTING.
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-144 SUBDIVISION B (2 of 2)

WORK WINDOW

<table>
<thead>
<tr>
<th>Manual Pickup</th>
<th>OPEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioremediation</td>
<td>OPEN</td>
</tr>
</tbody>
</table>

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

3N,0,P,Q Harbor Seal & Sea Lion Pupping & Molting

NO TIME CONSTRAINT. Authorized per memorandum dated 5/14/90 from Kathryn Frost/ADF&G to Mark Kuwada/ADF&G.

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 5/24/90
ADEC [Signature] Autlen
EXXON [Signature] [Signature]
NOAA [Signature] [Signature]
USCG [Signature] [Signature]

Prepared By: [Signature] May 1990
SHORELINE EVALUATION

SEGMENT ST/ KN-144  SUBDIVISION B (2 OF 2) DATE 4/1/90

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to oiled 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: 4/21/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 0 m: No Oil 473 m
Subsurface Oil Observed: Yes X No
Maximum Depth 10 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
Tarmat: Breakup ___ Other (see comments)
Removal ___ Beach Cleaner

COMMENTS: Recommended treatment includes 1) manual pick up of oiled vegetation and 2) bioremediation of areas shown on attached sketch map. Work should be conducted between 7/2 and 8/14.

TAG COMMENTS:

See Constraint Addendum 5/2/90

TAG APPROVAL DATE: 4/27/90

ADEC    EXXON    NOAA    USCG
Art Wenzel    Art Wenzel    Jason Cullin    M.J. Hall

POSC:  DATE: 5-3-90
SHORELINE EVALUATION

SEGMENT ST/ KN-144 SUBDIVISION A (1 OF 2) DATE 3/31/90

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)
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 59 m: Narrow 91 m: V.Light 225 m: No Oil 305 m
Subsurface Oil Observed: Yes No Maximum Depth

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

COMMENTS:

TAG COMMENTS: Remaining oil on vertical bedrock, rich intertidal biota
Therefore NTR recommended

TAG APPROVAL DATE: 4/24/90
ADEC:
EXXON:
NOAA:
USCG:

DATE: 5-3-90
SHORELINE EVALUATION

SEGMENT ST/ EN-144 SUBDIVISION B (2 OF 2) DATE 4/1/90

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

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

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

SHPO SIGNATURE:  DATE: 4/25/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 308 m: V.Light 0 m: No Oil 473 m
Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

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

COMMENTS: Recommended treatment includes 1) manual pick up of oiled vegetation and 2) bioremediation of areas shown on attached sketch map. Work should be conducted between 7/2 and 8/14.

TAG COMMENTS:

TAG APPROVAL DATE: 4/24/90
ADEC  EXXON  NOAA  USCG

FOSC:  DATE: 5-3-90
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT KN-145 SUBDIVISION A (1 of 1)

WORK WINDOW

Bioremediation CLOSED

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

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 Nest                            | USFWS 6/1/90 map indicates an active nest in Subdivision A. Closed to bioremediation within 400m of active nest. |

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

FOSC 6/9/90
DATE 6-10-90

Prepared By: W. Kelley
Date 6/9/90
SHORELINE EVALUATION

SEGMENT ST/ KN-145 SUBDIVISION A (1 OF 1) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Harbor seal and sea lion pupping (3N, 3P) - 5/15 to 7/1 and molting (30, 3Q) - 8/15 to 9/15; Active eagle nest (5T) - 3/1 to 6/1; Anchorages (6V) - 6/1 to 9/15. Restrict air and boat traffic to essential minimum. Air approach and takeoff from and to seaward only. Contact ADF&G prior to any activity re: seals and sea lions and USFWS re: eagle nest. Cleanup should be completed before 5/15 or between 7/1 - 8/15 unless otherwise approved by ADF&G.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-oiled substrate and biota.

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 112 m: Medium 20 m: Narrow 329 m: V.Light 291 m: No Oil 140 m
Subsurface Oil Observed: Yes X No Maximum Depth 15 cm

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

COMMENTS: Bioremediate areas of surface coat on low angle pocket beaches only. See sketch map for work areas. Work dates 7/1 to 8/15 based on seal, sea lion constraints.

TAG APPROVAL DATE: 4/12/90
ADEC JOHN S. BURGER ______ DATE: 4-19-90
EXXON ANDY TATE ______ FOSC: ______
NOAA Bud O'Leary ______ USCG M. J. Hall
1991 MAYSAP EVALUATION

SEGMENT: KN 144  SUB: 0  REGION: PWS  SURVEY DATE: 5/23/91

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: Timothy A. Smith Date: 6/07/91

RECOMMENDATIONS:

<table>
<thead>
<tr>
<th>Treatment Required (Y or N)</th>
<th>INITIAL</th>
<th>TAG</th>
<th>FOSC</th>
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<tbody>
<tr>
<td>N</td>
<td></td>
<td>N</td>
<td>2</td>
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<tr>
<td>Manual Pickup (Check as Req.)</td>
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<tr>
<td>Spot Washing</td>
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<td>Bio-Customblen Only</td>
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<td>Bio-Inipol/Customblen</td>
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<td>Other</td>
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COMMENTS:

INITIAL: ____________________________________________________

TAG: ________________________________________________________

FOSC: ______________________________________________________

TAG APPROVAL DATE: June 6 1991  FOSC APPROVAL DATE: 6/01/91

ADEC John Bauer  FOSC E. E. Page, CDR, USCG

EXXON  CHIEF OF STAFF, FOSC

USCG  

NOAA  

ADEC
NAME JEFF GOLINAS
SIGNATURE

NO RECOVERABLE OIL ON SEGMENT. ISLAND CONTAINS
NUMEROUS NESTING BIRDS & HARBOR SEALS (WITH PUP) OBSERVED
HARassed out.

EXXON
NAME LARRY D. OLSOAN
SIGNATURE

☐ NTR NO TREATABLE OILING CONDITIONS EXISTS

ANDMANAGER
NAME MARSHA HALL
OF DNR
SIGNATURE

☐ NTR ROCK ISLANDS. M. FAWCOTT AND G. MACDONALD WERE ON
SITE AT HIGH TIDE FOR SEGMENT SCOPE OUT. OYSTER CATCHER NESTS
AND TERN NESTS WERE OBSERVED AS WERE THE GULLS. THEY
RECORDED THE OILING. WE SKIFFED BY AT LOW TIDE, SEALS
WERE HAULED OUT AND THE BIRDS PRESENT. M. FAWCOTT REQUESTED
THE CREW NOT GET ON ISLAND SINCE WE'D CHASE THE BIRDS OFF
THEIR NESTS, LEAVING THE EGGS EXPOSED.

USCG/NOAA
NAME SCHULTZ
SIGNATURE

☐ NTR NO TREATABLE/RECOVERABLE OILING CONDITIONS FOUND

MED&D: FAWCOTT SURVEYED EARLIER - SEAL HAULOUT & ACTIVE BIRDS
PREVIOUS INSPECTION
MAYSAP SHORELINE OILING SUMMARY

SEGMENT: KN-144

TEAM NO.: 1

OG: M. Fawcett

ADEC: J. Gilabrias

EXXON: L. Olson

BIO: M. Fawcett

LANDMANAGER: M. Hall for ARK

USCG/NOAA: Schwarz/Chiles

DATE: 5/23/91

TIME: 15:30 to 16:05

TIDE LEVEL: +2.2 ft. to +1.2 ft.

ENERGY LEVEL: H M L

SURVEYED FROM: FOOT BOAT HELO

WEATHER: SUN CLOUDS FOG RAIN SNOW

TOTAL LENGTH SHORELINE SURVEYED: 625 m

NEAR SHORE SHEEN: BR RB SL X

EST. OIL CATEGORY LENGTH:

W . . m M . . m N . . m VL 95 m NO. . m US . . m

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. DEPTH (cm)

SUBSURFACE OIL CHARACTER

OP HORIZ ORIENT OF TR NO.

OILED ZONE cm-cm

CLEAN ZONE cm-cm

H2O LEVEL cm-cm

SHEEN COLOR S R B N

PIT ZONE S U M L

SURFACE-SUBSURFACE SEDIMENTS NOTES

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

OG COMMENTS: Cluster of rounded bedrock outcrops, the largest, central islet having shallow rockpools in a depression in its center. Trace of well weathered cl on the largest island. No substrate was available for footing. The cluster hosts nesting birds and a few Harbor Seals.

REVIEWED: F.W. 5/25/91

1.29 FRAMES
KN-144B
G. MACDONALD
6.23.81

Harbor Seal
Harbor Seal

low relief, low L,
smooth R outerb.

35m

A - CT, <1m, <10%
B - CT, <1/2m, <1%
N60m

generalized
PROFILE

"oil shadows"
common on R
throughout
subdivision.
**MAYSAF BIOLOGICAL SUMMARY FORM**

**TEAM #** 1  
**SEGMENT #** KN 144  
**SUBDIVISION** B  
**STATE**  

**DATE** 23 May 91  
**TIDAL HEIGHT (Range)** +2.4 ft MLW  
**BIOLOGIST** Michael Fawcett  
**WIND SPEED/DIRECTION** NW 5 knots  
**PHOTOGRAPHS: ROLL #**  
**FRAME #**  

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

This bedrock islet was pre-surveyed this A.M. by GM and MF at which time an oystercatcher nest and several tern nests were discovered. As soon as the birds flushed, gulls began circling the nesting area, looking for eggs, and were harassed by the terns. We quickly examined the condition of intertidal birds, then left the islet. Terns and oystercatchers immediately returned to nests. In the after noon survey, the MAYSAF team, stiffened by the islet, staying offshore -- nesting birds did not flush. We also observed 3 harbor seals hauled out on the islet, one of which was a pup. Oiling consisted of traces of CT near tidepools. (See sketch map)

### 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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<tr>
<td>Seabirds</td>
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<tr>
<td>Waterfowl</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Gulls/Kittiwakes</td>
<td>2 (Gull, Kittiwake)</td>
<td>10(10)</td>
<td></td>
<td></td>
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<tr>
<td>Shorebirds</td>
<td>1 (Black oystercatcher)</td>
<td>2 (Nesting pair), 3 eggs</td>
<td></td>
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<tr>
<td>Corvids</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Other Birds</td>
<td>1 (Arctic tern)</td>
<td>several nests, 10-12 birds</td>
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</table>

**MARINE MAMMALS**  
**# OBSERVED | SPECIES | # OBSERVED | SPECIES |
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Sea Otters</td>
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<tr>
<td>Pinnipeds (specify)</td>
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<td>Harbor Seals</td>
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<tr>
<td>Whales (specify)</td>
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Shoreline subdivision map showing important biological features attached.
Bi0 Sketch Map
KN 144 B
M. Fawcett
5/23/91

Oystercatcher and Arctic Tern nests

Rock pools

Pools with fil. green algae, Rhodanella, N. Hornella -- CT on BR above pools

No oil

Low relief, low L,
Smooth R outcrop.

ct, <1m, <10%
ct, <1/2m, <1%

Harbor seal haulout

"Oil shadows" common on R throughout subdivision.
KN 145A 5/23/91  Fawcett
- 3 hord seals heard at KN 145B
  - each sitting on edge of nest
  - beaks sticking out - not chicks
  - decided to abort survey & assume
    its an active nest - will contact
    Hong shin later - (plotted as
    an inactive nest -- may still be)

KN 144 B-1550  - seals went
  in water, terns still on
  nests, Kittiwakes all around
  - did not go ashore, will use charts
  from GM q MF survey earlier this AM.
  - delta is all bathed with
    a
    couple of SUTZ pools filled
    with green algae, luffa, Phaeocystis
    - CT nearly - MTZ-LTZ gone
    - Fucus & other algae - much
    growth in SUTZ + Udz, may inhibit
    barnacles, etc.
1991 MAYSAF EVALUATION

SEGMENT: KN 144  SUB:  A  REGION:  PWS  SURVEY DATE: 5/23/91

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: Timothy Adams  Date: 6/04/91

RECOMMENDATIONS:

TREATMENT REQUIRED (Y or N)  N  N  N

Manual Pickup (Check as Req.)
Spot Washing
Bio-Custombien Only
Bio-Inapol/Custombien
Other
Other

COMMENTS:
INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE:  June 4, 1991  FOSC APPROVAL DATE:  6/18/91

ADEC  FOSC  EXXON  USCG  NOAA

E. E. PAGE, CDR, USCG  CHIEF OF STAFF, FOSC
**MAYSAP FIELD SHORELINE COMMENT SHEET**

**TEAM NO.**  
**SEGMENT** KN 144  
**SUBDIVISION** A  
**DATE** 5/12/91

**ADEC**

<table>
<thead>
<tr>
<th>NAME</th>
<th>JEFF GINNAHAS</th>
<th>SIGNATURE</th>
</tr>
</thead>
</table>

**TREATMENT RECOMMENDED**

Manual work, OG map sites A2, B1, C1. Mostly pebble work. At C2 (cheapest oil area) low to mid SOIL contour in 6.5 M 315 ft. Under Bruders/Schutton, work would require moving Bruders, removinf heater & raking/assay. Header is a sharp incline narrow cone (8 ft wide) with many small areas. Could also be by gone to contain spread. Would be tedious. Site B2 has heavy oil at concentrations area at depression. Could easily be removed. Not AOT of armor protecting oil. If not removed wave action will most likely diminish this area within a year. Site A2 has less SOIL with occasional heavy patch with very little armor. If treating C1 & B2, later of A2 would benefit from moving Bruders, Schutton & header. C1 & C2

**EXXON**

<table>
<thead>
<tr>
<th>NAME</th>
<th>LARRY D. OLSON</th>
<th>SIGNATURE</th>
</tr>
</thead>
</table>

☑️ NTR No recoverable oil was located.

**NDMANAGER**

<table>
<thead>
<tr>
<th>NAME</th>
<th>MARRSHA HALL</th>
<th>SIGNATURE</th>
<th>MARRSHA HALL</th>
</tr>
</thead>
</table>

☑️ NTR ☐ TREATMENT only at Area C1. Oiling varies from low to mid SOIL and is under big cobbles angular. The surface rocks will need to be moved out of the way to head to acted sediments. Remove heavy patches. Rake/Rigide to low SOIL, or just agitate whole area. Since in area, tend to than B2, manual removal.

**USCG/NOAA**

<table>
<thead>
<tr>
<th>NAME</th>
<th>SCOTT C. CHILDS</th>
<th>SIGNATURE</th>
<th>SCOTT C. CHILDS</th>
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</thead>
</table>

☑️ NTR ☐ TREATABLE/RECOVERABLE OILING CONDITIONS FOUND

Steep rounded bedrock shoreline w/ crevices filled w/ Bruders. Deetable oil in MS/1 SOIL mainly in crevices. Wave energy protected area. C1 & C2 Site spotty but around most of segment. No subsurface oil found.
# MAYSAP SHORELINE OILING SUMMARY

**Team No.:** 1  
**Bio.:** M. Fawcett  
**ADEC: J. Giallias**  
**Land Manager:** M. Hall  
**USCG/NOAA:** Schwartz/Childs

**Time:** 16:40 to 17:35  
**Tide Level:** +2.1 ft. to +3.0 ft.  
**Energy Level:**  
- H  
- M  
- X  
- L  

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

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

**Total Length Shoreline Surveyed:** 700 m  
**Near Shore Sheen:**  
- ☑ BR  
- ☐ RB  
- ☐ SL  
- ☐ NONE

**Estimated Oil Category Length:**  
- 100 m  
- 6 m  
- 4 m  
- 23 m  
- 141 m  
- 491 m  
- 180 m  
- US  
- m

## SURFACE OIL CHARACTER

| C | AP | MS | TB | BOR | CV | CT | ST | FL | DB | NO | TYPE | V | H | M | L | W | M | LENGTH | ZONE | NOTES |
|---|----|----|----|-----|----|----|----|----|----|----|------|---|---|---|---|---|---|---|---|---|---|---|---|
| A1 | P | S |   |     |    |    |    |    |    |    |      | R | H | 0.2 | 20 | X |   | X |   |   |   |     |
| A2 | P | S |   |     |    |    |    |    |    |    |      | CB | H | 1 | 4 | X |   |   | X |   |   |   |     |
| B1 | D | P |   |     |    |    |    |    |    |    |      | R | M | 2 | 1 | X |   |   | X |   |   |   |     |
| B2 | P | S |   |     |    |    |    |    |    |    |      | CB | M | V | 4 | X |   |   | X |   |   |   |     |
| C1 | P | S |   |     |    |    |    |    |    |    |      | CB | M | 6 | 5 | X |   |   | X |   |   |   |     |
| C2 | P | S |   |     |    |    |    |    |    |    |      | R | H | 1 | 10 | X |   |   | X |   |   |   |     |
| D | T | S |   |     |    |    |    |    |    |    |      | R | H | 51 | 250 | X |   |   | X |   |   |   |     |
| E | S | S |   |     |    |    |    |    |    |    |      | R | B | M | 1/2 | 1 |   |   | X |   |   |   |     |
| F1 | P | P |   |     |    |    |    |    |    |    |      | L | H | 1/3 | 20 | X |   |   | X |   |   |   |     |
| V | S |   |     |    |    |    |    |    |    |    |      | R | B | H | 1 | 3 |   |   | X |   |   |   |     |

**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:**  
- 1  
- 29  
- FRAMES 10/14

## SUBSURFACE OIL CHARACTER

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT 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>
<th>NOTES</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>18</td>
<td>OP</td>
<td>HOR</td>
<td>MOR</td>
<td>LDR</td>
<td>TR</td>
<td>NO</td>
<td>cm-cm</td>
</tr>
</tbody>
</table>

**Pit Notes:**  
- Rocky shore typical

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

**OG Comments:**  
- Rocky shore w/ small B-filled crevices and BC channel. Surface oil only, as sol, & MS in R crevices and between BC & an earthy silt layer in the channel.
Key:

- CT < 10%
- CT < 1%
- PHOT LOC.

CT is well weathered, slightly tacky at mast.

\[ \frac{1}{2} \times 20 \text{ m}, \quad \text{CT, CV } 20\% \]

\[ 2 \times 3, \text{MSI } 25\% \]

\[ \text{CB; } 1 \text{ OSR; ORGANICX } 1 \times 3; \; 5\% \]

CT, CV, < 20\%
\[ \leq 1 \times 180 \text{ m} \]

\[ \frac{1}{2} \times 2, \text{OSR, } 30\% \; \text{SUTZ} \]

\[ 3 \times 1, \text{OSR, SUTZ, } 30\% \]

\[ \text{SUTZ} \]

CT, CV, < 20\%
\[ \leq 1 \times 180 \text{ m} \]
MAYSA BIOTICAL SUMMARY FORM

DATE 23 May 91

TEAM # 1
SEGMENT # KN 144
SUBDIVISION A
STATE CA.

TIDAL HEIGHT (Range) +2.3 to +3.0 ft MLLW
BIOLOGIST Michael Fawcett
WIND SPEED/DIRECTION CALM

PHOTOGRAPHS: ROLL #
FRAME #

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):
This subdivision contains mostly steep or moderately steep bedrock
with small boulder/cobble pocket beaches. Wave energy is low to
moderate. Residual oil CT, CV and patches of MS or SOR are scattered
throughout much of the subdivision; most of the oil is supratidal
above intertidal biota (except lichen & worms) and the remainder is
in the upper part of the high intertidal zone, among sparse barnacles
and sometimes dense limpets (Notoacmea persona). See sketch map
for descriptions of biota near oiled sites.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED</th>
<th>SPECIES PRESENT</th>
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<tbody>
<tr>
<td>Eagles</td>
<td></td>
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<td>Osmerids (Hooligan?)</td>
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<td>Seabirds</td>
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<tr>
<td>Waterfowl</td>
<td></td>
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<tr>
<td>Gulls/Kittiwakes</td>
<td>1 (G-W Gulls)</td>
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<td></td>
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<tr>
<td>Shorebirds</td>
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</tr>
<tr>
<td>Corvids</td>
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</tr>
<tr>
<td>Other Birds</td>
<td></td>
<td></td>
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</tbody>
</table>

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

Shoreline subdivision map showing important biological features attached.
KN 144A 5/23/91  

1640 - proceed north and fould
- local buoy site C/B/BR/P
- line 3 ft + 7 ft - move  
- from up to 15 + ft
- CT, CV, SAR, SUW2 - no hook
- red barbless, first 10 m dawn/sun - muscle
- 30 m north, more SOR SUW2 - 5 m
- more - nice barn + 10 ft - done
- fucus 3-4 m lavender - sparse
- mussel under rocks
- 2 edges across inlet in 120 B
- GW grabs 11

1700 hr - B/C pocket break - SOW in
- SUW2 - dense intestinal muscle and
- barnacles, limps, sparse algae, low line
- many littorinids

1710 - CT - SUW2 BR algae
- barnacles

1715 - BR - dense algae (fucus & oak
- fl. dry, go, fl. L72 SUW2 - sparse
- barnacles algae - Tr ct algae barn
- 1720 - trawler - dense - CT/cv
+ 8-11 ft - barns, sparse barns
- dense, personal - sparse mussel
(?) - cv - sparse fucus
144 A (Cont) 23 May 91  Fair wind  
1720 (cont) - most barnacles on MTZ  
+ 3-6 ft  - dense mass of kelp below  
covering Fucus & everything else  
in LTZ  
1730 - CT/CY MS/E + 8-10 c/HR  
- finish 1735  - same as 1720  

noticed large schools of 4-6"  
smelt + pollock fish in several new  
areas, places throughout Herring Bar  
today - Haddock?
CT above nearly all biota except occasional sparse barnacles, limpets (N. person) - same at all sites with circled star 

S location

CT above biota except wormy barnacles, limpets, mussels begin SM downshore, dense mussels, moderate barnacles to M down, also littorinids, large old limpets (2 spp.) in cavity boat.

CT/MS among B/C with dense limpets, sparse barnacles, mussels, littorinids and rockweed; mod. barnacles in M/TZ; dense filamentous, brown algal mats covering everything in LTZ.

same description as (E)

same description as (E) & (F)
1991 HAYSAP EVALUATION

SEGMENT:  KN 144  SUB:  A  REGION:  PWS  SURVEY DATE:  5/23/91

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

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

COMMENTS:
INITIAL:

____________________________________________________

TAG:

____________________________________________________

TAG APPROVAL DATE:  ______________________  FOSC APPROVAL DATE:  ______________________

ADEC                                      FOSC

EXXON

USCG

NOAA
MANAGER NAME: MARSHA HALL OF: DHR SIGNATURE: Marsha Hall

☐ TREATMENT only at Area C1. Oiling varies from
Lo sor - Hi sor and is under big cobbles angular.
The surface rocks will need to be shoved out of the way
to lead to oiled sediments. Remove heavy patches.
Rake/Agitate Lo sor, or just agitate whole area.
Since in area, tend to clean by manual removal.

USCG/NOAA NAME: SCHULTZ / CHILES SIGNATURE / [Signature]

☐ TREATABLE/RECOVERABLE OILING CONDITIONS FOUND

KEEP ROUND ROCK SUBMERGED IN CREVICES FILLED WITH BK'S. DECARTE OIL
MG/T - SOR MAINLY IN CREVICES / WAVE ENERGY PROTECTED AREAS. CT - CV
Silt Spotty but around most of Segment. NO SUBSURFACE OIL FOUND.
MAYSAP SHORELINE OILING SUMMARY

TEAM NO. 1

OG: G. Mardenary
BIO: M. Fawcett
ADEC: J. Ginawag
LANDMANAGER: M. Hall
EXXON: L. Olson
USCG/NOAA: Schwartz/Childs

SEGMENT: KN-144
SUBDIVISION: A
DATE: 5/23/91

TIME: 16:40 to 17:36

TIDE LEVEL: +2.1 ft. to +3.9 ft.
ENERGY LEVEL: [ ] H  [ ] M  [ ] X

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

TOTAL LENGTH SHORELINE SURVEYED: 700 m
NEAR SHORE SHEEN: [ ] BR  [ ] RB  [ ] SL  [X] NONE

EST. OIL CATEGORY LENGTH: W __ m  M __ m  G __ m  N __ m  V __ 491 m  NO __ 180 m  US __ m

<table>
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<tr>
<th>L</th>
<th>O</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT</th>
<th>SHORE SLOPE</th>
<th>AREA</th>
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<td>TYPE</td>
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<td>W</td>
</tr>
<tr>
<td>A1</td>
<td>P</td>
<td>R M 0.2 30</td>
<td>CB</td>
<td>H 1 4</td>
<td>X</td>
</tr>
<tr>
<td>A2</td>
<td>P</td>
<td>R M 0.2 30</td>
<td>CB</td>
<td>H 1 4</td>
<td>X</td>
</tr>
<tr>
<td>B1</td>
<td>P</td>
<td>R M 0.2 30</td>
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<tr>
<td>D1</td>
<td>P</td>
<td>R M 0.2 30</td>
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<tr>
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<td>CB</td>
<td>H 1 4</td>
<td>X</td>
</tr>
</tbody>
</table>

DISTRIBUTION: C = 91-100%; B = 81-90%; P = 51-60%; S = 1-10%; T = <1%
SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE

OG COMMENTS: Rocky shore of small B-jammed debris and BC channel. Surface oil only, as sol/I & MS/I in R crevice and between BC & an earthy clay layer in the channel.
CT is well weathered, slightly tacky at most.

**KEY**
- CT ≤ 10%
- CT < 1%
- Photo Loc.

---

**M/I in R**
- Text: [content not legible]

---

**Facts:**
- 1 ½ x 20 m, CT, CV 20%
- 2 x 3, NS/I 20%
- C/R; 10% Sol.
- Organics 1x3; ≤ 1%

---

**Legend:**
- CT, CV ≤ 1/8
- CT, CV ≤ 1/16
- CT, CV ≤ 1/2
- CT, CV ≤ 1/4
- CT, CV ≤ 1/8
- CT, CV ≤ 1/16
- CT, CV ≤ 1/32
- CT, CV ≤ 1/64

---

**Note:**
- Reviewed: R.W. 5/25/4
**WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS**

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
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<tbody>
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<tr>
<td>Pinnipeds (specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whales (specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Shoreline subdivision map showing important biological features attached.
KN 144A 5/23/91  Fawcett

start 1640 - proceed North and East

- lost buoy
- C1/B1/BP
- dense barnacles 1-3 in. +2 ft - brown
- from up to 15 ft
- CT / CV / SAR / SWTZ - no barnacles
- no sea urchins, ferns 10 m down to 1 pm
- 30 m north, more SAR / SWTZ
- 2 barnacks above barn +10 ft - brown
- Fucus 3-4 m brown
- Barnacks under rocks
- 2 eels across meter in 123 B

SW Gull 11

1700 hrs - D1/C pocket beach - SAR in
- SWTZ, dense intestinal barnacks and
- barnacks, fern, sparse algae
- many littorinids

1710 - CT / SWTZ BR above
- barnacks

1745 - BR - dense algae (Fucus & etc.)
- dark brown, opal, SWTZ - sparse
- barnacks above algae - Tr. CT above barn

1750 - time pocket - barnacks - CT / CV
+ 9-11 ft, among sparse barnacks
- dense perspica, sparse mussel
- Q, CVIT, sparse Fucus
144 A (cont) 23 May 91  
1720 (cont) - most barnacles in MTZ 
+ 3-6 ft - dense mats of algal bloom 
covering floors of everything 
in LTZ 
1230 - CT/C/1 M/1 + 8-10 </AR 
- finish 1730 - same as 1720 

noticed large schools of 4-6" 
smelt +/po fish in several new 
dense places throughout Herring Bar 
today - Haddock?
KN-144A
Bio Sketch Map
M. Fawcett
23 May 91

KEY
\[ CT < 40^\circ \]
\[ ... CT < 1^\circ \]

CT above nearly all biota except occasional sparse barnacles, limpets, mussels - same at all sites with circled star

CT above nearly all biota except occasional sparse barnacles, limpets, mussels begin, 5m downshore; dense mussels, moderate barnacles 10m down; also littorinds up large old limpets (3-5cm)

CM/MS among B/C with dense limpets, sparse barnacles, mussels, littorinds and rockweed; mod. barnacles in M/C; dense filamentous brown algal mats covering everything in LTZ

same description as (E)

same description as (E + E)

SUTZ3... above biota; barnacles, mussels, barnacles, littorinds downshore

SUTZ... above biota

SUTZ... above biota

SUTZ... above biota; barnacles, mussels, barnacles, littorinds downshore

same as (A2)

same as (A2)

same as (A2)

same as (A2)

same as (A2)

same as (A2)

0 60 cm
1991 KAYSAP EVALUATION

SEGMENT:  KN 144 SUB:  B  REGION:  PWS  SURVEY DATE:  5/23/91

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>
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<tbody>
<tr>
<td>N</td>
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Manual Pickup (Check as Req.)
Spot Washing
Bio-Customblen Only
Bio-Inipol/Customblen
Other

COMMENTS:
INITIAL:  __________________________________________________________

TAG:  __________________________________________________________

FOSC:  __________________________________________________________

TAG APPROVAL DATE:  ___________________________  FOSC APPROVAL DATE:  ___________________________

ADEC  ___________________________  FOSC  ___________________________

EXXON  ___________________________

USCG  ___________________________

NOAA  ___________________________
TEAM NO. 1  SEGMENT  KN  144       SUBDIVISION  B       DATE 5/23/91

ADEC
NAME  [Signature]

EXXON
NAME  LARRY O. OLSON SIGNATURE  [Signature]

LANDMANAGER
NAME  MARSHA HALL OF DNR SIGNATURE  [Signature]

USCG/NOAA
NAME  SCHULTZ/CITIZO  SIGNATURE  [Signature]

NO RECOVERABLE OIL ON SEGMENT. ISLAND CORMORANTS
NUMEROUS NESTING BIRDS & 4 HARBOUR SEALS (WITH PUPS) OBSERVED
HARBOUR.

NO TREATABLE OILING CONDITIONS EXIST.

Rock islands. M. Fawcett and G. Macdonald were on
site at high tide for segment scope out. Oyster Catcher nests
and tern nests were observed. As were the gulls. They
recorded the oiling. We skiffed by at low tide. Seals
were hauled out and the birds present. M. Fawcett requested
the crew not get on island since we'd chase the birds off
the nests, leaving the eggs exposed.

DO TREATABLE/RECOVERABLE OILING CONDITIONS FOUND.

MED. NO. 6 FAWCETT SURVEYED EARLIER - SEAL HAULOUT & ACTIVE BIRD
NESTS PREVENTED INSPECTION
**MAYSAP SHORELINE OILING SUMMARY**

**SEGMENT** KN-144  
**SUBDIVISION** B  
**DATE** 5/23/91

**TEAM NO.**  
OG G. MCDONALD  
ADEC J. GINAZAS  
EXXON L. OLSON  
BIO M. FANCETT  
USCG/NOAA SCHULTZ/CHILDS

**TIME** 15:50 to 16:05  
**TIDE LEVEL** +2.2 ft. to +2.3 ft.  
**ENERGY LEVEL**  
**SURVEYED FROM**  
FOOT  
BOAT  
HELO  
**WEATHER**  
SUN  
CLOUDS  
FOG  
RAIN  
SNOW  
**TOTAL LENGTH SHORELINE SURVEYED** 625 m  
**NEAR SHORE SHEEN**  
BR  
RB  
SL  
X  
**EST. OIL CATEGORY LENGTH**  
W  
M  
N  
VL  
DS  
NO  
US

<table>
<thead>
<tr>
<th>LOC</th>
<th>SURFACE OIL CHARACTER</th>
<th>SHORE SEDIMENT TYPE</th>
<th>WIDTH m</th>
<th>LENGTH m</th>
<th>ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>R M &lt;1 35 x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>R L &lt;2/3 60 x</td>
<td></td>
<td></td>
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<td></td>
</tr>
</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_1  
**FRAMES**  
1  
24  
15

**PIT**  
NO: DEPTH (cm)  
OP HORIZ MOLD  
OF TR NO  
OILED ZONE cm-cm  
Y/N (cm)  
BRN S UI MI LI  
SURFACE-OILED SUBSURFACE-SEDIMENTS

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

**OG COMMENTS**  
Cluster of rounded bedrock outcrops, the largest, central islet having shallow rockpools in a depression in its center. Trace of well weathered CT on the larger island; no substrate was available for pitting. The cluster hosts nesting birds and a few Harbor Seals.

**REVIEWED**  
F.W. 5/25/91
KN-1445
G. Macdonald
6.23.91

low relief, low L
Smooth R outcrop

35m

A = CT, <1m, <10"%
B = CT, <1/2m, <1"%
N 60m

generalized profile

"oil shadows"

common on R

throughout subdivision.

0 50m

REVIEWED: R.W. 5/25/91
**TEAM # I**  
**DATE 23 May 91**

**SEGMENT # KN 144**  
**TIDAL HEIGHT (Range)** +2.4 ft MLW

**SUBDIVISION B**  
**BIOLOGIST Michael Fawcett**

**SEA STATE**  
**WIND SPEED/DIRECTION NW 5 Kts**

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

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

The bedrock islet was pre-surveyed this A.M. by GM and MF, at which time an oystercatcher nest and several tern nests were discovered. As soon as the birds flushed, gulls began circling the nesting area, looking for eggs, and were harassed by the terns. We quickly examined oil condition and intertidal biota, then left the islet. Terns & oystercatchers immediately returned to nests. In the afternoon survey, the MARY J team shifted by the islet, staying off shore -- nesting birds did not flush. We also observed 3 harbor seals hauled out on the islet, one of which was a pup. Oiling consisted of traces of CT near tidepools (see sketch map)

---

**WILDLIFE OBSERVATIONS**  
**TO BE COMPLETED IN ALL SUBDIVISIONS**

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED</th>
<th>SPECIES PRESENT</th>
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<tbody>
<tr>
<td>Eagles</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Seabirds</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Waterfowl</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gulls/Kittiwakes</td>
<td>2 (Gull, Kittiwake)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shorebirds</td>
<td>1 (Black oystercatcher) 2 (nesting pair)</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>1 (Arctic tern) several nests</td>
<td></td>
<td></td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>MARINE MAMMALS</th>
<th># OBSERVED</th>
<th>SPECIES</th>
<th>$ OBSERVED</th>
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</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>Whales (specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Shoreline subdivision map showing important biological features attached.
Bio Sketch Map
KN 144 B
M. Fawcett
5/23/91

Oystercatcher
and Arctic Tern nests

rock pools

Pools with fil. green algae
Rhodones a. Horrida - CT
Dr. B. R. above pools

No oil

low relief, low L,
smooth R outcrop

CT, <1 m, <10%

CT, <1/2 m, <1/

harbor seal haulout

No oil

"oil shadows"
common on R
throughout
subdivision
5/27/91
Fawcett

- Pre survey GM & ME

KN 144688
Sm. isolated area.

Cabin #1 (2 eggs) & terms - several

Next - as soon as terms finished.

Cable #2 approached & were caught by terms.

We checked out oil, then left.

Pleasure here & terms natural.

Immediately after we left.
KN 145 A 5/23/91  Fawcett
- 3 haro seals hunking at 341
- eagle sitting on edge of nest
- with young shaking out - not cold
- decided to abort survey & assume
its an active nest - will contact
Tong stine later - (plotted as
an inactive nest -- may still be)

KN 149 B - 1550 - seals went
in water, tern still on
nest, Kittiwakes all around
-did not go ashore, will use dth
from GM & MF survey earlier this AM
- dth is all bedrock with a
- couple of SUTZ pools filled
with green algae, Lithophyllum, Phymacentrum
no CT nearby - MTZ-LTZ done
- Fucus & other algae - much
waving in SUTZ + UUTZ, may inhibit
barnacles, etc.
SHORELINE EVALUATION

SEGMENT ST/ KN-145  SUBDIVISION A (1 OF 1)  DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Harbor seal and sea lion pupping (3N, 3P) - 5/15 to 7/1 and molting (30, 3Q) - 8/15 to 9/15; Active eagle nest (5T) - 3/1 to 6/1; Anchorages (6V) - 6/1 to 9/15. Restrict air and boat traffic to essential minimum. Air approach and takeoff from and to seaward only. Contact ADF&G prior to any activity re: seals and sea lions and USFWS re: eagle nest. Cleanup should be completed before 5/15 or between 7/1 - 8/15 unless otherwise approved by ADF&G.

SUBDIVISION ECOCLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-oiled substrate and biota.

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: April 12, 1990

OILING CATEGORIZATION:
Wide 119 m: Medium 20 m: Narrow 329 m: V.Light 291 m: No Oil 140 m
Subsurface Oil Observed: Yes X No Maximum Depth 15 cm

RECOMMENDATIONS:
X Treatment Recommended Snare/Absorbent Booms
--- Manual Pickup Oil Snare (pom poms)
X Bioremediation Absorbents (pads, rolls, etc)
--- Spot Washing: Spot Washing
--- Removal Beach Cleaner
--- Other (see comments)

COMMENTS: Bioremediate areas of surface coat on low angle pocket beaches only. See sketch map for work areas. Work dates 7/1 to 8/15 based on seal, sea lion constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/12/90
ADEC JOHN BROKER [Signature]
EXXON RANDY TATE [Signature]
NOAA BRIAN WRIGHT [Signature]
USCG M.J. HALE [Signature]

FOSC: [Signature] DATE: 4-19-90
1991 MAYSAP EVALUATION

SEGMENT: KN 145  SUB: A  REGION: PWS  SURVEY DATE: 5/24/91

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: 6/07/91

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></td>
<td>N</td>
<td>N</td>
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</tbody>
</table>

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

COMMENTS:
INITIAL: ____________________________________________________

TAG: __________________________________________________________

FOSC: _________________________________________________________

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

ADEC  FOSC
John Brown  E. E. Page, CDR, USCG
EXXON  CHIEF OF STAFF, FOSC
USCG
NOAA
Eagle Nest: Access restricted from 3/1 to 9/1. USF&WS authorization required. Maintain 1000' vertical and 1/4 mile horizontal buffer.
NO RECOVERABLE OIL TO BE TREATED. MINIMAL SURFACE OIL IS TRAPPED IN CRACKS; INACCESSIBLE. SOME SUBSURFACE AT SOUTHERN END OF ISLAND BENEATH COARSE ARMOR AND SEDIMENTS (DEEP TO 15 CM), BUT NOT ENOUGH SUBSURFACE TO JUSTIFY AERIAL INJECTION. ALL TREATMENT MANUAL, EXHAUSTED. SLUDGE WILL NOT WORK, NOT ENOUGH FOR MECHANICAL AREA PROBABLY BETTER LEFT ALONE.

No recoverable oil remains.

Remainder oil best left as is.

Nothing of significance remains.

Bedrock controlled shoreline on small island. "Joint" controlled chutes composed of BCP's over bed rock "basement." Chutes generally trap oil on beaches that accumulate finer sediments in the sludge. Sludge oil at CT, CV & soot oil. Subsludge oil 10% portion in the hinge life.
**MAYSAP SHORELINE OILING SUMMARY**

**TIME:** 14:05 to 15:50  
TIDE LEVEL: +6.3 ft. to +3.2 ft.  
ENERGY LEVEL: [ ] H  [ ] LG-XL

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

**TOTAL LENGTH SHORELINE SURVEYED:** 1614 m  
NEAR SHORE SHEEN: [ ] BR [ ] RB [ ] SL [ ] NONE

**EST. OIL CATEGORY LENGTH:** W - [ ] m M - [ ] m N - [ ] m V - [ ] m  
*Lengths from high resolution shoreline

<table>
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<tr>
<th>LOC</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE Sediment SLOPE</th>
<th>AREA</th>
<th>DEPTH</th>
<th>LENGTH</th>
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<td></td>
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<td>cm/cm</td>
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<td>S</td>
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<td>B</td>
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<td>51</td>
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<td>F</td>
<td>S</td>
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**NOTES:**

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

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

**PHOTO ROLL #: MAYSAP-1 - 30 FRAMES 2x8**

**PIT NO.** | **PIT DEPTH** | **SUBSURFACE OIL CHARACTER** | **OILED ZONE** | **CLEAN BELOW** | **H2O LEVEL** | **SHEEN COLOR** | **PIT ZONE** | **SURFACE-SUBSURFACE SEDIMENTS** | **NOTES** |
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</table>

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

**OG COMMENTS:**

Small, rounded rock island w/ mud filled gullies in the R welly. Surface oil as sporadic CT and patchy sol. Subsurface oil, horiz. typical, in the gullies. CT is peeling off kelp, band, leaving "oil shadow."
KN-145A
G Mardon
5.24.91

'Oil shadows' throughout.

- Subsurface
  - A: MOR - 10 x 5, 4T2, SUTZ
  - B: MOR - 4 x 1
  - C: MOR - 3 x 2; 3 m R
  - D: MOR - 3 x 7.5 m R
  - E: LOR 4 x 3 MITZ
  - F: LOR 3 x 5 H1T2

- Peeling oil + oil shadows!
  - LOR, 3 x 60 total, G/R, <10°, + H1T2.

- No oil

- Profile
  - Peeling oil + lichen crust
  - CT <1°
  - LOR

- Key
  - CT <1°
WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED</th>
<th>SPECIES PRESENT</th>
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<tbody>
<tr>
<td>Eagles</td>
<td></td>
<td></td>
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<tr>
<td>Seabirds</td>
<td>1 (pigeon guillemot)</td>
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<tr>
<td>Waterfowl</td>
<td></td>
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<tr>
<td>Gulls/Kittiwakes</td>
<td>1 (G. Kittiwake)</td>
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<tr>
<td>Shorebirds</td>
<td></td>
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</tr>
<tr>
<td>Corvids</td>
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<tr>
<td>Other Birds</td>
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<tr>
<th>MARINE MAMMALS</th>
<th># OBSERVED</th>
<th>SPECIES</th>
<th># OBSERVED</th>
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<tbody>
<tr>
<td>Sea Otters</td>
<td>2 (♀ + pup)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pinnipeds(specific)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whales(specific)</td>
<td></td>
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</tbody>
</table>

Shoreline subdivision map showing important biological features attached.
KN-145A
Bio Sketch Map
M. Fawcett
5/24/91

CT, 10 ft. in SUTZ; above biota; dense barnacles; Fucus downshore

SOR in SUTZ, N+11 ft; above biota; barnacles; littorinids-limpets; begin 4-5 m downshore; dense mussels on downshore

LOR in SUTZ, above biota; barnacles; limpets; littorinids begin 5 m downshore; MTZ has littorinids & eggs; hermit crabs, amphipods, limpets, barnacles

SOR in UTZ-SUTZ near or above filamentous green algae; sparse barnacles, littorinids limpets; buried oil in MTZ gravel/pebble channel with mussels on surface, clams below; barnacles, limpets on isolated cobbles on gravel

KEY

CT < 1%
CT < 10%

Pool
24 May 91 KN 145A Fawcett

1410 hrs

- no sign of eagles near nest - none at 10:45 AM today
- dead - shriveled and dry
- North and East core - canoe faces north - Gregg falls, models -
- log auger - double hands
- CT on walls +9-11 ft, regime edge
- dense baran +9 ft - dense Fowey, plywood
- dense mussel +4-9 ft
- MTZ boulders w/ red 2/3 hammer 4 eggs
- waste, amph. deep, beam (1992)
- light subaqueous oil in doubles
- 52.5'TVZ - no birds +12 ft
- spine barn, till, 1 rd. short
- 5 m downstream +9 ft
- 1 sea eather dpup
- 1 kittiwake

- and areas NW and SE

80 R + 11 ft (below pool) +4-5 ft upstream from sparse baran, feet
- camp, 10 m above dense mussel
- Fowey - wall 2 moon stop
- CR in dense baran, Fowey - also seen
- Olive, Entry Rock, E. 1 beam (all
- the at +4-7 ft - Clacton
- DAR, op 4 beams (me)
- 1 fish - gutted
- 15 1/2 hrs - rugged shelf & ridge area
- CT of boulders in upper part. 9 ft
- 13 ft to 1.2 - boulders mid
- plas on AR +8-10 ft near spar
- boulders, dense subaqueous + fil
- m. up in pools & damp gravel
- "phantom drip" in the making
- dead fish being pulled off MTZ
- rocks near boulders +8 ft and
- area was likely in po"t reactor
- MTZ pools near fil. greas
- SCRAPED on ridge +1 foot (and
- large masses of eggs under boulders
- in pools) heavily, sculp
- some boulders in 0.3 MTZ
- 4 to +1 ft - clams at +6 below
- barn (diesel) on scoured rocks
- on gravel?"
KN 145A [cont] 24May 91 Fawcett

- Sun was fine, bricks heated on BR.
- Each side of 3/4 w/knife oil
- Homogenous, brown, little eggs
- Under Boletes 3-5/8/algae,
- Zed LTZ in 5/9/... dense
- piles of Green Entomoptera sp.
- under 5-8cm and dull, crinkly like
- Copper papa... 1-2ft long
- in LTZ - young
- these look like Vulpia, then get?
- Long 9+ hours.
- Finish 1545
- Wobbled eagle, met about half
- the time we were on the island.
- No sign of archipelago
- 2 eagles soaring, family toward,
- being harassed by 2 Kittiwakes


1991 MAYSAP EVALUATION

SEGMENT:  KN 145  SUB:  A  REGION:  PWS  SURVEY DATE:  5/24/91

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.
**ADEC**

**NAME:** JEFF GUNALIS  
**SIGNATURE:**

**NTR**  
No recoverable oil to be treated. 
Minimal surface oil is trapped in crannies; inaccessible. 
Some subsurface at southern end of island beneath cobble armor and sediments (7/10 to 15' CL), 
but not enough subsurface to justify manual intervention. 
Manual exposure/treatment will not work, not enough for mechanical area, probably better left alone.

**EXXON**

**NAME:** LARRY D. OLSON  
**SIGNATURE:**

**NTR**  
No recoverable oil remains.

**NDMANAGER**

**NAME:** MARSHA HALL  
**SIGNATURE:** Masha Hall

**NTR**  
Remaining oil best left as is.

**USCG/NOAA**

**NAME:** SCHULTZ  
**SIGNATURE:**

**NTR**  
Nothing of significance remains.

Bedrock controlled shoreline on small island, "Joint" controlled chutes composed of QCP's over red rock "basement" - chutes generally trapuwells 
but accumulate finer sediments in the suite. 
Subsurface oil at CT, CV, SCF. 
Sediments. 
Subsurface oil is noricable in the hole.
**MAYSAP SHORELINE OILING SUMMARY**

**TEAM NO.** 1  
**O.G. MACDONALD**  
**BIO. M. FANCIETT**  
**ADEC** J. GINALS  
**LANDMANAGER** M. HALL  
**USCG/NOAA** SCHULTZ/CHILD  
**SEGMENT** KN-145  
**SUBDIVISION** A  
**DATE** 5-1-91  
**TIME** 14:05 15:10  
**TIDE LEVEL** +6.3 ft. to +3.2 ft.  
**ENERGY LEVEL**  
**SURVEYED FROM:**  
**WEATHER:**  
**TOTAL LENGTH SHORELINE SURVEYED:**  
**EST. OIL CATEGORY LENGTH:**  

---

### Surface Oil Character

<table>
<thead>
<tr>
<th>LOC</th>
<th>Surface Oil Character</th>
<th>Surface Sediment Type</th>
<th>Shore Slope Type</th>
<th>Width (m)</th>
<th>Length (m)</th>
<th>B</th>
<th>U</th>
<th>M</th>
<th>L</th>
<th>Notes</th>
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<tr>
<td>A</td>
<td>S</td>
<td>R</td>
<td>H</td>
<td>61</td>
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<tr>
<td>B</td>
<td>J</td>
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<td></td>
<td>61</td>
<td>60</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>3 patches totaled.</td>
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<tr>
<td>C</td>
<td>P</td>
<td>R</td>
<td>H</td>
<td>61</td>
<td>55</td>
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<td></td>
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<td>peaking ct.</td>
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<tr>
<td>D</td>
<td>S</td>
<td>R</td>
<td>H</td>
<td>61</td>
<td>160</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>10 sof.</td>
</tr>
<tr>
<td>G</td>
<td>S</td>
<td>R</td>
<td>H</td>
<td>61</td>
<td>120</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>remainder of island</td>
</tr>
</tbody>
</table>

---

### Pit Subsurface Oils

<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>1</td>
<td>20</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>25</td>
<td>X</td>
<td>3-17</td>
<td>Y</td>
<td>21</td>
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<td>X</td>
<td>5-10</td>
<td>Y</td>
<td>10</td>
<td>S</td>
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<tr>
<td>4</td>
<td>15</td>
<td>X</td>
<td>8-12</td>
<td>-</td>
<td>N</td>
<td>30</td>
<td>B</td>
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<tr>
<td>5</td>
<td>3</td>
<td>X</td>
<td>11-14</td>
<td>Y</td>
<td>13</td>
<td>B</td>
<td>X</td>
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<td>6</td>
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<td>X</td>
<td>10-20</td>
<td>N</td>
<td>8</td>
<td>R, B</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**DISTRIBUTION:** C = 91-100%; B = 81-90%; P = 61-80%; S = 1-10%; T = <1%

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

---

**OG COMMENTS:** Small, rounded rock island w/ mud filled gully in the R wall. Surface oil as sporadic ct and patchy so. Subsurface oil, color: Brown, typical, in the gully. ct is peeling off lichen band, leaving "oil sheen" e.
 KN-145A
G. Marboe
5-24-91

20% 5x1, SUTC
CT, ST, MSH

"Oil shadow" throughout

SUBSURFACE
A. LOR - 10 x 5, HiTZ, SUTC
B. MOR - 4 x 1
C. MOR - 3 x 2; 3 or R
LOR - 3 x 7; bench

E. LOR 4 x 3 NUTC
LOR 3 x 5 HiTZ

Oil in

Profile
LOR, HiTZ, 3 x 60 total, G/R; < 10% + HiTZ

Total
< 1 x 10 m
< 1 x 20 m

CT 1%
CT 10%

KEY

Profile
LOR, HiTZ, 3 x 60 total, G/R; < 10% + HiTZ

Reviewed 5-27-91
Note: Substitute map
— No dual shoreline map

KN0145
Segment Reference Map
Map Key: KN1K0146

EAGLE NEST

(revised 5.27.99)
### WildLife Observations

#### BIRDS

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<thead>
<tr>
<th>Species</th>
<th># of Species</th>
<th>Total Birds</th>
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<tr>
<td>Seabirds</td>
<td>1 (pigeon guillemot)</td>
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<tr>
<td>Waterfowl</td>
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<td></td>
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<tr>
<td>Guillemottes/Kittiwakes</td>
<td>1 (bl. Kittiwake)</td>
<td>1</td>
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<tr>
<td>Shorebirds</td>
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<tr>
<td>Corvids</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Birds</td>
<td></td>
<td></td>
</tr>
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</table>

#### Fish Observed

- Tidepool Sculpns

#### Land Mammals

<table>
<thead>
<tr>
<th>Species</th>
<th># Observed</th>
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</thead>
<tbody>
<tr>
<td>Sea Otters</td>
<td>2 (ad &amp; pup)</td>
</tr>
<tr>
<td>Pinnipeds (specify)</td>
<td></td>
</tr>
<tr>
<td>Whales (specify)</td>
<td></td>
</tr>
</tbody>
</table>

Marine mammals section appears to be incomplete or missing.

Shoreline subdivision map showing important biological features attached.
KN-145A
Bio Sketch Map
M. Fawcett
5/24/91

CT: 10: 57/2
Sparse bio; dense barnacles; focus downshore

SOR in SUTZ, N+11 ft, above bio; barnacles; littorinids; limpets; begin 4.5 m downshore; dense mussels 10 m downshore

LOR in SUTZ, above bio; barnacles; limpets, littorinids begin 5 m downshore; MTZ has littorinids & eggs, hermit crabs, amph. pods, limpets, barnacles

OR-LOR +9-12 ft on shelf; near sparse barnacles; dense filamentous green & brown algae, pros. w/m littorinids & eggs

SOR in VTZ-SUTZ near or above filamentous green algae, sparse barnacles; littorinids; limpets; buried oil in MTZ gravel/pebble channel with mussels on surface, clams below; barnacles, limpets on isolated cobble on gravel

KEY
- CT %
  - CT <1%
  - CT <10%
24 May 91 NW 145A Faust
tn 410 hrs.

- no sign of eagles near
- nest - none at 10:00 a.m. today
- crows - scattered around
- North and 1st corn - corn
- faces north - long field, multiple
- 1st corn - clouds
- CT on walls +9-11 ft., various size
- 2 pine bums - dense bums
- 2 pine bums - dense bums + 7-9 ft.
- dense Fau's
- dense motifs +4-6 ft.

MTZ boulders w/ wood. (Hymenoptera eggs)
- ants, aphids, lice, lice
- light subsequence, in boulders
- SMTZ - no bums +12 ft.
- sparse bums, 
- 5 m boulders +7 ft.
- 1 sea otter 3 pup
- 1 Kittiwake

- 2nd corn west 14-3-5
- Bk MTZ - no bums +11 ft.
- SMTZ - no bums - CT - 3 m bums, grass
- (terrestrial) grow out of peat
- no tufted black - The corn
- is wider, more exposed than last peat
- 9 o'clock, below pool, bums +4-6 ft.
- 
- LTZ - 100 m above dense rushes
- water - walls +4-6 ft.
- dense bums, Fau's - also St. cro.
- ultra, Fau's, Redo, F. 1st bums (all
- the at 4-7 ft. - Cladophora
- ultra, opposite (right)
- pigeon guillemot feeding

1510 hrs. - rugged shelf w/ ridge are
- CT 4 buried bums in upper part, 6
- 4-6-12 - buried and in
- 1 pine 3-4 ft. near grass
- bums, dense asterophora 9 ft
- pine 9 ft. in pools + damp ground
- "shadow drift" in the making
- Cladophora, peeling off LTZ
- rock near buried 9-11 ft.
- more was likely in peat, tester
- LTZ peat near 5 ft. green
- subsequence may, letter in it (and
- large masses of eggs, under boulders
- 9-11 ft. bums, scale
- SMTZ - buried 15-6-3 MTZ
- +6 to +9 ft. - cladophora, etc. below
- bums (dense) on scoured cobble
- on gravel 8
KN 1954 (607) 24 May 91 Fawcett

Some barn, turquoise mussels on BP
each side of 5/9 w/burnt oil
- Hymenopora, borer, little eggs
under Borter, MT Z - sil algae,
clams LTE in 5/9/p dense
pieces of green Enteromorpha sp
under 5-8cm and shaded, crinkly like
crape paper, 1-2ft long) in MT Z - tiny
ones' level like caddisfly, then gets
living 9/18/87

Finish 1545

- Mound off eagle nest almost half
the time we were on the island.
no sign of anchor
1 eagle soaring 1/2 mile toward
being harassed by 2 Kittiwakes
SHORELINE EVALUATION

SEGMENT ST/KN-200   SUBDIVISION A (1 OF 1)  DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6V Recreation: Anchorages (6/1 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Anadromous stream within 100m in KN201. 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: 5/1/90

OILING CATEGORIZATION:
Wide 0 m; Medium 0 m; Narrow 129 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 Snare (pom poms)
X ___ Manual Pickup  ___ Absorbents (pads, rolls, etc)
X ___ Bioremediation  ___ Spot Washing: Wands
X ___ Tarmat Removal  ___ Spot Washing: Wands

COMMENTS: Recommended treatment includes, 1) manual removal of tarmats and oiled vegetation in areas indicated on sketch map, then 2) bioremediation of areas where manual work was done. Apply bioremediation up to snow melt streams. Work should be conducted after 5/1. No specific restrictions.

TAG COMMENTS: Monitors TO MONITOR SUITZ

TAG APPROVAL DATE: 4/23/90

ADEC  ALDEC  NOAA  USCG

DATE: 5/12/90
OIL CHARACTER LENGTH (m): AP 100 P0 0 CV 0 CT 0 ST 0 MS 0 PT 10 TB 10 FL 0 NO 30
1991 MAYSAP EVALUATION

SEGMENT: EN 200  SUB: A  REGION: PWS  SURVEY DATE: 5/2/91

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

COMMENTS:
INITIAL: ____________________________________________________________

TAG: ________________________________________________________________

FOSC: ______________________________________________________________

TAG APPROVAL DATE: ___________  FOSC APPROVAL DATE: ___________

ADEC __________________________ FOSC ____________________________

EXXON __________________________

USCG __________________________

NOAA __________________________
<table>
<thead>
<tr>
<th>TEAM NO.</th>
<th>SEGMENT</th>
<th>SUBDIVISION</th>
<th>DATE</th>
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<tbody>
<tr>
<td>3</td>
<td>KN 200</td>
<td>A</td>
<td>5/2/91</td>
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**MAYSAP FIELD SHORELINE COMMENT SHEET**

**DEP**

**NAME** Wesley Guinn

**SIGNATURE** Wesley Guinn

☐ NTR  □ TREATMENT RECOMMENDED

- **Remarks:**
  - Seems to be a healthy environment, no birds or debris collected. Also no Exxon trash collected.

**EXXON**

**NAME** Jon P. Czarnecki

**SIGNATURE** Jon Czarnecki

☐ NTR  □ This section is healthy, clean with a few small sea turtles

☞ **Remarks:**
  - Bats up what we saw during survey. Also, if necessary, they were removed from the beach.

**LANDMANAGER**

**NAME** John Johnson (CLM)  

**SIGNATURE** John Johnson

☐ NTR  2  ☐ Sea turtles noted!

**USCG/NOAA**

**NAME** Mooney/Boards

**SIGNATURE** Tony Board

☐ NTR  ☐ This segment was manually cleaned and looked surprisingly good. Any tar patties that were present, were removed by survey team.
OG: HARPER
BIO: STOKER
ADEC: Hormerly
LANDMANAGER: Johnson for CUC
EXON: Zemke
USCG/NOAA: Mooney/Barrats
SEGMENT: KN-200
SUBDIVISION: A
DATE: 2 MAY 1991
TIME: 09:00 to 09:15
TIDE LEVEL: 1.57 ft. to 42.12 ft.
ENERGY LEVEL: H M F
SURVEYED FROM: FOOT BOAT HELO
WEATHER: SUN CLOUDS FOG RAIN SNOW
TOTAL LENGTH SHORELINE SURVEYED: 129 m
NEAR SHORE SHEEN: BR RB SL NONE
EST. OIL CATEGORY LENGTH: NO OIL
TOTAL LENGTH SHORELINE SURVEYED: 129 m
NEAR SHORE SHEEN: NO

SURFACE OIL CHARACTER

<table>
<thead>
<tr>
<th>LOC</th>
<th>AP</th>
<th>MS</th>
<th>TB</th>
<th>SOR</th>
<th>CV</th>
<th>CT</th>
<th>FL</th>
<th>DB</th>
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</table>

NO OIL

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-3-08
FRAMES: 18

PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | OILED ZONE | CLEAN ZONE | H2O LEVEL | SHEEN COLOR | PIT ZONE | SURFACE-OILED ZONE | NOTES |
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<td></td>
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<td>NO OIL</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>ZONE</td>
<td>SUBSURFACE SEDIMENTS</td>
<td>-</td>
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</table>

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

OG COMMENTS:
Several mouse paths that were observed during the survey were collected or broken up - no "mapable" oil remains.
Operators collected several bags of non-spill related debris in this area.
WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

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<tr>
<th>BIRDS</th>
<th>No birds</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED</th>
<th>SPECIES PRESENT</th>
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<tr>
<td>Waterfowl</td>
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</tr>
<tr>
<td>Gulls/Kittiwakes</td>
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<td>Shorebirds</td>
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<td>Corvids</td>
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</tr>
<tr>
<td>Other Birds</td>
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MARINE MAMMALS

<table>
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<tr>
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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>
<td></td>
<td></td>
</tr>
<tr>
<td>Pinnipeds(specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sperm(specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

SEGMENT: KN 200  SUB: A  REGION: PWS  SURVEY DATE: 5/2/91

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: 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: 5/21/91  FOSC APPROVAL DATE: 6/11/91

ADEC  [Signature]  [FOSC]  [Signature]
EXXON  [Signature]  [Chief of Staff, FOSC]
USCG  [Signature]  
NOAA  [Signature]
TEAM NO. 3. SEGMENT KN 200  SUBDIVISION A  DATE 5/1/91

ADEC
NAME Wesley Shomley  SIGNATURE Wesley Shomley
☐ NTR  □ TREATMENT RECOMMENDED
- Seems to be a healthy environment, patties rendered by survey team. Also non Exxon trash collected.

EXXON
NAME Jon P. Graventi  SIGNATURE Jon Graventi
☑ NTR  This section is healthy, clean, with a few small size patties we broke up what we saw during survey. Also if necessary they were removed from the beach.

LANDMANAGER
NAME John Johnson  SIGNATURE John Johnson
☐ NTR  2
   Has patties noted.

USCG/NOAA
NAME Mooney / Banks  SIGNATURE Tony Banks
☑ NTR  This segment was manually cleaned and looked surprisingly good. Any tar patties that were present were removed by survey team.
**MAYSAP SHORELINE OILING SUMMARY**

**TEAM NO.**

OG: HARPER  
BIO: STOKES  
ADEC: CHINAMERY  
EXXON: CZARNECKI  

**SUBDIVISION:** A  
**DATE:** 2 MAY 1991  
**SEGMENT:** KJ-200

**TIME:** 09:10 to 09:15  
**TIDE LEVEL:** -4.57 ft. to -2.88 ft.  
**ENERGY LEVEL:** [ ]  
**WEATHER:** [ ] SUN  [ ] CLOUDS  [ ] FOG  [ ] RAIN  [ ] SNOW

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

**TOTAL LENGTH SHORELINE SURVEYED:** 129 m  
**NEAR SHORE SHEEN:** [ ] BR  [ ] RB  [ ] SL  [ ] NONE

**EST. OIL CATEGORY LENGTH:**

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<tr>
<th>W</th>
<th>O</th>
<th>M</th>
<th>D</th>
<th>N</th>
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**SURFACE OIL CHARACTER**

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**NO OIL**

**DISTRIBUTION:** C = 91-100%; B = 51-60%; P = 11-50%; S = 1-10%; T = <1%

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

**PHOTO ROLL # MAYSAP-3-08 FRAMES 18**

**PIT NO.**

<table>
<thead>
<tr>
<th>PIT</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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**SHEEN COLOR:** B = BROWN; R = RAINBOW; S = SILVER; N = NONE

**OG COMMENTS:**

Several mouse patties that were observed during the survey were collected or broken up - no "mopable" oil remains.

Staff operators collected several bags of non-spill related debris in this area.

*Traced May 9*
WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th>No birds</th>
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<th>TOTAL BIRDS</th>
<th>FISH OBSERVED</th>
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<td>Eagle glaucol</td>
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<tr>
<td>Waterfowl</td>
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<td>Gulls/Kittiwakes</td>
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<td>Shorebirds</td>
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<tr>
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<td>Other Birds</td>
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<td>Pinnipeds(specify)</td>
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</tr>
<tr>
<td>Whales(specify)</td>
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</table>

Shoreline subdivision map showing important biological features attached.
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-200

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION

SEGMENT ST/ KN-200 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
6V Recreation: Anchorages (6/1 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Anadromous stream within 100m in KN201. 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 0 m: Narrow 129 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
_ X_ Tarmat Removal  ___ Beach Cleaner
___ Other (see comments)

COMMENTS: Recommended treatment includes, 1) manual removal of tarmats and oiled vegetation in areas indicated on sketch map, then 2) bioremediation of areas where manual work was done. Apply bioremediation up to snow melt streams. Work should be conducted after 5/1. No specific restrictions.

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 uncoiled intertidal and subtidal algae and seagrass.
   Contact ADF&G for specific dates and locations.

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
   Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

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

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

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

Recruitment:
6U 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

ST. K—200 SUBDIVISION: A-10F1 DATE 04/19/90

USCG NAME: David S. Thomas SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

D. Manual Removal of Asphalt -

2). Substratal should be reassessed — due to limited view (snow cover) -

3). VI zone near stream mouth — oiled grass— manual removal —

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

Concur with manual removal of mousse, tarballs, and asphalt. Close proximity of anadromous stream, and lesser melt streams, should remove bio. as a consideration —
SHORELINE OILING SUMMARY

SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<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 90 sq. m by 4 cm
PATTIES/TARBALLS 1 BAGS
NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS AMOUNT DID YOU COLLECT DEBRIS?
Logs
Vegetation X
Trash
Debris

Photos:
Roll No. ST-13-4
Frames 10

SUBSURFACE OIL

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
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SURFACE-SUBSURFACE SEDIMENTS

COMMENTS
1. GEOMORPHOLOGY: SEGMENT COMPRIZED LOW ANGLE COBBLE/PEBBLE SHORELINE ON STREAM DELTA
2. OILING: AP TO 5 cm DEPTH. PATCHY BAND OF ASPHALT PAVEMENT IN WET AND MITZ AT OIL OUT OF SHORELINE

REVIEWS: J W DATE 4/29/9
Checklist:
- N Arrow
- Approx. Scale
- Sand/Silt Boundary
- Oil Dist.
- Width
- Length
- M. Corner
- Substrate Character
- Est. HWL/WL
- SSL
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

Legend:
- ▲ No Subsurface Oil
- ▼ Subsurface Oil

Continuous Distribution
- ▲

Broken Distribution
- ▼

Patchy Distribution
- ▼

Splashed Distribution

Oiled Vegetation
- ▲

Photo location, direction, and number

Oil Character Length (m): AP 100 PO 0 CV 0 CT 0 ST 0 MS 0 PT 10 TO 10 FL 0 NO 30

Sketch Map

Manually remove the mat and oiled vegetation then bioremediate area where manual work was done.
SHORELINE ECOLOGICAL SUMMARY

Segment ST / KN200 Subdivision A

Date (mo / day / yr) 4-19-90

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

(B) Overall % cover of biota (% of segment): Dense 15 Moderate 30 Low 55

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

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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</tbody>
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Wildlife Observations/ General Comments:

1. Low intertidal not sampled
2. Present in mid-intertidal; Enteromorpha

Ecological Considerations:

TA:B: Anadromous stream located within 100m of segment border in adjacent
   Segment KN201.
6U: no comment

N-Low - Dense mussels in mid-intertidal cobble would be susceptible
**ADDENDUM: SUBDIVISION CONSTRAINTS**

SEGMENT KN-200 SUBDIVISION A (1 of 1)

**WORK WINDOW**

<table>
<thead>
<tr>
<th>Manual Pickup</th>
<th>OPEN</th>
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<tbody>
<tr>
<td>Tarmat Removal</td>
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<tr>
<td>Bioremediation More Than 100m From Stream</td>
<td>OPEN</td>
</tr>
<tr>
<td>Bioremediation Less Than 100m From Stream</td>
<td>WORK PRIOR TO 7/10 (ADF&amp;G MONITOR REQ.)</td>
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</tbody>
</table>

**ARCHAEOLOGICAL STANDARD CONSTRAINT**

If cultural resources are uncovered, PHONE 564-3274.

**APPLICABLE ECOLOGICAL TIME CONSTRAINTS**

1A,1B Salmon Stream

ADF&G catalogued anadromous stream (226-30-16869) is present in adjacent Segment KN-201 and is within 100m of recommended treatment area. This subdivision is closed to bioremediation less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation is permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation more than 100m from stream. No constraint to manual pickup and tarmat removal.

**OTHER ECOLOGICAL CONSIDERATIONS**

No disturbance to stream bed or bank. No flushing of pollutants or sediment into stream drainage. Avoid any unnecessary disturbance or damage to unoiiled biota and substrate. Avoid walking on or damaging mussel beds.

TAG ADDENDUM DATE: 6/4/90

Prepared by: [Signature]  Date: 6/4/90
Exxon Company, USA
Map Key: KN-100

Incorporates USEWS 6/1/90
map of active Bald Eagle nests.

ECOLOGY MAP
SEGMENT KN-200

SUBDIVISION A (1 of 1)

METERS

★ Seabird Colony
▲ Eagle Nest
SHORELINE EVALUATION

SEGMENT ST/ KN-200        SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6V Recreation: Anchorages (6/1 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Anadromous stream within 100m in KN201. 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: 5/1/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 129 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

Other (see comments)

COMMENTS: Recommended treatment includes, 1) manual removal of tarmats and oiled vegetation in areas indicated on sketch map, then 2) bioremediation of areas where manual work was done. Apply bioremediation up to snow melt streams. Work should be conducted after 5/1. No specific restrictions.

TAG COMMENTS: Monitor for #3555; Suitz

TAG APPROVAL DATE: 4/27/90
ADEC        EXXON        FOSC:     DATE: 5/1/90
NOAA        USCG
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-200 SUBDIVISION A (1 of 1)

WORK WINDOW

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

| Bioremediation Over 100m From Stream | OPEN |
| Bioremediation Less Than 100m From Stream | PERMIT REQUIRED |

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

ADF&G catalogued anadromous stream (226-30-16869) is present in adjacent Segment KN-201 and is within 100m of recommended treatment area. Subdivision is closed to bioremediation less than 100m from stream without ADF&G authorization. No constraint to bioremediation more than 100m from stream. No constraint to manual pickup and tar mat removal.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or bank. No flushing of pollutants or sediment into stream drainage. Avoid any unnecessary disturbance or damage to unoleied biota and substrate. Avoid walking on or damaging mussel beds.
SHORELINE EVALUATION

SEGMENT ST/ KN-200 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
6V Recreation: Anchorages (6/1 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Anadromous stream within 100m in KN201. 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: 5/1/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 129 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 Removal __ Beach Cleaner
__ Tarmat Removal __ Other (see comments)

COMMENTS: Recommended treatment includes: 1) manual removal of tarmats and oiled vegetation in areas indicated on sketch map, then 2) bio­ remediation of areas where manual work was done. Apply bioremediation up to snow melt streams. Work should be conducted after 5/1. No specific restrictions.

TAG COMMENTS: MONITORS TO ABSEN: SUZITZ

TAG APPROVAL DATE: 4/28/90
ADEC ____________ EXXON ____________ FOSC: _______ DATE: 5/12/90
NOAA ____________ USCG ____________
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-201

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION

SEGMENT ST/ KN-201  SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous streams nos. 226-30-16872, 16870, 16869.
1A  Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B  Salmon stream mouth - spawning (7/10 to 8/31)
6V  Recreation: Anchorages (6/1 to 9/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. 3 anadromous streams. Avoid trampling or otherwise damaging 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 89 m: Narrow 167 m: V.Light 760 m: No Oil 0 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: Recommended treatment includes, 1) manual removal of oiled vegetation in area indicated on sketch map, 2) manual removal of tarmats in areas indicated on sketch map, 3) bioremediation of entire subdivision following manual work. Apply bioremediation up to stream bank with ADF&G approval. Work should be conducted between 5/15 and 7/10 due to salmon stream constraint.

TAG COMMENTS: ______________________

TAG APPROVAL DATE: ____________

ADEC  ______________________
EXXON  ______________________
NOAA  ______________________
USCG  ______________________

FOSC: __________________ DATE: ____________
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

Salmon stream mouth - fry outmigration (3/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 9/31)
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 Estuar 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 9/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (8/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

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

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3Q, 3Q Harbor seal and sea lion motting (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 for specific dates and locations.

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.

6J Recreation: Tent sites (5/1 to 9/15)
6V Anchorages (8/1 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)
7I-H Finfish harvesting
7I Deer harvesting (9/15 to 2/28)
7JL Invertebrate harvesting
For Codes 7Z through 7JL contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST / KN-201  SUBDIVISION: A - 10f 1  DATE 04/19/90

USCG NAME: David S. Thomas  SIGNATURE: 

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

ADEC NAME: Clara S. Crosby  SIGNATURE: 

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

Manual removal of asphalt tarballs. Especially around beaches? On debris - warm water flush would work well at N.E. end of Segment Stocker. High angle Beach - No other specific techniques recommended due to sensitivities of area.

LAND MANAGER NAME: Peter Zollars  SIGNATURE: 

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

Due to the close proximity of anadromous streams. I recommend manual removal only.
## SHORELINE OILING SUMMARY

<table>
<thead>
<tr>
<th>Segment St/</th>
<th>Subdivision</th>
<th>Team No.</th>
<th>TIDE LEVEL</th>
<th>Date</th>
<th>Time</th>
<th>EST. SUBDIVISION LENGTH</th>
<th>UPLANDS DESCRIPTION</th>
<th>WORKING DIRECTION</th>
<th>SURVEYED FROM</th>
<th>WORKING DIRECTION</th>
<th>DATE</th>
<th>WORKING DIRECTION</th>
<th>SUBDIVISION LENGTH</th>
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<tbody>
<tr>
<td>KN-201</td>
<td>A</td>
<td>13</td>
<td>+3 to +2</td>
<td>04/19/90</td>
<td>10:11</td>
<td>1007 m</td>
<td>Grass, Forest, Rock, Snow, in Super tidal</td>
<td>E to W</td>
<td>Foot, Boat, Helio</td>
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<td></td>
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### SURFACE OIL

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

| PAVEMENT | H F | 3.0 sq. m by 4 cm |
| Patties/Tarballs | 2 | BAGS |
| Near Shore Sheen | NO | BR, RW, SL, TL |

### SUBSURFACE OIL

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<thead>
<tr>
<th>Pit No.</th>
<th>Pit Depth (cm)</th>
<th>Surface Oil Character</th>
<th>Oiled Interval (cm)</th>
<th>Oiled Oil Character</th>
<th>Oiled Interval (cm)</th>
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<td>20</td>
<td>X</td>
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<td>X</td>
<td>X</td>
<td>X</td>
<td>G1/S</td>
<td></td>
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<tr>
<td>3</td>
<td>15</td>
<td>X</td>
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<td>X</td>
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<td>X</td>
<td>G1/P</td>
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<tr>
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<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>G1/P</td>
<td></td>
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### Comments:

1. **Geomorphic:** Predominantly high angle cobble/boulder shoreline. Low angle beaches located on stream deltas.
2. **Oiling:** Concentrated in Units AP/D, TP and PT distributed throughout shoreline.

Reviewed: Y | Date: 9/30/90
AP/P
- 3M wide Band
- 10 m², 3cm thick

AP/S, CT/S, TB/S
UNIT Z COBBLE/SCOURER

MANUALLY REMOVE TARMATS

WEST ARM

AP/P
- (2m²)

AP/S, TB/S, FL/S
- 20 m
- UNIT Z COBBLE

BIOREMEDIANATE ENTIRE SUBDIVISION AFTER MANUAL WORK — APPLY BIO UP TO STREAM BANK WITH ADFG APPROVAL

MANUALLY REMOVE OIL VEGETATION AND TARMAT

AP/S EXTEND UNIT Z AND OIL VEGETATION

Large Stream 300m to Lake
Oil Character Length (m): AP 600 PO 0 CV 0 CT 600 ST 0 MS 0 PT 100 TB 100 FL 20 NO 127

REVISION: 03/24/03
SHORELINE ECOLOGICAL SUMMARY

Segment ST / KN201 Subdivision A. Date (mo / day / yr) 4-19-90
Time (24 hr) 14:00 Biologist David Lyon

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

(B) Overall % cover of biota (% of segment):
Dense 15 Moderate 45 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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<th>Rare</th>
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MYTILUS

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GASTROPODS

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FUCUS

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<tr>
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<td>2</td>
<td>3</td>
<td>4</td>
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</table>

Wildlife Observations / General Comments:

See page 2

Ecological Considerations:

A/B 226-30-16872: oil present (Asphalt pavers)
226-30-16870: oil present (one moose patty)
226-30-16869: oil present

GV: no comment

Moderate - Dense mussels present in mud intertidal cobble near mouth of stream
Shoreline Ecological Summary

Segment KNZ01  Subdivision A  4-19-90

Biologist David Leve

Wildlife Observations/General Comments:
1. Low intertidal not sampled
2. Present in mid intertidal: Ulva, Enteromorpha, Ecklonia, unidentified branching red algae (Rhodomania?)
   high intertidal: isopods found under cobble
3. One mature bald eagle spotted in area being harassed by a raven
4. One sandpiper and one oter raven spotted in area. Flock of geese observed flying west high overhead
5. One salmon fishing regulates marker found in segment (see Ecology Map)
6. In some areas of the mid-intertidal Fucus was reduced to just stipa - very few or no blades were evident
7. In area near the northern segment boundary patchily distributed oil-covered barnacles were found on high intertidal boulders. Mortality of oil-covered barnacles was ~50%, mortality of non-oiled barnacles was ~10%.
8. Barnacle mortality reached ~20% on mid-intertidal boulders.
9. In addition to the 2 Gracipenaeus streams indicated on the Ecology map, one additional stream was located in Segment (Stream #1 on Ecology map). Oil (asphalt painter) was present near mouth of stream.
KN-07

ANADROMOUS STREAM
226-30-16872

ECOLOGY MAP (1 of 1)

RESOURCE CODES FOR ENTIRE SEGMENT:

1A
1B
226-30-16872
226-30-16870
226-30-16869

6N:

ANADROMOUS STREAM
226-30-16870

Map Key: PWS-402
Name:
Date:
Data Entered:
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-201 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup
Tarmat Removal

Bioremediation More Than 100m From Stream

Bioremediation Less Than 100m From Stream WORK PRIOR TO 7/10 (ADF&G MONITOR REQ.)

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

There are three ADF&G catalogued anadromous streams in this Segment (226-30-16869, 226-30-16870, 226-30-16872). This subdivision is closed to bioremediation less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation is permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation more than 100m from stream. No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or bank. No flushing of pollutants or sediment into stream drainage. Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Avoid dense mussel beds during bioremediation; do not walk on or damage mussel beds.

SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM (STREAM NO. 226-30-16872) FOR ADDITIONAL CONSTRAINT INFORMATION

Prepared by: Andra Meyer

Date: 6/4/90
SHORELINE EVALUATION

SEGMENT ST/ KN-201 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADFG anadromous streams no. 226-30-16872, 16870, 16869.
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
6V Recreation: Anchorages (6/1 to 9/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. 3 anadromous streams. Avoid trampling or otherwise damaging 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: [Signature] DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 89 m: Narrow 167 m: V. Light 760 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes, 1) manual removal of oiled vegetation in area indicated on sketch map, 2) manual removal of tarmats in areas indicated on sketch map, 3) bioremediation of entire subdivision following manual work. Apply bioremediation up to stream bank with ADFG approval. Work should be conducted between 5/15 and 7/10 due to salmon stream constraint.

TAG COMMENTS: AVOID OIL IN MUSSELS. DURING 5/15-7/10

TAG APPROVAL DATE: 5/4/90

ADEC Art Werner FOSC DATE: 9/11/90
EXXON Andy Hale
NOAA
USCG Capt. G. Reiter
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KN-201 SUBDIVISION A (1 of 1)

WORK WINDOW

<table>
<thead>
<tr>
<th></th>
<th>Manual Pickup</th>
<th>Tarmat Removal</th>
<th>Bioremediation Over 100m From Stream</th>
<th>Bioremediation Less Than 100m From Stream</th>
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<td>PERMIT REQUIRED</td>
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</table>

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B  Salmon Stream

There are three ADF&G catalogued anadromous streams in this Segment (226-30-16869, 226-30-16870, 226-30-16872). Subdivision is closed to bioremediation less than 100m from stream without ADF&G authorization. No constraint to bioremediation more than 100m from stream. No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or bank. No flushing of pollutants or sediment into stream drainage. Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. Avoid dense mussel beds during bioremediation; do not walk on or damage mussel beds.

Prepared by: Andrew Magr Date: 5/20/90

TAG ADDENDUM DATE 5/21/90

ADEC Art Weir  DATE 5/21/90

EXXON

NOAA

USCG
SHORELINE EVALUATION

SEGMENT ST/ KN-201 SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous streams no. 226-30-16872, 16870, 16869.
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
6V Recreation: Anchorages (6/1 to 9/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOCLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. 3 anadromous streams. Avoid trampling or otherwise damaging 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: [Signature] DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 89 m: Narrow 167 m: V. Light 760 m: No Oil 0 m
Subsurface Oil Observed: Yes ___ No ___ Maximum Depth __________

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes. 1) manual removal of oiled vegetation in area indicated on sketch map. 2) manual removal of tarmats in areas indicated on sketch map. 3) bioremediation of entire subdivision following manual work. Apply bioremediation up to stream bank with ADF&G approval. Work should be conducted between 5/15 and 7/10 due to salmon stream constraint. See Addendum dated 5/20/90

TAG COMMENT: Audio Observe Mussel Beds Outrun 6/10

TAG APPROVAL DATE: 5/4/90
ADEC [Signature] DATE: 5/4/90
EXXON [Signature] DATE: 5/12/90
NOAA [Signature] Date: 5/12/90
USCG [Signature] Date: 5/12/90
SHORELINE EVALUATION

SEGMENT ST/  KN-201   SUBDIVISION A (1 OF 1) DATE 4/19/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous streams no. 226-30-16872, 16870, 16869.
1A  Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B  Salmon stream mouth - spawning (7/10 to 8/31)
6V  Recreation: Anchorages (6/1 to 9/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. 3 anadromous streams. Avoid trampling or otherwise damaging 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: [Signature] DATE: 5/5/90

OILING CATEGORIZATION:

Wide_0 m: Medium 89 m: Narrow 167 m: V.Light 760 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth_____

RECOMMENDATIONS:

X Treatment Recommended  X Snare/Absorbent Booms
X Manual Pickup  X Oil Snares (pom poms)
X Bioremediation  X Absorbents (pads, rolls, etc)
X Tarmat Removal  X Spot Washing: Wands

Beach Cleaner
Other (see comments)

COMMENTS: Recommended treatment includes, 1) manual removal of oiled vegetation in area indicated on sketch map. 2) manual removal of tarmats in areas indicated on sketch map. 3) bioremediation of entire subdivision following manual work. Apply bioremediation up to stream bank with ADF&G approval. Work should be conducted between 5/15 and 7/10 due to salmon stream constraint.

TAG COMMENTS: AVOID OILED MUSSEL BEDS OUTSIDE 600

TAG APPROVAL DATE: 5/4/90

ADEC Art Werner  [Signature]  FOSS: [Signature] DATE: 5/12/90

EXXON Andy Treat  [Signature]  NOAA [Signature]  USCG [Signature]
1991 MAYSAP EVALUATION

SEGMENT: KN 201  SUB: A  REGION: PWS  SURVEY DATE: 5/2/91

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

Ecological/Constraints (see page two for details) Anadromous stream

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

SHPO Signature: ___________________________ Date: 5/12/91

RECOMMENDATIONS:

TREATMENT REQUIRED (Y or N) INITIAL TAG FOSC

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

COMMENTS:
INITIAL: ____________________________________________________

TAG: _______________________________________________________

FOSC: _______________________________________________________

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

ADEC
EXXON
USCG
NOAA
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

**TEAM NO.** 3  **SEGMENT** KNo 201  **SUBDIVISION** A  **DATE** 5/15/91

<table>
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<tr>
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<th><strong>NAME</strong> Wesley Groenveld</th>
<th><strong>SIGNATURE</strong> Wesley Groenveld</th>
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<tr>
<td>☐ NTR</td>
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Past work on segment in 1990 was a very good job. Only small amounts of patties were visible which we either retrieved or broke up. Overall a very recovering environment. No further treatment.

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<th><strong>NAME</strong> Jon P. Czarnec</th>
<th><strong>SIGNATURE</strong> Jon P. Czarnec</th>
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This was a long segment. The only major oil and that is not very much is the jet a side till. The beach is clean and what SIR we saw was either picked up or broke up.

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Has Patties Noth

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<tr>
<td>☑ NTR</td>
<td>Segments were manually filled in 1990. Any remaining Patties were broken up or removed. Very clean segment.</td>
<td></td>
</tr>
</tbody>
</table>
**MAYSAP SHORELINE OILING SUMMARY**

**TEAM NO. 3**
- **OG**: HARPER
- **ADEC**: CHORMAN
- **EXXON**: CBANICKI

**BIO**: STOKER
**LANDMANAGER**: JOHNSON
**USCG/NOAA**: MOONEY/BARATZ

**SEGMENT**: KN-201
**SUBDIVISION**: A
**DATE**: 2-1 May 1991
**TIME**: 08:10 to 09:00
**TIDE LEVEL**: 12.8 ft. to -5.7 ft.

**ENERGY LEVEL**: □ H □ M □ L
**WEATHER**: □ SUN □ CLOUDS □ FOG □ RAIN □ SNOW
**SURVEYED FROM**: □ FOOT □ BOAT □ HELO

**TOTAL LENGTH SHORELINE SURVEYED**: 1016 m

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

**EST. OIL CATEGORY LENGTH**:
- W: _m
- M: _m
- N: _m
- VL: 50 m
- NO: 946 m
- US: _m

<table>
<thead>
<tr>
<th>LO</th>
<th>C</th>
<th>AP</th>
<th>MS</th>
<th>TB</th>
<th>SOR</th>
<th>CV</th>
<th>CT</th>
<th>ST</th>
<th>FL</th>
<th>DB</th>
<th>NO</th>
</tr>
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<tbody>
<tr>
<td>A</td>
<td>S</td>
<td></td>
<td></td>
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**SURFACE OIL CHARACTER**

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<tr>
<th>LO</th>
<th>C</th>
<th>AP</th>
<th>MS</th>
<th>TB</th>
<th>SOR</th>
<th>CV</th>
<th>CT</th>
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<th>FL</th>
<th>DB</th>
<th>NO</th>
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**SURFACE SEDIMENT**

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</thead>
<tbody>
<tr>
<td>A</td>
<td>S</td>
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</table>

**AREA**

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<thead>
<tr>
<th>LO</th>
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<th>AP</th>
<th>MS</th>
<th>TB</th>
<th>SOR</th>
<th>CV</th>
<th>CT</th>
<th>ST</th>
<th>FL</th>
<th>DB</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>S</td>
<td></td>
<td></td>
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<td></td>
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**ZONE**

<table>
<thead>
<tr>
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<th>AP</th>
<th>MS</th>
<th>TB</th>
<th>SOR</th>
<th>CV</th>
<th>CT</th>
<th>ST</th>
<th>FL</th>
<th>DB</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>S</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTES**: 50% of A mostly broken

**DISTRIBUTION**: C = 91-100%; B = 51-60%; P = 11-50%; S = 1-10%; T = <1%

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

**PHOTO ROLL**: MAY SAP - 3 - 08

**FRAMES**: 12-14

<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>15</td>
<td>X</td>
<td>Y</td>
<td>-</td>
<td>X</td>
<td>P/50/F/R</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

**OG COMMENTS**:

This subdivision is essentially free of oil - one 50cm long section of SOR/H was identified (location A, <10m²) and much of this was broken up during the survey. No subsurface oil was identified or is likely to be found due to the fine subsurface sediments. Staff operators collected several bags of non-spill related debris.

**Amended 5/19/91 K6 OG 1a/4**
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>eagle blennies</td>
<td></td>
</tr>
<tr>
<td>Seabirds</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waterfowl</td>
<td>Goldeneyes</td>
<td>12</td>
<td>eagle blennies</td>
<td></td>
</tr>
<tr>
<td>Gulls/Kittiwakes</td>
<td>Glaucous-winged</td>
<td>±10</td>
<td>eagle blennies</td>
<td></td>
</tr>
<tr>
<td>Shorebirds</td>
<td>Raven</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corvids</td>
<td></td>
<td></td>
<td>eagle blennies</td>
<td></td>
</tr>
<tr>
<td>Other Birds</td>
<td></td>
<td></td>
<td>eagle blennies</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</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(specify)</td>
<td></td>
<td></td>
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</tbody>
</table>

Shoreline subdivision map showing important biological features attached.
<table>
<thead>
<tr>
<th>Width</th>
<th>ADEC Sub-segment Length</th>
<th>Meters</th>
</tr>
</thead>
<tbody>
<tr>
<td>XXXX</td>
<td>1816m</td>
<td></td>
</tr>
<tr>
<td>/////</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TTTT</td>
<td>Very Light</td>
<td></td>
</tr>
<tr>
<td>0000</td>
<td>No Oil</td>
<td></td>
</tr>
</tbody>
</table>

Map Key: KN1KN0201Ae
Name: HARPER
Date: 2 MAY 91
Data Entered:

Surface Oilings

Reviewed 5/19/91 KG

OG 4-84
1991 MAYSAP EVALUATION

SEGMENT: KN 201 SUB: A REGION: PWS SURVEY DATE: 5/2/91

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

Ecological/Constraints (see page two for details) Anadromous stream

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

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

**TEAM NO. 3**  
**SEGMENT**  
**SUBDIVISION A**  
**DATE 5/1/91**

**ADEC**

**NAME** Wesley Gurney  
**SIGNATURE** Wesley Gurney

- **TREATMENT RECOMMENDED**
- Past work on segment in 1990 was a very good job. Only small amounts of patties were visible which we either retrieved or broke up. Overall a very recovering environment. No further treatment.

**EXXON**

**NAME** Jon P. Crosskey  
**SIGNATURE** Jon P. Crosskey

- **TREATMENT RECOMMENDED**
- This was a long segment. The only major oil and that is not very much is the Jet a side wall. The beach is clean and what sea we saw was either picked up or washed up.

- **TREATMENT RECOMMENDED**
- Has Patti's note.

**LANDMANAGER**

**NAME** John Esham  
**SIGNATURE**

- **TREATMENT RECOMMENDED**

**USCG/NOAA**

**NAME** Robert Benz  
**SIGNATURE**

- **TREATMENT RECOMMENDED**
- Segment was manual tillage in 1990. Any remaining patties were broken up or removed. Very clean segment.
### MAYSAP SHORELINE OILING SUMMARY

**Segment:** KN-201  
**Subdivision:** A  
**Date:** 2 May 1991

**Surveyed From:** FOOT BOAT HELO  
**Weather:** SUN CLOUDS FOG RAIN SNOW

**Total Length Shoreline Surveyed:** 1016 m  
**Near Shore Sheen:** BR RB SL NONE

**Estimated Oil Category Length:** W m M m N m V0 m 50 m US m

#### Table: Surface Oil Character

<table>
<thead>
<tr>
<th>Location</th>
<th>Surface Oil Character</th>
<th>Surface Sediment Type</th>
<th>Slope</th>
<th>Width</th>
<th>Length</th>
<th>Zone</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SORLY MOSTLY BROKEN</td>
</tr>
</tbody>
</table>

**Distribution:** C = 81-100%; B = 81-90%; P = 11-90%; S = 1-10%; T = <1%

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

**Photo Roll:** MAYSAP - 3.08  
**Frames:** 12-16

#### Table: Subsurface Oil Character

<table>
<thead>
<tr>
<th>Pit NO.</th>
<th>Pit Depth (cm)</th>
<th>Subsurface Oil Character</th>
<th>Oiled Zone</th>
<th>Clean Zone Below</th>
<th>H2O Level</th>
<th>Sheen Color</th>
<th>Pit Zone</th>
<th>Subsurface Sediments</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>P/SR/</td>
</tr>
</tbody>
</table>

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

**OG Comments:**

This subdivision is essentially free of oil - one 50m long section of SOR/HR was identified (location A, <10 m²) and much of this was broken up during the survey.

No subsurface oil was identified or is likely to be found due to the fine subsurface sediments.

Staff operators collected several bags of non-spill related debris.

(Review 5/1991 by OG 1af 4  
(Revision: 5/1991 m)
WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS

<table>
<thead>
<tr>
<th></th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED SPECIES PRESENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eagles</td>
<td></td>
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<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>
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<tr>
<td>Other Birds</td>
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<table>
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<tr>
<th>MARINE MAMMALS</th>
<th># OBSERVED</th>
<th>SPECIES</th>
<th>LAND MAMMALS</th>
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<tbody>
<tr>
<td>Sea Otters</td>
<td></td>
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<tr>
<td>Pinnipeds(specify)</td>
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</tr>
<tr>
<td>Whales(specify)</td>
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</table>

Shoreline subdivision map showing important biological features attached.
ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-30-16872

SEGMENT KN-201 SUBDIVISION A

WORK WINDOW

Manual Pickup
Tarmat Removal
OPEN

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B  Salmon Stream

There are three ADF&G catalogued anadromous streams in this Segment (226-30-16869, 226-30-16870, 226-30-16872). Only stream no. 226-30-16872 had a specific Anadromous Fish Stream Evaluation conducted. No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

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

SEE SUBDIVISION CONSTRAINT ADDENDUM KN-201A FOR ADDITIONAL CONSTRAINT INFORMATION.

TAG APPROVAL DATE

ADEC
EXXON
NOAA
USCG

Prepared By: Andrea Myers

Date 5/31/90
ANADROMOUS FISH STREAM EVALUATION

SEGMENT NO. KN-201 A STREAM NO: 226-30-16872 DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
6V Recreation: Anchorages (6/1 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. No ecological constraints re: itnertidal 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: 5/4/90

Recom: 1.A. (X) Subsurface Oil Observed: Yes No X Maximum Depth

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

COMMENTS: Recommended treatment includes 1) manual pickup of mousse and tar patties as indicated on sketch map, 2) removal of tarmat where indicated. Work should be conducted between (5/15) and (7/10) based on anadromous stream constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 5/4/90
ADEC [Signature] [Date]
EXXON [Signature] [Date]
NOAA [Signature] [Date]
USCG [Signature] [Date]

[Stamp] [Date]
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/KN-201 A STREAM NO: 226-30-16872 DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
6V Recreation: Anchorages (6/1 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. No ecological constraints re: intertidal 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: 5/9/90

Subsurface Oil Observed: Yes__ No X Maximum Depth_____

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

COMMENTS: Recommended treatment includes 1) manual pickup of mousse and tar patties as indicated on sketch map, 2) removal of tarmat where indicated. Work should be conducted between 5/15 and 7/10 based on anadromous stream constraints.

TAG COMMENTS:__________________________________________________________

TAG APPROVAL DATE: 5/9/90
ADEC  ADEC  ADEC  ADEC  FOCS: [Signature] DATE: 5/16/90
EXXON  EXXON  EXXON  EXXON  USCG  USCG  USCG  USCG
### 40 PHOTLOG

<table>
<thead>
<tr>
<th>FRAME(S)</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>P-441: Scattered oil observed</td>
</tr>
<tr>
<td></td>
<td>P-442: Oil depth at oil from top down</td>
</tr>
<tr>
<td></td>
<td>P-443: Oil depth - oil seep from down</td>
</tr>
</tbody>
</table>

Top of Knell North Well shows partially oiled debris. Loggon also oiled crete/keep deeper. Also the TTT and Supra TT are still partially covered in snow and have thick areas of oil on debris/mousse etc.

### 40 OIL DISTRIBUTION DIAGRAM

- Headland
- Shelf
- Large flat with weathered discontinuities for most, covered on top and underlaid by thin red peat among organo black oil.

Sample taken

Some oiled debris on top

Some oiled patches mousse.

Oiled mousse
ANADROMOUS FISH STREAM ASSESSMENT

REGION: PRINCE WILLIAM SOUND
SEGMENT: KN-201 A
STREAM NO: 226-30-16872
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ KN-201 A STREAM NO: 226-30-16872 DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
6V Recreation: Anchorages (6/1 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. No ecological constraints re: itinertidal 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: ___________________________

Subsurface Oil Observed: Yes___ No X Maximum Depth_____

RECOMMENDATIONS:
___No Treatment Recommended ___ Snare/Absorbent Booms
___Treatment Recommended ___ Oil Snares (pom poms)
___Manual Pickup ___ Absorbents (pads, rolls, etc)
___Bioremediation ___ Spot Washing: _____ Wands
___Tarmat Removal ___ Beach Cleaner
___ X___ Other (see comments)

COMMENTS: Recommended treatment includes 1) manual pickup of mousse and tar patties as indicated on sketch map, 2) removal of tarmat where indicated. Work should be conducted between 5/15 and 7/10 based on anadromous stream constraints.

TAG COMMENTS: ____________________________________________________________
__________________________________________________________________________
__________________________________________________________________________

TAG APPROVAL DATE: _________
ADEC ________________ EXXON ________________ FOSC: ________________ DATE: _________
NOAA ________________ USCG ________________
Salmon stream mouth - fry outmigration (3/1 to 5/15)
Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in-pool application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.

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

1C Salmon fry nursery area (4/31 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in-pool application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

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

1D Esther Hatchery release (4/15 to 6/1)
1E Main Bay Hatchery release (4/20 to 6/10)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in-pool application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.

AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz  424-3214
1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzomoto 424-7511

2M Herring spawning (4/1 to 6/15)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unveiled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or in-pool application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3236

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 6/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of in-pool within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment.

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
ADF&G Don Calkins 267-2403

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Rothy 267-2206

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

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

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

7H Finfish harvesting

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

7J Invertebrate harvesting

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

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

SEGMENT ST 1  KN-201  SUBDIVISION: 280-30-16878  DATE 26 APR 90

USCG
NAME: Kerwin L. Draker  SIGNATURE: K. L. Draker

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED
COMMENTS: Agree.

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED
COMMENTS: Perform work at a minimum of (0.7 tide)
Remove scattered broken tar mats which cover areas
ranging from upper intertidal to lower intertidal on both
east and west sides of creek.
There are a few scattered patches west of the creek near a
smaller creek - these should be manually removed.
The flat on the west side of the creek in the upper inter-

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED
COMMENTS: Tidal zone has scattered bands of mats needing removal.
 Perform a survey of the entire ITZ prior to work
to get a feel for the distribution of mats.
Remove any oiled debris found.
No bioremediation recommended.
**SHORELINE OILING SUMMARY (ANAD)**

**OG CAL LARSON** USCG DREHER, CWE SEGMENT ST 1N 201

**BIO KEN LITCHLOW** LAND REP

**EXXON DARLIE YEE** ADFOBA K-OMMTH-WIPPE WERKEN TIME/1 10/10/6:30

**TEAM NO.** TIDE LEVEL DATE 1-22-90

**EST. SUBDIVISION LENGTH:** 65 m

**UPLANDS DESCRIPTION:** ☑ Grass ☑ Forest ☑ Rock

**SURVEYED FROM:** ☑ Foot ☑ Boat ☑ Halo

**SURFACE SEDIMENTS:** R % B S % C S % P 10 % G 60 % S 20 % M % V

**SLOPE:** Lang 100 % Hang % Vert %

**WAVE EXPOSURE:** ☑ Low ☑ Med ☑ High

**OIL CATEGORY LENGTH:** W mm M mm N mm VL 10 mm NO 55 n

### SURFACE OIL

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

**PAVEMENT H F 0 10 sq m by 2 c**

**PATTIES/TARBALLS** BAG:

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

**OILED DEBRIS AMOUNT**

- Did You Count?
- Debris ☑ YES ☑ NO

**TYPE**

- Photographs:
  - Roll No.
  - Frame:

### SUBSURFACE OIL

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>BELOW OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>ANADA SHEEN</th>
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<tbody>
<tr>
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<td>8</td>
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<td>10</td>
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</table>

**SLOPE SUBSURFACE SEDIMENTS**

- 1100/30/79 92
- 00, 92, 60, 92
- 1100, 30, 92
- 510, 00, 92

**COMMENTS**

- REVIEWED [Signature] DATE 4-24-90
**ACFG MULTI-ASSESSMENT DATA FORM**

<table>
<thead>
<tr>
<th>Survey Type:</th>
<th>SS</th>
<th>OS</th>
<th>73</th>
<th>AVS</th>
<th>SCHA 1984 PTA</th>
<th>Region:</th>
<th>12F</th>
<th>KP, C1</th>
<th>K, AP</th>
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<tbody>
<tr>
<td>Method:</td>
<td>Aerial</td>
<td>Ground</td>
<td>Boat</td>
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</table>

**EXTENT OF OIL**

<table>
<thead>
<tr>
<th>Shoreline</th>
<th>Stream</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>V</td>
</tr>
<tr>
<td>N</td>
<td>H</td>
</tr>
<tr>
<td>27 Surface Coverage</td>
<td></td>
</tr>
<tr>
<td>28 Surface Thickness</td>
<td>3-4 cm</td>
</tr>
<tr>
<td>29 Penetration</td>
<td>3-4 cm</td>
</tr>
<tr>
<td>30 Overall Oil Impact</td>
<td>N</td>
</tr>
<tr>
<td>31 Oil Type:</td>
<td>Pooled</td>
</tr>
<tr>
<td>32 Oiled Debris</td>
<td>N</td>
</tr>
<tr>
<td>33 Shoreline Type:</td>
<td>Headland</td>
</tr>
<tr>
<td>34 Wave Exposure</td>
<td>High</td>
</tr>
<tr>
<td>35 Substrate Type:</td>
<td>Bedrock</td>
</tr>
</tbody>
</table>

**Cataloged Acid Fish Species:**

<table>
<thead>
<tr>
<th>Species</th>
<th>Aerial</th>
<th>Ground</th>
</tr>
</thead>
</table>

**Notes:**

(Add)

- Running oil of concern in flat on north side of creek. 3-4 cm thick, forms�, very mobile on underside.

- Some oils coating on debris. Some invertebrates.

- 60-70% North in water. Some oil of concern - diluted
### OIL DISTRIBUTION DIAGRAM

- Top of Knoll North of Oregon has a partially oiled area. Stagnant oil and grass/keel debris. Also, the ITT and SPP 31 are still partly covered in snow and have thick layers of oiled debris/moosse, etc.

### Sample taken

- Some oiled debris on top
- Some oiled patch/moosse
- Oiled mussel
Recommendations

Perform all work during proper tidal window.

Remove via shovel or other mechanical means, oiled farm mats, patches, crusted oiled gravels, on flat north of stream. This flat runs from UTZ to UTZ.

Majority of farm mats lie in middle to upper UTZ. Remove oiled debris, (ropes, grasses, sticks, branches, etc.)

Remove oiled grasses, cut off stump + roots and other oiled parts of 2 trees on Run 2 and remove.
Perform survey of banks North & South of streambed and remove any oiled debris.

Take particular notice of US ITZ and Supra ITZ for oiled debris, moose, etc. and remove any thing found.

No bio remediation recommended.

Comments by Ken Critchlow:
Agree with ADFG recommendation
KRC
ASAP TAG REVIEW SHEET

Segment: KN201  Subd: A  Site: 1  Date PRE-Review 11AUG90

Priority For Addressing In 1990

- HIGH
- MEDIUM
- LOW
- NTR

Treatment Recommended: MANUAL REMOVE AP

As per ASAP TAG Review Sheet

Priority Site For Reassessment In 1991

YES CG NO
X ADEC NO
YES EXXON NO
X LAND MGR NO

TAG 13 AVE 90
Manual pickup AP (med priority)
Conditions Observed: Two points at east and west segment (and adjacent west to south) are over containing a moderate amount of AP and/or above-bankside oil. Also appears to have received some tank 2 manual removal and bioremediation during the summer oil cleanup.

Followup Recommendations: Due to large area of removable AP and subsurface oil remaining, manual removal is recommended to be followed by bioremediation.

---

Completed by Pickup Crew:

ADEC: [Signature]

Comments: Above described oiling should be removed in 1990. Treatment performed during summer 1990 was unsatisfactory. Oil did not remove area beneath oiling because it was not characteristic as a "Wet Side" for most provided by Exxon for ADEC project.

Exxon: [Signature]

Comments: I did not participate in survey or referenced area. Not involved in work area.

USCG: [Signature]

Comments: Low depth (80-100) of course, one out of many for which requires removal. Section is too large for treatment (see next page). Treatment work could include pumping and application of "dis" fungi, manual removal.

Land Rep.: [Signature]

Comments: Agree with ADEC recommendation's CAG is not taking a position on bioremediation. Should be further treatment in 1990.
SEGMENT AS / KN-204

SUBDIVISION: [ ] SITE: [ ] DATE 8-9-90

SCG

NAME: [ ] SIGNATURE:

[ ] YES [ ] NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

This area consists of a gravel beach to the west and a rocky promontory to the east. Pattree and sp. oil on the beach were broken up by the ASAP crew. The promontory was not checked by myself, but apparently contains more severe oiling. Would recommend checking the rocky area for remaining oil in 1991.

ADEC

NAME: [ ] SIGNATURE:

[ ] YES [ ] NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Rocky point at east end of segment was not surveyed by 06 because was not on a designated work site on maps provided for Exxon ASAP survey. However, I located a substantial amount (with CAC-60) of AP, MS, OP, OR.

* This area was not flagged on Oil Matric Oil Spill Map. However, ASAP agreed to recommend further manual removal. Particular attention should be paid to rocky point at east end of segment. * The Exxon policy statement "only underwater indicated on the maps is greatly jeopardizing the integrity of the ASAP project."

LAND MANAGER

NAME: [ ] SIGNATURE:

[ ] YES [ ] NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: AGREE WITH ADEC COMMENTS. SEE SSAT SKETCH MAP ALSO. MANUAL REMOVAL OF OIL RECOMMENDED.

EXXON

NAME: [ ] SIGNATURE:

[ ] YES [ ] NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

I AGREE for Need For Reassessment Based on ADEC No CAC Recommendation. I did not personally survey referenced area. The area located for ASAP Evaluation Contained Sporadic Patties which were Broken Up By ASAP Team and Would Require No Further Treatment or Re-Assessment.
## Surface Oil

<table>
<thead>
<tr>
<th>Character</th>
<th>Distribution</th>
<th>Oiled Zones</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>S.O.R.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POOLED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COVER</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COAT</td>
<td>X X</td>
<td></td>
</tr>
<tr>
<td>STAIN</td>
<td>X X X</td>
<td></td>
</tr>
<tr>
<td>MOUSSE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PATTIES/T.B.</td>
<td>REPLICATED</td>
<td></td>
</tr>
<tr>
<td>FILM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO OIL</td>
<td>X X X</td>
<td></td>
</tr>
</tbody>
</table>

**EST. SITE LENGTH**: 1016 m

## 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 (YN)</th>
<th>Pit Zone</th>
<th>Surface-Subsurface Sediments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>8</td>
<td>X</td>
<td>Y</td>
<td>X</td>
<td>P/G/G/C</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>15</td>
<td>X</td>
<td>Y</td>
<td>X</td>
<td>P/G/C</td>
</tr>
</tbody>
</table>

**REVIEWED**: 3/10/90

## Comments

- **PRIMARY CT/ST - 5 4 CT/P ON THE NORTH SHORE OF THE EMBOYMENT**.
- **THE PENDAL/COOK RANGE TO THE WEST OF ANGA STREAM 10272 HAS A VERY SPORADIC DISTRIBUTION OF CT/ST 4 ISOLATED PATCHES OF 1550 CM WITH NO OIL**.
- **THE ROCK CURE/OUTFLOW TO THE WEST ARE NOW SHOW OIL**.
- **THE TWO ANGA STREAMS ON THE SOUTH SHORE SHOWED IRON SPORADIC PATCHES**.
SKETCH MAP

SEGMENT SJ

KN-201

A-10f 1

DATE 04.19.90

CHECKLIST

☑️ Apparent Strike
☑️ Belt Exposure
☑️ Belt Width
☑️ Length
☑️ Circum
☑️ Subdivision Check
☑️ Major Div. Check

No Subsurface Oil

No Subsurface Oil

LEGEND

1 A
2 A
3 A

WORKED BY FIELD CREW

PT-5 SIT/S
50 x 1 m

STREAM

#226-30-16

8/9/90

CT 1105
ST 1115
PT 510
AP 46
NO 356
US 0
PLS 45

Large Stream, 300 m to Lake

PT 2

Character Len(cm) AP 60 PO O CV O CR 600 ST O NP O PT 10

Pebble Delta

Pt-5 SIT/S - VERY SPORADIC <15 cm
<table>
<thead>
<tr>
<th>SEGMENT</th>
<th>SITE</th>
<th>TAG Recommendations - August 13, 1990</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH-09</td>
<td>B Site 1</td>
<td>Manual pickup of tarmats, rake and bioremediate* H.P.</td>
</tr>
<tr>
<td></td>
<td>Site 2</td>
<td>Manual pickup of tarmats, rake and bioremediate* H.P.</td>
</tr>
<tr>
<td>EL-52</td>
<td>B</td>
<td>Manual till - mop up mobile oil with snare and bioremediate - low priority</td>
</tr>
<tr>
<td>EL-55</td>
<td>A</td>
<td>Storm berm relocation (mechanical if necessary)</td>
</tr>
<tr>
<td>EL-56</td>
<td>C</td>
<td>NTR - Reassessment in '91</td>
</tr>
<tr>
<td>EL-58</td>
<td>C</td>
<td>Custosmblen application and reassessment in '91</td>
</tr>
<tr>
<td>ER-07</td>
<td>A Site 1</td>
<td>Manual pickup of tarmat and bioremediation (low priority)</td>
</tr>
<tr>
<td></td>
<td>Site 2</td>
<td>Limited manual pickup followed by bioremediation - Custosmblen (low priority)</td>
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<tr>
<td></td>
<td></td>
<td>Manual pickup of mousse/AP followed by bioremediation. Manual till in heaviest areas if necessary (H.P.)</td>
</tr>
<tr>
<td>EV-05</td>
<td>A</td>
<td>Access and remove heaviest concentration of AP/OP/HOR manual removal followed by bioremediation</td>
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<tr>
<td></td>
<td>B</td>
<td>Manual removal of MS/AP/OP/HOR where accessible - bioremediation (H.P.)</td>
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<tr>
<td>EV-12</td>
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<td>Manual removal of AP and bioremediation (M.P.)</td>
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<td>EV-15</td>
<td>A</td>
<td>Manual pickup of OP/HOR sediments (relocate armor to access)</td>
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<td>EV-18</td>
<td>A</td>
<td>Bioremediated</td>
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<td>FL-01</td>
<td>A</td>
<td>NTR - work done</td>
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<td>GR-301</td>
<td>B Site 1</td>
<td>Manual pickup of mousse (H.P.)</td>
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<td>Site 2</td>
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<td>GR-301</td>
<td>B New Site</td>
<td>Manual pickup of mousse (H.P.)</td>
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<td>Manual pickup of AP/OP/mousse and bioremediation (H.P.) both areas</td>
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<td>KN-08</td>
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<tr>
<td>KN-201</td>
<td>A</td>
<td>Manual removal of AP followed by bioremediation (M.P.)</td>
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<tr>
<td>KN-211</td>
<td>A Site 1</td>
<td>Manual pickup of oiled debris at stream mouth next to small pool, use chain saw as necessary to access.</td>
</tr>
<tr>
<td></td>
<td>Site 2</td>
<td>NTR</td>
</tr>
<tr>
<td></td>
<td>Site 3</td>
<td>NTR</td>
</tr>
<tr>
<td></td>
<td>Site 4</td>
<td>NTR</td>
</tr>
<tr>
<td>KN-400</td>
<td>A Site 1</td>
<td>Manual removal of accessible AP followed by rake and bioremediation (L.P.)</td>
</tr>
<tr>
<td></td>
<td>Site 3</td>
<td>NTR</td>
</tr>
<tr>
<td>KN-404</td>
<td>A</td>
<td>Bioremediated and assessment in '91</td>
</tr>
<tr>
<td>KN-405</td>
<td>A</td>
<td>Further TAG evaluation - bioremediated and assessment in '91</td>
</tr>
<tr>
<td>NK-02</td>
<td>A</td>
<td>Manual pickup AP/mousse - bioremediation (M.P.)</td>
</tr>
<tr>
<td>PD-04</td>
<td>A</td>
<td>Manual pickup of mousse patties and bioremediation, Inipol and Custosmblen (M.P.)</td>
</tr>
<tr>
<td>PN-01</td>
<td>A</td>
<td>Manual pickup of AP and bioremediation (L.P.)</td>
</tr>
</tbody>
</table>

* ANADROMOUS STREAM CONSTRAINT

TAG

EXXON  
ADEC  
USCG  
NOAA  

DATED (See attached Archaeological Constraint Sheet) 8/14/90  

(See attached Archaeological Constraint Sheet) 8/14/90  

Work with Land Manager in effecting the
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/ KN-202

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION

SEGMENT ST/KN-202 SUBDIVISION A (1 OF 1) DATE 4/1/90

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

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-oiled 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 351 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth ______

RECOMMENDATIONS:
X No Treatment Recommended _______Snare/Absorbent Booms
_____Treatment Recommended _______Oil Snare (pom poms)
_____Manual Pickup _______Absorbs (pads, rolls, etc)
_____Bioremediation _______Spot Washing: ______ Wands
_____Tarmat: Breakup _______Beach Cleaner
_____Removal _______Other (see comments)

COMMENTS:

_______snare/Absorbent Booms
_______Oil Snare (pom poms)
_______Absorbs (pads, rolls, etc)
_______Spot Washing: ______ Wands
_______Tarmat: Breakup _______Beach Cleaner
_____Removal _______Other (see comments)

TAG COMMENTS:

TAG APPROVAL DATE: ____________
ADEC ________________ FOSC: ____________ DATE: ____________
EXXON ____________________
NOAA ____________________
USCG ____________________
FIELD SHORELINE COMMENT SHEET

SEGMENT ST1  KN- 202  SUBDIVISION:  A  DATE  3/20/90

USCG
NAME  SCOTT RAINFORD  SIGNATURE  Scott Rainford  M.S.

☑ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED
COMMENTS

ADEC
NAME  Wesley Shormley  SIGNATURE  Wesley Shormley

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED
COMMENTS

Mousse patties that are scattered thru-out this segment with a thickness up to 1" could be easily picked up and discarded using manual labor with shovels and trowels.

LAND MANAGER
NAME
SIGNATURE

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED
COMMENTS
## SHORELINE OILING SUMMARY

**USCG S. RAWFORD**  
**SEGMENT ST:** KN - 202

**TEAM NO.:** 3  
**TIDE LEVEL:** $+5$ to $+6$  
**DATE:** 3/20/90

**EST. SUBDIVISION LENGTH:** 354 m

**SURVEYED FROM:**
- Ship
- Boat
- Helo

**UPLANDS DESCRIPTION:**
- Grass
- Forest
- Rock

**SURFACE SEDIMENTS:**
- A
- S
- C
- G
- S
- M
- V

**SLOPE:**
- Long
- Hang
- % Vertical

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

### SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASPHALT PAVEMENT</td>
<td></td>
<td></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></td>
<td></td>
</tr>
<tr>
<td>MOUSE</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>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**PAVEMENT:**
- H
- F
- S

**PATTIES / TARBALLS:**

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

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

**OILED DEBRIS COLLECTED**
- YES
- NO

**NEAR DEBRIS BAGS:**

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

### SUBSURFACE OIL

**PIT NO.**

**PIT DEPTH (cm):**

**SUBSURFACE OIL CHARACTER:**

**OILED INTERVAL (cm-um):**

**BETWEEN OIL / FILM COLOR:**

**PIT ZONE:**

**ANALYSIS:**

**SUBSURFACE SEDIMENTS:**

**COMMENTS:**
- Steep rocky shore w/ patchy slicks / mouse on it.
- See oil from tree and/or the arm is melting and retreating oil on fire line sheen (rainbow)

**REVIEWED:**

**DATE:** 4/2/90

---

Page 1 of 3
**SHORELINE OILING SUMMARY**

**OG: G. Macdonald**  
**USCG: J. Rainsford**  
**Segment ST/ KN - 297**

**Bio: M.A. Scott**  
**Land Rep: L. Johnson**  
**Subdivision: A**

**Exxon: J. Busse**  
**ADEC: W. Garvey**  
**Time: 13:00 10-13-90**

**Team No.:**  
**Tide Level: +5 10 +6**  
**Date: 3/30/90**

**Est. Subdivision Length:** 350 m  
- [ ] Sun  
- [ ] Clouds  
- [ ] Fog  
- [ ] Rain  
- [ ] Snow

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

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

**Working Direction:** E to W

**Surface Sediments:**  
- [ ] Grass  
- [ ] Forest  
- [ ] Rock  
- [ ] Sand  
- [ ] Water  
- [ ] Mud  
- [ ] Mud

**Slope:**  
- [ ] Gravel  
- [ ] Sand  
- [ ] Mud  
- [ ] Water  
- [ ] Mud

**Wave Exposure:**  
- [ ] Low  
- [ ] Med  
- [ ] High

**Oil Category Length:**  
- [ ] Grass  
- [ ] Forest  
- [ ] Rock  
- [ ] Sand  
- [ ] Water  
- [ ] Mud  
- [ ] Mud

**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 Paving</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pool</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cover</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coat</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Stain</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mouse</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patties</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tarballs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Film</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Oil</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

**Subsurface Oil**

- No pits since there is no substrate here

**Comments:**  
Steep rocky shore with patchy splats of mouse on Signal Hill.  
Set of oil from wind and tide.  
The oil is melting and retreating oil as the rain sheen.

**Collecting Debris:**  
- [ ] Yes  
- [ ] No

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

**Subsurface Sediiments**

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

**Comments (rainbow):**

Page 1 of 3

**Reviewed:**  
**Date:** 4/1/90
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST / KV 202  
Subdivision: A  
Date (mo / day / yr): 3/30/92  

Time (24 hr): 1300  
Biologist: M. S. Opatz

(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>Bedrock</td>
<td></td>
<td></td>
<td>50</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boulder</td>
<td></td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cobble</td>
<td></td>
<td></td>
<td>15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pebble</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Sand</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Silt</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th></th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td>BARNACLES</td>
<td>1U 1M 1L</td>
<td>1U 1M 1L</td>
<td>1U 1M 1L</td>
<td>1U 1M 1L</td>
</tr>
<tr>
<td>MYTILUS</td>
<td>1U 1M 1L</td>
<td>1U 1M 1L</td>
<td>1U 1M 1L</td>
<td>1U 1M 1L</td>
</tr>
<tr>
<td>GASTROPODS</td>
<td>1U 1M 1L</td>
<td>1U 1M 1L</td>
<td>1U 1M 1L</td>
<td>1U 1M 1L</td>
</tr>
<tr>
<td>FUCUS</td>
<td>1U 1M 1L</td>
<td>1U 1M 1L</td>
<td>1U 1M 1L</td>
<td>1U 1M 1L</td>
</tr>
</tbody>
</table>

Wildlife Observations / General Comments:  
- Whale sighted  
- Low tidal zone not observed

Ecological Considerations:
LEGEND

1  △
Pit - No Subsurface Oil

2  △
Pit - Subsurface Oil

CT/C  
Continuous Distribution

CT/B  
Broken Distribution

CT/P  
Patchy Distribution

CT/S  
Splashed Distribution

Closed Vegetation

△
Photo location, direction, and number

Oil Character Length (m): AP — PO — CV — CT 350 — ST — MS — PT — TB — FL — NO —

ST/..::..J- ::Z.<> "2.­
SUBDIVISION_A
DATE 3/23/90
CHECKLIST
- N Arrow
- Approx. Scale
- Seg/Sub Badly
- OB Dist.
- Wash
- Length
- % Cover
- Subaqueous Character
- Est. MHWL/LWL
- SSL
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

LEGEND

1  △
Pit - No Subsurface Oil

2  △
Pit - Subsurface Oil

CT/C  
Continuous Distribution

CT/B  
Broken Distribution

CT/P  
Patchy Distribution

CT/S  
Splashed Distribution

Closed Vegetation

△
Photo location, direction, and number

Oil Character Length (m): AP — PO — CV — CT 350 — ST — MS — PT — TB — FL — NO —
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.

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE  5/24/90
ADEC  Army Weapons Det Weller
EXXON  Army Value
NOAA  Wetlands Authorization
USCG  Approval

Prepared By:  Andrew Myers  Date  5/22/90
SHORELINE EVALUATION

SEGMENT ST/ KN-202     SUBDIVISION A (1 OF 1) DATE 4/1/90

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

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-oiled 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: April 14, 1990

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 351 m: No Oil 0 m
Subsurface Oil Observed: Yes No Maximum Depth

RECOMMENDATIONS:
- No Treatment Recommended
- Treatment Recommended
  - Oil Snare Booms
  - Oil Snare Absorbent Booms
  - Oil Snare Pom Poms
  - Oil Snares (pom poms)
- Manual Pickup
  - Oil Snare Absorbents (pads, rolls, etc)
  - Oil Snares Pom Poms
- Bioremediation
  - Oil Snare Absorbents (pads, rolls, etc)
  - Oil Snare Pom Poms
- Tarmat: Breakup
  - Oil Absorbents (pads, rolls, etc)
  - Oil Snare Pom Poms
- Removal
  - Oil Absorbents (pads, rolls, etc)
  - Oil Snare Pom Poms
- Other (see comments)

COMMENTS:

TAG COMMENTS: MUSSE PATTIES INDICATED BY ADEC REP PRIOR TO MOBILIZING CLEAN UP TEAM TO THIS LOCATION MONITORS TO CHECK FOR NEED TO RETRIEVE THE PATTIES INDICATED

TAG APPROVAL DATE: 4/12/90
ADEC JOHN BAILEY
EXXON ANDY TEST
NOAA BIL WILCOX
USCG M. J. HALL
SEGMENT ST/ KN-202   SUBDIVISION A (1 OF 1) DATE 4/1/90

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

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-oiled biota and substrate.

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

SHPO SIGNATURE: Charles E. Haas DATE: April 14, 1990

OILING CATEGORIZATION:
Wide 0 m; Medium 0 m; Narrow 0 m; V.Light 351 m; No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth

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: MOUSE PATTIES INDICATED BY ADEC REP.
PRIOR TO MOBILIZING CLEAN UP TEAM TO THIS LOCATION.
MONITORS TO CHECK FOR THE NEED TO RETRIEVE THE PATTIES INDICATED.

TAG APPROVAL DATE: 4/12/90
ADEC JOHN BAER J.____ DATE: 5-6-90
EXXON ANNY TEAL __________ FOSC: __________
NOAA __________ USCG M. J. HALL 

DATE: 5-6-90
LEGEND
1 A
PH - No Subsurface Oil
2 A
PH - Subsurface Oil

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

Oiled Vegetation

Photo location, direction, and number

night sheen

Oil Character Length (m): AP _ PO _ CV _ CT 350 ST _ MS _ PT _ TB _ FL _ NO _

© SUTZ; LBN; DBN; SQ;
sticky mouse; typically trapped on rock & boulder crevices.

a = occasional CT/S < 1%
SHORELINE EVALUATION

SEGMENT ST/ KN-203 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M Herring spawning (4/1 to 6/15)
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3Q,3Q Harbor seal and sea lion molting (8/15 to 9/15)
6V Recreation: Anchorages (6/1 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

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

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

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

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 487 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth ________

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

COMMENTS: ______________________________________
_________ ______________________________________
_________ ______________________________________

TAG COMMENTS: ______________________________________
_________ ______________________________________
_________ ______________________________________

TAG APPROVAL DATE: 4/20/90
ADEC: ART WEINER [Signature] DATE: 5/12/90
EXXON: [Signature] DATE: 5/12/90
NOAA: [Signature] DATE: 5/12/90
USCG: KENNETH KEANE [Signature]
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-203

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION

SEGMENT ST/ KN-203 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M Herring spawning (4/1 to 6/15)
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)
6V Recreation: Anchorages (6/1 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

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

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 487 m: No Oil 0 m
Subsurface Oil Observed: Yes ___ No _X_ Maximum Depth ______

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

COMMENTS: __________________________

________________________

________________________

________________________

TAG COMMENTS:

________________________

________________________

________________________

TAG APPROVAL DATE: ___________
ADEC EXXON ___________________ FOSC: ___________ DATE: ___________
NOAA USCG ___________________
Salmon stream mouth - fry outmigration (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)

Estuary 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 IC 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 (6/15 to 9/15)

Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 300m horizontal and 300m vertical distance from haulouts.

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

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

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

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

SEGMENT ST 1  KN-  203  SUBDIVISION:  A  DATE  4/4/20

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

NAME  SCOTT RAVINSEED  SIGNATURE  SCOTT RAVINSEED  

ADEC

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

NAME  Wesley Graham  SIGNATURE  Wesley Graham  

LOR 3 oiled Pom-poms removed from area.

LAND MANAGER

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

NAME  LORA JOHNSON  SIGNATURE  LORA JOHNSON  

SNOW IN UPLANDS (5/17) INHIBITED SURVEY.
SHORELINE OILING SUMMARY

OG: G. MACDONALD USCG J. RAINSFORD SEGMENT ST/ KD-203
USCG: MA SCOTT LAND REP W. JOHNSON SUBDIVISION A (a.1)
EXXON: J. BUTLER ADEC W. CHINLEY TIME 15:25 TO 15:35
TEAM NO.: 3 TIDE LEVEL: DATE 4/4/90
EST. SUBDIVISION LENGTH: 500 m
SURVEYED FROM: FOOT BOAT HELICOPTER WORKING DIRECTION: E TO W
SURFACE SEDIMENTS: R 30 % B 25 % C 20 % P 10 % G 5 % S 5 % M 5 % V 5 %
SLOPE: Lang % Hang % Vert % WAVE EXPOSURE: Low Med High
OIL CATEGORY LENGTH: W 6 m M 6 m N 6 m V 6 m S 6 m N 6 m OILS

SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL/FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<tr>
<td>TARBALLS</td>
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</tr>
<tr>
<td>FILM</td>
<td>X X</td>
<td></td>
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</tr>
<tr>
<td>NO OIL</td>
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PAVEMENT: H F S 0 sq. m by 0 cm
PATTIES/TARBALLS 4 1 BAGS
NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS AMOUNT
Log
Vegetation
Trash
Debris

Photographs:
Roll No. ST-3-2
Frames

SUBSURFACE OIL

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
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<tr>
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<td>J</td>
<td>B.C.</td>
<td>G</td>
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<tr>
<td>2</td>
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<td></td>
<td></td>
<td>N</td>
<td>C.P.</td>
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COMMENTS:
Med. steep rocky shore w/ B.C. over bedrock
Surface oil only 30 ft/s; P.C. Sutt on grooves b/t blwr; c.B. Trace of P.C. Sutt.
SHORELINE ECOLOGICAL SUMMARY

Segment ST #191203
Subdivision A
Date (mo/day/yr) 1/4/70

Time (24 hr) 1530-1600
Biolgist MA Scott

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

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

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

### Barnacles

<table>
<thead>
<tr>
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<tr>
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### Mytilus

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### Gastropods

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### Fucus

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<td>1L</td>
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</table>

Wildlife Observations/ General Comments:
- 2 gulls
- 4 mergansers
- 1 eagle
- 2 brownheads
- 1 other

Ecological Considerations:
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-204

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION

SEGMENT ST/KN-204 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M Herring spawning (4/1 to 6/15)
6V Recreation: Anchorages (6/1 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

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

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

SHPO SIGNATURE: ______________________  DATE: ______________________

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 197 m: No Oil 0 m
Subsurface Oil Observed: Yes  No X  Maximum Depth

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

COMMENTS: Recommend manual pick up of tar balls, patties and removal of tar mats. Work should be conducted after 6/15 due to herring spawning constraint.

TAG COMMENTS: ______________________________________________________

TAG APPROVAL DATE: ______________
ADEC  __________________________  FOSC: ______________ DATE: ______________
EXXON  __________________________
NOAA  __________________________
USCG  __________________________
PWS ECOLOGICAL CONSTRAINTS

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

1C Salmon fry nursery area (4/31 to 7/31)
1D Esther Hatchery release (4/15 to 6/1)
1E Main Bay Hatchery release (4/20 to 5/10)
1F Sawmill Bay Hatchery release (4/20 to 5/10)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/21 to 9/30)
1K Purse seine hook-off (7/23 to 9/30)
1L Set net sites (8/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

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

3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

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

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

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

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

6V Forest Service cabins (6/1 to 9/15)
6X Lodge (6/1 to 9/15)
6Y Special use destination

7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
7HH Finfish harvesting
7II Deer harvesting (8/15 to 2/26)
7JJ Invertebrate harvesting
For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST, KN-204  SUBDIVISION:  7  DATE: 4/4/90

USCG NAME:  MARKA S. SHERR SIGNATURE:

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS:

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

ADEC NAME:  S. FERGUSON SIGNATURE:  Stephen Ferguson

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

- SNOW COVERED MOST OF MITZ
- PAVEMENT/PATCHY → NEAR KN-14 SEG-LINE [MANUAL REMOVAL]←NEAR RUN
- PATCHY COVER NEAR MID-POINT (AREA) OF SEG-204 [MANUAL REMOVAL]
- MOSSY PADDIES ALONG UPPER MITZ → TO SNOW LINE OR MITZ [MANUAL REMOVAL]

LAND MANAGER NAME:  M.C.T. SMITH SIGNATURE:  Michael C. Smith

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

REVISION NO. G01/90
**SHORELINE OILING SUMMARY**

OG  K. Ramsey
BIO  A. PENN
EXXON  S. Reid

USCG  R. Sharpe
LAND REP.  M. Smith(CA)
ADEC  S. Ferguson

SEGMENT ST.  KN-204
SUBDIVISION  A

TIME  3:55  to  4:30
DATE  4/17/90

EST. SUBDIVISION LENGTH: 1960 m
TIDE LEVEL: -7.5 to 1.5
DATE  4/17/90

SURVEYED FROM: Foot  Boat  Helo
WORKING DIRECTION: S to N

SURFACES DESCRIPTION:  Grass  Forest  Rock

SURFACE SEDIMENTS:  P  % B  % C  % S  % P  % O  % V  %

SLOPE:  Lang  Hang  Vert

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

**SURFACE OIL**

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<tr>
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<tr>
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<tr>
<td>COVER</td>
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**SUBSURFACE OIL**

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<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>OILED OIL CHARACTER</th>
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</table>

**COMMENTS:**
This was a low angle boulder beach. Most of the area was covered in snow so it was hard to tell the distribution of asphalt and cover. There were patches of mousse, patties, scattered throughout and a film on the rocks close to the snow line as indicated on map.

Reviewed  J W  Date  4/10/90
Oil Character Length (m): AP 7 PO 0 CV 7 CT 0 ST 0 MS 0 PT 1% TB 0 FL 0 ND 0

dimensions unknown due to snow

dimensions unknown due to snow

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

CT/C
   Commercial Distribution
CT/B
   Graven Distribution
CT/P
   Patchy Distribution
CT/S
   Splashed Distribution

Oiled Vegetation
1 →
   Photo location, direction, and number
### SHORELINE ECOLOGICAL SUMMARY

**Segment ST** KN-204  **Subdivision** A  **Date (mo/day/yr)** 04/04/90

**Time (24 hr)** 15:55  **Biologist** P&W

**A**  Substrate type and % of segments:

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<th>3</th>
<th>4</th>
<th>5</th>
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<tr>
<td>(1) Bedrock</td>
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<tr>
<td>(2) Boulder</td>
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<tr>
<td>(3) Cobble</td>
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<td>(4) Pebble</td>
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<tr>
<td>(5) Sand</td>
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<tr>
<td>(6) Silt</td>
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</table>

**B**  Overall % cover of biota (% of segment):

- Dense 10
- Moderate 20
- Low 20

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

<table>
<thead>
<tr>
<th>Substrate Type</th>
<th>Dense</th>
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**Wildlife Observations/General Comments:**

**Ecological Considerations:**
SHORELINE EVALUATION

SEGMENT ST/ KN-204 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M Herring spawning (4/1 to 6/15)
6V Recreation: Anchorages (6/1 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

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

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

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

OILING CATEGORIZATION:

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<td>Medium 0 m:</td>
<td>Narrow 0 m:</td>
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RECOMMENDATIONS:

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

COMMENTS: Recommend manual pick up of tar balls, patties and removal of tar mats. Work should be conducted after 6/15 due to herring spawning constraint.

TAG COMMENTS:

TAG APPROVAL DATE: 4/19/90
ADEC
EXXON
NOAA
USCG
FOSC: DATE: 5-12-90

[Exxon's Cultural Resource Program]
SHORELINE EVALUATION

SUBDIVISION A (1 OF 1) DATE 4/4/90

ECOLOGICAL SENSITIVITIES AND TIME CONSTRAINTS:
- Seating (4/1 to 6/15)
- Anchorage (6/1 to 9/15)

Locational constraint sheet for specific constraints and

ECOLOGICAL CONSTRAINTS:
- If unnecessary disturbance or damage to uncured biota and

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

SHPO SIGNATURE: ____________________ DATE: __________________

OILING CATEGORIZATION:
- Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 197 m: No Oil 0 m
- Subsurface Oil Observed: Yes ___ No X ___ Maximum Depth ______

RECOMMENDATIONS:
- X Treatment Recommended ___ Snare/Absorbent Booms
- X Manual Pickup ___ Oil Snare (pom poms)
- ___ Bioremediation ___ Absorbents (pads, rolls, etc)
- ___ Spill Washing: ___ Wands
- ___ Beach Cleaner ___ Other (see comments)

COMMENTS: Recommend manual pick up of tar balls, patties and removal
  of tar mats. Work should be conducted after 6/15 due to herring spawning
  constraint.

TAG COMMENTS:

TAG APPROVAL DATE: 4/19/90
- ADEC
- EXXON
- NOAA (signature)
- USCG (signature)
Dimensions unknown due to snow

Dimensions unknown due to snow

Oil Character Length (m): AP 2 PO 0 CV 7 CT 0 ST 0 MS 0 PT 1% TA 0 FL 0 NO 0
REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/KN-204

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION

SEGMENT ST/ KN-204 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M Herring spawning (4/1 to 6/15)
6V Recreation: Anchorages (6/1 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

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

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: ___________________ DATE: __________________

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 197 m: No Oil 0 m
Subsurface Oil Observed: Yes No

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

COMMENTS: Recommend manual pick up of tar balls, patties and removal of tar mats. Work should be conducted after 6/15 due to herring spawning constraint.

TAG COMMENTS: ____________________________________________

TAG APPROVAL DATE: __________
ADEC __________________________ FOSC: __________ DATE: ______
EXXON __________________________
NOAA __________________________
USCG __________________________
PWS ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
   No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage.
   No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
1C Salmon fry nursery area (4/31 to 7/31)
1D Esthers Hatchery release (4/15 to 6/1)
1E Main Bay Hatchery release (4/20 to 5/10)
1F Sawmill Bay Hatchery release (4/20 to 5/10)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/21 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
   For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

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

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

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

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

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

6U Recreation:
   Tent sites (6/1 to 9/15)
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)
7HI Finfish harvesting
7II Deer harvesting (8/15 to 2/20)
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 7.KN-204   SUBDIVISION:   4   DATE 4/4/90

USCG
NAME: Maria J. Shore   SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED   ☑ TREATMENT SUGGESTED

COMMENTS

ADEC
NAME: S. Ferguson   SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED   ☑ TREATMENT SUGGESTED

COMMENTS

- Snow-covered root of Mitz  
  - Pavement/Patchy   →   Near KN-14 Seg Line [Manual Removal] Near Road
  - Patchy cover   Near Mid-Point (Area) of Seg-204 [Manual Real]
  - Mosaic paddies   Along upper Mitz   →   Snow Line or Mitz [Manual Removal]

LAND MANAGER
NAME: M. T. Smith   SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED   ☐ TREATMENT SUGGESTED

COMMENTS
**SHORELINE OILING SUMMARY**

**OIL:** Exxon
**LAND REP:** M. Smith (AC)
**TIME:** 3:55 to 4:30
**DATE:** 4/1/90
**SECTIONS:** Tidal Level: 1.5 to 1.5
**DATE:** 4/1/90

**TEAM NO.:** 4
**TIDE LEVEL:** 1.5 to 1.5
**DATE:** 4/1/90

**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>
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**OILED DEBRIS AMOUNT**

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**IMPACTED ZONES**

- Partly covered by Slow
- Pavement
- Patties/Tarballs
- Near Shoreballs

**OILY SHEEN**

- No BoR Rw Sl TL

**OILED OIL**

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<tr>
<th>OILED DEBRIS AMOUNT</th>
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<tbody>
<tr>
<td>Debris Collected</td>
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<tr>
<td>Type</td>
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<tr>
<td># Bags</td>
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**PHOTOGRAPHS:**

- Roll No. __
- Frames ___

**SUBSURFACE OIL**

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<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 &amp; N</th>
<th>SUBSURFACE SEDIMENTS</th>
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**COMMENTS:**

This was a low angle boulder beach. Most of the area was covered in snow so it was hard to tell the distribution of asphalt and cover. There were patches of mousse, tar balls scattered throughout and a film on the rocks close to the snow line where indicated on map.

**REVIEWED:** JW 4/10/90

**Page 1 of 1**
### SHORELINE ECOLOGICAL SUMMARY

Segment ST / KN-204 Subdivision A Date (mo/day/yr) 04/04/90

Time (24 hr) 15:55 Biologist PENN

(A) Substrate type and % of segments:

(B) Overall % cover of biota (% of segment): Dense 10 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)

#### BARNACLES

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Wildlife Observations/ General Comments:

Ecological Considerations:
MEMORANDUM

TO: United States Coast Guard
    Federal On-Scene Coordinator

FROM: State of Alaska
       Department of Natural Resources

DATE: 4/20/90

STATE OF ALASKA
Department of Natural Resources

The Department has reviewed the shoreline treatments proposed by the Technical Advisory Group for the shoreline segments listed below. As land owner/manager for the state lands within these shoreline segments, we accept the treatment proposed. This acceptance does not infer approval of final treatment necessary to meet the state cleanup standards.


The Department does not concur with the treatment proposed by the Technical Advisory Group for the shoreline segments listed below.

N/A

Comments:

________________________________________
Signature

William H. Apelund
SEGMENT ST/ KN-204               SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
2M Herring spawning (4/1 to 6/15)
6V Recreation: Anchorages (6/1 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

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

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 0 m; Narrow 0 m; V.Light 197 m; No Oil 0 m
Subsurface Oil Observed: Yes X No X Maximum Depth

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

COMMENTS: Recommend manual pick up of tar balls, patties and removal of tar mats. Work should be conducted after 6/15 due to herring spawning constraint.

TAG COMMENTS: --------------------------------------------------------

TAG APPROVAL DATE: 4/19/90
ADEC [Signature] [Date]
EXXON [Signature] [Date]
NOAA [Signature] [Date]
USCG [Signature] [Date]
FOSC [Signature] [Date]
dimensions unknown due to snow

dimensions unknown due to snow
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.

OTHER ECOLOGICAL CONSIDERATIONS

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

SEGMENT ST/ KN-204  SUBDIVISION A (1 OF 1) DATE 4/4/90

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

OILING Categorization:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 197 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

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

COMMENTS: Recommend manual pick up of tar balls, patties and removal of tar mats. Work should be conducted after 6/15 due to herring spawning constraint.

TAG COMMENTS: 

TAG APPROVAL DATE: 4/19/90
ADEC
EXXON
NOAA
USCG

FSC: __________________ DATE: 5/12/90
Month 6 access units and suit during clean-up.
1991 MAYSAP EVALUATION

SEGMENT: KN 204 SUB: A REGION: FWS SURVEY DATE: 5/3/91

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: L. Leav Date: 5/17/91

RECOMMENDATIONS:

TREATMENT REQUIRED (Y or N) N N 7

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

COMMENTS:
INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: MAY 17 1991 FOSC APPROVAL DATE: 5/12/91

ADEC ExxON USCG NOAA
ADEC
NAME: Wesley GHOMLEY SIGNATURE: Wesley GHOMLEY

☐ NTR ☐ TREATMENT RECOMMENDED

The only oiling on this short segment consisted of an area 5x15m MOR in loose sediment. A small runoff stream was present. I believe it should flush itself clean in time.

EXXON
NAME: Jon Czarnecki SIGNATURE: Jon Czarnecki

☒ NTR This beach is clean and requires no additional work or time.

LANDMANAGER
NAME: Seth J ohn of Chynah Head SIGNATURE: John J ohn

☐ NTR ☒ Any oil present should be removed.

USCG/NOAA
NAME: mmm/ Bratell SIGNATURE: ??/ Bratell

☒ NTR SEGMENT IS MADE UP OF Boulder, Cobble, Pebble Small area of MOR found. NOT economical to treat such a small area.
**MAYSAP SHORELINE OILING SUMMARY**

**SEGMENT:** KN-204  
**TEAM NO. 3**

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<tr>
<th>TEAM</th>
<th>Harper</th>
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<tbody>
<tr>
<td>ADEC</td>
<td>Ghormley</td>
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<tr>
<td>EXXON</td>
<td>Czarnetzki</td>
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**BIG STOKES**  
**LANDMANAGER JOHNSON for CVC**  
**DATE 3 MAY 1991**  
**TIME 10:20 to 10:35**  
**TIDE LEVEL:** 13 ft to 32 ft  
**ENERGY LEVEL:** H M ✓

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

**TOTAL LENGTH SHORELINE SURVEYED:** 197 m  
**NEAR SHORE SHEEN:**  
- BR  
- RB  
- SL  
- NONE

**EST. OIL CATEGORY LENGTH:**  
- W 0 m  
- M 0 m  
- N 0 m  
- V 0 m  
- L 0 m  
- S 97 m  
- US 0 m

**SURFACE OIL CHARACTER**  
**SURFACE SEDIMENT ZONE**  
**NOTES**

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**DISTRIBUTION:**  
- C = 61-100%  
- B = 61-60%  
- P = 11-50%  
- S = 1-10%  
- T <1%

**SLOPE:**  
- V = VERTICAL  
- H = HIGH ANGLE  
- M = MEDIUM ANGLE  
- L = LOW ANGLE  
**PHOTO ROLL # MAYSAP-3 09**  
**FRAMES: 14-16**

**PIT NO. DEPTH OIL CHARACTER OILED ZONE CLEAN BELOW H2O SHEEN COLOR PIT ZONE SURFACE-SUBSURFACE SEDIMENTS NOTES**

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<th>SN</th>
<th>S</th>
<th>MI</th>
<th>MI</th>
<th>LI</th>
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<td></td>
<td></td>
<td></td>
<td>LATTS</td>
</tr>
</tbody>
</table>

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

**OG COMMENTS:**

This is a low-slope esplanade granule pebble beach at the north end of the South Arm of the Bay of Ilesas.

No surface oilling was noted.

An area of 50 m wide and 15 m in length, subsurface oilling was documented.

**REMARKS:**

- OIL SURVEYED  
- RC RODDLED  
- MAP:  
- OIL SURVEYED  
- RC RODDLED  
- MAP:  

**DATE:**

- May 8  
- 06 Tuf 4
<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>DEPTH (cm)</th>
<th>SUBSURFACE CHARACTER</th>
<th>OILED ZONE</th>
<th>CLEAN H2O (cm)</th>
<th>SHEEN COLOR</th>
<th>PIT NO.</th>
<th>SURFACE-SUBSURFACE SEDIMENTS</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>20</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>P65/5</td>
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</tr>
<tr>
<td>11</td>
<td>20</td>
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<td>-</td>
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<td>X</td>
<td>P65/5</td>
<td></td>
</tr>
</tbody>
</table>

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

**OG COMMENTS:**
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 3  DATE 5/13/91
SEGMENT # KN 204  TIDAL HEIGHT(Range) 0-1'
SUBDIVISION A  BIOLOGIST
SEA STATE Calm  WIND SPEED/DIRECTION Calm

PHOTOGRAPHS: ROLL #  FRAME #

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):
Low exposure beach at pebble/cobble/bedrock, transected by a small stream.
Bista extends from the upper intertidal downward, increasing down slope in both abundance and diversity. Lower LIT, MIT and GIT characterized by moderately dense Fucus, barnacles and spat, limpets, Mytilus (both attached and interbedded), littorina and egg masses, and, in the mid-intertidal and below, Nucella and amphipods.
Bista within and proximal to the small area of submersed ockling includes patchy barnacles, Fucus, limpets, amphipods, littorina, and Mytilus.
Extensive and dense interbedded Mytilus in vicinity of stream don't trample or disturb.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th>None seen</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eagles</td>
<td></td>
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<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>
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<tr>
<td>Gulls/Kittiwakes</td>
<td></td>
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<tr>
<td>Shorebirds</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corvids</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Birds</td>
<td></td>
<td></td>
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</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>Whales(specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LAND MAMMALS</th>
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</tbody>
</table>

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

SEGMENT: KN 204  SUB: A  REGION: FWS  SURVEY DATE: 5/3/91

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:

TREATMENT REQUIRED (Y or N)  INITIAL  TAG  FOSC

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

COMMENTS:
INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE:  FOSC APPROVAL DATE:

ADEC  
EXXON  
USCG  
NOAA  
TEAM NO. 3 | SEGMENT: KN0204 | SUBDIVISION A | DATE 5/1/91

**ADEC**
- NAME: Wesley Goodale
- SIGNATURE: Wesley Goodale

- [ ] NTR □ TREATMENT RECOMMENDED
  - The only oiling on this short segment consisted of an area 5x15m MOR in loose Sediment. A small Runoff stream was present. I believe it should flush itself clean in time.

---

**EXXON**
- NAME: Jon Copenacki
- SIGNATURE: Jon Copenacki

- [X] NTR
  - This beach is clean and requires no additional work at time.

---

**LANDMANAGER**
- NAME: Seth John of Chevron/UP
- SIGNATURE: Seth John

- [ ] NTR
  - Any oil present should be removed.

---

**USCG/NOAA**
- NAME: Denny Brees
- SIGNATURE: Denny Brees

- [X] NTR
  - SEGMENT is made up of Boulder, Cobble, Pebble. Small area of MOR found. Not economical to treat such a small area.
**OG Comments:**

This is a low wave-erosion granule pebble beach at the south end of the South Arm of the Bay of Islands.

No surface oiling was noted.

An area of mud, 5 m wide and 15 m in length, sub-surface oiling was documented.

**Review:** 06.29.91  ES revised  May 8

06.10.91
<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>OIL CHARACTER OP</th>
<th>HORIZ MOR OR LOR OF TR</th>
<th>OILED ZONE cm-cm</th>
<th>CLEAN BELOW Y/N</th>
<th>H2O LEVEL (cm)</th>
<th>SHEEN COLOR</th>
<th>PIT ZONE</th>
<th>SURFACE-SEDIMENTS</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>2.20</td>
<td>X</td>
<td></td>
<td>-</td>
<td>Y</td>
<td>-</td>
<td></td>
<td>X</td>
<td>P65/15</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>2.20</td>
<td>X</td>
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<td>-</td>
<td>Y</td>
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<td>X</td>
<td>P65/15</td>
<td></td>
</tr>
</tbody>
</table>

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

OG Comments:
TEAM # 3  DATE 5/3/91
SEGMENT # KN 204  TIDAL HEIGHT (Range) 0 - 1'
SUBDIVISION A  BIOLOGIST
SEA STATE Calm  WIND SPEED/DIRECTION Calm
PHOTOGRAPHS: ROLL # FRAME #

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

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Biotas extends from the upper intertidal downward, increasing downslope in both abundance and diversity, lower MZ, MZ and ET characterized by moderately dense Fucus, barnacles and spat, limpets, Mytilus (both attached and interbedded), littorina and egg masses.

Biotas within and proximal to the small stream or submersed areas include patchy barnacles, Fucus, limpets, amphipods, littorina and Mytilus.

Extensive and dense interbedded Mytilus in vicinity of small stream.

Shoreline subdivision map showing important biological features attached.