[Shoreline evaluations, 1991].

Kenai WB-02 to WB-06

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REGION: KENAI

SEGMENT: ST/WB-02

SUBDIVISIONS: A (1 OF 6)
SHORELINE EVALUATION

SEGMENT ST/ WB-02 SUBDIVISION A (1 OF 6) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
No specific constraints identified.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid 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 43 m: Medium 112 m: Narrow 27 m: V.Light 171 m: No Oil 81 m
Subsurface Oil Observed: Yes____ No X____ Maximum Depth____

RECOMMENDATIONS:

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

COMMENTS: The recommended treatment activities are as follows: 1) Tarmat removal, 2) Manual pick up of mousse and pooled oil (see attached sketch map for specific locations), and 3) bioremediation of areas where pooled oil has been removed. No specific time constraints have been identified.

TAG COMMENTS: ________________________________
__________________________
__________________________
__________________________

TAG APPROVAL DATE: __________
ADEC ________________ EXXON ________________ FOSC: ________________ DATE: __________
NOAA __________________ USCG ____________________
FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1W3-002 SUBDIVISION: A DATE 4-1-90

NAME: R. Bryan Hulse SIGNATURE: R. Bryan Hulse

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

I agree with the findings of the shoreline oiling summary sheet for WB-002 subdivision A.

ADEC

NAME: Russell Kunibe SIGNATURE: Russell Kunibe

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

See attached sheet

LAND MANAGER

NAME: Patrick Forman SIGNATURE: Patrick Forman

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

Recommend manual pick up of pucks and mats in subdivision A also follow up with bioremediation.
Segment WB-2  Subdivision A  Date 4/1/90

ADEC Russell Kunibe Signature

Description:
The oiling which remains in this subdivision is weathered mousse in the sediments around and under the boulders and cobbles. This oil is found on the pocket beaches in the UITZ and MITZ.

Recommendations:
Manual pick up and break up of the mousse and tar mats where possible. Because the mousse is under and around small boulders and cobbles washing may be needed. This would be especially true if the mousse-asphalt becomes more mobile in warmer weather. After much of the gross contamination has been removed bioremediation may be needed.
**SHORELINE OILING SUMMARY**

OG: USCG Bryan Hight
BIO: M.K. (Fawcett)
LAND REP: Pit Norman
REVS: Exxon

**TEAM NO.: 17**
**DATE: 4/1/90**
**TIME: 9:00 to 10:00**
**EST. SUBDIVISION LENGTH: 6.3 m**

**SURFACE OIL**

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<td>PATTIES</td>
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<td>TARBALLS</td>
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<td>FILM</td>
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**SURFACE OIL**

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**COMMENTS**

This subdivision consisted of a narrow (typically less than 10 m) zone of bedrock/boulder beach, occurring between the waterline and low tide. Oiled areas of the beach were focused within the bedrock cliffs and concentrated within the pocket beaches, particularly in an area along the UI. Some staining and marking of oiled rocks and boulders near the cliffs was observed between the oiled beaches.
This subdivision consisted of a narrow (typically less than 10 m) stretch of bedrock/boulder beach, occurring between the waterline and low/hi shoreline cliffs. Pocket beaches were incised into the bedrock cliffs, and most沿着 the U1. Some staining and coating of cliffs and boulders near the cliffs was observed between the incised beaches.
SEGMENT S17 A/AW-2

SUBDIVISION A

DATE 4/1/90

CHECKLIST

- N Arow
- Approx. Scale
- Segment/Art
- Cut Date
- Width
- Length
- % Cover
- Substrate Character
- Est. HWL/LWL
- SSL
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

LEGEND

1 ▲
- OR - No Subsurface Oil

2 ▲
- OR - Subsurface Oil

CT/C
- Continuous Distribution

CT/B
- Broken Distribution

CT/P
- Patchy Distribution

CT/S
- Splashed Distribution

Oiled Vegetation

Oil Character Length (m): AP ST PO CV DCT SP ST-SP MS PT TB FL NO
SEGMENT ST/ WB-2
SUBDIVISION A
DATE 4/1/90

CHECKLIST
- N Arrow
- Approx. Scale
- Seg/Sub Bdry
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Ext. HULL/ML
- SSL
- Probe Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

LEGEND
1 Δ
Pit - No Subsurface Oil

2 Δ
Pit - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oiled Vegetation

OIL CHARACTER LENGTH (m): AP_12 PO_M2 CV_M1 CT_30 ST_M2 MS_12 PT_12 TB_12 FL_M1 NO_5
SUBDIVISION A
DATE 4/11/90

CHECKLIST
- N Arrow
- Approx. Scale
- Seg/Sub Boundary
- Oil Stnl.
- Width
- Length
- % Cover
- Substrate Character
- Est. HWL (LWL)
- SSL
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

LEGEND
1 △
Pt. - No Subsurface Oil

2 △
Pt. - Subsurface Oil

CT/C
Continuous Distribution

CT/P
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oil Vegetation

Photo location, direction, and number

Sketch Map
#2
Part of Subdivision A

ST-CT/B (75%) on cliff face to a height of 2 m above surface

ST-CT/P (40%) 12 x 3 m on boulder surfaces

NAP (40%) 12 m x 2 m
0.1 m trapped beneath 1 cm deep

8 + C + P

H2O

Oil Character Length (m): AP 12 PO 15/4 CV 14/4 CT 15 ST 15 MS 14/4 PT 12 TB 12 A 14/4 NO 35
SHORELINE ECOLOGICAL SUMMARY

Segment ST 1 WB002 Subdivision A Date (mo/day/yr) 4/1/90

Time (24 hr) 1000-1100 Biologist M. Fawcett

(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 (?), new settlement (?)

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Wildlife Observations/General Comments:

See attached sheets

Ecological Considerations:

No sensitivities listed
This segment consists of vertical faces and large boulder outcrops separated by pocket beaches comprised of boulder cobbles, and pebbles, with sand/silt matrix beneath. In the mid- and low intertidal zones on the beaches, a well-developed infaunal community lives buried below the boulders and cobbles (clams, echiurids, worms, etc.). There is also a rich infaunal community in the low intertidal mudflat indicated on the sketch map for subsection B. Numerous craters in mudflat indicate sea otters have been digging clams recently. There are high densities of mussels and barnacles on bedrock and boulders in the mid-intertidal, especially on the more exposed outcrops. There are also locally dense areas of Fucus. Other than Fucus, algae are sparse and not very diverse in this area, as is typical of quiet bays. The mussels mainly range from 2 to 6037 mm in length, the smaller ones probably representing settlement from last summer or fall. In middle and upper zones, Balanus glandula is often very dense, B. cariosus locally dense in lower zone. On one cobble beach about 120m west of seaward end of
on top of a heavy layer of mousse embelished in the surface sand at about the 46-7ft tide level. Removal of this mousse would require destruction of the mussels. Some barnacles (B. glandula) in upper intertidal zone on bedrock faces in subsections B and C of the segment are heavily coated with weathered oil. Barnacle scours on rock indicate up to about 50 percent mortality in small patches at upper fringe of distribution, but the causes of mortality could be either suffocation by oil or natural physical factors (weather extremes) which typically have the greatest effect on barnacles near the upper limit of their vertical distribution. The stream at the western end of subsection C appears too small for use by anadromous fish. Few birds seen, possibly owing to clearcut logging operation underway just above the shoreline in section C.
REGION: KENAI

SEGMENT: ST/WB-02

SUBDIVISIONS: B (2 OF 6)
SHORELINE EVALUATION

SEGMENT ST/WB-02 SUBDIVISION B (2 OF 6) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
No specific constraints identified.

SUBDIVISION ECOCLOGICAL CONSTRAINTS:
Avoid 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 92 m: Narrow 164 m: V.Light 64 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: ___ Breakup ___ Beach Cleaner
X Removal ___ Other (see comments)

COMMENTS: Recommend tarmat removal and manual pick up of tar balls, patties, and oiled debris (see attached sketch map for locations). Bioremediation of areas with broken coats or stains is also recommended.

TAG COMMENTS: __________________________________________________________

TAG APPROVAL DATE: ________________

ADEC ______________________ FOSC: ____________ DATE: ____________

EXXON ______________________
NOAA ______________________
USCG ______________________
FIELD SHORELINE COMMENT SHEET

SEGMENT ST: WB-002 SUBDIVISION: B DATE 4-1-90

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

I agree with the findings of the Shoreline Oiling Summary sheet for WB-002 Subdivision B.

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

See attached 1 sheet.

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

Recommend manual pickup of patties, mats, and asphalt layers in Subdivision B, also follow up with broomitation.

REVISION NO. 02/01/90
This is a large cove with a mud flat below the boulder, cobble and pebble beach. The sketch map #4 misses a broken area of asphalt on the western beach which was approximately 5 M. X 10 M.

Recommendations:

Manual pick up and break up of the asphalt and mousse saturated sediments between the small boulders and cobbles. The tidal flushing of this cove is good so bioremediation may be effective.
**SHORELINE OILING SUMMARY**

**DATE:** 4/1/90  
**TIME:** 12:30  
**EST. SUBSURFACE OIL:**  
**LANDS DESCRIPTION:**  
**SURVEYED FROM:**  
**WORKING DIRECTION:**  
**SURFACE SEDIMENTS:**  
**SLOPE:**  
**WAVE EXPOSURE:**  
**OIL CATEGORY LENGTH:**  
**OIL DISTRIBUTION OIL FILM COLOR:**  
**SURFACE OIL**

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**PAVEMENT:**  
**PATTIES/TARBALLS**  
**NEAR SHORE SHEEN?**  
**OILED SHEEN AMOUNT**  
**DEBRIS COLLECTED**  
**TYPE**  
**BAGS**  
**PHOTOGRAPHS:**  
**Roll No.:**  
**Frames:**

**SUBSURFACE OIL**

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**COMMENTS:**  
This subdivision consisted of a mudflat and gravel, to boulder beaches, surrounding the mudflat. Low angle cliffs surrounded the beaches, at a distance of 100 meters from the trace of the waterline. A band of asphalt in the cliff was also frequently observed.

**ROLL NO.:**  
**FRAMES:**
COMMENTS This subdivision consisted of a mudflat, and gravel to boulder beaches surrounding the mudflat. Low angle cliffs surrounded the beaches at a distance of up to 100 meter from the trace of the waterline. A band of asphalt and icing occurred across the UF, ranging in width from 8-10 meters. Some staining/coating of the cliff was also frequently observed.
### SHORELINE ECOLOGICAL SUMMARY

**Segment ST/WB 002**  
**Subdivision** B  
**Date (mo/day/yr)** 4/1/90

**Time (24 hr)** 100-1330  
**Biologist** M. Fawcett

(A) **Substrate type and % of segments:**  

(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 (X)

#### BARNACLES

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#### MYTILUS

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#### FUCUS

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**Wildlife Observations/General Comments:**  
see attached sheets

**Ecological Considerations:**

No sensitivities listed

However, high density of clams and other infauna in LTZ mudflat indicates caution required in any cleanup activities on cobble beach above mudflat. Avoid trampling and other disturbance in the mudflat, and avoid collecting.
This segment consists of vertical faces and large boulder outcrops separated by pocket beaches comprised of boulders, cobbles, and pebbles, with sand/silt matrix beneath. In the mid- and low intertidal zones on the beaches, a well-developed infaunal community lives buried below the boulders and cobbles (clams, echinoids, worms, etc.). There is also a rich infaunal community in the low intertidal mudflat indicated on the sketch map for subsection B. Numerous craters in mudflat indicate sea otters have been digging clams recently. There are high densities of mussels and barnacles on bedrock and boulders in the mid-intertidal, especially on the more exposed outcrops. There are also locally dense areas of Fucus. Other than Fucus, algae are sparse and not very diverse in this area, as is typical of quiet bays. The mussels mainly range from 2 to 60.7 mm in length, the smaller ones probably representing settlement from last summer orfall. In middle and upper zones, Balanus glandula often very dense, B. cariosus locally dense in lower zone. On one cobble beach about 120m west of seaward end of subsection C, a dense bed of live mussels sits...
on top of a heavy layer of mousse embedded in the surface sand at about the +6-7ft tide level. Removal of this mousse would require destruction of the mussels. Some barnacles (B. glandula) in upper intertidal zone on bedrock faces in subsection B and C of the segment are heavily coated with weathered oil. Barnacle scars or rock indicate up to about 50 percent mortality in small patches at upper fringe of distribution, but the causes of mortality could be either suffocation by oil or natural physical factors (weather extremes) which typically have the greatest effect on barnacles near the upper limit of their vertical distribution. The stream at the western end of Subsection C appears too small for use by anadromous fish. Few birds seen, possibly owing to clearcut logging operation underway just above the shoreline in Section C.
SM-I = See sketch Map

Photos
ST-17-3
frames 2-21

MAP KEY: KEH-145A

Name: __________________________

Date: __________________________
subdivision A

subdivision B

XXX Wide

/// Medium

--- Narrow

ADEC Segment Length: 2232m
REGION: KENAI

SEGMENT: ST/WB-02

SUBDIVISIONS: C (3 OF 6)
SHORELINE EVALUATION

SEGMENT ST/ WB-02 SUBDIVISION C (3 OF 6) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
No specific constraints identified.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid 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 58_m Medium 162_m Narrow 61_m V.Light 240_m No Oil 0_m
Subsurface Oil Observed: Yes No X Maximum Depth______

RECOMMENDATIONS:

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

COMMENTS: Recommend tarmat removal and manual pick up of mousse, oiled debris and oiled trash (see sketch map for specific locations). Bioremediate areas with coated sediments as indicated on sketch map.

TAG COMMENTS: ____________________________________________

TAG APPROVAL DATE: __________

ADEC EXXON NOAA USCG

FOSC: DATE: ______ ______
FIELD SHORELINE COMMENT SHEET

SEGMENT ST WB-002 SUBDIVISION: C DATE 4-1-90

USCG NAME R. BRYAN HIRST SIGNATURE R. Bryan Hirst

NO TREATMENT RECOMMENDED TREATMENT SUGGESTED

COMMENTS

I agree with the findings of the Shoreline Oiling Summary Sheet for WB-002 Subdivision C

ADEC NAME Russell Kunibe SIGNATURE Russell Kunibe

NO TREATMENT RECOMMENDED TREATMENT SUGGESTED

COMMENTS

see attached 1 sheet

LAND MANAGER NAME Patrick Norman SIGNATURE Patrick Norman

NO TREATMENT RECOMMENDED TREATMENT SUGGESTED

COMMENTS

Recommend manual pick-up of patties, nets and asphalted layers in subdivision C. Use cold or warm water flushing to break up heavy concentrations. Aeration is recommended also. Follow up with Bio remediation.
Description:

The oiling which remains in this subdivision is weathered mousse in the sediments around and under the boulders and cobbles. This oil is found on the pocket beaches in the UITZ. The area in sketch map #5 has been flagged off as the area where the logging company will filling and placing a dock.

Recommendations:

Manual pick up and break up of the mousse and tar mats where possible. Because the mousse is under and around small boulders and cobbles washing may be needed. This would be especially true if the mousse-asphalt becomes more mobile in warmer weather. After much of the gross contamination has been removed bioremediation may be needed.
SHORELINE OILING SUMMARY

OG: Ready Seigel USCG: Bryan SEGMENT ST: WP-2
BIO: Mike (F) LAND REP: Pat Norman (FAC): SUBDIVISION: 3-5 of 4
EXXON: John Dean ADEC: Russell Kirihie TIME: 14:00 to 15:00
TEAM NO.: 17 TIDE LEVEL: + 1.2 to + 3.1 DATE: 4/1/90
EST. SUBDIVISION LENGTH: 500 m ☑️ Sun ☑️ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☑️ Grass ☑️ Forest ☑️ Rock
SURVEYED FROM: ☑️ Foot ☑️ Boat ☑️ Helo WORKING DIRECTION: E to W
SURFACE SEDIMENTS: R 15% B 60% C 10% P 10% G 4% S 1% M 0% V 0% SLOPE: Lang 40% Hang 60% Vert 0% WAVE EXPOSURE: ☑️ Low ☐ Med ☑️ High
OIL CATEGORY LENGTH: W 45 m M 130 m N 85 m VL 130 m NO OIL.

SURFACE OIL

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PAVEMENT: H ☑️ S 350 sq. m by 1 cm

PATTIES/TAR BALLS: 50 BAGS

NEAR SHORE SHEEN? ☐ BR RW SL TL

OILED DEBRIS AMOUNT

- Logs
- Vegetation
- Trash
- Debris

DEBRIS COLLECTED ☑️ YES ☐ NO

TYPE: ___________ #BAGS: 0

Photographs:

- Roll No. ST-17-3
- Frames: 1-21

OILED INTERVAL

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COMMENTS: This subdivision was very similar to Subdivision A. Narrow ( <10 meters) stretches of bedrock/boulder beaches beneath south-facing cliffs, with pocket beaches occasionally incised into the bedrock. Oiling typically was concentrated in the pocket beaches in a band along the OI. This subdivision included the area to be used for logging operations. Forest chipping was being performed in this area during our survey. Difficult to dig pits due to B.
OG: Ron Siegel
SEGMENT: WB-2
SUBDIVISION: C
DATE: 4/1/90

CHECKLIST
- N Arrow
- Approx. Scale
- Sep/Sub Bndry
- Oil Dist. Width
- Oil Length
- % Cover
- Substrate Character
- Est. HWLLWL
- SSL
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

LEGEND
1 △
Pit - No Subsurface Oil

2 △
Pit - Subsurface Oil

Continuous Distribution
[ ] △
Broken Distribution
[ ] △
Patchy Distribution
[ ] △
Splashed Distribution
[ ] △
Oiled Vegetation
[ ] △

Photo location, direction, and number

Oil Character Length (m): AP 40 PO N/A OV N/A CT 7 0 ST 7 0 MS 3 0 PT 3 0 TB 3 0 FL N/A NO

PATCH MAP
# 5

Part of Subdivision C

Logging Activity

AS-MS/B (75%)
12 cm deep
25 x 4 m

ST/CT/B
on cliff

AS/C (90%)
15 x 6 m
on bank

Bio Remediation

.poi

H2O

90 m

15 m
### SHORELINE ECOLOGICAL SUMMARY

**Segment ST/WB 082**

**Subdivision**

**Date (mo/day/yr)** 4/11/90

**Time (24 hr)** 13:30-15:00

**Biolologist** M.H. Fawcett

(A) Substrate type and % of segments:

- Bedrock
- Boulder
- Cobble
- Pebble
- Sand
- 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):

#### BARNACLES

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Photographs:

- Roll No. ST-17-3
- Frames 18-21

Wildlife Observations/General Comments:

- See attached sheets

Ecological Considerations:

- No sensitivities listed
This segment consists of vertical faces and large boulder outcrops separated by pocket beaches comprised of boulder, cobbles, and pebbles, with sand/silt matrix beneath. In the mid- and low intertidal zones on the beaches, a well-developed infraunal community lives buried below the boulders and cobbles (clams, echiuroids, worms, etc.). There is also a rich infraunal community in the low intertidal mudflat indicated on the sketch map for subsection B. Numerous craters in mudflat indicate sea otters have been digging clams recently. There are high densities of mussels and barnacles on bedrock and boulders in the mid-intertidal, especially on the more exposed outcrops. There are also locally dense areas of Fucus. Other than Fucus, algae are sparse and not very diverse in this area, as is typical of quiet bays. The mussels mainly range from 2 to 6.017 mm in length, the smaller ones probably representing settlement from last summer orfall. In middle and upper zones, B. granulifera is often very dense, B. cariosus locally dense in lower zone. On one cobble beach about 120m west of seaward end of subsection C, a dense bed of live mussels sits
on top of a heavy layer of mousse embedded in the surface sand at about the +6-7ft tide level. Removal of this mousse would require destruction of the mussels. Some barnacles (B. glandula) in upper intertidal zone on bedrock faces in subsections B and C of the segment are heavily coated with weathered oil. Barnacle scours on rock indicate up to about 50 percent mortality in small patches at upper fringe of distribution, but the causes of mortality could be either suffocation by oil or natural physical factors (weather extremes) which typically have the greatest effect on barnacles near the upper limit of their vertical distribution. The stream at the western end of subsection C appears too small for use by anadromous fish. Few birds seen, possibly owing to clearcut logging operation underway just above the shoreline in section C.
Photos
ST-17-3
frames 2-21

SM-1 = see sketch Map 1

SM-5 (Hud Flat)

Subdivision B

2-5 (aerial)

XX Wide
/h/ Medium
---- Narrow
TTTT Very Light

Ken 145a

Map Key: KEN-145b
Name: 
Date: 

ADEC Segment Length: 2232m
Photos
ST-17-3
frames 2-21

ADEC Segment Length: 2232m

Map Key: XEN-145b
Name:
Date:

[Diagram of WB-6 and WB-7 with various sub-surface and ground features marked including subareas A, B, and C with distances and notes such as "SW-5 Mud Flat" and "SW-3".]
REGION: KENAI

SEGMENT: ST/WB-02

SUBDIVISIONS: D (4 OF 6)
SHORELINE EVALUATION

SEGMENT ST/ WB-02       SUBDIVISION D (4 OF 6) DATE   4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
No specific constraints identified.

SUBDIVISION ECOCLOGICAL CONSTRAINTS:
Avoid 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: 13 m; Medium: 40 m; Narrow: 93 m; V.Light: 107 m; No Oil: 0 m
Subsurface Oil Observed: Yes X No Maximum Depth: 10 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend tarmat removal and manual pick up of mousse, oiled trash, vegetation, and debris as indicated on sketch map. Bioremediation of two small areas also recommended.

TAG COMMENTS: __________________________________________________________

TAG APPROVAL DATE: ____________

ADEC
EXXON
NOAA
USCG

FOSC: ____________ DATE: ____________
FIELD SHORELINE COMMENT SHEET

SEGMENT ST: WB-2  SUBDIVISION: 0  DATE 4/6/90

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

I agree with the findings of the Shoreline Oilings Summary Sheet for WB-002 subdivision 0

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

The oiling in this subdivision was a broken band of cover, coat and stain on the rock faces that was from 1/4 m wide to 3 m wide. The pocket baches had patchy bands of asphalt and mousse from 3 m to 12 m wide. These beaches were predominantly medium sized boulders.

Recommended treatment is manual pickup of the asphalt and mousse appears to be the best method although because of the size of the sediments this would leave much of the oiling and other alternatives may need to be considered.

On the rock faces scraping or spot washing of the oil coating is recommended.

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

Manual pickup of asphalt layers and patches on surface, manual removal under flushing to getter the oil around larger boulders.
SHORELINE OILING SUMMARY

OG: Randy Siegel USCG
BIO: Mike Leverett LAND REP: Pat Warm
EXXON: John Dean ADEC: Russell Kinzie

TEAM NO.: 17 TIME: 08-23-90
EST. SUBDIVISION LENGTH: 2450 m
TIDE LEVEL: +O.G to +3 B
DATE: 4/6/90

UPLANDS DESCRIPTION: Grass Forest Rock
SURVEYED FROM: Foot Boat Helo
WORKING DIRECTION: E to W

SURFACE SEDIMENTS: R 15% B 60% C 10% P 5% G 5% S 5% M 5% V 5% O 5%
SLOPE: Lang 15% Hang 20% Vertical 15% WAVE EXPOSURE: Low Med High

OIL CATEGORY LENGTH: W 25 m M 44 m N 60 m VL 130 m NO 0 m

SURFACE OIL

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PAVEMENT: H (R) 8 120 sq. m by 7 cm

NEAR SHORE SHEEN? NO BR RW SL TL

Photographs:
Roll No. ST-17-4
Frames 31-36

OILED DEBRIS AMOUNT
Logs
Vegetation
Trash
Debris

DEBRIS COLLECTED
TYPE
#BAGS

SUBSURFACE OIL

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<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>OILED AMOUNT</th>
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COMMENTS:

This subdivision consists of south-facing shoreline covered predominantly with boulders. MS-AP collected beneath the boulders in a band of variable width across much of the subdivision. OIL STC was observed in most much of the cliff walls. Some subsurface oiling was observed in April with pocket beaches but presence of boulders made additional investigation difficult.
<table>
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<tr>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL (cm-max)</th>
<th>BELOW</th>
<th>OIL / FILM COLOR</th>
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REVIEWED: JW  DATE: 4/6/20
SEGMENT ST/4B-2
SUBDIVISION D
DATE 4/6/90

CHECKLIST
- N Aucor
- Approx. Scale
- Geo/Site Data
- Oil Dist.
- Width
- Length
- % Cover
- Sediment Character
- Est. HWL/LML
- SSL
- Profile Location(s)
- Profile(s)
- Phi Location(s)
- Photo Location(s)

LEGEND

1
- No Subsurface Oil

2
- Subsurface Oil

CT/C
Continuous Distribution

CT/B
Buildup Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

MS/B (5%)
Oiled Vegetation

WATER

PHOTO

300 M

TARMAT REMOVAL
- Manual pick up MDOSS & OILED DEBRIS - TRASH VEGETATION, LEGS

ST-CT/P (10%)

33,34,35

ST-CT/8 (80%)

32

BUNKER

ST-CT/P + PO/5

MS-AP/P (25%)

10 m x 1 m

MS-AP/S

MS-AP/8

ST-17-4 #31-36

Pocket Bunker

MS-AP/1B/PT/5 (<10%)

beneath builders

AP-M3/B

10 m x 1 m

PHOTO LOC.

PHOTO DIRECTIONS

PHOTO NUMBER
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**Observations/General Comments:**
- White oil coating some barnacles in UTZ - most alive, some dead
- Seals swimming, laying eggs, MTZ. I am allowing
- Saw a small blob of herring (or similar) eggs under clams.

*Considerations:*
REGION: KENAI

SEGMENT: ST/WB-02

SUBDIVISIONS: E (5 OF 6)
SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
No specific constraints identified.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid disturbance or damage to unooled biota and substrate.

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

SHPO SIGNATURE: ____________________ DATE: ____________________

OILING CATEGORIZATION:
Wide 72 m: Medium 238 m: Narrow 140 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No ___ Maximum Depth 15 + cm

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


TAG COMMENTS:

TAG APPROVAL DATE: __________

ADEC
EXXON
NOAA
USCG

FOSC: __________ DATE: __________

FIELD SHORELINE COMMENT SHEET

SEGMENT STI  WB-2  SUBDIVISION:  E  DATE  4/4/90

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

I agree with the findings of the Shoreline
Erosion Summary Sheet for segment WB-002-
subdivision E.

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

See attached 1 page.

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

Due to the oiling summary sheet for WB-2 - Subdivision E,
I conducted manual pickup of surface and subsurface oil.
I will need to do additional warm water flushing to get
majority of the oil.

REVISION NO. 02/21/90
Treatment Suggested

The finding of the shoreline oiling summary accurately describe the oiling. In sketch map #1 the buried oil was under small boulders cobbles and gravel which could be moved. The pooled mousse in the segment was usually in the cracks of bedrock and around the base of the boulders.

Recommended clean up

Manual pick up of the mousse, asphalt and patties, including the buried mousse saturated lens in sketch map #1. Scraping or spot washing of the oil cover on the rock faces. Possible flood washing of the pocket beaches if the mousse and asphalt becomes less viscous in the warm weather. Deployment of snare booms if sheen develops during treatment. Bioremediation of the pocket beaches after they have been checked to insure that the gross contamination has been removed.
SHORELINE OILING SUMMARY

OG: Renda Siegel
USCG: Bryan Bartlett
SEGMENT ST: WB-2

EXXON: John Dean
ADEC: Ross Kunkel

TEAM NO.: 17
TIDE LEVEL: + 1.0 10-3.9
DATE: 4/1/90

EST SUBDIVISION LENGTH: 4820 m

UPLANDS DESCRIPTION: Grass Forest Rock

SURVEYED FROM: Foot Boat Helo

SURFACE SEDIMENTS: R 10% B 45% O 30% P 10% G S 0% M D V 0%

OIL CATEGORY LENGTH: W 130 m M 700 m N 150 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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<td>POOLED COAT</td>
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<tr>
<td>NO OIL</td>
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PAVEMENT: H (F) 250 sq. m by 2 cm

PATTIES / TARBALLS: 70 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS AMOUNT: Log Vegetation Trash Debris

DEBRIS COLLECTED: YES NO

TYPE: 0

Photographs:
Roll No.: ST-17-4
Frames: 5-12

SUBSURFACE OIL

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COMMENTS: This subdivision consists of shoreline with large boulders coating a band of oiling was observed along the UF across much of the subdivision; some were consisting of ST-CX-CX, QT-PT, or an AP layer. The oil was typically 3 meters in width. A buried layer of mouse- thickness and dip in visible. Shown was observed on the largest pocket beach in this subdivisison.

Oil sheen on water in intertidal pools.

Page 1 of 1
**Sketch Map**

**Date**: 4/1/90

**Checklist**
- N Awry
- Approx. Scale
- Seg/Sub Entry
- Oil Dri.
- Width
- Length
- % Cover
- Substrate Character
- Est. HWA/ML
- SSL
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

**Legend**

1. Area
2. Area

- **P1**: No Subsurface Oil
- **P2**: Subsurface Oil

- **CT/C**: Continental Distribution
- **CT/O**: Coastal Distribution
- **ETP**: Estuary
- **ETS**: Estuary
- **S**: Saltwater
- **O**: Oil Spill
- **Ov**: Oiled Vegetation

**Map Details**

- **AP-MS**/TB-PT/P beneath boulders and on surface
- **ST-CU/BC** on boulders
- **POLs** in crevices
- **3.6 m wide band-width oil** from 1.2 m

**Notes**

- R cliff
- **R**
- **H2O**
- **150 m**

**Oil Character Length (m)**: AP 75, PO 75, CV 5, CT 5, ST 5, MS 75, PT 75, TB 75, FL 20, NO 5
SHORELINE ECOLOGICAL SUMMARY

Segment ST / WR - 2 Subdivision E Date (mo/day/yr) 4/4/90

Time (24 hr) 1805 - 1900 Biologist Fawcett

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 (○)

BARNACLES

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MYTILUS

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ASTROPODS

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FUCUS

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Wildlife Observations/General Comments:
locally dense beds of mussels among pebbles in mini-cove areas. Dense community flat at mouth of small non-anadromous creek. Pat Norman, U.S. Army Corp confirms that fish do not use creek. Very little algae in the whole subsection, other than Fucus and patches of Ensis. No birds or mammals seen.

none listed
ST-CU/P (30%) on R cliff and B
PO/3 in rock crevices
AP-M51TB-P1/P (15%) beneath rocks
along length of shaded area
- 150 m x 3 m

SM-1 = See sketch
Map 1

Photos ST-17-4
section F - 2-4
section E 5-12

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

ADEC Segment Length: 2232m

Map Key: KEH-145a
Name:
Date: 4/4/70
REGION: KENAI

SEGMENT: ST/WB-02

SUBDIVISIONS: F (6 OF 6)
SHORELINE EVALUATION

SEGMENT ST/ WB-02 SUBDIVISION F (6 OF 6) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
No specific constraints identified.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid 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 271 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth ______

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

COMMENTS:
____________________________________________________

____________________________________________________

____________________________________________________

TAG COMMENTS:
____________________________________________________

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

SEGMENT STL 430-2

SUBDIVISION: F

DATE 4/4/90

USCG

NAME R. Bryan Hinkle

SIGNATURE R. Bryan Hinkle

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

I agree with the findings of the Shoreline Oiling Summary Sheet for Segment 430-001 Subdivision E.

ADEC

NAME Russell Kunibe

SIGNATURE Russell Kunibe

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

The oiling in this subdivision consisted of scattered splashes along the high tide line. Oil recovery would be minimal in this area.

LAND MANAGER

NAME Patrick Norman

SIGNATURE Patrick Norman

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

Agree with oiling summary sheet for 430-2 - Subdivision F.
SHORELINE OILING SUMMARY

ST SUBDIVISION LENGTH: 270 m
UPLANDS DESCRIPTION: Grass
SURVEYED FROM: Foot
SURFACE OIL
PATTERNS/TAR BALLS: 3
NEAR SHORE SHEEN? No

SUBSURFACE OIL
PIT NO. 1
PIT DEPTH (cm) 25
SUBSURFACE OIL CHARACTER -
OILED INTERVAL 0 0
OIL/FILM COLOR -
OILED DEBRIS Logs
VEGETATION -
TRASH -
DEBRIS COLLECTED -

COMMENTS
This subdivision consists of south-facing beach covered largely in boulders. A creek with gravel floodplains occurs at the east end of the subdivision. Very light oiling was observed across the height of the subdivision, occasional splashes on boulders, an isolated HSAP patt/fatball.

Sheen on water in intertidal pools.
**SHORELINE ECOLOGICAL SUMMARY**

**Segment ST / WB-2**  
**Subdivision**  
**F**  
**Date** (mo/day/yr)  
**4/4/90**  
**Time** (24 hr)  
**1700-1800**  
**Biologist**  
**M. Fawcett**

(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 (Q)

### BARNACLES

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<td>6</td>
<td>6</td>
<td>2</td>
<td>6</td>
</tr>
</tbody>
</table>

**Wildlife Observations/ General Comments:**

Mussel and Elkhedalia were the only macro-algae observed (above + 1 ft tide level - low intertidal zone underwater). No birds or mammals seen.

**Ecological Considerations:**

*No sensitivities listed.
ST-CU/P (30%) on R clif A and B
PO/S in rock crevices
AP-MS/TP-PT/P (15%) beneath rocks
along length of shallow e-corner
150 m x 5 m

SM-1 = See Key to Map I

Photos ST-17-4
section F-2-4
section E 5-12

Wide
Medium
Narrow
Very Light

ADEC Segment Length: 2232m

Map Key: KEN-1456
Name: David Eayre
Date: 4/2/90
XX Wide
/// Medium
---- Narrow
TTTT Very Light

ADEC Segment Length: 2232m

Map Key: KEN-145a
Name: [illegible]
Date: 4/9/15

KEN 1458
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT WB-2 SUBDIVISION A (1 of 6)

WORK WINDOW

<table>
<thead>
<tr>
<th>Manual Pickup</th>
<th>Tarmat Removal</th>
<th>OPEN</th>
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<tr>
<td>Bioremediation</td>
<td>Spot Washing</td>
<td>WORK PRIOR TO 7/1</td>
</tr>
</tbody>
</table>

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1J  Purse Seine Area  Closed to bioremediation and spot washing after 7/1. No constraint to manual pickup or tarmat removal.

5T  Bald Eagle Nest   NO CONSTRAINT. USFWS bald eagle impact assessment completed on 5/19/90 by Mary Portner indicates no active nests within 400m of the work area.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 7/1. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

TAG APPROVAL DATE 5/29/90
ADEC Art W  EXXON Andy E  NOAA Herbert E  USCG E. R. S.
FOSC D. N. S.  DATE 5/28/90
Prepared By: Andrew May  Date 5/28/90
SHORELINE EVALUATION

SEGMENT ST' WE-02 SUBDIVISION A (1 OF 6) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
No specific constraints identified.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid disturbance or damage to uncoiled biota and substrate.

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

SHPO SIGNATURE: Charles E. Dew DATE: 4/20/90

OILING CATEGORIZATION:
wide 43 m: Medium 112 m: Narrow 27 m: V.Light 171 m: No Oil 81 m
Subsurface Oil Observed: Yes No X Maximum Depth

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

COMMENTS: The recommended treatment activities are as follows: 1) Tarmat removal, 2) Manual pick up of mousse and pooled oil (see attached sketch map for specific locations), and 3) Bioremediation of areas where pooled oil has been removed. No specific time constraints have been identified. Spot Wash as Required Prior to Bioremediation

TAG COMMENTS:

AG APPROVAL DATE: 4/19/90
ADEC: [Signature] DATE: 5-12-90
EXXON: [Signature] FOSC: [Signature]
NOAA: [Signature] DATE: 5/28/90
USCG: [Signature]
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT WB-2 SUBDIVISION B (2 of 6)

WORK WINDOW

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<tr>
<td>Bioremediation</td>
<td>WORK PRIOR TO 7/1</td>
</tr>
<tr>
<td>Spot Washing</td>
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ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1J  Purse Seine Area  Closed to bioremediation and spot washing after 7/1. No constraint to manual pickup or tarmat removal.

5T  Bald Eagle Nest  NO CONSTRAINT. USFWS bald eagle impact assessment completed on 5/19/90 by Mary Portner indicates no active nests within 400m of the work area.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 7/1. Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Avoid trampling and flushing pollutants onto mud flat below the cobble beach. Avoid dense mussel beds during bioremediation.
SEGMENT ST/ WB-02  SUBDIVISION B (2 OF 6) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
No specific constraints identified.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid 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: 4/30/90

OILING CATEGORIZATION:
Wide 0 m; Medium 92 m; Narrow 164 m; V. Light 64 m; No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:
___No Treatment Recommended ___Snare/Absorbent Booms
___Treatment Recommended ___Oil Snakes (pom poms)
___Manual Pickup ___Absorbents (pads, rolls, etc)
___Bioremediation ___X Spot Washing: ___Wands
___Tarmat: ___Breakup ___Beach Cleaner
___Removal ___Other (see comments)

COMMENTS: Recommend tarmat removal and manual pick up of tar balls, patties, and oiled debris (see attached sketch map for locations). Bioremediation of areas with broken coats or stains is also recommended. Spot wash as required in area of mouse + bioremediation as necessary. Avoid dense mussel beds. See constraint appendix dated 5/29/90 Re: C

TAG COMMENTS:

TAG APPROVAL DATE: 4/19/90
ADEC
EXXON
NOAA
USCG

FOSC DATE: 5-12-90
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT WB-2 SUBDIVISION C (3 of 6)

WORK WINDOW

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<td>Bioremediation</td>
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<tr>
<td>Spot Washing</td>
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ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1J Purse Seine Area

No constraint to manual pickup and tarmat removal; closed to bioremediation and spot washing after 7/1.

5T Bald Eagle Nest

NO CONSTRAINT. USFWS bald eagle impact assessment completed on 5/19/90 by Mary Portner indicates no active nests within 400m of the work area.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 7/1. Avoid mussel beds and disturbance or damage to uncollected biota and substrate.

TAG APPROVAL DATE 5/29/90

Prepared By: ANDREW MEYER, R.E. C.

Date 5/28/90
Incorporates information from USFWS Bald Eagle Survey 5/28/70

ECOLOGY MAP
SEGMENT WB-2
SUBDIVISION 3 (3016)
METERS

★ Seabird Colony
▲ Eagle Nest
SHORELINE EVALUATION

SEGMENT ST/ WB-02 SUBDIVISION C (3 OF 6) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
No specific constraints identified.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid disturbance or damage to unooled biota and substrate.

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

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

OILING CATEGORIZATION:
Wide 58 m; Medium 61 m; Narrow 240 m; V.Light 61 m; No Oil 0 m
Subsurface Oil Observed: Yes X No
Maximum Depth

RECOMMENDATIONS:

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

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

COMMENTS: Recommend tarmat removal and manual pickup of mousse, oiled debris and oiled trash (see sketch map for specific locations). Bioremediate areas with coated sediments as indicated on sketch map.

TAG COMMENTS:

TAG APPROVAL DATE: 4/19/90
ADEC
EXXON
NOAA
USCG
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT WB-2 SUBDIVISION E (5 of 6)

WORK WINDOW

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</thead>
<tbody>
<tr>
<td>Spot Wash</td>
<td></td>
<td>Work Prior to 7/1</td>
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ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1J Purse Seine Area No constraint to manual pickup and tarmat removal; closed to spot washing after 7/1.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 7/1. Avoid any unnecessary disturbance or damage to unaltered biota and substrate.

Prepared by: [Signature] Date: 5/17/90
ECOLOGY MAP
SEGMENT WB-2
SUBDIVISION E (5016)
METERS

★ Seabird Colony
△ Eagle Nest
SEGMENT ST/ WB-02 SUBDIVISION E (5 OF 6) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
No specific constraints identified.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid disturbance or damage to unooled biota and substrate.

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

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

OILING CATEGORIZATION:
Wide 72 m: Medium 238 m: Narrow 140 m: V.Light 0 m: No Oil 0 m Subsurface Oil Observed: Yes X No Maximum Depth 15 + cm

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

COMMENTS: Recommend manual removal of tarmat and manual removal of mousse, patties and tar balls, + debris + trash

TAG COMMENTS:

TAG APPROVAL DATE: 4/19/90

ADEN [Signature] DATE: 5/12/90
EXXON [Signature]
NOAA [Signature]
USCG [Signature]
ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1J  Purse Seine Area  No constraint to manual pickup or tarmat removal.
5T  Bald Eagle Nest  No constraint. Recommended treatment area more than 400m from eagle nest.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 7/20. Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.
ECOLOGY MAP
SEGMENT WB-2
SUBDIVISION E (6 of 6)
METERS

WB-02
WB-01
WB-04

WORK AREA

★ Seabird Colony
★ Eagle Nest
SEGMENT ST/ WB-02  SUBDIVISION F  (6 OF 6)  DATE  4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
No specific constraints identified.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid disturbance or damage to unooled biota and substrate.

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

SHPO SIGNATURE:  
DATE:  4/23/90

OILING CATEGORIZATION:

- Wide 0 m; Medium 0 m; Narrow 0 m; V. Light 271 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
- X Tarmat: Breakup  Beach Cleaner
- X Removal  Other (see comments)

COMMENTS:  
MANUAL PICK UP OF TARMATS, DEBRIS & TRASH.

TAG COMMENTS:  

TAG APPROVAL DATE:  4/19/90  
ADEC  
EXXON  
NOAA  
USCG  
FOSC:  
DATE: 5-5-90
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT WB-2 SUBDIVISION D (4 of 6)

WORK WINDOW

<table>
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<tr>
<th>Manual Pickup</th>
<th>Tarmat Removal</th>
<th>Bioremediation</th>
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<tr>
<td>OPEN</td>
<td></td>
<td>WORK PRIOR TO 7/1</td>
</tr>
</tbody>
</table>

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS
1J Purse Seine Area  No constraint to manual pickup and tarmat removal; closed to bioremediation after 7/1.

OTHER ECOLOGICAL CONSIDERATIONS
Restrict boat and air traffic to essential minimum after 7/1. Avoid any unnecessary disturbance or damage to unveiled biota and substrate.

TAG ADDENDUM DATE 5/18/90
Prepared by: Exhibit WIK  Date: 5/11/90
SHORELINE EVALUATION

SEGMENT ST/ WB-02  SUBDIVISION D (4 OF 6)  DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
No specific constraints identified.

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

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

SHPO SIGNATURE: Charles Ziffer Date: 4/20/90

OILING CATEGORIZATION:

Wide 13 m: Medium 40 m: Narrow 93 m: V.Light 107 m: No Oil 0 m
Subsurface Oil Observed: Yes X No ___ Maximum Depth 10 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend tarmat removal and manual pick up of mousse, oiled trash, vegetation, and debris as indicated on sketch map. Bioremediation of two small areas also recommended.

TAG COMMENTS:

TAG APPROVAL DATE: 4/19/90
ADEC Exxon NOAA USCG

TAG APPROVAL DATE: 5/12/90
FOSC:
SHORELINE EVALUATION

SEGMENT ST/ WB-02 SUBDIVISION A (1 OF 6) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
No specific constraints identified.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid 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: 4/20/90

OILING CATEGORIZATION:
Wide 43 m: Medium 112 m: Narrow 27 m: V. Light 171 m: No Oil 81 m
Subsurface Oil Observed: Yes No X Maximum Depth

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

COMMENTS: The recommended treatment activities are as follows: 1) Tar- mat removal, 2) Manual pick up of mousse and pooled oil (see attached sketch map for specific locations), and 3) bioremediation of areas where pooled oil has been removed. No specific time constraints have been identified. Spot Wash as required prior to bioremediation.

TAG COMMENTS:

TAG APPROVAL DATE: 4/1/98.
ADEC
EXXON
NOAA
USCG
FOSC: L DATE: 5/12/90
SEGMENT ST/ WB-2
SUBDIVISION A
DATE 4/1/90

CHECKLIST
- N Arrow
- Approx. Scale
- Seg/Sub Boundary
- Oil Dist.
- Wash
- Length
- % Cover
- Substrate Character
- Ext. HWL/ML
- SEL
- Prox Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

LEGEND
1 △
Pt - No Subsurface Oil

2 △
Pt - Subsurface Oil

ST/CT/S-P on cliff

AS-MS/B (75%)
(12 x 7 m) local
On and beneath
boulders

MS/PO-TB-PT/15
(10%)
May have
Seen gone to
North

H2O

BIOREMEDIATION POOLING OIL AREA

TARMAK REMOVAL
MANUAL PICK UP
MOUSE, POOLED OIL

PHOTO LOCATION
LOCATION, DIRECTION,
AND NUMBER

Oil Character Length (m): AP 12 PO ML CV HA UT 20 ST 20 MS 12 PT 12 TB 12 FL HA NO 5
XXX Wide
/// Medium
--- Narrow
TTTT Very Light

WB-2

ADEC Segment Length: 2232m

Map Key: KEN-145a
Name: curry brown
Date: 4/1/30
SM-1 = See sketch Map 1

Photos
ST-17-3
Frames 2-21

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

WB-2

Map Key: KEN-145b
Name: 
Date: 

LEN 145A
SHORELINE EVALUATION

SEGMENT ST/ WB-02 SUBDIVISION B (2 OF 6) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
No specific constraints identified.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid 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: 4/10/90

OILING CATEGORIZATION:

Wide ___ 0 m: Medium 92 m: Narrow 164 m: V.Light 64 m: No Oil ___ 0 m
Subsurface Oil Observed: Yes _____ No X _____ Maximum Depth ______ 

RECOMMENDATIONS:

X Treatment Recommended Site cleanup: X Manual Pickup
X Manual Pickup Oil Snares (pom poms)
X Bioremediation Absorbents (pads, rolls, etc)
X Tarmat: Breakup Spot Washing: X Wands
---Removal Beach Cleaner
---Other (see comments)

COMMENTS: Recommend tarmat removal and manual pick up of tar balls, patties, and oiled debris (see attached sketch map for locations). Bioremediation of areas with broken coats or stains is also recommended. Spat wash as required in area of mussel + biogenic mounds as necessary. Avoid dense mussel beds.

TAG COMMENTS:

________________________________________________________

TAG APPROVAL DATE: 4/14/90

ADEC: Art Weller, Art Weller
EXXON: [Signature] DATE: 5/12/90
NOAA: [Signature] USCG: [Signature]
SM-1 = See Sketch Map

Photos
ST-17-3
frames 2-21

--- Narrow

--- Medium

XXX Wide

TTTT Very Light

ADEC Segment Length: 2232m

Map Key: KEN-145b

Name: _____________

Date: _____________
XXX Wide
/// Medium
---- Narrow
TTTT Very Light

WB-2

ADEC Segment Length: 2232m

Map Key: KEN-145a
Name: [Signature]
Date: 4/11/90
Photos
ST-17-3
frames 2-21

SM-1 = see sketch Map 1

Key:
KEN-145b

Name: __________

Date: __________
XXX Wide
/// Medium
----- Narrow
TTTT Very Light

ADEC Segment Length: 2232m

Map Key: KEN-145b
Name: ___________
Date: ___________
SHORELINE EVALUATION

SEGMENT ST/ WB-02  SUBDIVISION C (3 OF 6) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
No specific constraints identified.

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

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

SHPO SIGNATURE: Charles D. Date: 4/20/90

OILING CATEGORIZATION:

Wide 58 m: Medium 162 m: Narrow 61 m: V. Light 240 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)
X Manual Pickup Absorbents (pads, rolls, etc)
X Bioremediation X Spot Washing: X Wands
X Tarmat: Breakup
X Removal Beach Cleaner

Other (see comments)

COMMENTS: Recommend tarmat removal and manual pick up of mousse, oiled debris and oiled trash (see sketch map for specific locations). Bioremediate areas with coated sediments as indicated on sketch map. Spot wash as required, however avoid mousse 6905

TAG COMMENTS:

TAG APPROVAL DATE: 4/19/90

ADEC
EXXON
NOAA
USCG

TAG APPROVAL DATE: 5/12/90
DATE: 4/1/90

LEGEND

1 △ Pit - No Subsurface Oil

2 △ Pit - Subsurface Oil

Continuous Distribution

Broken Distribution

Patchy Distribution

Splashed Distribution

Oiled Vegetation

1 •• Photo location, direction, and number

Oil Character Length (m): AP 40 PO WA CV WA CT 70 ST 70 MS 30 PT 30 TB 30 FL WA NO
SM-1 = See sketch Map 1

Photos
ST-17-3
Frames 2-21

Segment Length: 2232m

Map Key: KEN-145b
Name: ____________________
Date: ____________________

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

ADEC Segment Length: 2232m

WB - 2

Map Key: KEN-145b
Name: ____________________
Date: ____________________
SM-1 = See sketch Map 1

Photos
ST 17-3
frames 1-21

Pocket beach (partial)
As-13/8 (75%)
25 x 8 m ...
STM/1 (75%)
Borden and cliffs
Pocket beach: 30 x 15 m
STM/7C on
east buss and
STM/13 on
bounders (75%)
(15 x 8 m)

Pocket beach:
25 m x 15 m
As/Per

Map Key: KEN-145b
Name: ility Beigel
Date: 3/1/90

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

ADEC Segment Length: 2232 m

LEN 145A
WB-2

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

ADEC Segment Length: 2232m

SM-5 See sketch map 05

Name: KEN-145a
Date: 4/1/20

Map Key: KEN-145a
Data Entered:

subdivision C

KEN 145B→
Photos
ST-17-3
Frames 2-21

Map Key: KEN-145b
Name: ____________
Date: ____________
SHORELINE EVALUATION

SEGMENT ST/ WB-92  SUBDIVISION D (4 OF 6) DATE  4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
No specific constraints identified.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid 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: 4/6/90

OILING CATEGORIZATION:
Wide: 13 m; Medium: 40 m; Narrow: 93 m; V.Light: 107 m; No Oil: 0 m
Subsurface Oil Observed: Yes X No ___ Maximum Depth: 10 cm

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

COMMENTS: Recommend tarmat removal and manual pick up of mousse, oiled trash, vegetation, and debris as indicated on sketch map. Bioremediation of two small areas also recommended.

TAG COMMENTS: ____________________________________________

TAG APPROVAL DATE: 4/12/90
ADEC  EXXON  NOAA  USCG
DATE: 5/12/90
FOSC:
SHORELINE EVALUATION

SEGMENT ST/ WB-02 SUBDIVISION E (5 OF 6) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
No specific constraints identified.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid 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: 4/20/90

OILING CATEGORIZATION:

- Wide 72 m: Medium 238 m: Narrow 140 m: V.Light 0 m: No Oil 0 m
- Subsurface Oil Observed: Yes X No ___ Maximum Depth 15 +cm

RECOMMENDATIONS:

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


SPOTWASH AS REQUIRED FOR AREAS INACCESSIBLE FOR MANUAL REMOVAL OF MOUSSE

TAG COMMENTS:


TAG APPROVAL DATE: 4/19/90

ADEC Art Weiner
EXXON Art Taylor
NOAA Buil Westcott
USCG Kenneth Keene

FOSC: __ DATE: 5/12/90
AP-MS/1B-PT/P beneath boulders and on surface
ST-CV/BC on boulders
P0/S in crevices
in a 3-m wide band-width, varies from 1.2 m

|ST-CV/P on B
PO/S in crevices (ex,
P0/S beneath B and C
found (31%)|

LEGEND
1 △
Pl - No Subsurface Oil
2 △
Pl - Subsurface Oil
Continuous Oil Stain
 Broken Distribution
Patchy Distribution
 Spilled Distribution
Cliff Vegetation

Photo location, direction,
and number

ON Character Length (m) AP 75 PO CV 15 CT 15 ST 15 MS 75 PT 75 FL 15 NO 1
Photos ST-17-4
section F-2-4
section E 5-12

SM-1 = See X Map 1

ST-CU/P (30%) on R cliff and B
PO/3 in rock crevices
AP-M3/TB-PT/P (15%) beneath rocks
Length of shalow continuous hard
150 m x 3 m

Map Key: KEN-1450
Name: lady bug
Date: 4/4/90
ST-CU/P (30%) on R. cliff and 3
PO/S in rock crevices
AP-M3/T8-PT/P (15%) beneath structure
along length of shoreline - continuous rock
150 m x 3 m

Map Key: KEH-1456
Name: H. Jeffery
Date: 4/4/70
SHORELINE EVALUATION

SEGMENT ST/ WB-02 SUBDIVISION F (6 OF 6) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
No specific constraints identified.

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

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

SHPO SIGNATURE: DATE: 4/23/90

OILING CATEGORIZATION:

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

RECOMMENDATIONS:

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

COMMENTS:
MANUAL PICKUP OF TARMATS, DEBRIS + TRASH.

TAG COMMENTS:

TAG APPROVAL DATE: 4/19/90
ADEC ART WEIKER ART (J) LIN
EXXON ANDY TAYLOR
NOAA BILL WOERGOTT
USCG KENNETH CONNELL

FOSC: DATE: 5-5-90
SHORELINE ECOLOGICAL SUMMARY

Segment ST / WB-2 Subdivision F Date (mo/day/yr) 4/4/90

Time (24 hr) 1720-1800 Biologist M. Fawer H

(A) Substrate type and % of segments:
(1) Bedrock (2) Boulder (3) Cobble (4) Pebble (5) Sand (6) Silt
(1) Overall % cover of biota (% of segment): Dense Moderate Low

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

Photographs:
Roll No. ST-17-4 Frames 2-4

BARNACLES

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FUCUS

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Wildlife Observations/ General Comments:

Fucus and Ectocladia were the only macro-algae observed (above +1 ft
1.8 m level; low intertidal zone underwater). No birds or mammals seen.

Ecological Considerations:

No sensitivities listed.
WORK PLAN ADDENDUM

Segment WB 002
Subdivision D
Dated 6/20/80

MODIFICATION

1. REASON FOR MODIFICATION

. TASTE FIELD EVALUATION

2. ADJUSTMENT TO WORK PLAN

. BIODEGRADATION TEAM "DG" TO CLARIFY AREAS FOR BIO
BEYOND THAT INITIALLY INDICATED ON SSAT PACKAGE. ALL AREAS
WITHIN THIS SUBDIVISION WHERE OIL REMAINS SHOULD BE BIODEGRADATION.

. MINOR PREP WORK PRIOR TO BIO (PICK UP ANY MOUSE PATTIES)
SHOULD BE CONDUCTED PRIOR TO BIO.

. SITE TO BE EVALUATED PRIOR TO FISHING SEASON

SHPO APPROVAL NEEDED YES ✓ SHPO SIGNATURE Charles R. Hom 6/22/80
NO X

TAG APPROVAL DATE 6/20/80
ADEC Ray Morris R.M
EXXON Amy Tread 6/28
NOAA Jose 6/28
USCG C.A. Potter C.A.P
FOSC Adam 6/28 DATE 6/28
WORK PLAN ADDENDUM

Segment WB 002  Subdivision E  Dated 6/20/90

MODIFICATION

1. REASON FOR MODIFICATION
   TAG FIELD EVALUATION

2. ADJUSTMENT TO WORK PLAN
   - BIOREMEDIATION TEAM "OG" TO CLARIFY AREAS FOR BIO
     BEYOND THAT INITIALLY INDICATED ON SSAT PACKAGE. ALL AREAS
     WITHIN THIS SUBDIVISION WHERE OIL REMAINS SHOULD BE BIOREMEDIATED.
   - MINOR PREP WORK PRIOR TO BIO (Pick up any mousse patties
     should be conducted prior to BIO).
   - SITE TO BE EVALUATED PRIOR TO FISHING SEASON.

SHPO APPROVAL NEEDED YES ✓ SHPO SIGNATURE Chip E. Warner 6/22/90

TAG APPROVAL DATE 6/20/90
ADEC Ray Wood
EXXON Kim Burrell
NOAA Vinson Anders
USCG G.A. Beiler

FOSC 7/3/90
1991 MAYSAP EVALUATION

SEGMENT: WB 002   SUB: B   REGION: KEN   SURVEY DATE: 5/25/91

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

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

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

SHPO Signature: __________________________ Date: __________________________

RECOMMENDATIONS:

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<tr>
<th>TREATMENT REQUIRED (Y or N)</th>
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<td>Spot Washing</td>
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<td>Other</td>
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COMMENTS:
INITIAL: Apply Customblen at locations B, C, and F after removing asphalt and high SCR. Avoid dense mussels at locations B and C.

TAG: __________________________________________________________

FOSC: __________________________________________________________

TAG APPROVAL DATE: __________________________ FOSC APPROVAL DATE: __________________________

ADEC __________________________ FOSC __________________________

EXXON __________________________

USCG __________________________

NOAA __________________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.
ADEC  
NAME: Steve Ferguson  
SIGNATURE: [Signature]

☐ NTR  ☑ TREATMENT RECOMMENDED

This small cove will be a long time before natural elements will effectively break down the AP/SOR. I do recommend treatment. Manual removal of AP/LH SOR at sites A, B, C, D, and E.

EXXON  
NAME: George L. Stiles  
SIGNATURE: [Signature]

☐ NTR

The majority of oil remaining is located in the 6-18' tide zone over a spread of discontinuous AP/SOR patches.

LANDMANAGER  
NAME: Pat Haren  
OF: R. Beahan  
SIGNATURE: [Signature]

☐ NTR  ☑ TREATMENT RECOMMENDED

Recommend manual pickup of AP, TB, SOR in sites A, B, C, D, E, F, K, on OG sketch map.

USCG/NOAA  
NAME: [Signature]  
SIGNATURE: [Signature]

☐ NTR  ☑ TREATMENT RECOMMENDED

Treatment recommended. Found several hundred yards of AP (see O/A 5 Sep) heavy, high % at plume - manual only.

Donald W. McCullough
**Survey Details**

**Surveyed From:**
- Foot
- Boat

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

**Surveyed To:**
- Helo

**Total Length Shoreline Surveyed:** 321 m

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

**EST. Oil Category Length:**
- W 0 m
- M 25 m
- H 0 m
- VL 81 m
- NO 0 m
- U8 781 m

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<th>MS</th>
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**Distribution:**
- C = 81-100%
- B = 61-80%
- P = 41-60%
- G = 1-40%
- T = <1%

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

**Photo Roll:**
- May 25

**Frames:**
- 9-1

**OG Comments:**

- No pits - Fine sediments beneath ooze.
- Locations B, C, D are adjacent at the same tide height; however concentrations vary by location.
- No color patches of discontinuous AP/502 found in location.
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4
SEGMENT #: WBOO 2
SUBDIVISION: B
SEA STATE: FLAT

TIDAL HEIGHT (Range): +3.5 to +2.8
WIND SPEED/DIRECTION: 

PHOTOGRAPHS: ROLL # FRAME #

COMMENTS/observATIONS (to be completed in oiled subdivisions only):
A - COBBLE - Boulders in MITZ/HiTE W/ SPARCE MUSSELS, BARNACLES; ABUNDANT LITTORENS
B - DENSE MYTILUS, FOCUS, Enteromorpha, LITTORENS
C - DENSE BARNACLES (2 spp.); MODERATE LITTORENS, BUT VERY DENSE IN SMALL AREAS; MODERATELY DENSE MUSSELS; FOCUS
G - DENSE MYTILUS, LITTORENS; FOCUS. BARNACLES MOSTLY HIGHER UP
H - DENSE MYTILUS, LITTORENS, BARNACLES, FOCUS
J - PHYTOMUS, LITTORENS, BARNACLES; SPARSE FOCUS
L - DENSE BARNACLES, LOCALLY DENSE LITTORENS, MUSSELS, FOCUS

GENERAL COMMENTS:
NO LOWER INTERTIDAL ZONE OBSERVATIONS COULD BE MADE. INTEGMENTAL
BIOTA IN MIDDLE AND UPPER ZONES APPEAR HEALTHY AND THRIVING.
THIS SUBDIVISION INCLUDES A SMALL SHELTERED BAY WHICH CONTAINS
AN EXTENSIVE MUD/SAND FLAT WITH A DIVERSE INFAUNA INCLUDING
POLychaete worms, Peanut Worms, and a variety of BIVALVES
INCLUDING EDIBLE SPECIES. TIDE WAS SUBOPTIMAL FOR OBSERVATION.
HERE BUT THE FOLLOWING BIVALVES WERE NOTED:
LITTLE-NECK CLAM (Protolase Staminea)
HEART COXLE (Climacodura nuttalii)
BUTTER CLAM (Saxidomus Giganteus)
LAKES-Nose CLAM (Macoma Nubila)

AN CONTEMPLATED CLEAN-UP ACTIVITIES SHOULD AVOID THESE SHELLFISH BIRDS

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

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Shoreline subdivision map showing important biological features attached.

REVIEWED: MC 5/30
1991 MAYSAP EVALUATION

SEGMENT: WB 002 SUB: C REGION: KEN SURVEY DATE: 5/27/91

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

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

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

SHPO Signature: __________________________ Date: __________________________

RECOMMENDATIONS:

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<td>Other</td>
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</table>

COMMENTS:
INITIAL: ___________________________________________________ 

TAG: 

FOSC: ___________________________________________________

TAG APPROVAL DATE: ____________ FOSC APPROVAL DATE: ____________

ADEC __________________________ FOSC __________________________

EXXON __________________________

USCG __________________________

NOAA __________________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

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

TEAM NO. 4 SEGMENT WB-002 SUBDIVISION C DATE 5/27/91

ADEC NAME Steve Ferguson SIGNATURE

☐ NTR ☑ TREATMENT RECOMMENDED
MANUAL REMOVAL OF SOR-H (50%) AT SITE B ON THE SKETCH MAP. ALSO RECOMMEND REMOVAL OF SOR-H AT SITES I AND K. DUE TO THE LOCATION (UPPER INTERTIDAL) VERY LITTLE NATURAL EROSION IS TAKING PLACE, AND MOST ALL OF THE OIL PREVIOUSLY OBSERVED WAS REMOVED BY MANUAL MEANS.

EXXON NAME George F. Stines SIGNATURE George R. Stines 5/27/91

☐ NTR The soil covering is located in the US tidal zone where above the waterline. It is a weathered state and if removed it is for cosmetic reasons only.

LANDMANAGER NAME Pat Homer OF Rathbun SIGNATURE Pat M. Homer

☐ NTR ☑ Treatment recommended.
MANUAL PICKUP OF OIL ON SITES B, D, E, G, I, J, K. ON THE DG SKETCH MAP. THE MAJORITY OF THE OIL FOUND WAS EXPOSED AND ACCESSIBLE, AREA WAS WORKED IN 1990 THE REMAINING HAS BECOME EXPOSED MAINLY DUE TO THOSE EFFORTS.

USCG/NOAA NAME Retired ABD SIGNATURE

☐ NTR
Some heavy tar deposits with some. This segment is hazardous that if not B is manually work C could be flueless. I feel C is labor extensive with most E's needed to clean. More environmental loss may result.

Juliette McDonald
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SURVEYED FROM: · ~FOOT OaoAT 0HELO

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"P ~ OJlM••··-'

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SUBDIVISION _ _ __

c.......M--.

DATE ~I..J:d./91

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Maysap Biological Summary Form

Team: 4  Date: 25 May 91
Segment: WB002  Tidal Height (Range): +2.75 to +3.1
Subdivision: C  Biologist: Jim Roth
Sea State: Flat  Wind Speed/Direction

Photographs: Roll:  Frame:

Comments/Observations (to be completed in oiled subdivisions only):
A - (Surveyed from skiff) - Dense Barnacles, Locally Dense Mussels
B - C - D - Boulder Talus w/moderate to locally dense mussels, dense barnacles, sparse littorines, Fucus
E - Boulders w/ dense Fucus, moderately dense barnacles, locally dense mussels, littorines; abundant limpets.
F - Boulder/Cobble, w/ dense Fucus, locally dense mussels, barnacles; abundant littorines
G - Boulder/Cobble, w/ moderately dense Fucus, barnacles, locally dense mussels, littorines.
H - L - Boulder/Cobble, w/ moderate to dense barnacles (a few dead w/oil-stained shells, most alive); mussels, littorines, limpets, (primarily Notacema Scutum, but also some N. Pernosa).

General Comments: No lower intertidal observations could be made. Intertidal biota in the subdivision appear to be healthy and thriving. Evidence was found of recent recruitment in Barnacles, Fucus.

Wildlife Observations
To be completed in all subdivisions

<table>
<thead>
<tr>
<th>Birds</th>
<th># of Species</th>
<th>Total Birds</th>
<th>Fish Observed</th>
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</thead>
<tbody>
<tr>
<td>Eagles</td>
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<td>Seabirds</td>
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<td>Waterfowl</td>
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<td>Gulls/Kittiwake</td>
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<td>6</td>
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<tr>
<td>Shorebirds</td>
<td></td>
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<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>
</tr>
</thead>
<tbody>
<tr>
<td>Sea Otters</td>
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<td>Pinnipeds (specify)</td>
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<td>Seals (specify)</td>
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</table>

Shoreline subdivision map showing important biological features attached.

Reviewed: ME 5/30/91
Subdivision Field Map

Map Key: KENOB002C

Name: TRIMM

Date: 25-MAY-91

Date Entered:

--- SURFACE OIL CATEGORY MAP ---

REVISED: MG 5/12/91 5:30 PM

XXX

Wide

/ / / /

Medium

---

Narrow

TTTT

Very Light

0000

No Oil

AK State Plane Zone E

NOBOOZ

D

C

B

45m

N

H.I. 1 1 C

23m

1 (E)

25m

1 (C)
1991 MAYSAP EVALUATION


ENVIRONMENTAL SENSITIVITIES:
Work Window(s) OPEN

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

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

SHPO Signature: __________________________ Date: ________________

RECOMMENDATIONS:

<table>
<thead>
<tr>
<th>TREATMENT REQUIRED (Y or N)</th>
<th>INITIAL</th>
<th>TAG</th>
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<tbody>
<tr>
<td>Manual Pickup (Check as Req.)</td>
<td>N</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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COMMENTS:
INITIAL:


TAG:


FOSC:


TAG APPROVAL DATE: __________  FOSC APPROVAL DATE: ___________

ADEC________________________  FOSC _______________________

EXXON________________________

USCG________________________

NOAA________________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

TEAM NO. 4  SEGMENT WB-002  SUBDIVISION E  DATE 5/17/91

ADEC
NAME Steve Ferguson  SIGNATURE Steve Ferguson

TREATMENT RECOMMENDED

☑ NTR  NO TREATMENT RECOMMENDED. All oiling observed with the exception of CU/CT/ST were picked up during survey.

EXXON
NAME George L. Styles  SIGNATURE George L. Styles  5/17/91

☑ NTR  A few tar patties and MS in some of the boulders and cobbles were retrieved. Very little oil remaining.

LANDMANAGER
NAME  PET NAME OF PET (obi)  SIGNATURE

☑ NTR  Exposed oil that was found was picked up while surveying.

USCG/NOAA
NAME  SIGNATURE

☑ NTR  Some scattered AP, RACER, and SPAT found and picked up.
MAYSAP SHORELINE OILING SUMMARY

TEAM NO. 4
EXxon George Styles

TIME 16:43 to 17:25
TIDE LEVEL 6.38 ft. to 4.85 ft.
ENERGY LEVEL: L

SURVEYED FROM: FOOT
WEATHER: RAIN
TOTAL LENGTH SHORELINE SURVEYED: 271 m
NEAR SHORE SHEEN: SL
EST. OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 14 m NO 257 m US 0 m

<table>
<thead>
<tr>
<th>LOC</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT SHORE SLOPE</th>
<th>AREA</th>
<th>ZONE</th>
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<td>V H M L</td>
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DISTRIBUTION: C = 91-100%; B = 81-90%; P = 71-80%; S = 1-10%; T = <1%
SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE

OG COMMENTS:
- No Pits, No Past Subsurface Oil History, Very Fine Sediments Under Boil-off Veneer
- Very Little Oiling Remains

Reviewed: MC 5/28/91
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4 DATE 26 MAY '91
SEGMENT # WB-002 TIDAL HEIGHT (Range) 5.75 to 3.0
SUBDIVISION F BIOLOGIST Jim Roth
SEA STATE Flat WIND SPEED/DIRECTION
PHOTOGRAPHS: ROLL # FRAME #

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):
A - Small cave in Hitz Bedrock w/ moderately dense Barnacles
B - Hitz Bedrock w/ moderate Barnacles, scarce Littorines
C - Hitz Bedrock w/ moderately dense Barnacles, Littorines

General Comments: A fairly sheltered boulder + talus shelf with a healthy and thriving intertidal biota. Middle tidal boulders have a dense cover of Fucus with typical animal associates: Mussels, Barnacles, Limpets, and Littorines. Fucus density increases toward the west end of the subdivision, which is more exposed than the east.

At the east end a gravel-pebble beach with moderate Fucus, Barnacles and Barnacles, scarce mussels, surrounds the mouth of a small stream. Observed oil characters occur in the Hitz, just above the Fucus Zone.

WATERFOWL OBSERVED: Lesser Scua, 100
Cormorant, 2
Gulls, 24

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
<thead>
<tr>
<th>BIRDS</th>
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<th>MARINE MAMMALS</th>
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<tr>
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</table>

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

SEGMENT: WB 002  SUB: D  REGION: KEN  SURVEY DATE: 5/25/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) OPEN

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

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

SHPO Signature: ___________________________ Date: __________________

RECOMMENDATIONS:

TREATMENT REQUIRED (Y or N)  INITIAL  TAG  FOSC

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

COMMENTS:

TAG: ___________________________ Date: __________________

FOSC: ___________________________

TAG APPROVAL DATE: ______  FOSC APPROVAL DATE: ______

ADEC ___________________________ FOSC ___________________________

EXXON ___________________________

USCG ___________________________

NOAA ___________________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.
ADEC
NAME: Steve Ferguson Signature: [Signature]

☐ NTR ☑ TREATMENT RECOMMENDED

MANUAL REMOVAL OF SOR AT SITES A, C, AND D. THE SOR FOUND AT THESE SITES ARE VERY SMALL BOULDERS/COBBLES AND THE OIL IS LOCATED UNDER THEM AND IN THE INTERSTITIAL AREAS. ALSO RECOMMEND MANUAL REMOVAL OF MS/SOR. H AT SITE F. THERE ARE PLENTY OF OPEN AREAS BETWEEN THE BOULDERS IN SITE F WHERE OIL IS DEPOSITED THAT IT SHOULD BE EASILY REMOVED.

EXXON
NAME: George L. Stiles Signature: [Signature] Date: 5/24/91

☐ NTR

Several areas of SOR and MS exist throughout this segment. See OG map.

LANDMANAGER
NAME: Pat Jordan Of: [Office] Signature: [Signature]

☐ NTR ☑ TREATMENT RECOMMENDED. MANUAL PICKUP OF OIL AS SHOWN ON OG SKETCH MAP ON SITE A, C, D, AND F. The MS, SOR, and H EXPOSED IN A MAJORITY OF THE Sites IN THIS SEGMENT. THE CONTINUED DAMAGE TO SUBSURFACE RESOURCES WILL BE MITIGATED WITH ADDITIONAL MANUAL WORK IN THIS AREA.

USCG/NOAA
NAME: [Signature] Signature: [Signature]

☒ NTR

Some subsurface, OR - weathered
Morne is visible and AP being
at sites. Possible sheen on the site. if
Characteristics warrant, otherwise, no manual
treatment. VECO picked up much of what
was spotted.
**MAYSAP-4 (77) - 9**

**Frames 22, 27**

**OG Comments:**
- It is possible that oiling in Location I has bleed off could bleed down to Location H.
- Mousse is generally found in the 'socket' on the underside of a surface cobble or boulder.
- Snow is found underneath or between surface armor.
- Mud is discontinuous in Location F (or 2% of 2-3 cm area).
HAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4  DATE 25 MAY '91
SEGMENT # W8002  TIDAL HEIGHT (Range) +3.2 to +4.2
SUBDIVISION D  BIOLOGIST Jim Roth
SEA STATE Flat  WIND SPEED/DIRECTION

PHOTOGRAPHS: ROLL # FRAME #

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):
A - High MUIZ/LOWER HITE Boulders w/ dense Barnacles, Small Mussels, Abundant Littorines
B - Bedrock cliff in HITE - NO INTERTIDAL FAUNA
C - MUIZ/HITE Boulders w/ dense Barnacles, Mussels; Abundant Littorines and Limpets
D - Gravel w/ dense Mussel Bed
E - Boulders w/ dense Fucus, locally dense Mussels, Barnacles; Abundant Littorines
F - Boulders w/ mol. Fucus, locally dense Mussels, Barnacles; Abundant Littorines, Limpets
G - No Intertidal Biota (Superficial)
H, I - Boulders w/ thin Patina of Green Algae, Moderately Dense Barnacles, Littorines
J - Boulders w/ sparse Barnacles, Littorines
K - Boulders w/ sparse to moderate Barnacles, Mussels, and Littorines

GENERAL COMMENTS: NO LOWER INTERTIDAL OBSERVATIONS COULD BE MADE. INTERTIDAL BIOTA IN THIS SUBDIVISION APPEARS TO BE HEALTHY, WITH RECENT RECRUITMENT IN MUSSELS, LITTORINES. WATERFOWL OBSERVED WAS A RAFT OF LESSER SCAP

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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<tr>
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<td>Salmon Fry</td>
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<td>Pinnipeds(specify)</td>
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<tr>
<td>Whales(specify)</td>
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<th>LAND MAMMALS</th>
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<th>SPECIES</th>
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</table>

Shoreline subdivision map showing important biological features attached.

Reviewed: MC 5/30/91
1991 MAYSAP EVALUATION


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

Ecological/Constraints (see page two for details)  Eagle nest, fish harvest area

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

SHPO Signature: ______________________ Date: ____________________

RECOMMENDATIONS:

<table>
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<tr>
<th>TREATMENT REQUIRED (Y or N)</th>
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<tr>
<td>Manual Pickup (Check as Req.)</td>
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COMMENTS:

INITIAL: ___________________________________________________

TAG: _________________________________________________________

FOSC: _______________________________________________________

TAG APPROVAL DATE: ________________  FOSC APPROVAL DATE: ________________

ADEC ____________________  FOSC ____________________

EXXON ____________________

USCG ____________________

NOAA ____________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.
MANUAL REMOVAL OF SORB. AT SITES # A1 AND # A3 ON SKETCH MAP. ALSO RECOMMEND MANUAL REMOVAL OF THE SUBSURFACE LENS AT SITES # B4 AND # B5. WORK TIME TO ACCOMPLISH THIS CLEAN-UP IS MINIMAL AND WOULD GREATLY HELP OUT ENVIRONMENTAL AREA.

Several areas of MS and 502 were found while surveying. The major areas were piped up.

Treatment recommended for manual pickup of oil on sites B4, B5, B6. Also additional work can be done on areas marked with the [DU] symbol. Also sites A2 - A3 need manual removal of sorb. The removal of a portion of the remaining oil in this area will greatly reduce the existing and continued damage to the eco system in this area of windy bay.

Some surface mousse. Further removal of submerged cause - mass environment harm than good.

While general would cause short term environmental damage, including mobilization of the oil components, however this would probably quickly move through colonies from adjacent areas. It is questionable whether the amount of oil remaining in the segment would have a long term environmental impact which need to be removed.
**OG 13 Ta.m**  
**ADEC S. Forgue**  
**LANDMANAGER P. Norman**  
**USCO/NOAA MacKenna/Duff**  

**DATE** May 25, 1981  
**TIME** 15:35 to 17:15  
**TIDE LEVEL** 6.92 ft. to 3.61 ft.  
**ENERGY LEVEL**  
- **H M L**  

**SURVEYED FROM:**  
- **FOOT**  
- **BOAT**  
- **HELICOPTER**  

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

**TOTAL LENGTH** 433 m  
**NEAR SHORE SHEEN:**  
- **BR**  
- **RB**  
- **SL**  
- **NONE**  

**EST. OIL CATEGORY LENGTH:**  
- W 0 m  
- M 40 m  
- N 21 m  
- VL 102 m  
- NO 27 m  

**DISTRIBUTION:**  
- **C = 0-10%**  
- **B = 11-50%**  
- **P = 51-80%**  
- **S = 81-99%**  
- **T < 1%**  

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

**PHOTO ROLL # MAYAP-4 (38)**  
**FRAMES 2-7**

### SURFACE OIL CHARACTER

<table>
<thead>
<tr>
<th>LOC</th>
<th>AP</th>
<th>MS</th>
<th>TB</th>
<th>SOR</th>
<th>CV</th>
<th>CT</th>
<th>ST</th>
<th>FL</th>
<th>DB</th>
<th>NO</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT TYPE</th>
<th>SHORE SLOPE</th>
<th>WIDTH</th>
<th>AREA</th>
<th>LENGTH</th>
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</tbody>
</table>

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

**NOTES:**
- **HUG SOx WAVE BETWEEN BOUNDERS**
- **HUG SOX WAVE BETWEEN BOUNDERS**
- **WAVE UNDER BOUNDERS/ROUGH CREST**
- **MED SOX UNDER BETWEEN BOUNDERS**
- **LIT MEN SOX WAVE BETWEEN BOUNDERS**
- **MED SOX WAVE BETWEEN BOUNDERS**
- **MED SOX UNDER BETWEEN BOUNDERS**
- **MED SOX UNDER BETWEEN BOUNDERS**

**DISTRIBUTION:**
- **C = 0-10%**
- **B = 11-50%**
- **P = 51-80%**
- **S = 81-99%**
- **T < 1%**

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

**PHOTO ROLL # MAYAP-4 (38)**
**FRAMES 2-7**

### SURFACE OIL CHARACTER

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>SURFACE OIL CHARACTER</th>
<th>OILED ZONE</th>
<th>CLEAN BELOW</th>
<th>SHEEN COLOR</th>
<th>PIT</th>
<th>SURFACE SEDIMENT TYPE</th>
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</tbody>
</table>

**OG COMMENTS:**
1. The mor found in Location B4 occurs where SOR is greater than 5cm on occasion where clean pebbles - gravel covered the SOR. New mor.
2. Locations B1, B2, B4, B5 are generally on the same tide height. The SOR is deposited between & beneath the surface armor. The SOR is discontinuous - NOT a continuous band - but discrete 20cm² patches.
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4
SEGMENT # WB002- SUBDIVISION A
SEA STATE FLAT PHOTOGRAPHS: ROLL #

DATE 25 MAY '91 BIOLGIST Jim Booth
TIDAL HEIGHT (Range) + G' to + 3.5'
WIND SPEED/DIRECTION — FRAME #

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

A1 - Cobble/Boulder w/ Moderately Dense Mussels, Littorines, Barnacles
      (incl. spat), No Macroalgae.
A2 - Bedrock w/ Locally Dense, Barnacles, Mussels (most 1" or less), Littorines
      (incl. new recruits), Limpets (primarily n. seatum, but some n. peregra), no macroalgae.
A3 - Bedrock/Boulder w/ Dense Barnacles, Littorines, Limpets, No Macroalgae.
B1 - Boulder w/ Barnacles (C. cariosus & B. glabra), Littorines (L. littorea, L. carinata),
      Limpets.
B2 - M!te Mussel Bed (all < 3/8" love), Dense; Also Dense Barnacles (esp. lot of small limpets, nemertean, beach hoppers, and hermit crabs common under cobble.
B3 - Bedrock w/ Mussels. Oil on and under living mussels - (some must have setton on it or st), Barnacles, Littorines, Limpets.
B4 - Upper M!te Cobble w/ Moderate Mussels, Dense Littorines, Boulder w/
      Dense Barnacles, Sparse, Fucus, Halosaccion.

B5 - Similar to B4.
B6 - Moderately Dense Mussels; Dense Barnacles, Littorines. (oil in m!te)
B7 - Bedrock in M!te/Gravel w/ Barnacles, Littorines, Mussels.
B8 - M!te Gravel/Cobble w/ Dense Mussels, Littorines, Limpets.
B9 - Small Boulder w/ Dense Barnacles, Mussels, Littorines, Limpets. Not much
      Fucus.
B10 - Bedrock w/ Dense Mussels, Barnacles, Fucus.

(SEE ATTACHED SHEET)

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS

<table>
<thead>
<tr>
<th>Eagles</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
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</thead>
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<tr>
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<tr>
<td>Seabirds</td>
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<tr>
<td>Waterfowl</td>
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<td>2</td>
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<tr>
<td>Gulls/Kittiwakes</td>
<td></td>
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<tr>
<td>Shorebirds</td>
<td></td>
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<tr>
<td>Corvids</td>
<td></td>
<td></td>
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<tr>
<td>Other Birds</td>
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</table>

FISH OBSERVED SPECIES PRESENT

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<th>Eagles</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
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<tr>
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<td>Other Birds</td>
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LAND MAMMALS

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

MAY MAP OF SUBDIVISIONS SHOWING IMPORTANT BIOLOGICAL FEATURES ATTACHED.

Reviewed: MC 5/30/91
**General Comments:**

Intertidal biota in this subdivision appear healthy and thriving. New recruitment in all of the most abundant mith groups (mussels, barnacles, littorines, limpets) was noted. Subdivision was visited on a +3.5 ft tide, so no observations on the LITZ were possible. For this reason the total number of species observed was limited. However, a few mith tide pools occurred in bedrock outcroppings, and these contained two anemone species (Anthopleura xanthogrammica and A. artemisia), as well as coralline algae, hermit crabs, tidepool gobies, and several species of algae.
1991 MAYSAP EVALUATION

SEGMENT: WB 002 SUB: D REGION: KEN SURVEY DATE: 5/25/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) OPEN

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

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

SHPO Signature: Timothy Church Date: 6/03/91

RECOMMENDATIONS:

TREATMENT REQUIRED (Y or N) N

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

COMMENTS:

INITIAL: ___________________________________________

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

FOSC: __________________________________________________

TAG APPROVAL DATE: MAY 31 1991 FOSC APPROVAL DATE: 6/3/91

ADEC
EXXON
USCG
NOAA

The State will evaluate the need for treatment on this submission.
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.
TEAM NO. 4 \ SEGMENT 406-002 \ SUBDIVISION P \ DATE 12/29/91

ADEC NAME: Steve Ferguson \ SIGNATURE: [Signature]

☐ NTR \ TREATMENT RECOMMENDED

MANUAL REMOVAL OF SOR AT SITES A, C, AND D. THE STRAND FOUND AT THESE SITES ARE VERY SMALL BOULDERS/COBBLIES AND THE OIL IS LOCATED UNDER THEM AND IN THE INTERSTITIAL AREAS. ALSO RECOMMEND MANUAL REMOVAL OF MS/SOR AT SITE F. THERE ARE PLENTY OF OPEN AREAS BETWEEN THE BOULDERS IN SITE F WHERE OIL IS DEPOSITED THAT IT COULD BE EASILY REMOVED.

EXXON NAME: George S. St. Croix \ SIGNATURE: [Signature] \ Date: 1/29/91

☐ NTR \ Several cases of SOR & MS exist throughout the segment. See 06 map.

LANDMANAGER NAME: Ft. Wayne OF Post, Graham \ SIGNATURE: [Signature]

☐ NTR \ TREATMENT RECOMMENDED. MANUAL PICKUP OF OIL AS SHOWN ON OG SKETCH MAP ON SITE A, C, THEN I. THE MS, SOR, H IS EXPOSED IN A MAJORITY OF THE SITES IN THIS SEGMENT. THE CONTINUED DAMAGE TO SUBSTANCE RESOURCES WILL BE MITIGATED WITH ADDITIONAL MANUAL WORK IN THIS AREA.

USCG/NOAA NAME: [Signature] \ SIGNATURE: [Signature]

☐ NTR \ Some subsurface SOR – weathered

Moisture in sediment, last 1/4 heavy at site. Possible bioremediation site if characterization warrant, otherwise – no manual treatment. VEJO picked up much of what was spilled.

[Signature]
**MAYSAP SHORELINE OILING SUMMARY**

**SEGMENT**: W3E22

**DATE**: May 25, 1981

**TIME**: 19:11 to 19:56

**TIDE LEVEL**: 3.09 ft. to 4.22 ft.

**ENERGY LEVEL**: ⊠H ⊠M ⊠L

**WEATHER**: ☀️SUN ❄️CLOUDS ☁️FOG ☔️RAIN ❄️SNOW

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

**TOTAL LENGTH SHORELINE SURVEYED**: 852 m

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

**EST. OIL CATEGORY LENGTH**: W 0 m M 0 m N 32 m VL +138 m NO 90 m US 0 m

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### Surface Oil Character

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<tr>
<th>L</th>
<th>C</th>
<th>AP</th>
<th>MS</th>
<th>TB</th>
<th>SHORE \ SEDIMENT \ TYPE</th>
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<th>H • HIGH ANGLE</th>
<th>M • MEDIUM ANGLE</th>
<th>L • LOW ANGLE</th>
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<th>TOTAL \ FRAMES</th>
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<td>B</td>
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<td>HYDROSOR</td>
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**OG COMMENTS:**

- IT IS POSSIBLE THAT OILING IN LOCATION I WAS BLEED OR COULD BLEED DOWN TO LOCATION H.
- MOSSAGE IS GENERALLY FOUND IN THE 'SOCKET' ON THE UNDERSIDE OF A SURFACE COBBLE OR BOVLED
- 50% IS FOUND UNDERNEATH OR BETWEEN SURFACE ARMOR
- 10% IS DISCONTINUOUS IN LOCATION 'F' (BEHIND 2-30M AREA).
TEAM # 4  DATE 25 MAY '91

SEGMENT # W8002

SUBDIVISION D

SEA STATE FLAT

BIOLIST JIM ROTH

PHOTOGRAPHS: ROLL # FRAME #

TIDAL HEIGHT (Range) +3.2 to +4.2

WIND SPEED/DIRECTION

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

- A - HIGH MIGHT/LOWER HITE Boulders w/ DENSE BARNACLES, SMALL MUSSELS, ABUNDANT LITTORINES.
- B - BEDROC CLIFF IN HITE - NO INTERTIDAL FAUNA.
- C - MIGHT/HITE Boulders w/ DENSE BARNACLES, MUSSELS; ABUNDANT LITTORINES AND LIMPETS.
- D - GRAVEL w/ DENSE MUSSEL BED
- E - BOULDER w/ DENSE FOCUS, LOCALLY DENSE MUSSELS, BARNACLES; ABUNDANT LITTORINES.
- F - BOULDER w/ MOD. FOCUS, LOCALLY DENSE MUSSELS, BARNACLES; ABUNDANT LITTORINES, LIMPETS.
- G - NO INTERTIDAL BIOTA (SUPRATIDAL)
- H, I - BOULDER w/ THIN PATINA OF GREEN ALGAE, MODERATELY DENSE BARNACLES, LITTORINES
- J - BOULDER w/ SPARSE BARNACLES, LITTORINES.
- K - BOULDER w/ SPARSE TO MODERATE BARNACLES, MUSSELS, AND LITTORINES.

GENERAL COMMENTS: NO LOWER INTERTIDAL OBSERVATIONS COULD BE MADE. INTERTIDAL BIOTA IN THIS SUBDIVISION APPEARS TO BE HEALTHY, WITH RECENT RECRUITMENT IN MUSSELS, LITTORINES. WATERFOWL OBSERVED WAS A RAFT OF LESSER SCROA.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS | # OF SPECIES | TOTAL BIRDS | FISH OBSERVED | SPECIES PRESENT
--- | --- | --- | --- | ---
Eagles | | | | SALMON FRY
Seabirds | | | | 
Waterfowl | 1 | 100 | |
Gulls/Kittiwakes | | | | 
Shorebirds | | | | 
Corvids | | | | 
Other Birds | | | | 

MARINE MAMMALS | # OBSERVED | SPECIES | # OBSERVED
--- | --- | --- | ---
Sea Otters | | | | 
Pinnipeds(specify) | | | | 

LAND MAMMALS

Shoreline subdivision map showing important biological features attached.

REVIEWED: MC 5/30/91
1991 MAYSAP EVALUATION


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

Ecological/Constraints (see page two for details)  Eagle nest, fish harvest area

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

SHPO Signature:  
Date:  

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/Customblen  
Other  
Other

COMMENTS:

INITIAL:  

TAG:

FOSC:  

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

ADEC  
EXXON  
USCG  
NOAA

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

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

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

TEAM NO. 4  SEGMENT WB-002  SUBDIVISION A  DATE 5/27/91

ADEC
NAME: Steve Ferguson  SIGNATURE: [Signature]

☐ NTR  ☐ TREATMENT RECOMMENDED

MANUAL REMOVAL OF SOR.H AT SITES #A1 AND #A3 ON
SKETCH MAP, ALSO RECOMMEND MANUAL REMOVAL OF THE SUBSURFACE
LENS AT SITES #B4 AND #B5. WORK TIME TO ACCOMPLISH THIS
CLEAN-UP IS MINIMAL AND WOULD GREATLY HELP OUT ENVIRONMENTAL
AREA.

EXXON
NAME: George P. Stiles  SIGNATURE: [Signature]

☐ NTR

 Several areas of m5 and 50x were
found while surveying. The major area were picked up.

LANDMANAGER
NAME: Pat Harris  SIGNATURE: [Signature]

☐ NTR  ☐ TREATMENT RECOMMENDED/RECOMMEND MANUAL PICKUP OF OIL
ON SITES B4, B5, B6. ALSO ADDITIONAL WORK CAN BE DONE ON
AREAS MARKED WITH THE Pнее SYMBOL. ALSO SITES A2-A3 NEED
MANUAL REMOVAL OF SOR.H. THE REMOVAL OF A MINORITY OF THE REMAINING
OIL IN THIS AREA WILL GREATLY REDUCE THE EXISTING ON CONTINUED DAMAGE
TO PERMANENCE IN THE AREA OF WINDY HAY.

USCG/NOAA
NAME: [Signature]

☐ NTR

 After subsurface oil cleanup, there is high
% in debris/dunes.
Some surface remains. Future removal
By restricted cause further environmental
Harm then good.

While general would cause short term environmental damage
including mobilizing some of the oil component, however, the area would
possibly quickly recover through colonisation from adjacent areas. It is
questions as to the amount of oil remaining in segment would
cause any long term environmental impact which needs to be evaluated.

[Handwritten notes on the page]
**Survey Details**

- **Survey Date**: May 25, 1981
- **Surveyed Area**: 153 m to 17:15
- **Tide Level**: 6.92 ft. to 3.61 ft.
- **Energy Level**: 
  - H: Heave
  - M: Motion
  - L: Lake

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

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

**Total Length Shorline Surveyed**: 433 m

**Near Shore Sheen**
- BR
- RB
- SL
- None

**Est. Oil Category Length**

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<th>LOC</th>
<th>L</th>
<th>OIL CHARACTER</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT</th>
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<th>WIDTH</th>
<th>AREA</th>
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<td>A10</td>
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<td>B</td>
<td>M</td>
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<td>2</td>
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</table>

**Dissolution**:
- C = 91-100%
- B = 81-90%
- P = 71-80%
- S = 61-70%
- T = <50%

**Subsurface Oil Character**

- **Oil Character**: Various
- **Subsurface Oil Character**: Various

**Oil Character**

- **Depth**: Various
- **Position**: OP
- **Horizon**: MOR
- **Location**: LOR
- **Operator**: TR
- **NOC**: NO

**Surface Oil Character**

- **Character**: Various
- **Subsurface Oil Character**: Various

**Surface Sediment**

- **Type**: Various
- **Slope**: Various
- **Width**: Various
- **Area**: Various
- **Length**: Various

**Subsurface-Surface Sediments**

- **Notes**: Various

**OG Comments**:

- The SOR found in location B4 occurs where SOR is greater than 5 cm. On occasion where clean pebbles - gravel covered the SOR - now more.
- Locations B1, B2, B4, B5 are generally on the same tide height. The SOR is deposited between & beneath the surface armor. The SOR is discontinuous - not a continuous band - but discrete 2.6 cm² (avg) patches.
**MAYSAP BIOLOGICAL SUMMARY FORM**

**TEAM # A**

**SEGMENT # W8002**

**SUBDIVISION A**

**SEA STATE FLAT**

**PHOTOGRAPHS: ROLL #**

**DATE 25 May 91**

**TIDAL HEIGHT (Range): +0' to +3.5'**

**BIOLOGIST Jim Roth**

**WIND SPEED/DIRECTION**

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

**A1 - Cobble/Boulder w/ Moderately dense Mussels, Littorines, Barnacles (incl. spat), no macroalgae.**

**A2 - Bedrock w/ locally dense Barnacles, Mussels (most 1" or less), Littorines (incl. van recent). Limpets (primarily N. Spartum, but some N. Persula), no macroalgae.**

**A3 - Bedrock/Boulder w/ Dense Barnacles, Littorines, Limpets. No Macroalgae.**

**B1 - Boulders w/ Barnacles (C. carosus & B. glabula), Littorines (L. sitkana, L. carinata), Limpets.**

**B2 - Mitz Mussel Bed (all < 3/8" long), dense, also dense Barnacles (esp. lots of small Limpets, N. merideaus, Beachhoppers, and Hermit Crabs common under cobble.**

**B3 - Bedrock w/ Mussels, oil on and under living Mussels— Some must have settled on CT or ST), Barnacles, Littorines, Limpets.**

**B4 - Upper Mitz Cobble w/ Moderate Mussels, Dense Littorines, Boulders w/ dense Barnacles, sparse Fucus, Halosaccion.**

**B5 - similar to B4.**

**B6 - Moderately dense Mussels; dense Barnacles, Littorines. (Oil in mitz)**

**B7 - Bedrock in mitz/mitz w/ Barnacles, Littorines, Mussels.**

**B8 - Mitz Gravel/Cobble w/ dense Mussels, Littorines, Limpets.**

**B9 - Small Boulders w/ dense Barnacles, Mussels, Littorines, Limpets. Not much Fucus.**

**B10 - Bedrock w/ dense Mussels, Barnacles, Fucus.**

(See attached sheet)

**WILDLIFE OBSERVATIONS**

To be completed in all subdivisions

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED</th>
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<tbody>
<tr>
<td>Eagles</td>
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<td>Seabirds</td>
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<td>Waterfowl</td>
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<tr>
<td>Gulls/Kittiwakes</td>
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<tr>
<td>Shorebirds</td>
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<tr>
<td>Corvids</td>
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<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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<tr>
<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.
GENERAL COMMENTS:

Intertidal biota in this subdivision appear healthy and thriving. New recruitment in all of the most abundant mitz groups (mussels, barnacles, littorines, limpets) was noted. Subdivision was visited on a +3.5 ft tide, so no observations on the litz were possible. For this reason the total number of species observed was limited. However, a few mitz tide pools occurred in bedrock outcroppings, and these contained two anemone species (Anthopleura xanthogrammica and A. Artemisia), as well as coralline algae, hermit crabs, tidepool gobies, and several species of algae.
1991 MAYSAP EVALUATION


ENVIRONMENTAL SENSITIVITIES:
Work Window(s) OPEN

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

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

SHPO Signature: Timothy Smith Date: 6/13/91

RECOMMENDATIONS:
TREATMENT REQUIRED (Y or N) N

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

COMMENTS:
INITIAL:

TAG: ___________________________________________________ ___

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

TAG APPROVAL DATE: MAY 31 1991  FOSC APPROVAL DATE: 6/13/91

ADEC  John Bar  FOSC
EXXON  R. M.  FOSC
USCG  E. E. PAGE, CDR, USCG
NOAA  CHIEF OF STAFF, FOSC
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.
ADEC
NAME: Steve Ferguson
□ TREATMENT RECOMMENDED
☐ NO TREATMENT RECOMMENDED. All oiling observed with the exception of CV/CT/ST were picked up during survey

EXXON
NAME: George L. Files
SIGNATURE: George L. Files 5/27/91
□ NTR A few tar patties and 1MS in some of the shoulders and cutblows were retrieved. Very little oil remaining.

LANDMANAGER
NAME: Pat Hoerner
SIGNATURE: Pat Hoerner
□ NTR Exposed oil that was found was picked up while surveying

USCG/NOAA
NAME: [unreadable]
SIGNATURE: [unreadable]
□ NTR Some mention? SP, MRW - found and picked-up

[Signature]
[Signature]
MAYSAP SHORELINE OILING SUMMARY

TEAM NO. 4

DATE MAY 26, 1991

TIME 16:43 to 17:25

TIDE LEVEL 6.38 ft. to 4.85 ft.

ENERGY LEVEL: □ N □ M □ X

SURVEYED FROM: □ FOOT □ BOAT □ HELO

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

TOTAL LENGTH SHORELINE SURVEYED: 27.1 m

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

EST. OIL CATEGORY LENGTH: W □ m M □ m N □ m VL □ m NO □ m US □ m

---

DISTRIBUTION: C = 91-100%; B = 81-90%; P = 71-80%; 8 = 1-10%; T = <1%

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

PHOTO ROLL # MAYSAP-□□□11 FRAMES 5-8

---

OG COMMENTS:
- No Pits, no past subsurface oil history, very fine sediments under boulder veneer
- Very little oiling remains
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4      DATE 26 May '91
SEGMENT # WB-002  TIDAL HEIGHT (Range) +5.75 to +3.0
SUBDIVISION F  BIOLOGIST Jim Roth
SEA STATE Flat  WIND SPEED/DIRECTION
PHOTOGRAPHS: ROLL #  FRAME 

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):
A - SMALL CAVE IN NITE BEDROCK W/MODERATELY DENSE BARNACLES
B - NITE BEDROCK W/MODERATE BARNACLES, SCARCE LITTORINES
C - NITE BEDROCK W/MODERATELY DENSE BARNACLES, LITTORINES

General Comments: A fairly sheltered boulder + talus shore
with a healthy and thriving intertidal biota. Middle -
tidal boulders have a dense cover of Fucus with
TYPICAL ANIMAL ASSOCIATES: MUSSELS, BARNACLES, LIMPETS, AND
LITTORINES. Fucus density increases toward the west end
of the subdivision, which is more exposed than the east.

At the east end a gravel-pebble beach with moderate Fucus cover
and barnacles, sparse mussels, surrounds the mouth of a small
stream. Observed oil characters occur in the NITE,
just above the Fucus zone.

WATERFOWL OBSERVED: LESSER SCAND, 100
        CORMORANT 2
        GULLS  24

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
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<tr>
<td>Waterfowl</td>
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<td>Other Birds</td>
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<th>MARINE MAMMALS</th>
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<th>LAND MAMMALS</th>
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<tr>
<td>Sea Otters</td>
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<tr>
<td>Pinnipeds(specific)</td>
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<tr>
<td>Seals(specific)</td>
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</table>

Shoreline subdivision map showing important biological features attached.
MODERATELY DENSE BARNACLES; SCARCE LITTORINES
A. BARNACLES
B. MODERATELY DENSE BARNACLES; SCARCE LITTORINES
C. MODERATELY DENSE BARNACLES, LITTORINES

Windy Bay
Kenai Peninsula

WBO02-F
Sketch Map
26. May. 91
1643-1725
BIO MAP
ROTH

0 meters

ACERELIPE PEOPLE: GROSSIET
BOULDER TALUS

Bog
1991 MAYSAP EVALUATION

SEGMENT: WB 002  SUB: E  REGION: KEN  SURVEY DATE: 5/25/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) OPEN

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

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

SHPO Signature: _________________________ Date: __________________

RECOMMENDATIONS:

TREATMENT REQUIRED (Y or N)  N

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__________________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.
MANUAL REMOVAL OF SORE AT SITES D. AND E. COLLECTION POINTS OF THE HORIZONTAL BEDROCK WHERE SEDIMENTS HAVE FILLED IN AREAS TO BE PARTICULARLY ADDRESSED DURING CLEAN-UP. I WAS THE MONITOR ON SITE LAST YEAR (90) AND SOME OF THE AREAS WHERE OIL HAS COLLECTED WERE CLEANED THEN. IT APPEARS THAT OIL IS STILL BLEEDING INTO THESE COLLECTION POINTS.

The MS + SORE area located between and underneath the boulder and inched rock cracks. The area of coverage has change but the percentage of MS + SORE are small.

Manual pickup of MS/sores on A, B, D, E, G on NG Sketch map oil is exposed and accessed around the rock edges and horizontal bedrock.

Removal operation would cause short term environmental damage, while the oil remaining on the segment area probably cause little if any long term environmental damage.
MAYSAP SHORELINE OILING SUMMARY

TEAM NO. 4

OG: B. Trim
BIO: J. Roth

ADEC: S. Ferguson
LANDMANAGER: P. Noeman

EXON: G. Stiles
USCG/NOAA: McMillen/McDonald

DATE: May 25, 1991

SEGMENT: W3002
SUBDIVISION: E

TIME: 09:56 to 10:47
TIDE LEVEL: 4.22 ft.
ENERGY LEVEL: H, M, X

SURVEYED FROM: [ ] FOOT [ ] BOAT [ ] HELO
WEATHER: [ ] SUN [ ] CLOUDS [ ] FOG [ ] RAIN [ ] SNOW
NEAR SHORE SHEEN: [ ] BR [ ] RB [ ] SL [ ] NONE

TOTAL LENGTH SHORELINE SURVEYED: 4.99 m
NEAR SHORE SHEEN: [ ] BR [ ] RB [ ] SL [ ] NONE

EST. OIL CATEGORY LENGTH: W: 0 m M: 30 m N: 210 m V: 0 m U: 203 m US: 0 m

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DISTRIBUTION: C = 91-100%; B = 81-90%; P = 11-50%; S = 1-10%; T = <1%

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

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<th>PIT NO.</th>
<th>DEPTH (cm)</th>
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<th>OILED ZONE</th>
<th>CLEAN BELOW H2O LEVEL</th>
<th>SHEEN COLOR</th>
<th>PIT ZONE</th>
<th>SURFACE-SUBSURFACE SEDIMENTS</th>
<th>NOTES</th>
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</table>

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

OG COMMENTS:

1. In location 'C', the crevices in the bedrock have the mousse & sor, coa1, conee & stain whereas the rock face only has coat & stain.

2. On Boulder Armor beaches, the Mousse & Sor are located between & underneath the Boulder Armor.

Reviewed: MC 11/9
Reviewed 10:31 PM A
Team #: 4

Segment #: W 6002

Subdivision: E

Sea State: Flat

Photographs: Roll #:___ Frame #:___

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

A - Much of this oiled band is in Hitz Boulder/Cobble, and has little Intertidal Biota. At east end, oiled zone extends shoreward to top of Mitz, where Fucus, Barnacles, and locally dense Mussels occur.

B - At west end, oiled band intertarts lower Hitz Barnacles and Mussels.

C - Hitz Bedrock/Boulder: Sparse Intertidal Biota - a few Barnacles + Littorines.

D - Much of this oiled band occurs in the Hitz, where has little Intertidal Biota. At east end, oiled zone extends to Mitz, where dense Fucus, Barnacles, Mussels, Littorines, and Limpets were found.

E - Hitz Bedrock/Boulder: Sparse Intertidal Biota - a few Barnacles + Littorines.

F - Hitz Bedrock Face w/Sparse Intertidal Fauna - primarily Lichen (Verucaria).

G - Oil in this band is located in Hitz Boulder/Talus, and is generally above the Fucus/Barnacle/Mussel zone, except at the NW end, where Fucus, and moderately dense Barnacles extend to the oiled zone.

General Comments: No lower Intertidal Observations could be made. Intertidal Biota appears healthy + thriving, including areas in close proximity to oil. Waterfowl observed included Lesser Scapv, Surf Scoters, and 1 unidentified duck species.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
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<tbody>
<tr>
<td>Eagles</td>
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<tr>
<td>Whales(specify)</td>
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</table>

Shoreline subdivision map showing important biological features attached.


Wade 02-E
Sketch Map
25-May-91
1956-2047

Bio Map
Roth

Windy Bay

Verrucaria

Barnacles, Mussels

Fucus; Dense Mussels, Barnacles

Sparse Barnacles, Littorines
(Fucus @ NW End)

Sparse Barnacles, Littorines

Trees

Boulders, B. Talus

B. Talus

Regulatory Marker

B. Talus

Boulder Talus

Fucus; Littorines, Limpets
1991 MAYSAP EVALUATION

SEGMENT: WB 002  SUB: E  REGION: KEN  SURVEY DATE: 5/25/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s) OPEN

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

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

SHPO Signature: __________________________ Date: 6/07/91

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: JUNE 7 1991  FOSC APPROVAL DATE: 6/14/91

ADEC  ________________________________________________________________

EXXON  ________________________________________________________________

USCG  ________________________________________________________________

NOAA  ________________________________________________________________

The staff will evaluate the need to treat this subdivision.
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

**Fish Harvest Area:** Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.
I

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 4 SEGMENT 018-002 SUBDIVISION E DATE 5.12.71

<table>
<thead>
<tr>
<th>ADEC NAME</th>
<th>Steve Ferguson</th>
<th>SIGNATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TREATMENT RECOMMENDED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MANUAL REMOVAL OF SOR-H AT SITES D AND E. COLLECTION POINTS OF THE HORIZONTAL BEDROCK WHERE SEDIMENTS HAVE FILLED IN ARE AREAS TO BE PARTICULARLY ADDRESSED DURING CLEAN-UP. IT WAS THE MONITOR ON SITE LAST YEAR (90) AND SOME OF THE AREAS WHERE OIL HAS COLLECTED WERE CLEANED THEN. IT APPEARS THAT OIL IS STILL BLEEDING INTO THESE COLLECTION POINTS.</td>
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</table>

<table>
<thead>
<tr>
<th>EXXON NAME</th>
<th>George P. Stiles</th>
<th>SIGNATURE George P. Stiles 5.30.71</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTR</td>
<td>The MS &amp; SOR are located between and underneath the boulders and on bedrock crevices. The areas of coverage and extent have changed but the percentage of MS &amp; SOR are small.</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>LANDMANAGER NAME</th>
<th>Pat Power</th>
<th>SIGNATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment recommended. Manual pickup of MS/SOR on, A, B, D, E, G on OG sketchmap. Oil is exposed and accessible around the rock edges and horizontal bedrock.</td>
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<td></td>
</tr>
</tbody>
</table>

| USCG/NOAA NAME | | SIGNATURE |
|----------------|-----------------------------|
| NTR | Moderate AP in crevices and around bedrock and bedrock crevices. Small sheen. Removal operations would further endanger the environmental balance. Removal operation would cause short term environmental damage, while the oil remaining on the segment was possibly cause little if any long term environmental damage. |
**OG COMMENTS:**

1. In location 'C', the crevices in the bedrock have the mouse 1/5 or coat, cover & stain whereas the rock face only has coat & stain.

2. On Boulder Armor beaches, the mouse 1/5 or are located between 1 1/2 underneath the Boulder Armor.
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4
SEGMENT # WB002
SUBDIVISION E

DATE 25 MAY 91
TIDAL HEIGHT (Range) 4.3 to 5.9
BIОLOGIST Jim Roth

SEA STATE FLAT
WIND SPEED/DIRECTION —

PHOTOGRAPHS: ROLL # ___ FRAME # ___

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):
A- Much of this oiled band is in Hitz Boulder/Cobble, and has little
   Intertidal Biota. At east end, oiled zone extends shoreward to
   top of Mitz, where Fucus, Barnacles, and locally dense mussels occur.
B- At west end, oiled band intersects lower Hitz Barnacles and mussels.
C- Hitz Grvis/Beach: Sparse, Intertidal Biota — a few Barnacles +
   Littorines
D- Much of this oiled band occurs in the Hitz, where has little
   Intertidal Biota. At east end, oiled zone extends to Mitz,
   where dense Fucus, Barnacles, Mussels, Littorines, and Limpets were found.
E- Hitz Grvis/Beach: Sparse, Intertidal Biota — a few Barnacles
   + Littorines
F- Hitz Grvis Face, with Sparse Intertidal Fauna — primarily
   Lichen (Verrucaria)
G- Oil in this band is located in Hitz Boulder/Talus, and is generally
   above the Fucus/Barnacle/Mussel zone, except at the NW
   end, where Fucus, and moderately dense Barnacles extend to
   the oiled zone.

GENERAL COMMENTS: No lower intertidal observations could be made.
Intertidal Biota appears healthy and thriving, including areas
in close proximity to oil. Waterfowl observed included
Lesser Scamp, Surf Scoters, and 1 unidentified duck species.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eagles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seabirds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waterfowl</td>
<td>3</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>Gulls/Kittiwakes</td>
<td></td>
<td></td>
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<tr>
<td>Shorebirds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corvids</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Other Birds</td>
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</tbody>
</table>

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

REVIEWED: MC 6/1/91
P: 7/1/91 D: 6/1/91
ASAP TAG REVIEW SHEET

Segment: WBO2  Subd:  Site:  Date
PRE-Review 14 Aug 90

Priority For Addressing In 1990

HIGH       X MEDIUM       LOW       NTR (X None)

Treatment Recommended: MP + BDO

Assistant MGR

Priority Site For Reassessment In 1991

YES NO YES NO YES NO YES NO

CG ADEC EXXON LAND MGR

TAG 15 AUG 90

Manual pickup of AP and materials where accessible (one day max) followed by BIO

Medium Priority
ASAP FOLLOWUP RECOMMENDATIONS

Segment AS/1302 Subd.: C Site: Date: Aug 7 1990

Conditions Observed: Subdivision C of 1302 is on both sides of the dock. It has marine and soft asphalt in a medium concentration. It appears to be under the rock and cobble.

Followup Recommendations: manually pick up the asphalt patches. The majority is concentrated in the middle half lane. With pick up more another application of emulsion may help.

Completed by Pickup Crew: [ ] YES [ ] NO

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

ADEC
Clara S. Crosby
(name)
Clara S. Crosby
(signature)

Comments: Consider this a high priority. In 1990 - significant & consistent land of 1302/1304 should be reseal.

Exxon
Jon Czarnocki
(name)
Jon Czarnocki
(signature)

Comments: There is about 2 days work for a manual pick up. Patches about 7 square yards

USCG
AEC Vandepol
(name)
AEC Vandepol
(signature)

Comments: Recommend frequent (weekly) 6CM east and west of log docks this year.

Land Rep.
Patrick Norman
(name)
Patrick Norman
(signature)

Comments: Assistance getting area (sic) into business

SEGMENT AS I  WB-02  SUBDIVISION: WB-02  SITE: C  DATE: 07 Aug '90

SCG
NAME: AEC Vandepols
SIGNATURE: AEC Vandepols

☑ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON: Band of 172155 extends 60 M east and west of log dock. Recommend manual and bio (input) again this year. Reasses in '91.

ADEC
NAME: Clara Crosby
SIGNATURE: Clara S. Crosby

☑ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON: Work order modification requested for '90. Priority site for reasessment in '91. This Subsegment has a consistent band of MS/AR ranging from surface to subsurface. OP (note photos). The oiling is easily accessible by rolling S/C or using shivel to move S/m C.
High priority for reassessment in '91.

LAND MANAGER
NAME: Patrick Norma
SIGNATURE: Patryk Norman

☑ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON: Requested additionl work on C segment for 1990 st. has exposed and unexposed subsurface oil. The surface oil has to be picked up in 1990 and the segment reassessed to see if anymore subsurface oil has become exposed. Subsistence gathering area.

EXXON
NAME: J. Czarnecki
SIGNATURE: J. Czarnecki

☑ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON: On both sides of the logery dock site is quite a bit of NH/715, and OR. Because of the use of this area it needs to be closed next spring.
ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/302 Subd.: C Site: Date: Aug 8 1990

Conditions Observed: Subdivision C of W007 is on both sides of the dock it has bermite and soft asphalt in a medium concentration. It appears to be under the dock and possibly dirt.

Followup Recommendations: manually pick up the agglomerate patches. The majority is concentrated in the middle half range. Does pick up maybe another applicant if agreed may help.

Completed by Pickup Crew: □ YES □ NO Priority for Addressing in 1990: □ High □ Mod. □ Low

ADEC

Name: Clara S. Crosby
Signature: Clara S. Crosby
Comments: Consider this a high priority for 1990 - significant consistent land of mgmpt, dock. Should be resubmitted.

Exxon

Name: Jon Cambaske
Signature: Jon Camblin
Comments: there is a sand bank, for a sand bar, of manual pick up. Possibly about 1 1/4 bags of sand to pull up.

USCG

Name: AEC Vandepoele
Signature: AEC Vandepoele
Comments: Command parental + firing 60 M east and west of log dockett this year

Land Rep.

Name: Patrick Norman
Signature: Patrick Norman
Comments: subsistence gathering area (snails, bidachies, mussels
## ASAP SHORELINE OILING SUMMARY

**TEAM NO.** 24  
**SEGMENT ASI, WB-52**  
**CG** Exxon Co.,  
**USCG** AEC Van Pelt's  
**SUBDIVISION** C  
**DATE** 07 July 1990  
**TIME** 9:15 to 10:10  
**TIDE LEVEL** -1.75 to -0.3  
**TOTAL NO. SITES** 1

**TOTAL EST LENGTH OF SHORELINE SURVEYED:** 370 m

**SURVEYED FROM:**  
- Foot  
- Boat  
- Helo  
**WEATHER:**  
- Sun  
- Clouds  
- Fog  
- Rain  
- Snow

**OIL CATEGORY LENGTH:**  
- W - m  
- M - 135 m  
- N - m  
- V - 1.255 m  
- US - m

### SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OILED ZONES</th>
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<tbody>
<tr>
<td></td>
<td>/C /B /P /S</td>
<td>SU / UI / MI / LI</td>
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</table>

- ASPHALT  
- S.O.R.  
- POOLED  
- COVER  
- COAT  
- STAIN  
- MOUSSE  
- PATTIES/T.B.  
- FILM  
- NO OIL  
- EST. SITE LENGTH 370 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>OILED INTERVAL</th>
<th>CLEAN BELOW (Y/N)</th>
<th>PIT ZONE</th>
<th>SURFACE-SUBSURFACE SEDIMENTS</th>
</tr>
</thead>
</table>

- No PITS

**COMMENTS**  
There is quite a bit of mousse remaining interstitial to (between) and under large cobbles and boulders. This material would be quite difficult to recover.
"Significant" Oiling

Wide
Medium
Narrow
Very Light
No Oil

Subdivision Field Map
Map Key: KENWB-2C
Name: R. Marky
Date: 11 Aug 1990
Data Entered:

WB-2 C

ADEC Subsegment Length: 520m
METERS

AK State Plane Zone 4 1:3503
nwb-2c
<table>
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<tr>
<th>SEGMENT ID: W089</th>
<th>SUBDIV: C</th>
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</table>
ASAP DATA ENTRY FORM

GENERAL DATA

SEG ID: 1030A SBDV: C SITE: 1 TEAM: 4 DATE: 9/24/90
SITE LGTH 370 OIL CATEGORIES: W M N VL S NO U
1991 REASSESSMENT: USCG: ADEC: LDMGR: EXXON:

SURFACE DATA

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU MI LI

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TIDAL ZONE: SU MI LI
ASAP TAG REVIEW SHEET

Segment: WB02  Subd: P  Site: 1  Date PRE-Review 14 Aug 90

Priority For Addressing In 1990

___ HIGH  ___ MEDIUM  ___ LOW  ___ NTR (None)

Treatment Recommended: WP + BJ0

Asphalt - col. muck

Priority Site For Reassessment In 1991

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

TAG 15 Aug 90

Rebio (Already Sched)  Reassess 91
ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/WB02  Subd:  Date: Aug-8 1990

Conditions Observed: Date of oil about 2-1/2 days ago. Pool of oil on top of the sand. When we cleaned up this time this summer I looked better. There is oil on top and between the fines a little thicker. This shows up underlying on a lens about 1/2 "

Followup Recommendations: Manually remove the oil on top that are caused by the fines. The area

Completed by: YES [ ] NO [ ]

Crew: Enesco

ADEC: Clara S. Crosby [Signature]

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

Comments: Manually remove AP & HSGP within segment.

Exxon: Tom Czarnocki [Signature]

Comments: The APM crew that I have on hand will spend about 7 to 9 hr. on this site before we leave. This team is here between 11 & 12 o'clock. The USGS AEC Vandeveer [Signature]

Comments: We will have our crew work this area while we are here. Approaches in Q. This is one of 2 areas in Thirty Bay where asphalt from bedrock

Land Rep: Patrick Norman [Signature]

Comments: Asphalt and marble layers have been exposed since the crew worked this segment last. Can be picked up with little effort.
FIELD SHORELINE COMMENT SHEET

SEGMENT AS WB-2  SUBDIVISION:  D  SITE: 01  DATE 07 Aug 1990

USCG
NAME AEC Vandepels  SIGNATURE AEC Vandepels

☑ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:  Our crew will work the beach area while we are here. Beg scz 91. This was one of the areas looked at by CDR. Later to use corvex.

ADEC
NAME Clara Crosby  SIGNATURE Clara A Crosby

☑ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:  Work modification request for further work in '90.
Areas of MS & AP remains under easily called B/C.

LAND MANAGER
NAME Patrick Norman  SIGNATURE Patrick J. Norman

☑ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:  Subsurface mussel and relict layers could be exposed over the centre.
Subsistence gathering area, snails, bidarkis, mussels.

EXXON
NAME Jon Carmack  SIGNATURE Jon Carmack

☑ YES  ☐ NO  PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:  This area has sub-surface oil on sand into the bedrock area. Scz had MS + AP we worked this area while here and removed the additional sediments.
ASAP FOLLOWUP RECOMMENDATIONS

Segment: ASW/B012 Subd. : __ Site: __ Date: Aug. 8 1990

Conditions Observed: Into of .11 about 1.5' away, part of
also occur on this segment. While I circled up,
then from this segment, I could see that the repair
there is oil on top and between the moss. A double
the moss is underlying a sawdust about 1' under
thech

Followup Recommendations: Manually remove the oil from
that area caused. Then, inspect the area.

Completed by Pickup Crew: ☐ YES ☐ NO

ADEC Clara S. Crosby (name) Class J. Crosby (signature)

Comments: Manually remove AP & H50E within segment.
Call AEC to access oil/MS/PA sketches when possible
This segment can be worked in conjunction with EIC.

Exxon Tony Greenslade (name) Tony Greenslade (signature)

Comments: The tarmac crew that I have on hand will
spend about 7 days on this site before we move
the two teams in here. Between them it should look
better.

USHQ AEC Vandevel AEC Vandervel (signature)

Comments: We will have our crew work this area
while we are here. Success is 91. This is one
of those in and out of easy solutions for others.

Land Rep. Patrick Norman (name) John Lune (signature)

Comments: Asphalt and moss/turf have been exposed.
Since the crew worked this segment last, can't be picked up
with little effort.
**ASAP SHORELINE OILING SUMMARY**

**TEAM NO:** C4  **SEGMENT AS:** WB-

**OG:** Exxon Jon Czarnecki  **SUBDIVISION:**

**DATE:** 1 Aug 1990  **TIME:** 10:10:10:30  **TIDE LEVEL:** -2 to +0.3

**TOTAL EST LENGTH OF SHORELINE SURVEYED:** 252m  **ROLL NO. 8/11/90**

**SURVEYED FROM:** 2 Foot 4 Boat 2 Helo  **WEATHER:** 2 Sun 2 Clouds 2 Fog 2 Rain 2 Snow

**OIL CATEGORY LENGTH:**
- W - m
- M - 108 m
- N - 44 m
- V - m
- L - m
- US - m

**SURFACE OIL**

<table>
<thead>
<tr>
<th>SITE 1</th>
<th>SITE 2</th>
<th>SITE 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CHARACTER</strong></td>
<td><strong>DISTRIBUTION</strong></td>
<td><strong>OILED ZONES</strong></td>
</tr>
<tr>
<td>ASPHALT</td>
<td>/C /B /P /S</td>
<td>SU UI MI LI</td>
</tr>
<tr>
<td>S.O.R.</td>
<td>/C /B /P /S</td>
<td>SU UI MI LI</td>
</tr>
<tr>
<td>POOLED COVER</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COAT</td>
<td>/C /B /P /S</td>
<td>SU UI MI LI</td>
</tr>
<tr>
<td>STAIN</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>MOUSSE</td>
<td>/C /B /P /S</td>
<td>SU UI MI LI</td>
</tr>
<tr>
<td>PATIES/T.B.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FILM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO OIL</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

**EST. SITE LENGTH:** 275m

**SUBSURFACE OIL**

<table>
<thead>
<tr>
<th>SITE NO</th>
<th>PIT NO</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>CLEAN BELOW (Y/N)</th>
<th>PIT ZONE</th>
<th>SURFACE-SUBSURFACE SEDIMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>18</td>
<td>X</td>
<td>9-17</td>
<td>Y</td>
<td>X</td>
<td>BCP/SGBC</td>
</tr>
</tbody>
</table>

**PHOTOGRAPHS:** ASAP-OV-03  **ROLL NO.:** - CC  **FRAMES:** 5-15

**COMMENTS:**
Major oiling type consists of a mousse pavement which is beginning to solidify into asphalt. This generally occurs between and beneath large cobbles and boulders and does not appear to be easily recoverable.
GENERAL DATA

SEG ID: W8D-2  SBDV: D  SITE: 1  TEAM: 4  DATE: 8/7/90
SITE LGTH 280  OIL CATEGORIES: W M U

SURFACE DATA

CHAR #: 1  OIL CHAR: 10  OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 2  OIL CHAR: 10  OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 3  OIL CHAR: 10  OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 4  OIL CHAR: 10  OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 5  OIL CHAR: 10  OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 6  OIL CHAR: 10  OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 7  OIL CHAR: 10  OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 8  OIL CHAR: 10  OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 9  OIL CHAR: 10  OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 10 OIL CHAR: 10  OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 11 OIL CHAR: 10  OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 12 OIL CHAR: 10  OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 13 OIL CHAR: 10  OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI
# ASAP Data Entry Form

**Subsurface Data**

**Page 2 of 2**

<table>
<thead>
<tr>
<th>Pit #</th>
<th>Pit Depth</th>
<th>Oil Character</th>
<th>Oil Interval: From</th>
<th>To</th>
</tr>
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<tbody>
<tr>
<td>Pit 1</td>
<td>18 cm</td>
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<td>Pit 2</td>
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<tr>
<td>Pit 3</td>
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<tr>
<td>Pit 4</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Pit 5</td>
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<tr>
<td>Pit 6</td>
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<tr>
<td>Pit 7</td>
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<td>Pit 8</td>
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</tr>
<tr>
<td>Pit 14</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Pit 15</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Clean Below:**

- Pit Zone: SU UI MI LI

**Subsurface Sediment:**

- BRK BLD COB PEB GRH SAN MUH VEG

- BRK BLD COB PEB GRH SAN MUH VEG

- BRK BLD COB PEB GRH SAN MUH VEG

- BRK BLD COB PEB GRH SAN MUH VEG

- BRK BLD COB PEB GRH SAN MUH VEG

- BRK BLD COB PEB GRH SAN MUH VEG

- BRK BLD COB PEB GRH SAN MUH VEG

- BRK BLD COB PEB GRH SAN MUH VEG

- BRK BLD COB PEB GRH SAN MUH VEG

- BRK BLD COB PEB GRH SAN MUH VEG

- BRK BLD COB PEB GRH SAN MUH VEG

- BRK BLD COB PEB GRH SAN MUH VEG

- BRK BLD COB PEB GRH SAN MUH VEG
ASAP TAG REVIEW SHEET

Segment: WB02 Subd: Site: Date
PRE-Review

Priority For Addressing In 1990

( ) HIGH  ( ) MEDIUM  ( ) LOW  ( ) NTR

Treatment
Recommended: M/F - J. D.

Asphalt - Soil - Muddles

Priority Site For Reassessment In 1991

YES NO YES NO YES NO YES NO

CG ADEC EXXON LAND MGR

TAB 15 Aug 90

NTR reassess 91
ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/ WBO2  Subd.: E.  Size:  Date: Aug 3, 1980

Conditions Observed: Some oil underlying the lake and
leaching off the surface in small isolated patches.
The oil appears to go to the bottom layer below
and crack up warts as the top layers get removed.

Followup Recommendations: Manually sick up and
explore of ADIT until allowed.

Completed by Pickup Crew: YES NO

ADEC Clark S. Crorey

Comments: Exposed ms & AP recovery - when possible, the crew should
follow: beams if removed work thin segment in conjunction of P.O.

Exxon Tom Crossfield

Comments: Manually remove the small accumulation of
product which is cracking up warts from the
shells.

USCG NEC Vankepol

Comments: Manually remove AP & thin this area.
This is one of 2 areas in curly bay that
silted up from bedrock.

Land Rep. Patrick Norman

Comments: The oil that has become exposed can be picked
up manually by a crew.

Substance Gathering area.
SEGMENT AS 1 SUBDIVISION: E SITE: 01 DATE 07 Aug '90

NAME: AEC Vandepels SIGNATURE: AEC Vandepels

☑️ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON: Found 2 x 4M area of AP/45 on eastern most pocket beach. This was an area looked at by GDR before to use lovech. Recommend removing bio again this year. Western most pocket beach has 5 182M areas of AP/45 that also needs manual

NAME: Clara S. Crosby SIGNATURE: Clara S. Crosby

☑️ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON: Work modification request for further cleanup in '90. High priority site for reassessment in '91. There are pockets of murre remaining under rolled B/C armor.

NAME: Patrick Norman SIGNATURE: Patrick Norman

☑️ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON: Unexposed subsurface oil in E segment should become exposed over the winter and needs to be assessed in '91. Additional work requested on exposed murre layers 8-3-90 also all of E segment is a subsistence gathering area of sea urchin, clams, mussels.

NAME: Joni Czarnecki SIGNATURE: Joni Czarnecki

☑️ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON: This site is one that concern was discussed to remove the oil. It bleeds if we raise warm up until it

REVISION NO. 7/26/90
**ASAP SHORELINE OILING SUMMARY**

**TEAM**

- ESSO
- Exxon

**SEGMENT**

- AS

**SUBDIVISION**

- B

**DATE**

- 07 Aug 1990

**TIME**

- 10:30

**TIDE LEVEL**

- +0.31

**WEATHER**

- Sun
- Clouds
- Fog
- Rain
- Snow

**OIL CATEGORY**

- W
- M
- N
- V
- L

**SURFACE OIL CHARACTER DISTRIBUTION**

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

**SUBSURFACE OIL**

<table>
<thead>
<tr>
<th>SITE NO.</th>
<th>PIT NO.</th>
<th>OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>CLEAN BELOW</th>
<th>PIT ZONE</th>
<th>SUBSURFACE SEDIMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

**COMMENTS**

Most of the remaining oil consists of a mousse which is solidifying to asphalt. This oil is found beneath cobbles, boulders and rubble and has associated S.O.R. The remaining oil will not be easily recovered.

**ROLL NO.**

- ASAP 04-03

**FRAMES**

- 16-24
AP-MS/TS-BT-PT/P beneath boulders and on surface

ST-CV/BC on boulders

POLs in crevices

in a 3 m wide band - width ranges from 1-2 m

SOR/P
AP-MS/P/I-U in a 1-2 m wide band

SITE 1 (Part)

H2O

1ST-CV/P on B
POLs in crevices
APS beneath B and around (10%)

LEGEND
1 A
Pt. - No Substrata Cell

2 A
Pt. - Substrata Cell

C/T/C
Coral-Fractured Clast

C/T/0
Coral

Vary (Distinctive in C/T/C)

Red Vegetation

Water bodies

100 m
Subdivision Field Map
Map Key: KENWB-2E
Name: R. Marty
Date: 11 Aug 1990
Data Entered:

Wide
Medium
Narrow
Very Light
No Oil

ADEC Subsegment Length: 449m
METERS

0 101 202

AK State Plane Zone A 1:3103

WDX

WB-2 E
ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/WB02 Subd: E. Site: ________ Date: Aug 5 1990

Conditions Observed: Some oil is under the rocks near 
the surface in small pocket pools. 
the oil appears to go to the seafloor, begins 
and creeps up onto the top layer gets removed

Followup Recommendations: manu (

Completed by Pickup Crew: YES NO Priority for Addressing in 1990: High Mod. Low

ADEC Class E Crosby
(name) (signature)

Comments: Exposed as AP recovery. When possible, the crew should 
follow seams & remove.

Exxon Jon Czarnecki
(name) (signature)

Comments: Manually remove the small contributories of 
swell which is reaching up waves and the 
seabed.

USCG AEC Vandegole
(name) (signature)

Comments: Manually remove the small that is being produced
This is one of those trips to Windy Bay that
adversely from seabed.

Land Rep. Patrick Norman
(name) (signature)

Comments: The oil that has become exposed can be picked 
up manually by a crew.

substance gathering area
ASAP DATA ENTRY FORM

GENERAL DATA

SITE LGTH: 340'  OIL CATEGORIES: W  M  N  S  VL  NO  U  RM  8/11/91

SURFACE DATA

CHAR #: 1  OIL CHAR: AP  OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 2  OIL CHAR: SO  OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 3  OIL CHAR: MS  OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 4  OIL CHAR: ND  OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 5  OIL CHAR:  OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 6  OIL CHAR:  OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 7  OIL CHAR:  OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 8  OIL CHAR:  OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 9  OIL CHAR:  OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 10  OIL CHAR:  OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 11  OIL CHAR:  OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 12  OIL CHAR:  OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 13  OIL CHAR:  OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 14  OIL CHAR:  OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 15  OIL CHAR:  OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 16  OIL CHAR:  OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI
ASAP DATA ENTRY FORM

SUBSURFACE DATA

SEGMENT ID: WBD02 SUBDIV: C SITE: 1

PIT # 0 PIT DEPTH C OIL CHARACTER OIL INTERVAL: FROM ___ TO ___
CLEAN BELOW: ___ PIT ZONE: SU UI MI LI ___
SUBSURFACE SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG ___

Pits along this subsegment.

PIT # ___ PIT DEPTH ___ OIL CHARACTER ___ OIL INTERVAL: FROM ___ TO ___
CLEAN BELOW: ___ PIT ZONE: SU UI MI LI ___
SUBSURFACE SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG ___

PIT # ___ PIT DEPTH ___ OIL CHARACTER ___ OIL INTERVAL: FROM ___ TO ___
CLEAN BELOW: ___ PIT ZONE: SU UI MI LI ___
SUBSURFACE SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG ___

PIT # ___ PIT DEPTH ___ OIL CHARACTER ___ OIL INTERVAL: FROM ___ TO ___
CLEAN BELOW: ___ PIT ZONE: SU UI MI LI ___
SUBSURFACE SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG ___

PIT # ___ PIT DEPTH ___ OIL CHARACTER ___ OIL INTERVAL: FROM ___ TO ___
CLEAN BELOW: ___ PIT ZONE: SU UI MI LI ___
SUBSURFACE SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG ___

PIT # ___ PIT DEPTH ___ OIL CHARACTER ___ OIL INTERVAL: FROM ___ TO ___
CLEAN BELOW: ___ PIT ZONE: SU UI MI LI ___
SUBSURFACE SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG ___

PIT # ___ PIT DEPTH ___ OIL CHARACTER ___ OIL INTERVAL: FROM ___ TO ___
CLEAN BELOW: ___ PIT ZONE: SU UI MI LI ___
SUBSURFACE SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG ___

PIT # ___ PIT DEPTH ___ OIL CHARACTER ___ OIL INTERVAL: FROM ___ TO ___
CLEAN BELOW: ___ PIT ZONE: SU UI MI LI ___
SUBSURFACE SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG ___

PIT # ___ PIT DEPTH ___ OIL CHARACTER ___ OIL INTERVAL: FROM ___ TO ___
CLEAN BELOW: ___ PIT ZONE: SU UI MI LI ___
SUBSURFACE SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG ___
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT WB-2 SUBDIVISION D (4 of 6)

WORK WINDOW

<table>
<thead>
<tr>
<th>Manual Pickup</th>
<th>Tarmat Removal</th>
<th>Bioremediation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OPEN</td>
<td>WORK PRIOR TO 7/23</td>
</tr>
</tbody>
</table>

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS
1J Purse Seine Area
No constraint to manual pickup and tarmat removal; closed to bioremediation after 7/23.

OTHER ECOLOGICAL CONSIDERATIONS
Restrict boat and air traffic to essential minimum after 7/23. Avoid any unnecessary disturbance or damage to unveiled biota and substrate.

TAG ADDENDUM DATE: 5/10/90
ADEC: Art Denker
EXXON: Jerry M. Ford
NOAA: Johnny Sullivan
USCG: L. Calvert
FOSG: [Signature]

Prepared by: [Signature]
Date: 6/13/90

COMMERCIAL PURSE SEINE AREA
CLOSING THRU 7/23. NO RESTRICTIONS ON BIOREMEDIATION AS PER CONSULTATION

OF TOM MUNNAN W/ USE GUARD, ADEA ON 7/20 7777.
**ADDENDUM: SUBDIVISION CONSTRAINTS**

**SEGMENT WB-2 SUBDIVISION E (5 of 8)**

<table>
<thead>
<tr>
<th>WORK WINDOW</th>
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<tbody>
<tr>
<td>Manual Pickup</td>
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<tr>
<td>Tar mat Removal</td>
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<tr>
<td>Spot Wash \&amp; bioremediation</td>
</tr>
</tbody>
</table>

**ARCHAEOLOGICAL STANDARD CONSTRAINT**

If cultural resources are uncovered, PHONE 564-3274.

**APPLICABLE ECOLOGICAL TIME CONSTRAINTS**

- **Purse Seine Area**
  - No constraint to manual pickup and tarmat removal; closed to spot washing after 7/9.

**OTHER ECOLOGICAL CONSIDERATIONS**

- Restrict boat and air traffic to essential minimum after 7/9.
- Avoid any unnecessary disturbance or damage to uncolled biota and substrate.

**TAG ADDENDUM DATE**

<table>
<thead>
<tr>
<th>ADEC</th>
<th>5/18/90</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXON</td>
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<td>NOAA</td>
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<td>USCG</td>
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Prepared by: Anne Meyer

Date: 5/17/90
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT PD-001 SUBDIVISION A (1 of 2)

WORK WINDOW

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Tammat Removal</td>
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<tr>
<td>Bioremediation</td>
<td>WORK PRIOR TO 7/23</td>
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<tr>
<td>Manual/Mechanical Tilling</td>
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<tr>
<td>Manual/Mechanical Raking</td>
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<tr>
<td>Spot Washing</td>
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</tbody>
</table>

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

>>> PHONE 564-3274 (Anchorage) OR 229-1508 (24 hrs.) <<< 7/20

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1J  Purse Seine Area


OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

Prepared by

Date 6-10-90

Date 6/10/90
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT PD-05 SUBDIVISION A (1 of 1)

<table>
<thead>
<tr>
<th>WORK WINDOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual Pickup</td>
</tr>
<tr>
<td>Tarmat Removal</td>
</tr>
<tr>
<td>Bioremediation</td>
</tr>
</tbody>
</table>

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

| 7/23 |
| 1J Pursa Seine Area | Closed to bioremediation between 8/25 and 8/31. No Constraint to manual pickup and tarmat removal. |

OTHER ECOLOGICAL CONSIDERATIONS
Avoid any unnecessary disturbance or damage to unsoiled biota and substrate. Restrict boat and air traffic to essential minimum after 8/25.

7/23

TAG ADDENDUM DATE 5/21/90
ADEC Art Young Antti Siiriländer
NOAA Joseph Tassan
USCG J. H. C.  
FOSC [Signature] DATE 5-21-90

Prepared by: [Signature] Date: 5/20/90
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT CB-3 SUBDIVISION B (2 of 3)

WORK WINDOW

<table>
<thead>
<tr>
<th>Manual Pickup</th>
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<tbody>
<tr>
<td>Spot Washing &amp; Bioremediation</td>
<td>OPEN TO 7/23, WORK BEFORE 7/4</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

NO CONSTRAINT. ADF&G catalogued anadromous stream (242-20-10190) is more than 100m from work area.

1J Purse Seine Area

Closed to spot washing after 7/4. No constraint to manual pickup.

7JJ Subsistence: Invertebrate Harvesting

NO CONSTRAINT. Per contacts with Mark Kwade/ADF&G 5/22/90 and Pat Norman/Port Graham Village Corporation 5/20/90 by Rex Coulter/Exxon.

5T Bald Eagle Nest

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

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 7/4. Avoid any unnecessary disturbance or damage to unoccupied biota and substrate.

TAG APPROVAL DATE 5/29/90

ADEC: Art Weimer Art Doe
EXON: 
NOAA: Bill Weir
USCG: Capt. G.A. Reeder

FOSC:

Prepared By: Linda Meg Date 5/29/90

COMMERICAL PURSE SEINE AREA

CLOSED THROUGH 7/23, NO

CONSTRAINT TO BIOREMEDATION

AS PER CONVERSATION OF TOM

MONAVAN W/ LER GULN, ADF&G

ON 7/20 FOC

Confirmed 7/23

Other: 7/23

MJS

7/20/90
REGION: KENAI

SEGMENT: WB-03

SUBDIVISIONS: A (1 OF 5)
SHORELINE EVALUATION

SEGMENT ST/ WB-03 SUBDIVISION A (1 of 5) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T All Bald Eagle nests (3/1 to 6/1) - Active eagle nest (3/1 to 9/1)
8AA Sensitive Estuary
7JJ Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

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

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 0 m: Medium 0 m: Narrow 169 m: V.Light 1364 m: No Oil 928 m
Subsurface Oil Observed: Yes No X Maximum Depth

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

COMMENTS: Recommend tarmat removal and pick-up of mousse and tarballs from areas indicated on the field sketch. Bioremediation is recommended for broken coat areas. Treatment should be limited to the period from 6/2 to 7/10 and should be cleared with ADF&G due to possible presence of bald eagle nests.

TAG COMMENTS:

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

SEGMENT ST1  W3-3  SUBDIVISION:  A  DATE:  4/6/90

USCG NAME: R. Bryan Hirtz  SIGNATURE: R. Bryan Hirtz

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

I agree with the findings of the Shoreline Oiling Summary Report for W3-3 Subdivision A

ADEC NAME: Russell Kunibe  SIGNATURE: Russell Kunibe

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

Overall the oiling in this area was very light. There was asphalt mousse and sediment patchies on the sandy spit at the beginning of the segment near W3-2. There were a few asphalt patchies at the head of the first lagoon and a splash distribute. The mouth of the stream in the boulders and cobble.

Recommended treatment: Manual pick up of all of asphalt and mousse patchies in this area. The asphalt and mousse on the spit and at the head of the lagoon was in fine sediments, making pick up easy. Pat Weisman of the Port Graham Village Association informed me that the mud flats were used by the natives for subsistence gathering of clams and mussels.

LAND MANAGER

NAME: Patrick Dorward  SIGNATURE: 

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

Manual pick up of asphalt and mousse patchies can be done throughout subdivision A.
This subdivision surrounded a tidal bay. Beaches were covered with boulders, cobbles, and finer sediments. Generally light oiling across shoreline, with occasional MS-AP patties and tarballs. One band of AP observed. A few areas had no observable oiling.
SHORELINE ECOLOGICAL SUMMARY

Segment ST W/B3 Subdivision A Date (mo/day/yr) 4/16/90

Time (24 hr) 0800-1600 Biologist M. H. Fawcett

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

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

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

BARNACLES

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Wildlife Observations/General Comments:
See Attachment

Ecological Considerations:

75T
5T
8A A
1A
At the east end of WB3A, on the relatively exposed side of the spit, the mid-intertidal zone has dense *Fucus*; moderately abundant mussels and barnacles, and sparse limpets (*A. peregrina*), littorines, and whelks (*N. exerxesta*). Moving around to the leeward side of the spit and into the dead-end cove, mussels become rare, barnacles are restricted to isolated small cobbles in the mid-intertidal, *Fucus* occurs in sparse patches among pebbles and gastropods are sparse. The lower intertidal is soft mud with sparse clams, and sparse burrowing shrimp, worms, etc., overlain by fairly dense *Ulva*. This is a very quiet water area.

**Birds observed:** 15 swans  
25 mallards  
6 bufflehead  
+ several small flocks of ducks on water, too far away to identify
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 (4/20 to 5/10)

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

Remote release site

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

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

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

Set net sites (5/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

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

Harbor seal and sea lion pupping (6/15 to 7/1)
Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

Seabird colony (6/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.

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

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

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

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

VB-03

WB-3

Subdivision A

WB-0

Wide
Medium
Narrow
Very Light

ADEC Segment Length: 8154m

Map Key: KEN-127
Name: Randy Siegel
Date: 4/6/90
REGION: KENAI

SEGMENT: WB-03

SUBDIVISIONS: B (2 OF 5)
SHORELINE EVALUATION

SEGMENT ST/WB-03 SUBDIVISION B (2 of 5) DATE 04/06/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T All Bald Eagle nests (3/1 to 6/1) - Active eagle nest (3/1 to 9/1)
8AA Sensitive Estuary
7JJ Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

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

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 0 m: Medium 0 m: Narrow 1228 m: V.Light 502 m: No Oil 171 m
Subsurface Oil Observed: Yes X No Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommend manual pick up of mousse, tarballs, patties, and oiled debris, (debris, trash, vegetation). Work should be conducted between 6/1 and 7/9 with USFWS Service permission due to eagle constraints.

TAG COMMENTS: ____________________________________________________________

TAG APPROVAL DATE: __________________

ADEC __________________________________ FOSC: __________ DATE: __________
EXXON __________________________________
NOAA ___________________________________
USCG ___________________________________
PWS ECOLOGICAL CONSTRAINTS

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

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

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

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

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

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

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

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

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

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

SEGMENT STI 2B-3 SUBDIVISION: B DATE 4-6-90

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

Agree with the findings of Shoreline Oiling Summary sheet for WB-3 Subdivision B

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

See attached 1 page.

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

Recommend manual pickup of asphalt and mumse patches in Subdivision B of WB-3
This segment includes the mouth of an anadromous stream and the salt marsh adjacent to the stream. There was a continuous asphalt band 1/2 M. wide and 50 M. long along the north shore of the salt marsh. A small 5 cm. mousse ball was noted sheening on the mud along the bank of a small branch of the stream which also had salmon fry in it. There were a few thin patties of mousse on the mud between the grass in the grassy salt marsh. I also noted a small asphalt area in the gravel along the stream bank.

South of the creek there is a long cobble, pebble, gravel beach which is above a large mud flat. There was a splashy distribution of asphalt between the cobbles and mousse under the cobbles. Sheen was observed in the runoff water and on the mud flats just below the cobble, pebble, gravel area.

Recommended treatment:

Manual pick up is recommended for the oil contamination along the stream and in the salt marsh and for the mousse and asphalt in the beach above the mud flats. This subdivision is both an anadromous stream and a subsistence clam gathering area.
**SHORELINE OILING SUMMARY**

**OG**: Rank, Ragel  
**USCG**: Region Kettle  
**Bio**: H.M. Forrest  
**Land Rep**: Pat Warren (Pave)  
**Subdivision**: R  
**EXXON**: John Dean  
**ADEC**: Russell Kennedy  
**Team No.**: 17  
**Date**: 4/16/90  
**Time**: 10:00 AM

**FST. SUBDIVISION LENGTH:** 8.25 m  
**Tide Level:** +5.2'  
**Irreg. No.:** 42  
**Sun**:  
**Clouds**:  
**Fog**:  
**Rain**:  
**Snow**:  
**Surveyed From**:  
**Boat**:  
**Helo**:  
**Working Direction**: E to W  
**Surface Sediments**:  
**Pit Sediments**

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**Surface Oils**

- **Character**: Asphalt Pavement, Pooled, Cover, Coat, Stain, Mousse, Patties, Tarballs, Film, No Oil
- **Oil/Film Color**: S, Md, Lg
- **Impacted Zones**: Su, U, M, L

**Near Shore Sheen?** Yes

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

**Debris Collected**: Yes, No

**Type**: Debris

**Photographs**:
- Roll No.: ST-17-4
- Frames: 13-22

**Subsurface Oils**

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**Comments**: The area resembles a tidal inlet with extensive mud flats. A number of stream channels (2 to 15 meters in width) cut through this area and drained into the tidal inlet. Oiling was generally light within the subdivision. A few isolated patties/tarballs were found on the stream banks. There is an anomalous oiled area near S. Black on or near pooled water in U1, M2, L2 zones.

**Reviewed**: P.A.T  
**Date**: 11/12/90
CHECKLIST
- N Amoe
- Approx Scale
- Seg/Sub Bndry
- Oil Dist
- Width
- Length
- % Cover
- Substrate Character
- Est H/W/L/A
- SSL
- Profile Location(s)
- Pits
- Pit Location(s)
- Phase Location(s)

LOCAL LEGEND

Photos
ST-17-4
Frames 13-16 (aerial)
+ 21-23

Date: 4/16/90

[Handwritten notes and diagram]
SHORELINE ECOLOGICAL SUMMARY

Segment ST/ W B 3  Subdivision B  Date (mo/day/yr) 4/16/90

Time (24 hr) 6:00-17:45  Biologist M. Fawcett

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

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

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa:
- Barnacles
- Mytilus
- Gastrospods
- Fucus

Wildlife Observations/ General Comments:
- Attached sheet
- Birds: belted kingfisher 10 magpies 2 ravens

Ecological Considerations:
- 7/5/90
- 5/7/90
- 8/20/90
This subsection includes an anadromous fish stream used by Pink, chum, and silver salmon and Dolly Varden (according to Pat Norman). We observed 50-60 salmon fry in a small side channel on the north side of the stream mouth next to the base of the hill. Buried mussels, splatters and oil sheen were found along the north bank of this small channel (2-6 ft wide channel). At the mouth of the main stream is a deltaic mudflat containing clams and other infauna. Fucus, barnacles, and a rich bed of mussels covering 100% of the surface in 0.20 acre, about 60 in. at the +3-4 ft tidal level. Most of the mussels are adults (i.e. range 5-30 mm). Besides Fucus, the only attached algae observed were patches of Enteromorpha, Ulva, and some filamentous greens.

Note: original of this sheet destroyed by copy machine.
REGION: KENAI

SEGMENT: WB-03

SUBDIVISIONS: C (3 OF 5)
SEGMENT ST/ WB-03 SUBDIVISION C (3 of 5) DATE 04/06/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T All Bald Eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
8AA Sensitive Estuary
7JJ Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

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

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 0 m: Medium 136 m: Narrow 182 m: V.Light 129 m: No Oil 0 m
Subsurface Oil Observed: Yes____ No__X__ Maximum Depth_______

RECOMMENDATIONS:

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

COMMENTS: Recommend tarmat removal and manual pick up of mousse, tarballs and oiled debris (trash, vegetation debris) as indicated in the attached sketch map. Work should be conducted between 6/1 and 7/9, USFWS permitting, due to eagle constraint.

TAG COMMENTS: ____________________________________________________________

TAG APPROVAL DATE: __________________________

ADEC ____________ DATE: ____________

EXXON ____________ DATE: ____________

NOAA ____________ DATE: ____________

USCG ____________
PWS ECOLOGICAL CONSTRAINTS

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

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

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

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

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

1F
Sawmill Bay Hatchery release (4/20 to 5/10)

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

1H
Remote release sites

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

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

1K
Purse seine hook-click (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 uncolored intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

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

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

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

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

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

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

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

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

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

6Y
Special use destination

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

7HH
Finfish harvesting

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

7JJ
Invertebrate harvesting

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

SEGMENT 51 60-3 SUBDIVISION: C DATE 4-6-90

☐ USCG NAME: R. Bryan Heath SIGNATURE: R. Bryan Heath
☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

□ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

I agree with the Shoreline Oiling Summary sheet.

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

The oiling in this subdivision consisted of a scumbery to thin distribution of black cast, over and stani on the rocks and boulders and asphalt and reass between the rocks along the mud flats.

Removal treatment: manual pickup of the asphalt and reass. Filling the treated boulders may be appropriate.

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

I recommend manual pickup of asphalt and reass patch in subdivision C. Manual pickup should pick up some of the oil but not all of it. So it needs to be looked at very closely to determine other means of collecting remaining oil in subdivision C.
SHORELINE OILING SUMMARY

OG: Randy Siegel  USCG: Bryan Kirtle  SEGMENT ST: WB-3 (5 subdivisions)
BIO: Michael Fawset  LAND REP: Pat Norman (DVE)  SUBDIVISION: C (3rd of 5)
EXXON: John Deen  ADEC: Russell Furrer  TIME: 16:00 to 16:30
TEAM NO.: 17  TIDE LEVEL: +3.6 to +0.6  DATE: 4/6/90
ST. SUBDIVISION LENGTH: 200 m  ☑ Sun ☐ Clouds ☑ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☑ Grass ☑ Forest ☑ Rock
SURVEYED FROM: ☑ Foot ☐ Boat ☐ Helo  WORKING DIRECTION: Nw to Se
SURFACE SEDIMENTS: 10% B 60% C 60% P < % G < % S < % M < % V < %
SLOPE: Lang 50% Hang 20% Ven 0%  WAVE EXPOSURE: ☑ Low ☐ Med ☐ High
OIL CATEGORY LENGTH: W 200 m M 30 m N 90 m VL 40 m NO 100 m

SURFACE OIL

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PAVEMENT: H ☑ S 200 sq. m by 2 cm
PATTIES / TARBALLS 800 BAGS
NEAR SHORE SHEEN? ☑ BR RW SL TL

OILED DEBRIS AMOUNT
Logs ☑
Vegetation ☑
Trash ☑
Debris ☑

DEBRIS COLLECTED ☑ NO
TYPE: N/A
#BAGS: 0

Photographs:
Roll No: ST-12-4
Frames: 23-30

SUBSURFACE OIL

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COMMENTS
This subdivision consists of a beach covered largely with boulders. Oil generally increased from north to south across the beach. A band of MS or AP was observed along most of the beach along the UI, but staining of rocks and a silver sheen were observed in the MI and sensitivity zones towards the south end.

Page 1 of 1

REVIEWED: D. A. L.  DATE: 12 Aug 90
SUBDIVISION C
DATE 4/16/90

CHECKLIST
- N Arrow
- Approx. Scale
- Bay/Sub Basin
- DR Dist
- Width
- Length
- % Cover
- Substrate Character
  - Ext. HWL/LWL
  - SSL
- Profile Location(s)
- Feature(s)
- Photo Location(s)

LEGEND
1  ▲
Pt - No Substrate Oil

2  ▲
Pt - Substrate Oil

CT/C
Continuous Distribution

CT/2
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oiled Vegetation
1  ◆
Photo location, direction, and number

Oil Character Length (m): AP 20° PO 110° CV 110° CT 120° ST 170° MS 120° PT 10° TB 16° FL 20° NO 110°
SHORELINE ECOLOGICAL SUMMARY

Time (24 hr) 1745-1830

Segment ST / WB 3 Subdivision C ___________________________ Date (mo / day / yr) 4/6/90

Biologist M. Fawcett

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

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

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

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FUCUS

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Wildlife Observations/General Comments:
LTZ mudflat has moderately abundant clams, Gurnels, echinoids, hermit crabs, litorines beneath LTZ boulders. Observed and photographed a 15m. diameter mussa patty covered with film of green algae, and with numerous young, vigorous Fucus germlings sprouting up through it (Photo ST-174-2617).

7J5
5T
8AA
WB-03

WB-0

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

ADEC Segment Length: 8154m

Map Key: KEH-127
Name: Robert Smith
Date: 4/18/90

NS-10 oil observed during ADEC 1989 survey, so not surveyed
A-70 SSAT.
REGION: KENAI

SEGMENT: WB-03

SUBDIVISIONS: D (4 OF 5)
SHORELINE EVALUATION

SEGMENT ST/ WB-03 SUBDIVISION D (4 of 5) DATE 04/06/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T All Bald Eagle nests (3/1 to 6/1) - Active eagle nest (3/1 to 9/1)
8AA Sensitive Estuary
7JJ Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

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

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 0 m: Medium 429 m: Narrow 434 m: V. Light 0 m: No Oil 0 m

Subsurface Oil Observed: Yes X No ____ Maximum Depth 7 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend tarmat removal and manual pick up of mousse, tar-balls and oiled debris (trash, vegetation debris) as indicated in the attached sketch map. Work should be conducted between 6/1 and 7/9. USFWS permitting, due to eagle constraint.

TAG COMMENTS: __________________________________________________________
__________ ________________________________________________________________

TAG APPROVAL DATE: ______

ADEC EXXON ____________________ FOSC: __________________ DATE: ______
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 (7/20 to 9/30)
1L Set net sites (6/11 to 7/26)
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 (6/15 to 7/1)
3Q Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

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 ST1 WB 6-3 SUBDIVISION: 3 DATE 4-7-90

USCG
NAME: R. Bryan HIRK SIGNATURE: R. Bryan HIRK, DE

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS
I agree with the findings of the Shoreline

1. Long Summary Sheet for WB-003 Subdivision

D

ADEC
NAME: Russell Kunike SIGNATURE: Russell Kunike

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS
There was asphalt and some moss in between the boulders on
the beach near the point between the two archaeological streams at the head of the bay.
The asphalt at the mouth of this segment was in fine sediments or in water, so it is
likely to
Recall I'd treated. Manual pick up of the moss and asphalt.

LAND MANAGER
NAME: Patrick Dowman SIGNATURE: Patrick Dowman

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS
Manual pickup of asphalt and mossic patties should work in this area.
The west end of the subdivision may require some other type of clean up along
with the manual pickup. The east end extends in to a Archaeological site and
still the asphalt and mossic needs to be picked up.
SHORELINE OILING SUMMARY

OG: Rudy Siegel
USCG: Bryan Hitzler
BIO: Mike Forester
LAND REP: Pat Norman (Coast)
SUBDIVISION: D (40% of 5)

NOXON: John Dean
ADEC: Russell Rapke
TIME: 8:45/10:15
DATE: 4/7/90
TIDE LEVEL: +1.2 to +0.6

EST: SUBDIVISION LENGTH: 675 m

SURVEYED FROM: C Foot C Boat C Halo

WORKING DIRECTION: E - to W

SLOPE: Lang 20% Hang 30% Vert 0%

SURFACE SEDIMENTS: R 15% B 75% C 1%

SLIDE: 20%

OIL CATEGORY LENGTH:

SURFACE OIL DISTRIBUTION:

IMPACTED ZONES

PAVEMENT: H C S - 210 sq. m by 2 cm

OILED AMOUNT

DEBRIS COLLECTED

Photographs:

Roll No. 5T-17-5
Frames 1-3

COMMENTS

This subdivision consists primarily of boulder-covered beaches with rock cliffs above. A band of oiling, usually asphalt, extended along the UI, either as 10, 18, or 15. Spills of AP were present in a narrow band in the 10 and 20. Subdivision D is separated from subdivision E to the east by about 4300 meters on "No Oil" shoreline from ADEC 1987 survey and therefore not surveyed for the 4/7/90.
PHOTOS: ST-15-5
4/17/90
Frames 1-3

LEGEND

1 A
- Pit - No Subsurface Oil

2 A
- Pit - Subsurface Oil

CT/C
- Continuous Distribution

CT/B
- Bacteriological Distribution

CT/P
- Patchy Distribution

CT/0
- Spotted Distribution

Oiled Vegetation

Oil Character Length (in): AP 130 PO 20 CV WHA ST SOC MS 100 FT SOC TB SOC FL MIA NO WLA
SHORELINE ECOLOGICAL SUMMARY

Segment ST: WB 3  Subdivision: D  Date (mo/day/yr): 4/7/90

Time (24 hr) 0850 - 1020  Biologist: M. Fawcett

(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)

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Wildlife Observations/General Comments:
- Bottle-nosed dolphin
- White-winged scoter
- Belted kingfisher

Ecological Considerations:
- FRAMES 1-3
- ROLL NO. ST-17-5
- NOT PRESENT
NS-10 oil observed during ADEC 1989 survey, not surveyed during 1990 SSAT.

Map Key: KEN-127
Name: [Redacted]
Date: 4/7/90
REGION: KENAI

SEGMENT: WB-03

SUBDIVISIONS: E (5 OF 5)
SHORELINE EVALUATION

SEGMENT ST/ WB-03 SUBDIVISION E (5 of 5) DATE 04/07/90

ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T All Bald Eagle nests (3/1 to 6/1) - Active eagle nest (3/1 to 9/1)
8AA Sensitive Estuary
7JJ Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

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

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 0 m: Medium 72 m: Narrow 58 m: V.Light 788 m: No Oil 447 m
Subsurface Oil Observed: Yes____ No X____ Maximum Depth____

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

COMMENTS: Recommend manual removal of patties, tarballs, and tarmat as shown on attached sketch map. Work should be conducted between 6/2 and 7/10 with USFWS permission (active eagle nest).

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

TAG APPROVAL DATE:___________
ADEC ________________________ FOSC: __________________ DATE:_____
EXXON ______________________
NOAA ________________________
USCG ________________________
PWS ECOLOGICAL CONSTRAINTS

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

Salmon fry nursery area (4/31 to 7/31)
Esther Hatchery release (4/15 to 6/1)
Main Bay Hatchery release (4/20 to 5/10)
Sawmill Bay Hatchery release (4/20 to 5/10)
Cannery Creek Hatchery release (4/21 to 6/1)
Remote release site
Gill net area (6/7 to 8/31)
Purse seine area (7/21 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 6/1)
Restrict boat traffic to essential minimum. Avoid damage to unlocated intertidal and subtidal algae and seagrass.
Contact ADF&G for specific dates and locations.

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

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

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

All Bald Eagle nests (3/1 to 5/1)
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.

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

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

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

SEGMENT ST 19.7 B-3  SUBDIVISION: E  DATE 4/7/90

USCG  NAME Bryan Hiri	SIGNATURE Bryan Hiri

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

Agree with the Shoreline Oil Spill Summary sheet for WB-003, E

ADEC  NAME Russell Kanibe  SIGNATURE Russell Kanibe

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

There was asphalt along the high tide line on the sand and gravel.

Recommended treatment: manual pickup of the asphalt.

LAND MANAGER  NAME Patrick Norman  SIGNATURE Patrick Norman

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

Manual pickup of asphalt and mouse patties should collect the

majority of oil found in this subdivision.
SHORELINE OILING SUMMARY

OG: Randy Siegel USCG Bryan Hirtle SEGMENT ST/ W3-3 (5 subdivisions)
BIO: Mike Brown ADEC Russell Kumber SUBDIVISION E (5 of 5)
TEAM NO.: 17 TIDE LEVEL: +5.0 m +6.2 DATE 4/17/90
EST. SUBDIVISION LENGTH: 130 m
UPLANDS DESCRIPTION: Grass Forest Rock
SURVEYED FROM: Foot Boat Helo WORKING DIRECTION: W to E
SURFACE SEDIMENTS:
- R: 10%
- B: 10%
- C: 5%
- P: 5%
- S: 10%
- G: 10%
- M: 60%
- V: 0%
- O:
- V:
- N:
- L:
- E:

SLOPE: Lang: 10%
Hang: 10%
Vert: 10%
WAVE EXPOSURE:
- Low
- Med
- High

OIL CATEGORY LENGTH:
- W: 10 m
- M: 10 m
- N: 30 m
- V: 150 m
- L: 600 m

SURFACE OIL

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<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
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PAVEMENT: H F S 30 sq. m by 2 cm

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

OILED DEBRIS AMOUNT
- Logs
- Vegetation
- Trash
- Debris

OILED AMOUNT
- SM
- MD
- LG

DEBRIS COLLECTED
- YES
- NO

TYPE
- P
- A

# BAGS
- 0

Photographs:
- Roll No. 5T-17-5
- Frames 4, 5, 7, 8

SUBSURFACE OIL

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COMMENTS
This subdivision consists largely of a sand spit about 200-400 meters in width. The spit extends inland and becomes underwater, ground cover changes to R + B. The easternmost 30 m on each side of the spit were not surveyed due to high tide. Minor oiling was observed on the sand spit - a few TB and PT. Further inland, two areas contained heavier oiling, although the presence of kelp in one of the areas prevented thorough surveying. This subdivision is separated from Subdivision C to the west by about 1,300 meters of shoreline which did not contain any oil. This report was reviewed by ADECs 1990 survey and was...
**CHECKLIST**

- N Arrow
- Approx. Scale
- Seg/Side Strict
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Ext. HW/AWL
- SSL
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

**LEGEND**

1 A
- St. No. Surface Oil

2 A
- St. Surface Oil

Continuous Distribution
- CT/C

Broken Distribution
- CT/B

Patchy Distribution
- CT/P

Splashed Distribution
- CT/S

Oiled Vegetation
- OI

Proto location, direction, and number

---

**KETCH MAP**

*Manual Pick-up of Tar Balls, Patterns
Tar Mat Removal

H2O

AP/B-TT/S (sometimes beneath kelp piles)

Pocket beach covered with kelp!
AP/B (50%)
ST-CT on a cliff

End of WB-3

---

No oil found previously (ADEC 1989)
Until the end of WB-3/D.
Not surveyed for 4/90 SAT.

Oil Character Length (m) AP 30 PO WIA CV WIA CT 60 ST 60 MS WIA PT 140 TO 140 FL WIA NO 600
### SHORELINE ECOLOGICAL SUMMARY

Segment: ST/MB 3  
Subdivision: E  
Date (mo/day/yr): 4/7/90  

**Time (24 hr): 10:40 - 11:55**  
**Biol ogist: M. Fawcett**

**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:
- (1) Juveniles/adults (X)
- (2) New settlement

#### BARNACLES

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**Photographs:** Roll No. 5T-17-5  
Frames 4-5

**Wildlife Observations/General Comments:**
- Main part of spit is unstable gravel/pebble bar, no attached kelp
- Outcrop toward east has dense Fucus/barnacle cover in MTZ
- 7-8 white-winged scoter/1 harbor seal/magpies

**Ecological Considerations:**

<table>
<thead>
<tr>
<th>Wildlife</th>
<th>Observations</th>
<th>General Comments</th>
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<tbody>
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[Signature: J.J.  
Date: 4/7/90  
A]
WB-03

WB-C

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

ADEC Segment Length: 8154m

Map Key: KEN-127
Name: [Handwritten]
Date: 4/6/99

NS-40 oil observed during ADEC 1979 survey, so not surveyed during 1980 SSAT.
SHORELINE EVALUATION

SEGMENT ST/ WB-03 SUBDIVISION A (1 of 5) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A  Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B  Salmon stream mouth - spawning (7/10 to 8/31)
5T  All Bald Eagle nests (3/1 to 6/1) - Active eagle nest (3/1 to 9/1)
8AA Sensitive Estuary
7JJ  Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

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

ARCHAEOLOGICAL CONSTRAINT: If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.).

SHPO SIGNATURE: __________________________ DATE: 5/9/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 169 m: V.Light 1364 m: No Oil 928 m
Subsurface Oil Observed: Yes X No Maximum Depth

RECOMMENDATIONS:

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

______ Removal  Other (see comments)

COMMENTS: Recommend tarmat removal and pick-up of mousse and tarballs from areas indicated on the field sketch. Bioremediation is recommended for broken coat areas. Treatment should be limited to the period from 6/2 to 7/10 and should be cleared with ABF & due to possible presence of bald eagle nests.

TAG COMMENTS:

TAG APPROVAL DATE: 4/23/90

ADEC Art Wimmer
EXXON          DATE: S-15-90
NOAA Joseph Talbot
USCG Kenneth Kerski
SUBDIVISION: A

DATE: 4/6/90

CHECKLIST:
- N Arrow
- Approx. Scale
- Seg/Sub Boundary
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. HWL/ELWL
- SSL
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

LEGEND:
1 △ Pit - No Subsurface Oil
2 △ Pit - Subsurface Oil

Ap/Pr:
CT/C Continuous Distribution
CT/T Broken Distribution
CT/P Patchy Distribution
CT/S Splashed Distribution

Oil Character Length (m): AP 15 PO 0 CV 0 CT 20 DT 27 MS 15 PT 100 TB 100 FL 0 NO 100
Subdivision A

VB-03

Subdivision A

WB-0

Wide
Medium
Narrow
Very Light

AOEC Segment Length: 8154m

Map Key: KEN-127
Name: [Signature]
Date: 4/6/20
SHORELINE EVALUATION

SEGMENT ST/WB-03 SUBDIVISION B (2 of 5) DATE 04/06/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T All Bald Eagle nests (3/1 to 6/1) - Active eagle nest (3/1 to 9/1)
8AA Sensitive Estuary
7JJ Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

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

ARCHAEOLOGICAL CONSTRAINT: If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

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

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 1228 m: V.Light 502 m: No Oil 171 m
Subsurface Oil Observed: Yes ___ No X ___ Maximum Depth ______

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

COMMENTS: Recommend manual pick up of mousse, tarballs, patties, and oiled debris, (debris, trash, vegetation). Work should be conducted between 6/1 and 7/9 with USFWS Service permission due to eagle constraints.

TAG COMMENTS: ____________________________________________________________

TAG APPROVAL DATE: 4/23/90
ADEC FOSC: DATE: 5-11-90
EXXON
NOAA
USCG
SEGMENT WB-3
SUBDIVISION B
DATE 4/16/90

CHECKLIST
- N Amos
- Approx. Scale
- Seg/Site Entry
- Oil Diek
- Width
- Length
- % Cover
- Substrate Character
- Est. Haul/W.
- SSL
- Profile Location(s)
- Profile
- Pit Location(s)
- Phase Location(s)

LEGEND
1 A
FR - No Subsurface Oil
2 A
Pit - Subsurface Oil

CT/C
Contour Distribution

CT/D
Breach Distribution

P/T/P
Paddyn Distribution

P/T/S
Splashed Distribution

Seal Vegetation

Photos
ST-17-4
Frames 13-16 (aerial)
+21-22

AP
PO
PIA
CV
LA
CT
ST
300
MS
30
PT
30
TB
30
FL
M/A
NO:

Character Length (m) AP 610 PO PIA CV LA CT 300 ST 300 MS 30 PT 30 TB 30 FL M/A NO:
WB-03

NS-no oil observed during ADEC 1989 survey, so not surveyed during 1990 S3AT.

WB-0

Map Key: KEN-127
Name: Randy Steg
Date: 4/6/90

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

ADEC Segment Length: 8194m
SEGMENT ST/ WB-03 SUBDIVISION C (3 of 5) DATE 04/06/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T All Bald Eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
8AA Sensitive Estuary
7JJ Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

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

ARCHAEOLOGICAL CONSTRAINT: If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: [Signature] DATE: 5/9/90

OILING CATEGORIZATION:

Wide 0 m: Medium 136 m: Narrow 182 m: V.Light 129 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: _______Breakup _______Beach Cleaner
_____Removal _______Other (see comments)

COMMENTS: Recommend tarmat removal and manual pick up of mousse, tarballs and oiled debris (trash, vegetation debris) as indicated in the attached sketch map. Work should be conducted between 6/1 and 7/9, USFWS permitting, due to eagle constraint.

TAG COMMENTS: Following manual pickup bioremediation during low tide but not at a minus tide level.

TAG APPROVAL DATE: 4/13/90
ADEC ART WEINBERG
EXXON [Signature] DATE: 5/14/90
NOAA [Signature] POSC: [Signature]
WB-03

--- Narrow

ADEC Segment Length: 8154m

WB-3

XX Wide

/// Medium

Map Key: KEN-127

Name: [Signature]

Date: 4/3/10

NS-10 oil observed during ADEC 1989 survey, so not surveyed during 1980 SAR.
SHORELINE EVALUATION

SEGMENT ST/WB-03  SUBDIVISION_D (4 of 5) DATE 04/06/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T All Bald Eagle nests (3/1 to 6/1) - Active eagle nest (3/1 to 9/1)
8AA Sensitive Estuary
7JJ Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

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

ARCHAEOLOGICAL CONSTRAINT: If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.).

OILING CATEGORIZATION:

Wide 0 m: Medium 429 m: Narrow 434 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 7 cm

RECOMMENDATIONS:

__No Treatment Recommended __Snare/Absorbent Booms
X Treatment Recommended __Oil Snares (pom poms)
X Manual Pickup __Absorbents (pads, rolls, etc)
X Bioremediation __Spot Washing: Wands
X Tarmat: __Breakup
X Removal __Beach Cleaner
__Other (see comments)

COMMENTS: Recommend tarmat removal and manual pick up of mousse, tarballs and oiled debris (trash, vegetation debris) as indicated in the attached sketch map. Work should be conducted between 6/1 and 7/9. USFWS permitting, due to eagle constraint.

TAG COMMENTS: Bioremediation coats and remaning oil in areas of main concern.

TAG APPROVAL DATE: 4/23/80
ADEC __Art Weinert
EXXON __Don Eshman
NOAA __Joseph Talbot
USCG __Kenneth Jensen
FOSC: ____ L DATE: 5/14/80
Photos: ST-17-5

4/7/90

Frames 1-3

SKETCH MAP

ST-CT/B
R-cliff
AP/B (50/2)
Band 25 x 4 m
beneath B
AP/P (20/2)
Band 25 x 4 m
beneath B

AP/I on B
AP/B on B
AP/CT/P
AP/C

ST-CT/P
MA/L-B-PT/P
(18%) 20 x 20

Mol's
40 x 5

AP/B-PT's
in LI
8 x 3 m

H2O

TARMAT REMOVAL
MANUAL PICK-UP OR
POOLING OIL, MUD/SE, PATTIES
TAR BALLS, AND OILED DEBRIS (RASB)

Oil Character Length (m): AP 180 PO 30 CV 10 IA 500 ST 500 MG 100 PT 500 TB 500 FL WIA No. WIA
SHORELINE EVALUATION

SEGMENT ST/ WB-03  SUBDIVISION E (5 of 5) DATE 04/07/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1A  Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B  Salmon stream mouth - spawning (7/10 to 8/31)
5T  All Bald Eagle nests (3/1 to 6/1) - Active eagle nest (3/1 to 9/1)
8AA  Sensitive Estuary
7JJ  Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

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

ARCHAEOLOGICAL CONSTRAINT: If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: ______________________ DATE: 5/9/90

OILING CATEGORIZATION:

Wide 0 m: Medium 72 m: Narrow 58 m: V.Light 788 m: No Oil 447 m
Subsurface Oil Observed: Yes ___ No X ___ Maximum Depth __________

RECOMMENDATIONS:

___ No Treatment Recommended ___ Snare/Absorbent Booms
___ 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 removal of patties, tarballs, and tarmat as shown on attached sketch map. Work should be conducted between 6/2 and 7/10 with USFWS permission (active eagle nest).

TAG COMMENTS: ______________________

TAG APPROVAL DATE: 5/14/90

ADEC: ______________________ DATE: __________

EXXON: ______________________ DATE: __________

NOAA: ______________________ DATE: __________

USCG: ______________________ DATE: __________
SKETCH MAP

- MANUAL PICK UP OF TAR BALLS, PATIES
- TAR MATT REMOVAL

- No oil found previously (ADEC 97)
- Not surveyed for 9/90 S5AT

Oil Character Length (m): AP 30 PO L/A CV U/A CT 60 ST 60 MS L/A PT 140 TO 140 FL U/A NO 600
XXX Wide
/// Medium
--- Narrow
TTTT Very Light

WB-03

SUBDIVISION A
SUBDIVISION E

WB-3

ADEC Segment Length: 8154m

Map Key: KEN-127
Name: R. E. N.
Date: 4/3/80
Note Entered:
1991 MAYSAP EVALUATION

SEGMENT: WB 003  SUB: A  REGION: KEN  SURVEY DATE: 5/27/91

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

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

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

SHPO Signature:  Date: 5/7/91

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>2</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: 6/14/91  FOSC APPROVAL DATE: 6/14/91

ADEC  EXXON  USCG  NOAA

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

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

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

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

**TEAM NO.** 4  
**SEGMENT** WB-003  
**SUBDIVISION** A  
**DATE** 5/12/91

<table>
<thead>
<tr>
<th>ADEC NAME</th>
<th>Signature</th>
<th>TREATMENT RECOMMENDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steve Ferguson</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| X | TREATMENT RECOMMENDED  
| All oiling observed with the exception of CV/CT/ST were picked up during survey. NO TREATMENT RECOMMENDED. |

<table>
<thead>
<tr>
<th>EXXON NAME</th>
<th>Signature</th>
<th>TREATMENT RECOMMENDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>George P. Stiles</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| X | TREATMENT RECOMMENDED  
| Very little oil found still remaining.  
| 2 bags picked up during the survey. |

<table>
<thead>
<tr>
<th>LANDMANAGER NAME</th>
<th>Signature</th>
<th>TREATMENT RECOMMENDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pat Norman</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| X | TREATMENT RECOMMENDED  
| Small amounts of AP, sor will continue to become exposed in this area. We picked up patches in the ASAP 95 survey also. |

<table>
<thead>
<tr>
<th>USCG/NOAA NAME</th>
<th>Signature</th>
<th>TREATMENT RECOMMENDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Signature]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| X | TREATMENT RECOMMENDED  
| Some AP + TF found and picked up. |
**MAYSAP SHORELINE OILING SUMMARY**

**TEAM NO.** 4  
**O G** J. Trimm  
**A D E C** S. Ferguson  
**E X X O N** George P. 151/7s

**B I O** J. Roth  
**L A N D M A N A G E R** Pat Norman  
**U S C G / N O A A M . M . M o l l o w / M . D e n v e r l**

**TIME** 17:25 to 18:21  
**TIDE LEVEL** 4.85 ft. to 3.31 ft.  
**ENERGY LEVEL** H  
**WEATHER** Sun  
**SURVEYED FROM** Foot  
**TOTAL LENGTH SHORELINE SURVEYED** 1442 m  
**NEAR SHORE SHEEN** BR  

**SEGMENT** WB003  
**SUBDIVISION** A  
**DATE** May 26, 1991

**EST. OIL CATEGORY LENGTH** W 0 m M 0 m N 0 m V16 m NO 112.6 m US 0 m

### Surface Oil Character

<table>
<thead>
<tr>
<th>LOC</th>
<th>AP</th>
<th>MF</th>
<th>Type</th>
<th>Shore Slop e</th>
<th>Width</th>
<th>Length</th>
<th>S</th>
<th>UI</th>
<th>MI</th>
<th>LI</th>
<th>Notes</th>
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<tbody>
<tr>
<td>A</td>
<td></td>
<td></td>
<td>R</td>
<td>H</td>
<td>1</td>
<td>5</td>
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<td>X</td>
<td></td>
<td></td>
<td>MS in Rock/Services</td>
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<tr>
<td>B</td>
<td></td>
<td></td>
<td>P</td>
<td>H</td>
<td>1</td>
<td>1</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td></td>
<td></td>
<td>P</td>
<td>H</td>
<td>1</td>
<td>1</td>
<td></td>
<td>X</td>
<td></td>
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</tr>
</tbody>
</table>

**DISTRIBUTION:** C = 91-100%; B = 51-60%; P = 11-50%; S = 1-10%; T = <1%

**SLOPE:** V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE  
**PHOTO ROLL** # MAYSAP-4(3) - 11  
**FRAMES** 10-17

### Pit and Subsurface Oiled Character

| No. | Pit Depth (cm) | Op | Hor | Mor | Lor | Tr | No. | B R | S | U | M | L | Sediments | Notes |
|-----|---------------|----|-----|-----|-----|----|-----|-----|----|----|----|----|---|-----------|-------|
|     |               |    |     |     |     |    |     |     |     |    |    |    |   |           |       |

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

**OG COMMENTS:**

Small discontinuous deposits of SOR, TB, FL on mud were recovered.  
Active tidal bar west of location 'B'.  
No oil observed in bodies.
**MAYSAP BIOLOGICAL SUMMARY FORM**

**TEAM**  
4

**SEGMENT**  
W8003

**SUBDIVISION**  
A

**SEA STATE**  
Flat

**PHOTOGRAPHS:**  
ROLL 

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

A - Bedrock outcropping in Nitz w/ moderately dense barnacles; sparse Fucus sporlings.

B - Bedrock outcropping in Nitz w/ moderately dense barnacles; sparse Fucus sporlings.

---

**GENERAL COMMENTS:** This Subdivision contains a small cove with a sheltered mudflat with Fucus, eel grass, Enteromorpha on gravel and mud banks in the Nitz. Mudflat probably contains edible bivalves, but tide was too high for observations in lower zone. Outside the tidal bar, the cobble-boulder shore has a typically rich inter-tidal flora with dense Fucus, mussels, barnacles, limpets, and litterines in the middle zone.

Bear tracks observed in cove mudflat.

---

**WILDLIFE OBSERVATIONS**  
To be completed in all subdivisions

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

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

Shoreline subdivision map showing important biological features attached.

Reviewed 5/31/91 MS
1991 MAYSAP EVALUATION

SEGMENT: WB 003 SUB: C REGION: KEN SURVEY DATE: 5/27/91

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

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

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

SHPO Signature: Date: 6/27/91

RECOMMENDATIONS:

TREATMENT REQUIRED (Y or N)  INITIAL TAG FOSE
N  N  D

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

COMMENTS:
INITIAL:

TAG:

FOSE:

TAG APPROVAL DATE: June 7 1991 FOSE APPROVAL DATE: 6/14/91

ADEC

EXXON

USCG

NOAA

E. E. PAGE, CBR, USCG
CHIEF OF STAFF, FOSE
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

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

Subsistence, Invertebrate Harvesting: Unlimited treatment except avoid disturbance of clam/mussel beds unless specifically directed by TAG Work Order.
NO TREATMENT RECOMMENDED. THERE IS REMAINING SOR-4 FROM THE SURVEY THAT COULD BE PICKED UP AT SITES A AND B. DUE TO THE LOCATION IN THE SEAMS, CREVICES AND LARGE OPENINGS IT WOULD TAKE A VERY DETERMINED CREW TO FULLY ADDRESS THE OILING.

Some areas of sulfur were found in the bedrock cracks and around the edges of the structures. These areas were picked during the survey (5 bags). No appreciable oil remaining.

RECOMMEND ADDITIONAL MANUAL PICKUP OF SOR as shown on of sketch map there is enough remaining oil in 240 segments of W0-3 to warrant additional work.

Very little oil front left to work. Production effect the clear-up. We did manage to make some good. 

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. SEGMENT SUBDIVISION DATE 5/18/91

ADEC NAME: Steve Ferguson SIGNATURE

☐ NTR ☑ TREATMENT RECOMMENDED

EXXON NAME: George P. Stiles SIGNATURE

☐ NTR

LANDMANAGER NAME: Ray Norman OF Port Graham SIGNATURE

☐ NTR

USCG/NOAA NAME: [Signature] SIGNATURE

☐ NTR
**MAYSAP SHORELINE OILING SUMMARY**

**TEAM NO.**

**B. Trimble**  
**EXXON**  
**George T. Shirk**  
**ADEC**  
**S. Freyدق**  
**BIO J. Roth**  
**LANDMANAGER Pat Howell**  
**USCG/NOAA Mc McIvor/McDonald**

**SEGMENT**

**W3302**

**SUBDIVISION**

**C**

**DATE**

**May 26, 1991**

**TIME**

18:39 to 18:56

**TIDE LEVEL**

3.03 ft. to 2.89 ft.

**ENERGY LEVEL**

□ H  □ M  □ L

**SURVEYED FROM**

☒ FOOT  ☒ BOAT  ☐ HELO

**WEATHER**

□ SUN  □ CLOUDS  □ FOG  □ RAIN  □ SNOW

**TOTAL LENGTH SHORELINE SURVEYED**

225 m

**NEAR SHORE SHEEN**

□ BR  ☐ RB  □ SL  ☐ NONE

**EST. OIL CATEGORY LENGTH**

W: 0 m  O: 0 m  D: 0 m  N: 0 m  V: 225 m  NO: 0 m  US: 0 m

---

**SURFACE OIL CHARACTER**

<table>
<thead>
<tr>
<th>L</th>
<th>O</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT TYPE</th>
<th>SHORE SLOPE</th>
<th>AREA</th>
<th>ZONE</th>
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</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

**ZONE**

H  B  N  M  L  S  U  M  L

**NOTES**

HUSSA/WSI/BID/IZE

---

**DISTRIBUTION**

C = 01-100%; 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 & MAYASAP**

---

**FRAMES**

---

**PIT**

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

**SHEEN COLOR**

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

---

**OG COMMENTS:**

Boulder Talus + High Angled Rock Face Shoreline. Oiling is predominately a narrow band of mosses & soro in the SUBFACE/VITE zones. Moss has persisted in rock crevices whereas the soro is located at the base of the rock or within small sediment caches on top of the rock.
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4
SEGMENT # W8003
SUBDIVISION C
SEA STATE 1 FT

DATE 26 MAY 91
TIDAL HEIGHT (Range) +3.0 to +2.95
BIOLOGIST Jim Roth

WIND SPEED/DIRECTION
PHOTOGRAPHS: ROLL #
FRAME #

COMMENTS/ OBSERVATIONS (to be completed in oiled subdivisions only):
A - HIGH BEARDED AND Boulders w/ SPARSE INTERTIDAL BIOTA (PRIMARILY
VERVEINEA) AT THE SHELTERED (NORTHWEST END), AND
MODERATELY DENSE FUCUS, BARNACLES, LITTORINES AND LIMPETS AT
MORE EXPOSED LOCATIONS (PRIMARILY TOWARD SOUTHWEST END).

GENERAL COMMENTS: A FAIRLY EXPOSED SITE - MORE EXPOSED TOWARD
THE SOUTHEAST. BOULDER/BEACH SHORE HAS A TYPICALLY
ZONATED INTERTIDAL BIOTA WITH FUCUS, BARNACLES,
MUSSELS, LIMPETS AND LITTORINES DOMINATING THE MIDDLE
ZONE. MIDDLE ZONE BIOTA EXTENDS UPWARD AT MORE
EXPOSED SITES.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS

<table>
<thead>
<tr>
<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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</tr>
<tr>
<td>Seabirds</td>
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<td></td>
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</tr>
<tr>
<td>Shorebirds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corvids</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Birds</td>
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</table>

MARINE MAMMALS

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

LAND MAMMALS

Shoreline subdivision map showing important biological features attached.

Reviewed M8 5/31/91
Verrucaria at sheltered sites

A C.T., C.V., S.T. 1%
SOR-H: 2%
MS: 1%
2 x 2.25 m

Partial Pick Up

Boulder Talus

Moderately dense Fucus, Barnacles, Littorines, Limpets at more exposed sites

Reviewed MS 5/6/91
1991 MAYSAP EVALUATION

SEGMENT: WB 003  SUB: B  REGION: KEN  SURVEY DATE: 5/15/91

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

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

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

SHPO Signature: Rebecca Owen  Date: 5/24/91

RECOMMENDATIONS:

TREATMENT REQUIRED (Y or N)  N  N  N

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

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: MAY 24 1991  FOSC APPROVAL DATE: 6/1/91

ADEC  FOSC

EXXON  E. E. PAGE, CDR, USCG

USCG  CHIEF OF STAFF FOSC

NOAA
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

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

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

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

**NAME:** Doug Hill  
**SIGNATURE:**

**NTR** Patches of AP remain on the beach ("Main Beach") to the south of the stream mouth. A more detailed exploration would most likely reveal more oil. Trace oil remains on the north shore approximately 200 meters upstream of the stream mouth.

---

**EXXON**

**NAME:** Rex Coulter  
**SIGNATURE:** Rex R. Coulter

**NTR** The surface looks excellent. An exercise in turning over cobbles revealed small, sporadic areas of very light SOR. No oil recovered. Two pumice stones, and the VOG workers collected all other non-oilable oiled sediments, debris and one small patch of mousse.

---

**LANDMANAGER**

**NAME:** Sonamegnieke of Art Graham  
**SIGNATURE:**

**NTR** By the Dead Trees Mound/area 1x2 meters wide 5-10 meter long upper intertidal zone going back towards the Antwort Mid Intertidal Zone 2x4 meters wide 2 meter long for other line stained wood 100 meter crossed the stream 1x20 meter 50m in frequent along grass high angle slope Supra Tidal Zone

---

**USCG/NOAA**

**NAME:** Chief Engineer Gary Shigemoto  
**SIGNATURE:**

**NTR** Of oil. Further removal operations should cause more environmental harm than the trace of oil to be removed.

**MAYSAP SHORELINE OILING SUMMARY**

**TEAM NO.**: G - Helo  
**BIO**: T. Schnöecker  
**LANDMANAGER**: S. McCranick for Graham  
**DATE**: 15 May 1991

**TIME**: 8:25 to 9:20  
**TIDE LEVEL**: -3 ft. to -3 ft.  
**ENERGY LEVEL**: □ H □ M □ L

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

**TOTAL LENGTH SHORELINE SURVEYED**: 1092 m  
**NEAR SHORE SHEEN**: □ BR □ RB □ SL □ NONE

**EST. OIL CATEGORY LENGTH**:
- W m  
- M m  
- N m  
- VI 140 m  
- NO 952 m  
- US m

**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**: MAYAP - G _ 15 _ FRAMES 7-11

**OG COMMENTS**: This segment is located at the west end and head of Windy Bay, consisting of a short beach with an inclined ANAA. Stream embayment. The stream is braided and empty into a broad tidal flat region. The oiling of this area was documented at four sites, excluding: 1) SOR and RMS at the southern end of the beach between and under boulders, 2) stained driftwood in the SUTZ (100 m length), 3) trace amount of SOR along 70 m of B-C beach in the MITZ above the focus zone, and 4) a narrow 30 m length of SOR along the northern slope of the Anadi Stream. VECo worker collected a ½ bag of mousse and oiled sediment from this segment and removed all seen and accessible oil.
KAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 6

SEGMENT # WB-003

SUBDIVISION B

SEA STATE Light chop

WIND SPEED/DIRECTION West = 5-10 mph

PHOTOGRAPHS: ROLL #

DATE 5/15/91

BIOLGIST T. R. Schroeder

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

(A B C) = Flock help filled with sea sitting, is growing very well along the entire food segment south of the
anadromous stream. Seabirds, sandpipers, and terns are abundant throughout the affected area. Some marsh
regrowth is occurring and marking trails on in the
marshes were present but not extensive. The remaining
oil does not appear to be affecting growth of
the plant and animal communities in this area. The
notable extensive mud flats were being utilized by
large flocks of sandpipers and some gulls. Only
extensive growth of this oil is evident 300 yards
of the intertidal farming area of the stream.

(D) = Horizontal beach grasses and fiddler crabs were thriving
in the north side of the anadromous stream, a large
nest of wrack birds were located in a field this

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS

<table>
<thead>
<tr>
<th>Species</th>
<th># of Species</th>
<th>Total Birds</th>
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<tbody>
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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>
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<td>Shorebirds</td>
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<td>Other Birds</td>
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</table>

FISH OBSERVED

<table>
<thead>
<tr>
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LAND MAMMALS

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<th>Species</th>
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<td>Sea Otters</td>
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<td>Pinnipeds(specific)</td>
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<tr>
<td>Whales(specify)</td>
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</table>

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

SEGMENT: WB 003  SUB: B  REGION: KEN  SURVEY DATE: 5/15/91

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

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

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

SHPO Signature: ___________________________  Date: ___________________________

RECOMMENDATIONS:

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

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

COMMENTS:

INITIAL: ____________________________________________

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

FOSC: ____________________________

TAG APPROVAL DATE: ______________ FOSC APPROVAL DATE: ______________

ADEC __________________________________ FOSC ________________________

EXXON __________________________________ USCG ___________________

NOAA __________________________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

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

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

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

**NAME** Doug Hill - ADF&G  
**SIGNATURE** Doug Hill

- **Patches of oil remain on the beach ("Main Beach") to the south of the stream mouth - a more detailed exploration would most likely reveal more oil. Trace oil remains on the month shore approximately 200 meters upstream of the stream mouth.**

**EXXON**

**NAME** Rex Coulter  
**SIGNATURE** Rex R. Coulter

- **The surface looks excellent. An entangled turning over cobbles flattened small, branching arms of very light SOR. ADF&G Rep. recovered 2 Pom. Pom., and ThE VRC working collected all other recoverable oiled sediments, debris and one small patch of mousse.**

**ANDMANAGER**

**NAME** Sonaph Megrinick  
**SIGNATURE** AndraMeegrinick

- **By the dead trees mousse 50 cm wide 4.20 meters long**

**USCG/NOAA**

**NAME** Chief Engineer Gary Shigemasa  
**SIGNATURE** Gary Shigemasa

- **Valve removed from this site. Have to search very closely for any traces of oil. Further removal operations could cause more environmental harm than the trace of oil to be removed.**

Surveyed portion of the section consisted of a cobble beach that opened out onto a broad tidal flat with an ephemeral bed, and a wide salt marsh through which a multi-channel stream flowed. This area was heavily oiled in 1989. Some putty SOR was observed and recovered/broken up on the cobble beach. The only other area where oiling was evident was in cobble rubble bordering the northern side of the salt marsh, where SOR and a weathered mousse gray had been found.
**MAYSAP SHORELINE OILING SUMMARY**

**TEAM NO. L - Helo**

**OG** D. Fitzgerald

**BIO** T. Schröeder

**ADEC** Doug Hill of ADF&G

**LANDMANAGER** S. Merganick

**USCG/NOAA** Chief Jenison/G. Shigemura

**EXXON** P. Coulter

**DATE** 15-1/21/92

**TIME** 8:25 to 9:20

**TIDE LEVEL** -3 ft. to -3 ft.

**ENERGY LEVEL**:

**SURVEYED FROM**:

**WEATHER**:

**TOTAL LENGTH SHORELINE SURVEYED**:

**NEAR SHORE SHEEN**:

**EST. OIL CATEGORY LENGTH**:

<table>
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<tr>
<th>LOC</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT</th>
<th>SHORE SLOPE</th>
<th>AREA</th>
<th>ZONE</th>
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<tr>
<td>A</td>
<td>B-SC  L</td>
<td></td>
<td></td>
<td>2</td>
<td>20</td>
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<tr>
<td>B</td>
<td>V-lang L</td>
<td></td>
<td>6</td>
<td>100</td>
<td>X</td>
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<tr>
<td>C</td>
<td>B-C L</td>
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<td>3</td>
<td>20</td>
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<tr>
<td>D</td>
<td>V-quad L</td>
<td></td>
<td>1</td>
<td>20</td>
<td>X</td>
</tr>
</tbody>
</table>

**NOTES**:

- [ ] Storm wreck line
- [ ] In middle of beach area
- [ ] SUTZ in grass, photo located

**SURFACE-OILED CLEAN H2O**

**SUBSURFACE OILED CLEAN H2O**

**SHEEN COLOR**:

- B = Brown
- R = Rainbow
- S = Silver
- N = None

**OG COMMENTS**:

This segment is located at the west end and head of Windy Bay, consisting of a short beach with an enclosed anan. Stream embayment. The channel is braided and empties into a broad tidal flat region. The oiling of this area was documented at four sites including:

1. Sor and ms at the southern end of the beach between and under boulders.
2. Stained driftwood in the SUTZ (100m length).
3. Trace amount of Sor along 70m of B-C beach in the WITE above the focus zone.
4. A narrow 20m length of Sor along the northeastern slope of the Anan Stream. VECO worker collected a 1/2 bag of mousse and oiled sediments from this segment and removed all Sor accessible oil.
PHOTO SITES, WB-3B
ROLL G-15, FRAMES 7 THRU 11

KENAI
PENINSULA

DEAD TREES

EVERGREENS

LOGS

Bedrock
slope/Cliff

PHOTO SITES

Anad. Stream

WB-3B

D. Fitz Gerald
8:25 - 9:20 am
15 May 1991

Sunken Forest

 PHOTO SITES: WB-3B

Slope at Surf

MASSIVE SLOPE

Marsh Grass

Sunken Forest

S-G-M

A. MS/SOR
1-2 by 20m, < 1%
L/u on the USTZ
RB-5 Shrubs

B. ST
6 by 100m, < 1%
Weathered Stony Dartwood

C. SOR
2-4 by 70m, < 1%
Bank above Focus line, L/u around
Boulders + Cobble

Expansive Tidal Flat
(sand and mud)

Windy Bay

Reviewed 5.17.91 JF
KAYSAP BIOLOGICAL SUMMARY FORM

DATE 5/15/91

SEGMENT # WB-C03

TIDAL HEIGHT (Range) -3.5 ft

SUBDIVISION B

BIOLGIST T.R. Schroeder

SEA STATE Light chop

WIND SPEED/DIRECTION West = 5-10 mph

PHOTOGRAPHS: ROLL # FRAME #

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

(a, b & c) = Flocks help mixed with sea clutter, is growing very well along the entire back segment south of 61St

and briny strong. Large fish schools and birds are abundant throughout the entire reef. One muscle

region is occurring just off the reef, and in

sheltered areas, 3200 yards north of the reef and delivers a large quantity of the sea

and extensive mud flats were being utilized by

large areas of sandbars are excellent

areas, large areas of sandbars where once

upwelling area of the reef.

(d) = At the tidal level, a large group of

seabirds were seen to the north of the reef

gulls/kittiwakes and

kittiwakes were

Shorebirds

Corvids

Other Birds

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eagles</td>
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<td>Seabirds</td>
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<td>Waterfowl</td>
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<tr>
<td>Gulls/kittiwakes</td>
<td>1 gull</td>
<td>12</td>
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<tr>
<td>Shorebirds</td>
<td>1 sandpiper</td>
<td>250</td>
<td></td>
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<tr>
<td>Corvids</td>
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<td>Other Birds</td>
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<td></td>
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</table>

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

Shoreline subdivision map showing important biological features attached.
KENAI PENINSULA

A. MS/SONE
1-2 by 20m, <1%
L/U in the UTT
RB-5 shrubs

B. ST
6 by 100m, <1%
Weathered Stained
Dartwood

C. SOR
2-4 by 70m, <1%
Bank above Focus Line, L/U around
Boulders + Cobble

Focus kept moist w/ sea
Source, Tans, Cheng, Limpets,
\n
- coral - coral - coral - coral - coral
- coral - coral - coral - coral
- coral - coral - coral - coral
- coral - coral - coral - coral

Entire MTZ B ZTZ

WINDY BAY

WB-3A

Expansive Tidal Flat (sand and mud)

WB-3C

TW 3-12

5/15/91 T. R. Schroeder

ANAD. STREAM
# 247-70 1016

MARSH GRASS

SUNKEN FOREST

Sketch Maps
WB-3-B

8:25 - 9:20 AM
15 May 1991
1991 MAYSAP EVALUATION

SEGMENT: WB 003  SUB: A  REGION: KEN  SURVEY DATE: 5/27/91

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

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

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

SHPO Signature: ___________________________ Date: ___________________________

RECOMMENDATIONS:

TREATMENT REQUIRED (Y or N) ____________________________________________

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

COMMENTS:

INITIAL: _______________________________________________________________

TAG: _________________________________________________________________

FOSC: ________________________________________________________________

TAG APPROVAL DATE: ___________  FOSC APPROVAL DATE: ___________

ADEC ___________________________
EXXON ___________________________
USCG ___________________________
NOAA ___________________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

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

Subsistence, Invertebrate Harvesting: Unlimited treatment except avoid disturbance of clam/mussel beds unless specifically directed by TAG Work Order.
TEAM NO. 4  SEGMENT WB-602  SUBDIVISION A  DATE 5/22/91

ADEC
NAME Steve Ferguson  SIGNATURE

☐ NTR  TREATMENT RECOMMENDED

All oiling observed with the exception of CV/CT/ST were
picked up during survey. No treatment recommended.

EXXON
NAME George P. Stiles  SIGNATURE George P. Stiles  5/22/91

☐ NTR  Very little oil found still remaining.

2. Bags picked up during the survey.

LANDMANAGER
NAME Pat Ream & Associates  SIGNATURE Pat T. Ream

☐ NTR  Small amounts of AP, so will continue to become
exposed in this area. We picked up patches in the ASAP
90 survey also.

USCG/NOAA
NAME  SIGNATURE

☐ NTR  Some AP + TB found and picked up.
**MAYSAP SHORELINE OILING SUMMARY**

**TEAM NO.** 4

**BIO** J. Roth

**ADEC** S. Ferguson

**EXXON** George F. Stills

**LANDMANAGER** Pat Rowan

**USCG/NOAA** Ph. Whalen/Ph. Daskal

**DATE** May 26, 1991

**TIME** 17:25 to 18:21

**TIDE LEVEL** 4.85 ft. to 3.31 ft.

**ENERGY LEVEL** □ H □ M □ L

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

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

**TOTAL LENGTH SHORELINE SURVEYED:** 142.2 m

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

**EST. OIL CATEGORY LENGTH:** W □ O □ m M □ O □ m N □ O □ m V □ K □ m NO □ L □ m US □ O □ m

<table>
<thead>
<tr>
<th>LOC</th>
<th>AP</th>
<th>MS</th>
<th>TB</th>
<th>SB</th>
<th>OR</th>
<th>CV</th>
<th>CT</th>
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<td>M.S. in Rock Crevices</td>
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</table>

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

**PHOTO ROLL # MAYSAP-41(11) - 11 FRAMES 10-1**

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

<table>
<thead>
<tr>
<th>OP</th>
<th>H</th>
<th>O</th>
<th>M</th>
<th>MOR</th>
<th>LOR</th>
<th>OF</th>
<th>TR</th>
<th>NO</th>
<th>cm-cm</th>
<th>Y/N (cm)</th>
<th>B</th>
<th>R</th>
<th>S</th>
<th>H</th>
<th>N</th>
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**SHORE-OILED CLEAN H2O SHEEN**

**SURFACE-SUBSURFACE SEDIMENTS**

**SHORE-OILED CLEAN H2O SHEEN**

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

**OG COMMENTS:**

Smaller discontinuous deposits of SOR, TB & fl on mud were recovered.

Active tidal bar west of location 'B'.

No oil observed in Bog.

**Reviewed:** MC 5/21/91

**Revised:** 5/30/91 KG
Date 26 May 91

Segment 4

Tidal Height (Range): +5.0 to +3.3 ft

Subdivision A

Biologist Jim Roth

Sea State Flat

Wind Speed/Direction

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

A - Bedrock outcropping in Nitz w/ moderately dense barnacles; sparse Fucus sporlings.

B - Bedrock outcropping in Nitz w/ moderately dense barnacles; sparse Fucus sporlings.

General Comments: This subdivision contains a small cove with a sheltered mudflat with Fucus, eelgrass, Enteromorpha on gravel and mud banks in the Nitz. Mudflat probably contains edible bivalves, but tide was too high for observations in lower Nitz. Outside the tidal bar, the cobble-boulder shore has a typically rich intertidal biota with dense Fucus, mussels, barnacles, limpets, and littorines in the middle zone.

Bear tracks observed in cove mudflat.

Wildlife Observations

To be completed in all subdivisions

Birds

<table>
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<tr>
<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>Waterfowl</td>
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<td>Gulls/kittiwakes</td>
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<td>Shorebirds</td>
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<td>Corvids</td>
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<td>Other Birds</td>
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Marine Mammals

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

Shoreline subdivision map showing important biological features attached.

Reviewed 5/11/91 MS
WB003-A
Sketch Map
26 - May - 91
1725 - 1821
Bio Map
Roth

Kenai Peninsula

North

0

100

meters

Trees

Granite - Pebble - Boulder

Bog

Mud - Granite - Pebble - Boulder

Land

Windy Bay

Active Tidal Bar

Granite - Pebble

Pebble - Granite (Fucus)

Angular - Cobble - Pebble

Barnacles

Carse - Fucus Sporling

Moderately Dense Barnacles

Fucus Sporling

Review MB: 61
1991 MAYSAP EVALUATION

SEGMENT: WB 003  SUB: C  REGION: KEN  SURVEY DATE: 5/27/91

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

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

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

SHPO Signature: ____________________________ Date: ____________________________

RECOMMENDATIONS:

TREATMENT REQUIRED (Y or N)  N  TAG  FOSC

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

COMMENTS:

INITIAL: ____________________________

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

FOSC: _______________________________

TAG APPROVAL DATE: ___________  FOSC APPROVAL DATE: ___________

ADEC______________________________  FOSC______________________________
EXXON____________________________
USCG____________________________
NOAA____________________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

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

Subsistence, Invertebrate Harvesting: Unlimited treatment except avoid disturbance of clam/mussel beds unless specifically directed by TAG Work Order.
NO TREATMENT RECOMMENDED. THERE IS REMAINING SOR-H FROM THE SURVEY THAT COULD BE PICKED UP AT SITES A AND B. DUE TO THE LOCATION IN THE SEAMS, CREVICES AND LARGE OPENINGS IT WOULD TAKE A VERY DETERMINED CREW TO FULLY ADDRESS THE OILING.

Some areas of M5-HS0R were found in the bedrock cracks and around the edges of the slabs. These areas were picked during the survey (5 bags). No appreciable oil remaining.

Recommend additional manual pickup of M5-HS0R as shown on our sketch map. There is enough remaining oil in ca 20 segments of 120-3 to warrant additional work.

Very little oil found late in daylight. Prohibited effects clean-up with Vice and I managed to take some oil.
MAYSAP SHORELINE OILING SUMMARY

TEAM NO.
OG B. Trimm
ADEC S. Ferguson
EXXON George L. Stiles

BIO J. Roth
LANDMANAGER Pat Normo
USCG/NOAA McMahol/McDonald

TIME 18:39 to 18:56
TIDE LEVEL 3.03 ft. to 2.89 ft.
ENERGY LEVEL: ☐ h ☐ m ☐ l
SURVEYED FROM: ☑ FOOT ☑ BOAT ☑ HELO
WEATHER: ☑ SUN ☐ CLOUDS ☐ FOG ☑ RAIN ☑ SNOW
TOTAL LENGTH SHORELINE SURVEYED: 225 m
EST. OIL CATEGORY LENGTH: W M O m N O m VL 225 m NO O m US O m

L O
<table>
<thead>
<tr>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT</th>
<th>SHORE SLOPE</th>
<th>WIDTH</th>
<th>LENGTH</th>
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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-

PIT NO. DEPTH SUBSURFACE OIL CHARACTER OILED ZONE CLEAN H2O SHEEN COLOR PIT SUBSURFACE SEDIMENTS
(cm) OP HOR MOR LOR OF TR NO cm-cm YIN (cm) BR NH S UI MI LI NOTES

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

OG COMMENTS:

Boulder Talls: High Angle Rock Face Shoreline. Oiling is predominantly a narrow band of mousse 1-5 cm in the surface / UI zone. Mousse has persisted in rock crevices whereas the sor is located at the base of the rock or within small sediment channels on top of the rock.
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4    DATE 26 MAY 91
SEGMENT # WB 003    TIDAL HEIGHT (Range) +3.0 to +2.95
SUBDIVISION C    BIOLIGIST Jim Roth
SEA STATE 1 FT    WIND SPEED/DIRECTION

PHOTOGRAPHS: ROLL #    FRAME #

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

A - High Seawall and Boulders with Sparse Intertidal Biota (Primarily Vermicaria) at the sheltered (northwest end), and moderately dense Fucus, barnacles, Littorinids and limpets at more exposed locations (primarily toward southwest end).

GENERAL COMMENTS: A fairly exposed site - more exposed toward the southwest. Boulder/Beachrock shore has a typically zonated Intertidal Biota with Fucus, barnacles, mussels, limpets and Littorinids dominating the middle zone. Middle zone biota extends upward at more exposed sites.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
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<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
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<td>Seals(specific)</td>
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</table>

LAND MAMMALS

Shoreline subdivision map showing important biological features attached.

Reviewed MS 5/14/11
VERUCARIA AT SHELTERED SITES

A CT, CV, ST 1%  SOR-H 2% MS <1%  2x 2.25m

BOULDER TALUS

MEDITELY DENSE FUCUS, BARNACLES, LITTORINES, LIMPETS AT MORE EXPOSED SITES
1991 MAYSAP EVALUATION

SEGMENT: WB 003  SUB: D  REGION: KEN  SURVEY DATE: 5/27/91

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

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

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

SHPO Signature: _______________________ Date: ______________________

RECOMMENDATIONS:

TREATMENT REQUIRED (Y or N)  N  Initial  TAG  FOSC

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

COMMENTS:
INITIAL:

 TAG:

 FOSC:

TAG APPROVAL DATE:___________  FOSC APPROVAL DATE:___________

ADEC________________________  FOSC __________________________

EXXON________________________

USCG________________________

NOAA________________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

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

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

TREATMENT RECOMMENDED
HAVE NOT MARKED EITHER BOX! WILL LET YOUR JUDGMENT OF THE STATE GUIDELINES DECIDE THIS ISSUE. I WOULD ONLY WORK THIS AREA IF AN SITE BEING FREE OF OIL (EXCEPTION BEING CT/ST) IS A CRITERIA THAT THE STATE HAS FOR STANDARDS IN CONJUNCTION WITH ITS' PRESENT ABORIGINAL PEOPLES.

EXXON
NAME: George H. Stiles
SIGNATURE

Several areas of SP/POX 8 ms were found and mostly picked up during the survey (10 bags). Very little retrievable oil remaining.

LANDMANAGER
NAME: Pat Coenman
OF: B. Anheim
SIGNATURE: Pat Dunne

RECOMMEND ADDITIONAL WORK ON D SEGMENT IN CONJUNCTION WITH WORK ON CY/AP/MS/SOR REMAINING THRU OUT THIS SEGMENT IS SIGNIFICANT ENOUGH TO REQUIRE ADDITIONAL WORK. ALL OIL REMAINING IN AND AROUND THE SITE NEEDS TO BE REMOVED.

USCG/NOAA
NAME: John H. Waldon
SIGNATURE

WEATHERED OIL, THE DEEP IN DECEMBER AND BRACK, PICKED-UP AS MUCH AS POSSIBLE BY VESO

ANDRELL W. MULL
# MAYSAP SHORELINE OILING SUMMARY

**TEAM NO.** 4  **BIO** J. Roth  **SEGMENT** WB 003  **SUBDIVISION** D  **DATE** May 26, 1991

**ADEC** S. Ferguson  **LANDMANAGER** R. Noe  **USCG/NOAA 1991 MAYSAP Project Lead**

**TIME** 3:50 to 20:11  **TIDE LEVEL** 2.89 ft to 3.71 ft  **ENERGY LEVEL** H M L

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

**TOTAL LENGTH SHORELINE SURVEYED:** 516 m  **NEAR SHORE SHEEN:**  ☐ BR  ☐ RB  ☐ SL  ☐ NONE

**EST. OIL CATEGORY LENGTH:**  W 0 m  M 0 m  N 35 m  V 33 m  NO 15 m  US  0 m

<table>
<thead>
<tr>
<th>LOC</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT TYPE</th>
<th>SHAPE SLOPE VERTICAL</th>
<th>AREA WIDTH m</th>
<th>LENGTH m</th>
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<td>LVYSor</td>
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**DISTRIBUTION:**  G = 91-100%;  S = 81-90%;  P = 71-80%;  B = 1-10%;  T = <1%

**SLOPE:**  V = VERTICAL;  H = HIGH ANGLE;  M = MEDIUM ANGLE;  L = LOW ANGLE  **PHOTO ROLL #** MAYSAP-4711-11  **FRAMES** 1-25

<table>
<thead>
<tr>
<th>PIT</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED ZONE</th>
<th>CLEAN BELOW LEVEL</th>
<th>SHEEN COLOR</th>
<th>PIT</th>
<th>SURFACE-SUBSURFACE SEDIMENTS</th>
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**SHEEN COLOR:**  B = BROWN;  R = RAINBOW;  S = SILVER;  N = NONE

**OG COMMENTS:**

- No pits were dug.
- The sor is predominantly under or between boulders whereas the mousse is found in rock crevices (locations A, B, C, D).
- Locations G, H, I, & J have a finer-grained surface sediment with little cobble or boulder clasts.

---

Revised: 5-31-91

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MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4
SEGMENT # WB 003
SUBDIVISION D

DATE 20 MAY 91
TIDAL HEIGHT (Range) + 2.95 to + 3.8 ft
BIOLOGIST JIM 00TH

SEA STATE ~ 1 ft
WIND SPEED/DIRECTION

PHOTOGRAPHS: ROLL # FRAME #

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

A - HITE Boulders/Bedrock/Cobble w/ Verrucaria, Sparse Fucus, Barnacle
B - HITE Boulder/Bedrock/Cobble w/ Verrucaria, Sparse Fucus, Barnacle
C - HITE Boulder/Gravel w/ Verrucaria
D - HITE Boulder/Cobble w/ Verrucaria
E - HITE Boulder w/ Moderately Dense Fucus, Barnacles, Littorines
F - HITE Bedrock w/ Moderately Dense Fucus, Barnacles, Littorines
G - HITE Boulders w/ Sparse Fucus, Moderately Dense Barnacles, Dense Mussels, Moderately Dense Littorines
H - HITE Boulders w/ Moderately Dense Fucus, Limpets, Littorines, Beach Hoppers, Sparse Barnacles
I - HITE Gravel/Boulder w/ Verrucaria, Beach Hoppers
J - HITE Cobble/Gravel w/ Limpets, Littorines, Beach Hoppers, Sparse Barnacles

GENERAL COMMENTS: A HIGH-ENERGY (EXPOSED) SITE WITH A HEALTHY AND THRIVING INTEGRAL BIO-DOMINATED IN THE MIDDLE ZONE BY THE TYPICAL ASSOCIATION OF FUCUS, MUSSELS, BARNACLES, LITTORINES, AND LIMPESTS.

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>
<tr>
<td>Eagles</td>
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<td>Other Birds</td>
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LAND MAMMALS

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

Shoreline subdivision map showing important biological features attached.

Reviewed MB 3/18/91
1991 MAYSAP EVALUATION

SEGMENT: WB 003  SUB: E  REGION: KEN  SURVEY DATE: 5/27/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s)  OPEN

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

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

SHPO Signature: __________________________  Date: __________________________

RECOMMENDATIONS:

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

COMMENTS:

INITIAL: __________________________

TAG: __________________________________

FOSC: __________________________________

TAG APPROVAL DATE: __________  FOSC APPROVAL DATE: __________

ADEC __________________________  FOSC __________________________

EXXON __________________________

USCG __________________________

NOAA __________________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

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

TEAM NO. 4    SEGMENT W8-003    SUBDIVISION E    DATE 5/27/91

ADEC
NAME Steve Ferguson    SIGNATURE
☑ NTR ☐ TREATMENT RECOMMENDED

No treatment recommended. L-SOR found along beach area west of bedrock <1%. M-SOR deposited in seams and crevices of bedrock <1%. Rest of oiling observed was in the form of CT/ST.

EXXON
NAME George L. Stiles    SIGNATURE George L. Stiles 5/27/91
☑ NTR ☐ No appreciable oil found. 1 bag of 1450 is was retrieved during the survey.

LANDMANAGER
NAME Pat Kramer    OF Pat Kramer    SIGNATURE Pat Kramer
☑ NTR ☐ Some SOR remains, hopefully this will be dispersed by wave action.

USCG/NOAA
NAME    SIGNATURE
☑ NTR ☐ Very little oil found and picked up

Signature
**MAYSAP SHORELINE OILING SUMMARY**

**TEAM NO. 4**

**B. Trimm**

**BIO. J. Roth**

**ADEC: S. Ferguson**

**LANDMANAGER: L. Shearon**

**EXON: George A. St. J**

**USCG/NOAA: M. Motlow/S. McDonell**

**DATE: MAY 1, 1991**

**SEGMENT: WB003**

**SUBDIVISION: F**

**TIME: 20:20 to 24:40**

**TIDE LEVEL: 3.95 ft to 4.58 ft.**

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

**SURVEYED FROM: **

FOOT [ ] BOAT [ ] HELO

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

**TOTAL LENGTH SHORELINE SURVEYED:** 59.9 m

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

**EST. OIL CATEGORY LENGTH:**

- OFF m
- ON m
- VL m
- US250 m

---

**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:**

---

**FRAMES**

---

**OG COMMENTS:**

**V. LITTLE OILING FOUND.**

---

**Revision:** MC 5/31/91 KG
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4
SEGMENT # WB 3
SUBDIVISION E
SEA STATE FT
PHOTOGRAPHS: ROLL # FRAME #

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

A. Hitze Boulder/Bedrock w/ NO INTERTIDAL BIOTA
B. Hitze Boulder/Bedrock w/ NO INTERTIDAL BIOTA
C. Hitze Boulder w/ NO INTERTIDAL BIOTA

GENERAL COMMENTS: THIS SUBDIVISION CONSISTS OF A SAND-
PEBBLE TIDAL BAR ENCLOSING A SMALL BOG. A HEALTHY
INTERTIDAL BIOTA IS FOUND ALONG THE BEDROCK OVERCAPPING
EATING WINDY BAY. NO OBSERVATIONS ON LIFE OR LOWER
HITZE COULD BE MADE. ALL OIL WAS FOUND IN HITZE
ABOVE THE LEVEL WHERE INTERTIDAL BIOTA IS FOUND.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS # OF SPECIES TOTAL BIRDS FISH OBSERVED SPECIES PRESENT
Eagles
Seabirds
Waterfowl
Gulls/kittiwakes
Shorebirds
Corvids
Other Birds

MARINE MAMMALS # OBSERVED SPECIES # OBSERVED
Sea Otters
Pinnipeds (specify)

LAND MAMMALS

Shoreline subdivision map showing important biological features attached.

Reviews MB 5/31/91
1991 MAYSAP EVALUATION

SEGMENT: WB 003  SUB:  E  REGION: KEN  SURVEY DATE: 5/27/91

ENVIRONMENTAL SENSITIVITIES:
Work Window(s)  OPEN

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

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

SHPO Signature: [Signature] Date: 6/14/91

RECOMMENDATIONS:

TREATMENT REQUIRED (Y or N)  N  N  

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

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: June 7 1991  FOSC APPROVAL DATE: 6/14/91

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

EXXON  [Signature]  CHIEF OF STAFF, FOSC

USCG  [Signature]  

NOAA  [Signature]
ECOLOGICAL CONSTRAINTS  
1991 FIELD ACTIVITIES

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

Subsistence, Invertebrate Harvesting: Unlimited treatment except avoid disturbance of clam/mussel beds unless specifically directed by TAG Work Order.
<table>
<thead>
<tr>
<th>ADEC</th>
<th>NAME: Steve Ferguson</th>
<th>SIGNATURE</th>
<th>TREATMENT RECOMMENDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑ NTR</td>
<td>NO TREATMENT RECOMMENDED. L-SOR FOUND ALONG BEACH AREA WEST OF BEDROCK &lt;1%. M-SOR DEPOSITED IN SEAMS AND CREVICES OF BEDROCK &lt;1%. REST OF OILING OBSERVED WAS IN THE FORM OF CT/GAL.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXXON</th>
<th>NAME: George L. Styles</th>
<th>SIGNATURE</th>
<th>George L. Styles</th>
<th>5/12/91</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑ NTR</td>
<td>No appreciable oil found. 1 bag of HSOR was retrieved during the survey.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LANDMANAGER</th>
<th>NAME: Pat Norman</th>
<th>SIGNATURE</th>
<th>Pat Norman</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑ NTR</td>
<td>SOME SOR REMAINS, HOPEFULLY THIS WILL BE DISPOSED BY WAVE ACTION.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>USCG/NOAA</th>
<th>NAME: [Signature]</th>
<th>SIGNATURE</th>
<th>[Signature]</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑ NTR</td>
<td>VERY LITTLE OIL FOUND AND PICKED-UP</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**MAYSAP SHORELINE OILING SUMMARY**

**TEAM NO.** 4  
**CO. B. Trimm**

**BIO. J. Roth**

**ADEC** S. Frazier  
**LANDMANAGER**  
**Lie. Warren**

**EXXON**  
**George A. Stiver**

**USCG/NOAA** Mohlenbrock/Mcdonald

**SEGMENT** W-003  
**SUBDIVISION** E

**DATE** MAY 1, 25, 1991

**TIME** 20:20 to 20:40  
**TIDE LEVEL** 3.95 ft to 4.58 ft

**ENERGY LEVEL**  
- H  
- X  
- M  
- K

**SURVEYED FROM:**  
- A - FOOT  
- B - BOAT  
- H - HELO

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

**TOTAL LENGTH SHORELINE SURVEYED:** 59.9 m  
**NEAR SHORE SHEEN:**  
- BR  
- RB  
- SL  
- NONE

**EST. OIL CATEGORY LENGTH:**  
- W  
- P  m  
- M  
- O  m  
- D  m  
- N  
- V  
- L  
- V  
- N  
- 284 m  
- US 258 m

---

### SURFACE OIL CHARACTER

<table>
<thead>
<tr>
<th>LOC</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT</th>
<th>SHORE SLOPE</th>
<th>AREA WIDTH</th>
<th>AREA LENGTH</th>
<th>ZONE</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>T</td>
<td>GP</td>
<td>M</td>
<td>20</td>
<td></td>
<td>A</td>
<td>LT SOF</td>
</tr>
<tr>
<td>B</td>
<td>5</td>
<td>P</td>
<td>M</td>
<td>20.5</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>T</td>
<td>P/R</td>
<td>M</td>
<td>10</td>
<td></td>
<td></td>
<td>MED SOF</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**

**FRAMES**

### PIT NO. DEPTH

<table>
<thead>
<tr>
<th>PIT</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED ZONE</th>
<th>CLEAN H2O</th>
<th>SHEEN COLOR</th>
<th>PIT SURFACE- SUBSURFACE SEDIMENTS</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
</tbody>
</table>

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

---

**OG COMMENTS:**

**Very Little Oiling Found**

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**Page 7 of 14**

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**Revised:** 5/30/91  
**Ko**
## MAYSAP BIOLOGICAL SUMMARY FORM

**TEAM #** 4  
**DATE** 26 MAY '91  
**SEGMENT #** WB 3  
**SUBDIVISION** F  
**TIDAL HEIGHT (Range)** +4.0 to +4.6 FT  
**BIOLOGIST** Jim Roth  
**SEA STATE** 1 FT  
**WIND SPEED/DIRECTION**  
**PHOTOGRAPHS:** ROLL #  
**FRAME #**  
**COMMENTS/ OBSERVATIONS** (to be completed in oiled subdivisions only):

A. **Nitz Boulder/Bedrock w/ NO INTERTIDAL BIOTA**
B. **Nitz Boulder/Bedrock w/ NO INTERTIDAL BIOTA**
C. **Nitz Boulder w/ NO INTERTIDAL BIOTA**

**GENERAL COMMENTS:** THIS SUBDIVISION CONSISTS OF A SAND-PEBBLE TIDAL BAR ENCLOSING A SMALL Bog. A HEALTHY INTERTIDAL BIOTA IS FOUND ALONG THE BEDROCK OUTCROPPING FACING WINDY BAY. NO OBSERVATIONS ON NITZ OR LOWER NITZ COULD BE MADE. ALL OIL WAS FOUND IN NITZ ABOVE THE LEVEL WHERE INTERTIDAL BIOTA IS FOUND.

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

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

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

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

**SEGMENT:** WB 003 **SUB:** D **REGION:** KEN **SURVEY DATE:** 5/27/91

**ENVIRONMENTAL SENSITIVITIES:**

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

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

**ARCHAEOLOGICAL CONSTRAINTS:**

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

**SHPO Signature:**

**RECOMMENDATIONS:**

TREATMENT REQUIRED (Y or N) | INITIAL | TAG | FOSC
---|---|---|---
N | N | N

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

**COMMENTS:**

INITIAL: _____________________________________

TAG: _____________________________

FOSC: ___________________________________________

**TAG APPROVAL DATE:** June 7 1991 **FOSC APPROVAL DATE:** 6/14/91

**ADEC**

**EXXON**

**USCG**

**NOAA**

**FOSC**

E. E. PAGE, CDR, USCG

CHIEF OF STAFF, FOSC
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

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

Subsistence, Invertebrate Harvesting: Unlimited treatment except avoid disturbance of clam/mussel beds unless specifically directed by TAG Work Order.
<table>
<thead>
<tr>
<th>ADEC</th>
<th>NAME: Steve Ferguson</th>
<th>SIGNATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

- **TREATMENT RECOMMENDED**: Have not marked either box, will let your judgment of the state guidelines decide this issue. I would only work this area if an site being free of oil (exception being CT/ST) is a criteria that the state has for standards in conjunction with its present Aboriginal peoples.

<table>
<thead>
<tr>
<th>EXXON</th>
<th>NAME: George P. Stiles</th>
<th>SIGNATURE: George P. Stiles</th>
<th>DATE: 5/31/91</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

- **NTR**: Several areas of AP/BS or LMS were found and mostly picked up during the survey (10 bags). Very little retrievable oil remaining.

<table>
<thead>
<tr>
<th>LANDMANAGER</th>
<th>NAME: Pat Farmer</th>
<th>SIGNATURE: Pat Farmer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>DATE: 5/31/91</td>
</tr>
</tbody>
</table>

- **NTR**: Recommend additional work on D segment in conjunction with work on C/4-AP/MS/BS or remaining throughout this segment is significant enough to require additional work. All oil remaining in and around the site needs to be removed.

<table>
<thead>
<tr>
<th>USCG/NOAA</th>
<th>NAME: [signature]</th>
<th>SIGNATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **NTR**: Weathered marine, very deep in sediments and cracks picked up as much as feasible by VECO.

- **NTR**: [signature]
**MAYSAP SHORELINE OILING SUMMARY**

**TEAM NO.** 4

**BIO.** J. Roth

**ADEC.** S. Ferguson

**LANDMANAGER.** P. Noonan

**EXXON.** George S. S. St. John

**USCG/NOAA.** W. McDonald

**DATE.** May 12 6 1991

**TIME.** 18:50 to 20:11

**TIDE LEVEL.** 2.89 ft to 3.71 ft

**ENERGY LEVEL.** H X M X L

**SURVEYED FROM.** X FOOT X BOAT X HELO

**WEATHER.** ☐ SUN ☐ CLOUDS ☐ FOG ☐ RAIN ☐ SNOW

**TOTAL LENGTH SHORELINE SURVEYED.** 516 m

**NEAR SHORE SHEEN.** ☐ BR ☐ RB ☐ SL ☐ NONE

**EST. OIL CATEGORY LENGTH.** W 0 m M 0 m N 35 m V 33 m L 51 m US 0 m

### Table

<table>
<thead>
<tr>
<th>LOC</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT TYPE</th>
<th>SHORE SLOPE</th>
<th>AREA WIDTH</th>
<th>AREA LENGTH</th>
<th>ZONE</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>T S S S S S</td>
<td>VB H 2</td>
<td>S</td>
<td>M</td>
<td>X</td>
<td>HVSOR</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>S S S S S S</td>
<td>GSFB M 1</td>
<td>S</td>
<td>M</td>
<td>X</td>
<td>HVSOR</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>T S S S S S</td>
<td>KB M 3</td>
<td>S</td>
<td>M</td>
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<td>LTHV3SR</td>
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<tr>
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<td>BRG 2 M 2</td>
<td>S</td>
<td>M</td>
<td>X</td>
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<td>B M 1</td>
<td>S</td>
<td>M</td>
<td>X</td>
<td>HV3SR</td>
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<td>R V 2</td>
<td>S</td>
<td>M</td>
<td>X</td>
<td>HVSOR</td>
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<td>G</td>
<td>S S S S S S</td>
<td>B C 2 M 2</td>
<td>S</td>
<td>M</td>
<td>X</td>
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<td>T S T T T T</td>
<td>BG 6 M 2</td>
<td>S</td>
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<td>I</td>
<td>T S T T T T</td>
<td>BG 6 M 2</td>
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<td>M</td>
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<td>LT_3SR</td>
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<tr>
<td>J</td>
<td>S S S S S S</td>
<td>BRG 2 M 1</td>
<td>S</td>
<td>M</td>
<td>X</td>
<td>LTHV3SR</td>
<td></td>
</tr>
</tbody>
</table>

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

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

**PHOTO ROLL.** # MAYSAP-4/31/91 FRAMES 19-25

### Pit Table

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

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

**OG COMMENTS:**

No pits were dug.

* The sor is predominately under or between boulders whereas the mousse is found in rock crevices (locations A, B, C, D).

* Locations G, H, I & J have a finer-grained surface sediment with little cobble or boulder clasts.

**Revised 5/31/91**

**Revised 5-30-94**
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4  DATE 26 MAY 91
SEGMENT # WB 003  TIDAL HEIGHT (Range) +2.95 to +3.8 ft
SUBDIVISION D  BIOLOGIST JIM ROTH
SEA STATE ~ 1 ft  WIND SPEED/DIRECTION
PHOTOGRAPHS: ROLL #  FRAME #

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

A - HITZ BOULDER/BEDROCK/Cobble w/ VERRUCARIA, SPARSE FUCUS, BARNACLES
B - HITZ BOULDER/BEDROCK/Cobble w/ VERRUCARIA, SPARSE FUCUS, BARNACLES
C - HITZ BOULDER/GRANUL w/ VERRUCARIA
D - HITZ BOULDER/Cobble w/ VERRUCARIA
E - HITZ BOULDER w/ Moderately Dense FUCUS, BARNACLES, LITTORINES
F - HITZ BEDROCK w/ Moderately Dense FUCUS, BARNACLES, LITTORINES
G - HITZ BOULDER w/ SPARSE FUCUS, Moderately Dense BARNACLES, SPARSE MUSSELS, Moderately Dense LITTORINES
H - HITZ BOULDER w/ Moderately Dense FUCUS, LIMPETS, LITTORINES, BEACH HOPPERS, SPARSE BARNACLES
I - HITZ GRAVEL/BOULDER w/ VERRUCARIA, BEACH HOPPERS
J - HITZ COBBLE/GRANUL w/ LIMPETS, LITTORINES, BEACH HOPPERS, SPARSE BARNACLES.

GENERAL COMMENTS: A HIGH-ENERGY (EXPOSED) SITE WITH A HEALTHY AND THRIVING INTERTIDAL BIOTA DOMINATED IN THE MIDDLE ZONE BY THE TYPICAL ASSOCIATION OF FUCUS, MUSSELS, BARNACLES, LITTORINES, AND LIMPETS.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

<table>
<thead>
<tr>
<th>BIRDS</th>
<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED SPECIES PRESENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eagles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seabirds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watertowl</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gulls/kittiwakes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shorebirds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corvids</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Birds</td>
<td></td>
<td></td>
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</tbody>
</table>

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

Shoreline subdivision map showing important biological features attached.

Reviewed M3 5/10/91
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ WB-003 STREAM NO: 242-32-10160 DATE 4/29/90

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)
1J Purse seine area (7/1 TO 8/31)
7JJ Subsistence area: Invertebrate harvesting
8AA Sensitive estuary
5T All bald eagle nests (3/1 to 6/1)
Active eagle nests (3/1 to 9/1)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Subject stream is located within subdivision B (2 of 5). Eagle nest within 400m of stream no. 242-32-10160

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: 5/18/90

Subsurface Oil Observed: Yes___ No X Maximum Depth

RECOMMENDATIONS:

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

TAG COMMENTS: Recommend manual removal of pavement and oiled vegetation as indicated on attached sketch map. Work from 6/2 to 7/1 with approval of USFWS regarding eagle nests.

TAG APPROVAL DATE: 5/18/90

ADEC Art Weiner
EXXON Andy Olaf
NOAA Gary Peterson
USCG C.T. Reiter
In 1990, issues of sedimentology became evident - only a few rows remained. To ensure moving rocks did not cause an erosional problem, concern for the beach was evident. As not all rocks were picked and placed into piles, much of the debris fell onto the intertidal zone. Cremated, they were found to cause moving rocks. In 1997, problems reached concerns with the beach. 414-60-10110 Monterey County, California. 90-32, 90-22, 90-32, 2003. 414-10110 Monterey County, California. 90-32, 90-22, 90-32, 2003.
ANADROMOUS FISH STREAM ASSESSMENT

REGION: KENAI
SEGMENT: WB-003
SUBDIVISION: B
STREAM NO: 242-32-10160
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ WB-003 STREAM NO: 242-32-10160 DATE 4/29/90

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)
1J Purse seine area (7/1 TO 8/31)
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SHPO SIGNATURE: ______________________ DATE: ______________

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

RECOMMENDATIONS:

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

COMMENTS: Recommend manual removal of pavement and oiled vegetation as indicated on attached sketch map. Work from 6/2 to 7/1 with approval of USFWS regarding eagle nests.

TAG COMMENTS: ________________________________________________

TAG APPROVAL DATE: __________

ADEC ____________________________ FOSC: __________ DATE: ______

EXXON __________________________

NOAA __________________________
PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A. Salmon stream mouth - fry outmigration (3/1 to 5/15)
   • stream mouth - spawning (7/10 to 6/31)
   No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which 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 267-3224

1C. Salmon fry nursery area (4/31 to 7/31)
   No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

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

1D. Esthar Hatchery release (4/15 to 6/15)
1E. Main Bay Hatchery release (4/20 to 6/15)
1F. Sawmill Bay Hatchery release (4/15 to 6/1)
1G. Cannery Creek Hatchery release (4/21 to 6/1)
1H. Pigeon Point Hatchery release (4/15 to 6/1)

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

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

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

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

   AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

2M. Herring spawning (4/1 to 6/15)

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

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

3N, 3P, 3O, 3Q

3N. Harbor seal and sea lion pupping (5/15 to 7/1)
3P. Harbor seal and sea lion molting (5/15 to 9/15)

Restrict boat and air traffic to essential minimum. No personnel within 200m. Aircraft to maintain 200m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31).

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

   AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
   AGENCY CONTACT PERSON: ADF&G Don Calkins 267-2403

5R. Seabird colony (5/1 to 9/1)

Restrict aircraft and boat traffic to essential minimum. No personnel within 200m. Aircraft to maintain 200m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.

   AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

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

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

   AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
   AGENCY CONTACT PERSON: ADF&G Tom Rothby 267-2206

5T. All Bald Eagle nests (3/1 to 6/1)

Restrict aircraft and all disturbance to essential minimum. No personnel within 400m. Aircraft to 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. Recreational use: Tent sites (6/1 to 9/15)
6V. Anchorage (6/1 to 9/15)
6W. Forest service cabins (6/1 to 9/15)
6X. Lodge (6/1 to 9/15)
6Y. Special use destination

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

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

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

SEGMENT ST1  WB-005  SUBDIVISION: 242-20-10160  DATE: 29 APR 90

CG
NAME: Kerwin L. Dreher  SIGNATURE: K. R. Chute

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS
Type A manual removal.

ADEC
NAME: Lee Glenn  SIGNATURE: [Signature]

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS
Manual pick up is recommended for all sides. The east side of stream and south marsh. Do extend 250 meters up this side. Remove plants 30 feet in grass that located approx 250 meters from stream bank. Remove overwash and asphalt along north beach. This subdivison area is also a subsistence hunt gathering area. Contact Lee Glenn prior to work so that to be sure that landscape was not removed.

LAND MANAGER: NONE  4-29-90 Aerial/Field Survey

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS
**SHORELINE OILING SUMMARY**

**DATE**: 4/12/90

**TEAM NO.**: 14

**EST. SUBDIVISION LENGTH**: 500 m

**TIDE LEVEL**: -0 ft

**UPLANDS DESCRIPTION**:  X Grass  X Forest  X Rock

**SURVEYED SURFACE SECTIONS**: Lang 100% Hang 10% Vert 10% WAVE EXPOSURE:  X Low  X Med  X High

**SLOPE**: Lang 100% Hang 10% Vert 10%

**OIL CATEGORY LENGTH**: W m M m N 250 m VL 50 m NO

### 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>
<td>TARBALLS</td>
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</tr>
<tr>
<td>FILM</td>
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<tr>
<td>NO OIL</td>
<td></td>
<td>X</td>
<td></td>
</tr>
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</table>

**PAVEMENT**: H

**NEAR SHORE SHEEN?**: X BR RW SL TI

**OILED DEBRIS AMOUNT**: SM MD LG

- Logs
- Vegetation
- Trash
- Debris

**Did You Collect Debris**: X YES X NO

**OILED DEBRIS AMOUNT**: SM MD LG

- Logs
- Vegetation
- Trash
- Debris

**NAMES OF PEOPLE**: X

**PHOTOGRAPHS**: Roll No.

**FAMES**: __________

### SUBSURFACE OIL

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<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>OILED DEBRIS AMOUNT</th>
<th>BORING INTERVAL</th>
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<td>SM MD LG</td>
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<td>Trash</td>
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<tr>
<td></td>
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<td>Debris</td>
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</table>

**DEBRIS AMOUNT**: SM MD LG

- Logs
- Vegetation
- Trash
- Debris

**NAMES OF PEOPLE**: X

**PHOTOGRAPHS**: Roll No.

**FAMES**: __________

**COMMENTS**: NO PITS DUE TO LACK OF OIL PERMEATION

**EXTRREMELY WEATHERED OIL AT SITE**

**SPARKLY PATTIES, TAR BALLS, SETTLING ON GRASS IN UPPER TIDAL GRASS FLAT**

**REVIEWED**: __________ **DATE**: __________
**GROUP A**

**AFDC MULTI-ASSESSMENT DATA FORM**

**Pre-screening**

1. **Survey Type**: SS & SS 13 AVS SCA 1845 PTI 8 Regions: PR, W, C, K, I

---

2. **Date**: 4/7/90

---

3. **High Tide Times**:

   - Date: 1
   - Time: 1

---

4. **High Tide HS**:

   - Date: 1
   - Time: 1

---

5. **Low Tide Times**:

   - Date: 0702
   - Time: 1

---

6. **Low Tide HS**:

   - Date: 1.3
   - Time: 1

---

7. **Station**:

   - Date: 10
   - Time: 3

---

8. **K-Unit**:

   - Date: 10
   - Time: 3

---

9. **Station Area**:

   - Date: 242-20
   - Time: 10

---

10. **Latitude**: S01°13'00"

---

11. **Longitude**: W150°30'90"

---

12. **Samples Taken**: 0

---

13. **Video Taken**: Y

---

14. **Location**: AFS #242-20-0160; Head of Wind Bay

---

15. **Description**: North Shore, Right Hand Creek

---

**Extent of Oil**

<table>
<thead>
<tr>
<th>Shoreline</th>
<th>Stream</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>V</td>
</tr>
</tbody>
</table>

---

16. **Overall Oil Impacts**:

   - Date: 1
   - Time: 1

---

17. **Oil Type**:

   - Date: Petrose; Asphalt; Sedimentary

---

18. **Oiled Debris**: Y

---

19. **Shoreline Type**:

   - Date: Heedland; Low-lying Rocks; Beach; Cove; Lagoon; Marsh

---

20. **Wave Exposure**: High

---

21. **Substrate Type**:

   - Date: Bedrock; Boulder; Cobble; Gravel; Sand; Mud

---

22. **Cataloged Anad. Fish Type**: Y

---

23. **Catalog No**: 242-20-10160

---

24. **OIL ON STREAM BANKS**: Y

---

25. **Oil on Beach Adjacent to Mouth**: Y

---

26. **Oil within 1 Mile of Stream**: Y

---

27. **Anadromous Fish Present**: Y

---

**Comments**:

- Chum, Pink, and Coho River, Flat, and Riverine, Migratory wetland and estuarine, Flats are used by other fish and species. No migratory waterfowl utilized this area. Bald Eagles frequent coast within 1 mile. Eagles and clams bed at mouth of stream.
Revisions as per Anadscat of 4/88/90-20%

Anadscat-Recommended

WB-3

Grassy intertidal flat

Windy Bay Right Hand Ck.

WB 03

- Tar patties observed frequently in interstices
- Oil stained rocks

In 1989 boulders and cobbles were picked and placed into piles over much of this beach-in order to get at the heavy pooled oil beneath and in the interstices. Crewe were later told to cease moving rocks (changing the beach morphology). As NOAA/Exxon stated concerns that it could cause an erosional problem.

In 1990 none of the cairn/gyrogyard-like piles were evident—only a few remain...
The area surveyed was behind the main beach berm. Most of the oil observed was located in two areas. One area, characterized by dead and new emerging grass, contained several areas of scattered patties or tarballs. Some of these oiled spots were staked and flagged to facilitate relocation; in one or two weeks the oil would be very difficult to find. The other oiled area was located along the east side of the site adjacent to a small stream channel. Oil in this location was located in a broken band of stain and asphalt pavement in the MIT2 and UIT2.

I recommend that patties and tarballs in both oiled areas be removed by shovel for disposal. No other treatment is recommended.

K.R. Critchlow
ASAP TAG REVIEW SHEET

Segment: W003 Subd: D Site: 1 Date PRE-Review 14 Aug 90

Priority For Addressing In 1990

_____ HIGH _____ MEDIUM _____ LOW _____ NTR

Treatment Recommended:

M/P + BZO

Asphalt, SPC

Movie, B-prelim

Priority Site For Reassessment In 1991

YES NO YES NO YES NO YES NO

CG ADEC EXXON LAND MGR

THE 15th W890

manual, pickup, mouse, tap, BIO

(Low Priority)
ASAP TAG REVIEW SHEET

Segment: W5x3 Subd: D Site: 2 Date PRE-Review 14 Aug 90

Priority For Addressing In 1990

___ HIGH ___ MEDIUM X LOW ___ NTR

Treatment Recommended:

SOIL mouse

Recommended:

Only

Priority Site For Reassessment In 1991

YES NO YES NO YES NO

CG ADEC EXXON LAND MGR

TAB is A83880 Same as Site 1
ASAP FOLLOWUP RECOMMENDATIONS

Conditions Observed:
- Asphalt & Mousse = 4 m Bank - O/P
- Asphalt & Mousse / U-I/P 3-5 m Bank - Site #1
- Mud & Sand/P in U723 M12 / U-5 as a 2-meter Bait

Followup Recommendations: Manual Removal of Mousse & Asphalt

Completed by Pickup Crew: [ ] YES [X] NO

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

ADEC

Clara Crosby
(name)

Comments: I feel that work order was incomplete. Banks are relatively easily recovered & while work crews are
in winter, they may require for COE. These subdivisions can be addressed the well.

Exxon

Comments: the oil which remains is about 1/2 day work for
a 2 man crew. Could be picked up in 1 Supena.

USCG

Comments: 

Land Rep.

Patrick Doan
(name)

Comments: Asphalt and mousse is mostly exposed and
can be picked up.
**USCG**

**NAME:** AEC Vandepeels  
**SIGNATURE:** AEC Vandepeels

☑️ **YES** ☐ **NO**  
**PRIORITY SITE FOR REASSESSMENT IN 1991**

**REASON:** Some AP/MS found on segment.  
Reassess in '91.

---

**ADEC**

**NAME:** Clara S. Crosby  
**SIGNATURE:** Clara S. Crosby

☑️ **YES** ☐ **NO**  
**PRIORITY SITE FOR REASSESSMENT IN 1991**

**REASON:**  
Manual removal of AP i MS incomplete. It is adjacent to an anamalous stream. Subsurface caving was observed in the burn @ pit site #2. A thorough reassessment & delineation of treatment of subsurface caving is needed.  
Area has been Bioremediated.

---

**LAND MANAGER**

**NAME:** Patrick Dorman  
**SIGNATURE:** Patrick Dorman

☑️ **YES** ☐ **NO**  
**PRIORITY SITE FOR REASSESSMENT IN 1991**

**REASON:** The western end of this segment still has subsurface mouse, and is an Archeological site that is important to us also a subsistence area.

---

**EXXON**

**NAME:** Jon Careneci  
**SIGNATURE:** Jon Careneci

☑️ **YES** ☐ **NO**  
**PRIORITY SITE FOR REASSESSMENT IN 1991**

**REASON:**  
This area is next to an active salmon stream and used for subsistence fishing reassessment in '91 would be very helpful.
ASAP SHORELINE OILING SUMMARY

TEAM NO 04 EXXON J. DesPrez SEGMENT AS: WIP -
OG Rich Mart USGS USCG DEC WDEPA/L SUBDIVISION D
ADEC Chris Costley LAND REP: Pat Nelson (LAG) TOTAL NO. SITES 1
DATE 07 Aug 1990 TIME 19:05 to 19:35 TIDE LEVEL +4' to +3'
TOTAL EST. LENGTH OF SHORELINE SURVEYED: 516 m
SURVEYED FROM: ☑ Foot ☐ Boat ☐ Helo WEATHER: ☑ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
OIL CATEGORY LENGTH: W — m M 267 m N 194 m VL 54 m NO — m US — m

SURFACE OIL

<table>
<thead>
<tr>
<th>SITE 1</th>
<th>SITE 2</th>
<th>SITE 3</th>
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<tr>
<td>CHARACTER</td>
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<tr>
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<td>/C /B /P /S</td>
<td>SU UI MI LI</td>
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<tr>
<td>S.O.R.</td>
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<tr>
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<tr>
<td>MOUSSE</td>
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<tr>
<td>PATTIES/T.B.</td>
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<td></td>
</tr>
<tr>
<td>FILM</td>
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<tr>
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SUBSURFACE OIL

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<td>SG/s</td>
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COMMENTS All comments are presented on the annotated sketch.
SKETCH MAP
ASAP Annotations
8/7/90 R. North

AI 55cm UITZ No oil SG/8
• 2 orn 5-11cm PC/SG STZ

NOTE: There is a marked discrepancy between the WB-3D/3C boundary on this map and on the computer map. RM 08/07/90

Patches of AP-MS/UIP in the MITZ-UITZ 1m wide band RM 08/07/90

AP-MS/UIP in the MITZ-STZ as a 3m wide band RM 08/07/90

Scattered PT & TB RM 08/07/90

Some oilied debris RM 08/07/90

PT/ScE/UIS
AP-MS/UIS
RM 08/07/90

MS and ScE/UIS in MITZ-UITZ
1/2 as a 2m band
RM 08/07/90

H₂O

H₂O

Condensed Lime Limestone
Cf/Tg

Shale Distribution
CT/P

Pebble Distribution
Cf/Tg

Skeletal Distribution
Cf/CT

Coral Vegetation

Photo location, direction, and number

Oil Character Length (m) AP PO CV CT ST MS PT TB FL NO
DISTRIBUTION OF "SIGNIFICANT" OILING

Wide
Medium
Narrow
Very Light
No Oil

ADEC Subsegment Length: 516m
METERS

Subdivision Field Map
Map Key: KEHWB-3D
Name: R. Marty

Date: 8/7/90
Data Entered:

AK State Plane Zone 4
proj-3d
<table>
<thead>
<tr>
<th>CHAR #</th>
<th>OIL CHAR</th>
<th>OIL DIST</th>
<th>TIDAL ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AP</td>
<td>CONT</td>
<td>SU UV UI</td>
</tr>
<tr>
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<td>SE</td>
<td>CONT</td>
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<td>3</td>
<td>MS</td>
<td>CONT</td>
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<td>TB</td>
<td>CONT</td>
<td>SU UV</td>
</tr>
<tr>
<td>5</td>
<td>NO</td>
<td>CONT</td>
<td>SU UI</td>
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</tbody>
</table>
ASAP DATA ENTRY FORM

SUBSURFACE DATA

SEGMENT ID: ND03  SUBDIV: D  SITE: 1

PIT # 1  PIT DEPTH 53  OIL CHARACTER NO OIL INTVAL: FROM TO
CLEAN BELOW: Y  PIT ZONE: SU UI X MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN X MUD VEG

NO MORE PITS

PIT # 2  PIT DEPTH  OIL CHARACTER  OIL INTVAL: FROM TO
CLEAN BELOW:  PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # 3  PIT DEPTH  OIL CHARACTER  OIL INTVAL: FROM TO
CLEAN BELOW:  PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # 4  PIT DEPTH  OIL CHARACTER  OIL INTVAL: FROM TO
CLEAN BELOW:  PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # 5  PIT DEPTH  OIL CHARACTER  OIL INTVAL: FROM TO
CLEAN BELOW:  PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # 6  PIT DEPTH  OIL CHARACTER  OIL INTVAL: FROM TO
CLEAN BELOW:  PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # 7  PIT DEPTH  OIL CHARACTER  OIL INTVAL: FROM TO
CLEAN BELOW:  PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # 8  PIT DEPTH  OIL CHARACTER  OIL INTVAL: FROM TO
CLEAN BELOW:  PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # 9  PIT DEPTH  OIL CHARACTER  OIL INTVAL: FROM TO
CLEAN BELOW:  PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT # 10  PIT DEPTH  OIL CHARACTER  OIL INTVAL: FROM TO
CLEAN BELOW:  PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG
SEG ID: WBO3 SBDV: D SITE: 2 TEAM: 4 DATE: 8/8/90
SITE LGTH 95 OIL CATEGORIES: W M N X VL NO U
1991 REASSESSMENT: USCG: ADEC: LDMGR: EXXON:

SURFACE DATA

CHAR #: _ OIL CHAR: SD OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UT MI LI

CHAR #: _ OIL CHAR: MS OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UT MI LI

CHAR #: _ OIL CHAR: NO OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU X MI LI

CHAR #: _ OIL CHAR: _ OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UT MI LI

CHAR #: _ OIL CHAR: _ OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UT MI LI

CHAR #: _ OIL CHAR: _ OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UT MI LI

CHAR #: _ OIL CHAR: _ OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UT MI LI

CHAR #: _ OIL CHAR: _ OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UT MI LI

CHAR #: _ OIL CHAR: _ OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UT MI LI

CHAR #: _ OIL CHAR: _ OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UT MI LI

CHAR #: _ OIL CHAR: _ OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UT MI LI

CHAR #: _ OIL CHAR: _ OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UT MI LI
SUBSURFACE DATA

SEGMENT ID: [REDACTED]  SUBDIV: D  SITE: 2

PIT #1  PIT DEPTH 12  OIL CHARACTER  OIL INTVAL: FROM 5 TO 11
CLEAN BELOW: x  PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT #2  PIT DEPTH 13  OIL CHARACTER  OIL INTVAL: FROM 5 TO 11
CLEAN BELOW: x  PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT #3  PIT DEPTH 14  OIL CHARACTER  OIL INTVAL: FROM 5 TO 11
CLEAN BELOW: x  PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT #4  PIT DEPTH 15  OIL CHARACTER  OIL INTVAL: FROM 5 TO 11
CLEAN BELOW: x  PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT #5  PIT DEPTH 16  OIL CHARACTER  OIL INTVAL: FROM 5 TO 11
CLEAN BELOW: x  PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT #6  PIT DEPTH 17  OIL CHARACTER  OIL INTVAL: FROM 5 TO 11
CLEAN BELOW: x  PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT #7  PIT DEPTH 18  OIL CHARACTER  OIL INTVAL: FROM 5 TO 11
CLEAN BELOW: x  PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT #8  PIT DEPTH 19  OIL CHARACTER  OIL INTVAL: FROM 5 TO 11
CLEAN BELOW: x  PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

PIT #9  PIT DEPTH 20  OIL CHARACTER  OIL INTVAL: FROM 5 TO 11
CLEAN BELOW: x  PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG
ASAP TAG REVIEW SHEET
Segment: WR09  Subd:  Site:  Date  
PRE-Review 14 Aug 90

Priority For Addressing In 1990
× HIGH  × MEDIUM  LOW  NTR

Treatment Recommended:  Mpl. + ESE

Priority Site For Reassessment In 1991
YES  NO  YES  NO  YES  NO  YES  NO
CG  ADEC  EXXON  LAND MGR

TAG  15 Aug 90
Reapply B10

LOW PRIORITY
ASAP FOLLOWUP RECOMMENDATIONS

Conditions Observed:
Lots of heavy sot and mouse on bank. After clean up, area was just blank the week of July 23, 1990.

Followup Recommendations: Check again before summer ends
And do a follow-up application of Bio-

Completed by Pickup Crew: [ ] YES [ ] NO

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

ADEC
Name: Matt Cerney
Signature: Clara L. Cusley

Comments:
Manual removal of 46 sq. ft MS. before application.

USCG
Name: AEC Vandepols
Signature: ACE Vandepols

Comments:
Bio-fuel again this year + rework in 96

Land Rep.
Name: Patrick Dornan
Signature: Patrick Dornan

Comments:
Another application of Bio could help with the remaining 40 sq. m.
SEGMENT AS I W8-09 SUBDIVISION: A SITE: 01 DATE: 06 Aug '90

USCG
NAME: AEC Vandepels SIGNATURE: AEC Vandepels

☐ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON: Manual work no more required on this segment. SORE present. Restart in 91. Should bio. with input again this year.

ADEC
NAME: Clara S. Crosby SIGNATURE: Clara S. Crosby

☐ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

LAND MANAGER
NAME: Patrick Germain SIGNATURE: Patrick Germain

☐ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON: Heavy residual oiling still present on the bay need to be looked into in spring to assess concern. H/SORE has been disused and the area treated and was done.

EXXON
NAME: Jon Garnecki SIGNATURE: Jon Garnecki

☐ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON: Area needs to be bred again and then check to see how it did next spring - this place is covered with heavy SORE.
**ASAP SHORELINE OILING SUMMARY**

**DATE:** 06 Aug 1990  
**TIME:** 05:10:20  15'  
**TIDE LEVEL:** +3.5' + 2.2'

**TOTAL EST LENGTH OF SHORELINE SURVEYED:** 60 m

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

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

**OIL CATEGORY LENGTH:**  
- W - m  
- M 60 m  
- N - m  
- VL - m  
- NO - m  
- US - m

### SURFACE OIL

<table>
<thead>
<tr>
<th>SITE 1</th>
<th>SITE 2</th>
<th>SITE 3</th>
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</thead>
<tbody>
<tr>
<td><strong>CHARACTER</strong></td>
<td><strong>DISTRIBUTION</strong></td>
<td><strong>OILED ZONES</strong></td>
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<tr>
<td>ASPHALT</td>
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<tr>
<td>S.O.R.</td>
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<tr>
<td>POOLED</td>
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<tr>
<td>COVER</td>
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</tr>
<tr>
<td>COAT</td>
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<td>STAIN</td>
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<tr>
<td>MOUSSE</td>
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<tr>
<td>PATTIES/T.B.</td>
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<tr>
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</tr>
<tr>
<td>NO OIL</td>
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</table>

**EST. SITE LENGTH:** 60 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>OILED INTERVAL (cm)</th>
<th>CLEAN BELOW (Y/N)</th>
<th>PIT ZONE</th>
<th>SURFACE-SUBSURFACE SEDIMENTS</th>
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</thead>
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<tr>
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</tbody>
</table>

**PHOTOGRAPHERS:**  
- ASAP-04-OZ  
- Roll No. 67-11

**COMMENTS:**  
A significant quantity of oil remains on this beach. Signs of oiling are readily identifiable.
CHECKLIST

1. N Arrow
2. Approx. Scale
3. Seg/Sub Entry
4. Oil Dsit.
5. Width
6. Length
7. % Cover
8. Substrate Character
9. Est. HWL/WL
10. SSL
11. Profile Location(s)
12. Profile(s)
13. Pit Location(s)
14. Photo Location(s)

LEGEND

1. ▲
   Pit: No Subsurface Oil

2. ●
   Pit: Subsurface Oil

   [Continuous Distribution] CT/C
   [Broken Distribution] CT/B
   [Patchy Distribution] CT/P
   [Splashed Distribution] CT/S

   Oiled Vegetation

PHOTO LOCATION, DIRECTION, AND NUMBER

Character Length (m): AP 10 PO CV 20 CT ST MS PT TB FL NO SOR 50
GENERAL DATA

SEG ID: WBO9 SBDV: SITE: TEAM: DATE: 06/29/90
SITE LGTH: OIL CATEGORIES: W M N VL NO U
1991 REASSESSMENT: USCG: ADEC: LDMGR: EXXON:

SURFACE DATA

CHAR #: 1 OIL CHAR: AP OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 2 OIL CHAR: SO OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: 3 OIL CHAR: CO OIL DIST: CONT BRKN PTCH X SPLH
TIDAL ZONE: SU X UI MI LI X

CHAR #: 4 OIL CHAR: NO OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU X UI MI LI X

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

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TIDAL ZONE: SU UI MI LI

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI

CHAR #: OIL CHAR: OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU UI MI LI
ASAP DATA ENTRY FORM

SUBSURFACE DATA

SEGMENT ID: WB04  SUBDIV:  A  SITE:  1

PIT #  OIL CHARACTER  OIL INTVAL: FROM  TO  
CLEAN BELOW:  
PIT ZONE:  SU  MI  LI

SUBSURF SEDIMENT:  BRK  BLD  COB  PEB  GRN  SAN  MUD  VEG

PIT #  OIL CHARACTER  OIL INTVAL: FROM  TO  
CLEAN BELOW:  
PIT ZONE:  SU  MI  LI

SUBSURF SEDIMENT:  BRK  BLD  COB  PEB  GRN  SAN  MUD  VEG

PIT #  OIL CHARACTER  OIL INTVAL: FROM  TO  
CLEAN BELOW:  
PIT ZONE:  SU  MI  LI

SUBSURF SEDIMENT:  BRK  BLD  COB  PEB  GRN  SAN  MUD  VEG

PIT #  OIL CHARACTER  OIL INTVAL: FROM  TO  
CLEAN BELOW:  
PIT ZONE:  SU  MI  LI

SUBSURF SEDIMENT:  BRK  BLD  COB  PEB  GRN  SAN  MUD  VEG

PIT #  OIL CHARACTER  OIL INTVAL: FROM  TO  
CLEAN BELOW:  
PIT ZONE:  SU  MI  LI

SUBSURF SEDIMENT:  BRK  BLD  COB  PEB  GRN  SAN  MUD  VEG

PIT #  OIL CHARACTER  OIL INTVAL: FROM  TO  
CLEAN BELOW:  
PIT ZONE:  SU  MI  LI

SUBSURF SEDIMENT:  BRK  BLD  COB  PEB  GRN  SAN  MUD  VEG

PIT #  OIL CHARACTER  OIL INTVAL: FROM  TO  
CLEAN BELOW:  
PIT ZONE:  SU  MI  LI

SUBSURF SEDIMENT:  BRK  BLD  COB  PEB  GRN  SAN  MUD  VEG
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT WB-3 SUBDIVISION A (1 of 5)

### WORK WINDOW

| Manual Pickup and Tarmat Removal Less Than 400m From Active Nest | CLOSED |
| Manual Pickup and Tarmat Removal More Than 400m From Active Nest | OPEN |
| Bioremediation and Other Approved Treatment Less Than 400m From Active Nest | CLOSED |
| Bioremediation and Other Approved Treatment More Than 400m From Active Nest | WORK PRIOR TO 7/10 |

### ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274

### APPLICABLE ECOLOGICAL TIME CONSTRAINTS

<table>
<thead>
<tr>
<th>Segment</th>
<th>Description</th>
<th>Constraint Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A,1B</td>
<td>Salmon Stream</td>
<td>ADF&amp;G catalogued anadromous streams (242-20-10160, 242-20-10170, and 242-20-10180) are present in Segment WB-3. No constraint to manual pickup, tarmat removal, bioremediation and other approved treatment. The work area is more than 100m from the nearest anadromous stream.</td>
</tr>
<tr>
<td>1J</td>
<td>Purse Seine Area</td>
<td>No constraint to manual pickup and tarmat removal. Closed to bioremediation and other approved treatment after 7/1A.</td>
</tr>
<tr>
<td>5T</td>
<td>Bald Eagle Nest</td>
<td>USFWS bald eagle impact assessment conducted on 5/19/90 by Mary Portner indicates an active nest within 400m of the work area. Closed to manual pickup, tarmat removal, bioremediation and other approved treatment within 400m of eagle nest buffer zone. No constraint to manual pickup, tarmat removal, bioremediation, and other approved treatment more than 400m from eagle nest buffer zone.</td>
</tr>
<tr>
<td>7JJ</td>
<td>Subsistence: Invertebrate Harvesting</td>
<td>No constraint to manual pickup, tarmat removal, bioremediation and other approved treatment.</td>
</tr>
</tbody>
</table>

### OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC: Date 6/6/90
Prepared by: J. Phillips Date 6/11/90
SHORELINE EVALUATION

SEGMENT ST/ WB-03 SUBDIVISION A (1 of 5) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T All Bald Eagle nests (3/1 to 6/1) - Active eagle nest (3/1 to 9/1)
5AA Sensitive Estuaries
5JJ Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

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

ARCHAEOLOGICAL CONSTRAINT: If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.).

SHPO SIGNATURE: DATE: 5/9/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 169 m: V.Light 1364 m: No Oil 928 m
Subsurface Oil Observed: Yes ___ No X Maximum Depth

RECOMMENDATIONS:
X Treatment Recommended
X Snare/Absorbent Booms
X Manual Pickup
X Absorbents (pads, rolls, etc)
X Oil Snare (pom poms)
X Spot Washing: Wands
X Breakup
X Beach Cleaner
X Other (see comments)

COMMENTS: Recommend tarmat removal and pick-up of mousse and tarballs from areas indicated on the field sketch. Bioremediation is recommended for broken coat areas. Treatment should be limited to the period from 6/2 to 7/10 and should be cleared with ADEC due to possible presence of bald eagle nests.

TAG COMMENTS:

TAG APPROVAL DATE: 4/23/90
ADEC
EXXON
NOAA
USCG

ADDENDUM dated 6/14/90

FOSC: DATE: 5/18/90
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT WB-3 SUBDIVISION B (2 of 5)

WORK WINDOW
Manual Pickup
Tarmat Removal
OPEN

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream
ADF&G catalogued anadromous streams (242-20-10160, 242-20-10170, and 242-20-10180 are in WB-3. No constraint to manual pickup and tarmat removal.

1J Purse Seine Area
No constraint to manual pickup and tarmat removal.

5T Bald Eagle Nest
USFWS bald eagle impact assessment conducted on 5/19/90 by Mary Portner indicates an active nest within 400m of the work area. USFWS has granted limited access to Subdivision B through active eagle nest buffer zone as outlined on map (Mary Portner, 6/7/00)

7JJ Subsistence: Invertebrate Harvesting
No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS
No disturbance to stream bed or banks. Restrict air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from active nests. Restrict boat and beach disturbance to essential minimum. Avoid any unnecessary disturbance or damage to un molted biota and substrate.

SEEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM (STREAM 242-20-10160) FOR ADDITIONAL CONSTRAINT INFORMATION

FOSC Signed: [Signature] Date 6/19/90
Prepared by: [Signature] Date 6/14/90
Access routes approved to minimize disruption of nearby eagle nest (USFWS 617/90, Mary Porter)
SEGMENT ENVIROMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A  Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B  Salmon stream mouth - spawning (7/10 to 8/31)
5T  All Bald Eagle nests (3/1 to 6/1) - Active eagle nest (3/1 to 9/1)
8AA  Sensitive Estuary
7JJ  Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

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

ARCHAEOLOGICAL CONSTRAINT: If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.).

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 1228 m: V.Light 502 m: No Oil 171 m
Subsurface Oil Observed: Yes  No  Maximum Depth

RECOMMENDATIONS:

X  No Treatment Recommended
X  Treatment Recommended

X  Manual Pickup

X  Bioremediation

X  Tarmat: Breakup

X  Removal

Snare/Absorbent Booms

Oil Snares (pom poms)

Absorbents (pads, rolls, etc)

Spot Washing: Wands

Beach Cleaner

Other (see comments)

TAG COMMENTS:

COMMENSTS: Recommend manual pick up of mousse, tarballs, patties, and oiled debris. (debris, trash, vegetation). Work should be conducted between 6/1 and 7/3 with USFWS Service permission due to eagle constraints.

TAG APPROVAL: 5/1/90

ADEC  Army Corps of Engineers  FOSC:  
EXXON  Army Van Dorn  DATE: 5/1/90
NOAA  USCG  DATE: 5/1/90

SHPO SIGNATURE:  
DATE: 5/1/90
### ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT WB-3 SUBDIVISION C (3 of 5)

#### WORK WINDOW

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<tr>
<th>Activity</th>
<th>Status</th>
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<tr>
<td>Manual Pickup</td>
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<tr>
<td>Tarmat Removal</td>
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</tr>
<tr>
<td>Bioremediation</td>
<td>CLOSED</td>
</tr>
</tbody>
</table>

#### ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274

#### APPLICABLE ECOLOGICAL TIME CONSTRAINTS

<table>
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<th>Constraint</th>
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<td>5T</td>
<td>Bald Eagle Nest</td>
</tr>
<tr>
<td>7JJ</td>
<td>Subsistence: Invertebrate Harvesting</td>
</tr>
</tbody>
</table>

- **1A,1B Salmon Stream**: NO CONSTRAINT. ADF&G cataloged anadromous streams (242-20-10160, 242-20-10170, and 242-20-10180) are in Segment WB-3. The work area is more than 100m from the nearest anadromous stream.
- **1J Purse Seine Area**: Closed to bioremediation after 7/90. No constraint to manual pickup and tarmat removal.
- **5T Bald Eagle Nest**: USFWS bald eagle impact assessment conducted on 5/19/90 by Mary Portner indicates an active nest within 400m of the work area. Closed to manual pickup, tarmat removal, and bioremediation.
- **7JJ Subsistence: Invertebrate Harvesting**: No constraint to manual pickup, tarmat removal, and bioremediation.

#### OTHER ECOLOGICAL CONSIDERATIONS

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

---

FOSC: [Signature]  Date: 6/15/90

Prepared by: [Signature]  Date: 6/14/90
Incorporates information from USFWS bald eagle survey 5/19/90

ECOLOGY MAP
SEGMENT WB-3
SUBDIVISION E-3 OF E-3
METERS

* Seabird Colony
△ Eagle Nest
SHORELINE EVALUATION

SEGMENT ST/ WB-03 SUBDIVISION C (3 of 5) DATE 04/06/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T All Bald Eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
8AA Sensitive Estuary
7JJ Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

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

ARCHAEOLOGICAL CONSTRAINT: If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: [Signature] DATE: 5/9/90

OILING CATEGORIZATION:

Wide 0 m: Medium 136 m: Narrow 182 m: V.Light 129 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: ___ Breakup ___ Beach Cleaner
X Removal ___ Other (see comments)

COMMENTS: Recommend tarmat removal and manual pick up of mousse, tarballs and oiled debris (trash, vegetation debris) as indicated in the attached sketch map. Work should be conducted between 6/1 and 7/9). USFWS permitting, due to eagle constraint.

TAG COMMENTS: Following manual pickup bioremediation during low tide, but not at a minus tide level

TAG APPROVAL DATE: 4/13/90

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

EOSC: [Signature] DATE: 5/14/90
**ADDENDUM: SUBDIVISION CONSTRAINTS**

**SEGMENT WB-3 SUBDIVISION C (3 of 5)**

**WORK WINDOW**

<table>
<thead>
<tr>
<th>Manual Pickup</th>
<th><em>Open</em></th>
<th><em>Closed</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tarmat Removal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bioremediation</td>
<td><em>Open to 7/23</em></td>
<td><em>Closed</em></td>
</tr>
</tbody>
</table>

**USFWS EAGLE MONITOR REQUIRED**

**ARCHAEOLOGICAL STANDARD CONSTRAINT**

If cultural resources are uncovered, PHONE 564-3274

**APPLICABLE ECOLOGICAL TIME CONSTRAINTS**

| 1A,1B  | Salmon Stream | NO CONSTRAINT. ADF&G catalogued anadromous streams (242-20-10160, 242-20-10170, and 242-20-10180) are in Segment WB-3. The work area is more than 100m from the nearest anadromous stream. |
| 1J     | Purse Seine Area | Closed to bioremediation after 7/19. No constraint to manual pickup and tarmat removal. |
| 5T     | Bald Eagle Nest | USFWS bald eagle impact assessment conducted on 5/19/90 by Mary Portner indicates an active nest within 400m of the work area. Cleared to manual pickup, tarmat removal, and bioremediation. |
| 7JJ    | Subsistence: Invertebrate Harvesting | No constraint to manual pickup, tarmat removal, and bioremediation. |

**OTHER ECOLOGICAL CONSIDERATIONS**

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

For FOSC

Prepared by [Signature] [Date 6/14/90]

[Signature] [Date 6/14/90]
Incorporates information from USFWS bald eagle survey 5/19/90

ECOLOGY MAP
SEGMENT WB-3
SUBDIVISION 3 (3 of 5)
METERS

★ Seabird Colony
▲ Eagle Nest
SHORELINE EVALUATION

SEGMENT ST/ WB-03 SUBDIVISION C (3 of 5) DATE 04/06/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T All Bald Eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
8AA Sensitive Estuary
7JJ Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

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

ARCHAEOLOGICAL CONSTRAINT:  If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 ( Anchorage) or 229-1508 (24 hrs.).)

SHPO SIGNATURE:  DATE: 5/9/90

OILING CATEGORIZATION:

Wide 0 m: Medium 136 m: Narrow 182 m: V.Light 129 m: No Oil 0 m
Subsurface Oil Observed: Yes No Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Recommend tarmat removal and manual pick up of mousse, tarballs and oiled debris (trash, vegetation debris) as indicated in the attached sketch map. Work should be conducted between 6/1 and 7/9. USFWS permitting, due to eagle constraint.

TAG COMMENTS: Following Manual Pickup Bioremediation during low tide BUT NOT AT A MINUS TIDE LEVEL.

TAG APPROVAL DATE: 4/13/90

ADEC Arctic Wildlife Nat’l Coord. FOSC:
EXXON Sport Fish & Wildlife NOAA
NOAA
USCG

DATE: 5-14-90
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT WB-3 SUBDIVISION D (4 of 5)

WORK WINDOW

<table>
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<tr>
<td>Tarmat Removal</td>
<td>Closed</td>
</tr>
<tr>
<td>Bioremediation</td>
<td>Closed</td>
</tr>
</tbody>
</table>

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream  ADF&G catalogued anadromous streams (242-20-10160, 242-20-10170, and, 242-20-10180) are in Segment WB-3. No constraint to manual pickup, tarmat removal, and bioremediation. The work area is more than 100m from the nearest anadromous stream.

1J Purse Seine Area  Closed to bioremediation after 7/15. No constraint to manual pickup and tarmat removal.

5T Bald Eagle Nest  USFWS bald eagle impact assessment conducted on 5/19/90 by Mary Portner indicates an active nest within 400m of the work area. Closed to manual pickup, tarmat removal, and bioremediation.

7JJ Subsistence: Invertebrate Harvesting  No constraint to manual pickup, tarmat removal, and bioremediation.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC: ___________________________  Date: __________

Prepared by: ______________________  Date: __________
Incorporates information from USFWS
bald eagle survey 5/19/90

ECOLOGY MAP
SEGMENT WB-3
SUBDIVISION D_ (4 of 5_) METERS

★ Seabird Colony
△ Eagle Nest
SHORELINE EVALUATION

SEGMENT ST/ WB-03  SUBDIVISION D (4 of 5) DATE: 04/06/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1A  Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B  Salmon stream mouth - spawning (7/10 to 8/31)
5T  All Bald Eagle nests (3/1 to 6/1) - Active eagle nest (3/1 to 9/1)
8AA  Sensitive Estuary
7JJ  Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

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

ARCHAEOLOGICAL CONSTRAINT: If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.).

SHPO SIGNATURE: [Signature] DATE: 5/9/90

OILING CATEGORIZATION:
Wide 0 m: Medium 429 m: Narrow 434 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes x No_____ Maximum Depth 7 cm

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

COMMENTS: Recommend tarmat removal and manual pick up of mousse, tarballs and oiled debris (trash, vegetation debris) as indicated in the attached sketch map. Work should be conducted between 6/1 and 7/9) USFWS permitting due to eagle constraint. SEE APPROVAL DATED 5/7/90

TAG COMMENTS: Bioremediate costs and remaining oil in areas of manna deposition

TAG APPROVAL DATE: 4/23/90
ADEC [Signature] DATE: 5/7/90
EXXON [Signature] FOSC: [Signature] DATE: 5/7/90
NOAA [Signature] USCG [Signature]
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT WB-3 SUBDIVISION D (4 of 5)

WORK WINDOW

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<td>Tannat Removal</td>
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<td></td>
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<tr>
<td>Bioremediation</td>
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</tr>
</tbody>
</table>

* USFWS Eagle Monitor Required

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A, 1B Salmon Stream

ADF&G catalogued anadromous streams (242-20-10160, 242-20-10170, and, 242-20-10180) are in Segment WB-3. No constraint to manual pickup, tannat removal, and bioremediation. The work area is more than 100m from the nearest anadromous stream.

1J Purse Seine Area

Closed to bioremediation after 7/23. No constraint to manual pickup and tannat removal.

5T Bald Eagle Nest

USFWS bald eagle impact assessment conducted on 5/19/90 by Mary Portner indicates an active nest within 400m of the work area. Closed to manual pickup, tannat removal, and bioremediation. OPEN AS PER USFWS SURVEY OF 7/19. USFWS Monitor Required.

7JJ Subsistence: Invertebrates Harvesting

No constraint to manual pickup, tannat removal, and bioremediation.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC: Date 6/14/90

Prepared by: Date 6/14/90
Incorporates information from USFWS bald eagle survey 5/19/90

ECOLOGY MAP
SEGMENT WB-3
SUBDIVISION D_ (4.015_)
METERS

★ Seabird Colony
▲ Eagle Nest
SEGMENT ST/ WB-03 SUBDIVISION D (1 of 5) DATE 04/06/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
1A  Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B  Salmon stream mouth - spawning (7/10 to 8/31)
ST  All Bald Eagle nests (3/1 to 6/1) - Active eagle nest (3/1 to 9/1)
SAA  Sensitive Estuary
7JJ  Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

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

ARCHAEOLOGICAL CONSTRAINT: If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: __________________________ DATE: 5/9/90

OILING CATEGORIZATION:

Wide 0 m: Medium 429 m: Narrow 434 m: V.Light 0 m: No Oil 0 m

Subsurface Oil Observed: Yes X No____ Maximum Depth 7 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend tarmat removal and manual pick up of mousse, tar-balls and oiled debris (trash, vegetation debris) as indicated in the attached sketch map. Work should be conducted between 6/1 and 7/9 USFWS permitting, due to eagle constraint.

TAG COMMENTS: Bioemulsion coated remaining oil in areas

TAG APPROVAL DATE: 5/22/90
ADEC  [Signature]  DATE: 5/22/90
EXXON  [Signature]  DATE: 5/22/90
NOAA  [Signature]  DATE: 5/22/90
USCG  [Signature]  DATE: 5/22/90
ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 242-20-10160

SEGMENT WB-3 SUBDIVISION B

WORK WINDOW

| Manual Pickup | Work Prior to 7/1 |
| Tarmat Removal | (ADF&G Monitor Req.) |

Bioremediation Less Than 100m From Stream

Bioremediation More Than 100m From Stream

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A, 1B Salmon Stream

ADF&G catalogued anadromous stream (242-20-10160) is present in Subdivision B. No constraint to manual pickup and tarmat removal. 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.

1J Purse Seine Area

No constraint to manual pickup and tarmat removal. Closed to bioremediation after 7/10.

5T Bald Eagle Nest

No constraint to manual pickup, tarmat removal and bioremediation. USFWS (Mary Porter, 6/7/00) has granted access to Subdivision B through eagle nest buffer zone (see map).

7JJ Subsistence: Invertebrate Harvesting

No constraint to manual pickup, tarmat removal, and bioremediation per conversation of Pat Norman/Port Graham Village Corp. with Rex Coulter/Exxon on 6/11/00.

OTHER ECOLOGICAL CONSIDERATIONS

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

SEE SUBDIVISION CONSTRAINT ADDENDUM WB-3B FOR ADDITIONAL CONSTRAINT INFORMATION.

FOSC

Date 6/16/00

Prepared by 6/14/00

FAUNIPI

Date 6/14/00
Access routes approved to minimize disruption of nearby eagle nest (USFWS 6/7/90, Mary Porter)
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ WB-003 STREAM NO: 242-32-10160 DATE 4/29/90

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)
1J Purse seine area (7/1 TO 8/31)
7JJ Subsistence area: Invertebrate harvesting
8AA Sensitive estuary
5T All bald eagle nests (3/1 to 6/1)
Active eagle nests (3/1 to 9/1)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Subject stream is located within subdivision B (2 of 5). Eagle nest within 400m of stream no. 242-32-10160

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

SHPO SIGNATURE: [Signature] DATE: 5/22/90
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: Recommend manual removal of pavement and oiled vegetation as indicated on attached sketch map. Work from 6/2 to 7/1 with approval of USFWS regarding eagle nests.

TAG COMMENTS: [Comment]

TAG APPROVAL DATE: 5/18/90.
ADEC Art Weiner Art Weiner
EXXON _Amy Tien_ Art Weiner
NOAA Gay Price Gay Price
USCG [Signature] [Signature] Date: 6/June 90
REGION: KENAI

SEGMENT: ST/WB-04

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION

SEGMENT ST/ WB-04 SUBDIVISION A (1 OF 1) DATE 4/28/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
- Purse seine area (7/1 to 8/31)
- All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
See attached Ecological Constraint sheet for specific constraints and contacts.

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

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

SHPO SIGNATURE: ______________________ DATE: ______________________

OILING CATEGORIZATION:
- Wide 0 m: Medium 0 m: Narrow 394 m: V.Light 767 m: No Oil 1317 m
- Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

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

COMMENTS: Recommended treatment includes manual removal of tarmats in areas indicated on sketch map. Work should be conducted between 6/1 and 7/1 with approval of USFWS regarding eagle nest constraint.

TAG COMMENTS: _______________________________________________________

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

1A Salmon stream mouth - fry outmigration (5/1 to 6/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
   No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or lnipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
   AGENCY CONTACT PERSON: ADF&G John Morison 267-2324

1C Salmon fry nursery area (4/31 to 7/31)
   No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or lnipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
   AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D Esther Hatchery release (4/15 to 6/15)
1E Main Bay Hatchery release (4/20 to 6/15)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release sites
   No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or lnipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
   AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1I Gill net area (6/7 to 8/31)
1J Puma seine area (7/20 to 9/30)
1K Puma seine hook-off (7/20 to 9/30)
1L Set net sites (8/11 to 7/25)
   Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or lnipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
   AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

2M Herring spawning (4/1 to 6/15)
   Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or lnipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
   AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235

3M 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 colonies. Contact 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 6/1)
   Restrict boat and air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colonies. Contact USFWS prior to treatment.
   AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S Shorebird/waterfowl concentration (4/1 to 5/15)
   Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
   AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
   ADF&G Tom Rothe 267-2208

5T All Bald Eagle nests (3/1 to 6/1)
   Active Bald Eagle nests (3/1 to 6/1)
   Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
   AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

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

7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
7H Finfish harvesting
    Deer harvesting (9/15 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 Fell 267-2359

PWS-C002 AM4 4/25/90
FIELD SHORELINE COMMENT SHEET

SEGMENT ST: WB-04  SUBDIVISION: A-1 OF  DATE: 04/28/90

USCG
NAME: David S. Thomas  SIGNATURE:

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS

ADEC
NAME: Clara S. Crosby  SIGNATURE:

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

Suggest removal of AR at western end of segment — easily recovered.

LAND MANAGER
NAME: Dick Moeller  SIGNATURE:

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED
SHORELINE OILING SUMMARY

OG RICK GILLIE USCG DAVE THOMAS SEGMENT ST/ WB-04
BIO DAVE LONGE LAND REP DICK NOONIN (NT) SUBDIVISION A (10F)
EXXON FRANK BOX ADEC EL MEA CROWLEY

TEAM NO. 13 TIDE LEVEL 16 to -3 DATE 04/28/90
EST. SUBDIVISION LENGTH: Z=355 m
UPLANDS DESCRIPTION: Grass, Forest, Rock
SURVEYED FROM: Foot, Boat, Helo
WORKING DIRECTION: E 10 W
SURFACE SEDIMENTS: R 50 % B 20 % C 20 % P 10 % G 0 % S 0 % M 0 % V 0 %
SLOPE: Lang 50 % Hang 30 % Vert 20 %
WAVE EXPOSURE: Low, Med, High
OIL CATEGORY LENGTH: W 0 m M 0 m N 400 m VL 800 m NO 1335 m

SURFACE OIL

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<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<tr>
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<td>X</td>
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<td>MOUSSE</td>
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<tr>
<td>PATTIES</td>
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<tr>
<td>TARBALLS</td>
<td>X</td>
<td>X</td>
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<td>FILM</td>
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<tr>
<td>NO OIL</td>
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PAVEMENT H F 40 sq. m by 5 cm
PATTIES / TARBALLS 1 BAGS
NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS AMOUNT

<table>
<thead>
<tr>
<th>Logs</th>
<th>Vegetation</th>
<th>Trash</th>
<th>Debris</th>
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<tr>
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DID YOU COLLECT DEBRIS?
YES X, NO □
TYPE: Prop. Flow
#BAGS: 1

Photographs:
Roll No. 6T-13-05
Frames 33-37

SUBSURFACE OIL

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED DEBRIS MATERIAL</th>
<th>BELOW</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>ANA SHEET (YN)</th>
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<tr>
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<tr>
<td>2</td>
<td>40</td>
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<td>X</td>
<td>X</td>
<td>J</td>
<td></td>
</tr>
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<td>30</td>
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<td>30</td>
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<td>X</td>
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<td>J</td>
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</tr>
<tr>
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<td>20</td>
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<td>X</td>
<td>X</td>
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<td>J</td>
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</tr>
<tr>
<td>6</td>
<td>25</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td>J</td>
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</table>

COMMENTS

GEOMORPHOLOGY: PREDOMINANTLY NARROW RUBBLE BEACHES BACKED BY VERTICAL CLIFF (5M HIGH), 8 LARGER BEACHES (200M LONG) COBBLE/PEBBLE

OILING: AREA OF "NARROW" AT WEST END COMPRISING ASPHALT PAVEMENT BANDS IN H T 2 AT TWO SITES

REVIEWED BY: DATE: MAY 50
### Subsurface Oil (Continued)

<table>
<thead>
<tr>
<th>Pit No.</th>
<th>Pit Depth (cm)</th>
<th>Subsurface Oil Character</th>
<th>Oiled Interval</th>
<th>Below Oil / Film Color</th>
<th>Pit Zone</th>
<th>Anaerobic Sediments</th>
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<tbody>
<tr>
<td>7</td>
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<td>P-J, P</td>
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<tr>
<td>8</td>
<td>30</td>
<td>V</td>
<td>5-10</td>
<td>X</td>
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<td>P-J, PG</td>
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<tr>
<td>9</td>
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<td>X</td>
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<td>P-J, G</td>
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<td>C-P, G</td>
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<tr>
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<td>X</td>
<td>C-P, G</td>
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</table>

**Comments**

...
AP/P (30% cover), TB/S
3x50m, 2-8 cm thick
LITZ
COBBLE? OVER PEBBLES

CT/C, COMING ON ROCK FACES

CT/S (<1% cover)
BAND < 1m high on SHELTERED ROCK FACES

AP/S, TB/S IN BDRK/COBBLE

AP/P (20% cover), LITZ
1x50m, 2 cm thick
(POSSIBLE BURIAL >30 cm)

LEGEND

1 ▲
- No Subsurface Oil

2 ▲
- Subsurface Oil

CT/C
- Continuous Distribution

CT/B
- Broken Distribution

CT/P
- Patchy Distribution

CT/S
- Speckled Distribution

Oiled Vegetation

Photo location, direction, and number
LEGEND
1 A
Pr1 - No Subsurface Oil

2 A
Pr2 - Subsurface Oil

CT/C Continuous Distribution
CT/B Broken Distribution
CT/PP Patchy Distribution
CT/PS Splashed Distribution

Cited Vegetation

Photo location, direction, and number

Character Length (m): AP 20 PO 0 CV 0 CT 100 ST 0 MS 0 PT 0 TB 6 FL 0 NO 7 4 0
SHORELINE ECOLOGICAL SUMMARY

Segment ST/ WBOO4 Subdivision A Date (mo/day/yr) 4-29-90

Time (24 hr) 7:15 Biologist David Lohr

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

(B) Overall % cover of biota (% of segment): Dense 45 Moderate 35 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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<thead>
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<th>Sparse</th>
<th>Rare</th>
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**MYTILUS**

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**FUCUS**

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Wildlife Observations/ General Comments:

See page 7

Ecological Considerations:

One commercial salmon fishing regulatory marker was placed at the western boundary of this segment. Unknown how far any anomalous streams are from this segment boundary.
Shoreline Ecological Summary

Segment ST-WB004 Subdivision A

4-28-90

Draft: David Lohse

Wetland Observations / General Comments


mid intertidal: Scytopsiphon, Ulva, coralline algae, Arthroplax, Kathrina tunicata, sculpins, Pagurus, Halosaccion, Nuella, Porphyra, unknown red algal "branch" (R. rhodomenia?), Testa, Methridium, Alaria, Endocladia

high - Cladophora

2. Worms, 1 squid, and many ducks were observed in the area.

3. A few, small (less than 100 cm²) patches of brown thraux were found on mid-intertidal boulders.

4. Algal cover in low intertidal was 75% on boulders (2 estimates), 75% on bedrock (1 estimate), and 80% on cobble (2 estimates).

5. Bacterial mortality on mid-intertidal boulder was ~5% (estimate of one site), 10% on mid-intertidal bedrock (1 site), and 5-25% on high intertidal bedrock (2 sites).

6. One stream located in segment, Unknown whether or not it is anadromous. See OEE map for location.

7. A commercial salmon fishing regulatory marker was posted at the western boundary of this segment.
# 1991 MAYSAP EVALUATION

**SEGMENT:** WB 004  **SUB:** A  **REGION:** KEN  **SURVEY DATE:** 5/26/91

## ENVIRONMENTAL SENSITIVITIES:

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

## Ecological/Constraints (see page two for details)

- Eagle nest,
- Fish harvest area

## ARCHAEOLOGICAL CONSTRAINTS:

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

**SHPO Signature:** ________________________  **Date:** ________________

## RECOMMENDATIONS:

<table>
<thead>
<tr>
<th>TREATMENT REQUIRED (Y or N)</th>
<th>INITIAL</th>
<th>TAG</th>
<th>FOSC</th>
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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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<tr>
<td>Bio-Customblen Only</td>
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</tr>
<tr>
<td>Bio-Inipol/Customblen</td>
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<tr>
<td>Other</td>
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<tr>
<td>Other</td>
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</table>

## COMMENTS:

**INITIAL:** ____________________________________________________

________________________________________________________________

________________________________________________________________

**TAG:** _________________________________________________________

________________________________________________________________

________________________________________________________________

**FOSC:** _________________________________________________________

________________________________________________________________

________________________________________________________________

**TAG APPROVAL DATE:** __________  **FOSC APPROVAL DATE:** __________

**ADEC** ________________________  **FOSC** ________________________

**EXXON** ________________________

**USCG** ________________________

**NOAA** ________________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

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

TEAM NO. 4  SEGMENT W16-004  SUBDIVISION A  DATE 5/27/91

ADEC NAME: Steve Ferguson  SIGNATURE: [signature]

☐ NTR  TREATMENT RECOMMENDED

NO TREATMENT RECOMMENDED. All oiling observed with the exception of CT/ST were picked up during survey.

EXXON NAME: George P. Stiles  SIGNATURE: [signature]

☐ NTR  Very little oil was found to remain. The survey crew picked up several areas of MTF/FO (weathered). Picked up 1 bag.

LANDMANAGER
NAME: [redacted]  OF: [redacted]  SIGNATURE: [signature]

☐ NTR  This spot could be cleaned over the summer when work is done on other sites in windy bay.

USCG/NOAA
NAME: [redacted]  SIGNATURE: [signature]

☐ NTR  Very little found.
# MAYSAP SHORELINE OILING SUMMARY

## Data Summary

- **Team No.:** 4
- **Bio:** J. Roth
- **Landmanager:** P. Coleman
- **USCG/NOAA:** McMahon/McDonald
- **Date:** May 24, 1991
- **Segment:** WB 004
- **Subdivision:** A
- **Time:** 20:44 to 20:55
- **Tide Level:** 4.72 ft. to 5.12 ft.
- **Energy Level:** M
- **Surveyed From:** Foot, Boat, Helo
- **Weather:** Sun, Clouds, Fog, Rain
- **Total Length Shoreline Surveyed:** 75 m
- **Near Shore Sheen:** BR, RB, SL, X
- **Est. Oil Category Length:**
  - W 15 m
  - M 5 m
  - N 0 m
  - O 15 m
  - V 0 m
  - L 0 m
  - US 240 m

## Surface Oil Character

<table>
<thead>
<tr>
<th>LO</th>
<th>Surface Oil Character</th>
<th>Surface Sediment</th>
<th>Shore Slope</th>
<th>Area Width</th>
<th>Length</th>
<th>Zone S</th>
<th>UI</th>
<th>MI</th>
<th>LI</th>
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<td>B</td>
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</tbody>
</table>

## Distribution:

- C = 91-100%
- B = 81-90%
- P = 71-80%
- S = 61-70%
- T = <1%

## Slope:

- V = Vertical
- H = High Angle
- M = Medium Angle
- L = Low Angle

## Photo Roll:

- MAYSAP frames

## Pit and Subsurface:

- OP, HOR, MOR, LOR, TR, NO, cm-cm
- Y/N, (cm), BRSH, S, UI, MI, LI

## Sheen Color:

- B = Brown
- R = Rainbow
- S = Silver
- N = None

## OG Comments:

Very little oil remains.
TEAM: 4
DATE: 26 May 91

SEGMENT #: WB 4
TIDAL HEIGHT (Range): 4.6 to 4.65

SUBDIVISION: A
BIOLIST: Jim Roth

SEA STATE: 1 FT
WIND SPEED/DIRECTION:

PHOTOGRAPHS: ROLL #
FRAME #

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):
A - Site Bedrock w/ Verrucaria
B - Site Bedrock w/ Verrucaria, sparse barnacles, littorines.

General Comments: A fairly high-energy site consisting of a clean pebble-gravel beach which is devoid of intertidal biota, and a bedrock outcropping which has a well-developed and thriving intertidal biota on the north side.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS

<table>
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<th># OF SPECIES</th>
<th>TOTAL BIRDS</th>
<th>FISH OBSERVED</th>
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<tbody>
<tr>
<td>Eagles</td>
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<tr>
<td>Seabirds</td>
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<tr>
<td>Waterfowl</td>
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<td></td>
</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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<td>Other Birds</td>
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LAND MAMMALS

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<th>SPECIES</th>
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<tr>
<td>Pinnipeds (specify)</td>
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<td></td>
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<tr>
<td>Whales (specify)</td>
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</table>

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

SEGMENT: WB 004 SUB: A REGION: KEN SURVEY DATE: 5/26/91

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

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

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

SHPO Signature: Timothy A. Smith Date: 6/7/91

RECOMMENDATIONS:

TREATMENT REQUIRED (Y or N) N N Y

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

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: 6/7/91
ADEC
EXXON
USCG
NOAA

FOSC APPROVAL DATE: 6/14/91
FOSC
CHIEF OF STAFF, FOSC
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

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

<table>
<thead>
<tr>
<th>TEAM NO.</th>
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**ADEC NAME**

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**EXXON NAME**

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**LANDMANAGER**

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**USCG/NOAA NAME**

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**Observed Oil**

- **TREATMENT RECOMMENDED**
  - No treatment recommended. All oiling observed with the exception of CR/ST were picked up during survey.

- **NTR**
  - Very little oil was found to remain. The shoreline crew picked up several areas of MOP (Weathered). Picked up 1 bag.

- **NTR**
  - This spot could be checked over the summer when work is done on other sides in windy day.

- **NTR**
  - Very little found.
MAYSAP SHORELINE OILING SUMMARY

TEAM NO. 1

BIO J. Roth

LANDMANAGER P. Norman

USCG/NOAA McManus/McDonald

DATE MAY 26, 1991

SEGMENT WB 004

SUBDIVISION A

TIME 20:44 to 20:55

TIDE LEVEL 4.72 ft. to 5.12 ft.

ENERGY LEVEL: H

SURVEYED FROM: FOOT

WEATHER: SUN

TOTAL LENGTH SHORELINE SURVEYED: 75 m

NEAR SHORE SHEEN: BR

EST. OIL CATEGORY LENGTH: 24.3 m

TOTAL OIL SURVEYED: 24.3 m

AO (cm) OIL CHARACTER: NO OILED ZONE: SC

SURFACE OIL CHARACTER: S S

COLLECTED OIL: DB

SHORE SLOPE: R V

AREA: S U M L

ZONE: X X

NOTES: FRAME

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

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

PHOTO ROLL # MAYSAP

OG COMMENTS:

VERY LITTLE OIL REMAINS

REVIEWED: MC 6/24/91

REvised 5/24/91 KG
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #  4  DATE  26 MAY 91
SEGMENT #  WB 4  TIDAL HEIGHT (Range): 4.6 to 4.65
SUBDIVISION  A  BIOLOGIST  Jim Roth
SEA STATE  1 FT  WIND SPEED/DIRECTION
PHOTOGRAPHS:  ROLL #  FRAME #

COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):
A - HitZ Bedrock w/ Verrucaria
B - HitZ Bedrock w/ Verrucaria, Sparse Barnacles, Littorines.

GENERAL COMMENTS: A FAIRLY HIGH-ENERGY SITE CONSISTING OF A CLEAN Pebble-GRANULE BEACH WHICH IS DEVOID OF PASTE TEDAL BIOTA; AND A BEDROCK OUTCROPPING WHICH HAS A WELL-DEVELOPED AND THRIVING INTERTIDAL BIOTA ON THE NORTH SIDE.

WILDLIFE OBSERVATIONS
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS  # OF SPECIES  TOTAL BIRDS  FISH OBSERVED  SPECIES PRESENT

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

MARINE MAMMALS  # OBSERVED  SPECIES  # OBSERVED

| Sea Otters |  | | |
| Pinnipeds (specify) |  | | |
| Whales (specify) |  | | |

LAND MAMMALS

Shoreline subdivision map showing important biological features attached.
SHORELINE EVALUATION
SEGMENT ST/ WB-04 SUBDIVISION A (1 OF 1) DATE 4/28/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

- Purse seine area (7/1 to 8/31)
- All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)

See attached Ecological Constraint sheet for specific constraints and contacts.

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

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 394 m: V.Light 767 m: No Oil 1317 m
Subsurface Oil Observed: Yes X No ___ Maximum Depth 10 cm

RECOMMENDATIONS:

- X Treatment Recommended
- Manual Pickup
- Bioremediation
- X Tarmat Removal
- Snare/Absorbent Booms
- Oil Snares (pom poms)
- Absorbents (pads, rolls, etc)
- Spot Washing: Wands
- Beach Cleaner
- Other (see comments)

COMMENTS: Recommended treatment includes manual removal of tarmats in areas indicated on sketch map. Work should be conducted between 6/1 and 7/1 with approval of USFWS regarding eagle nest constraint.

TAG COMMENTS:

TAG APPROVAL DATE: 5/1/90
ADEC [Signature] DATE: 6/June 90
EXXON [Signature]
NOAA [Signature]
USCG [Signature]
LEGEW

AP/P (30% cover), TB/S
3x50m, 2-8 cm thick
LITZ COBBLE† OVER PEBBLES

VT/CS, 10M LONG ON ROCK FACES

CT/S (<1% cover)
BAND <1M HIGH ON SHELTERED ROCK FACES

AP/S, TB/S IN BDRK/Cobble

AP/P (20% cover), MITZ
1x50m, 2 cm thick
(Possible Burial >50 cm?)

VERTICAL ROCK,
NARROW ANGULAR BOULDER/Cobble
BEACHES

Windy Bay

LEGEND
1 △ Sketch Map
2 △ West Part

CHECKLIST
N Arrows
Approx. Scale
Easting/Map
Grid
Profile Location(s)
Profile(s)
Plot Location(s)
Plot(s)

LEGEND
P - No Subsurface Oil
P - Subsurface Oil
CT/C Continuous Distribution
CT/P Patchy Distribution
CT/S Splashed Distribution

DEAD TREES

AP/P (30% cover), MITZ COBBLE† OVER PEBBLES

Windy Bay

AP/S, TB/S IN BDRK/Cobble

AP/P (20% cover), MITZ
1x50m, 2 cm thick
(Possible Burial >50 cm?)
SUBDIVISION A - 1 1/4
DATE 09/23/90

CHECKLIST
- Arrow
- Approx. Scale
- Seg/Sub Endry
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Ext. Hwl/Hwl
- SOL
- Profile Location(s)
- Profile(s)
- Oil Location(s)
- Photo Location(s)

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

CT/C Cenosphere Distribution
CT/B Broken Distribution
CT/P Patchy Distribution
CT/S Splashed Distribution

Oil Vegetation
1 △
- Photo location, direction, and number

Windy Bay

CT/S (< 1") ON ROCK FACES

PEBBLE BEACH
Narrow Rubble Beaches, Vertical Rock Backshore

Rock Cliff

Oil Character Length (m): AP 20 PO 0 CV 0 CT 100 ST 0 MB 0 PT 0 TB 5 FL 0 NO 2410
(For Entire Segment)
Sketch Map

Nindy Bay

Vertical Rock

CTIC, Channeling
ON SOA FLX

CT/S (0.1% Oil)
Band CIM in 1 m on
W-Flx for 2 km East

RP = 3/2 in EWR

AP/2 (200m 000' 1) Mitz
X 50 m 7 cm Top

Pub. 3 ce (ARIAL >3x 1)

Legend

1
No Subsurface Oil

2
Subsurface Oil

CT/C
Channel Distribution

CT/B
Oil Distribution

CT/E
Entry Distribution

CT/F
Shelf Distribution

Vegetation

0
Location, direction, number
WB-6

WB-7

OPS MAP

KEN 128A

XXX Wide

/// Medium

---- Narrow

TTTT Very Light

Map Key: KEN-128A
Name: Role Griffin
Date: 09/23/98

ADEC Segment Length: 2465m
WEST PART

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

WB-4

Map Key: KEN-1280
Name: Rick Callie
Date: 04/28/90

ADEC Segment Length: 2665m
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT WB-4 SUBDIVISION A (1 of 1)

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1J  Purse Seine Area  No constraint to tarmat removal.

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

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 7/1. Restrict air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from active nests. Avoid any unnecessary disturbance or damage to unciled biota and substrate.

FOSC  Date  6-19-90
Prepared by  Date  6/10/90
ECOLOGY MAP
SEGMENT WB-4
SUBDIVISION A (1/10 of 1)

WB-04

WB-02

WB-01

WB-8

WB-9

WORK AREA

Seabird Colony

Eagle Nest
SHORELINE EVALUATION

SEGMENT ST/ WE-04  SUBDIVISION A (1 OF 1) DATE 4/28/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1J  Purse seine area (7/1 to 8/31)
5T-1  All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION 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: 5/11/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 394 m: V.Light 767 m: No Oil 1317 m
Subsurface Oil Observed: Yes X  No  Maximum Depth 10 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes manual removal of tarmats in areas indicated on sketch map. Work should be conducted between 6/1 and 7/1 with approval of USFWS regarding eagle nest constraint.

TAG COMMENTS:___________________________________________________________

TAG APPROVAL DATE: 5/1/90
ADEC  EXXON  NOAA  USCG
Art Weir  Amy En  Lis  D.D. Rome
DATE: 6 June 90
REGION: KENAI

SEGMENT: ST/WB-06

SUBDIVISIONS: A (1 OF 1)
SHORELINE EVALUATION

SEGMENT ST/ WE-06 SUBDIVISION A (1 OF 1) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
5S Shorebird/Waterfowl concentration (4/25 to 5/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOCLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unciled 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 17 m: No Oil 79 m
- Subsurface Oil Observed: Yes No X Maximum Depth _______

RECOMMENDATIONS:

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

COMMENTS: Recommend tarmat removal and bioremediation of oil coated boulders and bedrock as indicated on sketch map. Work should be conducted after 5/15 based on above shorebird/waterfowl constraints.

TAG COMMENTS: ________________________________

TAG APPROVAL DATE: ________________

ADEC EXXON FOSC: ________________ DATE: ________________

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 (7/20 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 (5/1 to 9/15)
6Y  Special use destination

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

SEGMENT ST: WB-6  SUBDIVISION: 19  DATE 4/7/90

USCG NAME  R. Bryan Hirst  SIGNATURE  R. Bryan Hirst

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

NAME  R. Bryan Hirst  SIGNATURE  R. Bryan Hirst

COMMENTS

Agree with the findings of the Shoreline Oiling Summary Sheet.

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

NAME  Russell Kubo  SIGNATURE  Russell Kubo

COMMENTS

Only one 25cm patty and some tarning on the boulders and rocks was found.

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

NAME  Patrick Domon  SIGNATURE  Patrick Domon

COMMENTS

☐
SHORELINE OILING SUMMARY

CG: Randy Siegel  USCG  Bryan Hiltle  SEGMENT ST/ WB-G

BIO: M.K. Sweet  LAND REP  R.T. Navar (P.S.)  SUBDIVISION A

EXXON: John Dee  ADECO Based Range  TIME 16:45 17-10-90

TEAM NO.: 17  TIDE LEVEL: +4.0 to +3.5  DATE 17-10-90

ST. SUBDIVISION LENGTH: 92 m  ☑️ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow

UPLANDS DESCRIPTION: ☑️ Grass ☑️ Forest ☑️ Rock

SURVEYED FROM: ☑️ Foot ☐ Boat ☑️ Helo  WORKING DIRECTION: NE to SE

SURFACE SEDIMENTS: R % B 16 % C 5 % P 5 % G 62 % S 5 % M 20 % V 0 %

SLOPE: Lang 75 % Hang 75 % Vert 20 %  WAVE EXPOSURE: ☑️ Low ☐ Med ☐ High

OIL CATEGORY LENGTH: W HA m M HA m N HA m VL 30 m NO 62 m

SURFACE OIL

<table>
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<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<td>MOUSE</td>
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<td>PATTIES TARBALLS</td>
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<td>FILM</td>
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PAVEMENT: H ☑️ S 1 sq.m by Z cm

PATTIES / TARBALLS: ☐ BAGS

NEAR SHORE SHEEN? ☑️ BR RW SL TL

OILED DEBRIS AMOUNT

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

Roll No. ST-17-5
Frames 49, 10, 15

OILED INTERVAL OIL / FILM COLOR PIT ZONE A NA

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<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>BELOW OIL / FILM COLOR</th>
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COMMENTS

This segment consists of a west-facing gravel beach on an island. The segment is only listed as only 92 meters long. The beach is flanked by bedrock outcrops. 4 or 5 PT/18 were observed within the northwestern and some PT/17 were observed on the southern outcrop. Very minor oiling.

* ST/S on some gravel from pits 1+2.

REVIEWED: BAR  DATE 12 Aug 90
The island dimensions are scaled down according to Exxon's published segment lengths - I believe the dimensions of the island are significantly larger than those indicated.

Character Length (m): AP PO V/A CV V/A CT ZU ST 20 MS V/A PT 1 TB 1 FL V/A NO 72 52
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST/WB6  
Subdivision A  
Date (mo/day/yr) 4/7/90

Time (24 hr) 7:20-9:35  
Bacteriology  M. H. Fawcett

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

(B) Overall % cover of biota (% of segment):  
   Dense___ Moderate___ Low___

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

### BARNACLES

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### FUCUS

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**Wildlife Observations/ General Comments:**

1/21/90 the segment consists of a barren, unstable sand/gravel spit, with no macro-biota. However a large rock outcrop on the north side of it spans the intertidal zone and has dense barnacles in MT2 and UT2.

**Ecological Considerations:**

*dense mussels in MT2; moderately dense limpets and barnacles in MT2 & UT2, and sparse barnacles in MT2.

*5 - bird concentration area
WB-6
Subdivision A
(only 1 subdivision)

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

Map Key: KEH-149
Name: Rudy Siegel
Date: 4/7/90
SHORELINE EVALUATION

SEGMENT ST/ WB-06 SUBDIVISION A (1 OF 1) DATE 4/7/90

ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
5S Shorebird/Waterfowl concentration (4/25 to 5/15)
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: 4/20/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 17 m: No Oil 179 m
Subsurface Oil Observed: Yes X No
Maximum Depth

RECOMMENDATIONS:
___No Treatment Recommended ___Snare/Absorbent Booms
X Treatment Recommended ___Oil Snares (pom poms)
X Manual Pickup ___Absorbents (pads, rolls, etc)
X Bioremediation ___Spot Washing: Wands
X Tarmat: Breakup ___Beach Cleaner
X Removal ___Other (see comments)

COMMENTS: Recommend tarmat removal and bioremediation of oil coated boulders and bedrock as indicated on sketch map. Work should be conducted after 5/15 based on above shorebird/waterfowl constraints.

TAG COMMENTS: __________________________________________________________

TAG APPROVAL DATE: 4/19/90
ADEC Art Weimer

EXXON Andy Temp
NOAA Burr Westfall
USCG Kenneth Echlin

FOSC: ___ DATE: 5/22/90
The island dimensions are scaled down according to Exxon's published segment lengths. I believe the dimensions of the island are significantly larger than those indicated.
Trig St 17-5
Frames 6, 9, 10
4/7/90

OLIENG
- Heavy
- Moderate
- Light
- Very Light
- None
- Not Surveyed

Distance In Meters
- Sep/Oct 1990 Survey

500.0
WB-6
Subdivision A
(only 1 subdivision)

Map Key: KEN-149
Name: Randy Seegel
Date: 4/7/90
1991 MAYSAP EVALUATION


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

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

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

SHPO Signature: __________________________ Date: __________________

RECOMMENDATIONS:

<table>
<thead>
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<th>INITIAL</th>
<th>TAG</th>
<th>FOSC</th>
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<tbody>
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</tr>
<tr>
<td>Spot Washing</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Bio-Customblend Only</td>
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<tr>
<td>Bio-Inipol/Customblend</td>
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<td>Other</td>
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<tr>
<td>Other</td>
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</table>

COMMENTS:
INITIAL:

TAG: ____________________________________________________________

FOSC: __________________________________________________________

TAG APPROVAL DATE: __________  FOSC APPROVAL DATE: __________

ADEC __________________________  FOSC __________________________

EXXON __________________________

USCG __________________________

NOAA __________________________
ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.
TEAM NO. | SEGMENT | SUBDIVISION | DATE
--- | --- | --- | ---
1 | WB-006 | | 5/12/91

**MAYSAP FIELD SHORELINE COMMENT SHEET**

**ADEC**
**NAME:** Steve Ferguson  
**SIGNATURE:**

**TREATMENT RECOMMENDED**

The 2m(w) x 2m(l) area of mud exposed by turning over surface cobbles was located in an open area of an abundant Fucus growth. A few other open areas where cobbles were turned revealed no oil. The Fucus area was not disturbed by turning over a lot of cobbles to check the undersides for oil.

**EXXON**
**NAME:** George P. Stiles  
**SIGNATURE:** George P. Stiles

**NTR** No appreciable oil remaining.

**LANDMANAGER**
**NAME:** Pat Norman  
**SIGNATURE:**

**NTR** Any remaining oil is subsurface and would be difficult to find. However, when work is done on US-7A, US-6-A can be worked if any oil becomes exposed.

**USCG/NOAA**
**NAME:** Peter W. Shannon  
**SIGNATURE:**

**NTR** No noticeable surface oil.
TOTAL LENGTH SHORELINE SURVEYED: 97 m  
NEAR SHORE SHEEN: BR RB SL NONE  
EST. OIL CATEGORY LENGTH: W __ m M __ m N __ m V __ m NO __ m US __ m  

<table>
<thead>
<tr>
<th>LOC</th>
<th>SURFACE OIL CHARACTER</th>
<th>SURFACE SEDIMENT</th>
<th>SHORE SLOPE</th>
<th>AREA WIDTH</th>
<th>AREA LENGTH</th>
<th>ZONE</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>ST</td>
<td>Sd/Lvl</td>
<td>H</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

DISTRIBUTION: C = 61-100%; B = 51-60%; P = 41-50%; S = 1-10%; T = C1%  
SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE  

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED ZONE</th>
<th>OILED BELOW</th>
<th>SHEEN COLOR</th>
<th>PIT ZONE</th>
<th>SUBSURFACE SEDIMENTS</th>
<th>NOTES</th>
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<tbody>
<tr>
<td>1</td>
<td>30</td>
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</tr>
<tr>
<td>2</td>
<td>40</td>
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<tr>
<td>3</td>
<td>50</td>
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</tbody>
</table>

OG COMMENTS: The oil was observed to form a western extremity on the larger island shown on the photo. It consists of a reddish-brown subaqueous rock deposited between the reddish cliff-like formation and is nearly black in color. Oil was found near the reddish outcrop as a few MSAA patches < 20 cm deep under surface sediments.
MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 4
SEGMENT # WB-006
SUBDIVISION A
SEA STATE FLAT

DATE 26 MAY '91
TIDAL HEIGHT (Range) +0.9 to +1.0

BIOLeST JIM ROTH

PHOTOGRAPHS: ROLL # FRAME #

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

A1 - Boulder/Cobble in Mitz w/ moderately abundant mussels, dense barnacles and littorines on boulders.

GENERAL COMMENTS: THIS SUBDIVISION HAS A HEALTHY AND THRIVING INTERTIDAL BIOTA, PARTICULARLY ON BEDROCK OUTCROPPINGS, WHICH HAVE DENSE MUSSEL BEDS, DENSE BARNACLES (BOTH BALANUS AND SEMIBALANUS), EVERS, LITTORINES AND LIMPETS. OCCASIONAL MIZ Pools contained anemones and the six-armed sea star (LEPTASTARIS).

WILDLIFE OBSERVATIONS TO BE COMPLETED IN ALL SUBDIVISIONS

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

<table>
<thead>
<tr>
<th>LAND MAMMALS</th>
<th># OBSERVED</th>
<th>SPECIES</th>
<th>$ OBSERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sea Otters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pinnipeds (specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whales (specify)</td>
<td></td>
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</tr>
</tbody>
</table>

Shoreline subdivision map showing important biological features attached.

Reviewed MB 6/1/91
1991 MAYSAP EVALUATION


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

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

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

SHPO Signature: 
Date: 6/14/91

RECOMMENDATIONS:

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

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

COMMENTS:
INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: 6/14/91  FOJC APPROVAL DATE: 6/14/91
ADEC
EXXON
USCG
NOAA

E. E. PAGE, CDR, USCG  CHIEF OF STAFF, FOSC
Ecological/Constraints
Page 2

ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

Fish Harvest Area: Unlimited treatment unless otherwise directed by ADF&G. Sheen containment/recovery procedures required for mechanical treatment.
THE 2m(w) x 2m(l) AREA OF MSOR EXPOSED BY TURNING
OVER SURFACE COBBLES WAS LOCATED IN AN OPEN AREA OF AN
ABUNDANT FUCUS GROWTH. A FEW OTHER OPEN AREAS WHERE COBBLES
WERE TURNED REVEALED NO OIL. THE FUCUS AREA WAS NOT DISTURBED
BY TURNING OVER A LOT OF COBBLES TO CHECK THE UNDERSIDES FOR OIL.

NTR

ANY REMAINING OIL IS SUBSURFACE AND WOULD BE
DIFFICULT TO FIND. HOWEVER, WHEN WORK IS DONE ON WB-7A,
WB-6A, IT CAN BE WORKED IF ANY OIL BECOMES EXPOSED.

NTR

NO NOTICABLE SURFACE OIL.
**OIL SPILL SURVEY**

**DATE:** May 13, 1991

**TIME:** 09:40 to 10:25

**TIDE LEVEL:** 1' to 2' N

**ENERGY LEVEL:**
- **N:** None
- **M:** Medium
- **L:** High

**WEATHER:**
- **SUN:** Yes
- **CLOUDS:** Yes
- **FOG:** No
- **RAIN:** No
- **SNOW:** No

**TOTAL LENGTH SHORELINE SURVEYED:** 97 m

**NEAR SHORE SHEEN:**
- **BR:** Blue
- **RB:** Red
- **SL:** Silver
- **X:** None

**EST. OIL CATEGORY LENGTH:**
- **W:** 1 m
- **M:** 1 m
- **N:** 2 m
- **S:** 6 m
- **NO:** 9.5 m
- **US:** 1 m

---

**SURFACE OIL CHARACTER**

<table>
<thead>
<tr>
<th>L</th>
<th>OIL</th>
<th>AREA</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>AP</td>
<td>MS</td>
</tr>
<tr>
<td>---</td>
<td>-----</td>
<td>----</td>
</tr>
<tr>
<td>91</td>
<td>ST</td>
<td></td>
</tr>
</tbody>
</table>

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**SURFACE-OIL CHARACTER**

<table>
<thead>
<tr>
<th>L</th>
<th>OIL CHARACTER</th>
<th>OILED ZONE</th>
<th>CLEAN</th>
<th>NSO</th>
<th>SHEEN COLOR</th>
<th>PIT-ZONE</th>
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<tbody>
<tr>
<td>C</td>
<td>OIL TYPE</td>
<td>OP</td>
<td>HORIZOR</td>
<td>ORIEN</td>
<td>TIME</td>
<td>TR</td>
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<td></td>
<td>1.30</td>
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**OG COMMENTS:**

We note a forms the western extremity on the largest island. It consists of a middle-aged accumulation, relatively well sorted sand/mud/gravels, and well-developed bedrock cliffs.

**Sediments:**

- Silt
- Clay
- Sand
- Mud
- Gravel

---

**REVISED:** May 31, 1991
**MAYSAP BIOLOGICAL SUMMARY FORM**

**TEAM #** 4  
**SEGMENT #** WB-006  
**DATE** 26 MAY '91  
**TIDAL HEIGHT (Range)** +0.9 to +1.0  
**SUBDIVISION** A  
**BIOLOGIST** Jim Roth  
**SEA STATE** Flat  
**WIND SPEED/DIRECTION**  
**PHOTOGRAPHS: ROLL #**  
**FRAME #**

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

- AL - Boulder/Cobble in Mitz w/ moderately abundant mussels, dense barnacles and littorines on boulders.

**GENERAL COMMENTS:** This subdivision has a healthy and thriving intertidal biota, particularly on bedrock outcroppings, which have dense mussel beds, dense barnacles (both Balanus andSemibalanus), funis, littorines and limpets. Occasional mitz pools contained anemones and the six-armed sea star (Leptasterias).

---

**WILDLIFE OBSERVATIONS**

**TO BE COMPLETED IN ALL SUBDIVISIONS**

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Shoreline subdivision map showing important biological features attached.

*Reviewed 06/28/91*