OIL SPILL PUBLIC INFO. CENTER
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# [Shoreline evaluations, 1990].

## LA-15 – LS-61

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# SHORELINE EVALUATION

SEGMENT ST/ LA-15 SUBDIVISION A (1 OF 5) DATE 4/1/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**
Stream mouth catalog no. 226-40-16783 and 226-40-16782.

| | |
|---|---|
| 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 bald eagle nests (3/1 to 9/1) |
| 6U | Recreation: Tent sites (6/1 to 9/15) |
| 7HH | Finfish harvesting |
| 7II | Deer harvesting (8/15 to 2/28) |

**SUBDIVISION ECOLOGICAL CONSTRAINTS:**
Avoid any unnecessary disturbance or damage to unoiled biota or substrate.
See attached Ecological Constraint Sheet.

SHPO SIGNATURE: Charles E. Holmes DATE: 4/12/90

**OILING CATEGORIZATION:**
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 829 m
Subsurface Oil Observed: Yes____ No X Maximum Depth_____

**RECOMMENDATIONS:**

| | |
|---|---|
| X No Treatment Recommended | _____Snare/Absorbent Booms |
| _____Treatment Recommended | _____Oil Snares (pom poms) |
| _____Manual Pickup | _____Absorbents (pads,rolls,etc) |
| _____Bioremediation | _____Spot Washing:_____Wands |
| _____Tarmat: _____Breakup | _____ Beach Cleaner |
| _____Removal | _____Other (see comments) |

**COMMENTS:**

**TAG COMMENTS:**

TAG APPROVAL DATE: 4/16/90.
ADEC Al Keller
EXXON Andy Lehr
NOAA Burl Wescott
USCG G.A. Reitel

FOSC: _____ DATE: 5-8-90

# PWS ECOLOGICAL CONSTRAINTS

LA-15- A, B, C, D, E

| | | |
|---|---|---|
| 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 (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

5

SEGMENT ST / LA #5 SUBDIVISION: A DATE 3/31/90

**USCG**
NAME Randolph W. Hubbard SIGNATURE

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

**ADEC**
NAME J. LYNN MARTIN SIGNATURE J Lynn Martin

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS
NO OIL OBSERVED

**LAND MANAGER**
NAME Patrick Sourface SIGNATURE
Chenega

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

# SHORELINE OILING SUMMARY

REVISION NO. 2

R-- ...N USCG HUBBARD SEGMENT ST/ LA-015
N ...ORO LAND REP SELANOFF SUBDIVISION A (1 OF 5)
ON GARCIA ADEC MARTIN TIME 09 :30 to 11 :30
I NO.: 16 TIDE LEVEL: -0.6 to -0.5 DATE 3 / 31 / 90
SUBDIVISION LENGTH: 866 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☒ Snow
NDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
'EYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: ____ to ____
'ACE SEDIMENTS: R 30 % B 50 % C 15 % P 4 % G 1 % S — % M — % V — %
E : Lang 60 % Hang 40 % Vert — % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
ATEGORY LENGTH: W — m M — m N — m VL — m NO 866 m

## FACE OIL

| RACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AC | AB | AP | AS | | | | | | SU | UI | MI | LI |
| RALT EMENT | | | | | | | | | | | | | |
| LED | | | | | | | | | | | | | |
| ER | | | | | | | | | | | | | |
| T | | | | | | | | | | | | | |
| IN | | | | | | | | | | | | | |
| USSE | | | | | | | | | | | | | |
| TLE | | | | | | | | | | | | | |
| BA--- | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| OIL | | | | | | | | | | X | X | X | X |

PAVEMENT: H F S — sq. m by — cm

PATTIES / TARBALLS — BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | | | |
| Debris | | | |

DEBRIS COLLECTED ☐ YES ☐ NO

TYPE —

#BAGS —

Photographs:

Roll No. SS-16-1

Frames 1-11

## SURFACE OIL

| PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm-cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | OP | OR | OL | OF | NO | | UO | UG | | | | | | SU | UI | MI | LI | | |
| 10 | | | | | X | - | | | | | | | | | X | | | | PEG |
| 40 | | | | | X | - | | | | | | | | | X | | | | PCB |
| 30 | | | | | X | - | | | | | | | | | X | | | | SGPC |
| | | | | | | - | | | | | | | | | | | | | |
| | | | | | | - | | | | | | | | | | | | | |
| | | | | | | - | | | | | | | | | | | | | |

ENTS upper intertidal zone covered with lichen, Lower Intertidal with green algae



7/11 4-1-90

Ralph Nizzi

Segment Length (m): AP ___ PO ___ CV ___ CT ___ ST ___ MS ___ PT ___ TB ___ FL ___ NO 866 m

# SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/28/90

Segment ST/ LA15 Subdivision A - COBBLE BEACH Date (mo / day / yr) 3/31/90 6

(24 hr) 1130 (GMT) Biologist TONY ZAMORA

(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 X 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)

Photographs: Roll No. 55-16-1
Frames 1-11

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | X | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT
U: 1-6
M: 4-6
L: 1-6

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | X | X | 2 | X | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT
U: 1-6
M: 4-6
L: 1-6

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | X | X | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT
U: 1-6
M: 3-6, 1
L: 4-6, 1

**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | X | X | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT
U: 1-6
M: 1, 3-6
L: 1, 3-6

**Wildlife Observations/ General Comments:**
DEER ON COBBLE BEACH, OTTER & SEALIONS OFFSHORE,
BIOTA DENSE & DIVERSE ON BOULDER/BEDROCK SECTIONS
NEREOCYSTIS KELP BED JUST OFFSHORE

**Ecological Considerations:**

, 60, 744, 13, 711

# SHORELINE ECOLOGICAL SUMMARY

Segment ST / LA-45 (AK-0935) Subdivision A (BOULDERS & BEDROCK) Date (mo / day / yr) 3/31/90

Time ( 24 hr ) APP. 1130 Biologist TONY ZAMORA

(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 X 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)

Photographs: Roll No. SS-16-1 Frames 1-11

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| U | 1M | 1L | U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | X | 2 | 2 | 3 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | X | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT
U: 5-6
M: 5-6
L: 2-6

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| U | 1M | 1L | U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| X | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT
U: 2-6
M: 3-6
L: 1-6

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | U | M | X | U | M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | X | X | | X | X | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT
U: 3-6
M: 3-6
L: 5-6

**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | X | 1L | 1U | X | X | U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | X | 2 | X | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT
U: 4-6
M: 4-6
L: 2-6

**Wildlife Observations/ General Comments:**
DEER ON COBBLE BEACH, OTTER & SEALIONS OFFSHORE,
BIOTA DENSE & DIVERSE ON BOULDER/BEDROCK SECTIONS.
KELP REEF JUST OFFSHORE

**Ecological Considerations:**
6U, 7HH, 1B, 7II

OG Reimer

SEGMENT ST/ 2A-15

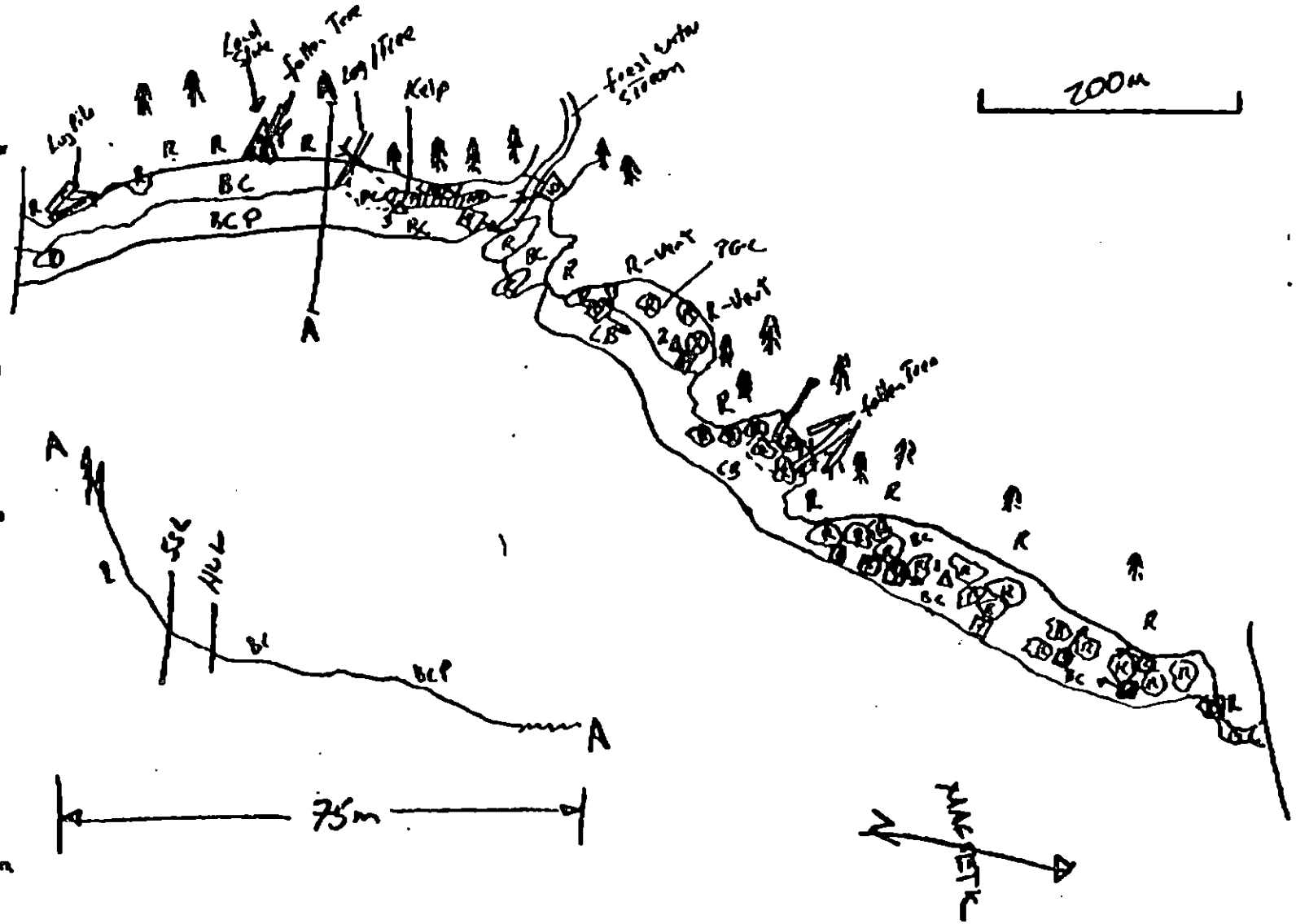
SUBDIVISION A

DATE ____/____/90

## SKE MAP

⊗ - Landing Site

🌲 - TREE




### CHECKLIST

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

### LEGEND

1 △

Pit - No Subsurface Oil

2 ▲

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

Oiled Vegetation

Photo location, direction, and number

# Character Length (m): AP_____ PO_____ CV_____ CT_____ ST_____ MS_____ PT_____ TB_____ FL_____ NO 866 m

JM ADEC

REVISED 2/2000

6

4

# ECOLOGICAL MAP

## LA-15A

1A,1B
▲ 5T
6U
7HH
7II
9EE

PWS 496C

(Subsection E)

226-40-16783
PS

LA-015/A

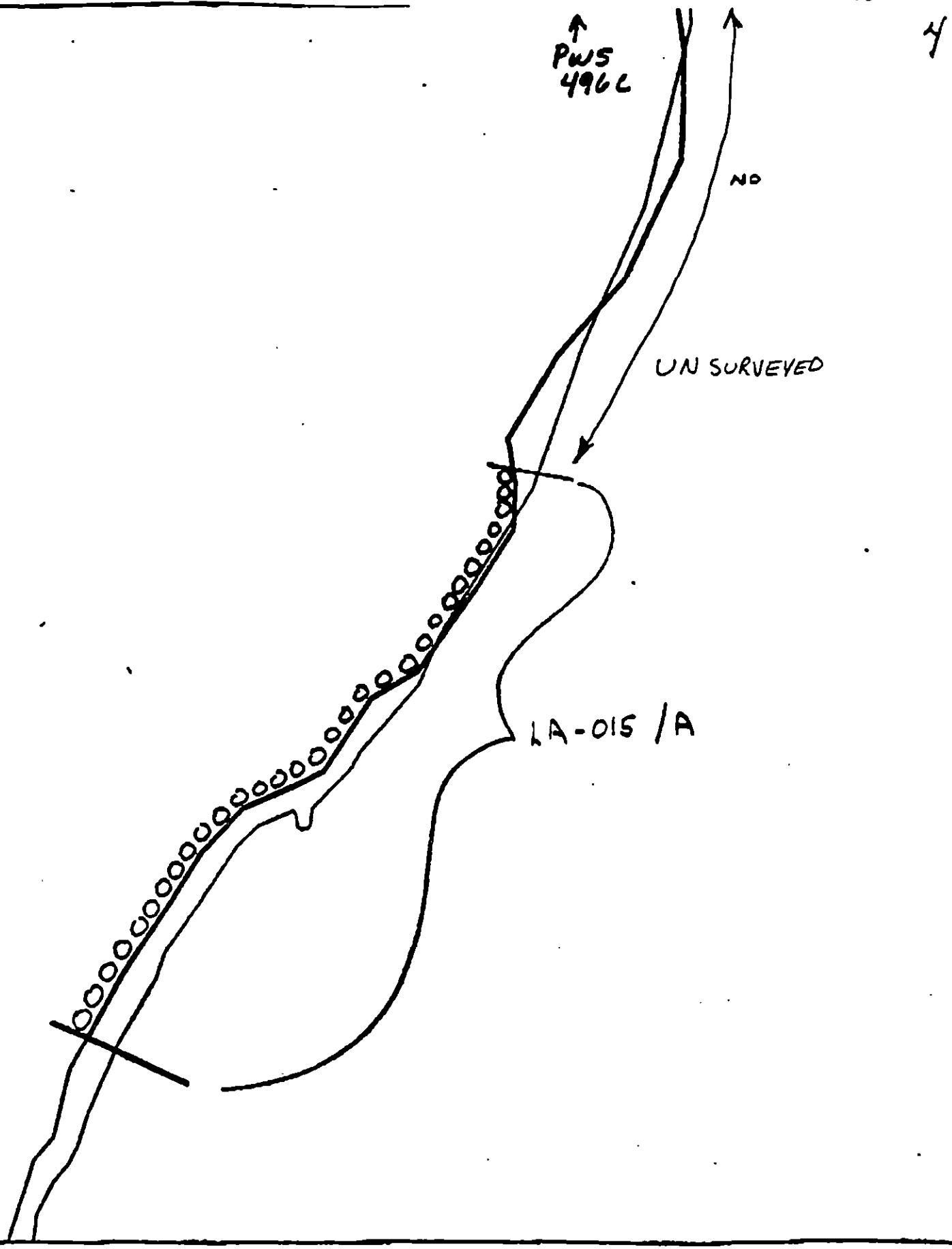
XXXX Wide
//// Medium
---- Narrow
TTTT Very Light

LA-15

ADEC Segment Length: 4517m

Map Key: PWS-496a
Name: Reimer
Date: 3/31/90

4




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

# LA-15

ADEC Segment Length: 4517m

Map Key: PWS-496a
Name: Reimer
Date: 3/31/90

# SHORELINE EVALUATION

SEGMENT ST/ LA-15 SUBDIVISION B (2 OF 5) DATE 3/31/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**
Stream mouth catalog no, 226-40-16783 and 226-40-16782.

| | |
|---|---|
| 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 bald eagle nests (3/1 to 9/1) |
| 6U | Recreation: Tent sites (6/1 to 9/15) |
| 7HH | Finfish harvesting |
| 7II | Deer harvesting (8/15 to 2/28) |

**SUBDIVISION ECOLOGICAL CONSTRAINTS:**
Avoid any unnecessary disturbance or damage to unoiled biota or substrate.
See attached Ecological Constraint Sheet.

SHPO SIGNATURE: Sheila Hamm DATE: 4/17/90

**OILING CATEGORIZATION:**
Wide 169m: Medium 36 m: Narrow 21 m: V.Light 8 m: No Oil 0 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 60+ cm

**RECOMMENDATIONS:**

| | |
|---|---|
| ____No Treatment Recommended | ____Snare/Absorbent Booms |
| X Treatment Recommended | ____Oil Snares (pom poms) |
| X Manual Pickup | ____Absorbents (pads,rolls,etc) |
| X Bioremediation | ____Spot Washing:____Wands |
| X Tarmat: ____Breakup | ____ Beach Cleaner |
| X Removal | ____Other (see comments) |

COMMENTS: Recommend removal of tarmats, manual pick up of oiled vegetation and debris as shown on sketch map. Bioremediate areas indicated on sketch map. Treatment activities should be conducted between 6/1 and 7/10 based on above constraints.

TAG COMMENTS: BIOREMEDIATION MONITORING REQUIRED TO DETERMINE EFFEC, FURTHER TAG EVALUATION AT A LATER DATE

TAG APPROVAL DATE: 4/16/90
ADEC AL HEGLUND
EXXON ANDY TEAS
NOAA Burt Wescott
USCG G.A. BEITER
FOSC: DATE: 5-9-90

# 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 (5/1 to 9/15) |
| 6V | | Anchorages (5/1 to 9/15) |
| 6W | | Forest Service cabins (5/1 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 | | Invertebrate harvesting |
| | | For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints. |

# FIELD SHORELINE COMMENT SHEET

16

SEGMENT ST / LA-015 SUBDIVISION: B DATE 3/31/90

**USCG**
NAME R. W. Hubbard SIGNATURE R. W. Hubbard

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED
COMMENTS
Area heavy boulder mosaic, remove oil film and slightly below coarse rock.

**ADEC**
NAME J. LYNN MARTIN SIGNATURE J. Lynn Martin

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

MECHANICAL CLEANUP SUGGESTED IN NORTHERN TO MIDDLE OF SEGMENT. FOLLOWED BY MANUAL CLEANUP OF ASPHALT AREA.

EXXON EVALUATION OF AREA: GOOD & VERY COMPLETE

**LAND MANAGER**
NAME Patrick Seymour SIGNATURE

Chenega

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Because of the snow we were unable to survey the unsanded 20m, we do need to keep that in mind when we start the actual cleanup. The majority of the oil in this segment is subsurface so it going to take more than just spraying it down. The only means of cleaning it I think is to have it moved (somehow) with a BULLDOZER.

APR 0 1 1990

# SHORELINE OILING SUMMARY

DIVISION NO. 03/2000

10

OG Reimer USCG Hubbard SEGMENT ST/ LA-015

RRO ZAMORA LAND REP SELANOFF SUBDIVISION B (2 OF 5)

EXXON GARCIA ADEC MARTIN TIME 12 :00 to 13 :30

TEAM NO.: 16 TIDE LEVEL: +0.5 to +4.0 DATE 3 / 31 / 90

EST. SUBDIVISION LENGTH: 300 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow

UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock

SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: E to W

SURFACE SEDIMENTS: R 40 % B 40 % C 15 % P 4 % G 1 % S — % M — % V — %

SLOPE : Lang 70 % Hang 30 % Vert — % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High

OIL CATEGORY LENGTH: W 215 m M 40 m N 20 m VL 5 m NO — m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AC | AB | AP | AS | BR/BK | RW/MW | OL | SL/BR | TL | SU | UI | MI | U |
| ASPHALT PAVEMENT | | X | | | | | | X | | | X | X | |
| POOLED | | | | | | | | | | | | | |
| COVER | | X | ✓ | | | | | | X/✓ | | ✓ | ✓ | |
| COAT | X | | ✓ | ✓ | | ✓ | | | X | | ✓ | ✓ | |
| STAIN | | | | | | | | | | | | | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | X | | | | | | | | X | | X | X | |
| NO OIL | | | | | | | | | | X | | | X |

PAVEMENT: H F (S) 30 sq. m by 3 cm

PATTIES / TARBALLS — BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | X | | |
| Vegetation | X | | |
| Trash | X | | |
| Debris | | | |

DEBRIS COLLECTED ☐ YES ☒ NO

TYPE

#BAGS

Photographs:

Roll No. SS-16-1

Frames 12-23

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm-cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | | UO | UC | BR/BK | RW/MW | OL | SL/BR | TL | SU | UI | MI | U | | |
| 1 | 60 | | X | | | | 5-60 | X | | | | | X | | | X | | | | PG |
| 2 | 45 | X | | | | | 25-45 | X | | | | | X | | | | X | | | PCGS |
| 3 | 30 | | | | | X | - | | | | | | | | | | | X | | SPCB |
| 4 | 45 | | X | | | | 15-27 | | X | | | | X | | | | | X | | SPCB |
| 5 | 20 | X | | | | | 5-20 | X | | | | | | | | X | | | | BPC |
| 6 | 45 | X | | | | | 5-45 | | | | | | X | | | X | | | | PC |

COMMENTS UP Lifted Sedimentary Strata perpendicular to shoreline - higher ridges are due to more resistant bedrock layers - most of the beach is underlayen with low angle rock platform. Varying depths of sediment cover segment. Oil Penetration in MIZ appears to extend to either bedrock or bottom oiling Not reached, this thins out down the beach and dissapears in LIT. Most of the surface of the segment is mantled with boulders, surface of boulders have a film, however sides and interstitial areas have Continuous coverage of mouse to depth Sub-surface distribution coinsides with surface expression

REVIEWED JW DATE 4-1-90

## SHORELINE OILING SUMMARY (PAGE 2 of 2)

REVISION 03/29/90

11

SEGMENT ST/ LA-015 SUBDIVISION B

### SUBSURFACE OIL (CONTINUED)

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm-cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | MO | | UO | UC | | | | | | SU | LI | MS | LI | | |
| 7 | 10 | X | | | | | 5 - 10 | | X | | | | X | | | X | | | | PC - Rock |
| | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | |

COMMENTS

REVIEWED DATE

G Reimc

EGMENT STI LA-015

UBDIVISION B

ATE 3 / 31 / 90

CHECKLIST

- ✓ N Arrow
- Approx. Scale
- ✓ Seg/Sub Entry
- ✓ Oil Dist.
  - Width
  - Length
  - % Cover
- ✓ Substrate Character
- ✓ Est. HWL/LWL
- ✓ SSL
- ✓ Profile Location(s)
- ✓ Profile(s)
- ✓ Fix Location(s)
- Photo Location(s)

LEGEND

1 A

- No Subsurface Oil

2 A

- Subsurface Oil

CT/C

CT/B

CT/P

CT/S

Bed Vegetation

① →

Photo location, direction, and number

SKETCH MAP

⊗ - Landing Site

▭ - Logs

- Trees

BEO

CT/S

CV/P

CT/P

AP/S/B

CV/B

AP/S/B

CT/C

CROSS-SECTION

SSL

HWL

R

BCR

ROCK/RIP

OILED DEBRIS

CV/B

CT/B on the Rock

Remove Pavement

"B"

"A"

SWL

STORM BERM

NWL

oiled debris Kelp/Logs/Trash

OILED BEACH SECTION

CURRENT WATER LINE

0m

MAGNETIC N

Character Length (m): AP____ PO____ CV____ CT____ ST____ MS____ PT____ TB____ FL____ NO____

REVISIONS

MAR-31-1990 21:53 FROM TO 907 586 7586 P.03

00 Reimer

SEGMENT ST -015

SUBDIVISION B

DATE 3 / 31 / 90

**CHECKLIST**

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

**LEGEND**

1 △

Pit - No Subsurface Oil

2 ▲

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

Oiled Vegetation

① ←

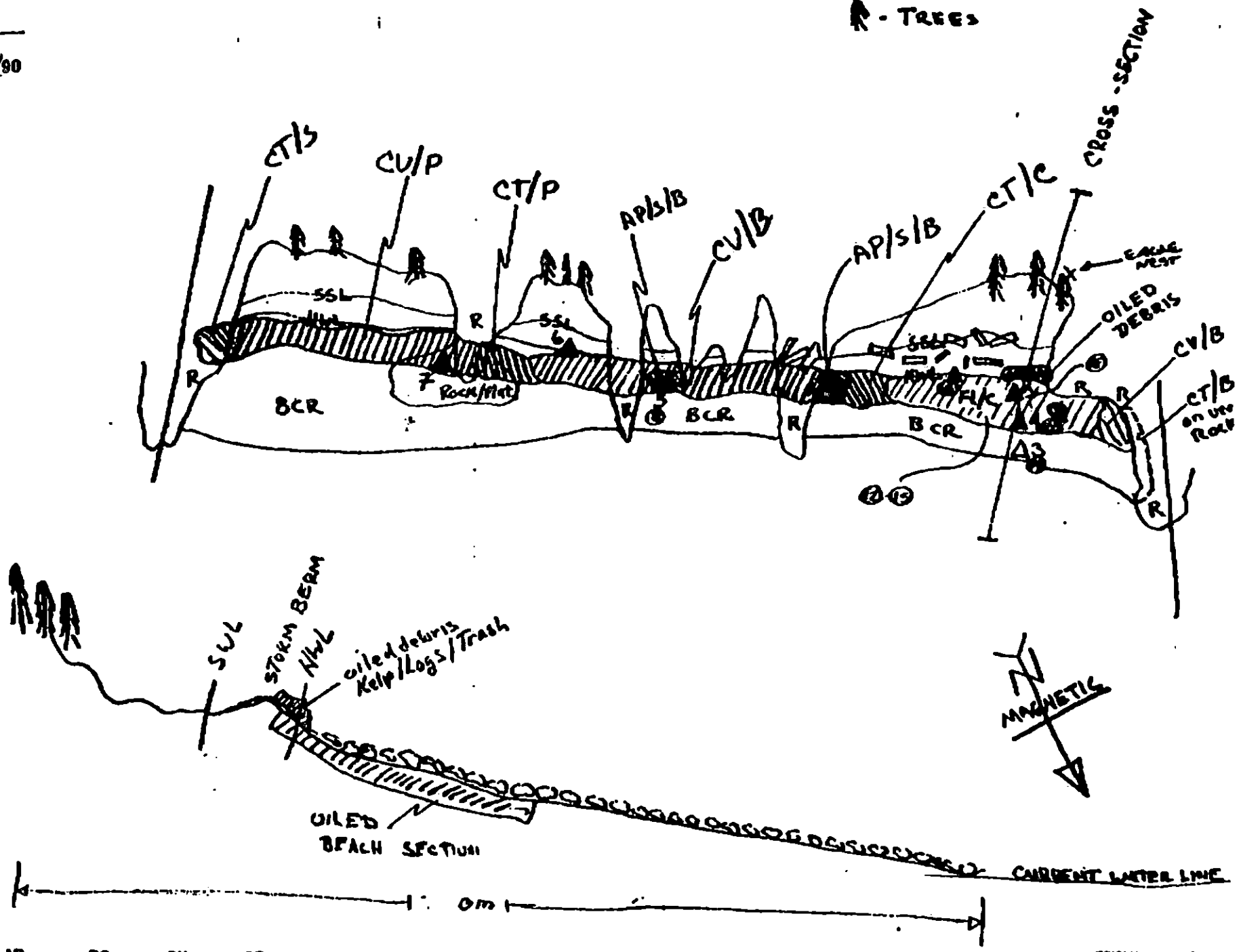
Photo location, direction, and number

SI[illegible]CH MAP

⊗ - landing site

▭ - Logs

🌲 - TREES




Oil Character Length (m): AP_____ PO_____ CV_____ CT_____ ST_____ MS_____ PT_____ TB_____ FL_____ NO_____

22M NOC

G

o Reim[redacted]

EGMENT ST/ LH-015

UBDIVISION B

ATE 3/3/90

CHECKLIST

- ✓ N Arrow
- Approx. Scale
- ✓ Grp/Sub Bndry
- ✓ Oil Dist.
- Width
- Length
- % Cover
- ✓ Substrate Character
- ✓ Est. HWL/LWL
- ✓ SSL
- ✓ Profile Location(s)
- ✓ Profile(s)
- ✓ Pit Location(s)
- Photo Location(s)

LEGEND

1 ▲

% - No Subsurface Oil

2 ▲

% - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Speckled Distribution

Mod Vegetation

Photo location, direction, roll number

SKE[redacted] MAP

⊙ - Landing site
▱ - Logs
🌲 - Trees

CROSS-SECTION

CT/S
CV/P
CT/P
AP/S/B
CV/B
AP/S/B
CT/C
BOOM NEST
OILED DEBRIS
CV/B
CT/B on Hard Rock
SSL
HWL
R
BCR
Rockfruit
FK
A3
"B"
"A"

SWL
STORM BERM
HWL
oiled debris Kelp/Logs/Trash
OILED BEACH SECTION
MAGNETIC N
CURRENT WATER LINE
0m
22m ADEL

Character Length (m): AP_____ PO_____ CV_____ CT_____ ST_____ MS_____ PT_____ TB_____ FL_____ NO_____

# SHORELINE ECOLOGICAL SUMMARY

REVISION: 10/22/90

K/

S---int ST / LA15 Subdivision B Date (mo / day / yr) 3/31/90

Time ( 24 hr ) 1200 (GW) 1325 (AA) Biologist TONY ZAMORA

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

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

Photographs:
Roll No. 55-16-1
Frames 12-23

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| X U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT
U: 2-6
M: 4-6
L: 1-6

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | X M | 1L | 1U | 1M | 1L | 1U | 3 1M X | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | | 2 | 2 | 2 | 2 |
| | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT
U: 1-6
M: 3-6
L: 1-6

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | X M | X L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | X | X | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | X | X | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT
U: 1-6
M: 4-6, 1
L: 1, 4-6

**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | X M | 1L | 1U | 1M | 1L | 1U | 2 M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | X | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT
U: 1-6
M: 3-6
L: 1-6

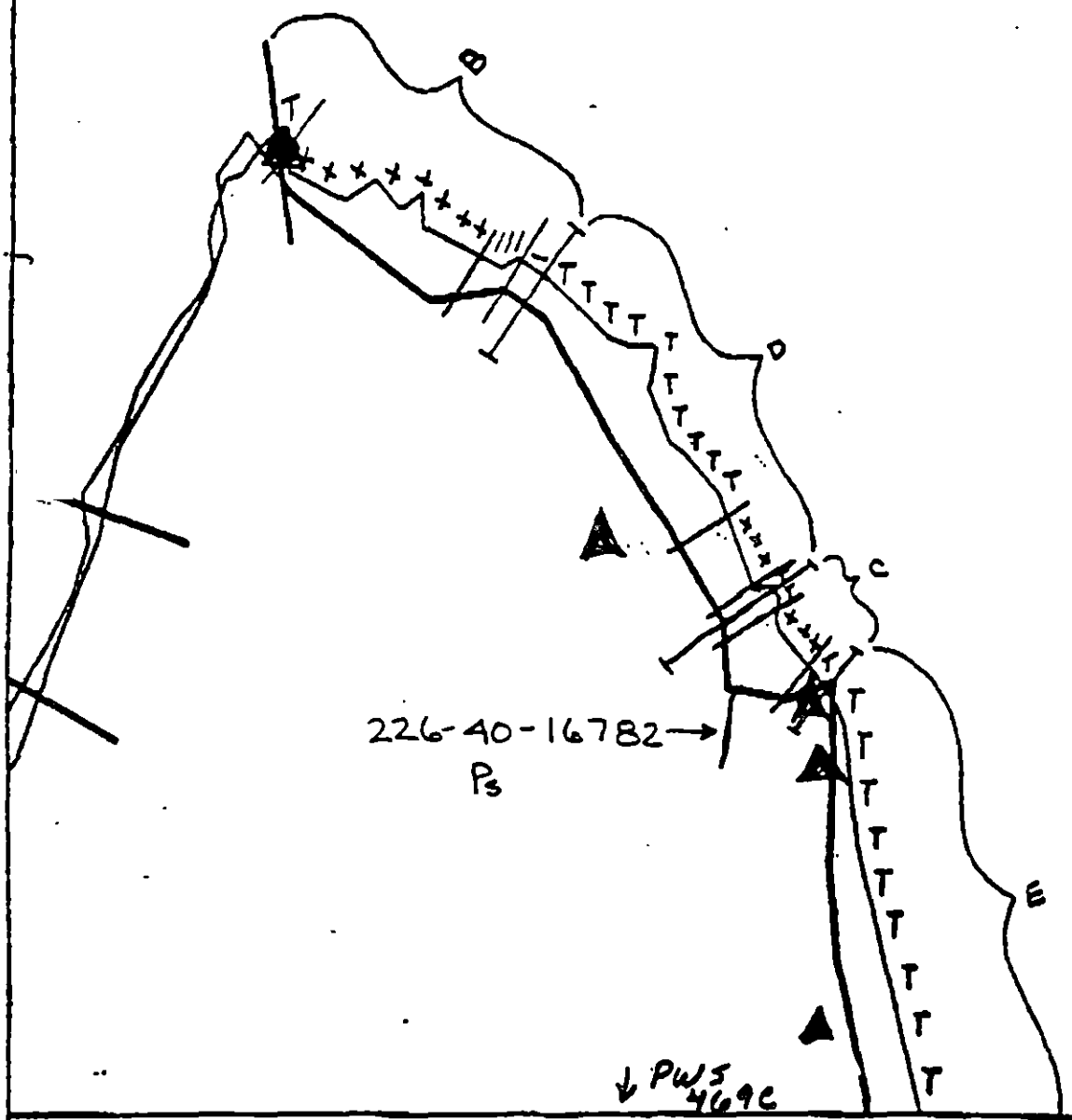
**Wildlife Observations/ General Comments:**
EAGLE, CORMORANTS, ANNELID WORMS SEEN IN MOUSSE IN UI [redacted] UNDER COBBLE

**gical Considerations:**
LLE NEST, GU, 7HH,

ECOLOGICAL MAP

LA-15B

▲5T
6U
7HH
711
9EE




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

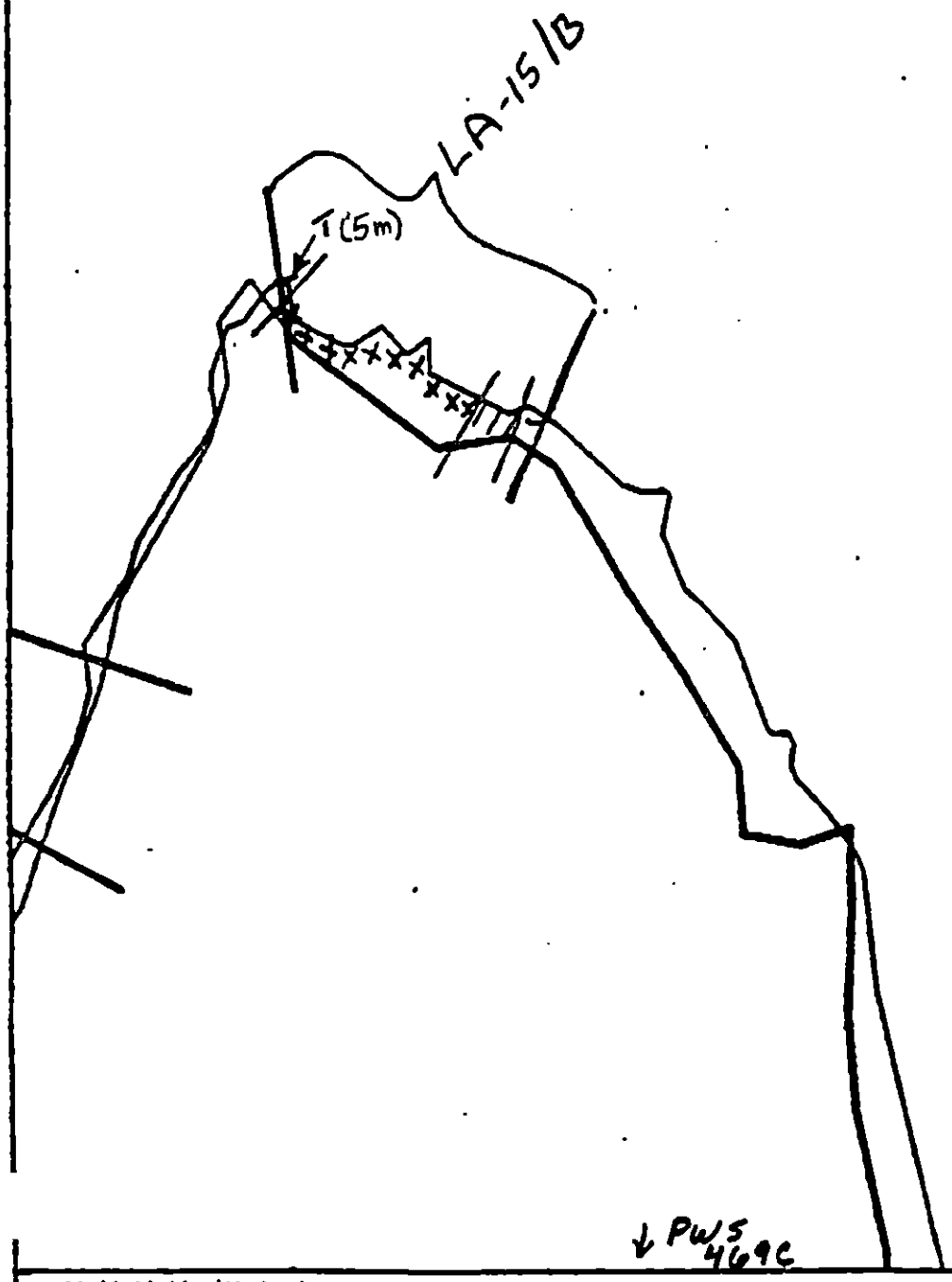
LA-15/C

ADEC Segment Length: 4517m

0 100 200 300
METERS

Map Key: PWS-496a
Name: REIMER
Date: 4/1/90
Date Entered:

12




XXXX Wide
//// Medium
---- Narrow

# LA-15

ADEC Segment Length: 4517m

Map Key: PWS-496c
Name: Reimer

# ADDENDUM: SUBDIVISION CONSTRAINTS

## SEGMENT LA-15 SUBDIVISION B ( 2 of 5 )

| WORK WINDOW | |
|---|---|
| Manual Pickup<br>Tarmat Removal | OPEN |
| Bioremediation | WORK PRIOR TO 7/1 |

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

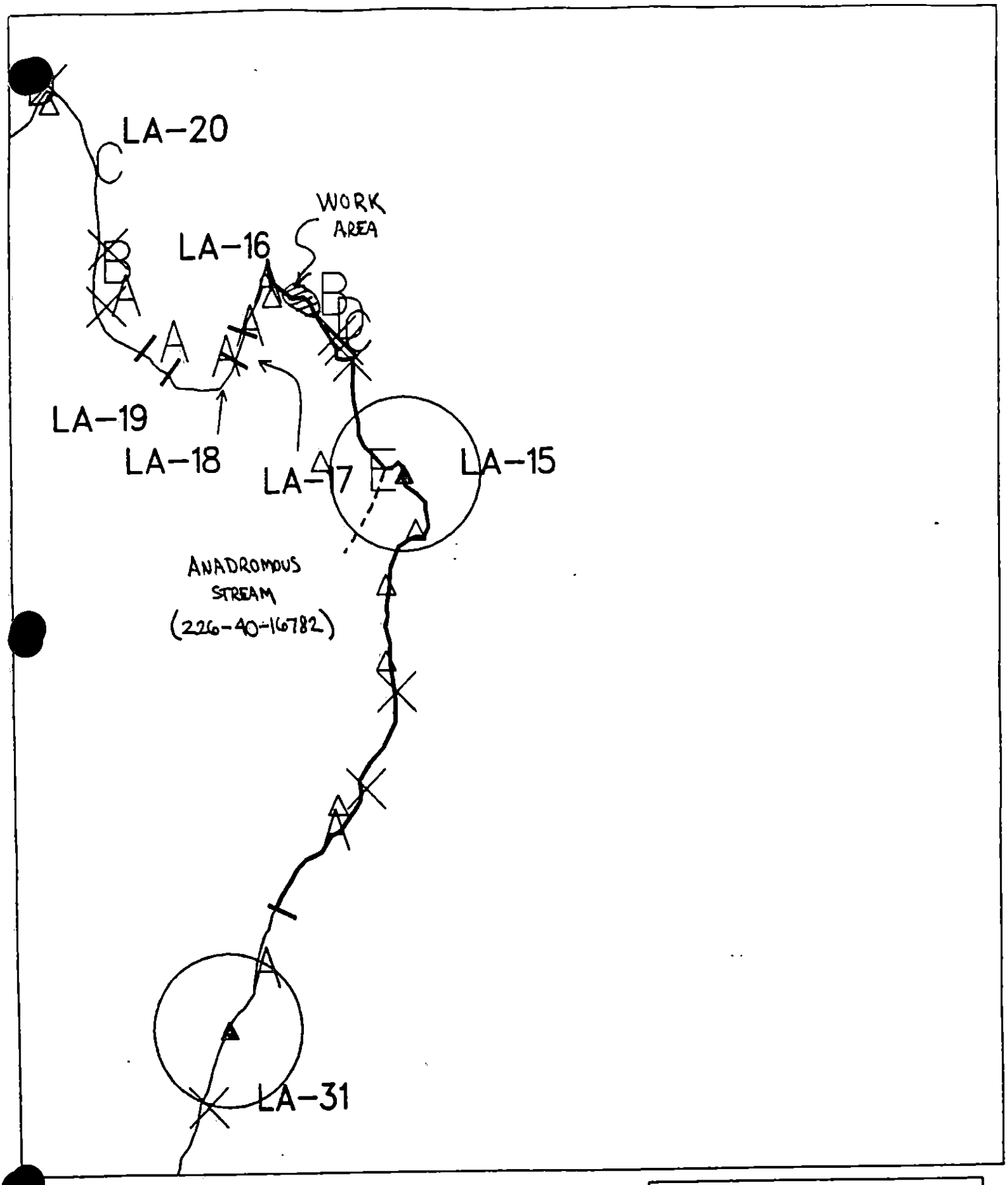
| | | |
|---|---|---|
| **1K** | **Purse Seine Hook-off** | Closed to bioremediation after 7/20. No constraint to manual pickup and tarmat removal. |
| **1A,1B** | **Salmon Stream** | NO CONSTRAINT. ADF&G catalogued anadromous stream (226-40-16782) is more than 100m from work area. |
| **5T** | **Bald Eagle Nest** | NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision B work site. |
| **7II** | **Subsistence: Deer Harvesting** | Closed to bioremediation after 8/15. No constraint to manual pickup and tarmat removal. |
| **7HH** | **Subsistence: Finfish Harvesting** | No constraint to manual pickup and tarmat removal. Closed to bioremediation after 7/1. |

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Restrict boat and air traffic and beach disturbance to essential minimum after 7/1. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

TAG APPROVAL DATE_____
ADEC_____
EXXON_____ FOSC [signature] Date 6-10-90
NOAA_____
USCG_____

Prepared by J. P. Phillips Date 6/10/90




EXXON

Exxon Company, USA

Map Key: PWS-LA-15

# ECOLOGY MAP

## SEGMENT LA-15

SUBDIVISION B (2 of 5)

METERS

★ Seabird Colony

▲ Active Eagle Nest

△ Inactive Eagle Nest

WORK PLAN ADDENDUM

Segment LA 15 Subdivision B Dated 7/02/90.

MODIFICATION

1. REASON FOR MODIFICATION

- REQUEST FROM FIELD FOR MECHANICAL ASSISTANCE TO BE ALLOWED AS REQUIRED TO ACCESS MOUSSE.

2. ADJUSTMENT TO WORK PLAN

- MECHANICAL EQUIPMENT APPROVED TO RAKE AND ACCESS MOUSSE AND SUBSURFACE OIL SHOULD MANUAL REMOVAL/ACCESS BE NOT FEASIBLE. SPOT WASHING AS REQUIRED.

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

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

SHPO APPROVAL NEEDED YES X SHPO SIGNATURE Rachel Jean Orr 7/2/90

NO ____

INSPECTION CONSTRAINT APPLIES

TAG APPROVAL DATE 7/02/90

ADEC Ray Morris, R. Morris

EXXON Andy Teal

NOAA Joseph Talbott

USCG G.A. Reiter G.A. Reiter

FOSC _____ DATE 6 July 90

WORK PLAN ADDENDUM

Segment LA 15 - B Subdivision B Dated 07/20/90.

MODIFICATION

1. REASON FOR MODIFICATION

SECOND REQUEST FROM THE FIELD.

2. ADJUSTMENT TO WORK PLAN

MANUALLY REMOVE OF SEDIMENTS + MOUSSE IN AREA INDICATED ON THE ATTACHED SKETCH.

SHPO APPROVAL NEEDED YES _____ SHPO SIGNATURE _____

NO X

TAG APPROVAL DATE 7/20/90

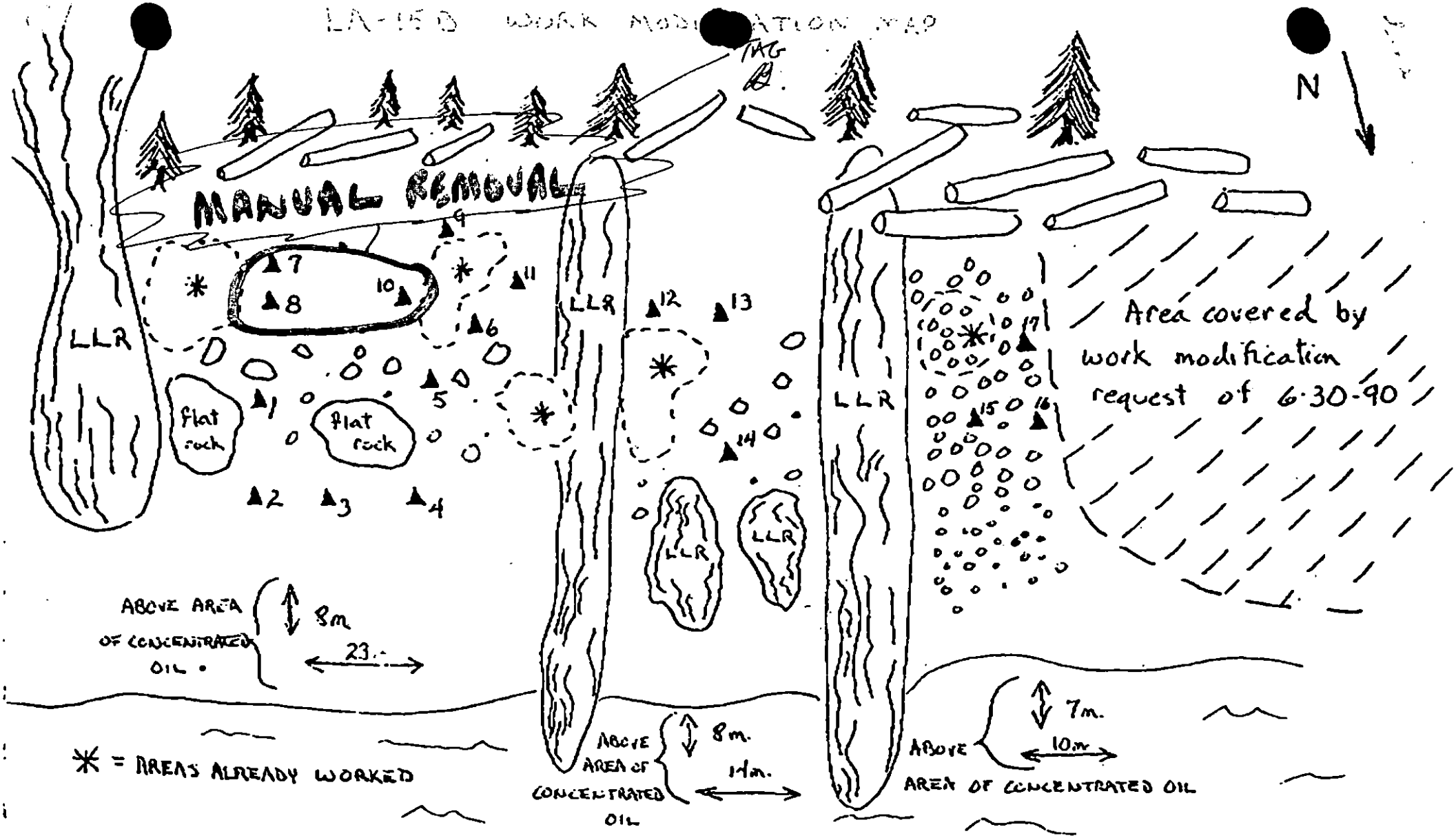
ADEC JOHN BAUER JohnBauer

EXXON ANDY TEAL

FOSC _____ DATE 7-21-90

NOAA Burl Wescott

USCG G.A. REITER G.A. Reiter




— Surface: N... ...bble, Pebble

— Subsurface: ...Gravel, Cobble

— Entire area underlined by ... near-surface bedrock

— Most OP oiling resting on bedrock shelf

— All pits in MITZ except #'s 2, 3, 4, & 14 which are in MITZ

LA-15B

# WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT LA-15 SUBDIVISION B DATED 8/16/90

MODIFICATION CLASS I X CLASS II ____ CLASS III ____

1. REASON FOR MODIFICATION
OIL IS LOCATED IN THE FRONT FACE OF THE STORM BERM
ADD behind Storm Berm. [signature]

2. SUGGESTED ADJUSTMENT TO WORK PLAN
EXTEND MECHANICAL WORK BEING DONE IN THE UPPER INTERTIDAL ZONE INTO THE STORM BERM

EXPOSING OILED SEDIMENTS TO WAVE ACTION BY RAKING THEM INTO THE ACTIVE ZONES.

3. TIMING ISSUES

| | | |
|---|---|---|
| PURSE SEINE HOOKOFF | AFTER 7/20 | * Waived 8/1/90 for manual & mechanical to cont. [signature] |
| DEGR HARVESTING | AFTER 8/15 | CLOSED TO BIOREMEDIATION ONLY EXCEPT IF WITH CVC APPROVAL AND WITH CVC MONITOR PRESENT DURING APPLICATION |
| FINFISH HARVESTING | AFTER 7/1 | |

ADEC Peter A. Frantz

EXXON [signature]

USCG [signature]

LAND MANAGER [signature] (If field rep is on scene)
Leigh Carlson, ADNR

# SHORELINE EVALUATION

SEGMENT ST/ 1A-15 SUBDIVISION C (3 OF 5) DATE 3/31/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**
Stream mouth catalog no. 226-40-16783 and 226-40-16782.

| | |
|---|---|
| 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 bald eagle nests (3/1 to 9/1) |
| 6U | Recreation: Tent sites (6/1 to 9/15) |
| 7HH | Finfish harvesting |
| 7II | Deer harvesting (8/15 to 2/28) |

**SUBDIVISION ECOLOGICAL CONSTRAINTS:**
Avoid any unnecessary disturbance or damage to unoiled biota or substrate.
See attached Ecological Constraint Sheet.

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

**OILING CATEGORIZATION:**
Wide 81 m: Medium 0 m: Narrow 0 m: V.Light 58 m: No Oil 0 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 70+ cm

**RECOMMENDATIONS:**

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

COMMENTS: Manually remove tarmat and mousse as indicated on sketch map. Bioremediation of areas of surface and subsurface oiling up to 100m of anadromous stream. Work between 6/1 and 7/10 based on anadromous stream constraints.

TAG COMMENTS: USE MANUAL/MECHANICAL AGGITATION/RAKING IN CONJUNCTION WITH SPOT WASH + OIL SNARES. PRIOR TO BIOREMEDIATION. FURTHER TAG EVALUATION LATE MAY

TAG APPROVAL DATE: 5/16/90
ADEC H. RAUSER
EXXON ANDY BOR
NOAA Burl Wescott
USCG G.A. REITER FOSC: [signature] DATE: 5-9-90
CVC Rep to be present

# 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 (6/1 to 9/15) |
| 6Y | | Special use destination |
| 7Z | Subsistence area: | Salmon harvesting (5/1 to 9/30) |
| 7HH | | Finfish harvesting |
| 7II | | Deer harvesting (8/15 to 2/28) |
| 7JJ | | Invertebrate harvesting |
| | For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints. | |

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA-15 SUBDIVISION: _____ DATE 1-APR-90

:G
NAME R. W. Hubbard SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

1. Suggest cleaning solution to remove stain of rocks,
2. Reject manual removal of rocks w/ some type suction machine

**ADEC**
NAME J. LYNN MARTIN SIGNATURE J. Lynn Martin

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED
COMMENTS

MECHANICAL + MANUAL REMOVAL OF SUBSURFACE & SURFACE
HOWEVER ACTIVE STREAM SHOULD BE A CONSIDERATION.

MECHANICAL RECOMMENDATIONS: TILING & DREDGE TECHNIQUE

**LAND MANAGER**
NAME Patrick Seanoff SIGNATURE [signature]
Chenega

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

REVISION NO. 03/21/90

# SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Reimer USCG Hubbard SEGMENT ST/ LA-15
BIO Zamora LAND REP Solanoff (CHENEGA) SUBDIVISION C (3 of 5)
EXXON Garcia ADEC MARTIN TIME 09 :20 to 10 :00
TEAM NO.: 16 TIDE LEVEL: +7.0 to +4.0 DATE 4 / 1 / 90
EST. SUBDIVISION LENGTH: 2000 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: E to W
SURFACE SEDIMENTS: R 20 % B 70 % C 10 % P — % G — % S — % M — % V — %
SLOPE : Lang 90 % Hang 10 % Vert — % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
OIL CATEGORY LENGTH: W 140 m M — m N — m VL 60 m NO — m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AC | AB | AP | AS | SHN OR | DBL RW | GY SL | DBR TL | LBR | | SU | UI | MI | LI |
| ASPHALT PAVEMENT | | X | | | X | | | | | | | X | | |
| POOLED | | | | | | | | | | | | | | |
| COVER | | | | | | | | | | | | | | |
| COAT | | X | | | | X | | | | | | X | X | |
| STAIN | X | ✓ | | | | X/ | | | | | | X/ | X/ | |
| MOUSSE | X | | | | | | | | X | | | X | | |
| PATTIES | | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | | |
| FILM | | | | | | | | | | | | | | |
| NO OIL | | | | | | | | | | | X | | | X |

PAVEMENT: H F (S) 24 sq. m by 5 cm
PATTIES / TARBALLS _____ BAGS
NEAR SHORE SHEEN? (NO) BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | | | |
| Debris | | | |

DEBRIS COLLECTED ☐ YES ☐ NO
TYPE _____
#BAGS _____

Photographs:
Roll No. SS-16-1 & 2
Frames 30-37, 1-10

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm-cm) | BELOW | | OIL / FILM COLOR | | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | | UO | UC | SHN BR | DBL RW | GY SL | DBR TL | LBR | | SU | UI | MI | LI | | |
| 1 | 30 | | | | | X | - | | | | | | | | | | | | X | | SC PC |
| 2 | 20 | | | | | X | - | | | | | | | | | | | X | | | SC PC B |
| 3 | 35 | X | | | | | 8 - 28 | | X | | | | X | | | | | X | | | GP |
| 4 | 25 | X | | | | | 5 - 25 | X | | | | | X | | | | | | X | | GPC |
| 5 | 25 | X | | | | X | - | | | | | | | | | | | | X | | PGC |
| 6 | 25 | X | | | | X | - | | | | | | | | | | X | | | | PC |

COMMENTS Pocket beach with rock cliff on both ends
Oil Character consists of surface stain on Boulder/cobble Beach
~ 25-30 m wide over 60% of Beach, Broken coat on larger boulders and rock cliff sections. Considerable oil at depth was found indicated by distribution of pits - The subsurface oil appears to coincide with surface distribution



REVIEWED JW DATE 4-4-90

# SHORELINE OILING SUMMARY (PAGE 2 of 2)

REVISION 03/22/90

SEGMENT ST/ LA-15 SUBDIVISION C

## SUBSURFACE OIL (CONTINUED)

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL | BELOW | | OIL / FILM COLOR | | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | (CM-CM) | UO | UC | | | | | | | SU | UI | MI | LI | | |
| 7 | 40 | X | | | | | 30 - 40 | X | | | | | X | | | | X | | | | PC B |
| 8 | 70 | X | | | | | 30 - 70 | X | | | | | X | | | | X | | | | PC |
| 9 | 30 | | | | | X | - | | | | | | | | | | | X | | | TPC |
| 10 | 20 | X | | | | | 5 - 20 | X | | | | | X | | | | X | | | | PC |
| 11 | 30 | X | | | | | 15 - 30 | X | | | | | X | | | | | X | | | PCG |
| 12 | 30 | | | | | X | - | | | | | | | | | | | | X | | PC |
| 13 | 30 | | X | | | | 20 - 30 | X | | | | | X | | | | | X | | | PC |
| 14 | 20 | X | | | | | 0 - 25 | X | | | | | X | | | | | X | | | B / PC |
| 15 | 45 | | X | | | | 30 - 45 | X | | | | | X | | | | X | | | | PC |
| | | | | | | | - | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | |

COMMENTS

REVIEWED JW DATE 4-4-90

# SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / LA15 Subdivision C Date (mo / day / yr) 4/1/90

Time (24 hr) 0925 ON 1100 OFF Biologist TONY RAMORA

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

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

Photographs: ~~Roll No.~~ 55-16-1,

~~Frames~~ ____

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| X | X | | X | ③ | | | | | | | |
| 2 | 2 | 2 | X | X | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | X | X | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | X | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT
U: 4-6
M: 4,6
L: NOT OBS

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| X | X | | | | | | | | | | |
| 2 | 2 | 2 | 2 | X | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | X | 5 | 5 | 5 | 5 | X | ③ | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT
U: 2-4, 6
M: 3,4,6
L: —

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| X | X | | X | | | | | | | | |
| 2 | X | 2 | X | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | X | 3 | X | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | X | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT
U: 4-6
M: 5,6
L: —

**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| X | X | | X | | | | | | | | |
| 2 | X | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | X | 3 | X | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT
U: 1-6
M: 4-6
L: 1,2,4-6

**Wildlife Observations/ General Comments:**

- DENSE BIOTA ON ROCK OUTCROPS FLANKING BEACH. NEREOCYSTIS KELP BED JUST OFFSHORE OF ROCK OUTCROP ON WEST SIDE. DENSE MUSSEL BEDS ON EAST SIDE OF SITE - IN SAND BETWEEN COBBLE. VERY ABUNDANT AMPHIPODS UNDER COBBLE IN MID ZONE. DIVERSE ALGAE ON BOULDER/ROCK ON WEST
- LOW ZONE NOT EXPOSED DURING SURVEY.
- SITED: 2 OTTERS, DEER TRACKS, 2 RAVENS
  L COATED BARNACLES ON BEDROCK IN UI:
  - 50% MORTALITY OF BALANUS
  - 95% MORTALITY OF CHTHAMALUS
  - A FEW (RARE) SPATS OBSERVED ON ASPHALT COAT.

ECOLOGICAL CONSIDERATIONS

- THH. 7 IL. 73 1 AR #

OIL P- er

SEGMENT/ LA-15

SUBDIVISION C

DATE 4 / 1 90

**CHECKLIST**

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

**LEGEND**

1 △
Pit - No Subsurface Oil

2 ▲
Pit - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

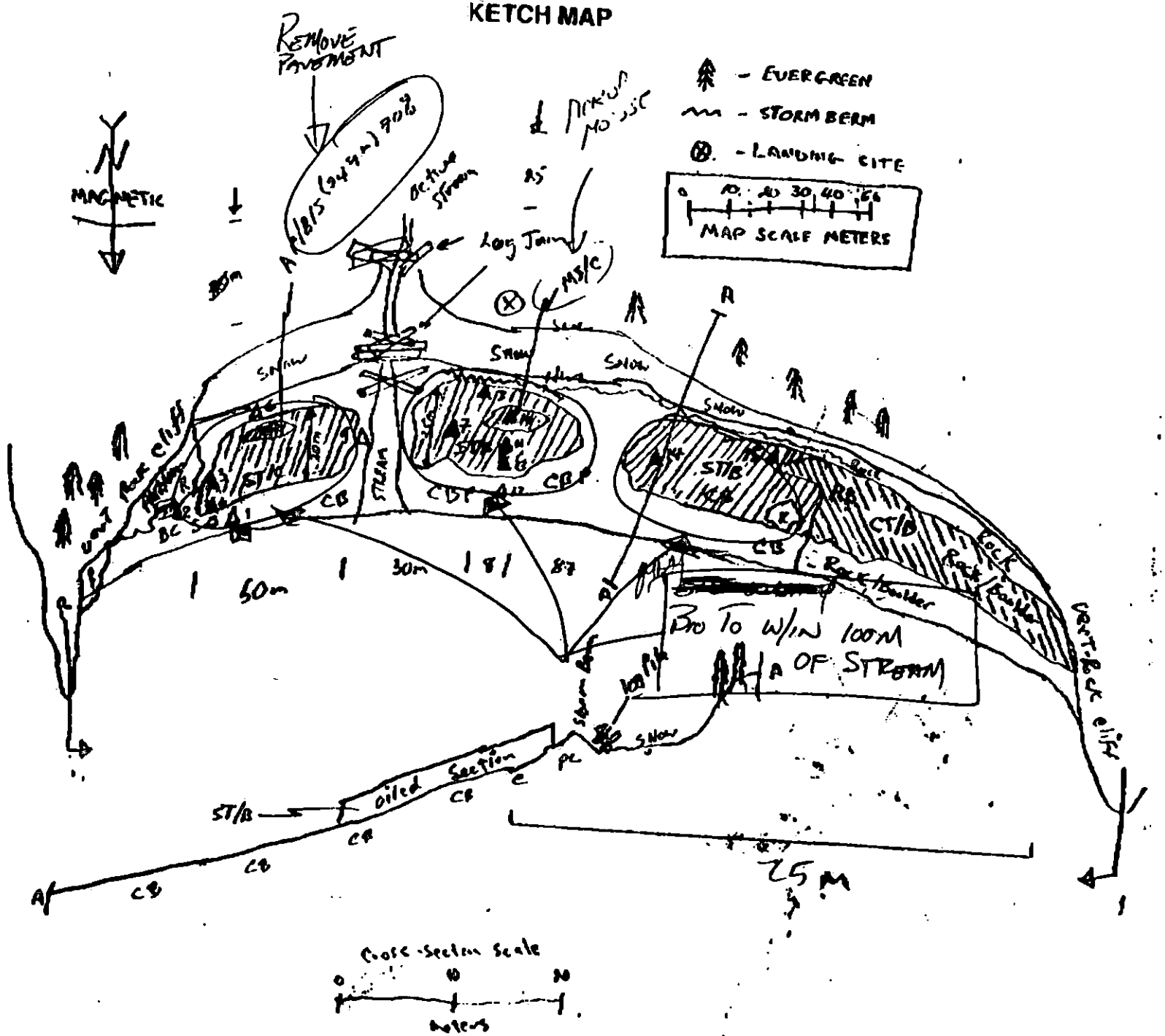
CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oiled Vegetation

1 ●→
Photo location, direction, and number

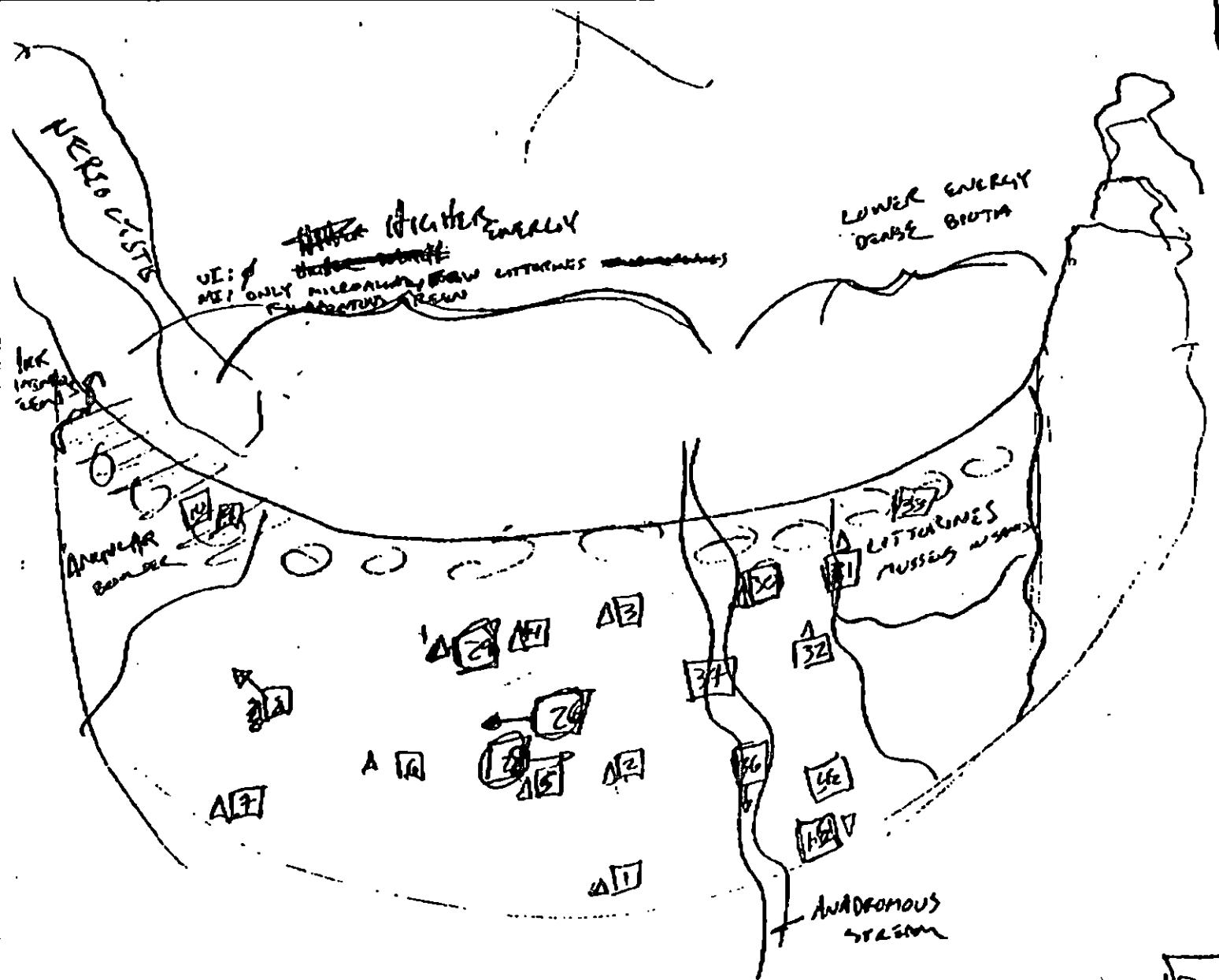
# KETCH MAP




Oil Character Length (m): AP 30 PO — CV — CT 100 ST 200 MS 10 PT — TB — FL — NO 60

REVISION 8/87/MM

LA-15-C1




THIS MAP NOT TO SCALE. PHOTO LOCATIONS AND OTHER FEATURES REFER TO GEOLOGIST MAP OF SITE

PHOTO LOCATIONS

ROLLS SS-16-1 ↑ SS-16-2

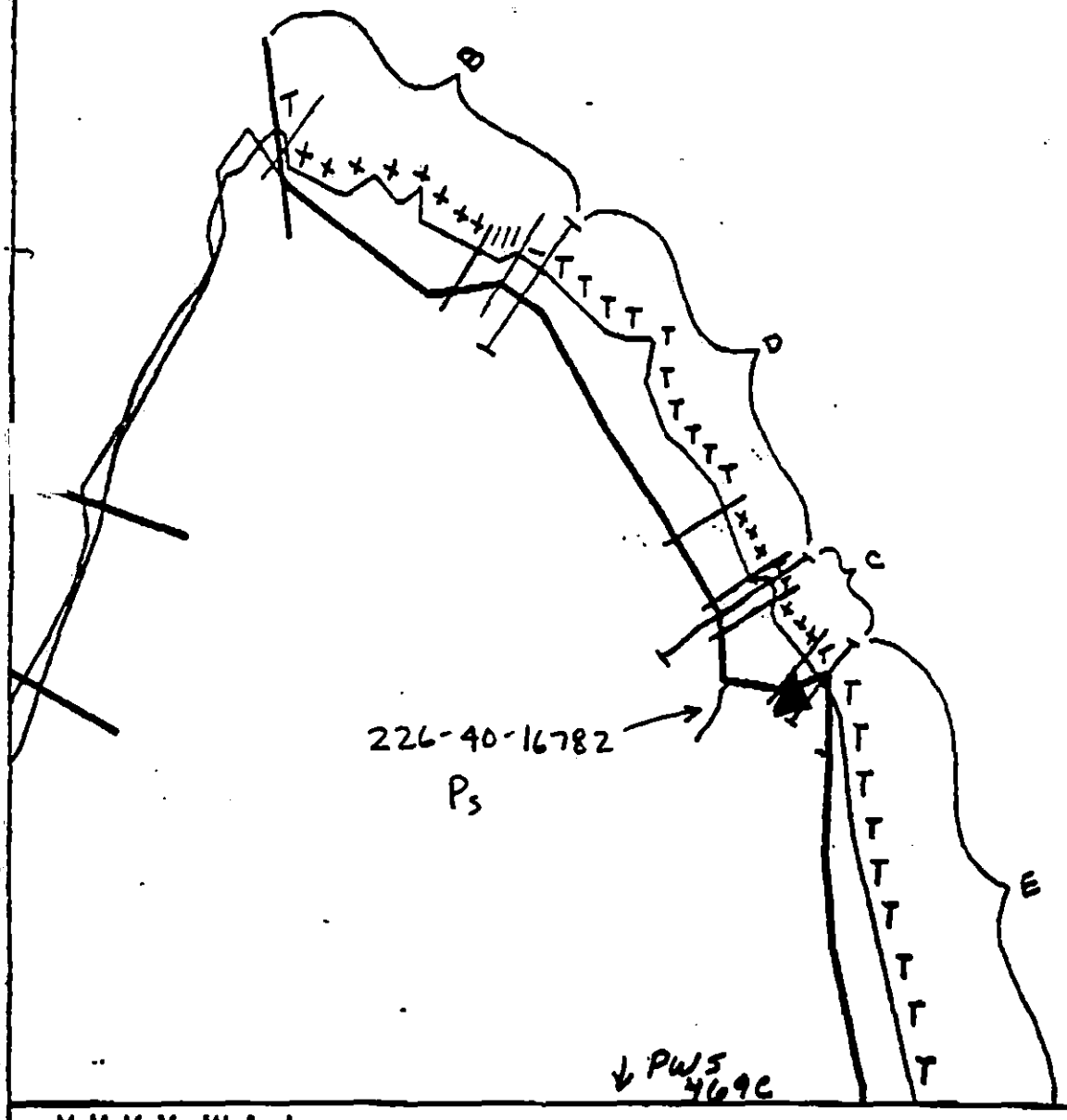
PIT #1 29

STREAM RUNOFF FLOWS (SZNEATH)
SFC CURRENT - SEEN ON POOLED RUNOFF

1A, 1B
▲ 5T
6U
7HH
7II
9EE

# ECOLOGICAL MAP

## LA-15C



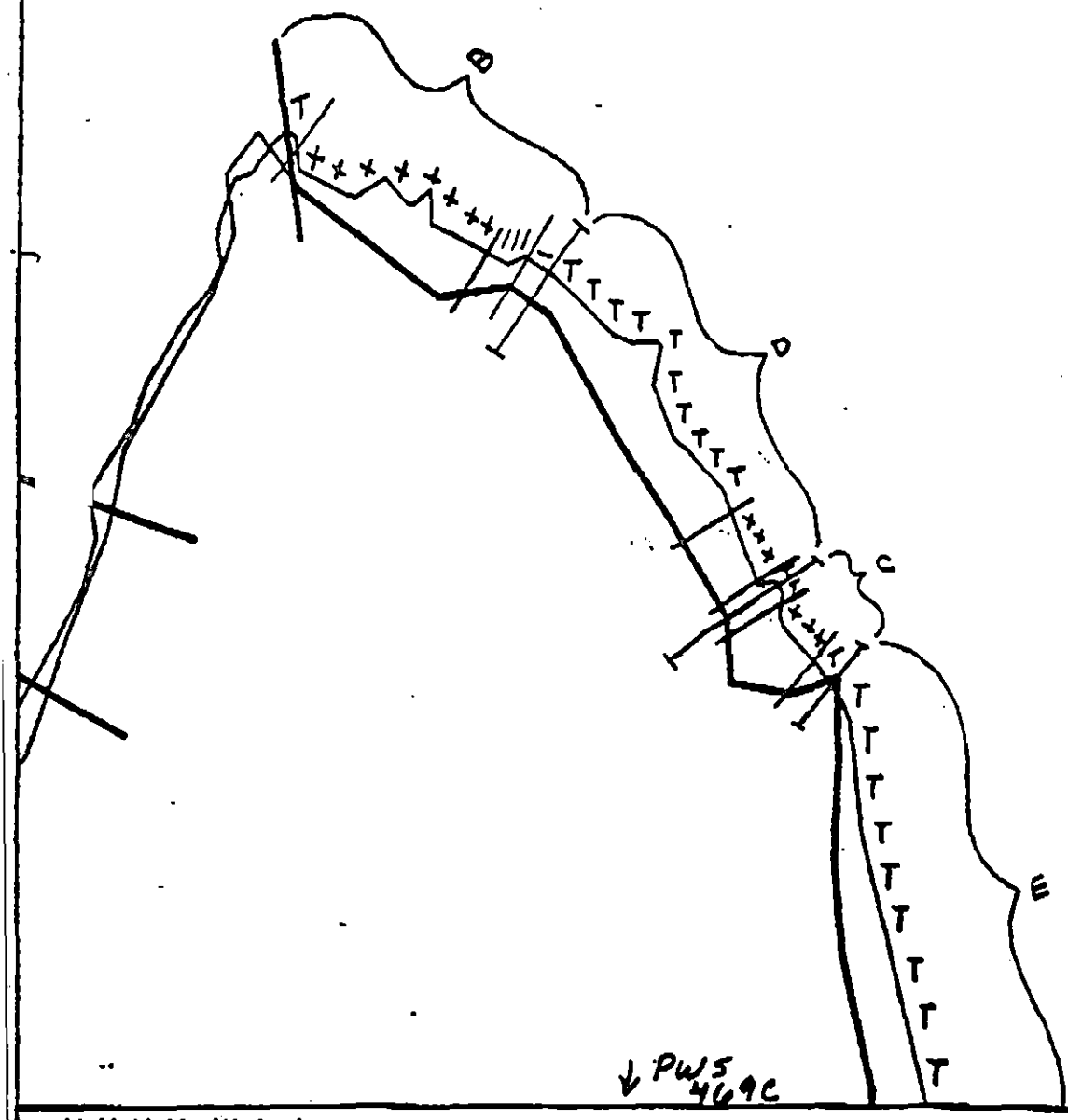

XXXX Wide
//// Medium
--- Narrow
TTTT Very Light
0000 No Oil

**LA-15/C**

ADEC Segment Length: 4517m

0 100 200 300
METERS

Map Key: PWS-496
Name: REIMER
Date: 4/1/90
Date Entered:




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

# LA-15/C

ABEC Segment Length: 4517m

0 100 200 300
METERS

Map Key: PWS-496a
Name: REIMER
Date: 4/1/90
Date Entered:

# ADDENDUM: SUBDIVISION CONSTRAINTS

## SEGMENT LA-15 SUBDIVISION C ( 3 of 5 )

| WORK WINDOW | |
|---|---|
| Manual Pickup<br>Tarmat Removal | OPEN |
| Bioremediation<br>Spot Washing<br>Other Approved Treatment<br>Manual/Mechanical Agitation/Raking | WORK PRIOR TO 7/1 |

## ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

| | | |
|---|---|---|
| **1A,1B** | **Salmon Stream** | NO CONSTRAINT. ADF&G catalogued anadromous streams (226-40-16782 and 226-40-16783) are more than 100m from the work area. |
| **1K** | **Purse Seine Hook-off** | Closed to bioremediation, spot washing, other approved treatment, and manual/mechanical agitation/raking after 7/20. No constraint to manual pickup and tarmat removal. |
| **5T** | **Bald Eagle Nest** | NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision C work site. |
| **7HH** | **Subsistence: Finfish Harvesting** | Closed to bioremediation spot washing, other approved treatment and manual/mechanical agitation/raking after 7/1. No constraint to manual pickup and tarmat removal. |
| **7II** | **Subsistence: Deer Harvesting** | Closed to bioremediation, spot washing, other approved treatment, and manual/mechanical agitation/raking after 8/15. No constraint to manual pickup and tarmat removal. |

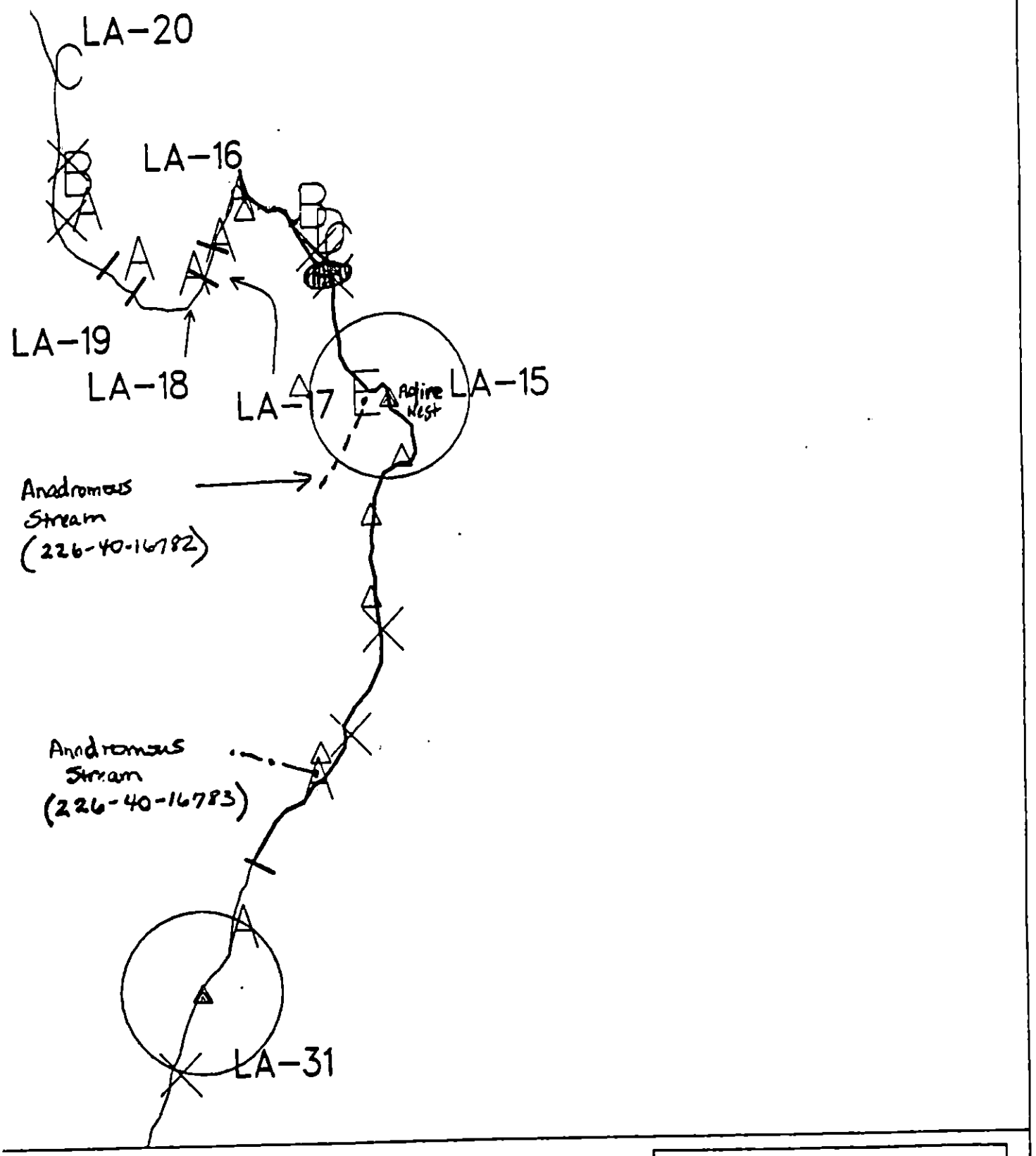
OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Restrict boat and air traffic and beach disturbance to essential minimum after 7/1. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

**SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM (STREAM NO. 226-40-16782) FOR ADDITIONAL CONSTRAINT INFORMATION**

FOSC _____ Date 6/13/90

_____ Date 6/12/90




EXXON

Exxon Company, USA
Map Key: PWS-LA-15
June 04, 1990

# ECOLOGY MAP

## SEGMENT LA-15

SUBDIVISION C (3 of 5)

METERS

★ Seabird Colony
△ Active Eagle Nest
△ Inactive Eagle Nest

1 inch = 1000 feet

# ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ LA-15 STREAM NO: 226-40-16782 DATE 4/20/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**
Two anadromous streams in LA-15: 226-40-16782, 226-40-16783 (in Subdivision C.)
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-7 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6U Recreation: Tent sites (6/1 to 9/15)
7HH Subsistence area: Finfish harvesting
9EE Set aside
See attached Ecological Constraint sheet for specific constraints and contacts.

**SUBDIVISION ECOLOGICAL CONSTRAINTS:**
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. There is one and possibly two bald eagle nests within 400 M of stream 226-40-16782. See ecology map. Subject stream is located within Subdivision C (3 of 5).

SHPO SIGNATURE: J. David McMahan DATE: 5/10/90

Subsurface Oil Observed: Yes X No _____ Maximum Depth 45+ cm

**RECOMMENDATIONS:**

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

COMMENTS: Recommended treatment includes 1) manual removal of tarmat, 2) manual pickup of mousse patties, 3) manual tilling of storm berm down to MITZ, 4) spot washing using sorbents, 5) bioremediation of tilled and washed area and other areas shown on attached sketch map. Work should be conducted between 6/1 and 7/10 based on eagle nest and salmon constraints after approval of USFWS regarding eagle nest and ADF&G regarding tilling and bioremediation of stream banks.

TAG COMMENTS: MANUAL TILLING PRIOR TO BIO IN AREAS OF TEST PITS 3+6 (STORM BERM). MANUAL RAKING OF REMAINDER OF AREA WITH SUBSURFACE OIL AS INDICATED PRIOR TO BIO.

ROVAL DATE: 5/10/90.
RT Wehrle
WDFG Beal
Wescott
D. Rome

FOSC: _____ DATE: 5-18-90

NOTIFY CVC 24HRS. IN ADVANCE OF WORK

# PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G John Morison 267-2324

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 July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D Esther Hatchery release (4/15 to 6/1)
1E Main Bay Hatchery release (4/20 to 6/10)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or 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: 1E ADF&G Larry Peltz 424-3214
1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzomoto 424-7511

1I Gill net area (6/7 to 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 unoiled 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 Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of 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
ADF&G Don Calkins 267-2403

5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Rothy 267-2206

5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U Recreation: Tent sites (5/1 to 9/15)
6V Anchorages (5/1 to 9/15)
6W Forest Service cabins (5/1 to 9/15)
6X Lodge (5/1 to 9/15)
6Y Special use destination

7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
7AA Finfish harvesting
7II Deer harvesting (8/15 to 2/28)
7JJ Invertebrate harvesting
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

5

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA-015 SUBDIVISION: ~~226-20-10588~~ ARADNOUS STREAM CATALOG # 226-40-16782 DATE 4-20-90

**USCG**
NAME CWO2 Kerwin L. Dreher SIGNATURE CWO2 K. L. Dreher

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

[redacted] ADFG
NAME RICK GUSTIN SIGNATURE Richard J Gustin

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

1. Shovel removal of mousse puddles/tar mats in upper/middle/lower storm berms and anywhere else from use of tracked bulldozer with ripper to pull down berms and till submerged oil to surface in berms.
2. removal of severely oiled logs in jam over creek and disposal.
3. Pull down storm berms (upper 2) and wash with steam or hot water in addition to coldwater deluge system.
4. Absorbent off stream edge while washing to prevent recoiling.
5. Till + wash both sides of stream bank where oiled lens occurs.
6. Till + wash oiled tongue which shows in center of stream
7. Rip up lower + middle storm berms with tracked cats + rock ripper to bring subsurface oiled gravel and cobble to surface and treat with steam or hot water and cold deluge.
8. No bioremediation recommended
9. Boom site and collect oil with skimmers as necessary during washing.

moderate rolling (It appears there is a large relatively thick at times lens of subsurface oil on both sides of the stream in the entire intertidal area (upper, middle, lower intertidal) This in our opinion needs to be tilled and treated.

**LAND MANAGER**
NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

# SHORELINE OILING SUMMARY (ANAD)

REVISION NO. 1/1

OG CAL LARSON USCG DRAKER, CWE SEGMENT ST/ 1A-015
BIO KEN CRITCHLOW LAND REP _____ STREAM220-40-10782 ( OF )
EXXON DARRYL YOES ADFG BOB KNOTT-AIMEE WEREMAN TIME 11:45 to 13:15
TEAM NO. 14 TIDE LEVEL X6FT DATE 4 / 20 / 90
EST. SUBDIVISION LENGTH: 40 m ☐ Sun ☑ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☑ Grass ☑ Forest ☐ Rock _____
SURVEYED FROM: ☑ Foot ☐ Boat ☐ Helo
SURFACE SEDIMENTS: R 10 % B 10 % C 40 % P 40 % G ____ % S ____ % M ____ % V ____
SLOPE: Lang 50 % Hang 50 % Vert ____ % WAVE EXPOSURE: ☐ Low ☑ Med ☐ High
OIL CATEGORY LENGTH: W ____ m M 15 m N ____ m VL 25 m NO ____ m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ro | ri | ir | ib | | | | | | su | ui | mi | li |
| ASPHALT PAVEMENT | ✓ | | | | | ✓ | | | | | | ✓ | |
| POOLED | | | | | | | | | | | | | |
| COVER | ✓ | | | | | | | ✓ | | | ✓ | | |
| COAT | | | | | | | | | | | | | |
| STAIN | | | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | ✓ |
| MOUSSE | | | ✓ | | | | | ✓ | | | | ✓ | ✓ |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | ✓ | | | | ✓ | | | | | | ✓ |
| NO OIL | | | | | | | | | | | | | |

PAVEMENT H F 3 8 sq. m by 2 cm
PATTIES / TARBALLS _____ BAGS
NEAR SHORE SHEEN? NO BR RW SG TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | ✓ | |
| Vegetation | ✓ | | |
| Trash | ✓ | | |
| Debris | ✓ | | |

Did You Collect DEBRIS ☐ YES ☑ NO
TYPE _____
#BAGS _____

Photographs:
Roll No. _____
Frames _____

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SHEEN (VAN) | ▼ | SURFACE - SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | op | or | ol | of | mo | | vo | so | | | | | | su | ui | mi | li | | | | |
| 1 | 45 | | | | | ✓ | • | | ✓ | | | | | | | ✓ | | | ✓ | N | | CB,PB/CB,PB |
| 2 | 30 | | | | ✓ | | • | | ✓ | | | ✓ | | | | ✓ | | | ✓ | Y | ✓ | CB PB GR/CB,P |
| 3 | 45 | | ✓ | | | | 5-45 | ✓ | | | | | | ✓ | | ✓ | | | | N | | CB PB GR/ CB PB GR C |
| 4 | 25 | | ✓ | | | | 5-20 | | ✓ | | | | | | | ✓ | | | | Y | ✓ | CB, PB GR S/ CB PB GR S |
| 5 | 25 | | | | ✓ | | 5-25 | ✓ | | | | ✓ | | | | | ✓ | | | Y | ✓ | CB, PB GR/ CB PB GR |
| 6 | 50 | | ✓ | | | | 5-50 | ✓ | | | | | ✓ | | ✓ | | | | ✓ | N | | CB, PB/CB PB GR |

COMMENTS NOTED OIL STAIN SPORATICALLY THROUGHOUT SITE. UPPER STORM BERM NEXT TO STREAM MOUTH WAS AN OIL LAYER OF DARK BROWN MOUSSE 50CM IN DEPTH. PART OF IT CONTINOUS UPTO STREAM MOUTH AND UNDER BEACH DRIFT/LOGS. PIT NO 2 HAD LIGHT SHEEN PERCOLATING THRU SEDIMENTS. SILVER SHEEN WAS OBSERVED IN LITZ NEXT TO STREAM DISCHARGE.

REVIEWED JW DATE 4-24-90

## SHORELINE OILING SUMMARY (PAGE 2)

SEGMENT ST/ LA 015 STREAM 226-40-1670 OF

### SUBSURFACE OIL (CONTINUED)

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm-cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SHEEN (Y/N) | ▼ | SURFACE SUBSURFAC SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | | VO | WC | | | | | | SU | UI | MI | LI | | | | |
| 7 | 35 | | ✓ | | | | 5-15 | | ✓ | ✓ | | | ✓ | | | | ✓ | | | Y | ✓ | PB CO GR 50 PPCO GR 50 |
| 8 | 20 | | | ✓ | | | 5-10 | | ✓ | | | | ✓ | | | | | ✓ | | Y | ✓ | " " |
| 9 | 35 | | ✓ | | | | 5-35 | * | | | | | ✓ | | | | | ✓ | | Y | ✓ | " " |
| | | | | | | | - | | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | | |

COMMENTS * NO DATA

REVIEWED JW DATE 4-24-90

DG CAL ARSON

SEGMENT STI LA-015

STREAM 226-40-16782

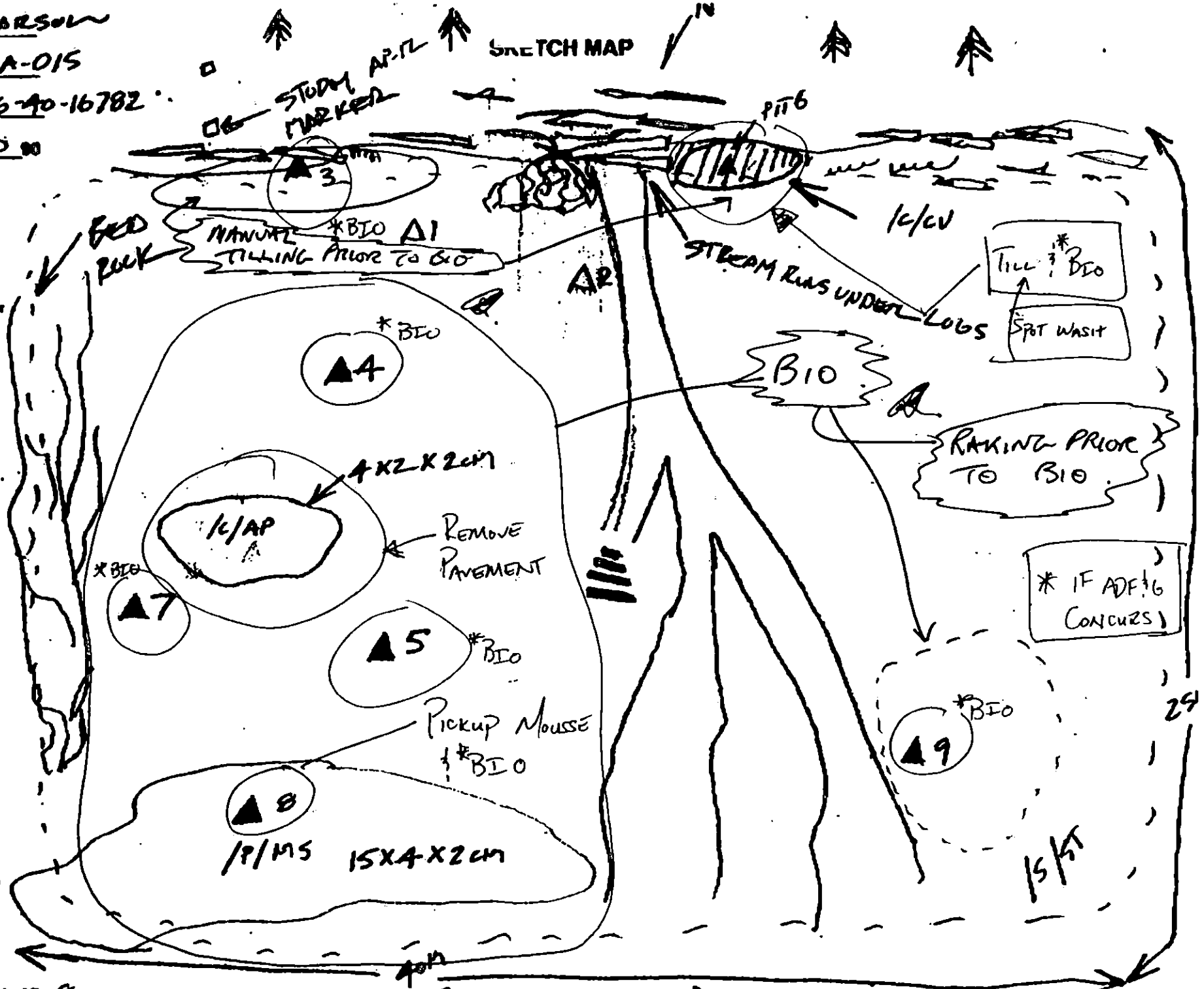
DATE 4 / 20 90

**CHECKLIST**

- N Arrow
- Approx. Scale
- Segment Body
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. HWA/WL
- SSL
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

**LEGEND**

- 1 ▲ Pit - No Subsurface Oil
- 2 ▲ Pit - Subsurface Oil
- CT/C Continuous Distribution
- CT/B Broken Distribution
- CT/P Patchy Distribution
- CT/S Splashed Distribution
- Oiled Vegetation
- Photo location, direction, and number




Oil Character Length (m): AP 8 PO ____ OV ____ CT ____ ST ____ MB 8 PT ____ TB ____ FL ____ NO ____

4/20/90

F36

# ADF&G MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: BS (SS) DS TS AVS SCM MMS PTA — 2 REGION: (PWS) KP,CI K,AP

METHOD: Aerial Ground Boat

3 DATE: 4-20-90 — 16 HIGH TIDE TIMES: / — 21 TEAM RECORDER: RLL

4 START TIME: 1200 — 16 HIGH TIDE HTS: / — 22 OBSERVERS: AW

5 STOP TIME: 1330 — 17 LOW TIDE TIMES: / — 23 AGENCY: ADFG

6 SEGMENT #: LA15 — 18 LOW TIDE HTS: / — 24 PHOTOS TAKEN: Y (N)

7 STATION #: — 19 TIDE HT AT SURVEY: — Roll #: Frame:

8 K-UNIT: — Ebb Slack Flood Slack — 25 VIDEO TAKEN: (Y) N TAPE: SCML555

9 STAT AREA: — 20 USCG QUAD: — Start: 0876 End: 1010

10 LAT: — 11 LONG: — 26 SAMPLES TAKEN? Y (N) Number

12 SOURCE: (Map) Loran — Oil

13 LOCATION: S A-3 Latouche Is. — Sediment

14 DESCRIPTION: — Biological

Water

EXTENT OF OIL

| | SHORELINE L | W | NS | % | STREAM L | W | NS | % |
|---|---|---|---|---|---|---|---|---|
| 27 SURFACE COVERAGE | 1675 | 25 | | 75 | | | | |
| 28 SURFACE THICKNESS | Film to mousse 1cm | | | | | | | |
| 29 PENETRATION | 25 cm | NA | | | 10 cm | | | |

30 OVERALL OIL IMPACT: N VL L M H

31 OIL TYPE: (Peelers) (Mousse) Tar Asphalt (Slight) (Stain)

32 OILED DEBRIS? (Y) N

33 SHORELINE TYPE: Headland Low-lying Rocks Beach (Cobble) Lagoon Marsh

34 WAVE EXPOSURE: (High) Moderate Low

35 SUBSTRATE TYPE: Bedrock Boulder Cobble ✓ Gravel ✓ Sand ✓ Mud/silt

36 CATALOGED ANAD. FISH STREAM? (Y) N

37 CATALOG #: 226-40-16782

38 STREAM NAME:

39 OIL IN STREAM BED? (Y) N

40 OIL ON STREAM BANKS? (Y) N

41 OIL ON BEACH ADJACENT TO MOUTH? (Y) N (within 30 meters)

42 OIL WITHIN 1 MILE OF STREAM? (Y) N

Where:

43 ANADROMOUS FISH PRESENT? Y N

44 ANADROMOUS FISH OBSERVATION

| Species | Aerial | Ground |
|---|---|---|
| | | |
| | | |
| | | |
| | | |

COMMENTS: 75% of area on Sand either side of stream - from middle to mid-intertidal is oiled. Deepest penetration 25 cm. Surface rocks - stained under side lines in some areas coated thickly with pooled mobile oil. Thin bands down to streams edge on both sides as well as upper stream berm bands.

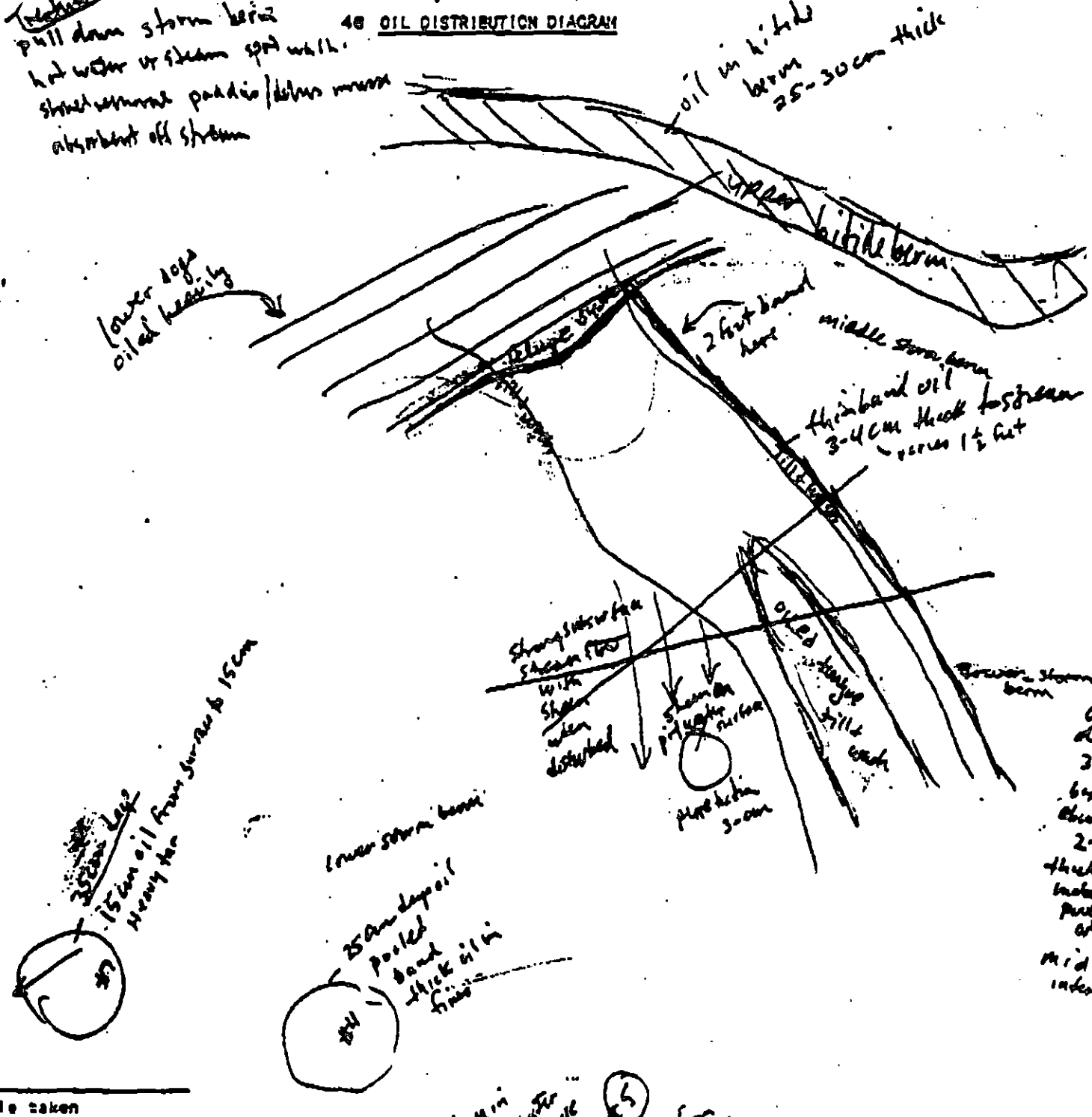
3 3/1

## 4B PHOTOLOG

| FRAME(S) | DESCRIPTION |
|---|---|
| | Isol. Broad area of subsurface oil under armor coating of rock/cobble oil from 1" below surface to 4-5" penetration and deeper. |
| Recommendations → | pull down storm berm, hot water or steam wash with cold water deluge, shovel remove puddles of mousse and oiled debris (logs etc) for treatment off stream to prevent re-oiling. Rig up lower storm berm and other lower subsurface oil with vacuum or vac (trucked) and wash with steam or hot water with cold water deluge / fill wash bath. See backpage |

Treatment: pull down storm berm; hot water or steam spot wash; shovel remove puddle/debris mousse; absorbent off stream

## 4B OIL DISTRIBUTION DIAGRAM




Sample taken
Photo frame # and shot direction.

COPY 2

ADF&G MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: BS (SS) DS TS AVS SCHA MMS PTA  2 REGION (PWS) KP,CI K,AP

METHOD: Aerial (Ground) Boat

3 DATE: 4/20/90  15 HIGH TIDE TIMES: 1007 1230↓  21 TEAM RECORDER: M. WIEDMER

4 START TIME: 1150  16 HIGH TIDE HTS: 9.0', 9.4'  22 OBSERVERS: T. CROWE

5 STOP TIME: 1320  17 LOW TIDE TIMES: 0400, 1634  23 AGENCY: ADFG

6 SEGMENT #: LA-015  18 LOW TIDE HTS: 4.5', 1.6'  24 PHOTOS TAKEN: (Y) N

7 STATION #: _____  19 TIDE HT AT SURVEY: 4.48'  Roll #: _____ Frame: _____

8 K-UNIT: —  (Ebb) Slack Flood Slack  25 VIDEO TAKEN: (Y) N TAPE#: 90TWC001

9 STAT AREA: —  20 USGS QUAD: SEWARD A-3  Start: 0421 End: 0708

10 LAT: _____  11 LONG: _____  26 SAMPLES TAKEN? Y (N) Number

12 SOURCE: Map Loran  Oil _____

13 LOCATION: NE LATOUCHE  Sediment _____

14 DESCRIPTION: E. OF SLEEPY BAY  Biological _____

EXTENT OF OIL  Water _____

| | SHORELINE L | W | M² | % | STREAM L | W | M² | % |
|---|---|---|---|---|---|---|---|---|
| 27 SURFACE COVERAGE (Horizontal) | 100' | 25 yd | | 75 | 30' | 5 yd | | 2 |
| 28 SURFACE THICKNESS | | | | | 0 | 0 | | 1 cm |
| 29 PENETRATION | 20cm | 80cm | 0cm | | | | | |

30 OVERALL OIL IMPACT: N VL L M (H)

31 OIL TYPE: Pooled (Mousse) (Tar) Asphalt Sticky Stain

32 OILED DEBRIS? (Y) N

33 SHORELINE TYPE: Headland Low-lying Rocks Beach (Cave) Lagoon Marsh

34 WAVE EXPOSURE: High (Moderate) Low

35 SUBSTRATE TYPE: Bedrock _____ Boulder 5 Cobble 60 Gravel 35 Sand _____ Mud/silt _____

36 CATALOGED ANAD. FISH STREAM? (Y) N

37 CATALOG #: 226-40-16782

38 STREAM NAME: —

39 OIL IN STREAM BED? (Y) N

40 OIL ON STREAM BANKS? (Y) N

41 OIL ON BEACH ADJACENT TO MOUTH? (Y) N (within 30 meters)

42 OIL WITHIN 1 MILE OF STREAM? (Y) N

Where: MOUTH

43 ANADROMOUS FISH PRESENT? (Y) N  PRES

44 ANADROMOUS FISH OBSERVATION

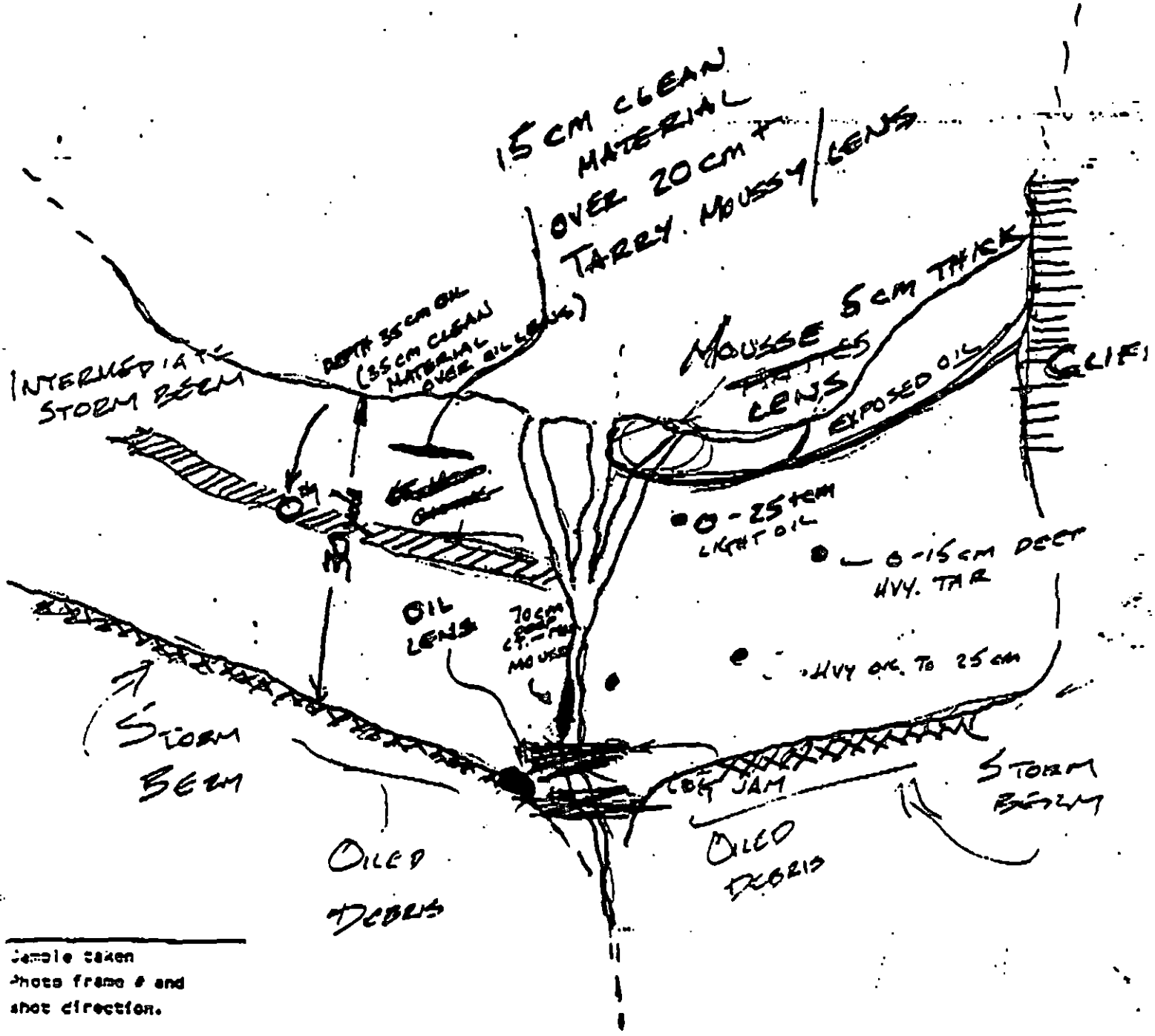
| Species | Aerial | Ground |
|---|---|---|
| | | |
| | | |
| | | |
| | | |

COMMENTS: BASED ON THE 10 PITS OUR GROUP DUG, IT IS MY JUDGEMENT THAT A LENS OF OIL EXTENDS THROUGH THE ZONE OF INTEREST. THIS LENS IS EXPOSED AT THE STORM BERM AND THE LOWER INTERTIDAL AND BURIED BY 15 cm+ THICK COBBLE/GRAVEL IN THE MID-INTERTIDAL. MOUSSE/TAR IS IN THE STREAM CHANNEL @ THE LOWER INTERTIDAL

46 BIOTOLOG

| SAMPLE | COMMENTS | DESCRIPTION |
|---|---|---|
| | | LENS OF OIL EXPOSED IRREGULARLY ALONG BOTH BANKS C |
| | | CHANNEL. OILED DEBRIS UNDER LOGS ALONG STORM BERM. |
| | | RECOMMENDATIONS: REMOVE OILED DEBRIS FROM STORM BERM |
| | | MANUALLY REMOVE ALL OIL FROM STREAM CHANNEL (CHANNEL I |
| | | MOBILE AND BROAD AT MOUTH). RMV OIL 15 YDS ON EITHER |
| | | SIDE OF CURRENT CHANNEL). |

46 OIL DISTRIBUTION DIAGRAM




Sample taken
Photo frame # and
shot direction.

Recommendation.

(or mid sized cat (bulldozer with rock ripper))

1. shovel removal of mousse paddies/tar mats in upper/middle/lower storm berms and any where else found.

2. removal of severely oiled logs in jam over creek

3. Pull down storm berms (upper 2) and wash with steam or hot water in addition to cold water deluge system

4. Absorbent off stream while doing this to prevent recoiling

5. Till + wash both sides of stream banks where oiled logs occur.

6. till + wash oiled tongue which sheens in center of stream

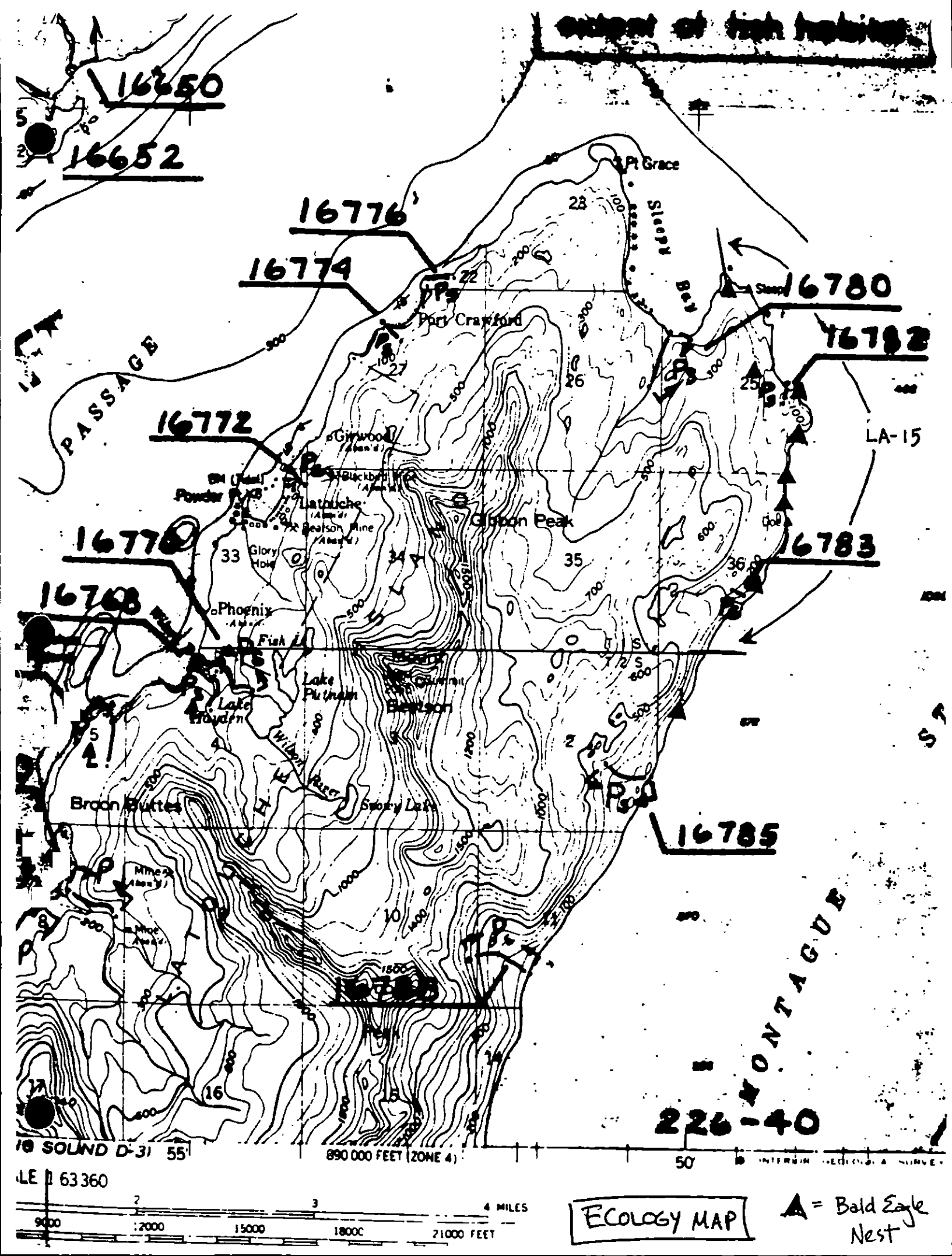
7. Rip up lower + middle storm berms with tracked cat and rock ripper to bring subsurface oiled gravel and cobble to surface and treat with steam or hot water with cold deluge.

8. No bio remediation recommended

9. Boom site and collect oil with skimmer as necessary during washing.

Comments by Ken Critchlow:

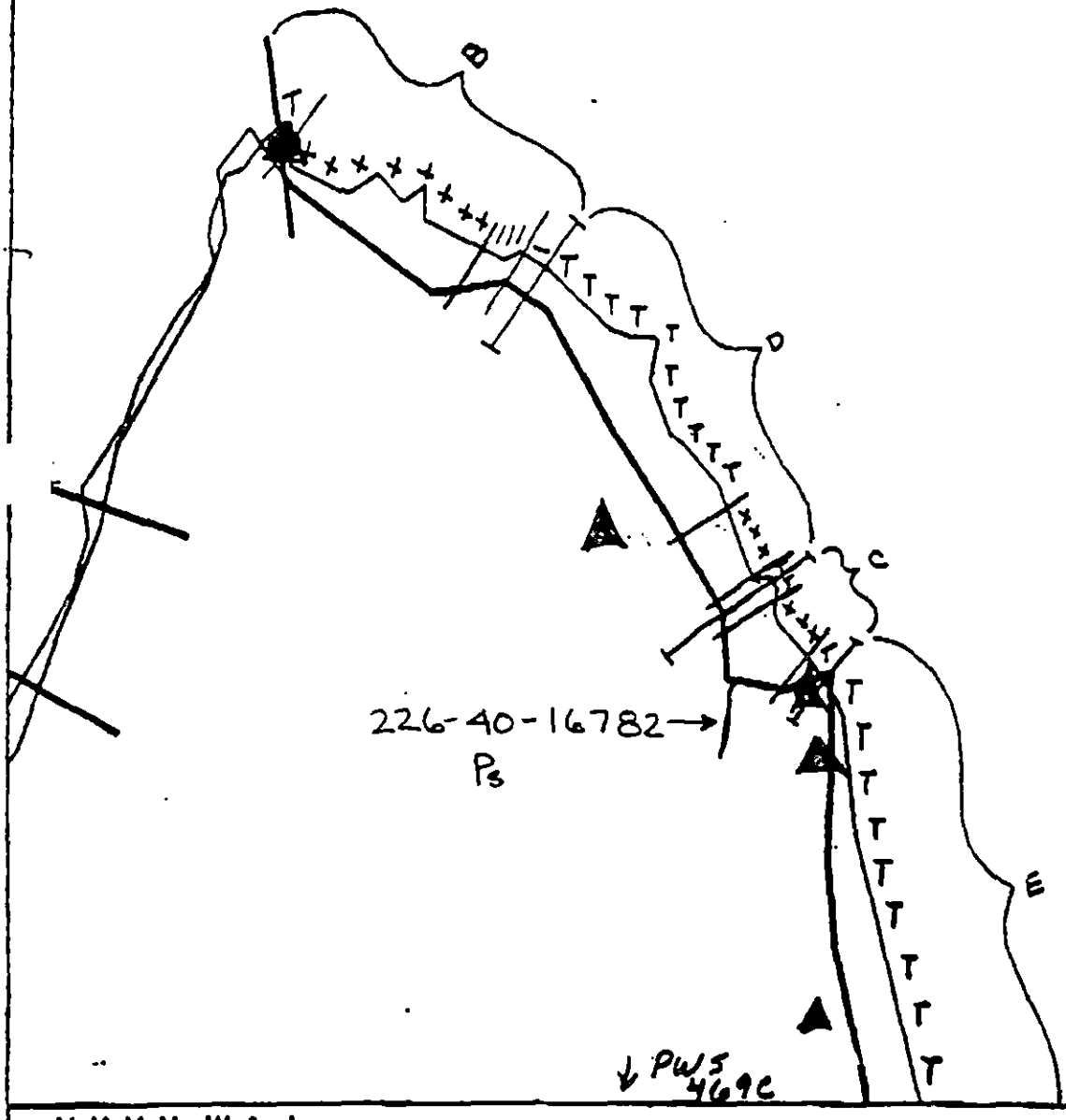
I agree with ADFG's recommendations, except that bioremediation should be used as last step. KRC


16650
16652
16776
16774
16780
16782
16772
16770
16768
16783
16785
226-40
Port Crawford
Pt Grace
Sleepy Bay
PASSAGE
Girdwood
Latouche
Powder Flats
Glory Hole
Gibbon Peak
Phoenix
Fish
Lake Placid
Lake Hayden
Beeson
Broon Buttes
Sheep Mtn
Mine
LA-15
MONTAGUE
890 000 FEET (ZONE 4)
SCALE 1 63360
ECOLOGY MAP
▲ = Bald Eagle Nest

ECOLOGICAL MAP

LA-15

▲ 5T
6U
7HH
711
9EE




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

LA-15/C

ADEC Segment Length: 4517m

0 100 200 300
METERS

Map Key: PWS-496c
Name: REIMER
Date: 4/1/90
Date Entered:

# SHORELINE EVALUATION

SEGMENT ST/ LA-15 SUBDIVISION D (4 OF 5) DATE 3/31/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**
Stream mouth catalog no. 226-40-16783 and 226-40-16782.

| | |
|---|---|
| 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 bald eagle nests (3/1 to 9/1) |
| 6U | Recreation: Tent sites (6/1 to 9/15) |
| 7HH | Finfish harvesting |
| 7II | Deer harvesting (8/15 to 2/28) |

**SUBDIVISION ECOLOGICAL CONSTRAINTS:**
Avoid any unnecessary disturbance or damage to unoiled biota or substrate.
See attached Ecological Constraint Sheet.

SHPO SIGNATURE: Charles E Holmes DATE: 4/17/90

**OILING CATEGORIZATION:**
Wide 56 m: Medium 0 m: Narrow 0 m: V.Light 255 m: No Oil 0 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 50 + cm

**RECOMMENDATIONS:**

| | |
|---|---|
| ____No Treatment Recommended | ____Snare/Absorbent Booms |
| _X_Treatment Recommended | ____Oil Snares (pom poms) |
| ____Manual Pickup | ____Absorbents (pads,rolls,etc) |
| _X_Bioremediation | ____Spot Washing:____Wands |
| _X_Tarmat: ____Breakup | ____ Beach Cleaner |
| _X_Removal | ____Other (see comments) |

A.

COMMENTS: Removal of tar mat as shown on sketch map. No bioremediation due to proximity of surface oil to anadromous stream (<100m). Work between 6/1 and 7/10 based on eagle nest and anadromous stream constraints.

TAG COMMENTS: ADD BIOREMEDIATION CLARIFICATION BY ADF&G PRIOR TO USE

TAG APPROVAL DATE: 4/16/90
ADEC A. Kraus
EXXON Andy Teas
NOAA Buck Upscott
USCG G.A. Reiter

FOSC: ____ DATE: 5-12-90

Bioremediation not approved pending resolution of CVC concerns about salmon streams is resolved.

# 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 (6/1 to 9/15) |
| 6Y | | Special use destination |
| 7Z | Subsistence area: | Salmon harvesting (5/1 to 9/30) |
| 7HH | | Finfish harvesting |
| 7II | | Deer harvesting (8/15 to 2/28) |
| 7JJ | | Invertebrate harvesting |
| | For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints. | |

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA 15 SUBDIVISION: D DATE 4-1-90

**USCG**
NAME B. W. Hubbard SIGNATURE

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

1. LIGHT surface wash down.

**ADEC**
NAME J. LYNN MARTIN SIGNATURE

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED
COMMENTS

MECHANICAL & MANUAL REMOVAL OF SUBSURFACE & SURFACE OIL.

MECHANICAL TECHNIQUES: TICING & HOT WATER WASH

**LAND MANAGER**
NAME Patrick Seanmore SIGNATURE
Chenega

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

I suggest it be worth half be looked over more carefully because it is among these particular type of beach we gather our seafoods - octpus, seaweed & gumboots etc.

# SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG REIMER USCG HUBBARD SEGMENT ST/ LA-5
BIO ZAMORA LAND REP SELANOFF( ) SUBDIVISION D (4 OF 5)
EXXON GARCIA ADEC MARTIN TIME 11 : 30 to 12 : 04
TEAM NO.: 16 TIDE LEVEL: +0.7 to +0.1 DATE 4 / 1 / 90
EST. SUBDIVISION LENGTH: 450 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
SURVEYED FROM: ☐ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
SURFACE SEDIMENTS: R 10 % B 50 % C 35 % P 5 % G - % S - % M - % V % %
SLOPE : Lang 60 % Hang 40 % Vert % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
OIL CATEGORY LENGTH: W 100 m M - m N - m VL 350 m NO - m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | rc | rb | rp | ra | BRN/BLK | DRK/MED | GY | BRN/TN | LGT | su | ui | mi | li |
| ASPHALT PAVEMENT | X | | | | | | | | X | | X | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | X | | | | | | | X | | X | | |
| COAT | | | X | | | X | | | | | X | | |
| STAIN | | X | ✓ | | | X/ | | | | | X/ | X/ | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | | | | | | | | | | |
| NO OIL | | | | | | | | | | T | | | X |

soil pits

PAVEMENT: H F (S) 30 sq. m by 4 cm
PATTIES / TARBALLS - BAGS
NEAR SHORE SHEEN? (NO) BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | X | | |
| Vegetation | | | |
| Trash | | | |
| Debris | | | |

DEBRIS COLLECTED ☐ YES ☐ NO
TYPE
#BAGS

Photographs:
Roll No. SS-16-2
Frames 11-23

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm-cm) | BELOW | | OIL / FILM COLOR | | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | | UO | UC | BRN/BLK | DRK/MED | GY | BRN/TN | LGT | | su | ui | mi | li | | |
| 1 | 45 | | X | | | | 15 - 45 | X | | | | | X | | | | | X | | | PC |
| 2 | 50 | X | | | | | 5 - 45 | | X | | | | X | | | | X | | | | CPB |
| 3 | 45 | | X | | | | 30 - 45 | | X | | | | X | | | | | X | | | PCG |
| 4 | 30 | | | | | X | • | | | | | | | | | | | | X | | C |
| 5 | 20 | | X | | | | 8 - 20 | X | | | | | X | | | X | | | | | CBP |
| 6 | 20 | X | | | | | 5 - 15 | | X | | | | X | | | | | X | | | PC |

COMMENTS

Irregular section of rock cliff, platform and pocket beaches. Because of poor access over much of this sub-segment much was surveyed by Helo. Beach surveyed on foot consisted of Boulders and Cobbles, a broken to patchy band of surface stain covered most of the upper and mid tidal zone. Sub surface oil conformed to the surface distribution, except for oil found in ~~UI~~ supertidal zone test pit 2 and 5

Page 1 of

REVIEWED DATE 4-4-90

Oil appears to continue from Pit 2 to 5 at depth.

# SHORELINE OILING SUMMARY (PAGE 2 of 2)

REVISION 03/22/90

SEGMENT ST/ LA-15 SUBDIVISION D

## SUBSURFACE OIL (CONTINUED)

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (CM-CM) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | | UO | UC | BLK/BR | DBR/RED | DY | DBR/TL | LBR | SU | UI | MI | LI | | |
| 7 | 50 | | X | | | | 5 - 50 | X | | | | | X | | | X | | | | CP |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |

COMMENTS

REVIEWED JW DATE 4-4-90

BASELINE ECOLOGICAL SUMMARY

Segment ST/ LA 15 Subdivision D Date (mo / day / yr) 4/1/90

Time ( 24 hr) 1125 ON 1204 OFF Biologist TONY ZAMORA

Substrate type and % of segments:
(1) Bedrock 10 (2) Boulder 50 (3) Cobble 35 (4) Pebble 5 (5) Sand ____ (6) Silt ____

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

Photographs:
Roll No. SS-16-2
Frames 11-23

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| X | X | 2 | 2 | X | 2 | X | 2 | 2 | 2 | 2 | 2 |
| 2 | 2 | 3 | 3 | X | 3 | X | 3 | 3 | 3 | 3 | 3 |
| 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 6 | 6 | | | | | | | | | | |

NOT PRESENT

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1M | 1L | | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | | X | X | 2 | 3 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | | 2 | X | 3 | 4 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | | 3 | 3 | 4 | 5 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | | 4 | 4 | 5 | 6 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | | 5 | 5 | 6 | | 6 | 6 | 6 | 6 | 6 |
| | | | 6 | 6 | | | | | | | |

NOT PRESENT

**TROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1M | 1L | | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| X | 2 | | X | X | X | 2 | 2 | 2 | 2 | 2 | 2 |
| 2 | 3 | | 2 | X | X | 3 | X | 3 | 3 | 3 | 3 |
| 3 | 4 | | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 |
| 4 | 5 | | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 |
| 5 | 6 | | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 |
| 6 | | | 6 | 6 | 6 | | | | | | |

NOT PRESENT

**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | X | X | 2 | 2 | 2 | 2 | 2 | X | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | X | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

Wildlife Observations/ General Comments:
-SITE ENCOMPASSES SMALL COBBLE BEACH AND LONG STRETCH OF ROCK/BOULDER TIDAL HAS DENSE POPULATIONS OF ALGAE & BARNACLES & MUSSELS.
-SEEN: 1 OTTER, ~5 SMALL DOLPHINS (DAHL'S?), 2 EAGLES - 1 ADULT & 1 JUV,
-NEREOCYSTIS KELP BEDS OFF OF ROCKY SECTIONS
-THICK FILAMENTOUS GREEN ALGAE ON COBBLE BEACH IN [redacted] MID ZONE.

ECOLOGICAL CONSIDERATIONS:
THH TTE 211

OG Rein

SEGMENT ST/ LA-15

SUBDIVISION D

DATE 4 / 1 / 90

**CHECKLIST**

- [x] N Arrow
- [x] Approx. Scale
- [x] Seg/Sub Bndry
- [x] Oil Dist.
- [ ] Width
- [ ] Length
- [ ] % Cover
- [ ] Substrate Character
- [ ] Est HWL/LWL
- [ ] SSL
- [ ] Profile Location(s)
- [ ] Profile(s)
- [ ] Pit Location(s)
- [x] Photo Location(s) (SEPARATE)

**LEGEND**

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

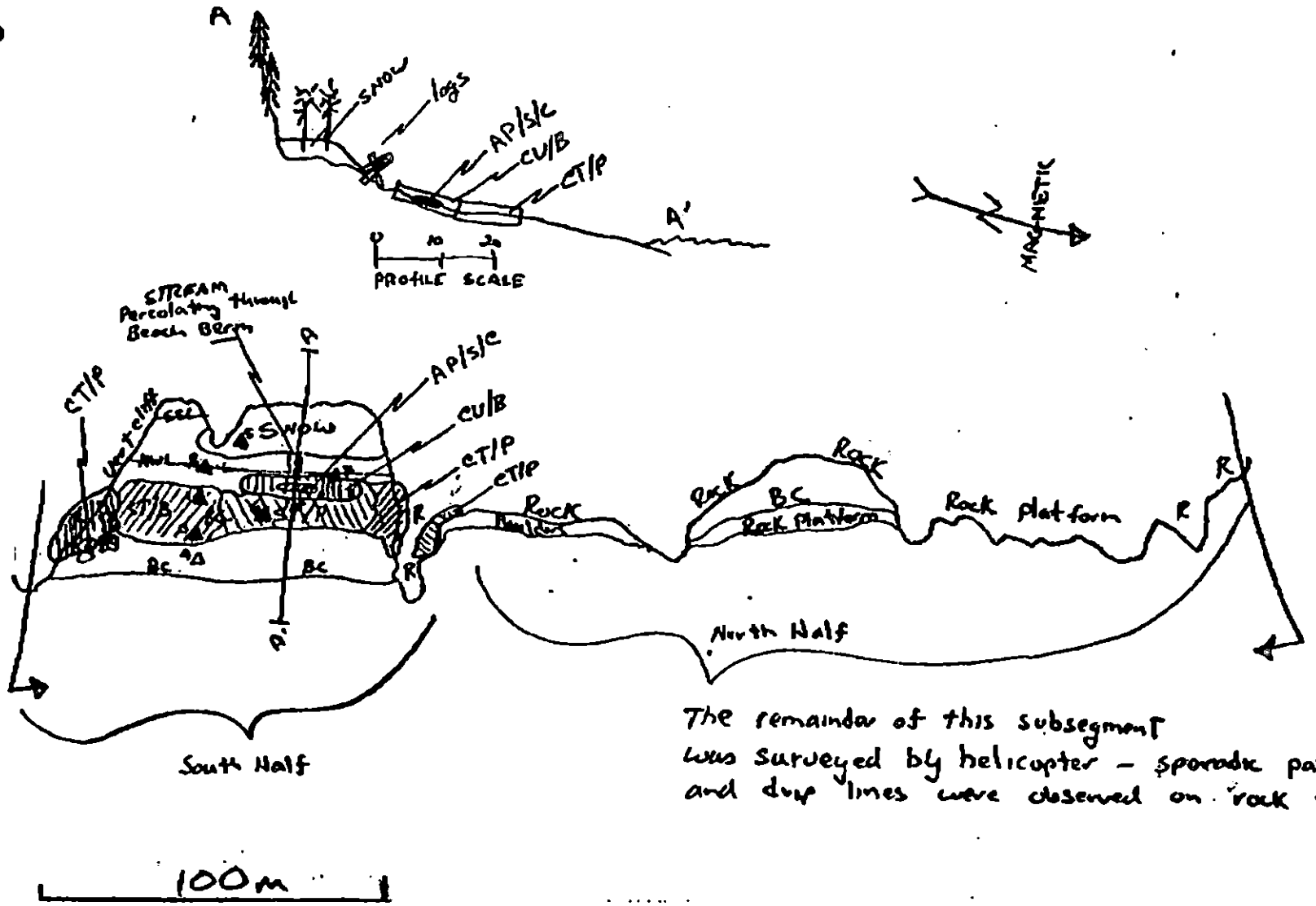
CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 ●→ Photo location, direction, and number

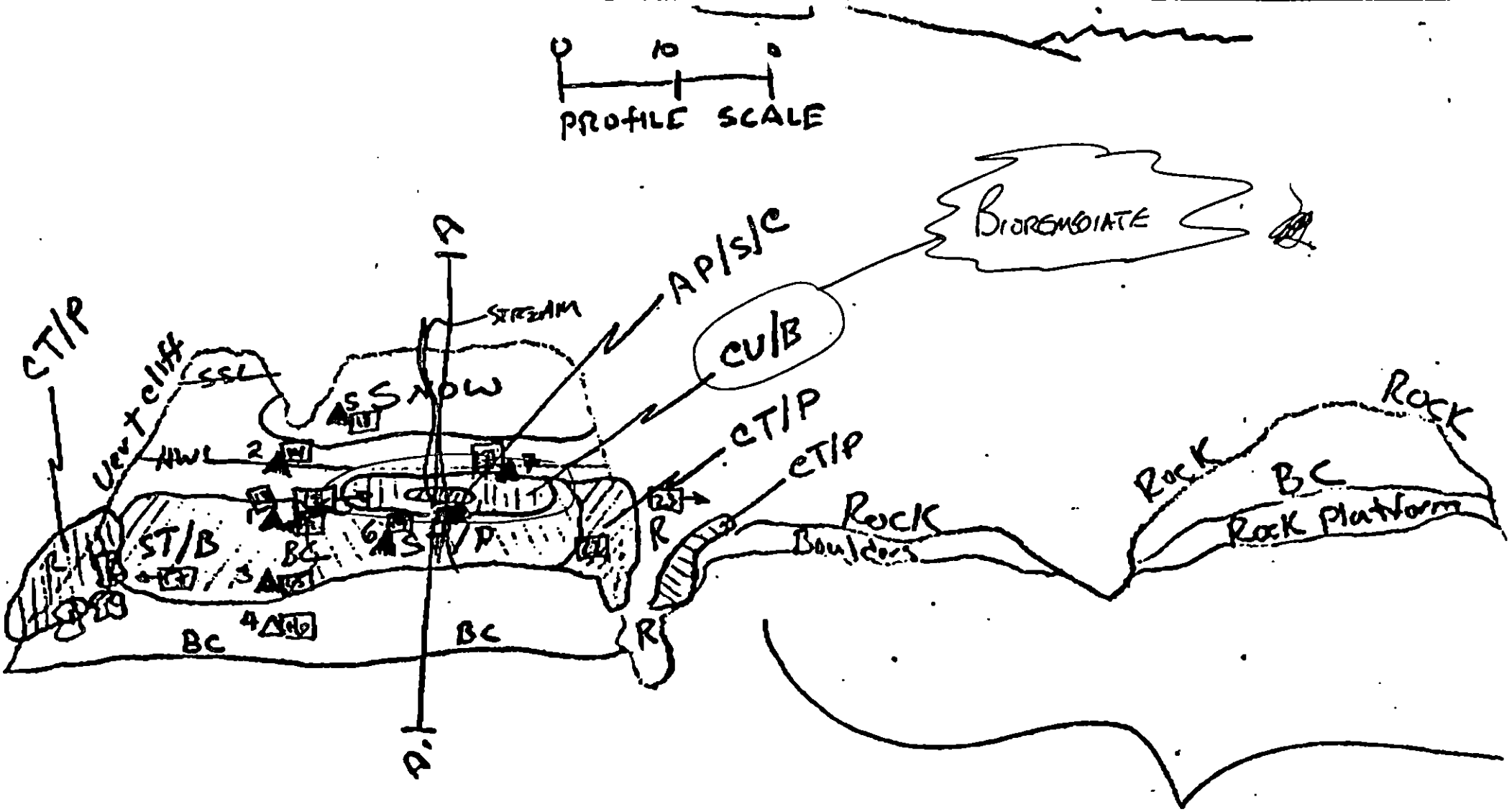
# SEGMENT MAP




The remainder of this subsegment was surveyed by helicopter - sporadic patches and drop lines were observed on rock cliffs

Oil Character Length (m): AP 8 PO — CV 40 CT 25 ST 80 MS — PT — TB — FL — NO —

REVISION 08/24/88



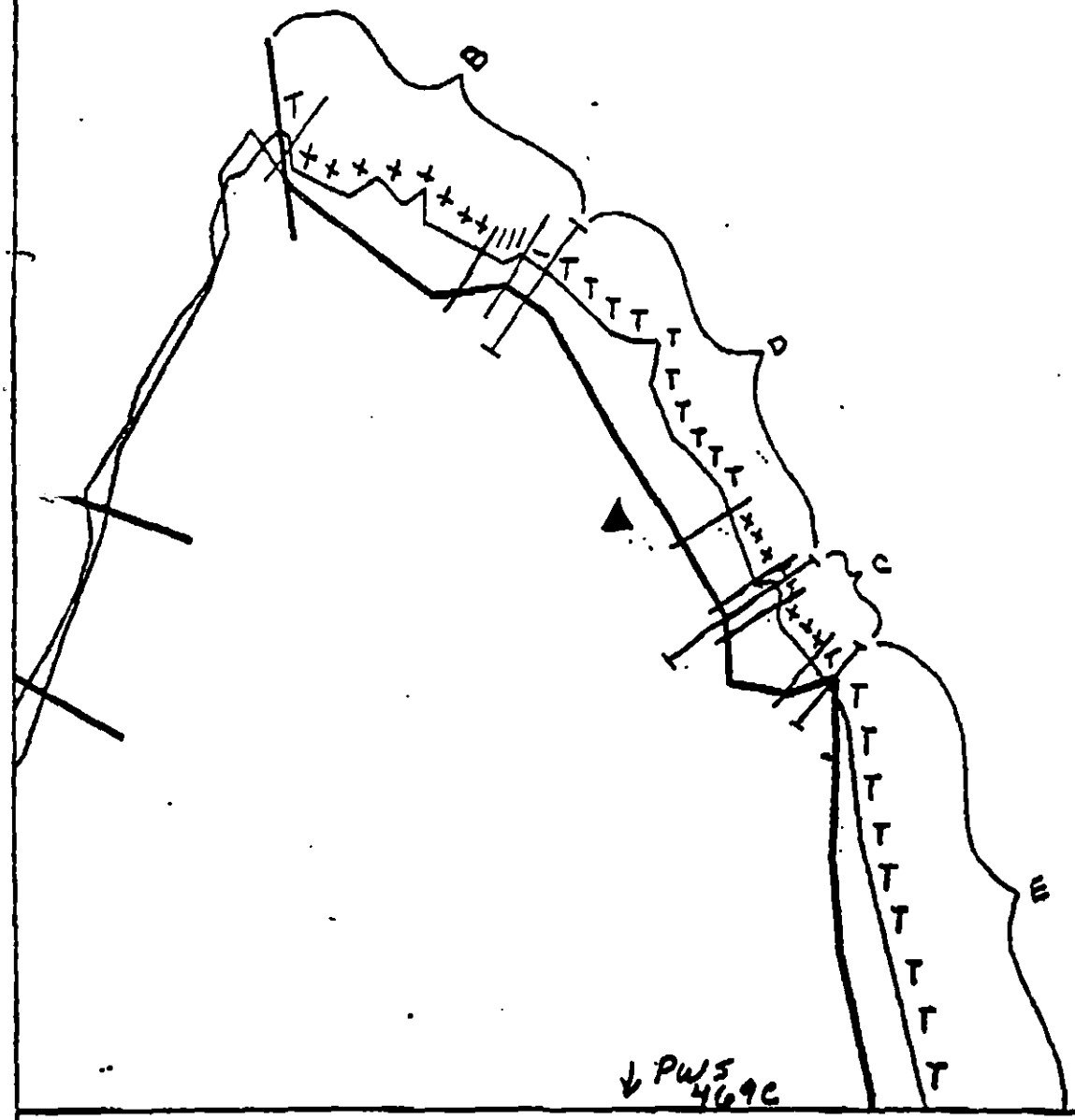

The remainder was surveyed and drop line

PHOTOGRAPHS RECORDED ON COBBLE BEACH

▲ 5T
6U
7HH
7II
9EE

# ECOLOGICAL MAP

## LA-15D



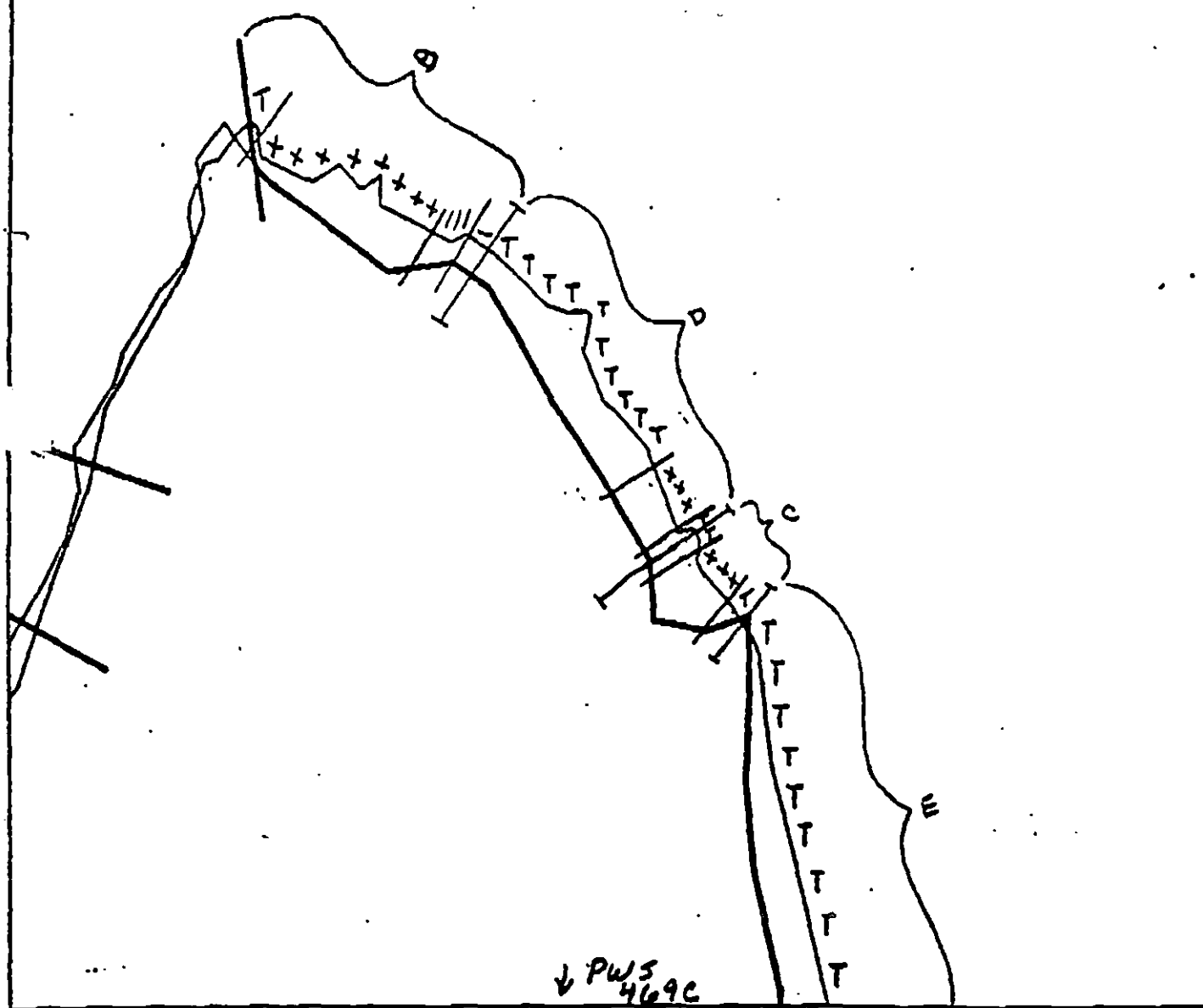

XXXX Wide
//// Medium
--- Narrow
TTTT Very Light
0000 No Oil

## LA-15/C

ADEC Segment Length: 4517m

0 100 200 300
METERS

Map Key: PWS-496c
Name: REIMER
Date: 4/1/90
Date Entered:




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

# LA-15

ADEC Segment Length: 4517m

0 100 200 300
METERS

Map Key: PWS-496a
Name: REIMER
Date: 4/1/90
Date Entered:

# ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT LA-15 SUBDIVISION D ( 4 of 5 )

| WORK WINDOW | |
|---|---|
| Tarmat Removal | **OPEN** |
| Bioremediation | **WORK PRIOR TO 7/1** |

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

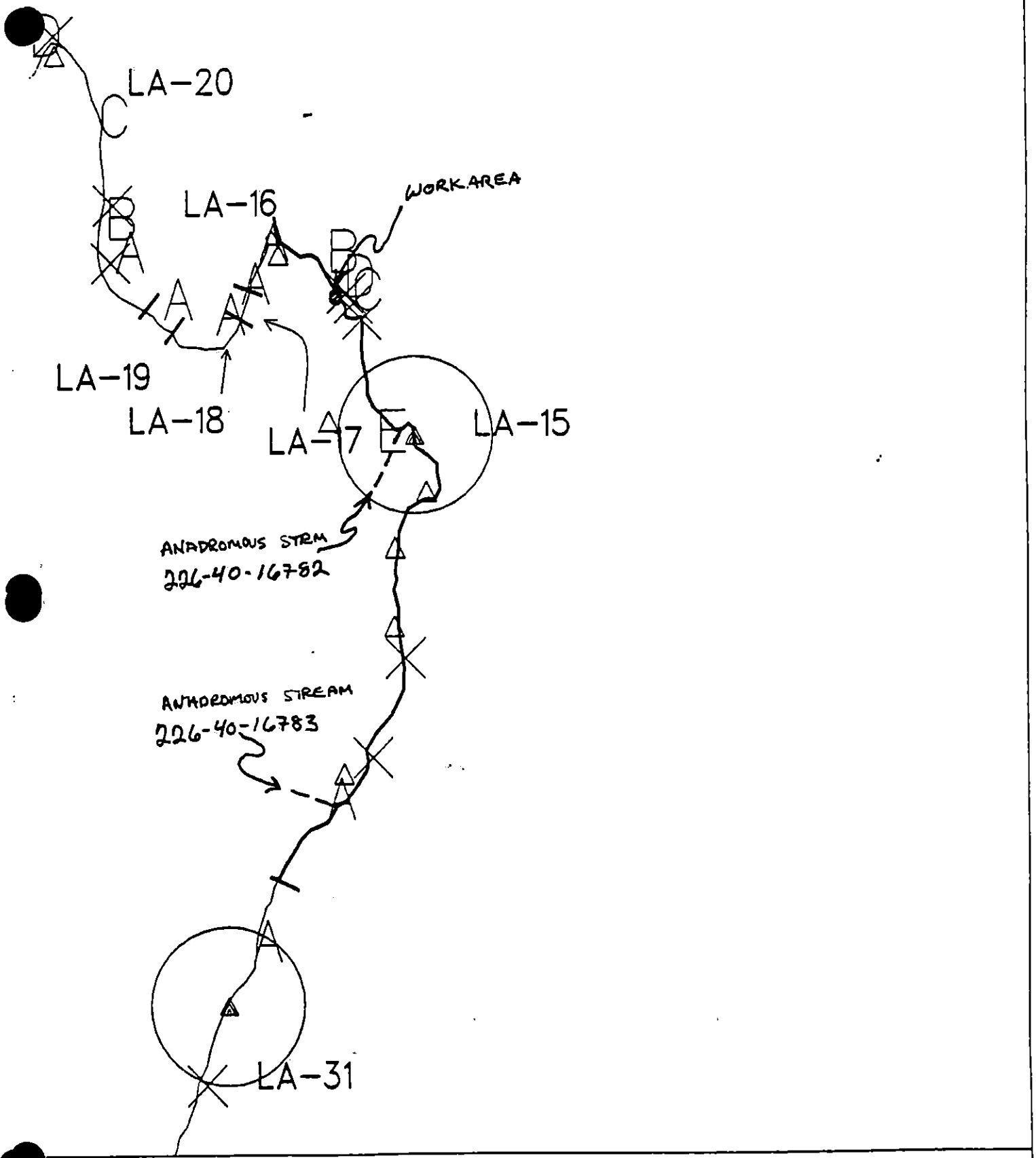
APPLICABLE ECOLOGICAL TIME CONSTRAINTS

| | | |
|---|---|---|
| **1A,1B** | **Salmon Stream** | ADF&G catalogued streams (226-40-16783 and 226-40-16782) are more than 100m from the work site. No constraint to tarmat removal and bioremediation. |
| **5T** | **Bald Eagle Nest** | NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision D work site. |
| **7HH** | **Subsistence: Finfish Harvesting** | Closed to bioremediation after 7/1. No constraint to tarmat removal. |
| **7II** | **Subsistence: Deer Harvesting** | Closed to bioremediation after 8/15. No constraint to tarmat removal. |

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC G. A. Ritter for Date 6/10/90




EXXON

xxon Company, USA

Map Key: PWS-LA-15

# ECOLOGY MAP

## SEGMENT LA-15

SUBDIVISION D (4 of 5)

METERS

★ Seabird Colony

△ Active Eagle Nest

△ Inactive Eagle Nest

# SHORELINE EVALUATION

SEGMENT ST/ LA-15 SUBDIVISION E (5 OF 5) DATE 3/31/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**
Stream mouth catalog no. 226-40-16783 and 226-40-16782.

| | |
|---|---|
| 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 bald eagle nests (3/1 to 9/1) |
| 6U | Recreation: Tent sites (6/1 to 9/15) |
| 7HH | Finfish harvesting |
| 7II | Deer harvesting (8/15 to 2/28) |

**SUBDIVISION ECOLOGICAL CONSTRAINTS:**
Avoid any unnecessary disturbance or damage to unoiled biota or substrate.
See attached Ecological Constraint Sheet.

SHPO SIGNATURE: Sheldon E. Adams DATE: 4/12/90

**OILING CATEGORIZATION:**
Wide 48 m: Medium 0 m: Narrow 0 m: V.Light 1894 m: No Oil 148 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 50 + cm

**RECOMMENDATIONS:**

| | |
|---|---|
| ____No Treatment Recommended | ____Snare/Absorbent Booms |
| _X_Treatment Recommended | ____Oil Snares (pom poms) |
| ____Manual Pickup | ____Absorbents (pads,rolls,etc) |
| _X_Bioremediation | ____Spot Washing:____Wands |
| ____Tarmat: ____Breakup | ____ Beach Cleaner |
| ____Removal | ____Other (see comments) |

COMMENTS: Recommend bioremediation of area of subsurface oil found at landing site shown on attached sketch map. Work between 6/1 and 7/10 based on eagle/anadromous stream constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/16/90.
ADEC Al Kreuzer
EXXON Andy Teas FOSC: ____ DATE: 5-9-90
NOAA Bob Wright Bud Lyons
USCG G.A. Reiter G.A. Reiter CVC Rep to be present

# 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 (5/1 to 9/15)** |
| 6V | | **Anchorages (5/1 to 9/15)** |
| 6W | | **Forest Service cabins (5/1 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 | | **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 /_____ SUBDIVISION:_____ DATE 1-APR-96

**USCG**
NAME R.H. Hubbard SIGNATURE R.H. Hubbard

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS
1. MINOR TILING TO TURN SOIL TO ALLOW NATURE TO PROCESS NATURALLY.
2. USE POSITIVE WATER SOLUTION TO CLEAN BOULDER OIL ~~[illegible]~~ edge of sheen

**ADEC**
NAME J. LYNN MARTIN SIGNATURE J. Lynn Martin

☑ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED
COMMENTS
NO TREATMENT SUGGESTED FOR SURFACE OIL, DUE TO THE FACT THAT IT'S ONLY LITTLE STAINS.

SUBSURFACE OIL COULD BE MECHANICALLY CLEANED UP USING TILING TECHNIQUE FOR AGITATION. PURPOSES

**LAND MANAGER**
NAME Patrick SEAWARD Chenega SIGNATURE Patrick Seaward

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS
~~Ref~~ Ref. to ADEC comment.

# SHORELINE OILING SUMMARY

REVISION NO. 05/22/90

OG Reimer USCG Hubbard SEGMENT ST/ LA 15
BIO ZAMORA LAND REP Selanoff (CHENEGA) SUBDIVISION E (5 OF 5)
EXXON GARCIA ADEC MARTIN TIME 12 :30 to 14 :00
TEAM NO.: 16 TIDE LEVEL: 0.0 to +1.5 DATE 4 / 1 / 90
ST. SUBDIVISION LENGTH: 2601 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☐ Boat ☒ Helo WORKING DIRECTION: N to S
SURFACE SEDIMENTS: R 80 % B 15 % C 3 % P 2 % G — % S — % M — % V — %
SLOPE : Lang 10 % Hang 50 % Vert 40 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
OIL CATEGORY LENGTH: W 50 m M — m N — m VL 2551 m NO — m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AC | AB | IP | IB | BRN/BLK | DBRN/RST | ORG | DBRN/TN | LBRN | SU | UI | MI | LI |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | | | | | | | | | | | | |
| COAT | | | X | \ | | | | | X | | X | | |
| STAIN | | | | X | | X | | | | | X | | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | | | | | | | | | | |
| NO OIL | | | | | | | | | | X | | | X |

PAVEMENT: H F S — sq. m by — cm

PATTIES / TARBALLS — BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | | | |
| Debris | | | |

DEBRIS COLLECTED ☐ YES ☐ NO

TYPE

#BAGS

Photographs:

Roll No. 55-16-2

Frames 24-29

## SUBSURFACE OIL

| PIT NO. | PIT-DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (CM-CM) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | | UO | UC | BRN/BLK | DBRN/RST | ORG | DBRN/TN | LBRN | SU | UI | MI | LI | | |
| 1 | 30 | | X | | | | 20-25 | | X | | | | X | | | | X | | | PC |
| 2 | 50 | | X | | | | 30-50 | X | | | | | X | | | X | | | | PC |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |

COMMENTS Long rocky coastline with exposed Rock cliff and platform, the platform sections are often mantled with boulders and larger blocks. This subsegment was surveyed mostly by air with the exception of two sites located on the map. a sub surface layer of oil was found on a small pebble beach (wide). the remainder of the segment has patchy areas of dark coat or stain, drop lines and splashes (very light)

Page 1 of 1 REVIEWED JW DATE 4-4-90

# SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / LA 15 Subdivision E Date (mo / day / yr) 4 / 1 / 90

Time ( 24 hr ) _____ Biologist TONY ZANOBA

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

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

Photographs:
Roll No. _____
Frames 24- _____

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| X | X | 2 | X | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | X | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | X | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | M | 1L | 1U | M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| X | 2 | 2 | X | X | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| X | 2 | 2 | X | X | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | X | X | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | X | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | M | L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| X | 2 | 2 | 2 | X | X | 2 | 2 | X | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | X | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**Wildlife Observations/ General Comments:**

- LONG SITE ENCOMPASSING ~90% BEDROCK/BOULDER W/ DENSE BIOTA AND 10% COBBLE BEACH.
- ROCK.. AREA HAD DENSE & DIVERSE ALGAE
- COBBLE BEACHES WERE TYPICAL AND UPPER ZONES WERE DEVOID OF LIFE.
- ONE POINT HELO LANDED ON WAS DENSE WITH MUSSELS IN SHELLHASH, TIDE POOLS (HEALTHY), AND DENSE BIOTA GENERALLY.
- KELP BEDS OFFSHORE OF ROCKY ZONES
- WILDLIFE SEEN: SEALIONS, GREBES,

- ECOLOGICAL CONSIDERATIONS: ZHH.ZJJ. ZLT. 1 AB

OG RE11

SEGMENT ST/ LA-15

SUBDIVISION E

DATE 4 / 1 / 90

**CHECKLIST**

- N Arrow
- Approx. Scale
- Seg/Sub Bndry
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. HWL/LWL
- X SSI
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

**LEGEND**

1 △ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

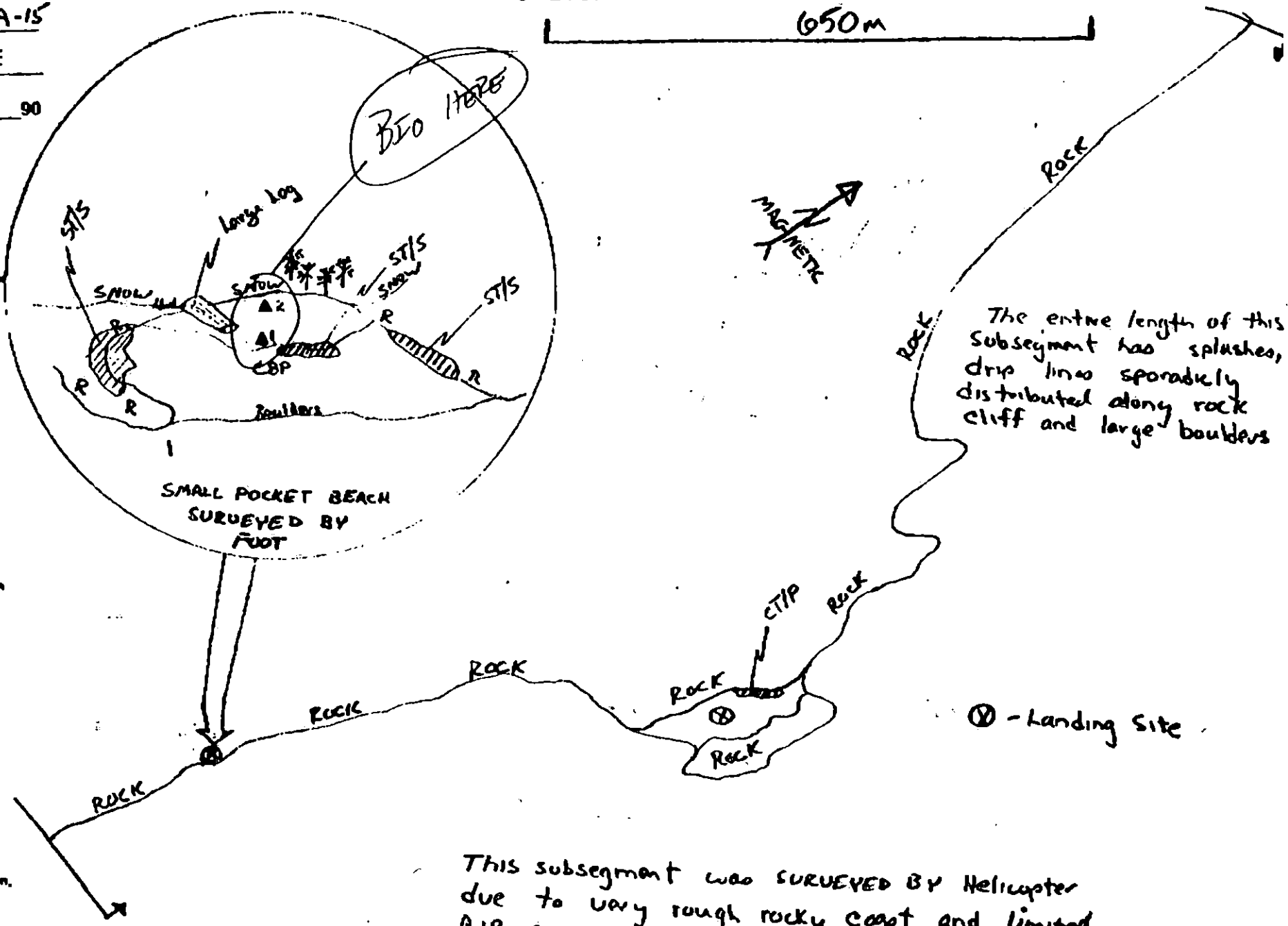
CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

Photo location, direction, and number

## SKETCH MAP



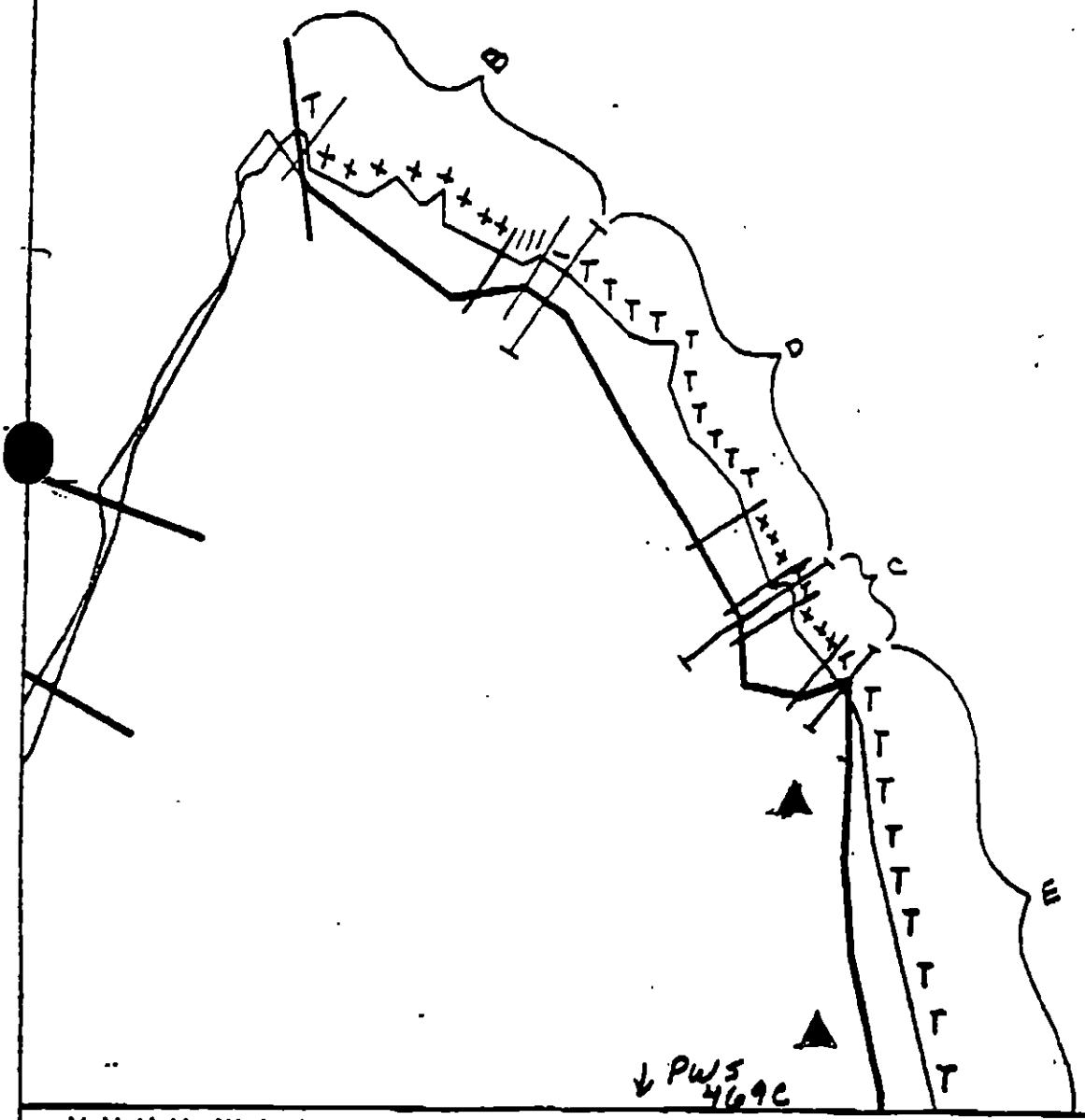

Oil Character Length (m): AP — PO — CV — CT — ST 1000 MS — PT — TB — FL — NO 160 ft

REVISION 01/24/90

▲ ST-3
6-U
7-HH
9-EE
7-II

# ECOLOGICAL MAP

## LA-15E



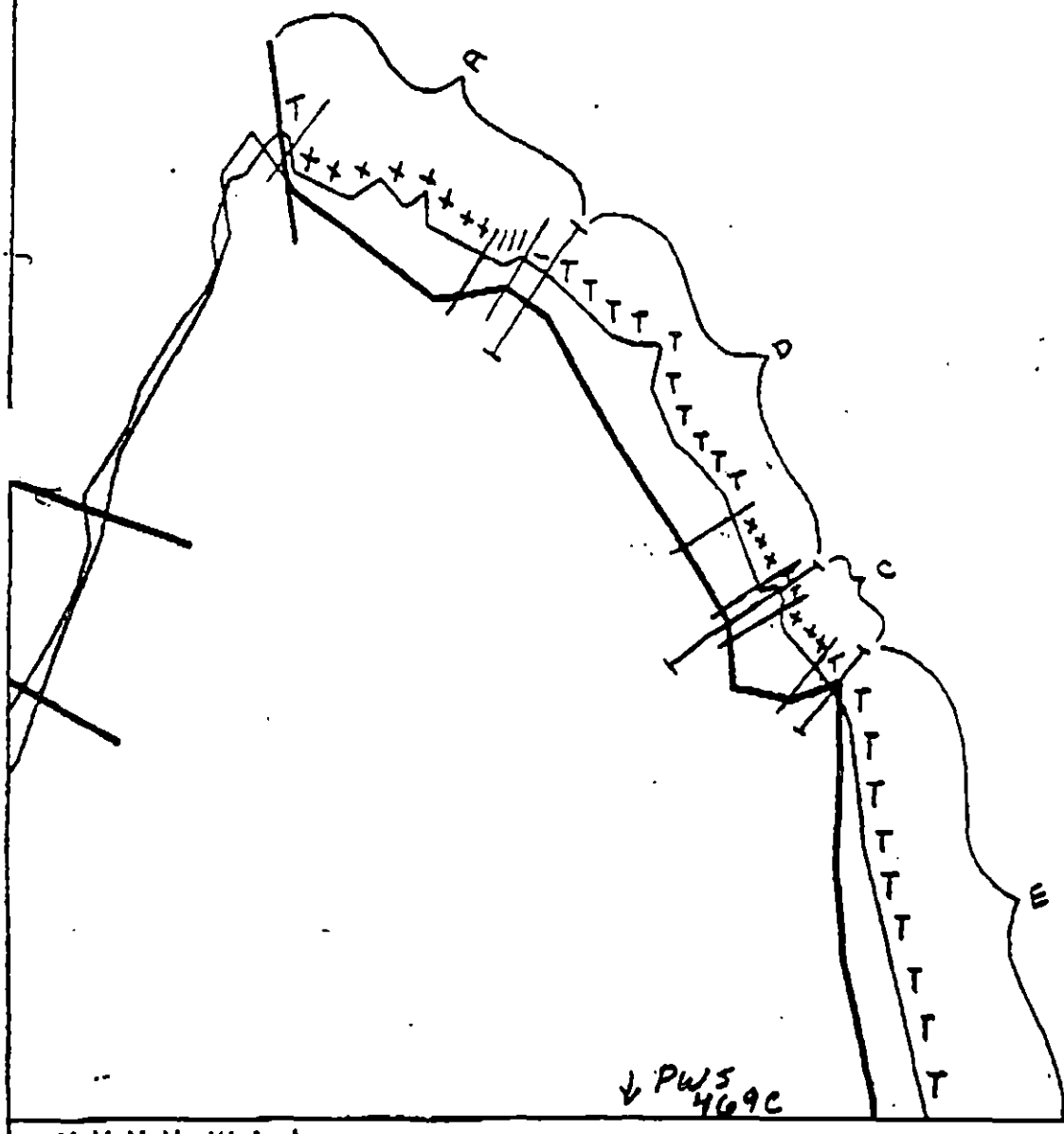

XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
0000 No Oil

## LA-15/C

ADEC Segment Length: 4517m

0 100 200 300
METERS

Map Key: PWS-496c
Name: REIMER
Date: 4/1/90
Date Entered:




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

# LA-15

ADEC Segment Length: 4517m

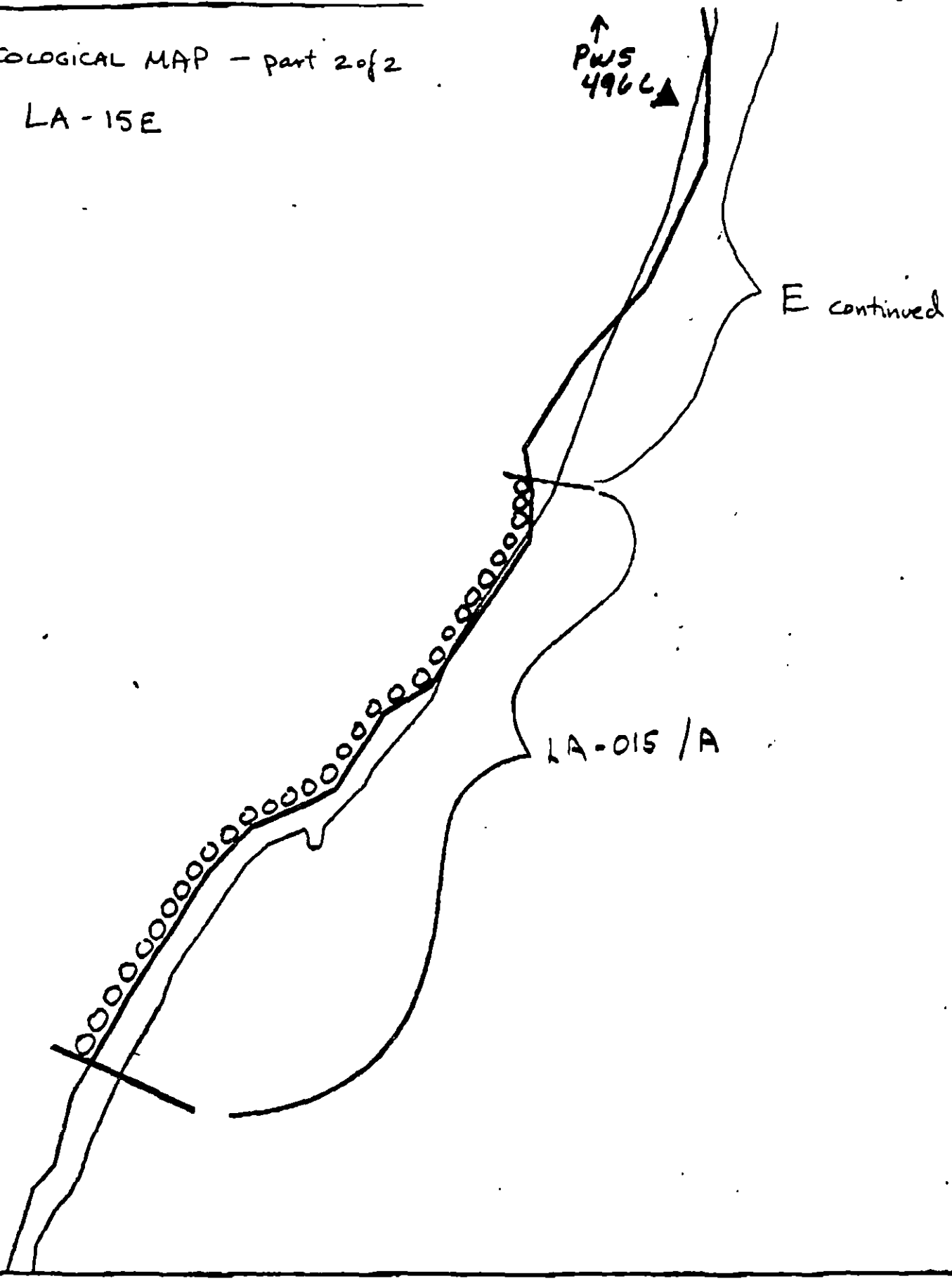
0 100 200 300
METERS

Map Key: PWS-496c
Name: REIMER
Date: 4/1/90
Date Entered:

4

# ECOLOGICAL MAP – part 2 of 2

LA-15E



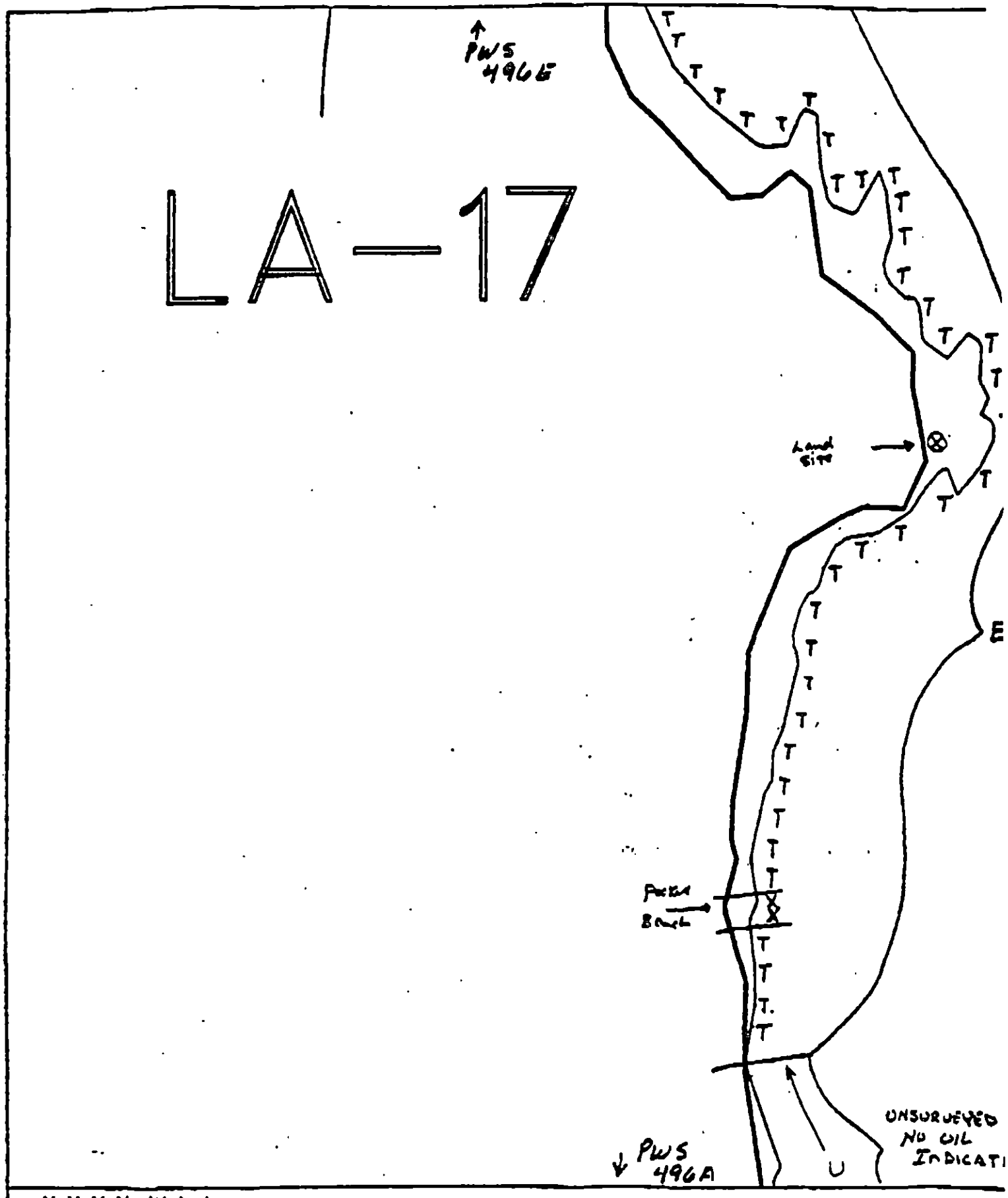

XXXX Wide
//// Medium
---- Narrow
TTTT Very Light

LA-15

ADEC Segment Length: 4517m

0 100 200 300

Map Key: PWS-496a
Name: Reimer
Date: 3/31/90




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

LA-15

ADEC Segment Length: 4517m

0 100 200 300 meters

Map Key: PWS-496c
Name: Reimer
Date: 4/1/90
Date Entered:

APR-02-1990 22:08 FROM COURDOUX TO SCAT TEAM P.08

# ADDENDUM: SUBDIVISION CONSTRAINTS

## SEGMENT LA-15 SUBDIVISION E ( 5 of 5 )

**WORK WINDOW**

Bioremediation — **WORK PRIOR TO 7/1**

EXXON 'A' STUDY SITES AP-1182 - DO NOT REMOVE STAKES FROM BACK OF INTERTIDAL ZONE

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

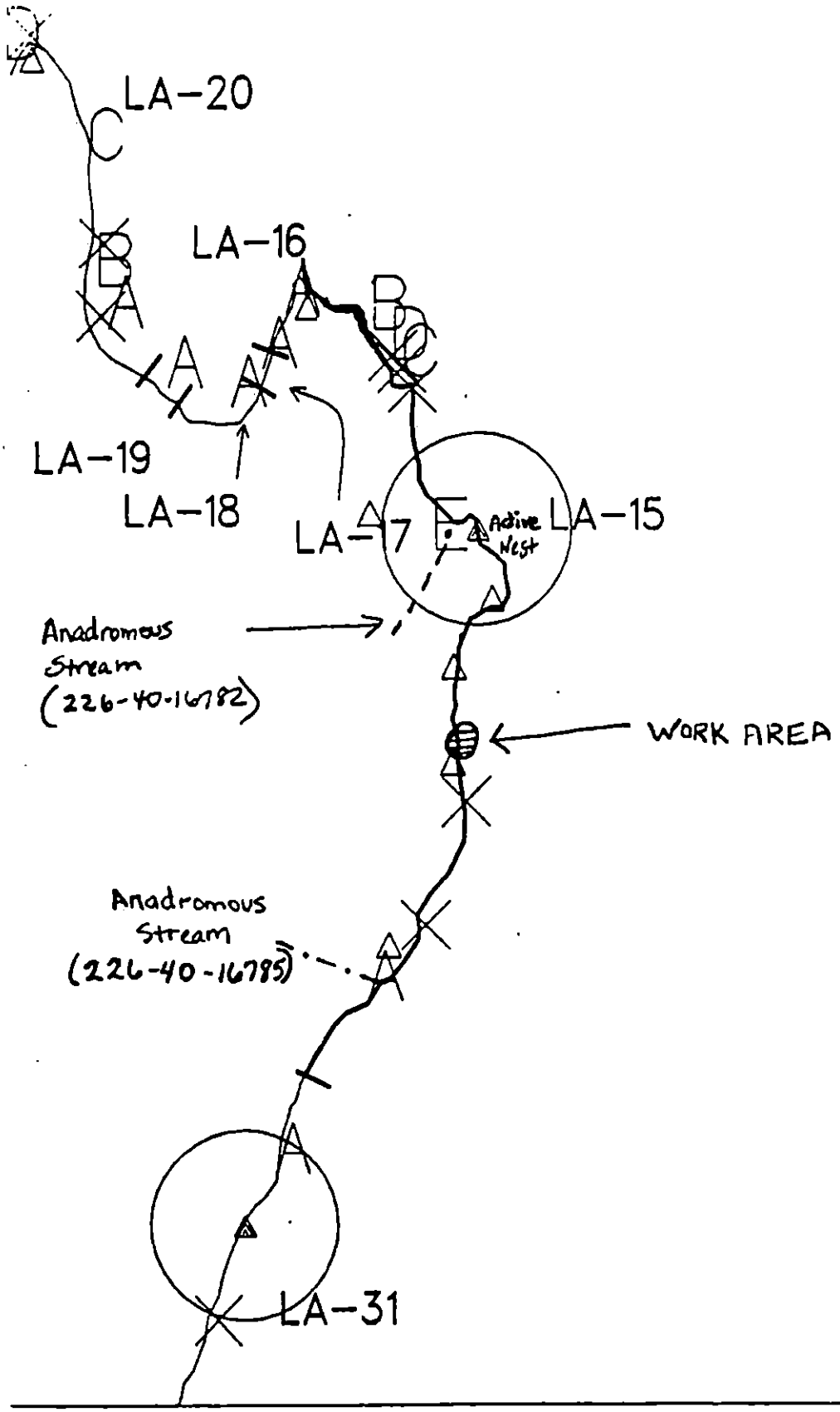
| | | |
|---|---|---|
| **1K** | **Purse Seine Hook-off** | Closed to bioremediation after 7/20. |
| **1A,1B** | **Salmon Stream** | NO CONSTRAINT. ADF&G catalogued stream 226-40-16782 is more than 100m from the work area. |
| **5T** | **Bald Eagle Nest** | NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision E work site. |
| **7HH** | **Subsistence: Finfish Harvesting** | Closed to bioremediation after 7/1. |
| **7II** | **Subsistence: Deer Harvesting** | Closed to bioremediation after 8/15. |

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC [signature] Date 6/7/90

Prepared by [signature] Date 6/12/90




EXXON

Exxon Company, USA
Map Key: PWS-LA-15
June 04, 1990

# ECOLOGY MAP

## SEGMENT LA-15

SUBDIVISION E (5 of 5)

METERS

- ★ Seabird Colony
- ▲ Active Eagle Nest
- △ Inactive Eagle Nest

/

# ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-20-16782 — THIS STREAM IN SUBDIVISION (E) NOT (C.) MAP IS CORRECT RPP 6/23/90

SEGMENT LA-15 SUBDIVISION ~~X~~ E

## WORK WINDOW

| | |
|---|---|
| Manual Pickup<br>Tarmat Removal | **CLOSED** |
| Bioremediation<br>Spot Washing<br>Manual Tilling<br>Other Approved Treatment | **CLOSED** |

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

**1A,1B Salmon Stream** — ADF&G catalogued anadromous stream (226-40-16782) is in Subdivision ~~X~~ E. This subdivision is closed to bioremediation, spot washing, manual tilling, and other approved treatment less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation, spot washing, manual tilling, and other approved treatment are permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation, spot washing, manual tilling, and other approved treatment more than 100m from stream. No constraint to manual pickup and tarmat removal.

**5T Bald Eagle Nest** — USFWS 6/1/90 map indicates an active nest in Subdivision ~~X~~ E. Closed to manual pickup, tarmat removal, bioremediation, spot washing, manual tilling, and other approved treatment within 400m of active nest. No constraint to manual pickup, tarmat removal, bioremediation, spot washing, manual tilling and other approved treatment more than 400m from active nest.

**7HH Subsistence: Finfish Harvesting** — Closed to bioremediation, spot washing, manual tilling, and other approved treatment after 7/1. No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

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

**SEE SUBDIVISION CONSTRAINT ADDENDUM LA-15E FOR ADDITIONAL CONSTRAINT INFORMATION.**

FOSC [signature] Date 6/13/90

Prepared by [signature] Date 6/12/90

# ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-20-16782

SEGMENT LA-15 SUBDIVISION ~~C~~ E

| WORK WINDOW | |
|---|---|
| Manual Pickup<br>Tarmat Removal | **CLOSED** |
| Bioremediation<br>Spot Washing<br>Manual Tilling<br>Other Approved Treatment | **CLOSED** |

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

| | | |
|---|---|---|
| **1A,1B** | **Salmon Stream** | ADF&G catalogued anadromous stream (226-40-16782) is in Subdivision C. This subdivision is closed to bioremediation, spot washing, manual tilling, and other approved treatment less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation, spot washing, manual tilling, and other approved treatment are permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation, spot washing, manual tilling, and other approved treatment more than 100m from stream. No constraint to manual pickup and tarmat removal. |
| **5T** | **Bald Eagle Nest** | USFWS 6/1/90 map indicates an active nest in Subdivision C. Closed to manual pickup, tarmat removal, bioremediation, spot washing, manual tilling, and other approved treatment within 400m of active nest. No constraint to manual pickup, tarmat removal, bioremediation, spot washing, manual tilling and other approved treatment more than 400m from active nest. |
| **7HH** | **Subsistence: Finfish Harvesting** | Closed to bioremediation, spot washing, manual tilling, and other approved treatment after 7/1. No constraint to manual pickup and tarmat removal. |

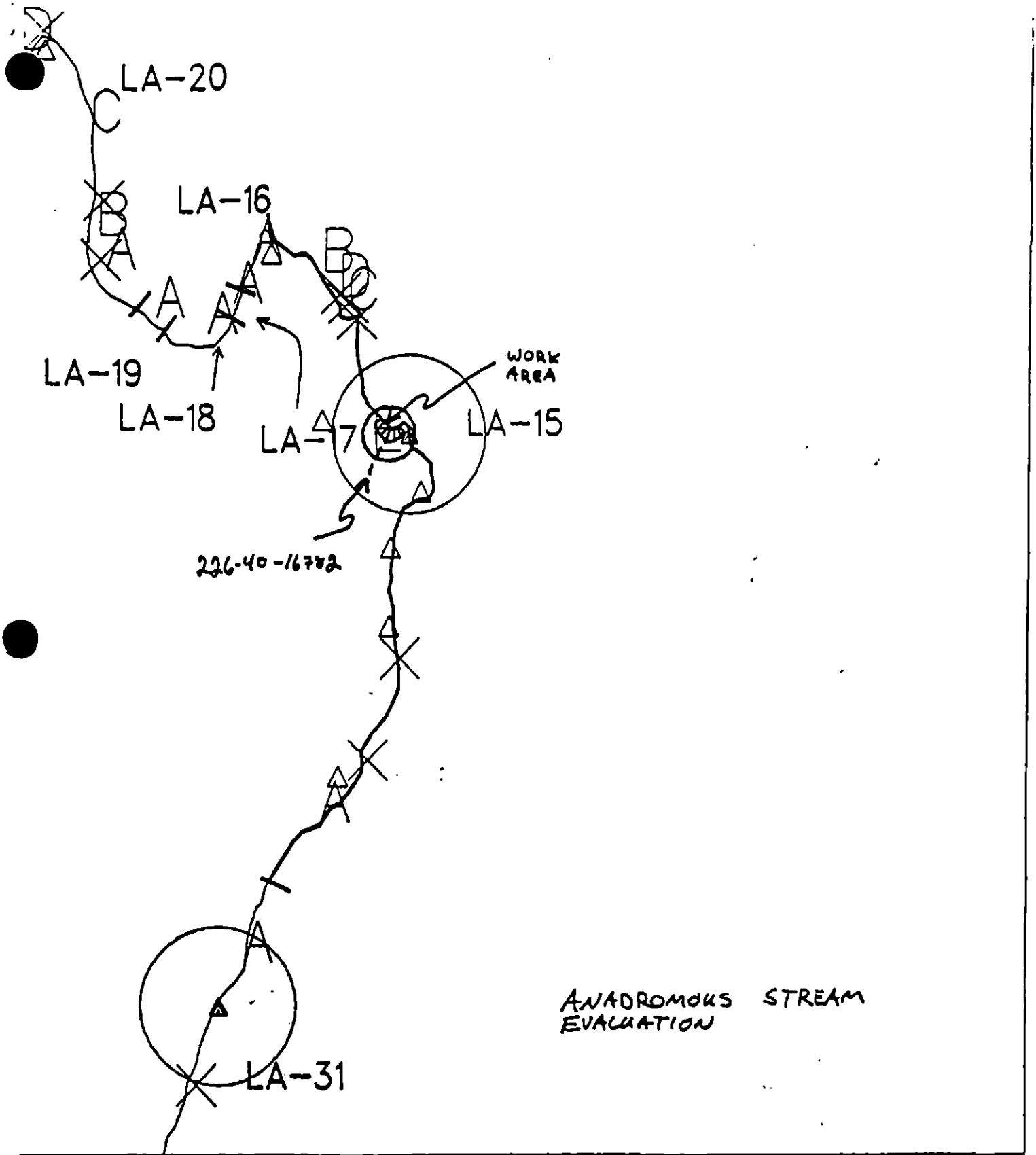
OTHER ECOLOGICAL CONSIDERATIONS

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

**SEE SUBDIVISION CONSTRAINT ADDENDUM LA-15C FOR ADDITIONAL CONSTRAINT INFORMATION.**

FOSC D Zamzow Date 6/13/90

Prepared by J.P. Phillips Date 6/12/90




EXXON

Exxon Company, USA
Map Key: PNS-LA-15
June 04, 1990

# ECOLOGY MAP
## SEGMENT LA-15
SUBDIVISION E (3 of 5)

METERS

★ Seabird Colony
△ Active Eagle Nest
△ Inactive Eagle Nest

# SHORELINE EVALUATION

SEGMENT ST/ LA-16 SUBDIVISION A (1 OF 1) DATE 4/10/90

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

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

SHPO SIGNATURE: [signature] DATE: 4/28/90

**OILING CATEGORIZATION:**

Wide 207 m: Medium 31 m: Narrow 147 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 | X Oil Snares (pom poms) |
| ___ Manual Pickup | ___ Absorbents (pads,rolls,etc) |
| X Bioremediation | X Spot Washing: X Wands |
| ___ Tarmat: ___ Removal | ___ Beach Cleaner |
| | ___ Other (see comments) |

COMMENTS: Recommended treatment includes spot washing with snare booms to contain sheen and oil followed by bioremediation. Work should be conducted after 6/1 and with USFWS approval based on eagle constraints.

TAG COMMENTS: ___

TAG APPROVAL DATE: 4/26/90
ADEC JOHN BAUER [signature]
EXXON AMY TEAR [signature]
NOAA Gary Petrae [signature]
USCG KENNETH KRANE [signature]

FOSC: [signature] DATE: 5-12-90
CVC Kept to be on scene during cleanup

# PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

| | | |
|---|---|---|
| 1A | Salmon stream mouth - fry outmigration (3/1 to 5/15) | |
| 1B | Salmon stream mouth - spawning (7/10 to 8/31) | |
| | No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits. | |
| 1C | Salmon fry nursery area (4/31 to 7/31) | |
| 1D | Esther Hatchery release (4/15 to 6/1) | |
| 1E | Main Bay Hatchery release (4/20 to 5/10) | |
| 1F | Sawmill Bay Hatchery release (4/15 to 6/1) | |
| 1G | Cannery Creek Hatchery release (4/21 to 6/1) | |
| 1H | Remote release site | |
| 1I | Gill net area (6/7 to 8/31) | |
| 1J | Purse seine area (7/20 to 9/30) | |
| 1K | Purse seine hook-off (7/20 to 9/30) | |
| 1L | Set net sites (6/11 to 7/25) | |
| | For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints. | |
| 2M | Herring spawning (4/1 to 6/15) | |
| | Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations. | |
| 3N, 3P | Harbor seal and sea lion pupping (5/15 to 7/1) | |
| 3O, 3Q | Harbor seal and sea lion molting (8/15 to 9/15) | |
| | Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. | |
| 5R | Seabird colony (5/1 to 9/1) | |
| | Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment. | |
| 5S | Shorebird/waterfowl concentration (4/1 to 5/15) | |
| | Restrict all activity to essential minimum, especially air traffic. | |
| 5T | All Bald Eagle nests (3/1 to 6/1) | |
| | Active Bald Eagle nests (3/1 to 9/1) | |
| | Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates. | |
| 6U | Recreation: | Tent sites (6/1 to 9/15) |
| 6V | | Anchorages (6/1 to 9/15) |
| 6W | | Forest Service cabins (6/1 to 9/15) |
| 6X | | Lodge (6/1 to 9/15) |
| 6Y | | Special use destination |
| 7Z | Subsistance area: | Salmon harvesting (5/1 to 9/30) |
| 7HH | | Finfish harvesting |
| 7II | | Deer harvesting (8/15 to 2/28) |
| 7JJ | | Invertebrate harvesting |
| | For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints. | |

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA-16 SUBDIVISION: — DATE 4/10/90

**USCG**
NAME R. HUBBARD SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

1, Hot/cold water flush to remove oil coat.

**ADEC**
NAME J. LYNN MARTIN SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

AGREE WITH EXXON OPS. RECOMMENDATION FOR A HOT WASH OF AREA FOLLOWED BY BIOREMEDIATION. WOULD ~~SUGGEST~~ SUGGEST USE OF OMNI BARGE IN AREA DUE TO THE SHARP, JAGGED, VERTICAL SHINGLE ROCK SURFACE.

**LAND MANAGER**
NAME Patrick SELANDER SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Wash Down & Bioremediate.

# SHORELINE OILING SUMMARY

REVISION NO. 0 1

OG Reimer USCG Hubbard SEGMENT ST/ LA-16
BIO Zamora LAND REP Selanoff (CUC) SUBDIVISION A
EXXON Garcia ADEC MARTIN TIME 09:50 to 10:45
TEAM NO.: 16 TIDE LEVEL: +1 to +4 DATE 4/10/90
EST. SUBDIVISION LENGTH: 352 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock snow
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: South to North
SURFACE SEDIMENTS: R 40 % B 45 % C 10 % P 5 % G — % S — % M — % V — %
SLOPE: Lang 20 % Hang 80 % Vert — % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W 172 m M 100 m N 80 m VL — m NO — m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ao | ai | ip | ab | | | | | | su | ui | mi | li |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | X | X | | | X | | | X | X | |
| COVER | ✓ | X | o | | | X | | ✓X | | | X | X | |
| COAT | | X | ✓ | | | X✓ | | | | X | X | | |
| STAIN | | | | | | | | | | | | | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | X | ✓ | | | | X | | | X | X | |
| NO OIL | | | | | | | | | | | | | X |

PAVEMENT: H F S — sq m by — cm

PATTIES / TARBALLS — BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | | | |
| Debris | | | |

DEBRIS COLLECTED ☐ YES ☒ NO

TYPE

#BAGS

Photographs:

Roll No. ST-16-8 & 9

Frames 32-37, 1

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm-cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | op | or | ol | of | mo | | uo | oo | | | | | | su | ui | mi | li | | |
| * 1 | 25 | | X | | | | 0 - 15 | | X | | | | X | | | X | | | | GPS |
| 2 | 10 | | X | | | | 0 - 2 | | X | | | | X | | | X | | | | B → PG → B |
| 3 | 35 | | | | | X | - | | | | | | | | | Y | | | | PGC |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |

* oil in pit 1 ≤ 5cm does not constitute subsurface oil

COMMENTS rocky shoreline with a mantle of angular boulders along the fringe and MA tidal zone, two small pocket cobble/boulder beaches. This entire segment is oiled with the higher concentrations along the south end with a 5-10 cm band of 80-90% coverage and sporadic pooled oil in crevices and around boulders. The oil distribution is wider on the lower slope beach areas and narrower along the rocky cliffs where a "bath tub ring" is common at the UIZ. Along the north end of the segment the oiling changes to a coating that mimics the fucoid distribution.



REVIEWED GM DATE 4/12/90

OG mov

SEGMENT ST/LA-16

SUBDIVISION

DATE 4 / 10 90

**CHECKLIST**

- N Arrow
- Approx. Scale
- Dig/Sub Biolgy
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. HWL/LWL
- GSI
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

**LEGEND**

1 ▲

Pit - No Subsurface Oil

2 ▲

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

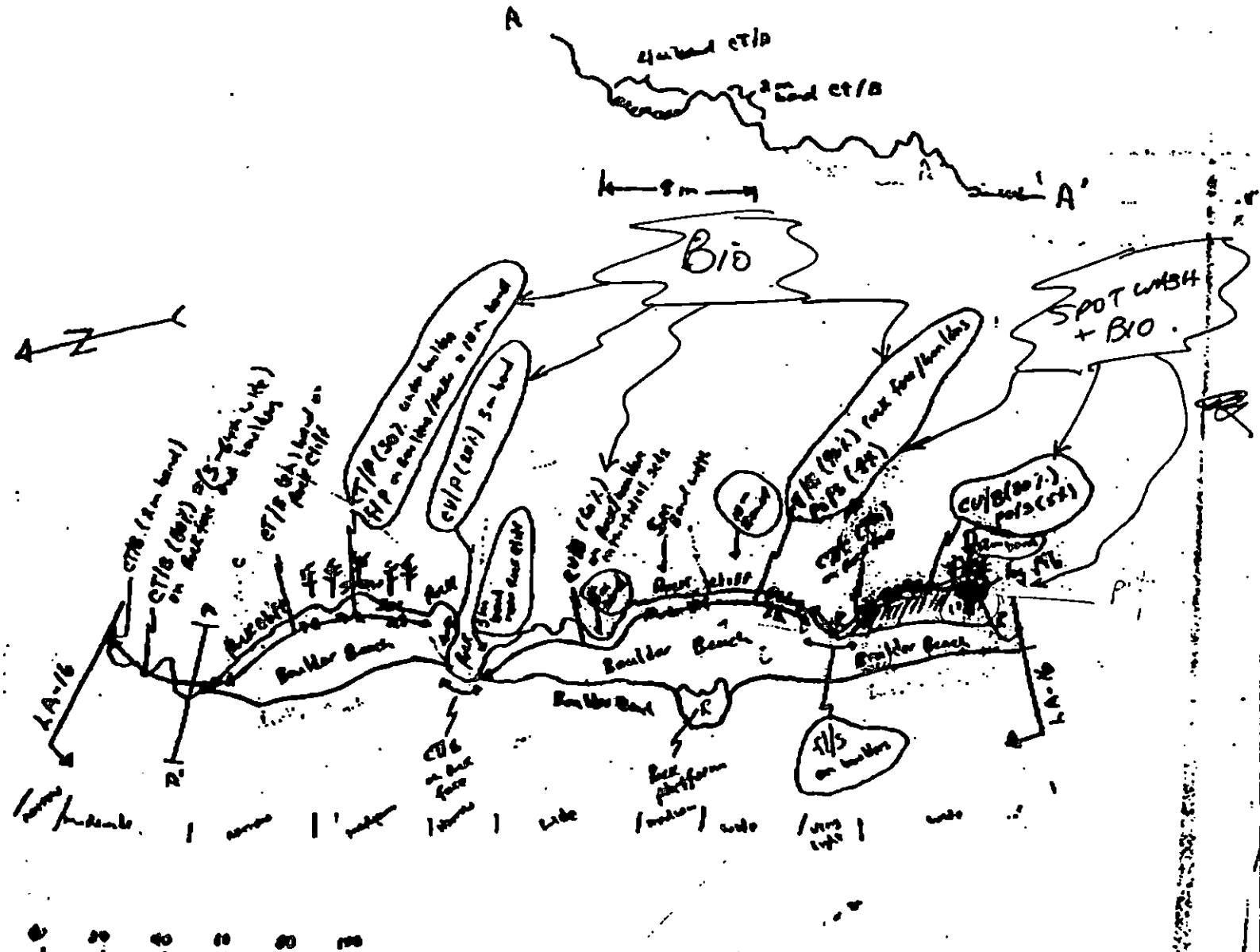
Splashed Distribution

Oiled Vegetation

1 ⇦

Photo location, direction, and number

## SKETCH MAP




Oil Character Length (m): AP — PO 100 CV 200 OT 150 ST — MB — PT — TB — FL 40 HO —

REVISIONS

SCAT TEAM P.13
IU
EXXON VALDEZ
1989 CRUISE
HPK-10-1990 10:13

# SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST/ LA16 0950 ON Subdivision — Date (mo / day / yr) 4/10/90

Time ( 24 hr ) 1045 OFF Biologist TONY ZAMORA

(A) Substrate type and % of segments:
(1) Bedrock 40 (2) Boulder 45 (3) Cobble 10 (4) Pebble 5 (5) Sand — (6) Silt —

(B) Overall % cover of biota ( % of segment ): Dense 40 Moderate 55 Low 5

(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)

Photographs:
Roll No. _____
Frames 33-37--

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | X | X | 2 | 2 | 2 | 2 | 2 | 2 | X |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | X | X | 2 | 2 | (2) | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | X | X | (1U) | X | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | X | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 3 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 5 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| X | 2 | 2 | (2) | (X) | X | X | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | X | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

Wildlife Observations/ General Comments: SEAVANGER OTTER CARCASS FOUND-NO VISIBLE OIL
- NEAR COMPLETE ALGAL COVERAGE IN MI
- MUSSELS ON BOULDERS NEAR POSSIBLE TREATMENT AREAS
- BARNACLE SPAT NOTED ON OIL COAT ON ROCK FACE

Ecological Considerations:

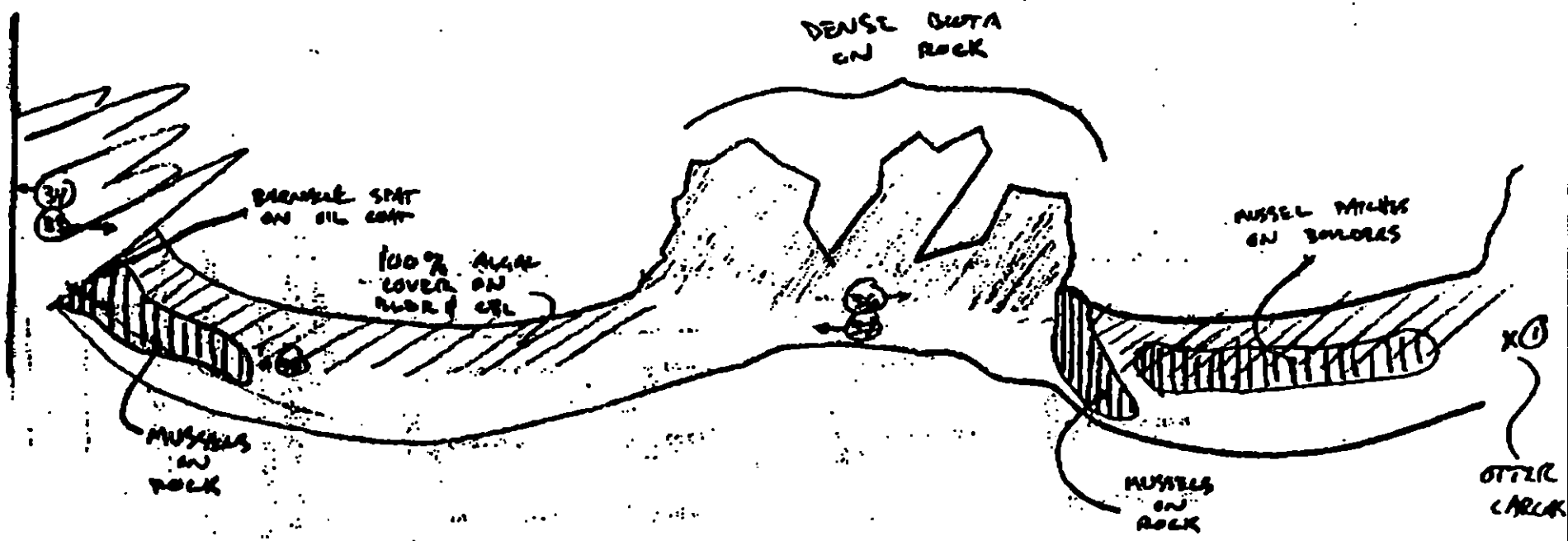
7II,

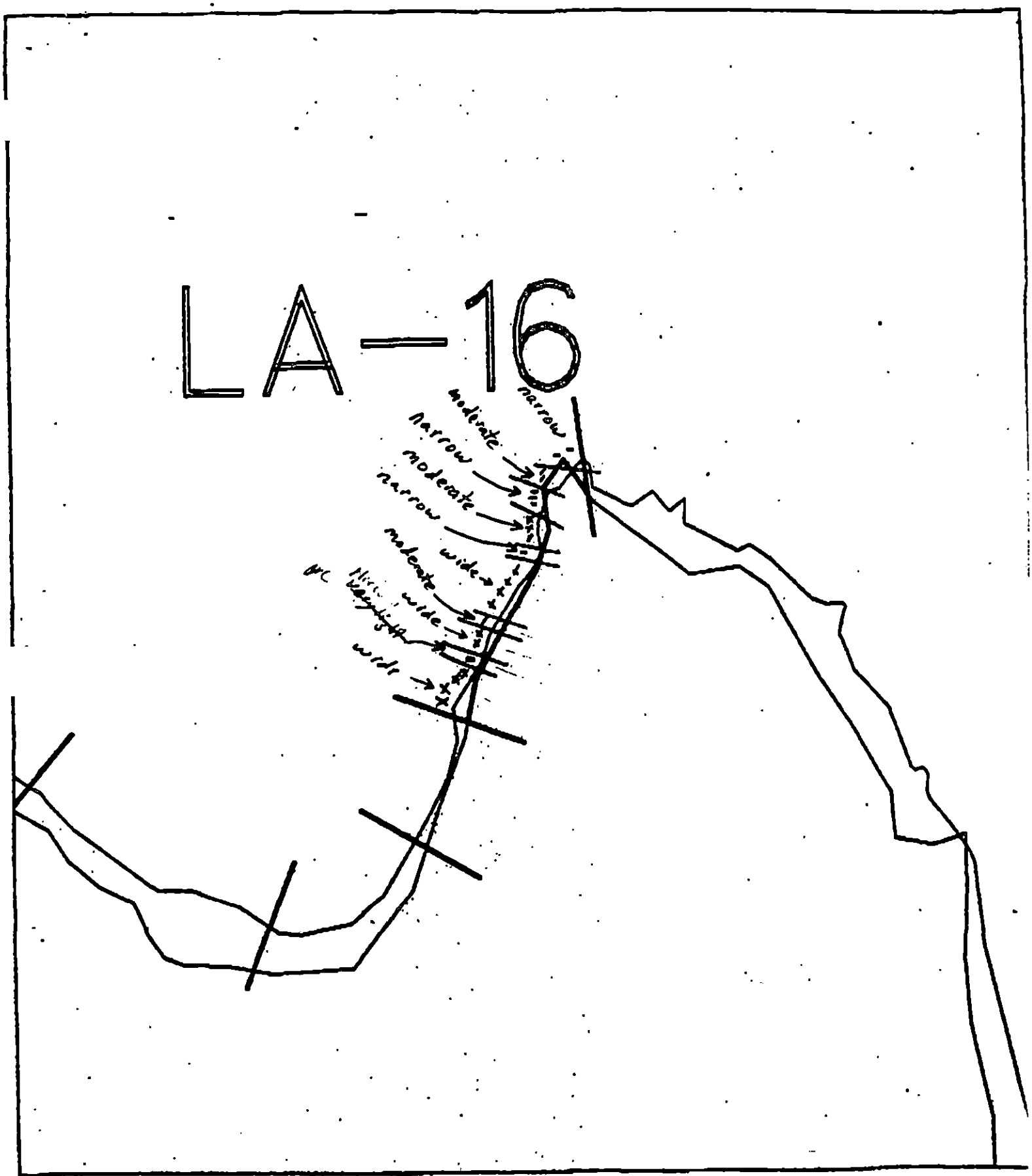
- NO EAGLE NEST WAS SEEN BUT 3 EAGLES WERE SEEN IN TREE AT HEAD OF BAY. EAGLE PELLETS AND POSSIBLE EAGLE SHIT WAS FOUND NEAR OTTER CARCASS, INDICATES EAGLE FEEDING AREA

E

# EA

BIOLOGY SCHEMATIC & PHOTO LOCATIONS






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

# LA-16

ADEC Segment Length: 385m

0 100 200 300

Map Key: PWS-422
Name: Reimer
Date: 4/10/90
Date Entered:

# ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT LA-16 SUBDIVISION A ( 1 of 1 )

| WORK WINDOW | |
|---|---|
| Bioremediation<br>Spot Washing<br>Other Approved Treatment | OPEN |

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

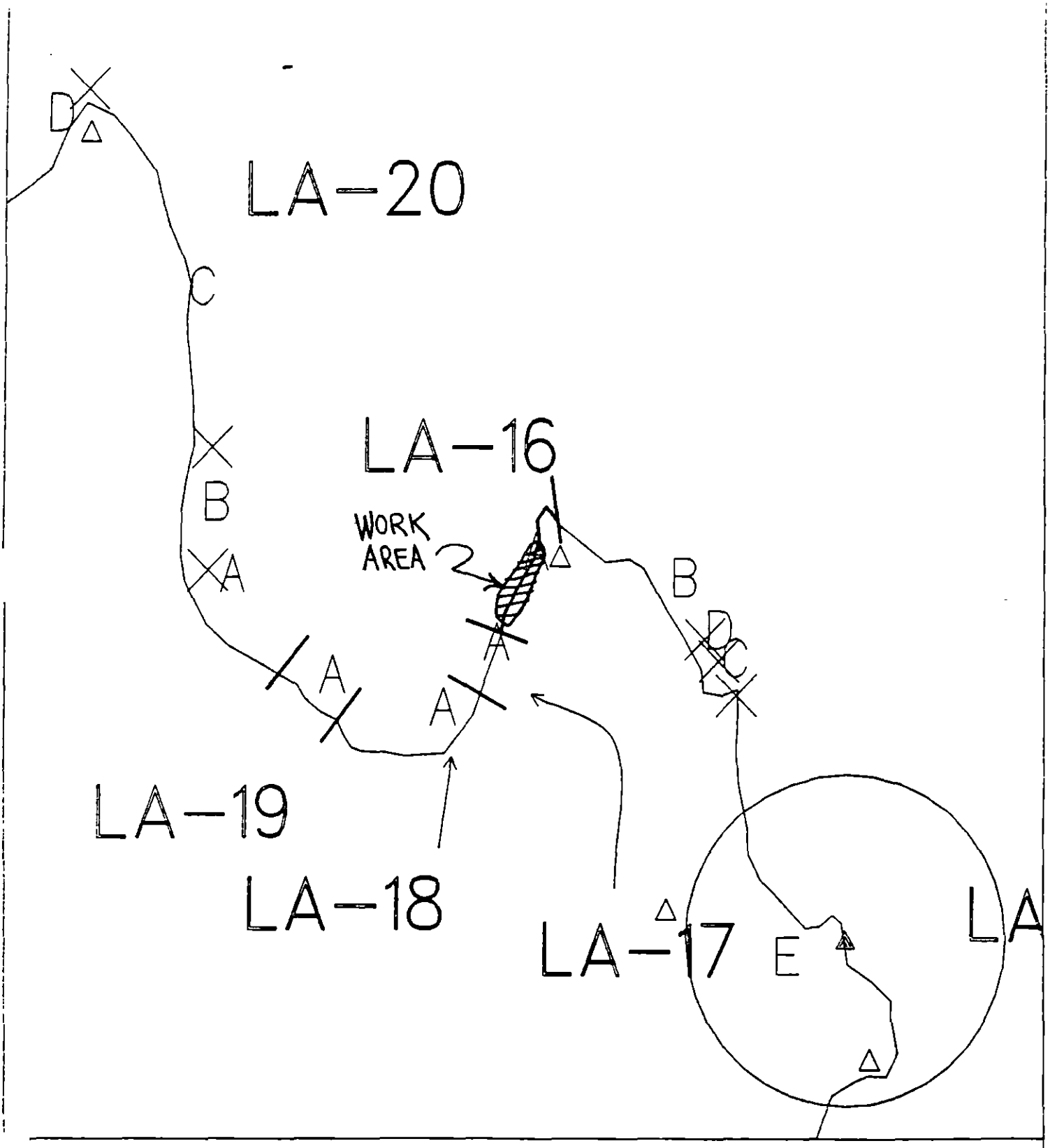
| | | |
|---|---|---|
| **5T** | **Bald Eagle Nest** | NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site. |

OTHER ECOLOGICAL CONSIDERATIONS

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

OSC G.A. Reiter for DATE 6/10/90

Prepared By: D Phillips Date 6/6/90




EXXON

Exxon Company, USA

Map Key: PWS-LA-16

# ECOLOGY MAP

SEGMENT LA-16

SUBDIVISION A (1 of 1)

METERS

★ Seabird Colony

Active Eagle Nest

△ Inactive Eagle Nest

## SHORELINE EVALUATION

SEGMENT ST/ LA-17 SUBDIVISION A (1 OF 1) DATE 4/10/90

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

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

SHPO SIGNATURE: J. David McMahan DATE: 5/8/90

**OILING CATEGORIZATION:**

Wide 157 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes____ No X Maximum Depth_____

**RECOMMENDATIONS:**

| | |
|---|---|
| _____No Treatment Recommended | _____Snare/Absorbent Booms |
| X Treatment Recommended | _____Oil Snares (pom poms) |
| X Manual Pickup | _____Absorbents (pads,rolls,etc) |
| X Bioremediation | X Spot Washing: X Wands |
| _____Tarmat: _____Removal | _____ Beach Cleaner |
| | _____Other (see comments) |

COMMENTS: Recommended treatment includes 1) manual pick up of pooled oil in areas shown on attached sketch map followed by bioremediation, 2) bioremediation only of other areas shown on map, 3) spot washing with wands. Work should be conducted with approval of USFWS regarding eagle nest constraints.

TAG COMMENTS:_____

TAG APPROVAL DATE: 4/25/90.
ADEC ART WEINER
EXXON ANDY TEAL
NOAA Jacqui Michel
USCG KENNETH KOENIG

FOSC: _____ DATE: 5-12-90
CVC Rep to be on site.

# PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

| | | |
|---|---|---|
| 1A | | Salmon stream mouth - fry outmigration (3/1 to 5/15) |
| 1B | | Salmon stream mouth - spawning (7/10 to 8/31)<br>No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits. |
| 1C | | Salmon fry nursery area (4/31 to 7/31) |
| 1D | | Esther Hatchery release (4/15 to 6/1) |
| 1E | | Main Bay Hatchery release (4/20 to 5/10) |
| 1F | | Sawmill Bay Hatchery release (4/15 to 6/1) |
| 1G | | Cannery Creek Hatchery release (4/21 to 6/1) |
| 1H | | Remote release site |
| 1I | | Gill net area (6/7 to 8/31) |
| 1J | | Purse seine area (7/20 to 9/30) |
| 1K | | Purse seine hook-off (7/20 to 9/30) |
| 1L | | Set net sites (6/11 to 7/25)<br>For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints. |
| 2M | | Herring spawning (4/1 to 6/15)<br>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)<br>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)<br>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)<br>Restrict all activity to essential minimum, especially air traffic. |
| 5T | | All Bald Eagle nests (3/1 to 6/1)<br>Active Bald Eagle nests (3/1 to 9/1)<br>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<br>For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints. |

27

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA-17 SUBDIVISION: DATE 4/10/90

**USCG**
NAME R. Hubbard SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED
COMMENTS

1. I concur with command stated by Exxon Rep.

**ADEC**
NAME J. LYNN MARTIN SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

AGREE WITH EXXON OPS. RECOMMENDATION FOR A HOT WASH OF AREA. FOLLOWED BY BIOREMIDIATION. WOULD SUGGEST USE OF OMNI BARGE + BOOMS DUE TO VERTICAL SHINGLE ROCK SURFACE.

**LAND MANAGER**
NAME Patrick Seamount SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

I would suggest manual removal before ~~of~~ some of the pools ~~are~~ will before any attempt to hot wash this area, because the coverage is so massive.

REVISION NO. 03/21/90

# SHORELINE OILING SUMMARY

REVISION NO. 26

OG Reimer USCG Hubbard SEGMENT ST/ LA-17
BIO Zamora LAND REP Selanoff (Cue) SUBDIVISION A
EXXON Garcia ADEC Martin TIME 09 : 15 to 09 : 50
TEAM NO.: 16 TIDE LEVEL: 0 to +1 DATE 4 / 10 / 90
EST. SUBDIVISION LENGTH: 158 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock Snow
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: South to North
SURFACE SEDIMENTS: R 20 % B 50 % C 20 % P 10 % G - % S - % M - % V - %
SLOPE: Lang 50 % Hang 50 % Vert — % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W 158 m M 0 m N 0 m VL 0 m NO 0 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AD | AB | AP | AA | | | | | | SU | UI | MI | LI |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | X | ✓ | X/ | | | ✓/ | | | ✓/ | ✓/ | |
| COVER | | X | | | X | X | | X | | X | X | X | |
| COAT | | X | | | X | | | | | X | | | |
| STAIN | | | | | | | | | | | | | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | | | | | | | | | | |
| NO OIL | | | | | | | | | | | | | X |

PAVEMENT: H F S — sq. m by — cm
PATTIES / TARBALLS Ø BAGS
NEAR SHORE SHEEN? (NO) BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | | | |
| Debris | | | |

DEBRIS COLLECTED ☐ YES ☒ NO
TYPE
#BAGS 0

Photographs:
Roll No. ST-16-8
Frames 19-31

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm-cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | ON | OL | OP | NO | | UO | UO | | | | | | SU | UI | MI | LI | | |
| 1 | 7 | | X | | | | 0 - 3 | | X | | | | X | | | X | | | | B PG |
| 2 | 20 | | | | | X | • | | | | | | | | | X | | | | PC → Rock |
| | | | | | | | • | | | | | | | | | | | | | |
| | | | | | | | • | | | | | | | | | | | | | |
| | | | | | | | • | | | | | | | | | | | | | |
| | | | | | | | • | | | | | | | | | | | | | |

COMMENTS Boulder beach with numerous rock outcrops and backshore rock cliffs. The entire segment has a wide oiling character in the form of a coating on, around and under boulders (60-80% coverage), 10-50 cm band. Also associated with this is sporadic to patchy pooled oil in cracks and crevices in rocks and around boulders. A broken coating (both thick and thin) is found along the rock cliffs and boulders in the MIZ.



REVIEWED JPH DATE 16 Apr 90

25

## SHORELINE ECOLOGICAL SUMMARY

REVISION: 000/0

Segment ST / LA 17 Subdivision — Date (mo / day / yr) 4/10/90

Time (24 hr) 0915 ON 0950 OFF Biologist TONY ZAMORA

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

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

(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)

Photographs:
Roll No. ST.16.8
Frames 19-31

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | X | 3 | 2 | X | X | X | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | X | 3 | X | X | X | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | X | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | X | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | X | X | X | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | X | X | X | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | X | 2 | X | 2 | 2 | 2 | 2 | X | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**Wildlife Observations/ General Comments:**
- REPRODUCTIVE LT BAND
- HIGH # OF BARNACLE SPAT IN MI. HIGH MORTALITY OF ADULTS NOTED
- MUSSELS BEDS ARE ON ROCK OUTCROP
- ABUNDANT PIGMENTATION

**Ecological Considerations:** 7 II

OG Reimer

SEGMENT ST/ LA-17

SUBDIVISION A

DATE 4 / 10 90

**CHECKLIST**

- N Arrow
- Approx. Scale
- Segment/Sub Bndry
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Ex. HWL/LWL
- Sal
- Oil/Sk Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

**LEGEND**

1 ▲

Pit - No Subsurface Oil

2 ▲

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

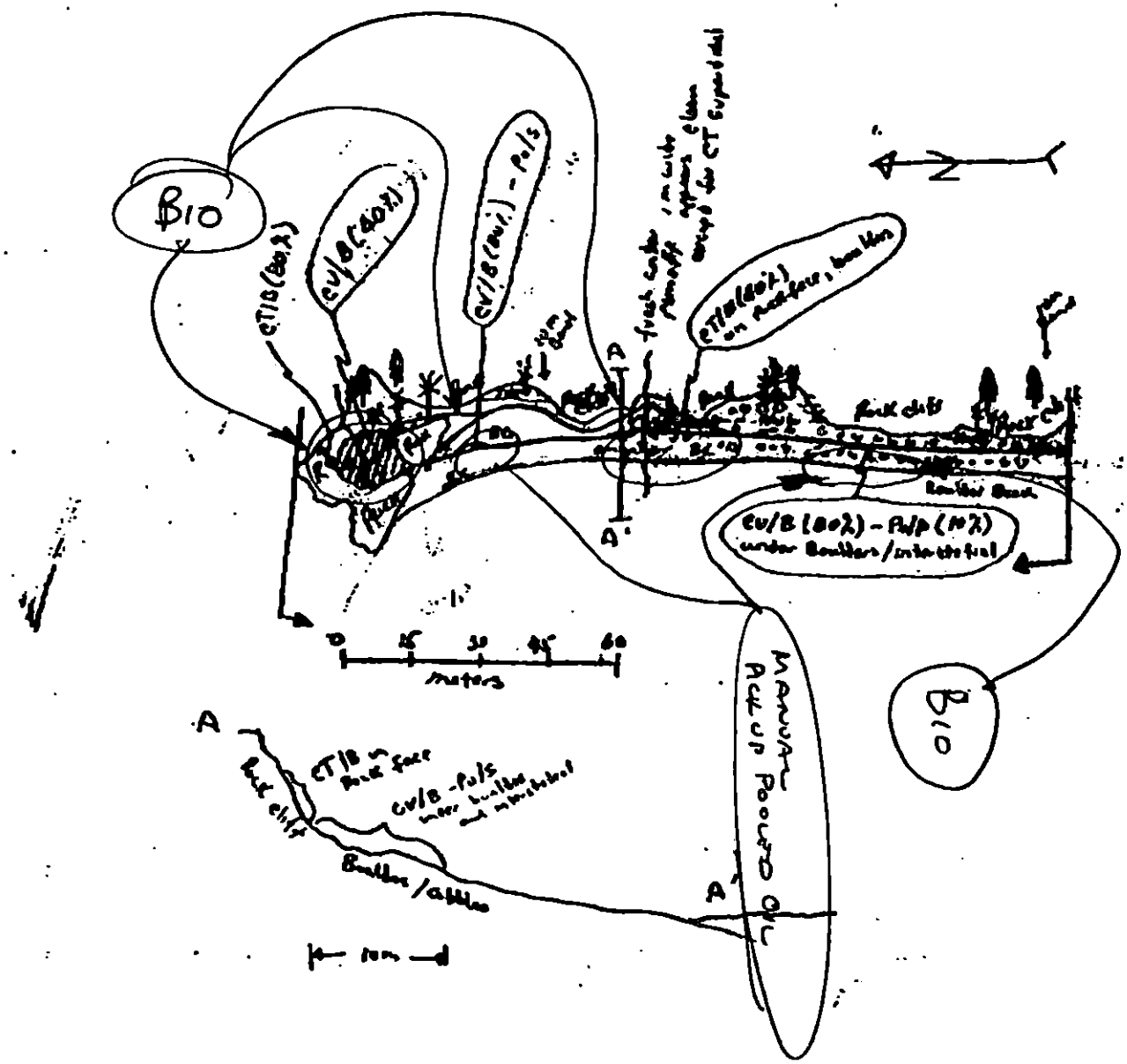
Splashed Distribution

Oiled Vegetation

1

Photo location, direction, and number

# SKETCH MAP

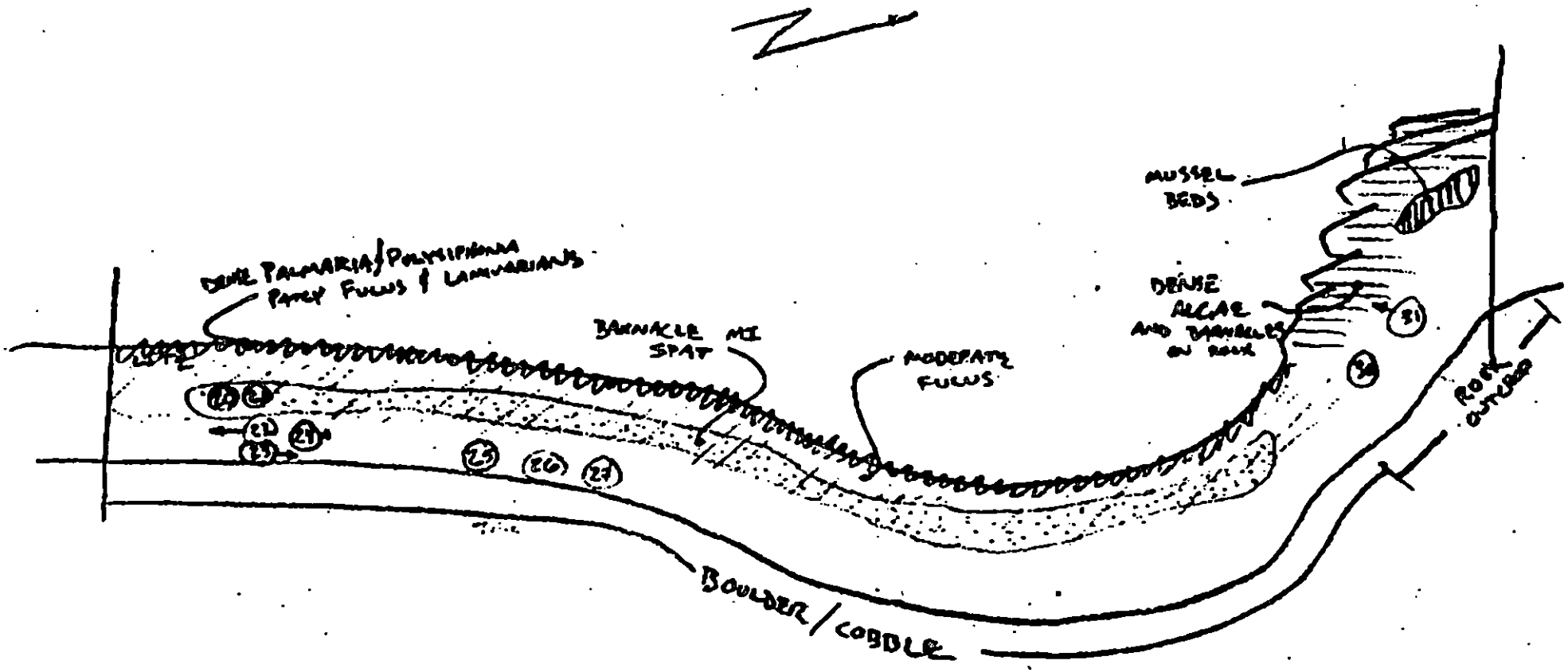


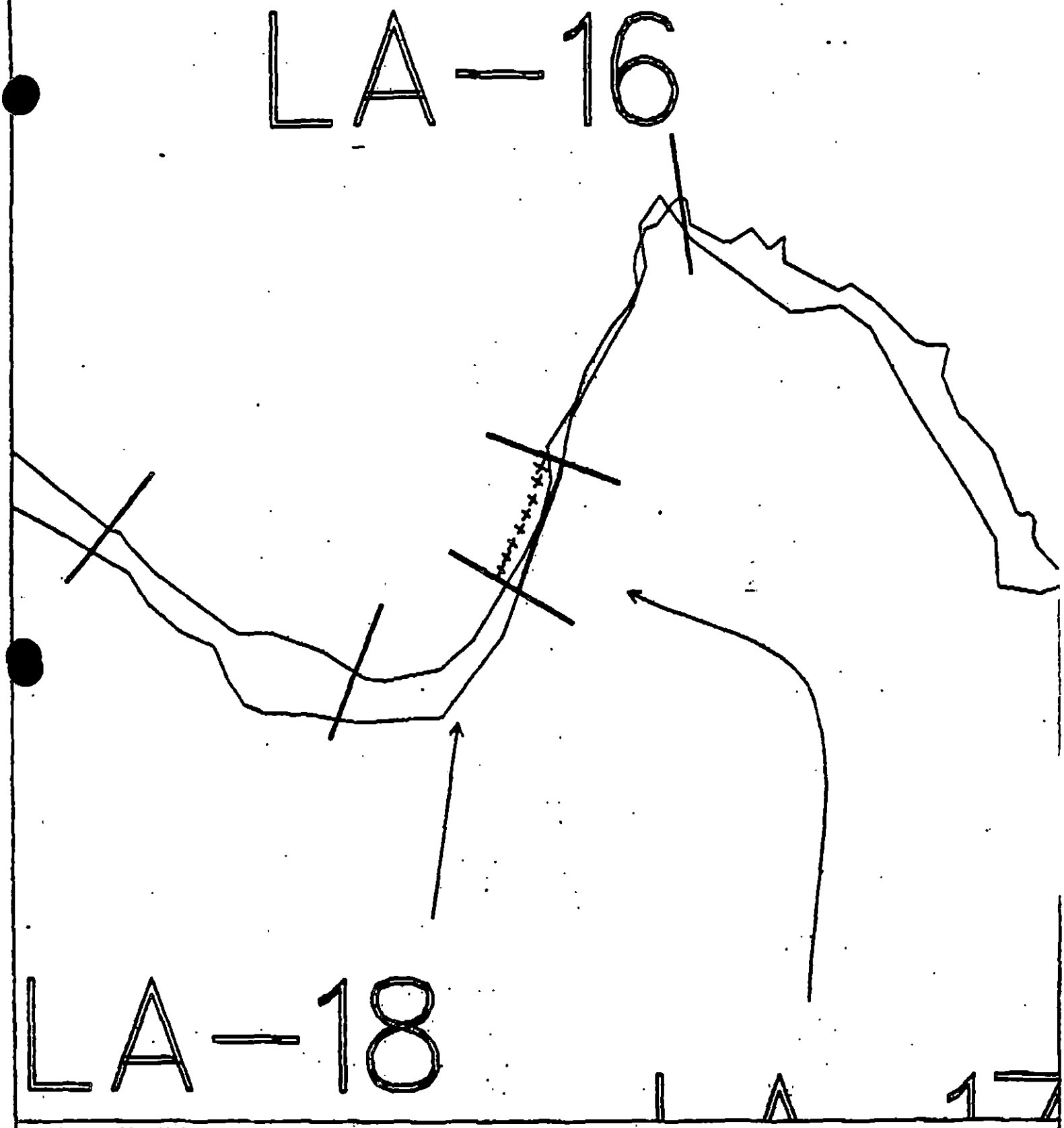

Oil Character Length (m): AP — PO 120 CV 158 CT 80 ST — MS — PT — TB — FL — NO —

APR-10-1990 18:16 FROM EXXON CMD CORDOVA TO SCAT TEAM P.19

LA 17

BIOLOGY SCHEMATIC & PHOTO LOCATIONS






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

LA-17

ADEC Segment Length: 157m

0 100 200 300
METERS

Map Key: PWS-423
Name: Reimer
Date: 4/10/90
Date Entered:

# ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT LA-17 SUBDIVISION A ( 1 of 1 )

| WORK WINDOW | |
|---|---|
| Manual Pickup | OPEN |
| Bioremediation<br>Spot Washing | OPEN |

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

| | | |
|---|---|---|
| **5T** | **Bald Eagle Nest** | NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site. |
| **7II** | **Subsistence: Deer Harvesting** | No constraint to manual pickup and spot washing. Closed to bioremediation after 8/15. |

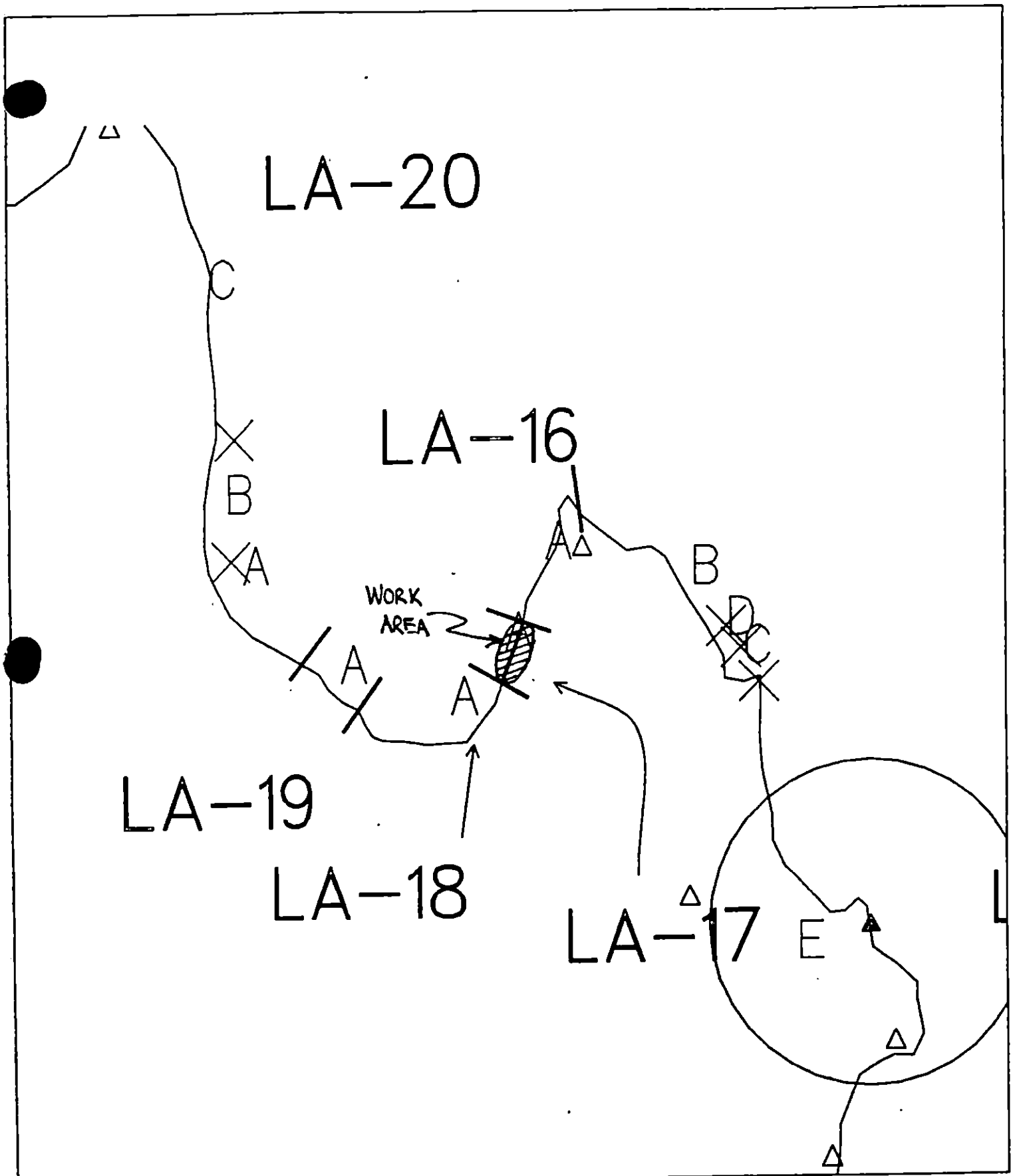
OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC _____ DATE 6-10-90

Prepared by: J.P. Phillips

Date: 6/10/90




EXXON

Exxon Company, USA
Map Key: PWS-LA-17
June 09, 1990

# ECOLOGY MAP
## SEGMENT LA-17
SUBDIVISION A (1 of 1)

METERS
0 321 643

★ Seabird Colony
▲ Active Eagle Nest
△ Inactive Eagle Nest

1 inch = 1054 feet

SHORELINE EVALUATION

SEGMENT ST/LA-18 (REVISED) SUBDIVISION A (1 OF 1) DATE 4/2/90 (REVISED) 4/27/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**

6U Recreation: Tent sites (6/1 to 9/15)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
#226-40-16780 (Ps, 12/89)
Sensitivity code and general time constraints. See attached Ecological sheet for specific constraints and contacts.

**SUBDIVISION ECOLOGICAL CONSTRAINTS:**

SHPO SIGNATURE: Rachel Jean Dale DATE: 5/18/90

**OILING CATEGORIZATION:**

Wide 449m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 30 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 30 cm

**RECOMMENDATIONS:**

| | |
|---|---|
| ____No Treatment Recommended | ____Snare/Absorbent Booms |
| __X__Treatment Recommended | ____Oil Snares (pom poms) |
| __X__Manual Pickup | ____Absorbents (pads,rolls,etc) |
| __X__Bioremediation | __X__Spot Washing: hand Wands |
| __X__Tarmat Removal | ____Beach Cleaner |
| | ____Other (see comments) |

COMMENTS: Recommended treatment includes: 1) manual removal of tarmat, 2) manual pick up of mousse and pooled oil, 3) spot wash as required and 4) bioremediate areas of coat and cover as indicated on attached sketch map. Work between 5/15 and 7/10 due to anadromous stream constraints.

TAG COMMENTS: notify CVC 24h prior beginning treatment ops

TAG APPROVAL DATE: 5/17/90
ADEC Art Weiner Art Weiner
EXXON Andy Teal Andy Teal
NOAA Gary Petrae Gary Petrae
USCG G.A. Reiter G.A. Reiter

FOSC: D. Jawaski DATE: 6/16/90

4/4 has repeatedly failed to provide their 24h comments, even after several

# PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G John Morison 267-2324

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 July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D Esther Hatchery release (4/15 to 6/15)
1E Main Bay Hatchery release (4/20 to 6/15)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or 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: 1E ADF&G Larry Peltz 424-3214
1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzomoto 424-7511

1I Gill net area (6/7 to 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 unoiled 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 Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of 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
ADF&G Don Calkins 267-2403

5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Rothy 267-2206

5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U Recreation: Tent sites (5/1 to 9/15)
6V Anchorages (5/1 to 9/15)
6W Forest Service cabins (5/1 to 9/15)
6X Lodge (5/1 to 9/15)
6Y Special use destination

Subsistence area: Salmon harvesting (5/1 to 9/30)
Finfish harvesting
Deer harvesting (8/15 to 2/28)
7JJ Invertebrate harvesting
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

LA-18 ↔ LA-19 4/27/90

Note: This is a Revised Segment

The boundary on the computer generated maps was incorrectly positioned between these two segments. The original SSAT reports reflect the incorrect boundaries. The attached revised SSAT Reports have been prepared by the original SSAT team members and reflects an adjustment of boundary position only and not a change of observations All information on the original SSAT reports are included on the revised reports, however some information was moved from one segment to the other as necessary. Sketch maps, percentages and measurements have been adjusted accordingly

LA-18 Revised

Revised 4/27/90

# SHORELINE OILING SUMMARY

REVISION NO. 03-22-90

G Reimer USCG Hubbard SEGMENT ST/ LA-18
IO Zamora LAND REP Salanoff (CUC) SUBDIVISION A
EXXON Garcia ADEC Martin TIME 11 : 20 to 13 : 30
TEAM NO.: 16 TIDE LEVEL: +1.75 to +0 DATE 4 / 2 / 90
EST. SUBDIVISION LENGTH: 388 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock SNOW
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: North to South
SURFACE SEDIMENTS: R 5 % B 30 % C 45 % P 20 % G 0 % S 0 % M 0 % V 0 %
SLOPE : Lang 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W 353 m M 0 m N 0 m VL 0 m NO 35 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION /C | /B | /P | /S | OIL / FILM COLOR SSL/BR | DSL/RW | GY/SL | DBR/TL | LBR | IMPACTED ZONES SU | UI | MI | LI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ASPHALT PAVEMENT | | X | | | | | | X | | | | X | |
| POOLED | | | X | | | | | X | | | X | X | |
| COVER | | X | | | | | | X | | | X | X | |
| COAT | X | | | | | | | X | | | X | X | |
| STAIN | | X | | | | X | | | | | X | X | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | | | | | | | | | | |
| NO OIL | | | | | | | | | | — | | | X |

SNOW

PAVEMENT: H F (S) 70 sq. m by 5 cm

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | X | | |
| Debris | | | |

DEBRIS COLLECTED ☐ YES ☒ NO

TYPE

#BAGS

Photographs:

Roll No. ST-16-3

Frames 11-22, 27-29

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER OP | OR | OL | OF | NO | OILED INTERVAL (CM-CM) | BELOW UO | UC | OIL / FILM COLOR SSL/BR | DSL/RW | GY/SL | DBR/TL | LBR | PIT ZONE SU | UI | MI | LI | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10 | | | | | X | - | | | | | | | | | | X | | | PSGC |
| 2 | 30 | | | | | X | - | | | | | | | | | | | X | | PSGC |
| 3 | 20 | | | | X | | 10-15 | | X | | | | X | | | | X | | | PGS / Boulder |
| 4 | 30 | | X | | | | 5-28 | | X | | | | X | | | | X | | | PGSC |
| 5 | 20 | | | | | X | - | | | | | | | | | | | X | | PGSC |
| 6 | 20 | | X | | | | 5-20 | X | | | | | X | | | | X | | | PGC |

COMMENTS Shingle beach - boulder, cobble, lag deposits armoring pebble, granule substrate. Coarser material at north end of segment with angular blocks; Pebbles, cobbles and scattered boulders to the south end by stream. Band of oil 12-50m wide over entire segment, except for small runoff stream at the north end of the segment, and larger stream at south end. Oil is coating or covering finer pebbles, granules, cobbles, surface mantel of boulders are generally clean, however there is some cover and coat on the sides of boulders

(revised 4-27-90)

## SHORELINE OILING SUMMARY (PAGE 2 of 2)

REVISION 03-22-90

SEGMENT ST/ LA-18 SUBDIVISION A

### SUBSURFACE OIL (CONTINUED)

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (CM-CM) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | | UO | UC | SOL/BR | DBL/RW | OY | BL | DBR/TL | LBR | SU | UI | MI | LI | | |
| 7 | 30 | | | | | X | - | | | | | | | | | | | | X | | SGC |
| 8 | 30 | | X | | | | 5-30 | X | | | | | X | | | | X | | | | PGC |
| 9 | 20 | | | | | X | - | | | | | | | | | | | X | | | PGC |
| 10 | 28 | | | | | X | - | | | | | | | | | | | X | | | PGC |
| | | | | | | | - | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | |

COMMENTS near finer surface sediments, and pooled oil in cracks and crevices between rocks and boulders.

(Note Aerial Pictures ST-16-3 (1-10) Sleepy Bay La-16, 17, 18, 19, 20)

REVIEWED JW DATE 4-30-90

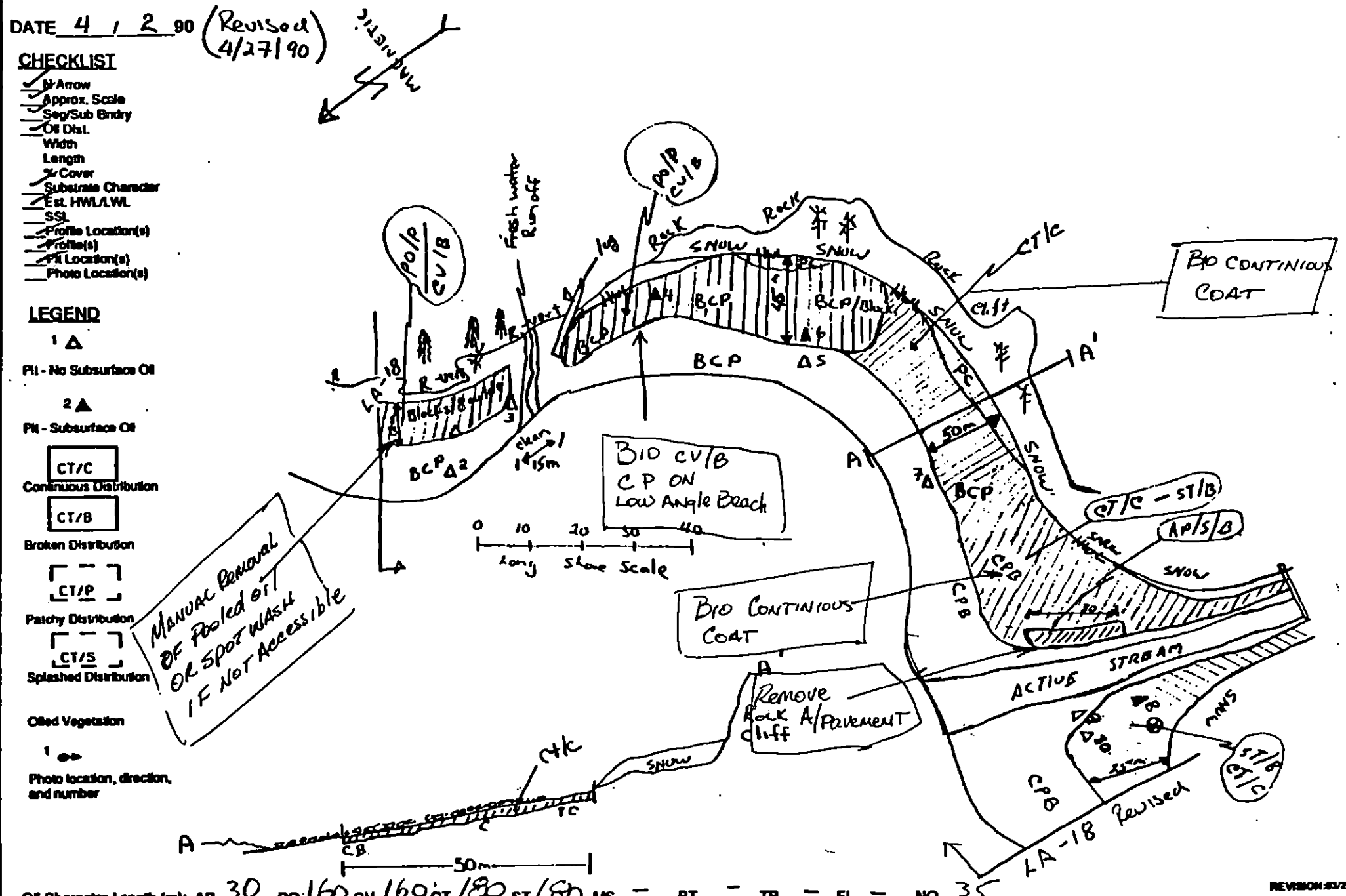
OG Kelm

SEGMENT ST/ LA-18

SUBDIVISION A

DATE 4 / 2 90 (Revised 4/27/90)

## SKETCH MAP



# SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / LA 18 Subdivision - Date (mo / day / yr) 4/2/90

Time (24 hr) 1130 ON 1245 OFF Biologist TONY ZAMORA

(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 X

(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)

Photographs:
Roll No. ST-16-3
Frames 11-22, 27-2

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | ③ | 2 | X | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | X | 2 | 2 | X | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**GASTROPODS**

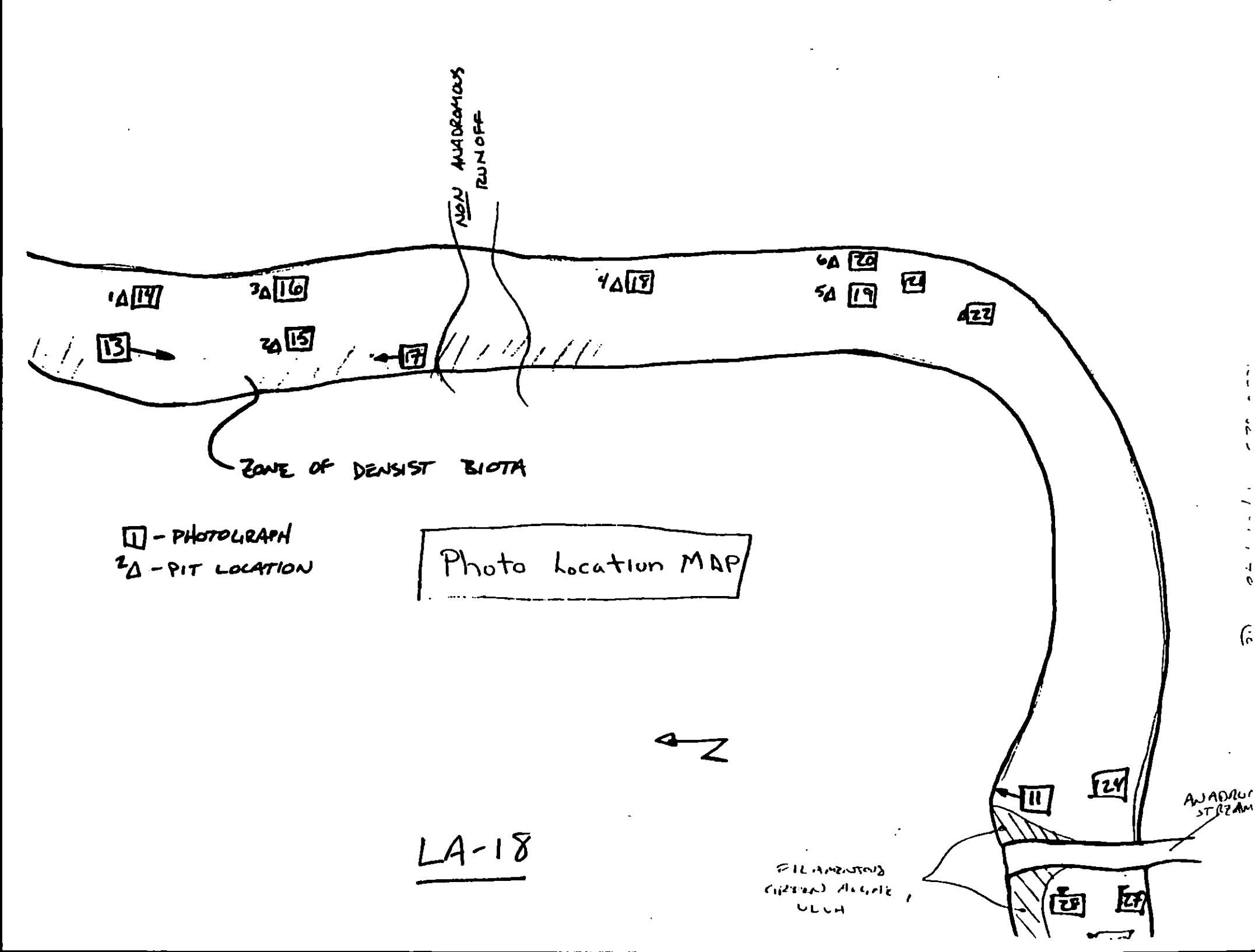
| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| X | X | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| X | X | 2 | 2 | 2 | 2 | X | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | X | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | X | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | ③ | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | ③ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**Wildlife Observations/ General Comments:**

- LOW ZONE WAS NOT EXPOSED DURING SURVEY.
- NORTH END OF SITE IS MUCH MORE PRODUCTIVE - IT'S LOWER ENERGY
- FILAMENTOUS GREEN ALGAE ON MID & LOW ZONES, DENSE AMPHIPODS UNDER COBBLE GASTROPODS WERE: ALMAEIDS & LITTORINES. NO NUCELLA FOUND, NOR DRILLED MYTILUS SHELLS
- WILDLIFE: 1 ADULT EAGLE, 1 JUVENILE EAGLE, 2 RAVENS, FISH SKELETON, DEAD OTTER - TAIL & VERTEBRA FOUND
- LOW MORTALITY OF MYTILUS THOUGH SOME HAVE TAR SPLATTERS



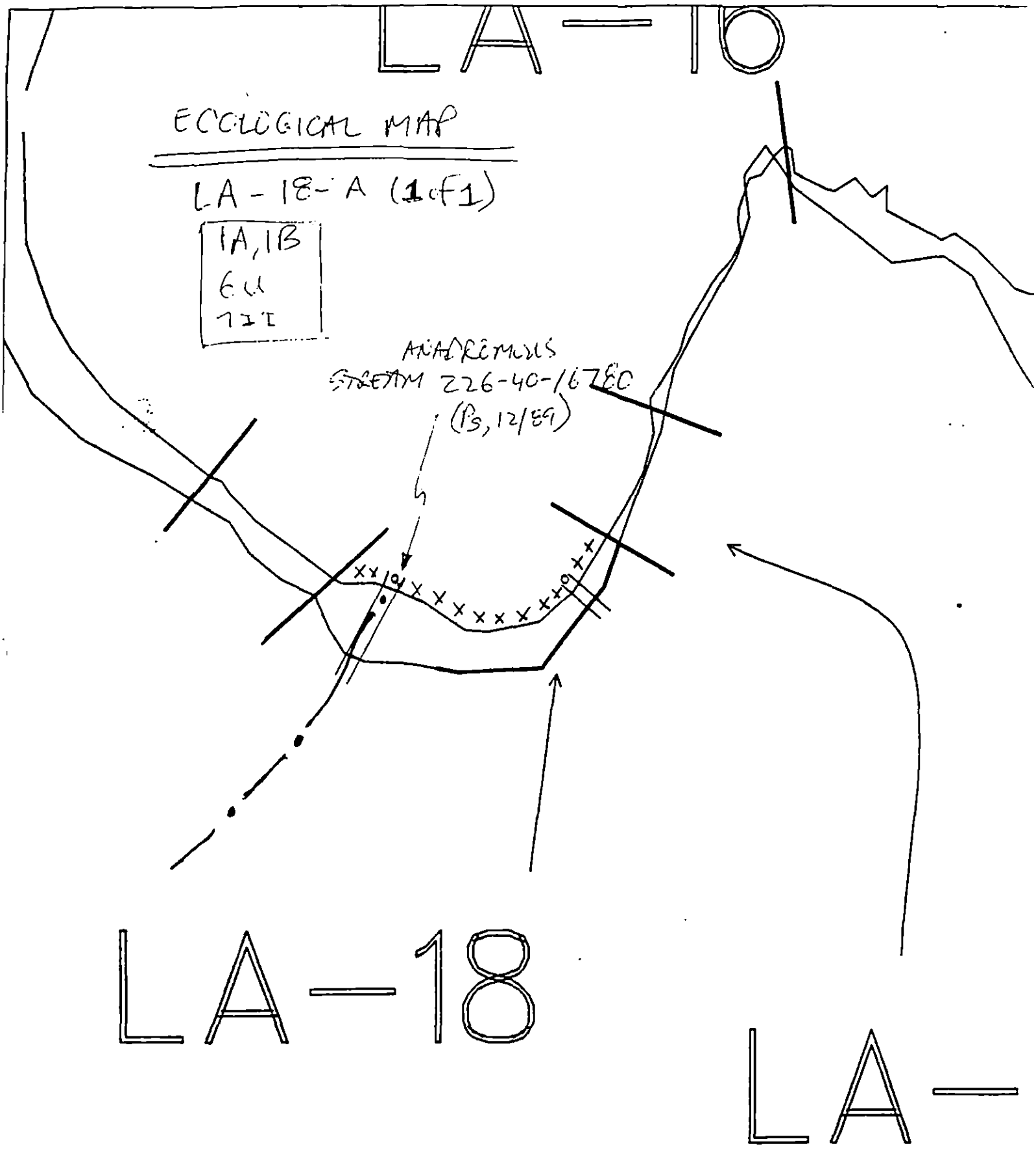

1 - PHOTOGRAPH
2Δ - PIT LOCATION

Photo Location MAP

LA-18




LA-18
Revised (4/27/90)

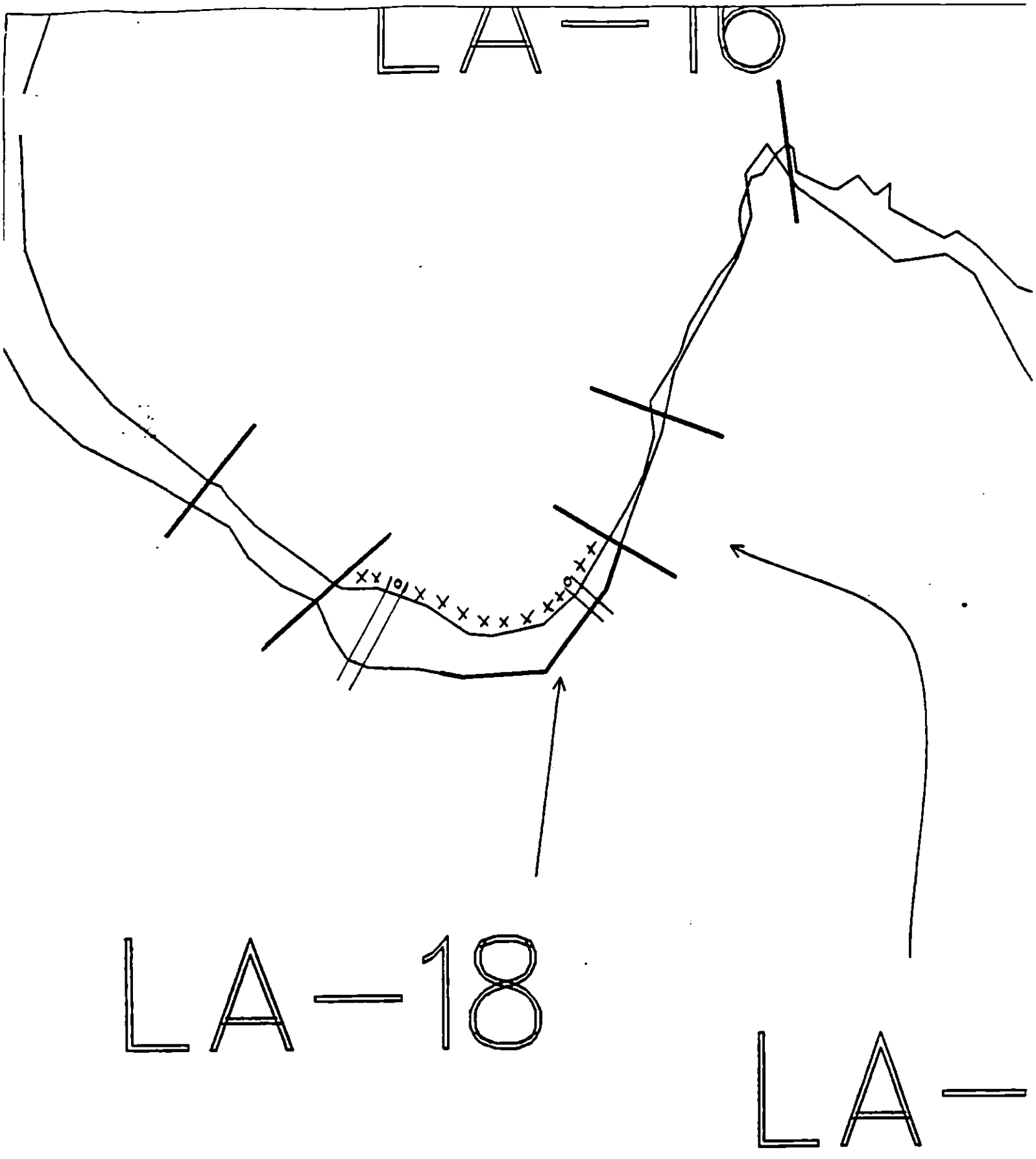



XXXX Wide
//// Medium
---- Narrow
TTTT Very Light

LA-18

ADEC Segment Length: 292m

Revised (4/27/90)
Map Key: PWS-424
Name: Reimer
Date: 4/2/90




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

LA-18

ADEC Segment Length: 292m

Revised (4/27/90)
Map Key: PWS-424
Name: Reimer
Date: 4/2/90

# ADDENDUM: SUBDIVISION CONSTRAINTS

## SEGMENT LA-18 SUBDIVISION A ( 1 of 1 )

| WORK WINDOW | |
|---|---|
| Manual Pickup | OPEN |
| Bioremediation Less Than 100m From Stream | WORK 5/15 to 7/10 (ADF&G MONITOR REQ.) |
| Bioremediation More Than 100m From Stream | WORK PRIOR TO 8/15 |

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

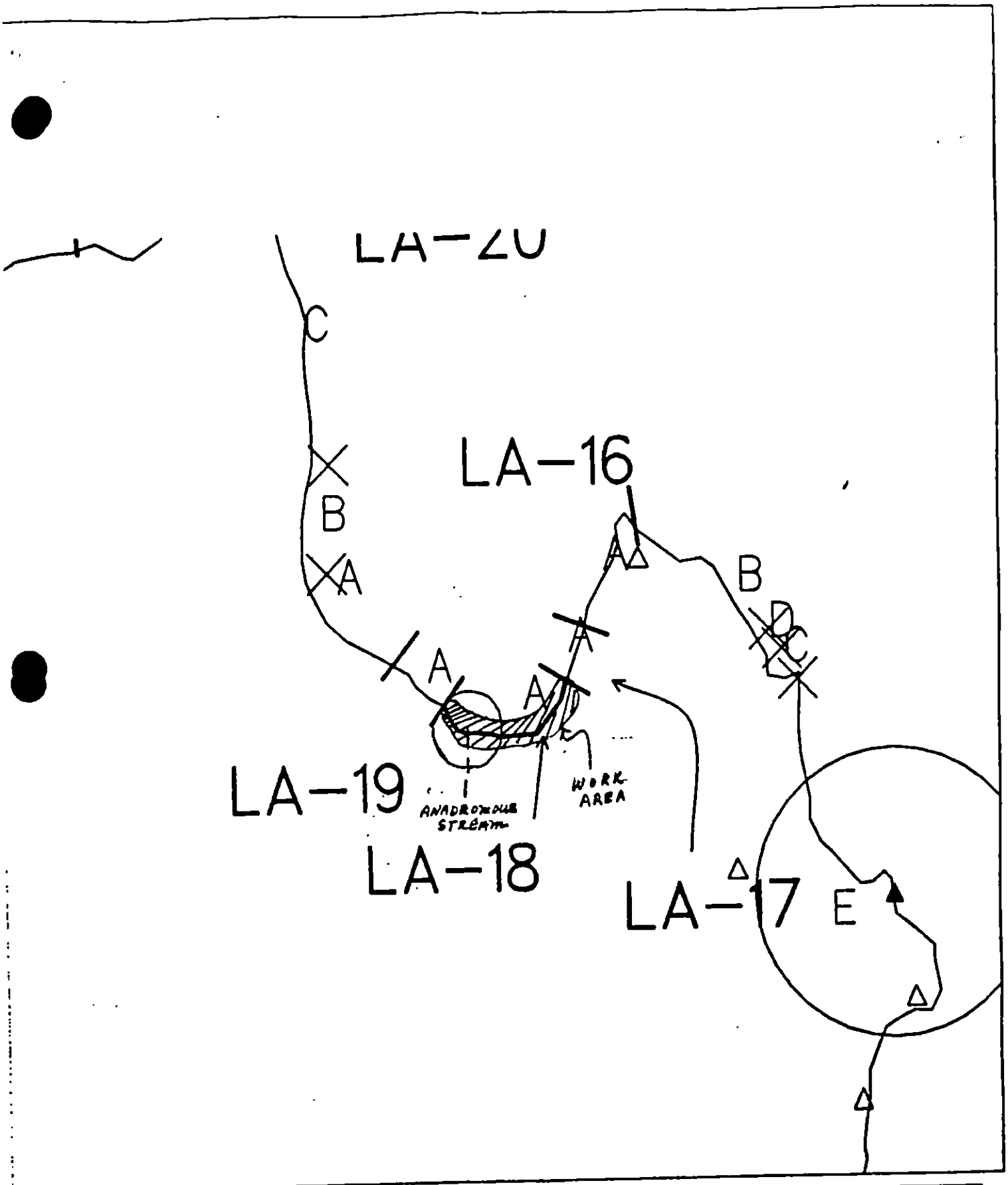
| | | |
|---|---|---|
| **1A,1B** | **Salmon Stream** | ADF&G catalogued anadromous stream (226-40-16780) is in Subdivision A. This subdivision is closed to bioremediation less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation is permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation more than 100m from stream. No constraint to manual pickup. |
| **7II** | **Subsistence: Deer Harvesting** | Closed to bioremediation after 8/15. No constraint to manual pickup. |

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC _____ Date 6-20-90

Prepared by _____ Date 6/19/90




EXXON

Exxon Company, USA
Map Key: PWS-LA-18
June 09, 1990

# ECOLOGY MAP
## SEGMENT LA-18
SUBDIVISION ___ (___of___)

METERS
0 361 723

★ Seabird Colony
▲ Active Eagle Nest
△ Inactive Eagle Nest

1 inch = 1186 feet

55/55

Segment LA 018 4/22/90
Stream 226-40-16620 Michael Fawcett
Sleepy Bay
Ecological Summary

This stream has steep, unconsolidated banks with a considerable amount of remaining buried and surface oil, cobble and boulders near stream mouth (MTZ) more or less barren except for a film of green algae. A mature community including mussels, barnacles, Fucus, Ralfsia, Ulva, Enteromorpha, etc., exists on MTZ bedrock about 60m west of stream. Some of the barnacles and mussels are coated with oil, but most are alive, and their size indicates they are more than a year old. There are no ecological constraints re: intertidal biota as per recommended cleanup measures.

M. H. Fawcett

# ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ LA-18 STREAM NO: 226-40-16780 DATE 4/22/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
6U Recreation: Tent sites (6/1 to 9/15)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

**SUBDIVISION ECOLOGICAL CONSTRAINTS:**
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. There are no ecological constraints re: intertidal biota as per recommended cleanup measures.

SHPO SIGNATURE: J. David McMahan DATE: 5/10/90

Subsurface Oil Observed: Yes X No _____ Maximum Depth 45+cm

**RECOMMENDATIONS:**

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

COMMENTS: Recommended treatment includes 1)manual removal of patties and vegetation, 2) mechanically till areas as indicated on attached sketch, 3) spot wash, and 4) bioremediate after tilling. Line stream bed and waterline with pom pom boom during mechanical work. Work should be conducted between 5/15 and 7/10 and with ADF&G approval of tilling and bioremediation of stream banks.

TAG COMMENTS: MANUALLY RAKE SURFACE OILED SEDIMENTS AWAY FROM THE STREAM, PARTICULARLY WHERE BANKS ARE STEEP IN THE VICINITY AS INDICATED ON SKETCH. MANUALLY REMOVE TARMATS ON EAST BANK OF STREAM.

TAG APPROVAL DATE: 5/10/90
ADEC ART WEINER
EXXON ANDY TARR
NOAA Burl Wescott
USCG D. D. KOME

FOSC: _____ DATE: 5-14-90

NOTIFY CVC 24 HRS. IN ADVANCE OF WORK

# PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G John Morison 267-2324

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 July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D Esther Hatchery release (4/15 to 6/1)
1E Main Bay Hatchery release (4/20 to 6/10)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or 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: 1E ADF&G Larry Peltz 424-3214
1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzomoto 424-7511

1I Gill net area (6/7 to 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 unoiled 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

3P Harbor seal and sea lion pupping (5/15 to 7/1)
3Q Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of 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
ADF&G Don Calkins 267-2403

5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

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AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Rothy 267-2206

5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

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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 Subsistance area: Salmon harvesting (5/1 to 9/30)
7HH Finfish harvesting
7II Deer harvesting (8/15 to 2/28)
7JJ Invertebrate harvesting
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

46/53

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA 018 SUBDIVISION: 16780 DATE 4/22/90

**USCG**
NAME Cwo McMahon SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

1. MANUAL CLEAN-UP; REMOVE + BAG MOUSSE & ASPHALT AND OILY DEBRIS length of stream to forken log
2. Bioremediation right side bank.
3. CAUTION !!! HOT WATER WASH RIGHT BANK (100 KPA ONSHORE) [THIS IS POSSIBLE REMOVAL OPTION — NOT NECESSARILY SUGGESTED]

~~ADF&G~~ ADEC Michael Wiedmer
NAME ~~No Team Member~~ SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

REFER TO ~~ADF&G~~ ANADSCAT OBSERVATIO AND RECOMMENDATIONS SUMMARY FOR THIS DATE.

**LAND MANAGER**
NAME No Team member SIGNATURE _____

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

2/55

Alaska Department of Fish and Game

ANADSCAT Observations and Recommendations
Team 18 - Michael Wiedmer and Tom Crowe

22 April 1990

ASC # 226-40-16780

Segment LA-018 (Sleepy Bay)

Observations This site was very heavily oiled last year and remains a heavily impacted site. Nearby deposits of mobile oil are a source of chronic recoiling of the stream channel. Within the upper intertidal portion of the channel, both banks have bands of recently (< 5 days) deposited oil and oily debris. Along the low-mid-intertidal east bank of the channel are relatively recent heavy surface deposits of mousse.

A band of oiled substrate crosses the stream channel in the upper intertidal zone. Cascading oiled gravels and cobbles cover the western upper-intertidal bank and the adjacent submerged portion of the stream channel. Multiple pits east of the channel did not reveal significant quantities of oil adjacent to the stream. However, the upper- and mid- intertidal portions of the beach west of the channel contain large amounts of buried oil. This pattern is consistent with the sites of oiled gravel removal conducted last year (oiled gravel was removed east of the channel but not west of the channel).

The level of substrate oiling increases west from the stream. An extremely heavy deposit of mobile oil begins approximately 50 meters from the channel. This deposit is a likely source for the chronic re-oiling of the stream channel.

Although mostly covered by snow, limited observations indicate that the storm berms on either side of the channel contain significant amounts of oil and oily debris. Heavily stained cobbles and boulders are densely distributed throughout the upper- and mid-intertidal zones.

Treatment Recommendations Nearby sources of chronic re-oiling must be thoroughly treated prior to cleaning the immediate stream area. All surface mousse and tar deposits on and near the stream bank and within the stream channel should be manually removed. The oil deposit west of the channel should be hot washed, mechanically tilled, and hot washed again. This would be a very appropriate location to apply mechanical gravel washing techniques, should they become available.

# SHORELINE OILING SUMMARY (NAD.) 49/55

OG William Reid USCG McMahon SEGMENT ST/ LA018
BIO Michael Fawcett LAND REP Tom Grove ADFG STRATA 226-10-16708 OF
EXXON Gus Garcia ADFG Mike Wiegert Time 14:38 to 16:20
TEAM NO. 15 TIDE LEVEL 9.5 ft DATE 23 / APR / 90
EST. SUBDIVISION LENGTH: 20 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
SURVEYED FROM: ~~☒~~ Foot ☐ Boat ☐ Helo
SURFACE SEDIMENTS: R ___ % B 10 % C 65 % P 25 % G ___ % S ___ % M ___ % V ___
SLOPE: Lang 80 % Hang 20 % Vert ___ % WAVE EXPOSURE: ☐ Low ☒ Med ☐ Hi
OIL CATEGORY LENGTH: W ___ m M 30 m N 50 m VL ___ m NO ___

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AC | AB | P | A | | | | | | SU | M | MB | U |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | | | | | | | | | | |
| COVER | X | | | | X | | | | | | X | | |
| COAT | X | | | | | | | | | | | | |
| STAIN | X | | | | | X | X | | | | X | X | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | X | | | | X | | | | | | X | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | | | | | | | | | | |
| NO OIL | | | | | | | | | | X | | | X |

PAVEMENT H F S 0 sq. m by 0
PATTIES / TARBALLS ___ B
NEAR SHORE SHEEN? (NO) BR RW SL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | X | | |
| Vegetation | X | | |
| Trash | X | | |
| Debris | | | |

Did you Col DEBRIS ☐ YES ☐ NO
TYPE ___
#BAGS ___

Photographs:
Roll No. ___
Frames ___

## SUBSURFACE OIL

| | PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SHEEN (Y/N) | ▼ | SURFAC SUBSURF SEDIMEN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | OP | OR | OL | OF | MO | | SO | BO | | | | | | SU | M | MB | U | | | | |
| * | 1 | 40 | | X | | | | 0-30 | | X | | | | X | | | | X | | | N | | P/G/C |
| * | 2 | 40 | | X | | X | | 0-30 | | X | | | | X | | | X | | | | N | | P/G/C |
| | 3 | 50 | | | | | X | · | | | | | | | | | X | | | | N | | P/G/C |
| | 4 | 40 | | | | | X | · | | | | | | | | | X | | | | N | | P/C |
| | 5 | 35 | | | | | X | · | | | | | | | | | X | | | | N | | P/C/C |
| * | 6 | 30 | | | | X | | 0-15 | | X | | | | X | | | | X | | | N | | P/G/C |

COMMENTS

REVIEWED JW DATE 4-24-

50/55

## SHORELINE OILING SUMMARY (PAGE 2)

SEGMENT ST/ LA-18 STREAM [illegible] OF [illegible]

226-40-16780

### SUBSURFACE OIL (CONTINUED)

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL cm-cm | BELOW | | OILY FILM COLOR | | | | | PIT ZONE | | | | ANA | SCREEN (Y/N) | | SURFAC SUBSURF. SEDIMEN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CP | CR | CL | CF | NO | | WO | SO | [illegible] | | | | | SU | SI | SS | U | | | | |
| * 7 | 15 | | X | | | | 0-10 | | X | X | X | | | | | | X | | | Y | | P/C |
| 8 | 30 | | | | | X | | | | | | | | | | | X | | | N | | A/C |
| * 9 | 45 | | X | | | | 0-45 | X | | | X | | | | | X | | | | N | | P/C/G |
| | | | | | | | | | | | | | | | | | | | | | | |
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COMMENTS

* OILED INTERVAL <5cm IN PITS 1, 2, 6, 7, 9 DOES NOT CONSTITUTE SUBSURFACE

47/55

ADF&G MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: BS (SS) CS TS AVS SCAT MMIS PTA 2 REGION: (PWS) KP,CI K,AP

METHOD: Aerial (Ground) Boat

3 DATE: 4/22/90 15 HIGH TIDE TIMES: 1205 / — 21 TEAM RECORDER: M. WEGNER

4 START TIME: 1430 16 HIGH TIDE HTS: 10.0' / — 22 OBSERVERS: T. CROWE

5 STOP TIME: 1605 17 LOW TIDE TIMES: 0603 / 1814 23 AGENCY: ADF&G

6 SEGMENT #: LA-018 18 LOW TIDE HTS: 1.0' / 0.7' 24 PHOTOS TAKEN: Y (N)

7 STATION #: 226-40-16780 19 TIDE HT AT SURVEY: 2.67' Roll #: _____ Frame: _____

8 K-UNIT: _____ (Ebb) Slack Flood Slack 25 VIDEO TAKEN: Y (N) TAPE#: _____

9 STAT AREA: _____ 20 USGS QUAD: SEWARD A3 Start: _____ End: _____

10 LAT: _____ 11 LONG: _____ 26 SAMPLES TAKEN? Y (N) Number

12 SOURCE: Map Loran Oil _____

13 LOCATION: SLEEPY BAY, NORTH END LATOUCHE I. Sediment _____

14 DESCRIPTION: _____ Biological _____

Water _____

EXTENT OF OIL

| | SHORELINE L | W | Ht | % | STREAM L | W | Ht | % |
|---|---|---|---|---|---|---|---|---|
| 27 SURFACE COVERAGE | 100 | 150 | | 75 | 150 | 3 | | 10 |
| 28 SURFACE THICKNESS | 1 mm | <1 mm | 3 cm | 1 mm | 2 mm | 4 mm | | |
| 29 PENETRATION | 15 cm | 30 cm | 45 cm | 1 cm | 5 mm | 1 mm | | |

36 CATALOGED ANAD. FISH STREAM? (Y) N

37 CATALOG #: 226-40-16780

38 STREAM NAME: SLEEPY BAY

39 OIL IN STREAM BED? (Y) N

40 OIL ON STREAM BANKS? (Y) N

30 OVERALL OIL IMPACT: N VL L M (H)

41 OIL ON BEACH ADJACENT TO MOUTH? (Y) N (within 50 meters)

31 OIL TYPE: Pooled (Mousse) (Tar) Asphalt (Sticky) (Stain)

42 OIL WITHIN 1 MILE OF STREAM? (Y) N

32 OILED DEBRIS? (Y) N Where: _____

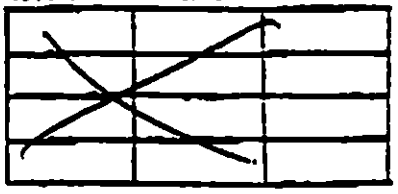
33 SHORELINE TYPE: Headland Low-lying Rocks Beach (Cove) Lagoon Marsh

43 ANADROMOUS FISH PRESENT? (Y) N FRY PRESUMED

34 WAVE EXPOSURE: High (Moderate) Low

44 ANADROMOUS FISH OBSERVATION

35 SUBSTRATE TYPE: Bedrock _____ Boulder 20 Cobble 40 Gravel 40 Sand _____ Mud/silt _____




COMMENTS: VERY HEAVILY IMPACTED SITE WITH VERY RECENT REGULANCE. BOTH BANKS OF THE CHANNEL IN THE UPPER INTERTIDAL ZONE HAVE BEEN OILED IN THE PAST 5 DAYS. SOURCE OF OIL LIKELY TO BE HEAVILY OILED SUBSTRATES 100m+ WEST OF CHANNEL. OILED SUBSTRATE IN 10m+ BAND ACROSS STREA

LA-018
226-40-16780 48/52

48 PHOTOLOG

RIVER(S)

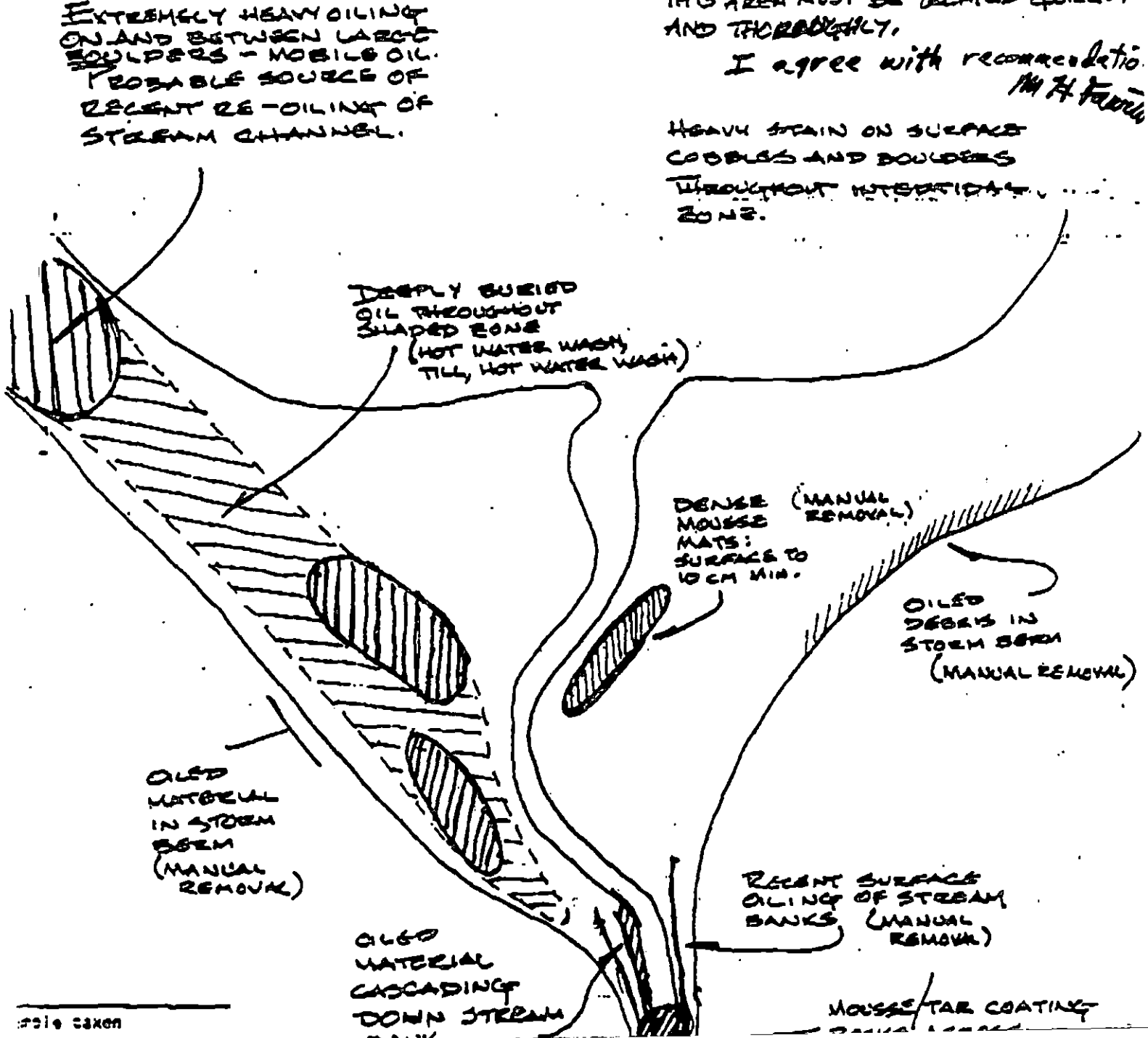
MANUAL DESCRIPTION

RECOMMENDATIONS: A REMOVAL OF ALL SURFACE OIL ADJACENT TO STREAM. MANUAL REMOVAL OF OILED SEDIMENTS WITHIN STREAM CHANNEL IN UPPER INTERTIDAL ZONE. MANUAL REMOVAL OF OILED MATERIAL IN STREAM BERM.

IN MID AND UPPER INTERTIDAL ZONE TO WEST OF CHANNEL WHERE OIL PENETRATES DEEPLY INTO SUBSTRATE RECOMMEND HOT WATER WASH - TILLING - HOT WATER WASH. ALTHOUGH THE HEAVIEST OIL IN OF THE STREAM IS OUTSIDE THE ANADROMOUS FISH STREAM ZONE, IT IS A PROBABLE SOURCE OF THE OIL WHICH IS CONTINUOUSLY ENTERING THE STREAM. THIS AREA MUST BE TREATED QUICKLY AND THOROUGHLY.

I agree with recommendation
[illegible]

48 OIL DISTRIBUTION DIAGRAM




File Exxon

OG V. AH REID

SEGMENT ST/ LA018

STREAM 226-40-16780

DATE 12/APR 90

5/1/55

SCAT TEAM P.49

TO

EXXON CHD CORDOVA

APR-23-1990 19:13 FROM

**CHECKLIST**

- N Arrow
- Approx. Scale
- Segment Ends
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. Hnd/Lnd
- Soil
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

**LEGEND**

- Pit - No Subsurface Oil
- Pit - Subsurface Oil
- CT/C Continuous Distribution
- CT/B Broken Distribution
- CT/P Patchy Distribution
- CT/S Splashed Distribution
- Oiled Vegetation
- Photo location, direction, and number

## SKETCH MAP

MANUALLY REMOVE PATTIES & OILED VEGITATION

MECHANICALLY TILL TO EXPOSE OILED GRAVELS / SEDIMENTS

SPOT WASH & BIOREMEDIATE

401

SUBDIVISION

TAR PIT

COVER

SHATTERED LOGS & VEG

STAIN

1A

1B

1C

2

4

5

6

7

8

9

10

MANUAL PICK UP OF TARMAT

LINE STREAM BED WITH BOOM DURING WORK

4 CONTAINERS

MANUAL RAKE OILED SEDS AWAY FROM BANKS

SPOT WASH + TRIM

1A WIPE

RE-OILED

99

Oil Character Length (m): AP____ PO____ CV____ CT____ ST____ MB____ PT____ TB____ FL____ NO____

# ANADROMOUS FISH STREAM EVALUATION ADDENDUM

## CONSTRAINTS FOR STREAM NO. 226-40-16780

## SEGMENT LA-18 SUBDIVISION A

| WORK WINDOW | |
|---|---|
| Manual Pickup* | |
| Tarmat Removal | OPEN |
| Spot Washing | |
| Other Approved Treatment | WORK PRIOR TO 8/15 |
| Bioremediation | |
| Manual Raking | ADF&G MONITOR REQ. |
| Mechanical Tilling | WORK PRIOR TO 7/10 |

* EXXON 'A' STUDY SITE # AP-13 - DO NOT REMOVE STAKES FROM BACK OF INTERTIDAL ZONE

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

| | | |
|---|---|---|
| **1A,1B** | **Salmon Stream** | This subdivision is closed to bioremediation, manual raking, and mechanical tilling less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation, manual raking, and mechanical tilling are permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation, manual raking and mechanical tilling more than 100m from stream. No constraint to manual pickup, tarmat removal, spot washing and other approved treatment. |
| **7II** | **Subsistence: Deer Harvesting** | Closed to bioremediation, manual raking, mechanical tilling, spot washing, and other approved treatment after 8/15. No constraint to manual pickup and tarmat removal. |

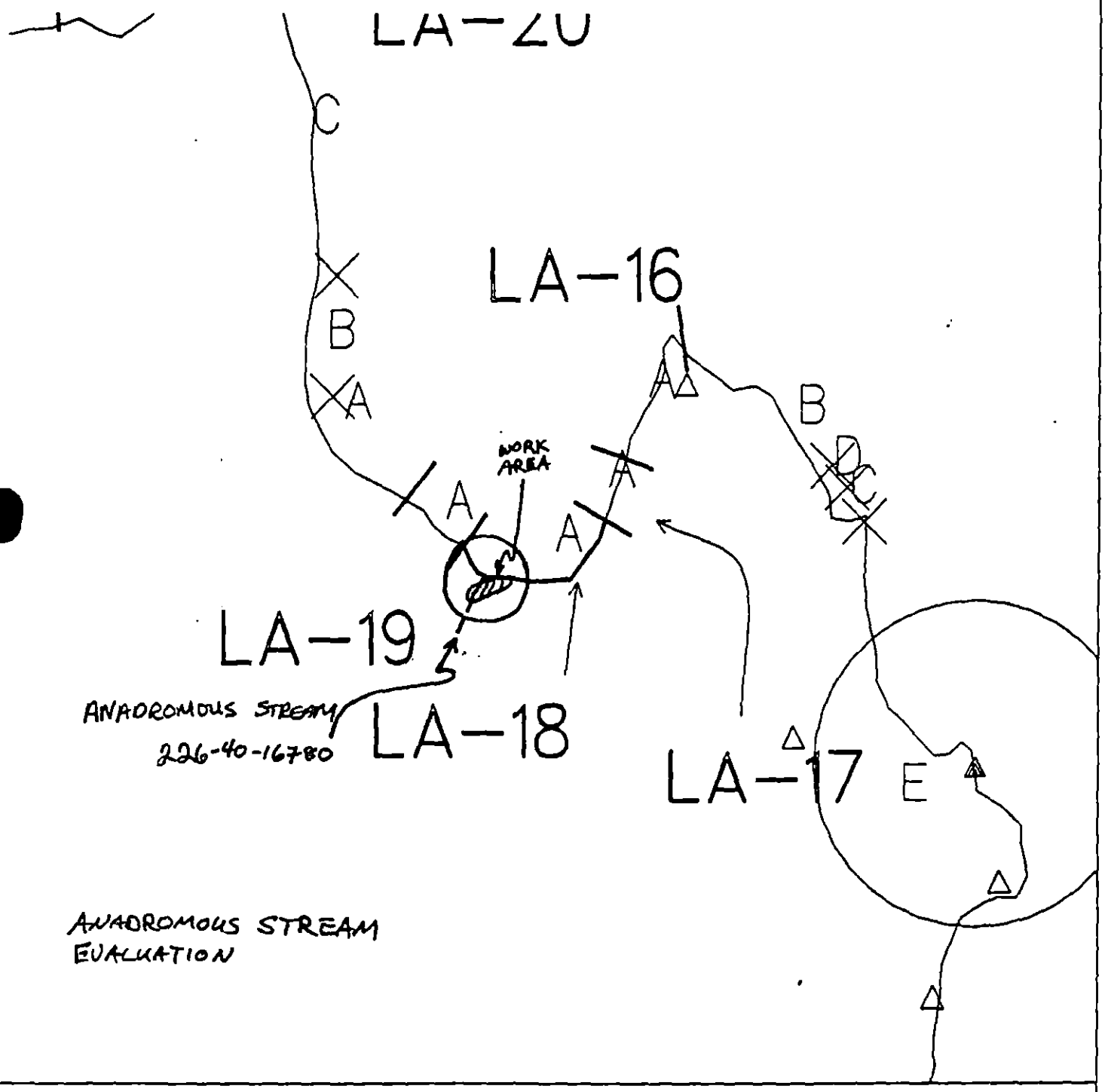
OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. No flushing of pollutants or sediments into stream drainage; do not allow inipol to enter stream flow. On-site examination and consultation by ADF&G monitor is required prior to bioremediation in order to authorize a setback distance from the stream during chemical application; if ADF&G monitor's presence is impossible, authorization may be given by the ADEC monitor. Restrict boat and air traffic and beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

**SEE SUBDIVISION CONSTRAINT ADDENDUM LA-18A FOR ADDITIONAL CONSTRAINT INFORMATION**

FOSC _____ Date 6-10-90

Prepared by _____ 6-10-90 Date 6/10/90




EXXON

Exxon Company, USA
Map Key: PWS-LA-18
June 04, 1990

# ECOLOGY MAP
## SEGMENT LA-18
SUBDIVISION A (1 of 1)

METERS

0 — 361 — 736

★ Seabird Colony
△ Active Eagle Nest
△ Inactive Eagle Nest

1 inch = 1186 feet

# SHORELINE EVALUATION

SEGMENT ST/LA-19 (REVISED) SUBDIVISION A (1 OF 1) DATE 4/2/90
4/27/90 (REVISED)

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**
6U Recreation: Tent sites (6/1 to 9/15)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
Sensitivity code and general time constraints. See attached Ecological sheet for specific constraints and contacts.

**SUBDIVISION ECOLOGICAL CONSTRAINTS:**

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. No additional constraints.

SHPO SIGNATURE: Kathleen Ome DATE: 5/18/90

**OILING CATEGORIZATION:**

Wide 149 m: Medium 0 m: Narrow 20 m: V.Light 17 m: No Oil 0 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 15cm

**RECOMMENDATIONS:**

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

COMMENTS: Recommended treatment includes: 1) manual removal of pavement, TRASH, and pooled oil, spot wash if not accessible, 2) bioremidate continuous and broken coat in UITZ and MITZ as indicated on attached sketch map. Work before 8/15 based on constraints.

TAG COMMENTS: MONITORS TO ASSESS COCS

TAG APPROVAL DATE: 5/17/90.
ADEC ART WEINER Art Weiner
EXXON ANDY TEAL
NOAA Gary Petrae Gary Petrae
USCG G.A. BREITER G.A. Breiter
FOSC: _____ DATE: 6-19-90

CVC Land manager to be present during clean up

# PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A **Salmon stream mouth - fry outmigration (3/1 to 5/15)**
1B **Salmon stream mouth - spawning (7/10 to 8/31)**
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G John Morison 267-2324

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 July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D **Esther Hatchery release (4/15 to 6/15)**
1E **Main Bay Hatchery release (4/20 to 6/15)**
1F **Sawmill Bay Hatchery release (4/15 to 6/1)**
1G **Cannery Creek Hatchery release (4/21 to 6/1)**
1H **Remote release site**
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or 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: 1E ADF&G Larry Peltz 424-3214
1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzomoto 424-7511

1I **Gill net area (6/7 to 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 unoiled 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 **Harbor seal and sea lion pupping (5/15 to 7/1)**
3O, 3Q **Harbor seal and sea lion molting (8/15 to 9/15)**
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of 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
ADF&G Don Calkins 267-2403

5R **Seabird colony (5/1 to 9/1)**
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S **Shorebird/waterfowl concentration (4/1 to 5/15)**
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Rothy 267-2206

5T **All Bald Eagle nests (3/1 to 6/1)**
**Active Bald Eagle nests (3/1 to 9/1)**
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U **Recreation: Tent sites (5/1 to 9/15)**
6V **Anchorages (5/1 to 9/15)**
6W **Forest Service cabins (5/1 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**
**Deer harvesting (8/15 to 2/28)**
**Invertebrate harvesting**
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

LA-18 & LA-19 4/27/90

Note: This is a Revised Segment

The boundary on the computer generated maps was incorrectly positioned between these two segments. The original SSAT reports reflect the incorrect boundaries. The attached revised SSAT Reports have been prepared by the original SSAT team members and reflects an adjustment of boundary position only and not a change of observations All information on the original SSAT reports are included on the revised reports, however some information was moved from one segment to the other as necessary. Sketch maps, percentages and measurements have been adjusted accordingly.

LA-19
Revised

Revised 4/27/90

# SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Reimer USCG Hubbard SEGMENT ST/ LA-19
BIO Zamora LAND REP Selanoff (CUC) SUBDIVISION A
EXXON Garcia ADEC Martin TIME 13 : 30 to 14 : 30
TEAM NO.: 16 TIDE LEVEL: +0 to +1.5 DATE 4 / 2 / 90
EST. SUBDIVISION LENGTH: 174 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock Snow
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: East to West
SURFACE SEDIMENTS: R 25 % B 45 % C 25 % P 5 % G 0 % S 0 % M 0 % V 0 %
SLOPE : Lang 80 % Hang 20 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W 129 m M 0 m N 15 m VL 30 m NO 0 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION /C | /B | /P | /S | OIL / FILM COLOR SBL/BR | DBL/RW | OY/SL | DBR/TL | LBR | IMPACTED ZONES SU | UI | MI | LI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ASPHALT PAVEMENT | | X | | | | | | X | | | | X | |
| POOLED | | X | ✓ | o | | | | X/o | | | X/o | X/o | |
| COVER | | | | | | | | | | | | | |
| COAT | ✓ | X | | | | X/ | | | | | X/ | X/ | |
| STAIN | | X | ✓ | | | X/ | | | | | X/ | X/ | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | | | | | | | | | | |
| NO OIL | | | | | | | | | | - | | | X |

SNOW

PAVEMENT: H F (S) 32 sq. m by 5 cm

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | X | | |
| Vegetation | | | |
| Trash | X | | |
| Debris | | | |

DEBRIS COLLECTED ☐ YES ☒ NO

TYPE

#BAGS

Photographs:

Roll No. 51-16-3

Frames 23-26, 30 & 31

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER OP | OR | OL | OF | NO | OILED INTERVAL (cm-cm) | BELOW UO | UC | OIL / FILM COLOR SBL/BR | DBL/RW | OY/SL | DBR/TL | LBR | PIT ZONE SU | UI | MI | LI | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15 | | X | | | | 5-15 | X | | | | | X | | | X | | | | PGSC |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |

COMMENTS Cobble, boulder armoring over pebble, granual, cobble substrate, Numerous rock outcrops throughout the segment. Oil distribution is fairly continuous over the whole segment. finer sediments are coated in most areas to 3-5 cm, surface boulders, cobbles and rocks have a discontinuous stain. Sections of asphalt Pavement are located in the eastern part of the segment (498m), and pooled oil is found around larger blocks and rocky outcrops. Snow cover the entire



REVIEWED JW DATE 4-30-90

Reimer

MENT ST/ LA-19

DIVISION A

E 4 / 2 90 (Revised 4/27/90)

CKLIST

Arrow
pprox. Scale
eg/Sub Bndry
ll Dist.
Width
ength
% Cover
ubstrate Character
st. HWL/LWL
SL
rofile Location(s)
rofile(s)
ll Location(s)
hoto Location(s)

GEND

o Subsurface Oil

Subsurface Oil

CT/C
nuous Distribution

CT/B
n Distribution

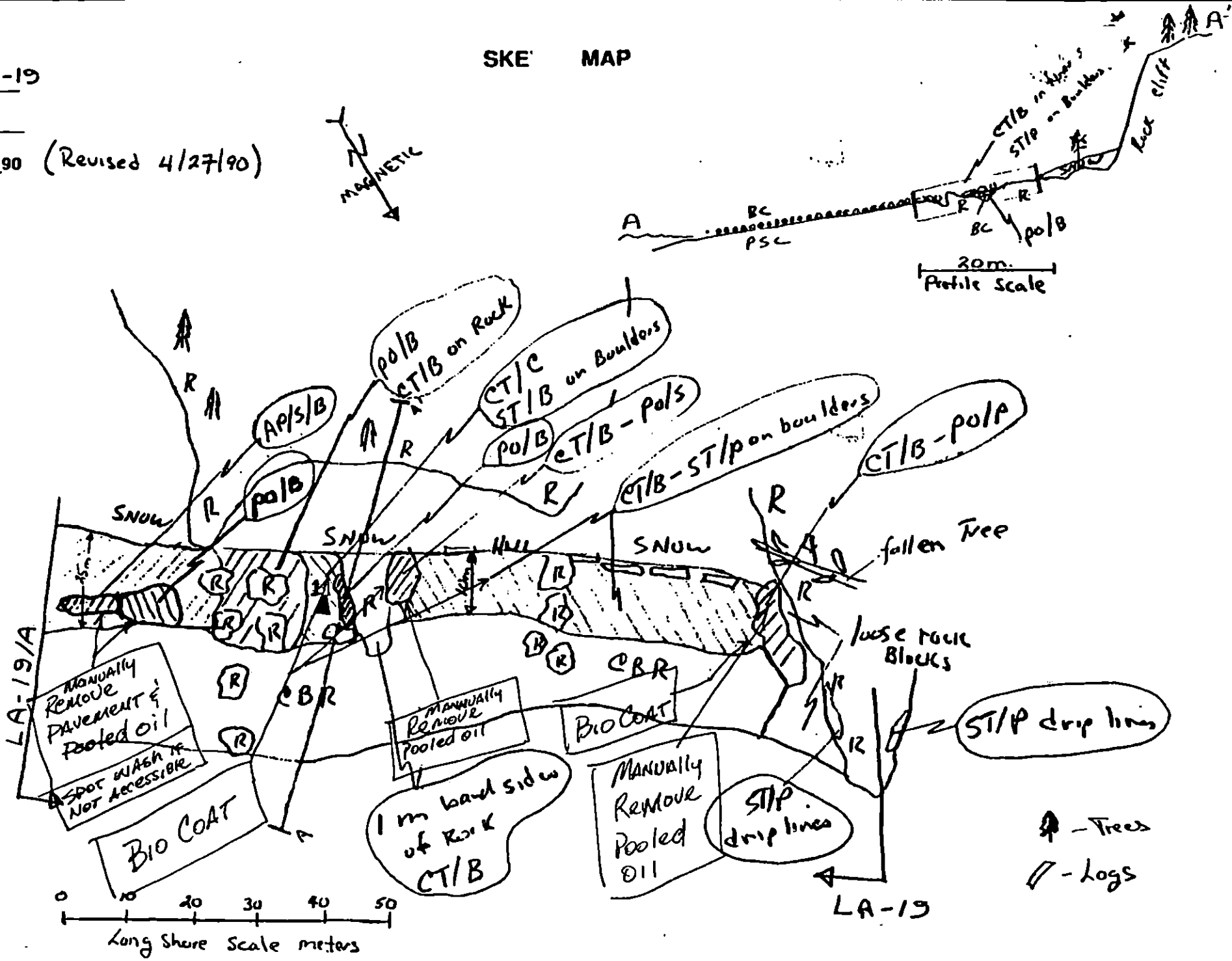
CT/P
y Distribution

CT/S
hed Distribution

Vegetation

location, direction, umber

# SKE MAP




aracter Length (m): AP 8 PO 20 CV ____ CT 130 ST 120 MS 0 PT 0 TB 0 FL 0 NO 0

REVISION 03/31/88




LA-19
Revised (4/27/90)

# SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / LA 19 (1300 ON) Subdivision – Date (mo / day / yr) 4 / 2 / 90

Time ( 24 hr ) 1440 OFF Biologist TONY ZAMORA

( A ) Substrate type and % of segments:
( 1 ) Bedrock 20 ( 2 ) Boulder 50 ( 3 ) Cobble 25 ( 4 ) Pebble 5 ( 5 ) Sand – ( 6 ) Silt –

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

Photographs:
Roll No. ST-16-3
Frames 23 - 26, 30 & 31

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | ② | 2 | X | X | 2 | X | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | X | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | X | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | X | X | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | X | X | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | X | 4 | X | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

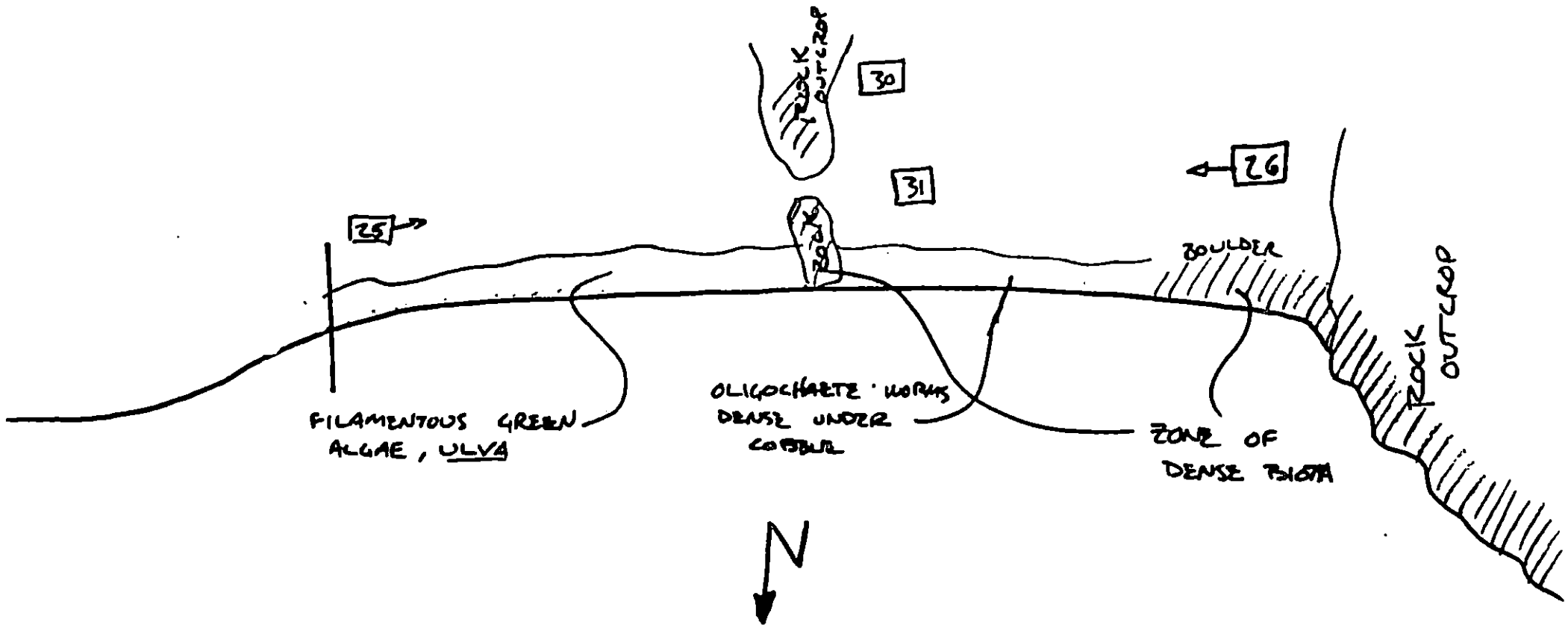
**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | X | X | 2 | 2 | X | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

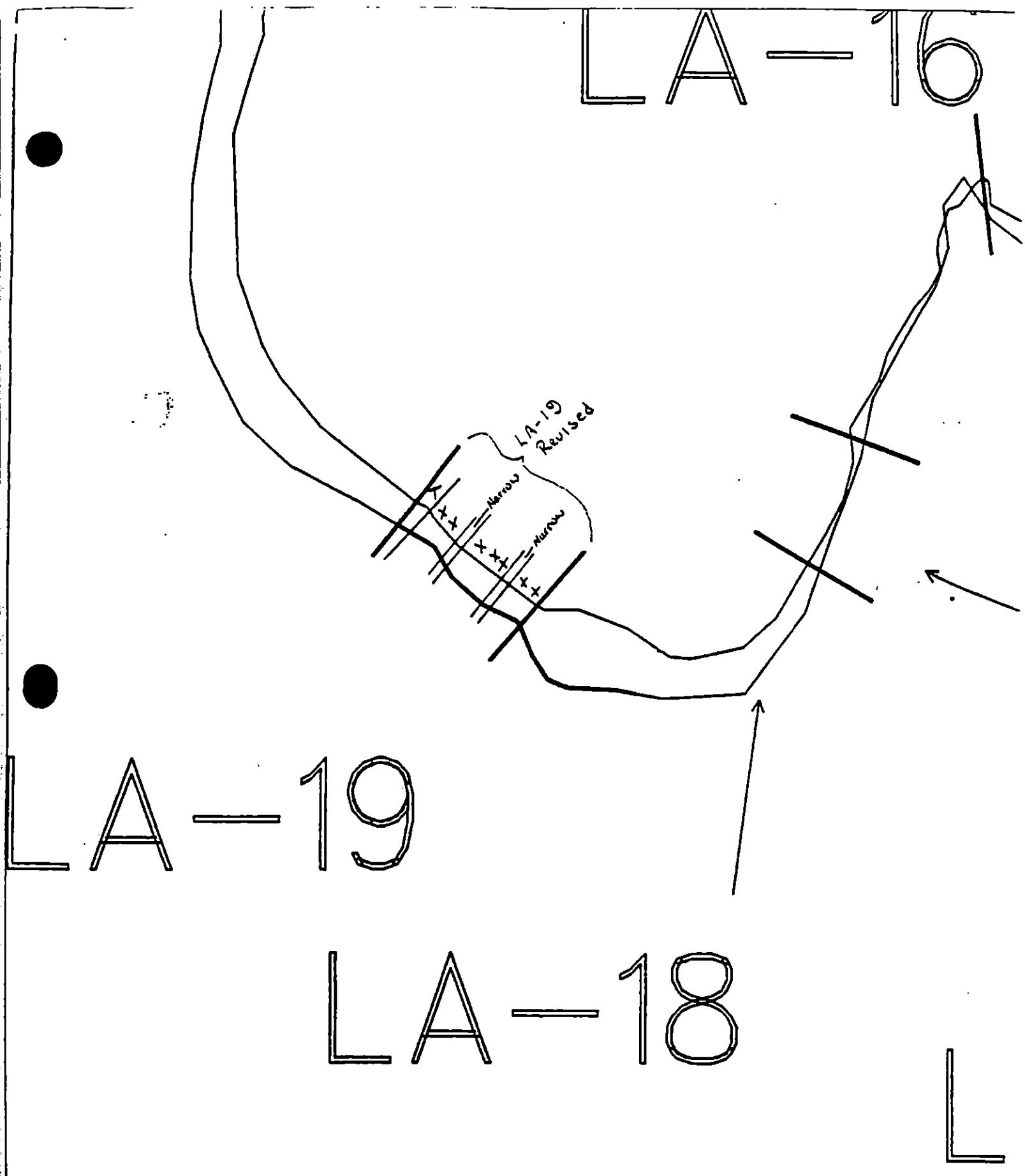
**Wildlife Observations/ General Comments:**

- ONLY UPPERMOST MARGIN OF LOW ZONE EXPOSED.
- DENSE BIOTA ON BOULDERS AT WEST END AND ON ROCK OUTCROP.
- UPPER ZONE HAS TRACE FILAMENTOUS GREEN ALGAE WHICH BECOMES THICK IN MID ZONE.
- DIVERSE COMMUNITY ON BOULDERS AT WEST END – GUNNELS, PALMARIA, LEPT. POLYSYPHONIA, ULVA, PAGURIDS (SEXUALLY ACTIVE), HALOSACCION, ACMAEIDS, LITTOR CHTHAMALUS, LEPTASTERIAS, CHITONS (INCLUDING TONICELLA), BENSE BRYOZOANS, SKYROBIDS, SHEEN OBSERVED ON TIDE POOLS.
- 100% MORTALITY OF OIL COATED BARNACLES IN HIGH ZONE.
- WILDLIFE – DEER TRACKS, EAGLE




# LA-19

PHOTO LOCATIONS & BIOTA




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

LA-19

ADEC Segment Length: 373m

0 100 200 300

Revised 4/27/90
Map Key: PWS-425
Name: Reimer
Date: 4/2/90

# ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT LA-19 SUBDIVISION A ( 1 of 1 )

| WORK WINDOW | |
|---|---|
| Manual Pickup<br>Tarmat Removal | **OPEN** |
| Bioremediation<br>Spot Washing<br>Other Approved Treatment | **WORK PRIOR TO 8/15** |

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

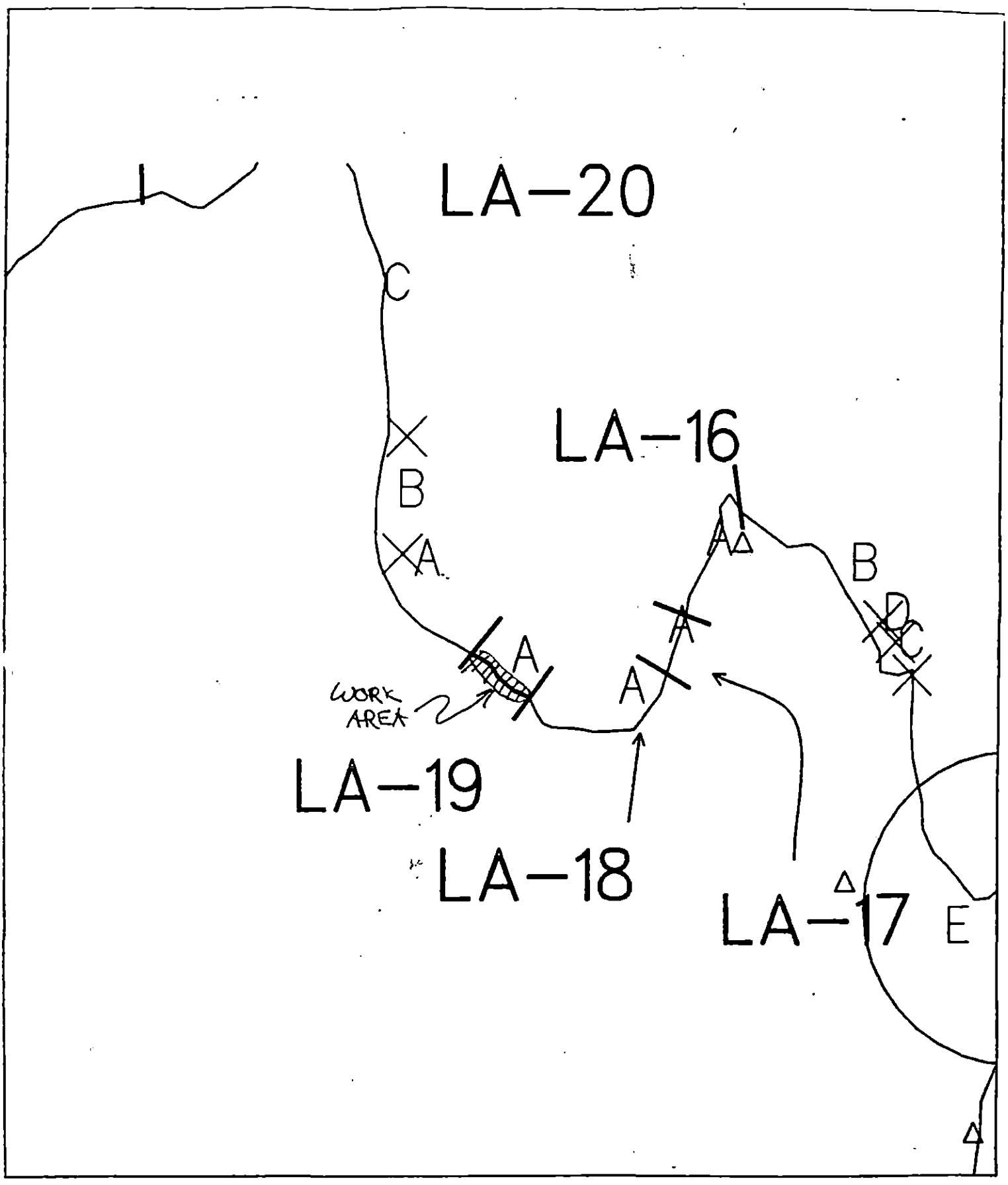
| | | |
|---|---|---|
| 711 | **Subsistence: Deer Harvesting** | Closed to bioremediation, spot washing, and other approved treatment after 8/15. No constraint to manual pickup and tarmat removal. |

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC _____ Date _____

Prepared by _____ Date 6/14/90




EXXON

Exxon Company, USA
Map Key: PMS-LA-19
June 09, 1990

# ECOLOGY MAP
## SEGMENT LA-19
SUBDIVISION A (1 of 1)

METERS
0 334 668

★ Seabird Colony
▲ Active Eagle Nest
△ Inactive Eagle Nest

1 inch = 1095 feet

# SHORELINE EVALUATION

SEGMENT ST/ LA-20 SUBDIVISION A (1 OF 4) DATE 4/2/90

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

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

SHPO SIGNATURE: Pauline Johnson DATE: 5/22/90

**OILING CATEGORIZATION:**

Wide 244 m: Medium 78 m: Narrow 0 m: V.Light 0 m: No Oil 41 m
Subsurface Oil Observed: Yes X No ___ Maximum Depth 40+ cm

**RECOMMENDATIONS:**

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

COMMENTS: Recommended treatment includes 1)*reassessment of oiling conditions immediately prior to treatment, 2) removal of tarmats and oiled debris, 3)*mechanical relocation of UITZ sediments to MITZ followed by bioremediation. Work should be conducted after 6/1 and with permission of USFWS due to eagle nesting constraint.

TAG COMMENTS: ___

TAG APPROVAL DATE: 5/18/90.
ADEC Art Weiner Art Weiner
EXXON Andy Teal
NOAA Gary Petrae
USCG G.A. Reiter G.A. Reiter
FOSC: [signature] DATE: 6/26/90

# PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

| | | |
|---|---|---|
| 1A | | Salmon stream mouth - fry outmigration (3/1 to 5/15) |
| 1B | | Salmon stream mouth - spawning (7/10 to 8/31) |
| | | No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits. |
| 1C | | Salmon fry nursery area (4/31 to 7/31) |
| 1D | | Esther Hatchery release (4/15 to 6/1) |
| 1E | | Main Bay Hatchery release (4/20 to 5/10) |
| 1F | | Sawmill Bay Hatchery release (4/15 to 6/1) |
| 1G | | Cannery Creek Hatchery release (4/21 to 6/1) |
| 1H | | Remote release site |
| 1I | | Gill net area (6/7 to 6/31) |
| 1J | | Purse seine area (7/20 to 9/30) |
| 1K | | Purse seine hook-off (7/20 to 9/30) |
| 1L | | Set net sites (6/11 to 7/25) |
| | | For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints. |
| 2M | | Herring spawning (4/1 to 6/15) |
| | | Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations. |
| 3N, 3P | | Harbor seal and sea lion pupping (5/15 to 7/1) |
| 3O, 3Q | | Harbor seal and sea lion molting (8/15 to 9/15) |
| | | Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. |
| 5R | | Seabird colony (5/1 to 9/1) |
| | | Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment. |
| 5S | | Shorebird/waterfowl concentration (4/1 to 5/15) |
| | | Restrict all activity to essential minimum, especially air traffic. |
| 5T | | All Bald Eagle nests (3/1 to 6/1) |
| | | Active Bald Eagle nests (3/1 to 9/1) |
| | | Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates. |
| 6U | Recreation: | Tent sites (6/1 to 9/15) |
| 6V | | Anchorages (6/1 to 9/15) |
| 6W | | Forest Service cabins (6/1 to 9/15) |
| 6X | | Lodge (6/1 to 9/15) |
| 6Y | | Special use destination |
| 7Z | Subsistence area: | Salmon harvesting (5/1 to 9/30) |
| 7HH | | Finfish harvesting |
| 7II | | Deer harvesting (8/15 to 2/28) |
| 7JJ | | Invertebrate harvesting |
| | | For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints. |

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA-20 SUBDIVISION: A DATE 4/2/90

**USCG**
NAME Randolph M Hubbard SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED
COMMENTS

**ADEC**
NAME J. LYNN MARTIN SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED
COMMENTS

SEE ATTACHED SHEET

**LAND MANAGER**
NAME Patrick SCHAEFF SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Regardless of the changes that are taking place here, oil will be here for a long time. If we do not intervene, because it is embedded so deep.

a

FIELD SHORELINE COMMENTS LA-20A

ADEC

J. LYNN MARTIN J. Lynn Martin

AGREE WITH EXXON OPS. RECOMMENDATION FOR RE-ASSESMENT OF AREA AT A LATER DATE, DUE TO MOVEMENT OF STORM BERM ON BEACH.

ON 4-2-90 THE TEAM CONDUCTED SURVEY OF LA-20A, NOTED A HEAVY BAND OF SUBSURFACE OIL IN THE UI TO STORM BERM OIL CONSISTED OF THICK MOUSSE MIXED WITH KELP. TEST PITS WERE DUG AND REVEALED THAT THE OIL STARTED ABOUT 15 CM. DOWN AND EXTENDED < 40 cm.

ON 4-6-90 THE TEAM LANDED ON LA-20-A TO UNLOAD GEAR AND FINISH THE REST OF SEGMENT LA-20. NOTED THAT STORM BERM HAD MOVED DOWN TO THE LOWER PART OF THE UI. SUBSURFACE OIL NOTED ON 4-2-90 WAS NOW VISIBLE ON SURFACE WHICH SUGGESTS AREA NEEDS RE-ASSESMENT AT A LATER DATE TO DETERMINE BEACH CHARACTERISTICS AND OIL PENETRATION.

# SHORELINE OILING SUMMARY

REVISION NO. 2

OG Reimer USCG Hubbard SEGMENT ST/ LA-20
BIO Zamora LAND REP Schanoff (CVC) SUBDIVISION A (1 of 4)
EXXON Garcia ADEC Martin TIME 14 :45 to 16 :00
TEAM NO.: 16 TIDE LEVEL: +1.75 to +2.5 DATE 4 / 2 / 90
EST. SUBDIVISION LENGTH: 360 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☒ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock Snow
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
SURFACE SEDIMENTS: R 0 % B 20 % C 60 % P 20 % G 0 % S 0 % M 0 % V 0 %
SLOPE : Lang 100 % Hang – % Vert – % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
OIL CATEGORY LENGTH: W 200 m M 60 m N 0 m VL 0 m NO 40 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | /C | /S | /P | /S | | | | | | SU | UI | MI | LI |
| ASPHALT PAVEMENT | | X | | | | | | X | | | X | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | X | | | | | | X | X | | X | | |
| COAT | | | | | | | | | | | | | |
| STAIN | | | | | | | | | | | | | |
| MOUSSE | | | X | | | | | | X | | X | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | | | | | | | | | | |
| NO OIL | | | | | | | | | | - | | X | X |

SHOW

PAVEMENT: H F (S) 20 sq. m by 5 cm
PATTIES / TARBALLS 0 BAGS
NEAR SHORE SHEEN? NO BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | X |
| Vegetation | | | X |
| Trash | X | | |
| Debris | | | |

DEBRIS COLLECTED ☐ YES ☒ NO
TYPE 0
#BAGS 0

Photographs:
Roll No. 55 - 16 - 34
Frames 32 - 35, 1-11

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm-cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | | UO | UC | | | | | | SU | UI | MI | LI | | |
| 1 | 30 | | | | | X | - | | | | | | | | | X | | | | PG |
| 2 | 45 | | | | | X | - | | | | | | | | | | X | | | PG |
| 3 | 40 | X | | | | | 35 - 40 | X | | | | | X | | | X | | | | PC |
| 4 | 30 | X | | | | | 15 - 30 | X | | | | | X | | | X | | | | PC |
| 5 | 40 | X | | | | | 38 - 40 | X | | | | | X | | | | X | | | PG |
| 6 | 30 | X | | | | | 25 - 30 | X | | | | | X | | | X | | | | C |

COMMENTS moderate slope high energy beach. Surface Sediments are in the pebble, cobble size range @ the south end of the segment, but coarsen to boldars toward the north end. Pebbles, Granules, Sand and scattered cobbles found in the Subsurface. Surface oil was found @ the north end in the UIT, associated with the active storm berm. The majority of this is oiled Kelp mixed in with pebbles and Cobbles, covering an area 120 m x 3 to 6 m. The Subsurface oil (mousse) as shown by the pits, covers a much larger area - again this oiling is mixed with organics, Kelp and finer sediments.



REVIEWED JW DATE 4/9/90

3

# SHORELINE OILING SUMMARY (PAGE 2 of 2)

REVISION 05/22/90

SEGMENT ST/ LA-20 SUBDIVISION A

## SUBSURFACE OIL (CONTINUED)

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | (CM-CM) | UO | UC | | | | | | SU | UI | MI | LI | | |
| 7 | 60 | | | | | X | - | | | | | | | | | X | | | | PG-SC |
| 8 | 20 | | X | | | | 5 - 20 | X | | | | | X | | | X | | | | Cobble / Kelp |
| 9 | 20 | X | | | | | 12 - 17 | | X | | | | X | | | X | | | | PC |
| 10 | 20 | | | | X | | 5 - 20 | X | | X | | | | | | X | | | | C |
| 11 | 20 | | X | | | | 5 - 7 | | X | | | | X | | | X | | | | CPG-S |
| 12 | 40 | | X | | | | 10 - 35 | | X | | | | X | | | X | | | | G-P |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |

COMMENTS

REVIEWED JW DATE 4/9/90

OG Remer

SEGMENT ST/ LA-20

SUBDIVISION A

DATE 4 / 2 90

**CHECKLIST**

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

**LEGEND**

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

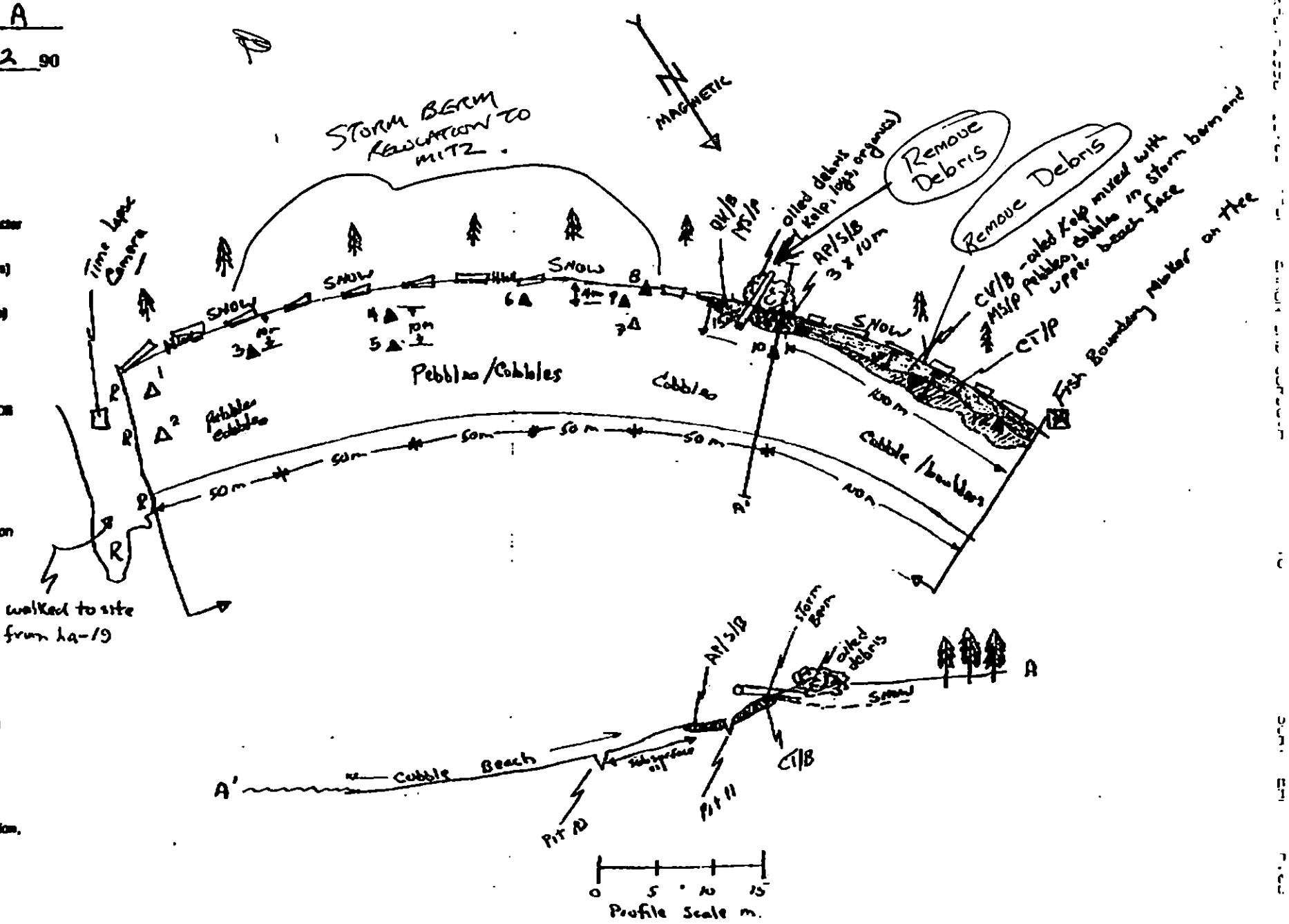
CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

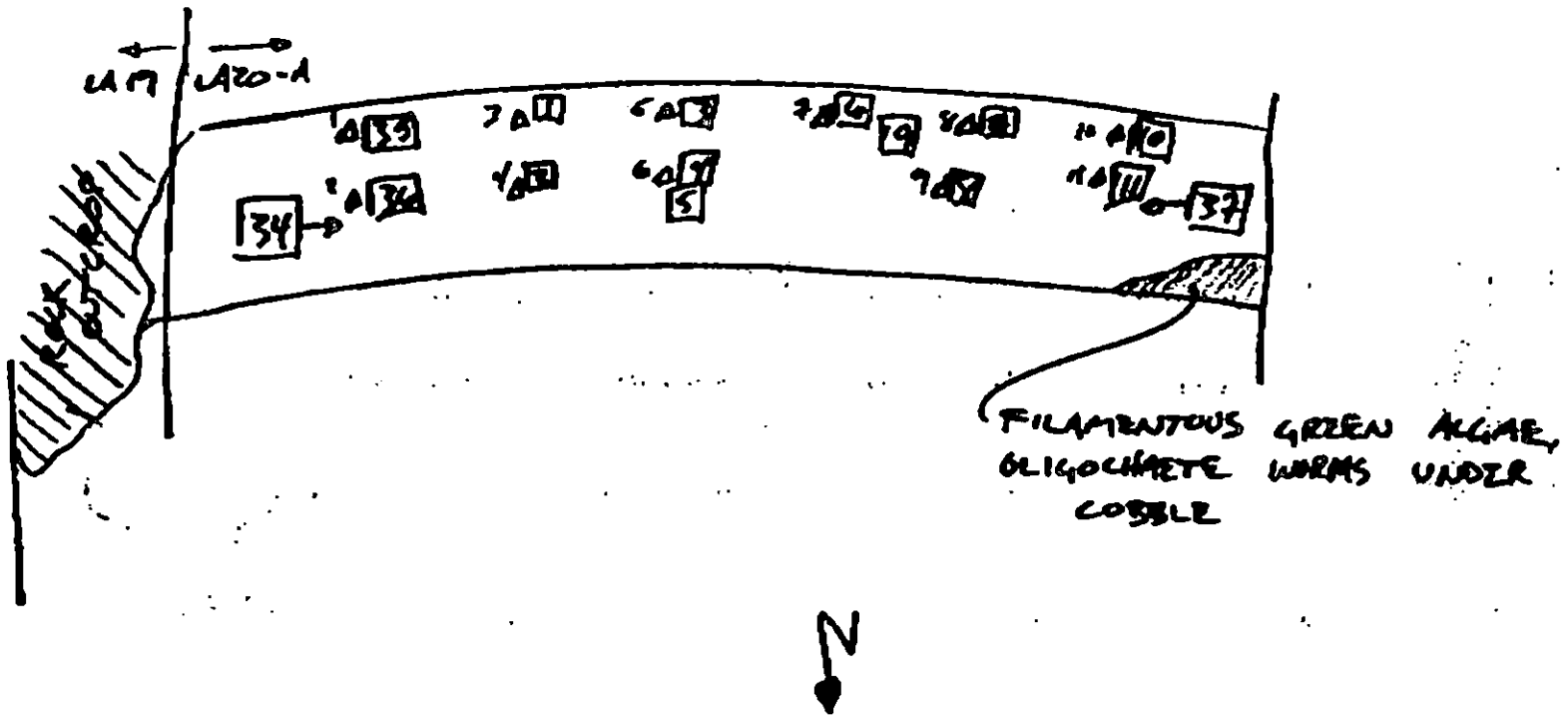
1 Photo location, direction, and number

# SKETCH MAP




Oil Character Length (m): AP 10 PO 0 CV 130 CT 0 ST 0 MS 150 PT 0 TB 0 FL 0 NO 230

REVISION 03/2000 1


LA 19
LA20-A
34
37
FILAMENTOUS GREEN ALGAE, OLIGOCHAETE WORMS UNDER COBBLE
N

LA-20-A

# SHORELINE ECOLOGICAL SUMMARY

Segment ST / LA 20 Subdivision A Date (mo / day / yr) 4/2/90

Time (24 hr) 1500 ON 1550 OFF Biologist TONY ZAMORA

(A) Substrate type and % of segments:
(1) Bedrock — (2) Boulder 20 (3) Cobble 60 (4) Pebble 20 (5) Sand — (6) Silt —

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

(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)

Photographs:
Roll No. ST-16-3, 4
Frames 32-37, 1-11

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | X | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | X | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | X | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

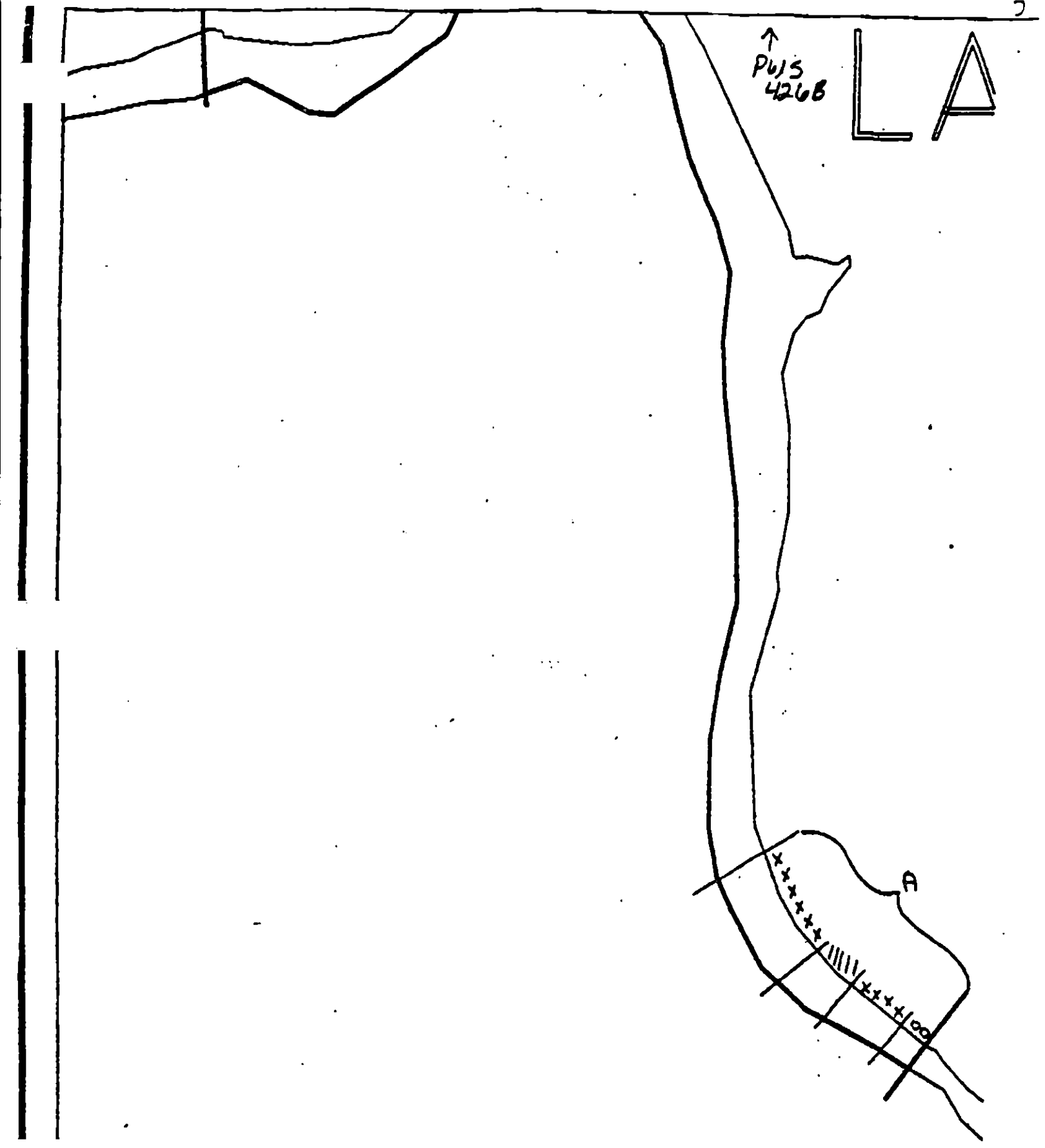
**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

Wildlife Observations/ General Comments:

- HIGH ENERGY ISL, LITTLE LIFE
- LOW ZONE UNEXPOSED
- MOST OF SITE IS COBBLE/PEBBLE. # COBBLE AT WEST END IN MID ZONE HAS FILAMENTOUS GREEN ALGAE COAT.
- UNDER COBBLE IN MIDZONE: DENSE. OLIGOCHAETES.
- WILDLIFE: EAGLE
- DEAD STARFISH (MEDIASTER). DEAD OTTER - FULL CARCASS (SKIN & BONES), FRESH MISSING AROUND FACE ONLY. NO OIL VISIBLE ON COAT.

ECOLOGICAL CONSIDERATIONS: III.



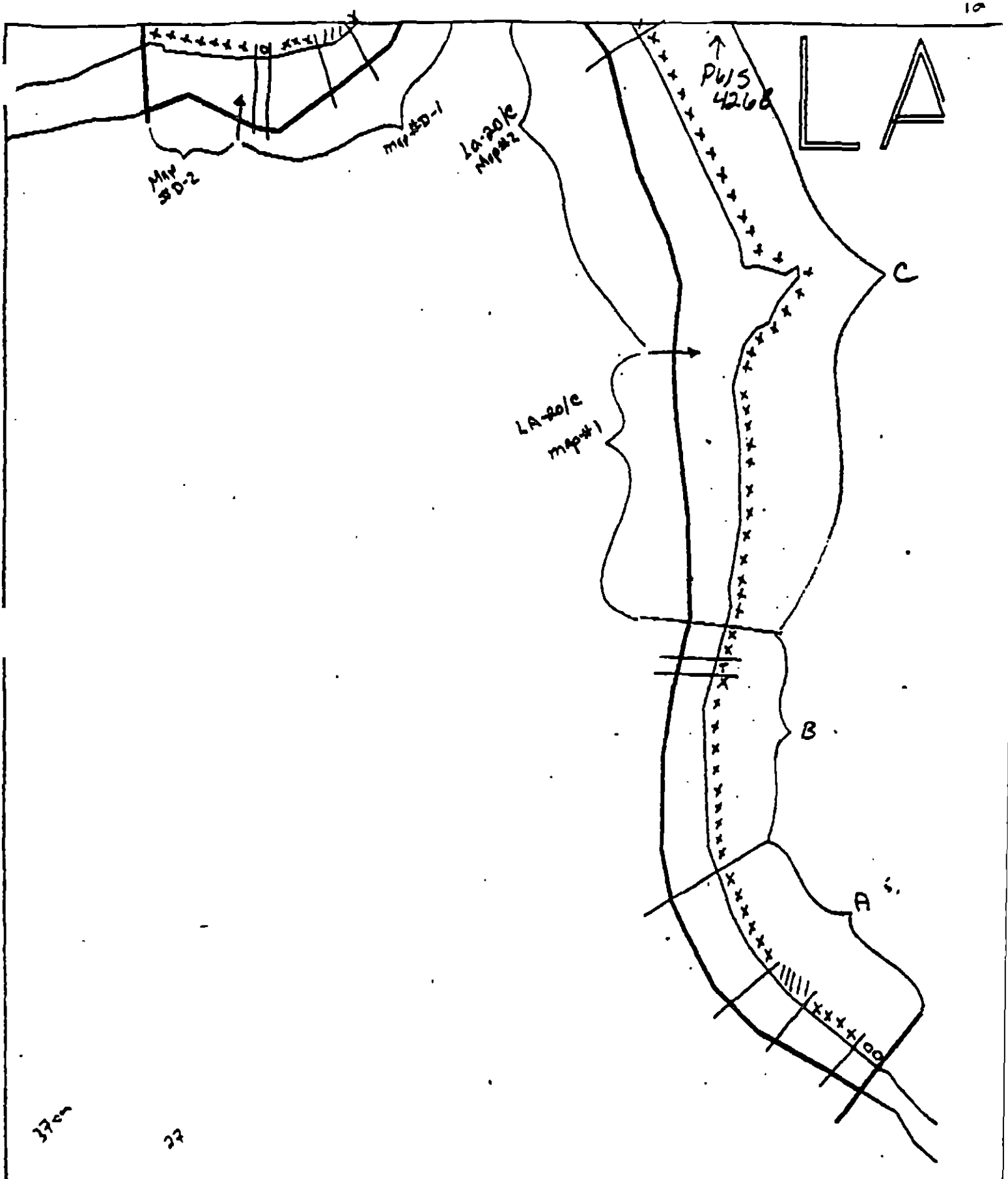

XXXX Wide
//// Medium
---- Narrow
TTTT Very Light

# LA-20

ADEC Segment Length: 2114m

Map Key: PWS-426a
Name: Reimer
Date: 4/2/90

10

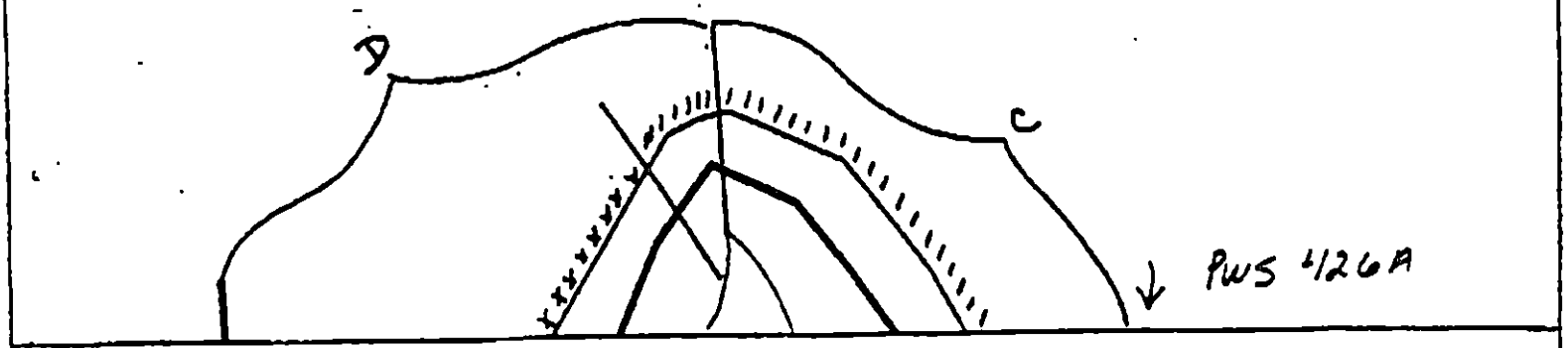



XXXX Wide
//// Medium
---- Narrow
TTTT Very light

# LA-20

ADEC Segment Length: 2114m
Exxon — 2282m

Map Key: PWS-426a
Name: Reimer
Date: 4/2/90




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

# LA-20

ADEC Segment Length: 2114m

0 100 200 300
METERS

N

Map Key: PWS-426b
Name: REIMER
Date: 4/2/90
Date Entered:

# ADDENDUM: SUBDIVISION CONSTRAINTS

## SEGMENT LA-20 SUBDIVISION A ( 1 of 4 )

| WORK WINDOW | |
|---|---|
| Manual Pickup<br>Tarmat Removal | OPEN |
| Bioremediation<br>Mechanical Relocation | WORK PRIOR TO 8/15 |

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

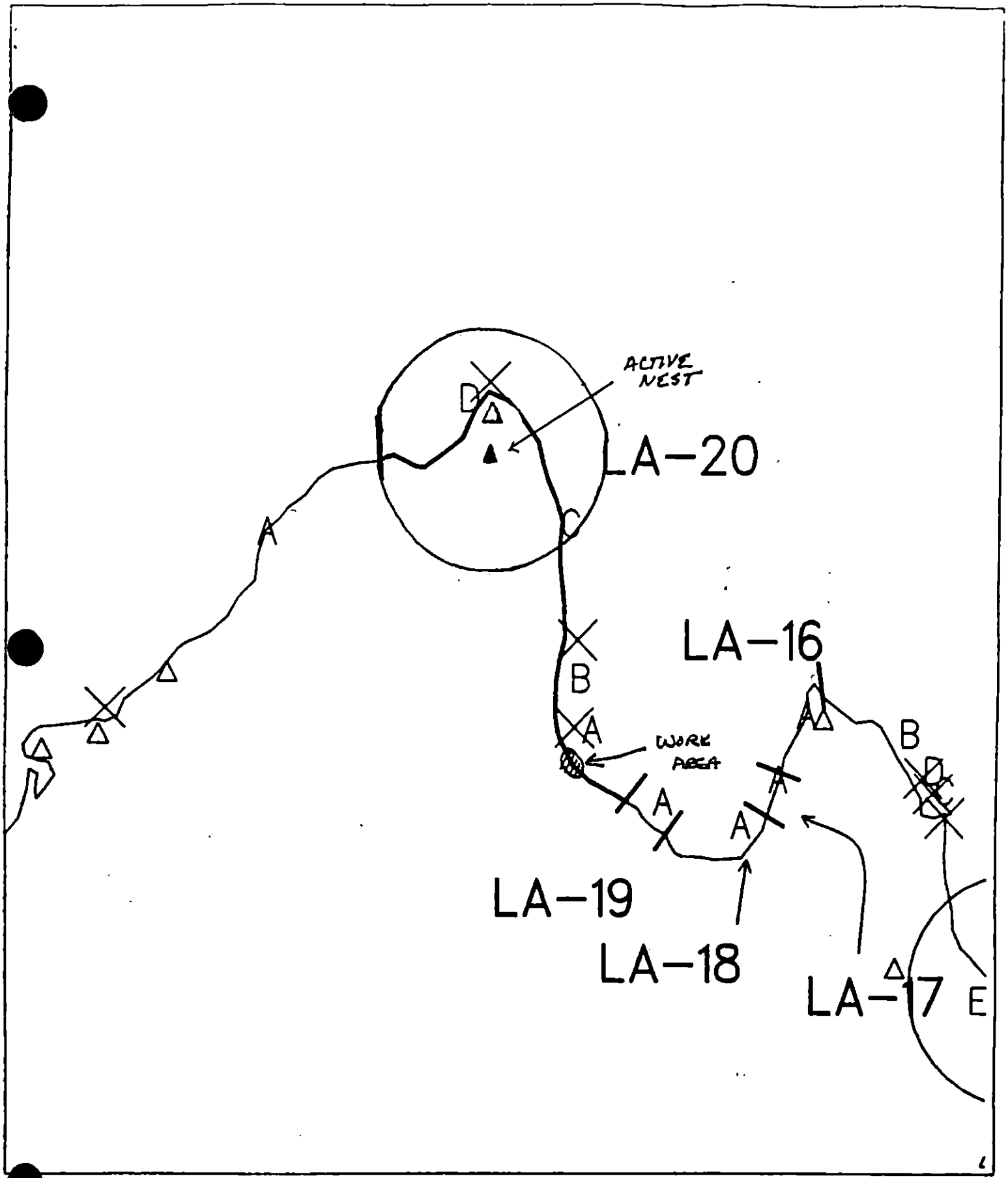
| | | |
|---|---|---|
| **5T** | **Bald Eagle Nest** | NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site. |
| **7II** | **Subsistence: Deer Harvesting** | Closed to bioremediation and mechanical relocation after 8/15. No constraint to manual pickup and tarmat removal. |

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC DD Rome Date 6/24/90

Prepared by J.P. Phillips Date 6/22/90




EXXON

Exxon Company, USA
Map Key: PMS-LA-20
June 09, 1990

# ECOLOGY MAP
## SEGMENT LA-20
SUBDIVISION A (1 of 4)

METERS
0 448 897

★ Seabird Colony
▲ Active Eagle Nest
△ Inactive Eagle Nest

1 inch = 1471 feet

WORK PLAN ADDENDUM

SEGMENT LA-20 SUBDIVISION A DATED 20 Jul 1990

MODIFICATION

1. REASON FOR MODIFICATION

REASSESSMENT CALLED FOR IN ORIGINAL WORK ORDER INDICATED NEED FOR SPECIFIC DETAILED WORK PLAN.

2. ADJUSTMENT TO WORK PLAN

SEE ATTACHED WORK PLAN

SHPO APPROVAL NEEDED YES_____ NO X SHPO SIGNATURE_____

TAG APPROVAL DATE_____

ADEC SEE ATTACHED LETTER

EXXON

NOAA

USCG

FOSC_____ DATE 7-21-90

Ensure all work is conducted in such a manner as to resulting minimum impact to the environment.

July 20, 1990

TO: Admiral D.E. Ciancaglini

FROM: Technical Advisory Group

In reviewing and assessing the proposed work plan modification for the buried lense in the super intertidal zone at LA20 A, we cannot reach a concensus as to the preferred treatment method. Exxon has proposed a treatment method as outlined in the attached work plan modification. The USCG, NOAA and Exxon representatives support the treatment program proposed as technically sound and the preferred option. However, the state representatives disapprove of the approach and request excavation and removal of the oiled sediments (high OR and OP) prior to relocation of remaining sediments. Therefore, due to the impass we forward to you both positions and the proposed program for your resolution.

TAG

EXXON - Andy Teal
ADEC - John Bauer
NOAA - Burl Wescott
USCG - Gary Reiter

07/20/90

# Sleepy Bay - Latouche Island - LA20 A
## Work Plan Modification

The following modification to the existing work plan has been developed to deal with a subsurface oil lens discovered in the SUITZ during the storm berm relocation. This lens of OP/Mousse sediments is patchy and extends laterally along the SUITZ between the storm swash line and the storm berm (see attach sketches). A team of SCAT geologist visited the site on July 15 their findings provided the basis for these recommendations.

The recommended treatment plan resulting from this site evaluation is as follows:

1. Using a bulldozer, blade the cleaner surface material from the area shown in Figure 4 to the prescribed relocation zone also illustrated in Figure 5. This should be conducted for all those areas specified in Figure 6. The material should be spread as thinly as possible with in this zone.

2. Apply Customblen to this entire area.

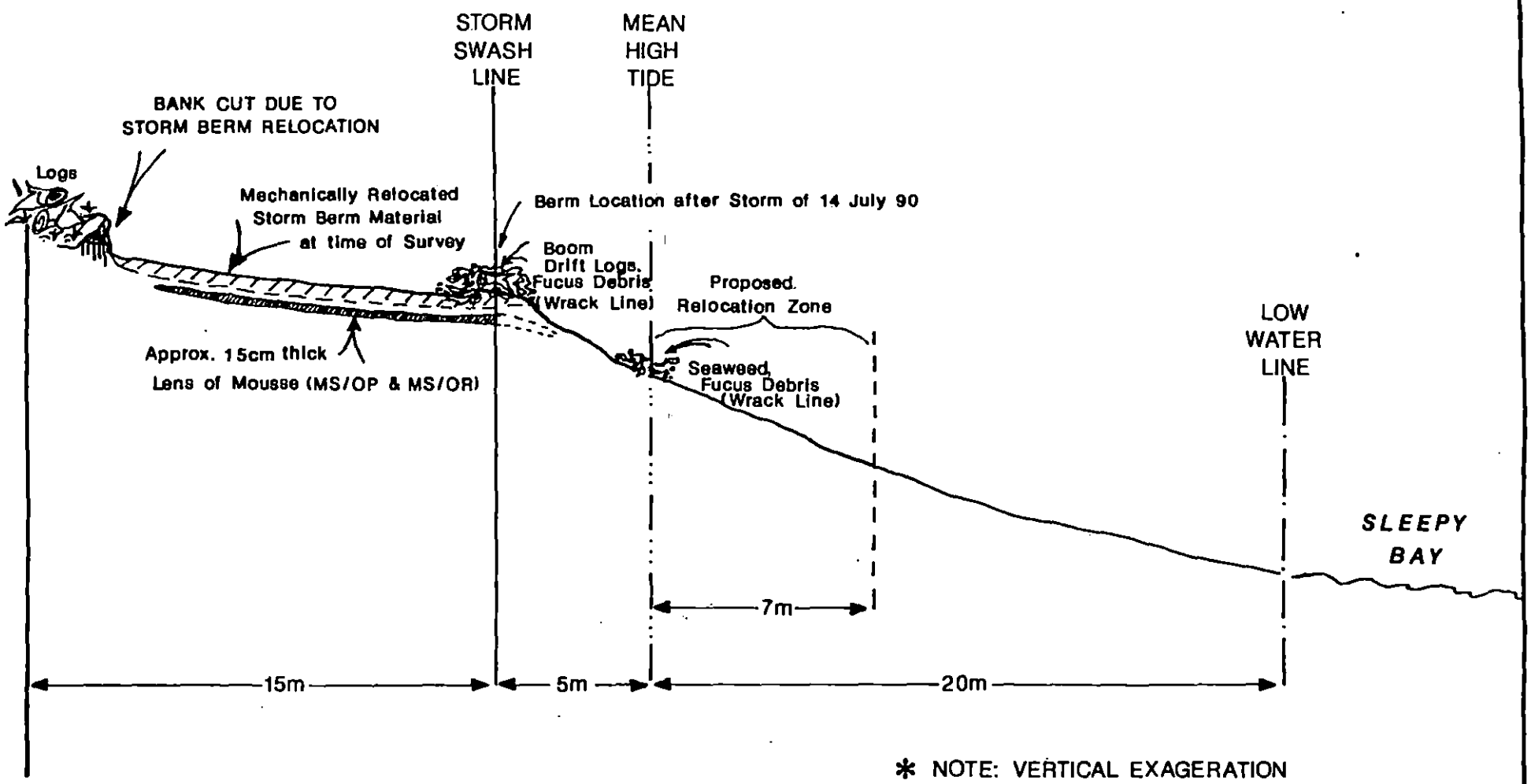
3. Following surface material relocation, recover any exposed surface mousse or pooled oil using sorbents. When blotting of the free oil has been accomplished relocation the oiled lens as shown in Figure 5 to the relocation zone indicated and apply Customblen.

4. Recover as much free oil (mousse/pooled oil) as possible.

5. String oil snare booms across the relocation zone and below the relocation zone to trap as much oil as possible. Leave booms in place and monitor.

6. ~~If feasible~~ manually/mechanically/~~hydrologically~~ agitate the oiled sediments during the rising tide to enhance oil removal. Recover floating oil with snares. SEDIMENTS WILL BE HOT-WATER FLUSHED TO SKIRTED BOOM WILL BE PLACED OFFSHORE OF WORK AREA.

7. Apply Inipol to all oiled sediments.

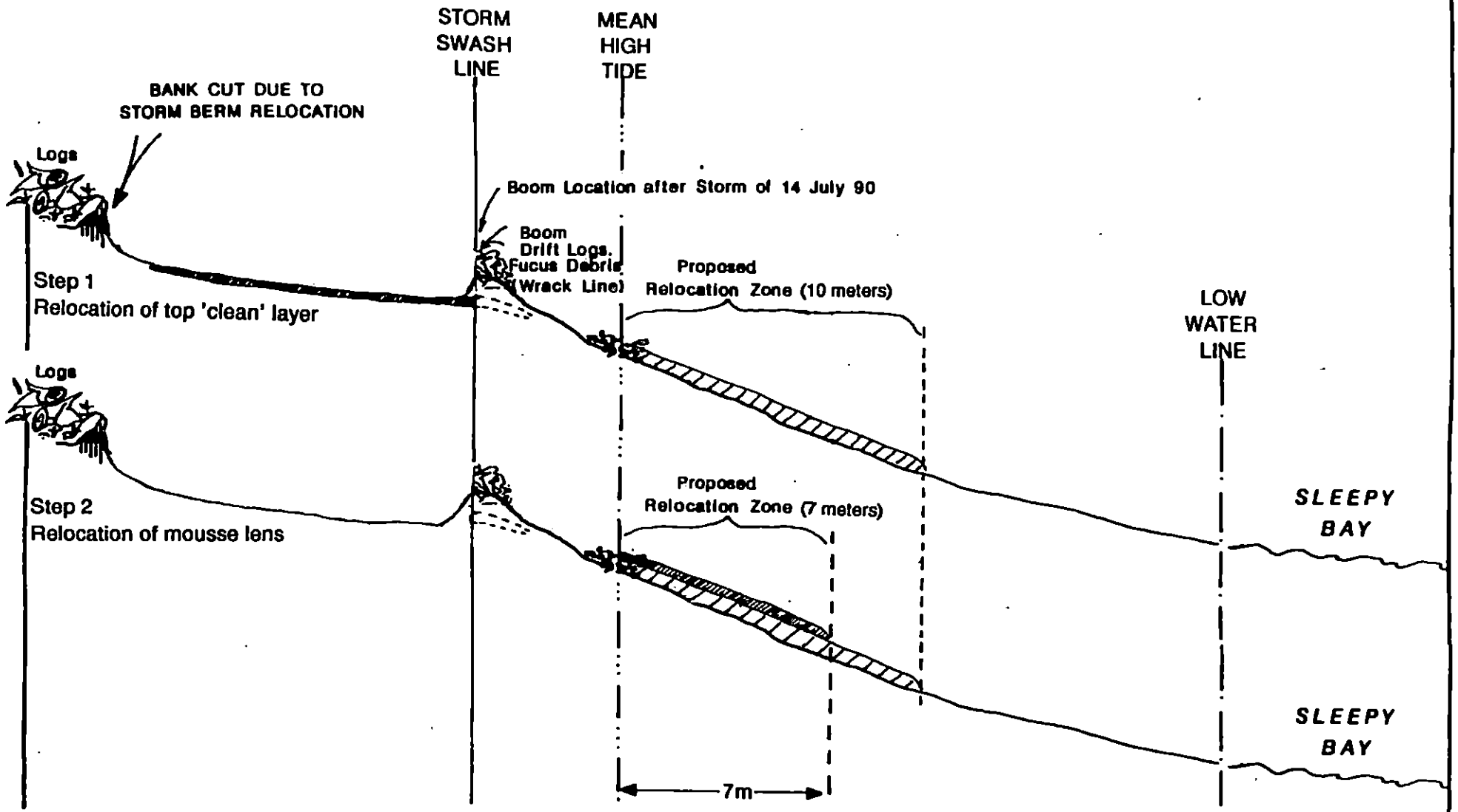



# IDEALIZED CROSS SECTION

## LA020-A

Figure 4

**DRAFT**



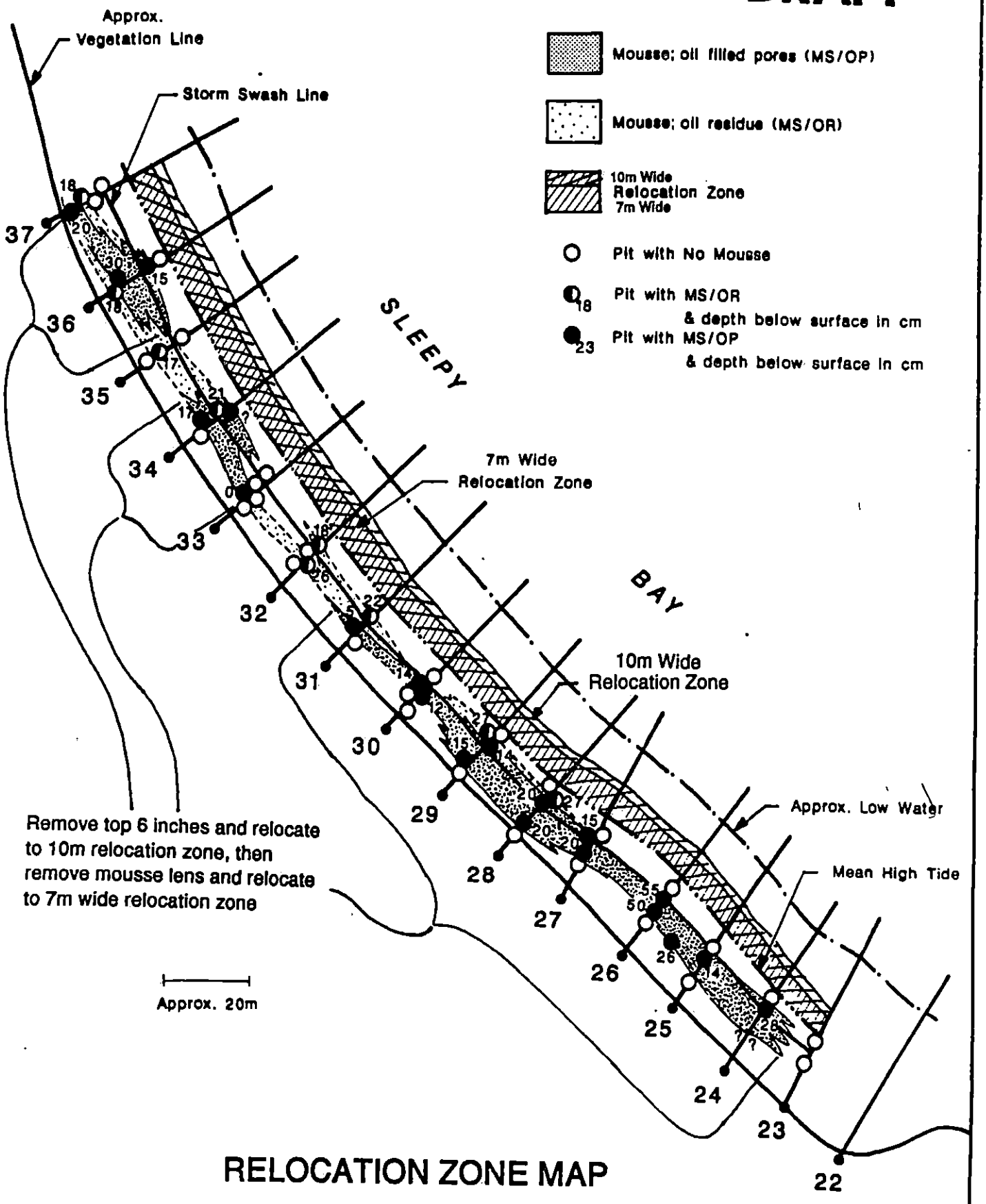

# PROPOSED RELOCATION PLAN

## LA020-A

Figure 5

**DRAFT**

DRAFT




# RELOCATION ZONE MAP
# LA020-A

Figure 6

# SHORELINE EVALUATION

SEGMENT ST/ LA-20 SUBDIVISION B (2 OF 4) DATE 4/2/90

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

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

SHPO SIGNATURE: Charles E. Holmes DATE: 4/28/90

**OILING CATEGORIZATION:**

Wide 286 m: Medium 0 m: Narrow 0 m: V.Light 24 m: No Oil 0 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 40+ cm

**RECOMMENDATIONS:**

| | |
|---|---|
| ____No Treatment Recommended | ____Snare/Absorbent Booms |
| X Treatment Recommended | X Oil Snares (pom poms) |
| X Manual Pickup | X Absorbents (pads,rolls,etc) |
| X Bioremediation | X Spot Washing: X Wands |
| X Tarmat: X Removal | ____ Beach Cleaner |
| | ____Other (see comments) |

COMMENTS: Recommended treatment includes 1) spot washing of small areas with pooled oil, 2) bioremediation of areas shown on attached sketch map, 3) manual pick up of oiled debris and 4) manual removal of tarmats as shown on map. Work should be conducted after 6/1 and with approval of USFWS due to eagle nests.

TAG COMMENTS: MONITORS TO ASSESS SUITZ DURING TREATMENT.

TAG APPROVAL DATE: 4/26/90.
ADEC JOHN BAUER
EXXON
NOAA Gary Petrae
USCG KENNETH KEARNS

FOSC: DATE: 5-12-90
CVC Rep to be on scene.

# PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

| | | |
|---|---|---|
| 1A | Salmon stream mouth - fry outmigration (3/1 to 5/15) | |
| 1B | Salmon stream mouth - spawning (7/10 to 8/31) | |
| | No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits. | |
| 1C | Salmon fry nursery area (4/31 to 7/31) | |
| 1D | Esther Hatchery release (4/15 to 6/1) | |
| 1E | Main Bay Hatchery release (4/20 to 5/10) | |
| 1F | Sawmill Bay Hatchery release (4/15 to 6/1) | |
| 1G | Cannery Creek Hatchery release (4/21 to 6/1) | |
| 1H | Remote release site | |
| 1I | Gill net area (6/7 to 8/31) | |
| 1J | Purse seine area (7/20 to 9/30) | |
| 1K | Purse seine hook-off (7/20 to 9/30) | |
| 1L | Set net sites (6/11 to 7/25) | |
| | For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints. | |
| 2M | Herring spawning (4/1 to 6/15) | |
| | Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations. | |
| 3N, 3P | Harbor seal and sea lion pupping (5/15 to 7/1) | |
| 3O, 3Q | Harbor seal and sea lion molting (8/15 to 9/15) | |
| | Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. | |
| 5R | Seabird colony (5/1 to 9/1) | |
| | Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment. | |
| 5S | Shorebird/waterfowl concentration (4/1 to 5/15) | |
| | Restrict all activity to essential minimum, especially air traffic. | |
| 5T | All Bald Eagle nests (3/1 to 6/1) | |
| | Active Bald Eagle nests (3/1 to 9/1) | |
| | Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates. | |
| 6U | Recreation: | Tent sites (6/1 to 9/15) |
| 6V | | Anchorages (6/1 to 9/15) |
| 6W | | Forest Service cabins (6/1 to 9/15) |
| 6X | | Lodge (6/1 to 9/15) |
| 6Y | | Special use destination |
| 7Z | Subsistance area: | Salmon harvesting (5/1 to 9/30) |
| 7HH | | Finfish harvesting |
| 7II | | Deer harvesting (8/15 to 2/28) |
| 7JJ | | Invertebrate harvesting |
| | For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints. | |

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA - 20 SUBDIVISION: B DATE 4-6-90

**USCG**
NAME Randolph Hellmers SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

**ADEC**
NAME J. LYNN MARTIN SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED
COMMENTS

SHORELINE OILING SUMMARY, COMPLETE & THOROUGH

AGREE WITH EXXON OPS RECOMMENDATION FOR HOT WASH OF SMALL AREAS FOLLOWED BY BIOREMEDIATION & MANUAL REMOVAL OF TAR MAT AREAS

**LAND MANAGER**
NAME [illegible] SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

# SHORELINE OILING SUMMARY

REVISION NO. 03/29/90

OG Rayner USCG Hubbard SEGMENT ST/ LA-20
BIO Zamora LAND REP Selanoff (CVC) SUBDIVISION B 2054
EXXON Garcia ADEC Martin TIME 14 : 10 to 14 : 50
TEAM NO.: 16 TIDE LEVEL: +7 to +5 DATE 4 / 6 / 90
EST. SUBDIVISION LENGTH: 350 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☐ Rock Snow
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: South to North
SURFACE SEDIMENTS: R 3 % B 78 % C 15 % P 5 % G 0 % S 0 % M 0 % V 0 %
SLOPE: Lang 100 % Hang % Vert % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
OIL CATEGORY LENGTH: W 320 m M 0 m N 0 m VL 30 m NO 0 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ro | ra | rp | rs | | | | | | su | ui | mi | li |
| ASPHALT PAVEMENT | X | | | | | X | | | | | X | | |
| POOLED | | | X | | X | | | X | | | X | X | |
| COVER | | X | ✓ | | | X | | X | | | X | X | |
| COAT | | X | | | | | | X | | | X | X | |
| STAIN | | X | | | | X | | | | | X | X | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | | | | | | | | | | |
| NO OIL | | | | | | | | | | - | | | X |

Snow

PAVEMENT: H F (8) 22 sq. m by 10 cm
PATTIES / TARBALLS 0 BAGS
NEAR SHORE SHEEN? NO BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | X |
| Vegetation | | | X |
| Trash | | | |
| Debris | | | |

DEBRIS COLLECTED ☐ YES ☐ NO
TYPE 0
#BAGS 0

Photographs:
Roll No. ST-16-5
Frames 1-11

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm-cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | op | or | ol | of | no | | uo | uc | | | | | | su | ui | mi | li | | |
| 1 | 40 | | X | | | | 5 - 40 | X | | | | | X | | | X | | | | PCC |
| 2 | 45 | | | | X | | 5 - 35 | | X | X | | | | | | | X | | | PC |
| 3 | 10 | X | | | | | 5 - 8 | | X | | | | X | | | | X | | | PCC |
| 4 | 10 | X | | | | | 5 - 8 | | X | | | | X | | | X | | | | C-PC |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |

COMMENTS Coarse sediment beach, cobbles and boulders along the south end, grading into angular boulders to the north. The majority of the Supra-tidal is covered with Snow

Oil Cover on boulders and mostly interstitial fines/sediments, patchy pooled on bedrock boulders, Percentages increase near the MR2. The storm berm @ the North is oiled along the entire segment with accumulations of oiled debris and logs. Intertidal Supra-tidal.



REVIEWED JW DATE 4/9/90

OG [redacted] of

SEGMENT ST/ LA-80

SUBDIVISION B

DATE 4 / 6 90

**CHECKLIST**

- ✓ Arrow
- Approx. Scale
- ✓ Segment Bndry
- Oil Dist.
- Width
- Length
- % Cover
- Sediment Character
- Est. HWL/WL
- ✓ Soil
- Profile Location(s)
- Profile(s)
- ✓ Pit Location(s)
- Photo Location(s)

**LEGEND**

1 ▲
Pit - No Subsurface Oil

2 ▲
Pit - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

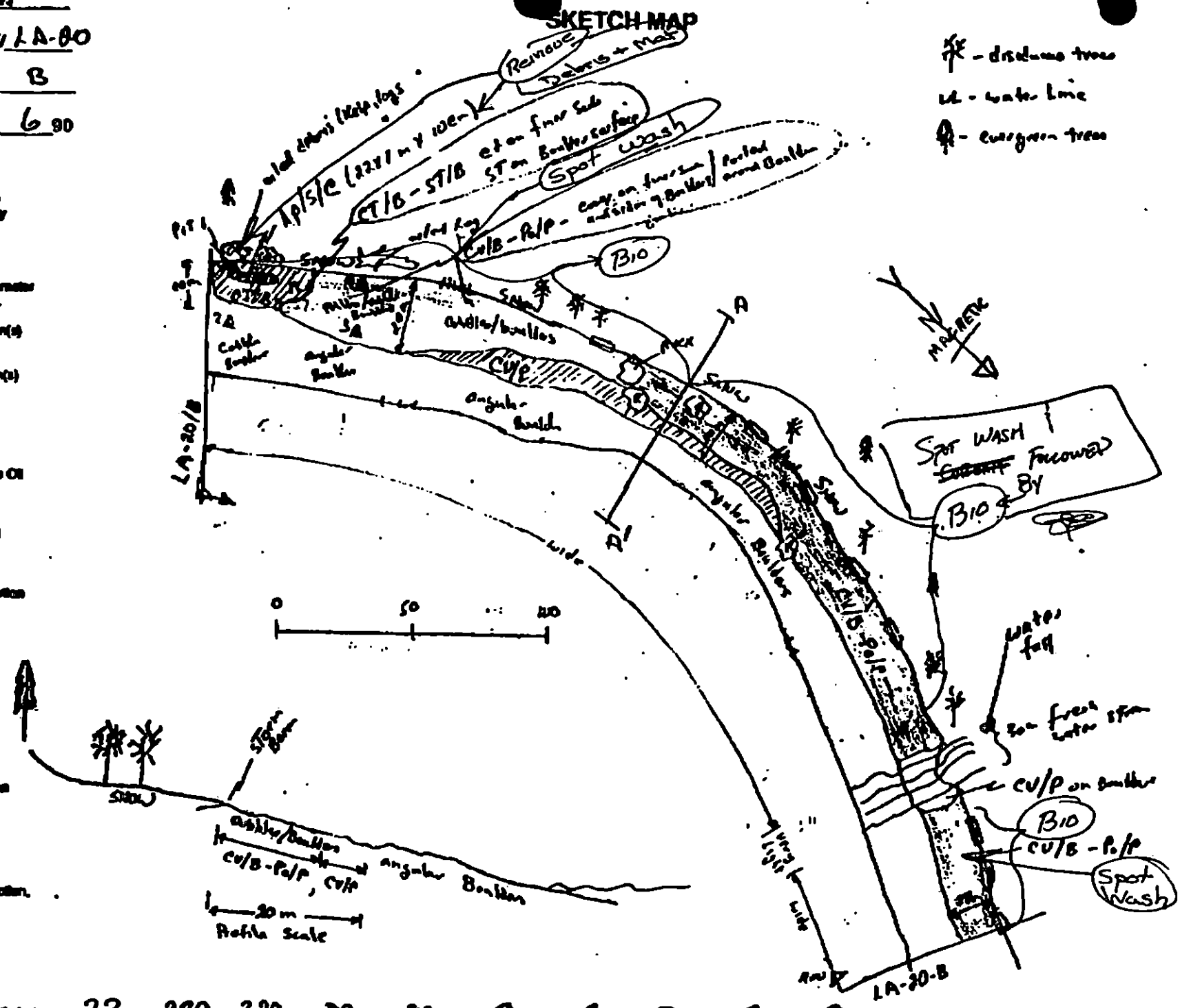
CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oiled Vegetation

1
Photo location, direction, and number

**SKETCH MAP**




tree - deciduous trees
wl - water line
evergreen trees

Oil Character Length (m): AP 22 PO 290 CV 320 CT 20 ST 20 MS 0 PT 0 TB 0 FL 0 NO 0

REVISIONS

# SHORELINE ECOLOGICAL SUMMARY

REVISION 10

Segment ST / LA 20 (1400 ON) Subdivision B Date (mo / day / yr) 4/6/90

Time (24 hr) 1450 OFF Biologist TONY ZAMORA

(A) Substrate type and % of segments:
(1) Bedrock 2 (2) Boulder 78 (3) Cobble 15 (4) Pebble 5 (5) Sand — (6) Silt —

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

(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)

Photographs:
Roll No. ST-16-5
Frames 1-11

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | X | 2 | 2 | 2 | 2 | NOT PRESENT |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | 3 | 3 | 3 | |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | X | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | X | 2 | 2 | X | 2 | NOT PRESENT |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

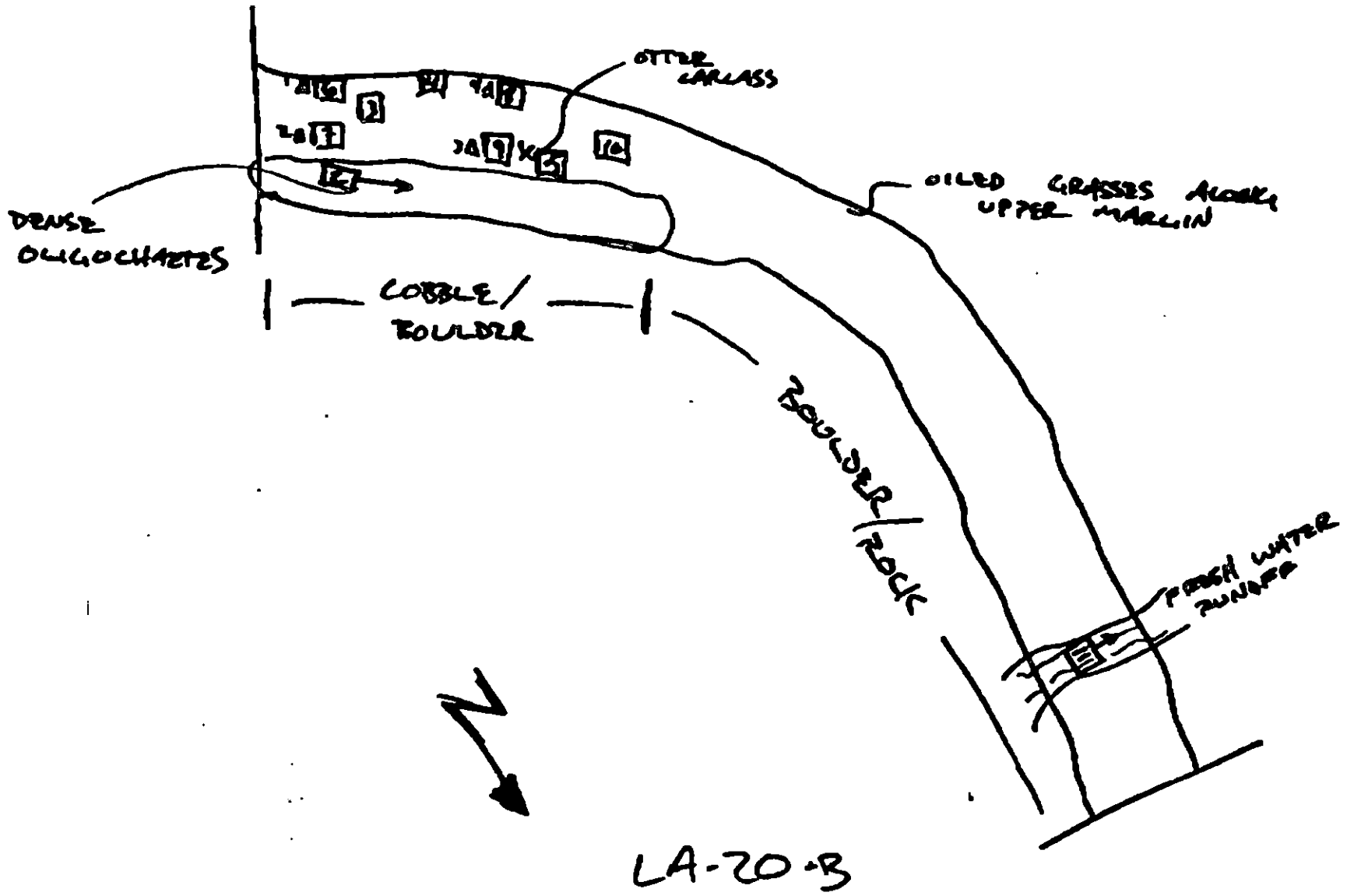
**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | X | 2 | 2 | 2 | 2 | NOT PRESENT |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | 3 | 3 | 3 | |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

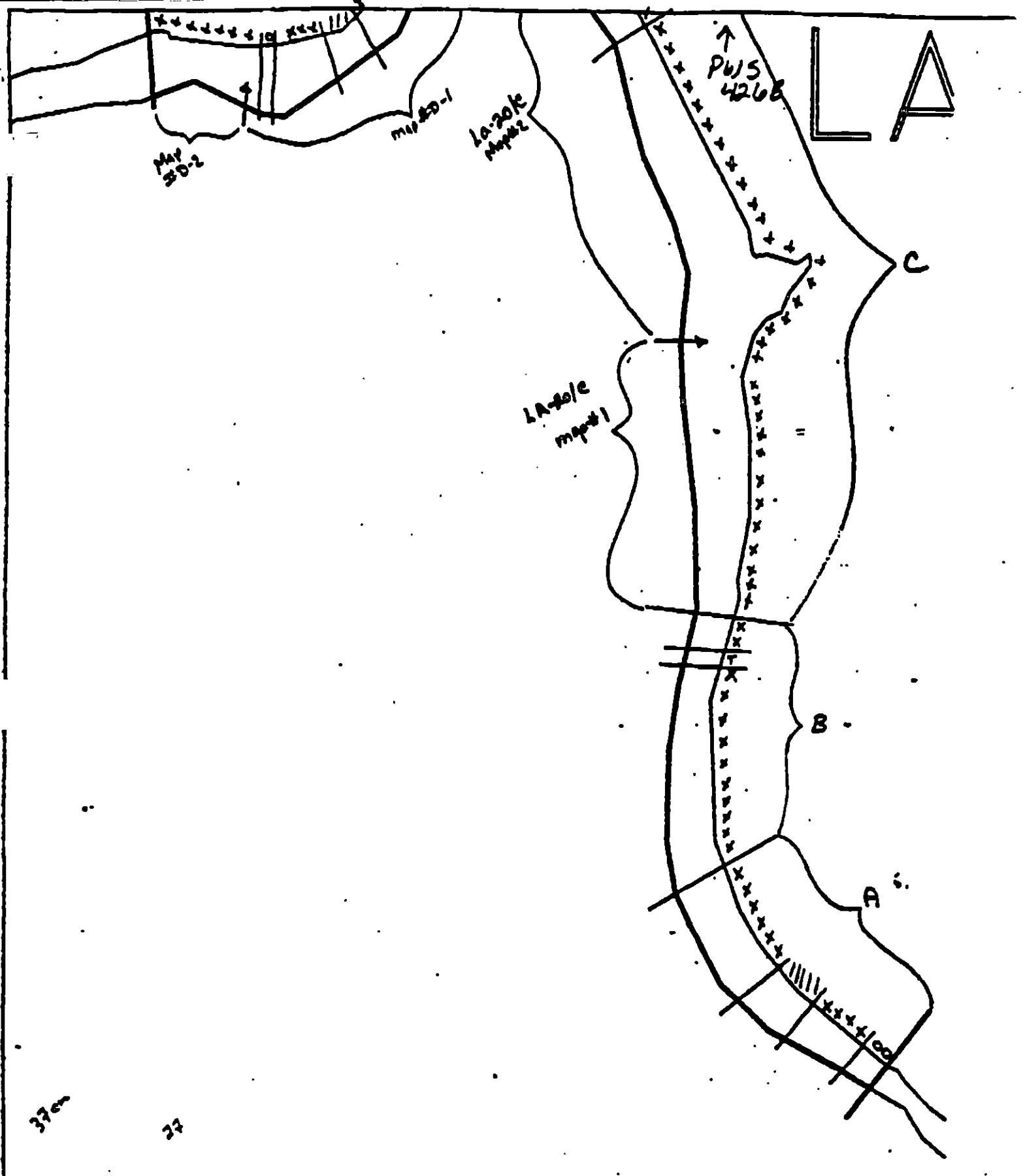
**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | NOT PRESENT |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

Wildlife Observations/ General Comments:
- ONLY TOP OF MID ZONE EXPOSED DURING SURVEY
- FRESH WATER RUNOFF. NOT ANADROMOUS. GRASS ABOVE BEACH IS GLED.
- FILAMENTOUS GREEN ALGAE COATS LARGER COBBLE AND BOULDERS IN MID ZONE. LG. AMOUNT OF DRIFT LAMINARIAN KELP MAY INDICATES BED IN LI.
- OLIGOCHAETES DENSE UNDER COBBLE/BOULDER.
- 99% MORTALITY OF OIL COATED BARNACLES ON BEDROCK.
- FEW BARNACLE SPAT SEEN ON ASPHALT COAT.
- OTTER CARCASS FOUND. SKIN & BONES, SCAVANGED. APPEARS SIMILAR TO CARCASS FOUND HERE 2 DAYS PREVIOUS - THOUGH MORE "WAVE-BATTERED"
- WILDLIFE: 1 EAGLE SEEN.


OTTER CARCASS
OILED GRASSES ALONG UPPER MARLIN
DENSE OLIGOCHAETES
COBBLE/ BOULDER
BOULDER/ROCK
FRESH WATER RUNOFF
N

LA-20-B




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

# LA-20

ADEC Segment Length: 2114m

Map Key: PWS-426B
Name: Reimer
Date: 4/8/90
Date Entered:

## SHORELINE EVALUATION

SEGMENT ST/ LA-20 SUBDIVISION C (3 OF 4) DATE 4/2/90

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

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

SHPO SIGNATURE: Charles E Holmes DATE: 4/28/90

**OILING CATEGORIZATION:**

Wide 677 m: Medium 238 m: Narrow 0 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No ___ Maximum Depth 40 cm

**RECOMMENDATIONS:**

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

COMMENTS: Recommended treatment includes 1) manual removal of tarmat and 2) Set up a series of sections on this very coarse (predominantly boulders) shoreline that can be used to assess the relative effectiveness and efficiency of available techniques for this shoreline type; for example:
- pre-soak with lifting agent and flush
- hot-water flush plus pom-poms
- staked pom-poms alone
the results would then be evaluated to determine if there is a practical and useful technique for dealing with this type of shoreline that then could be applied elsewhere in the Sound. Work should be conducted after 6/1 and/or with approval from USFWS regarding eagle nests.

ONLY

TAG COMMENTS: MANUAL PICKUP OF TARMATS, OILED DEBRIS - TRASH - VEGETATION, AND POOLED OIL. SPOT WASH, USE SNARES TO RECOVER AS MUCH OIL AS POSSIBLE, SNARE + ABSORBENT BOOMS TO REDUCE SHEENING, FOLLOWED BY BIOREMEDIATION

TAG APPROVAL DATE: 4/26/90
ADEC JOHN BAUER
EXXON ANDY TEAL
NOAA Gary Petrae
USCG KENNETH KEENE

FOSC: DATE: 5-12-90

Do not Bioremediate - CVC Rep to be on scene.

# PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

| | | |
|---|---|---|
| 1A | Salmon stream mouth - fry outmigration (3/1 to 5/15) | |
| 1B | Salmon stream mouth - spawning (7/10 to 8/31) | |
| | No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits. | |
| 1C | Salmon fry nursery area (4/31 to 7/31) | |
| 1D | Esther Hatchery release (4/15 to 6/1) | |
| 1E | Main Bay Hatchery release (4/20 to 5/10) | |
| 1F | Sawmill Bay Hatchery release (4/15 to 6/1) | |
| 1G | Cannery Creek Hatchery release (4/21 to 6/1) | |
| 1H | Remote release site | |
| 1I | Gill net area (6/7 to 8/31) | |
| 1J | Purse seine area (7/20 to 9/30) | |
| 1K | Purse seine hook-off (7/20 to 9/30) | |
| 1L | Set net sites (6/11 to 7/25) | |
| | For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints. | |
| 2M | Herring spawning (4/1 to 6/15) | |
| | Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations. | |
| 3N, 3P | Harbor seal and sea lion pupping (5/15 to 7/1) | |
| 3O, 3Q | Harbor seal and sea lion molting (8/15 to 9/15) | |
| | Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. | |
| 5R | Seabird colony (5/1 to 9/1) | |
| | Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment. | |
| 5S | Shorebird/waterfowl concentration (4/1 to 5/15) | |
| | Restrict all activity to essential minimum, especially air traffic. | |
| 5T | All Bald Eagle nests (3/1 to 6/1) | |
| | Active Bald Eagle nests (3/1 to 9/1) | |
| | Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates. | |
| 6U | Recreation: | Tent sites (6/1 to 9/15) |
| 6V | | Anchorages (6/1 to 9/15) |
| 6W | | Forest Service cabins (6/1 to 9/15) |
| 6X | | Lodge (6/1 to 9/15) |
| 6Y | | Special use destination |
| 7Z | Subsistence area: | Salmon harvesting (5/1 to 9/30) |
| 7HH | | Finfish harvesting |
| 7II | | Deer harvesting (8/15 to 2/28) |
| 7JJ | | Invertebrate harvesting |
| | For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints. | |

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA-20 SUBDIVISION: C DATE 4-6-90

EXXON
NAME Randolph W. Hubbard SIGNATURE Randolph W. Hubbard

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED
COMMENTS

1. I Recommend the area a hot or cold flush to eliminate oil substance found area not cleaned by nature.

ADEC
NAME J. LYNN MARTIN SIGNATURE J. Lynn Martin

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED
COMMENTS

AGREE WITH EXXON OPS. REPORT FOR A HOT WASH IN AREA BUT I WOULD RECOMMEND A COLD WATER FLUSH TO GO ALONG WITH THIS. MANUAL REMOVAL WILL HAVE TO BE PREFORMED IN TARMAT AREAS & AREAS OILED UNDER DRIFTWOOD. SUPER-TIDAL NEEDS TO BE LOOKED AT AFTER SNOW MELT.

LAND MANAGER
NAME Patrick Seamount SIGNATURE Patrick Seamount

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

~~Definitely~~ Definitely needs treatment, because it is inhabited with deer, bear, seals. We have seen signs of mortality. Our sea otter for example. Also because this is where we do a lot of subsistence hunting

REVISION NO. 092190

LT.

# SHORELINE OILING SUMMARY

REVISION NO. 0/1/90

OG Rainey USCG Hubbard SEGMENT ST/ LA-20
BIO Zamora LAND REP Selanoff (CVC) SUBDIVISION C 3 of 4
EXXON Garcia ADEC Martin TIME 14 : 51 to 15 : 30
TEAM NO.: 16 TIDE LEVEL: +5 to +4 DATE 4 / 6 / 90
EST. SUBDIVISION LENGTH: 1098 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock Snow
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: South to North
SURFACE SEDIMENTS: R 5 % B 70 % C 20 % P 5 % G 0 % S 0 % M 0 % V 0 %
SLOPE: Lang 90 % Hang 5 % Vert 5 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
OIL CATEGORY LENGTH: W 750 m M 250 m N 0 m VL 0 m NO 0 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AC | AB | AP | AS | | | | | | SW | UI | MI | U |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | ✓ | X | | X/✓ | | | ✓ | | | X/✓ | X | |
| COVER | X | ✓ | O | | | X/✓ | | X/✓ | | ✓ | X/✓ | X/✓ | |
| COAT | | | | | | | | | | | | | |
| STAIN | | | | | | | | | | | | | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | | | | | | | | | | |
| NO OIL | | | | | | | | | | | | | X |

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

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | X |
| Vegetation | | | X |
| Trash | X | | |
| Debris | | | X |

DEBRIS COLLECTED ☐ YES ☒ NO
TYPE 0
#BAGS 0

Photographs:
Roll No. ST-16-5
Frames 12-27

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm-cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | | DO | UO | | | | | | SW | UI | MI | U | | |
| 1 | 15 | | X | | | | 0-15 | X | | | | | X | | | X | | | | BC grass/kelp |
| 2 | 15 | | | | X | | 5-10 | | | | | | X | | | X | | | | cpc & |
| 3 | 15 | X | | | | | 0-15 | X | | | | | X | | | X | | | | BC PC |
| 4 | 20 | | X | | | | 5-10 | | X | | | | X | | | X | | | | PG |
| 5 | 10 | | X | | | | 0-10 | X | | | | | X | | | | X | | | PFC |
| 6 | 20 | | X | | | | 5-20 | X | | | | | X | | | X | | | | PGC |

COMMENTS Predominantly a cobble/boulder beach with occasional rock outcrops - this section of coast is covered with a continuous broken to patchy band of coarse 15-30m wide, considerable pooling of oil is found around boulders. Oil percentages distribution are near 80% in the South half of the segment, increase to 95% in the central section and then decrease to 35-45% along the mouth and around the point.



REVIEWED JW DATE 4/9/90

## SHORELINE OILING SUMMARY (PAGE 2 of 2)

SEGMENT ST/ LA-20 SUBDIVISION C

### SUBSURFACE OIL (CONTINUED)

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm-cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OF | OR | OL | OF | NO | | UO | UC | | | | | | SU | U | MI | U | | |
| 7 | 25 | | X | | | | 20 - 25 | X | | | | | X | | | | X | | | PGC |
| 8 | 40 | X | | | | | 5 - 40 | X | | | | | X | | | X | | | | PG |
| | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | |

COMMENTS

REVIEWED JW DATE 4/9/90

OG Rew

SEGMENT ST/ LA-20

SUBDIVISION C - map #1

DATE 4 / 6 90

**CHECKLIST**

- N-Arrow
- Approx. Scale
- Geo/Sub Bndry
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. HWL/LWL
- SOIL
- Profile Location(s)
- Pit(s)
- PR Location(s)
- Photo Location(s)

**LEGEND**

1 ▲

PR - No Subsurface Oil

2 ▲

PR - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

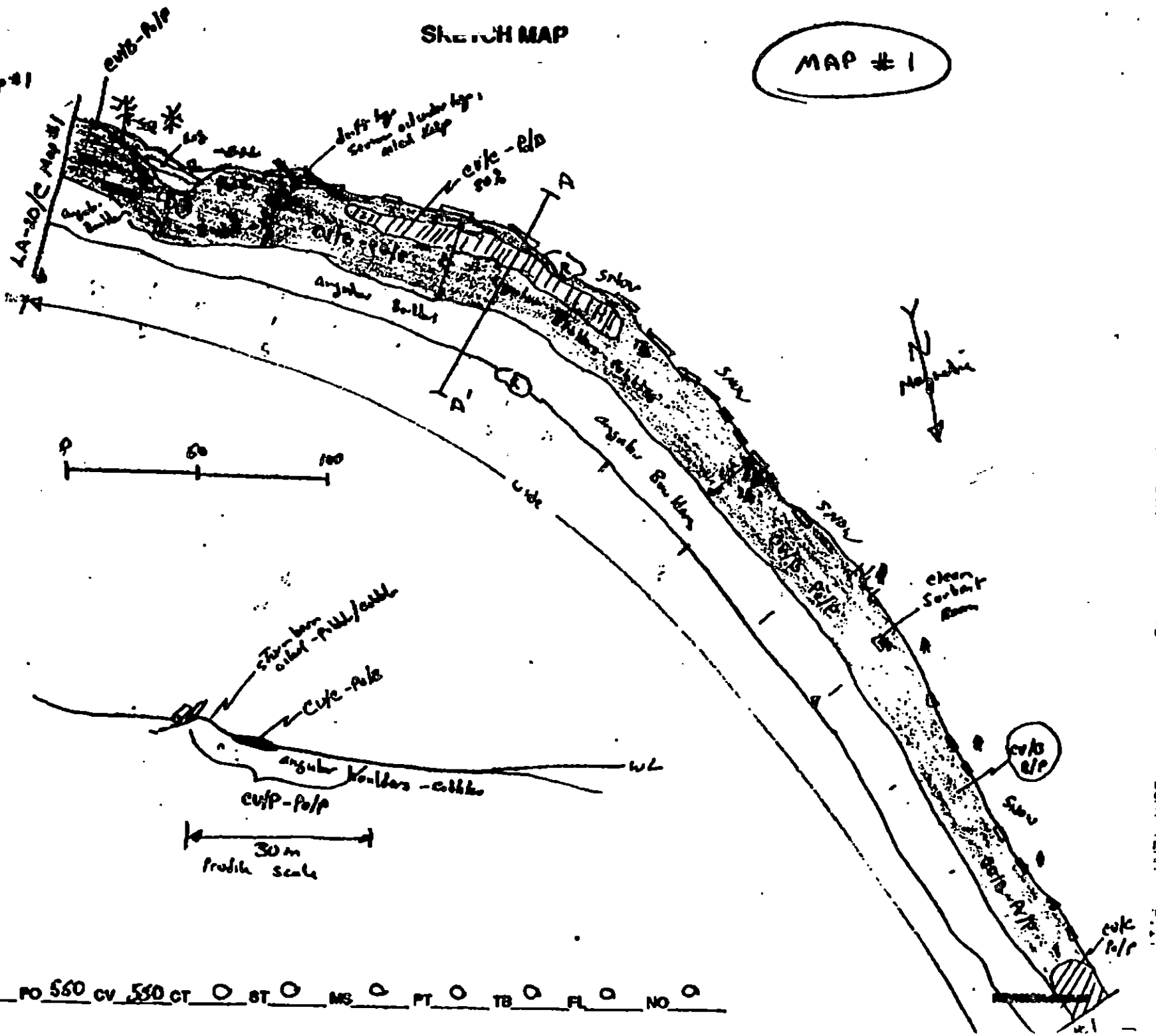
Splashed Distribution

Oiled Vegetation

Photo location, direction, and number

## Sketch MAP

MAP #1




Character Length (m): AP 0 PO 560 CV 550 CT 0 ST 0 MS 0 PT 0 TB 0 FL 0 NO 0

OG Reyr

SEGMENT ST/ ST-20

SUBDIVISION C

DATE 4 / 6 90

**CHECKLIST**

- N Arrow
- Approx. Scale
- Map/Date Entry
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. HWL/LWL
- SRL
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

**LEGEND**

1 △

Pit - No Subsurface Oil

2 △

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

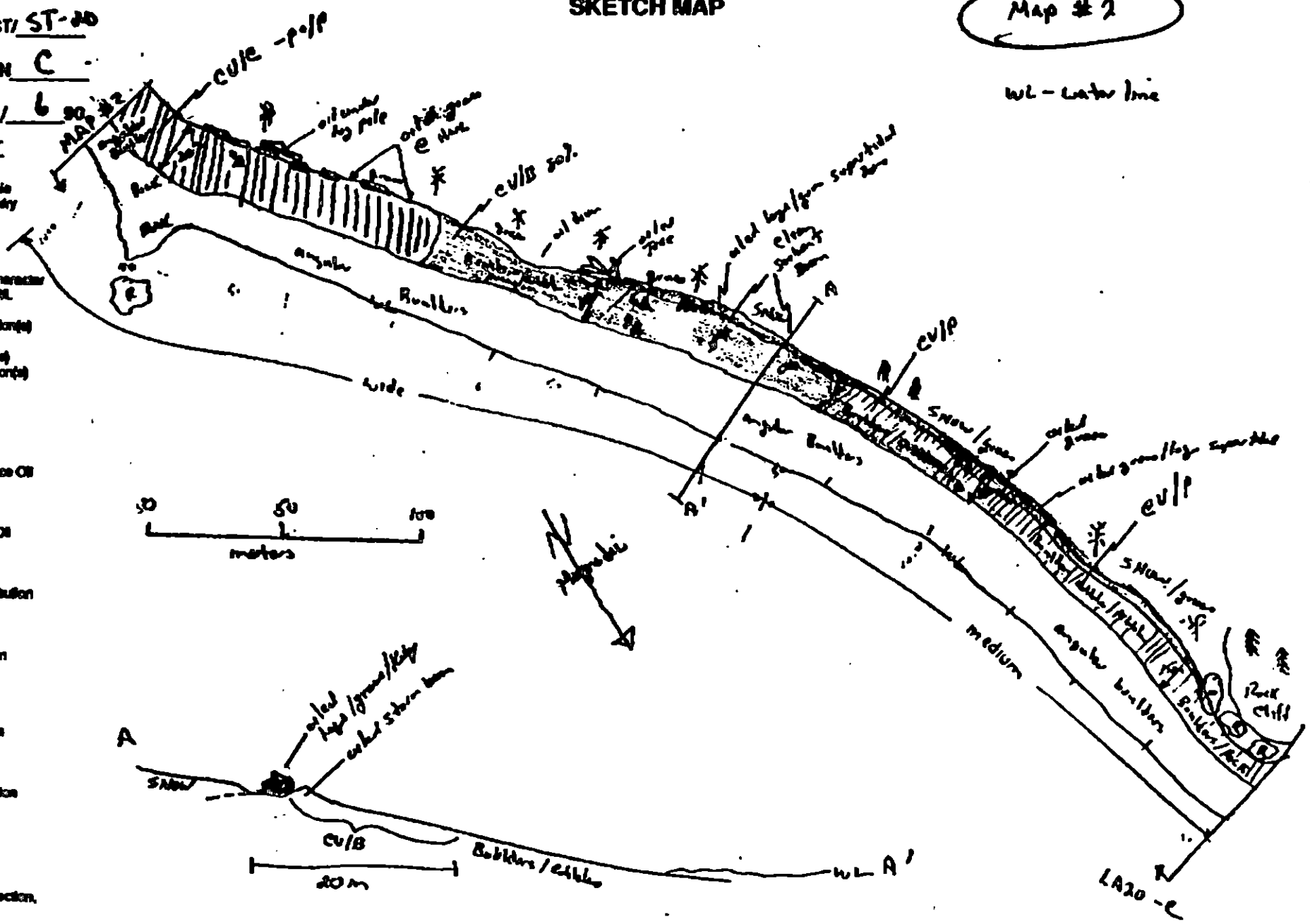
Oiled Vegetation

Photo location, direction, and number

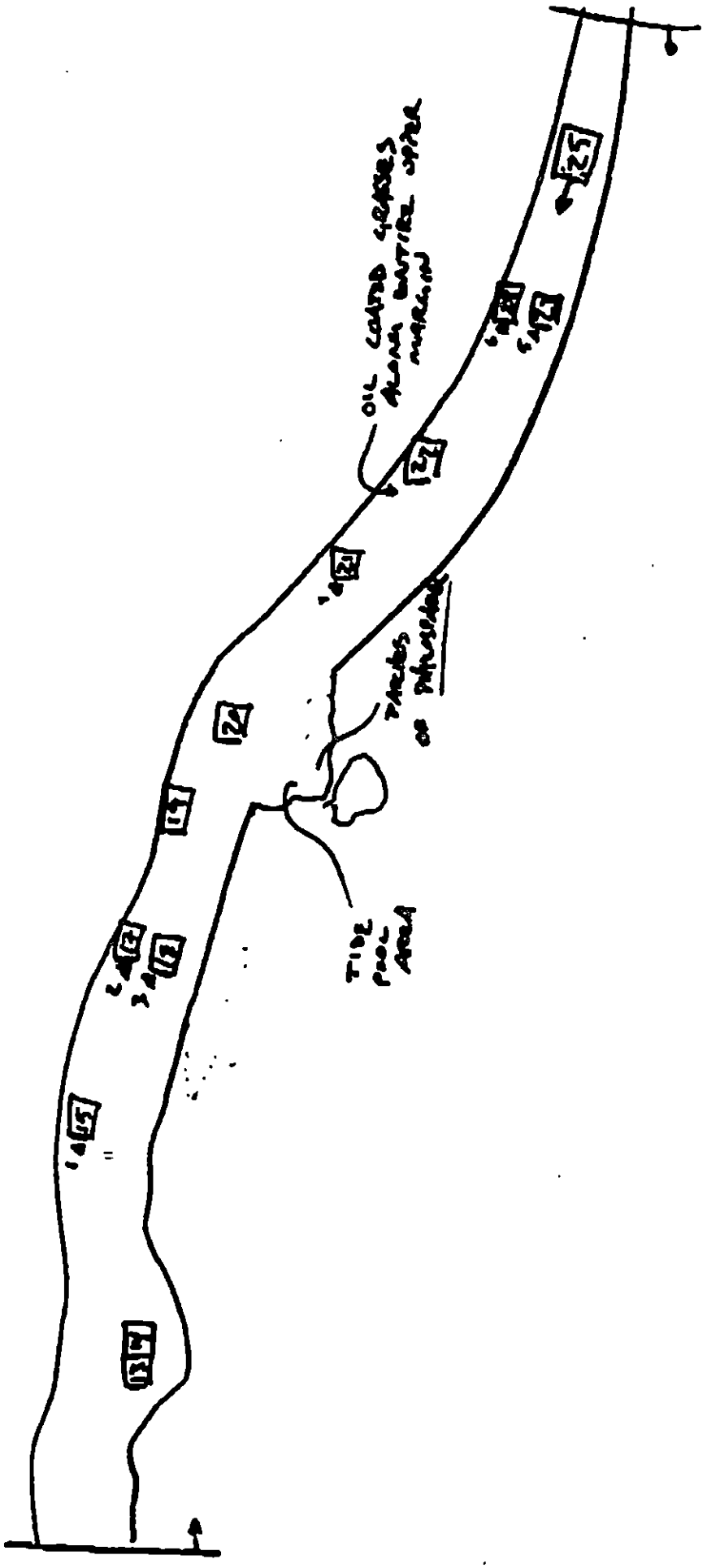
# SKETCH MAP

Map # 2

WL - water line




Oil Character Length (m): AP 0 PO 150 CV 450 CT 0 ST 0 MS 0 PT 0 TB 0 FL 0 NO ∞


Oil Control Options
Marine Wildlife Impact
Protection
Tide Pool Area

LA-20-C

# SHORELINE ECOLOGICAL SUMMARY

REVISION 09/22/90

Segment ST / LA-20 Subdivision C Date (mo / day / yr) 4/6/90

Time (24 hr) 1450 ON Biologist TONY ZAMORA

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

(B) Overall % cover of biota (% of segment): Dense 10 Moderate 85 Low 5

(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)

Photographs:
Roll No. ST-16:5
Frames 12-27

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | X | 2 | X | X | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | X | 3 | 3 | 3 | X | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | X | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | X | 2 | 2 | X | 2 | X | | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | X | | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | X | 2 | X | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | X | 3 | X | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

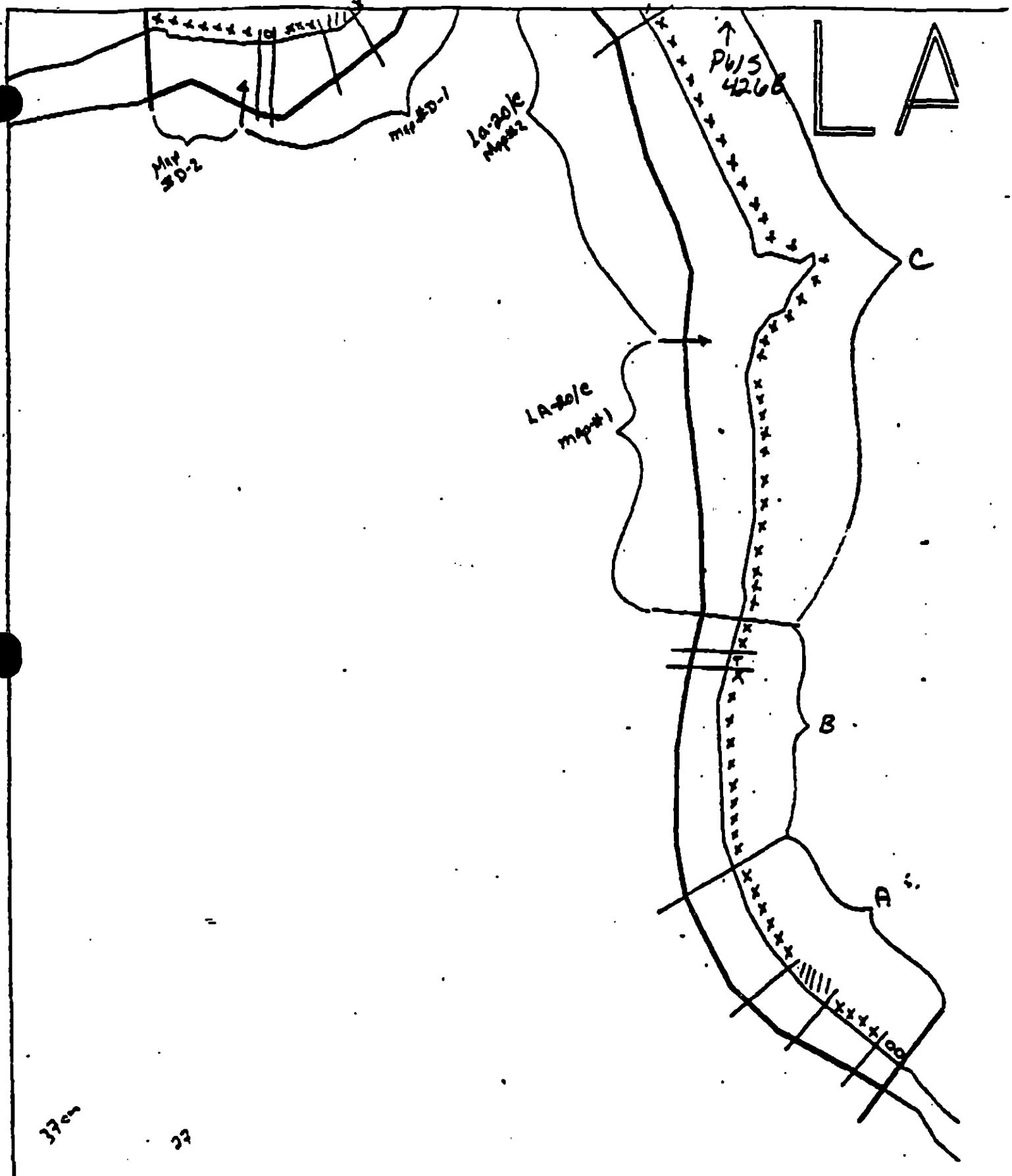
**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | X | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**Wildlife Observations/ General Comments:**

- LOW ZONE UNEXPOSED DURING SURVEY
- APPROX. 50% OF MUSSELS ARE JUVENILE (>2 cm)
- GRASS ABOVE BEACH IS DEAD - NEW GROWTH SEEN.
- BIOTA ON THIS SUBDIVISION BECOMES DENSER AS WE WALK WEST INTO BOULI
- WILDLIFE: 2 SEA LIONS, 7 MURRES, DEER TRACKS, OTTER, CORMORANT, EAGLE
- TIDEPOOLS IN BEDROCK HAVE DENSE BIOTA: SNAILS, HERMIT CRABS, LIMPETS, ISOPODS, ANTHROPLEURA ARTEMESIA, RHODOMELA, SMALL CRABS.
- PATCHES OF PHYLLOSPADIX IN MID ZONE. LG AMOUNT OF DRIFT LAMINARIA KELP INDICATES BED IN UNEXPOSED LI.
- ECOLOGICAL CONSIDERATIONS: 7 II, 7 JJ,
- BASED ON BIOTA IN LOW ZONE OF ADJACENT SUBDIVISION THE [illegible]

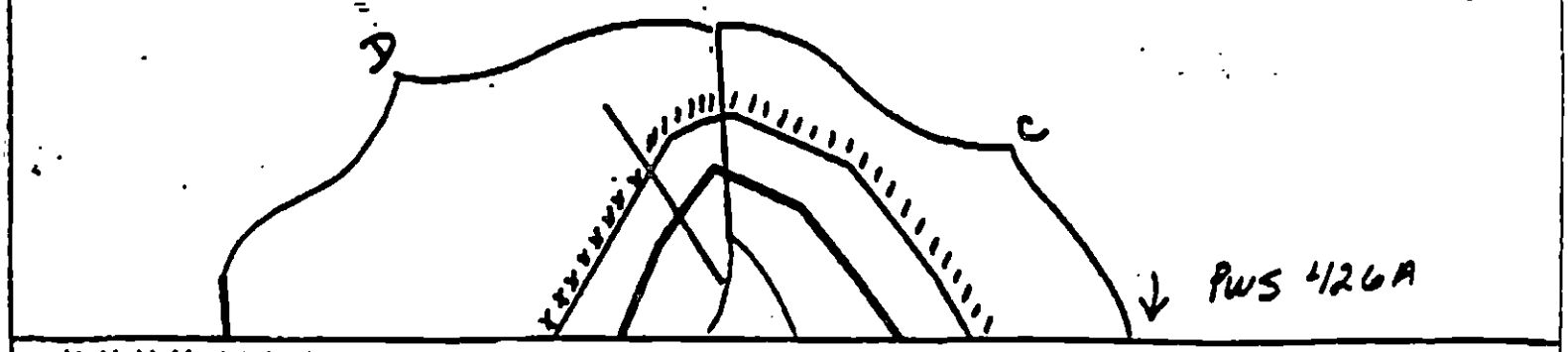



XXXX Wide
//// Medium
---- Narrow
TTTT Very light

# LA-20

ADEC Segment Length: 2114m
(from — past)

Map Key: PWS-426
Name: Reimer
Date: 4/2/90




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

# LA-20

ADEC Segment Length: 2114m

0 100 200 300
METERS

Map Key: PWS-426b
Name: REIMER
Date: 4/2/90
Date Entered:

# ADDENDUM: SUBDIVISION CONSTRAINTS

## SEGMENT LA-20 SUBDIVISION C ( 3 of 4 )

| WORK WINDOW | |
|---|---|
| Manual Pickup<br>Tarmat Removal | OPEN* |
| Spot Washing | OPEN* |
| Other Approved Treatment | WORK PRIOR TO 8/15 |

***Access approved with small boat and crew.**

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

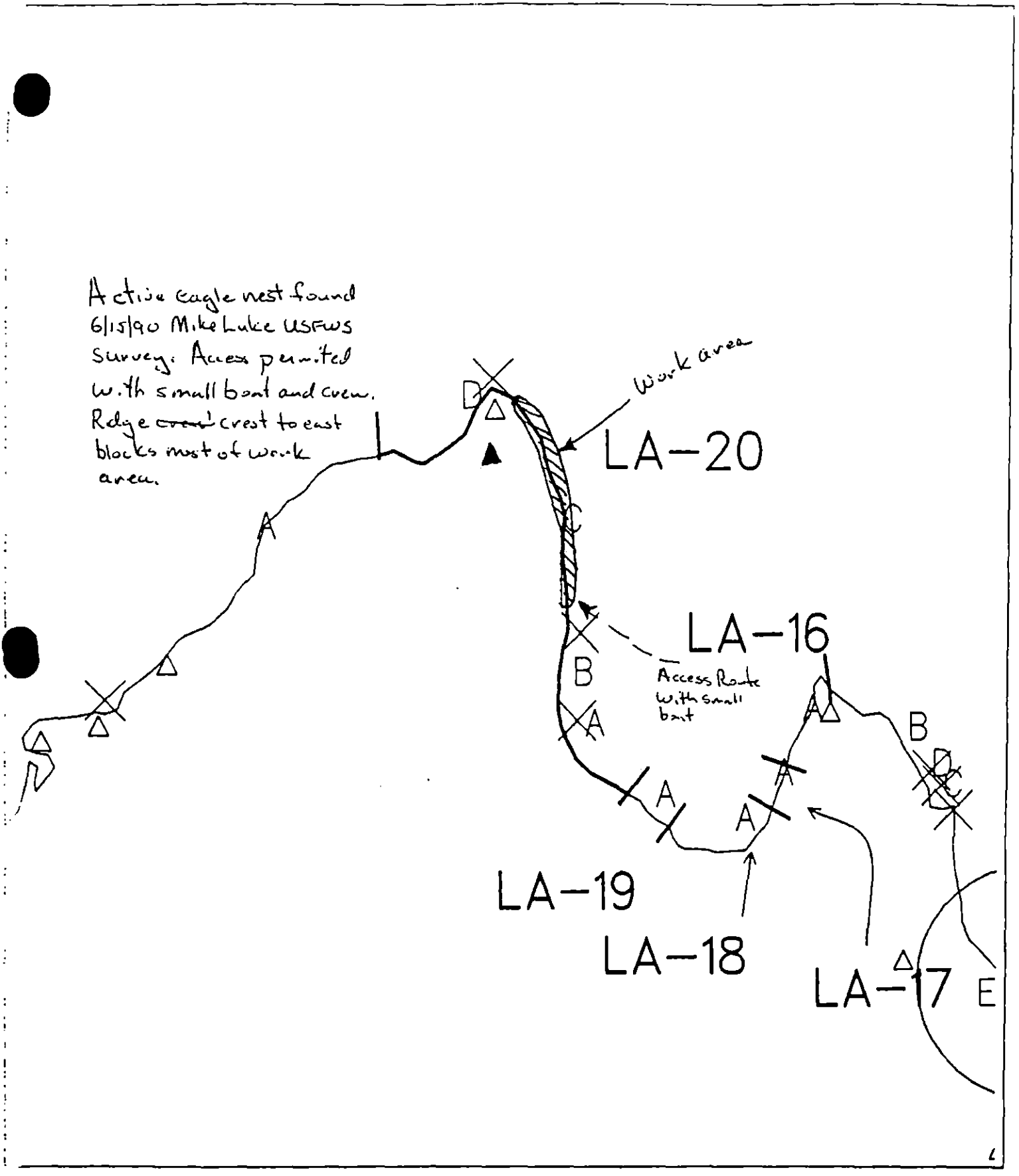
| | | |
|---|---|---|
| **5T** | **Bald Eagle Nest** | NO CONSTRAINT. USFWS bald eagle impact assessment conducted on 6/15/90 by Mike Luke indicates an active nest 150 yds inland from shore, with ridge crest blocking most of work area. Access approved with small boat and crew. |
| **7II** | **Subsistence: Deer Harvesting** | Closed to other approved treatment after 8/15. No constraint to manual pickup, tarmat removal, and spot washing. |

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC _____ Date 6/21/90

Prepared by _____ Date 6/20/90




EXXON

Exxon Company, USA
Map Key: PWS-LA-20
June 09, 1990

# ECOLOGY MAP

SEGMENT LA-20

SUBDIVISION C (3 of 4)

METERS

0 448 897

★ Seabird Colony
△ Active Eagle Nest
△ Inactive Eagle Nest

1 inch = 1471 feet

# SHORELINE EVALUATION

SEGMENT ST/ LA-20 SUBDIVISION D (4 OF 4) DATE 4/2/90

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

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

SHPO SIGNATURE: Charles E Holmes DATE: 4/29/90

**OILING CATEGORIZATION:**

Wide 392 m: Medium 112 m: Narrow 0 m: V.Light 0 m: No Oil 22 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 25 cm

**RECOMMENDATIONS:**

| | |
|---|---|
| ____No Treatment Recommended | ____Snare/Absorbent Booms |
| X Treatment Recommended | ____Oil Snares (pom poms) |
| X Manual Pickup | ____Absorbents (pads,rolls,etc) |
| X Bioremediation | ____Spot Washing:____Wands |
| ____Tarmat: ____Removal | ____ Beach Cleaner |
| | * Other (see comments) |

COMMENTS: Recommended treatment includes 1) manual pick up of oiled debris, 2) *burn logs oiled greater than 10%, 3) bioremediation of area shown on sketch map. Work should be conducted after 6/1 and/or with approval of USFWS regarding eagle nests.

TAG COMMENTS: MONITORS TO ASSESS NEED TO BURN LOGS ALSO CHECK SUITE FOR ADDITIONAL OILING

TAG APPROVAL DATE: 4/26/90
ADEC JOHN BAUER
EXXON ANDY TER
NOAA JOSEPH TALBOTT
USCG KENNETH KOAME FOSC: CVC DATE: 5-9-90
Rep to be present.

# PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

| | | |
|---|---|---|
| 1A | Salmon stream mouth - fry outmigration (3/1 to 5/15) | |
| 1B | Salmon stream mouth - spawning (7/10 to 8/31) | |
| | No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits. | |
| 1C | Salmon fry nursery area (4/31 to 7/31) | |
| 1D | Esther Hatchery release (4/15 to 6/1) | |
| 1E | Main Bay Hatchery release (4/20 to 5/10) | |
| 1F | Sawmill Bay Hatchery release (4/15 to 6/1) | |
| 1G | Cannery Creek Hatchery release (4/21 to 6/1) | |
| 1H | Remote release site | |
| 1I | Gill net area (6/7 to 8/31) | |
| 1J | Purse seine area (7/20 to 9/30) | |
| 1K | Purse seine hook-off (7/20 to 9/30) | |
| 1L | Set net sites (6/11 to 7/25) | |
| | For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints. | |
| 2M | Herring spawning (4/1 to 6/15) | |
| | Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations. | |
| 3N, 3P | Harbor seal and sea lion pupping (5/15 to 7/1) | |
| 3O, 3Q | Harbor seal and sea lion molting (8/15 to 9/15) | |
| | Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. | |
| 5R | Seabird colony (5/1 to 9/1) | |
| | Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment. | |
| 5S | Shorebird/waterfowl concentration (4/1 to 5/15) | |
| | Restrict all activity to essential minimum, especially air traffic. | |
| 5T | All Bald Eagle nests (3/1 to 6/1) | |
| | Active Bald Eagle nests (3/1 to 9/1) | |
| | Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates. | |
| 6U | Recreation: | Tent sites (6/1 to 9/15) |
| 6V | | Anchorages (6/1 to 9/15) |
| 6W | | Forest Service cabins (6/1 to 9/15) |
| 6X | | Lodge (6/1 to 9/15) |
| 6Y | | Special use destination |
| 7Z | Subsistence area: | Salmon harvesting (5/1 to 9/30) |
| 7HH | | Finfish harvesting |
| 7II | | Deer harvesting (8/15 to 2/28) |
| 7JJ | | Invertebrate harvesting |
| | For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints. | |

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA-20 SUBDIVISION: D DATE 7/6/90

**USCG**
NAME Randolph W. Hubbard SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

1. Mild oil debris cover large section of this area. I consider a back vac truck w/ a solution to lift oil off surface.

**ADEC**
NAME J. LYNN MARTIN SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

AGREE WITH EXXON ORS. RECOMMENDATION FOR BIOREMEDIATION & CLEANUP OF OILED DEBRIS.
HOWEVER I WOULD SUGGEST A COLD WATER FLUSH OVER AREA WITH CONTAINMENT FOR A PERIOD NO LESS THAN TWO WEEKS TO FREE MOBIL OIL ON BEACH.
SNOW IN SUPER-TIDAL RECHECK AT LATER DATE.

**LAND MANAGER**
NAME Patrick Seamuff SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Oil was found on the average 3% to .15% [illegible] on this segment. It does need to be cleaned. This much oil for over for the period over a long period of time.

# SHORELINE OILING SUMMARY

OG Reimer USCG Hubbard SEGMENT ST/ 19-20
BIO Zamora LAND REP Selanoff (Cavs) SUBDIVISION D 4 of 4
EXXON Garcia ADEC Martin TIME 5:30 to 17:00
TEAM NO.: 16 TIDE LEVEL: +4 to +2 DATE 4/6/90
EST. SUBDIVISION LENGTH: 490 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock Scrub
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: East to West
SURFACE SEDIMENTS: R 5 % B 40 % C 40 % P 15 % G 0 % S 0 % M 0 % V 0 %
SLOPE : Lang 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W 398 m M 80 m N 0 m VL 0 m NO 12 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | rc | ra | p | a | | | | | | sw | ui | mi | u |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | X | ✓ | | | ✓/X | | ✓/X | | | X | X | |
| COAT | | | | | | | | | | | | | |
| STAIN | | | | | | | | | | | | | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | | | | | | | | | | |
| NO OIL | | | | | | | | | | SW | | | X |

PAVEMENT: H F S 0 sq. m by 0 cm
PATTIES / TARBALLS 0 BAGS
NEAR SHORE SHEEN? NO BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | X | |
| Vegetation | | | |
| Trash | | X | |
| Debris | | | |

DEBRIS COLLECTED ☐ YES ☒ NO
TYPE 0
#BAGS 0

Photographs:
Roll No. ST-16-5
Frames 28-31

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm-cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | op | or | ol | of | no | | vo | uc | | | | | | sw | ui | mi | u | | |
| 1 | 10 | | X | | | | 0 - 10 | X | | | | | X | | | X | | | | B Pc |
| 2 | 15 | X | | | | | 0 - 15 | X | | | | | X | | | X | | | | B Pc |
| 3 | 25 | | X | | | | 10 - 25 | X | | | | | X | | | | X | | | Pc-c |
| 4 | 20 | X | | | | | 5 - 20 | X | | | | | X | | | X | | | | Pc-c |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |

COMMENTS Cobble/boulder beach, back shore covered with snow.
Oil coverage is continuous along almost entire area. Patchy coverage found @ north end of segment near headland and again in the middle of sub-segment in shelter cove, the rest of the sub segment has broken (90%) coverage on boulder/cobble and underlying finer sediments. The only clean section is a small run-off stream (12m) wide.



REVIEWED JW DATE 4/9/90

OC Reimer

SEGMENT ST/ LA-20

SUBDIVISION D - map 1

DATE 4 / 6 90

## SKETCH MAP

map #1

**CHECKLIST**

- ✓ N Arrow
- Approx. Scale
- Seg/Sub Bndry
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. HWL/LWL
- SBL
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

**LEGEND**

1 △ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

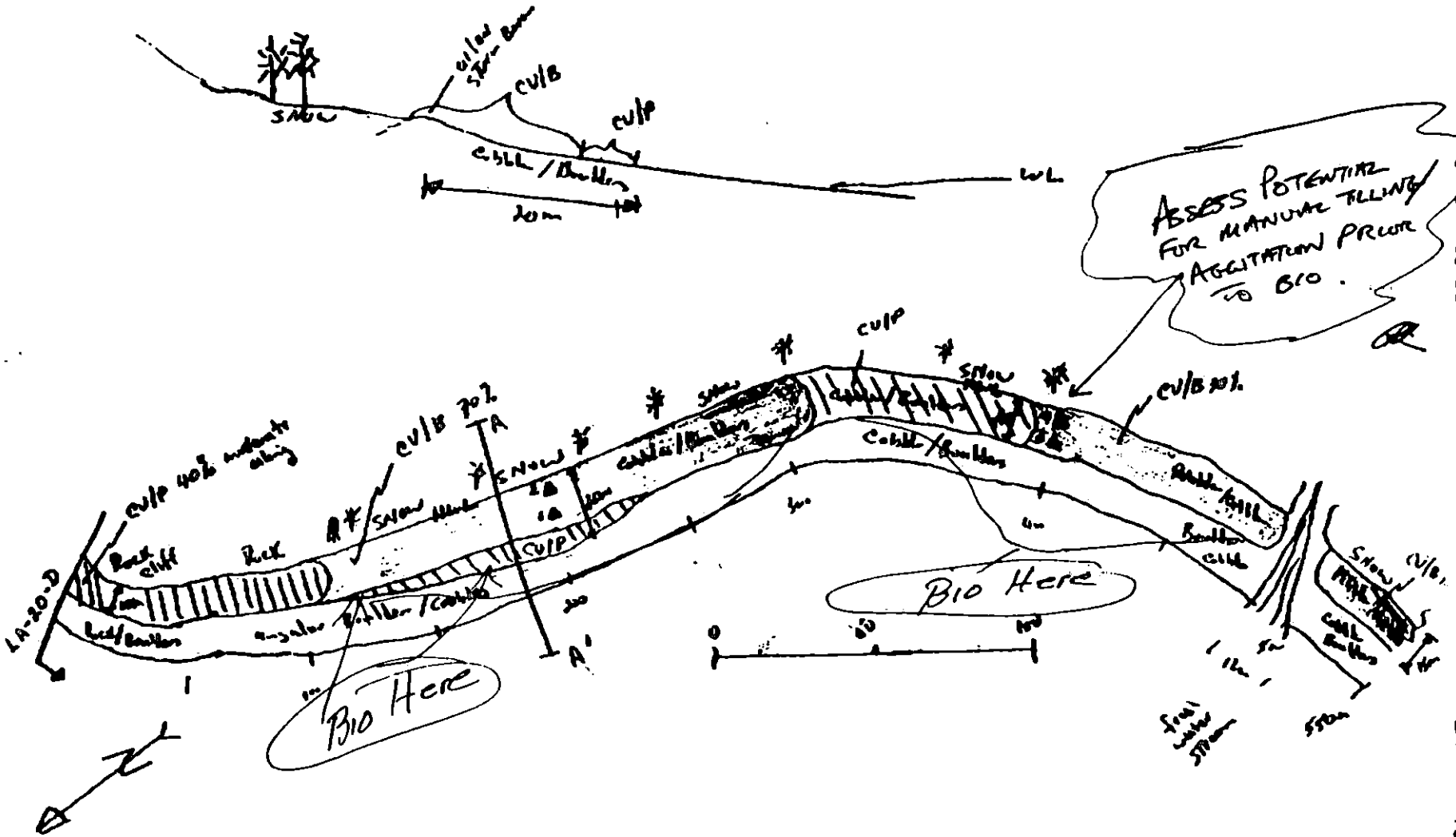
CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

Photo location, direction, and number




Oil Character Length (m): AP 0 PO 0 CV 328 CT 0 ST 0 MS 0 PT 0 TB 0 FL 0 NO 12

REVISION/ADDITION

93

OG Reveal

SEGMENT ST/ LA-20 / L

SUBDIVISION D - map #2

DATE 4 / 6 90

## SKETCH MAP

MAP #2

**CHECKLIST**

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

**LEGEND**

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

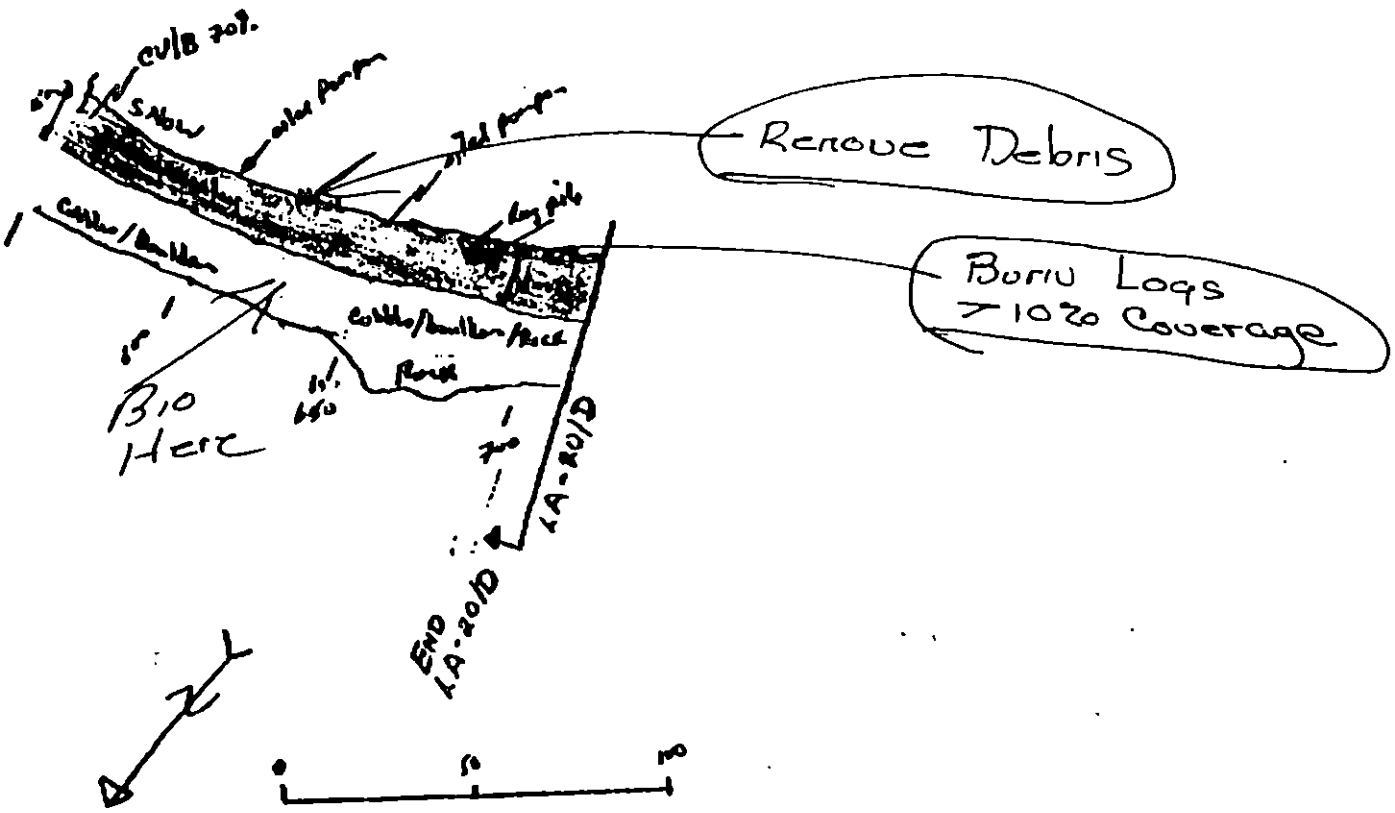
CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 ⇨ Photo location, direction, and number




Oil Character Length (m): AP ⊘ PO ⊘ CV 150 CT ⊘ ST ⊘ MS ⊘ PT ⊘ TB ⊘ FL ⊘ NO ⊘

REVISION: 03/01/93

LA-20-D

# SHORELINE ECOLOGICAL SUMMARY

REVISED: 09/22/90

Segment ST / LA 20 Subdivision D Date (mo / day / yr) 4/6/90

Time ( 24 hr ) 1930 eff Biologist TONY ZAMORA

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

(B) Overall % cover of biota ( % of segment ): Dense 50 Moderate 25 Low 25

(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)

Photographs:
Roll No. ST-16-5
Frames 28-31

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | X | 2 | X | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | X | X | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | X | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | X | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| X | 2 | 2 | 2 | X | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | X | 3 | 3 | 3 | X | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

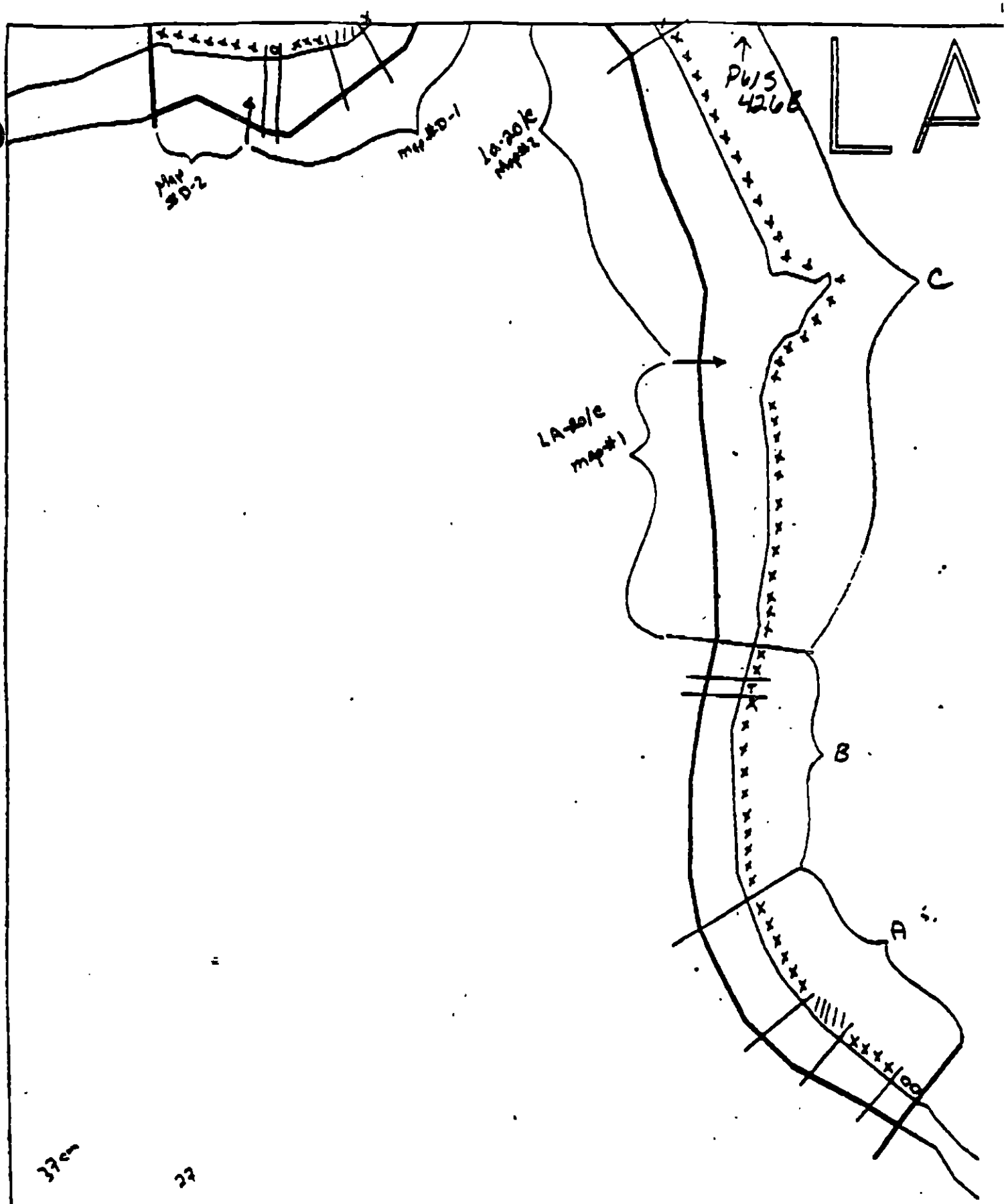
**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | X | 2 | 2 | | 2 | X | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

Wildlife Observations/ General Comments:

- ONLY UPPER MARGIN OF LOW ZONE EXPOSED.
- WILDLIFE: 2 OTTERS, 2 SEALIONS, 3 EAGLES,
- OVERALL COVERAGE OF MYTILUS ON BOULDERS IS SPARSE - BUT IN PATCHES
- IN LOW ZONE: PALMARIA, PAGURIDS, LEPTOSTRACAS, ISOPODS, AMPHIPODS, GUNNELS, SPIROR GUNNELS, RHODOMELA, PHYLLOSPADIX, PETROCELLUS,
- GASTROPOD EGG CASES FOUND ON BEDROCK IN L I

ECOLOGICAL CONSIDERATIONS: 735.711



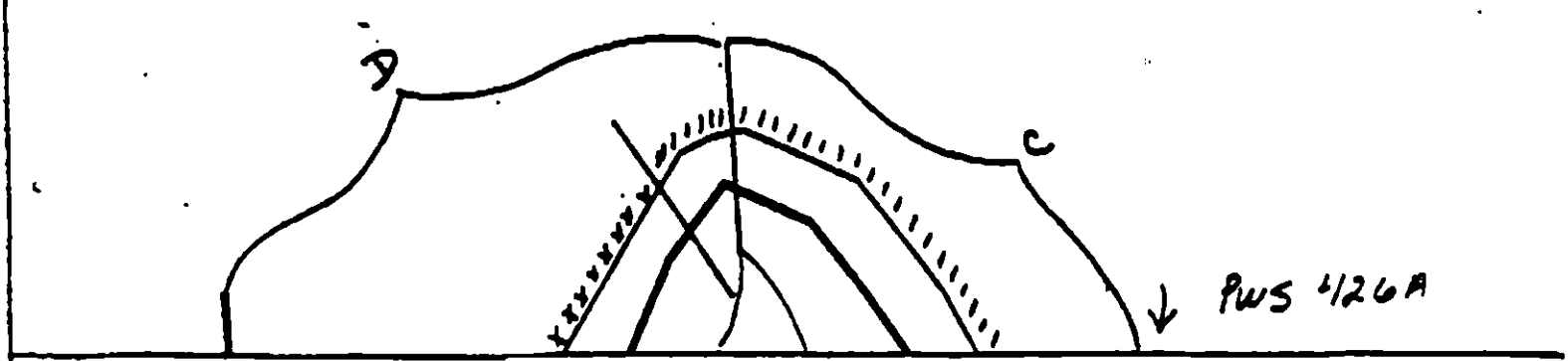

XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
0000 No Oil

# LA-20

ADEC Segment Length: 2114m
(from — past)

0 100 200 300
METERS

Map Key: PWS-426a
Name: Reimer
Date: 4/2/90
Date Entered:




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

# LA-20

ADEC Segment Length: 2114m

0 100 200 300
METERS

Map Key: PWS-426b
Name: Reimer
Date: 4/2/90
Data Entered:

APR-07-1990 11:08 FROM EXXON CMD CORDOVA TO SCAT TEAM P.22

# ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT LA-20 SUBDIVISION D ( 4 of 4 )

| WORK WINDOW | |
|---|---|
| Manual Pickup | **CLOSED** |
| Bioremediation<br>Oiled Log Burning | **CLOSED** |

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

| | | |
|---|---|---|
| **5T** | **Bald Eagle Nest** | Closed to manual pickup, bioremediation, and oiled log burning. USFWS bald eagle impact assessment conducted on 6/15/90 by Mike Luke indicates an active nest within 400m of the work area. |
| **7II** | **Subsistence: Deer Harvesting** | Closed to bioremediation and log burning after 8/15. No constraint to manual pickup. |

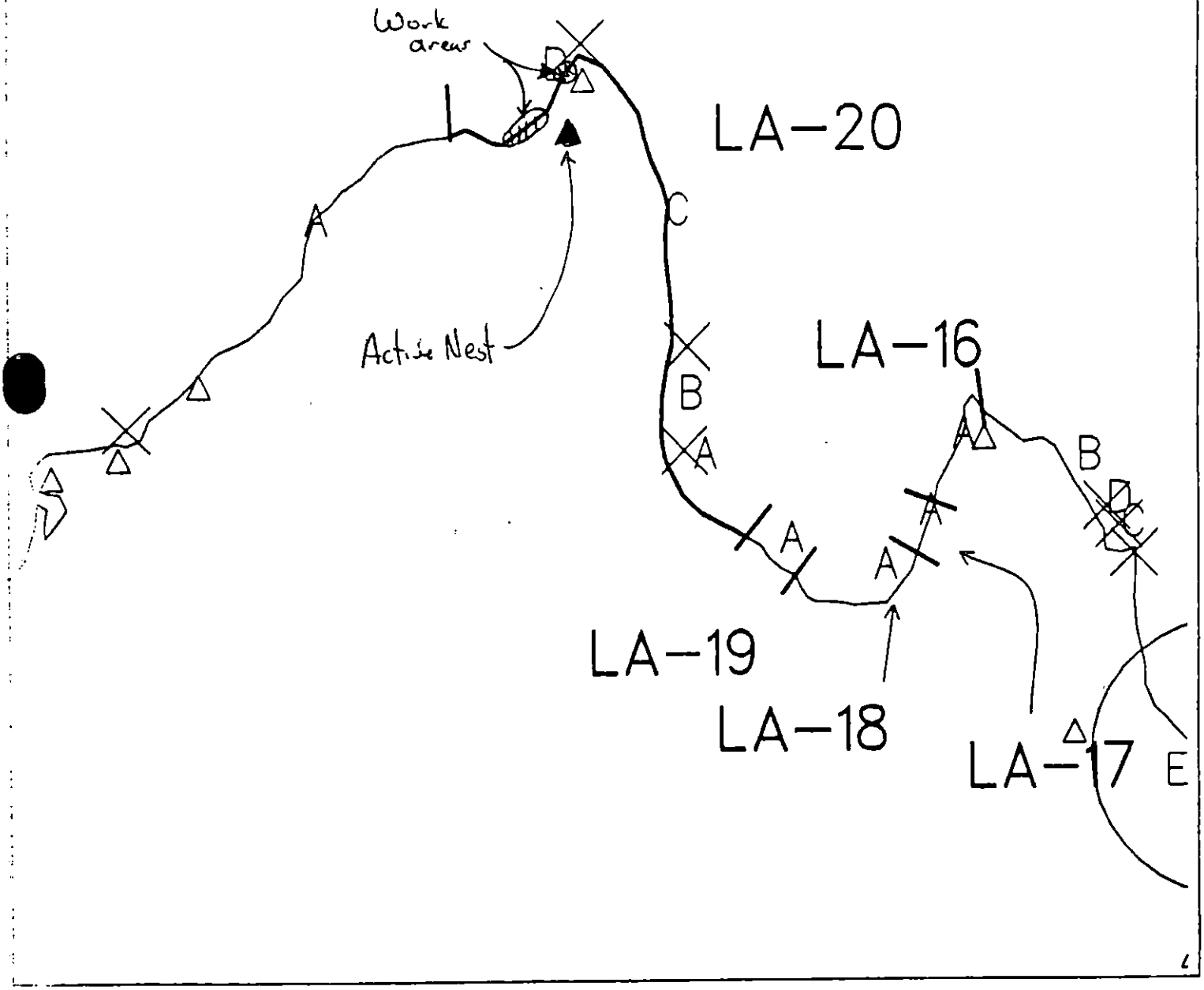
OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC _____ Date 6-22-90

Prepared by _____ Date 6/22/90

Active eagle nest found 6/15/90 USFWS Survey, Mike Luke.




EXXON

Exxon Company, USA
Map Key: PWS-LA-20
June 09, 1990

# ECOLOGY MAP
## SEGMENT LA-20
SUBDIVISION D (4 of 4)

METERS
0 448 897

★ Seabird Colony
▲ Active Eagle Nest
△ Inactive Eagle Nest

1 Inch = 1471 feet

# SHORELINE EVALUATION

SEGMENT ST/ LA-21 SUBDIVISION A (1 OF 2) DATE 4/7/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**
ADF&G anadromous streams no. 226-40-16774, 16776.
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-3 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

**SUBDIVISION ECOLOGICAL CONSTRAINTS:**
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Subdivision A - 1 eagle nest; 2 more eagle nests within 400 m of subdivision A.

SHPO SIGNATURE: J. Daniel McMahon DATE: 4/23/90

**OILING CATEGORIZATION:**

Wide 215 m: Medium 483 m: Narrow 51 m: V.Light 442 m: No Oil 161 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 30+ cm

**RECOMMENDATIONS:**

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

COMMENTS: Recommended treatment includes 1) pick up all pooled oil oiled vegetation and debris, 2) Spot wash area "A" using snares and pom poms to control sheening, 3) bioremediate areas shown on attached sketch map. ~~but not within 100m of anadromous fish stream.~~ Work should be conducted between 6/1 and 7/10 based on eagle nest and salmon constraints, after approval of USFWS regarding eagle nest.

TAG COMMENTS: MONITORS TO ASSESS SUITZ.

TAG APPROVAL DATE: 4/23/90.
ADEC ART WEINER
EXXON ANDY TOTH
NOAA Joseph Talbott
USCG KENNETH KEANE

FOSC: [signature] DATE: 5-18-90

NOTIFY CVC 24 HRS. IN ADVANCE OF WORK

# PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

| | | |
|---|---|---|
| 1A<br>1B | | **Salmon stream mouth - fry outmigration (3/1 to 5/15)**<br>**Salmon stream mouth - spawning (7/10 to 8/31)**<br>No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits. |
| 1C | | **Salmon fry nursery area (4/31 to 7/31)** |
| 1D | | **Esther Hatchery release (4/15 to 6/1)** |
| 1E | | **Main Bay Hatchery release (4/20 to 5/10)** |
| 1F | | **Sawmill Bay Hatchery release (4/15 to 6/1)** |
| 1G | | **Cannery Creek Hatchery release (4/21 to 6/1)** |
| 1H | | **Remote release site** |
| 1I | | **Gill net area (6/7 to 6/31)** |
| 1J | | **Purse seine area (7/20 to 9/30)** |
| 1K | | **Purse seine hook-off (7/20 to 9/30)** |
| 1L | | **Set net sites (6/11 to 7/25)**<br>For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints. |
| 2M | | **Herring spawning (4/1 to 6/15)**<br>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)**<br>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)**<br>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)**<br>Restrict all activity to essential minimum, especially air traffic. |
| 5T | | **All Bald Eagle nests (3/1 to 6/1)**<br>**Active Bald Eagle nests (3/1 to 9/1)**<br>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**<br>For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints. |

# FIELD SHORELINE COMMENT SHEET

EGMENT ST / LA-21 SUBDIVISION: A DATE 4/07/90

**USCG**
NAME R. Hubbard SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

1. I suggest a good oil removing solution to flush and spot from beaches.

**ADEC**
NAME J. LYNN MARTIN SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED
COMMENTS

AGREE WITH EXXON OPS. RECOMMENDATION FOR A HOT WASH IN AREA "A" (SEE ATTACHED MAP) FOLLOWED BY BIOREMEDIATION I ALSO AGREE THAT AREA "B" (SEE ATTACHED MAP) SHOULD BE A SPOT BIOREMEDIATED HOWEVER I WOULD SUGGEST MANUAL REMOVAL OF POOLED AREAS BEFORE THIS OCCURES

**LAND MANAGER**
NAME Patrick SELANOFF SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

All oil/ gross debris will have to be manually removed before any bioremediation.

## SHORELINE OILING SUMMARY

REVISION NO.

OG Reimer | USCG Hubbard | SEGMENT ST/ LA-21
BIO Zamora | LAND REP Selanoff (CVC) | SUBDIVISION A
EXXON Garcia | ADEC Martin | TIME 15 : 30 to 16 : 46
TEAM NO.: 16 | TIDE LEVEL: +3 to +1 | DATE 4 / 7 / 90
EST. SUBDIVISION LENGTH: 1425 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☐ Rock SNOW
SURVEYED FROM: ☐ Foot ☐ Boat ☐ Helo WORKING DIRECTION: North to South
SURFACE SEDIMENTS: R 1 % B 30 % C 40 % P 29 % G – % S – % M – % V ____ %
SLOPE : Lang 100 % Hang – % Vert – % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W 220 m M 525 m N 80 m VL 475 m NO 125 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | A | P | S | Bn | O | L | Bk | W | I | M | F |
| ASPHALT PAVEMENT | | | | | | | | | | | | |
| POOLED | | | X | | X | | | X | | | X | X | |
| COVER | X | o | ✓ | | | X/✓ | | | X | X/✓ | X/✓ | |
| COAT | | | | X | | | | X | | | X | X | |
| STAIN | | | | | | | | | | | | | |
| MOUSSE | | | | | | | | | | | | | F |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |

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

PATTIES/TARBALLS 0 BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

| OILED DEBRIS | AMOUNT | | |
|---|---|---|---|
| | SM | MD | LG |
| Logs | | X | |
| Vegetation | | | X |
| Trash | | | |
| Debris | | X | |

DEBRIS COLLECTED ☐ YES ☒ NO
TYPE 0
#BAGS 0

Photographs:

## SHORELINE OILING SUMMARY (PAGE 2 of 2)

SEGMENT ST/ LA-2 SUBDIVISION A

## SUBSURFACE OIL (CONTINUED)

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | (CM-CM) | UO | UC | | | | | | SU | UI | MI | LI | | |
| 7 | 20 | | | | | X | - | | | | | | | | | X | | | | PCG |
| 8 | 30 | | | | | X | - | | | | | | | | | | X | | | GPC |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
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COMMENTS

REVIEWED JW DATE 4/12/90

## SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/23/98

Segment ST / LA21 (1515 ON) Subdivision A Date (mo / day / yr) 4/7/90

Time ( 24 hr ) 1645 OFF Biologist TONY ZAMORA

( A ) Substrate type and % of segments:
( 1 ) Bedrock 1 ( 2 ) Boulder 20 ( 3 ) Cobble 40 ( 4 ) Pebble 29 ( 5 ) Sand — ( 6 ) Silt —

( B ) Overall % cover of biota ( % of segment ): Dense 5 Moderate 40 Low 25

( 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 )

Photographs:
Roll No. ST-16-4
Frames 12 - 23

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | X | 2 | 2 | X | 3 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | X | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | X1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | X | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | X | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| X1U | X1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | X | X | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | X | X | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | X | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

Wildlife Observations/ General Comments: OBSERVED: 2 OTTERS, 2 SEA LIONS, DEER & DEER S
- 2 EAGLES, GULLS. FOUND DEAD OTTER - DECOMPOSED, NO VISIBLE OIL.
- GRASSES ABOVE BEACH ARE OIL COATED.
- SCATTERED NEREOCYSTIS KELP OFFSHORE

Ecological Considerations: 7II, 1A/B

- FILAMENTOUS GREEN COVERS COBBLE IN UI & M2

OG R

SEGMENT ST/ LA-21

SUBDIVISION A

DATE 4 / 7 90

**CHECKLIST**

- ✓ N Arrow
- Approx. Scale
- Spg/Sub Bndry
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. HWL/LWL
- SSL
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

**LEGEND**

1 ▲

Pit - No Subsurface Oil

2 ▲

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

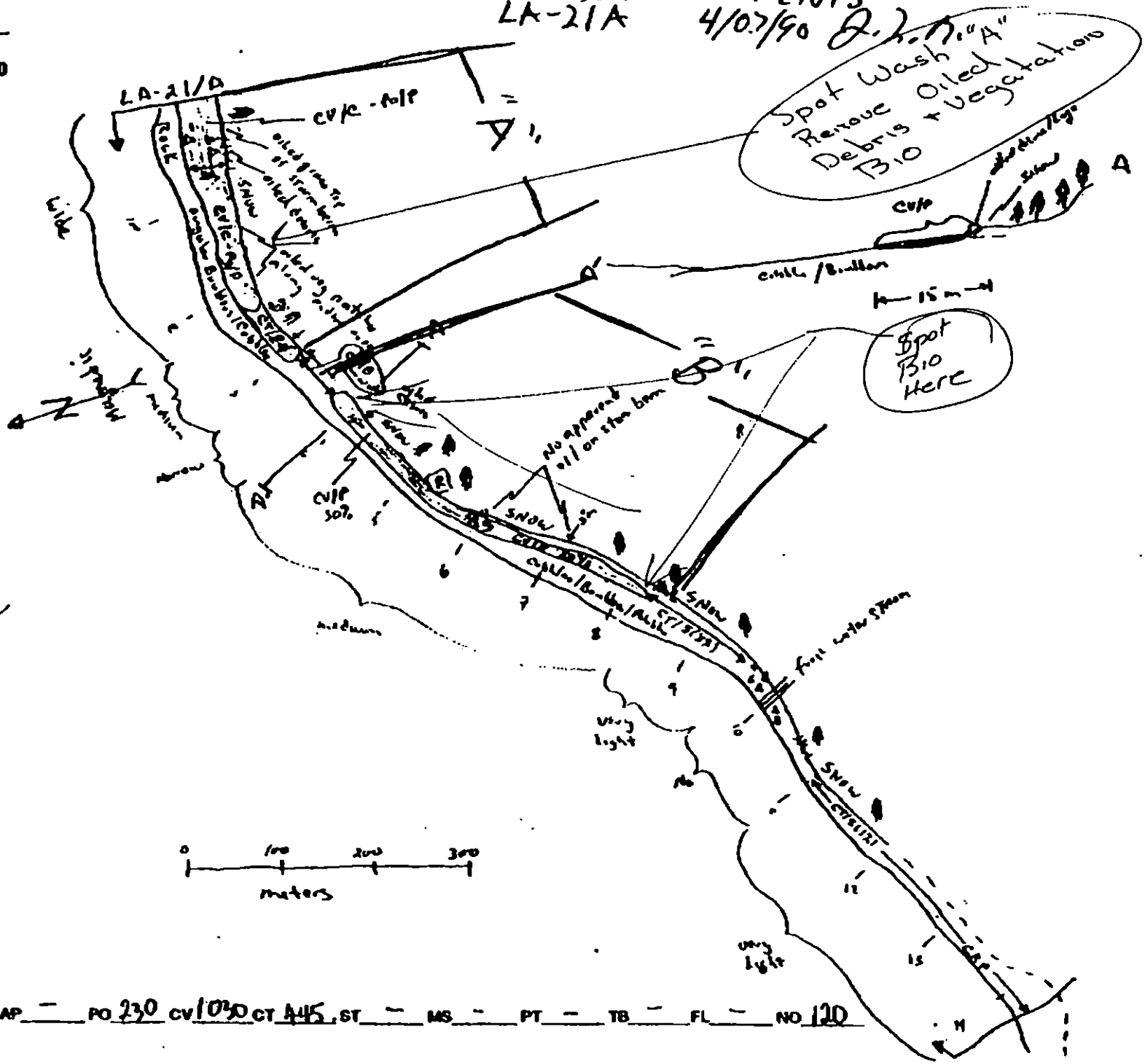
Splashed Distribution

Oiled Vegetation

Photo location, direction, and number

# SKETCH MAP

MAP FOR ADEC COMMENTS
LA-21A 4/07/90 Q.A.R. "A"




Oil Character Length (m): AP — PO 230 CV 1030 CT 445 ST — MS — PT — TB — FL — NO 120

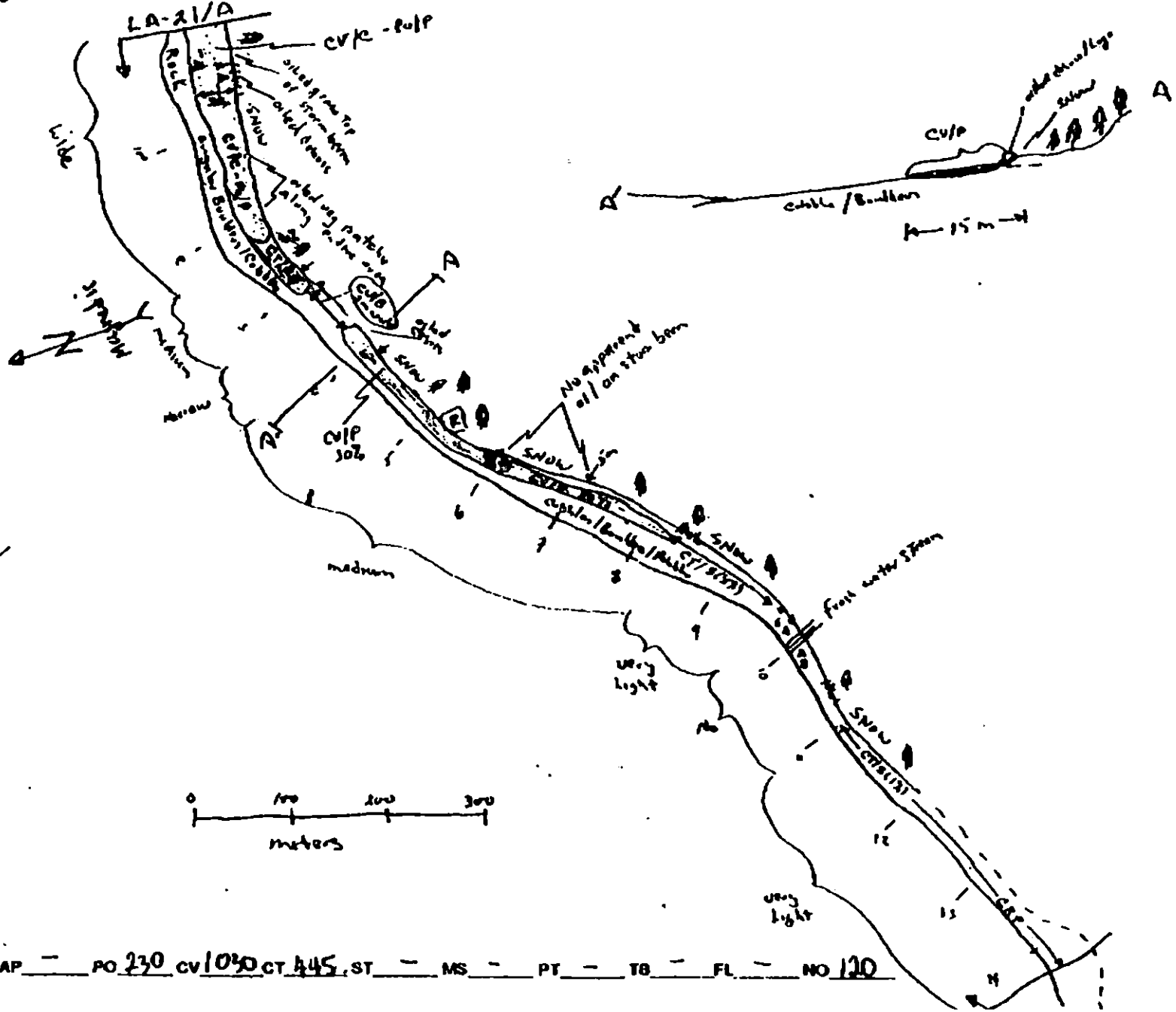
OG Reir

SEGMENT ST/ LA-21

SUBDIVISION A

DATE 4 / 7 90

## SKETCH MAP




Oil Character Length (m): AP — PO 230 CV 1030 CT 445 ST — MS — PT — TB — FL — NO 120

REVISION 08/2000

### CHECKLIST

- ✓ N Arrow
- Approx. Scale
- Bdy/Sub Bndry
- Oil Dist.
- Width
- Length
- % Cover
- Subsurface Character
- Est. HWL/LWL
- SSL
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

### LEGEND

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

CT/P Patchy Distribution

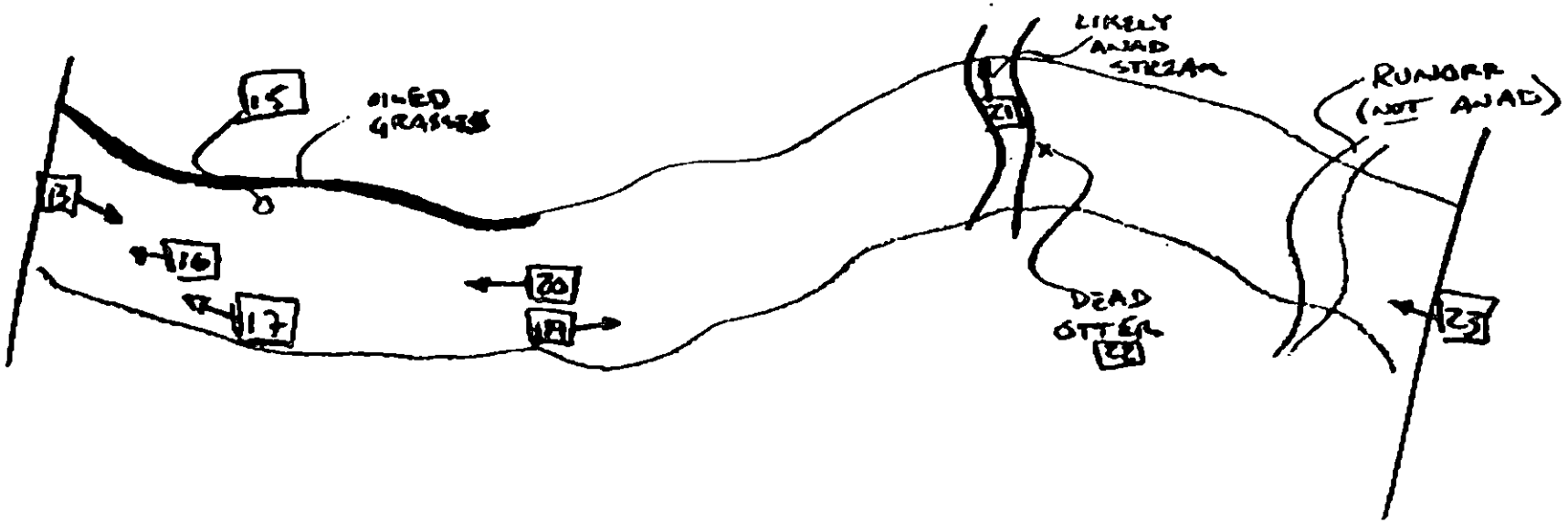
CT/S Splashed Distribution

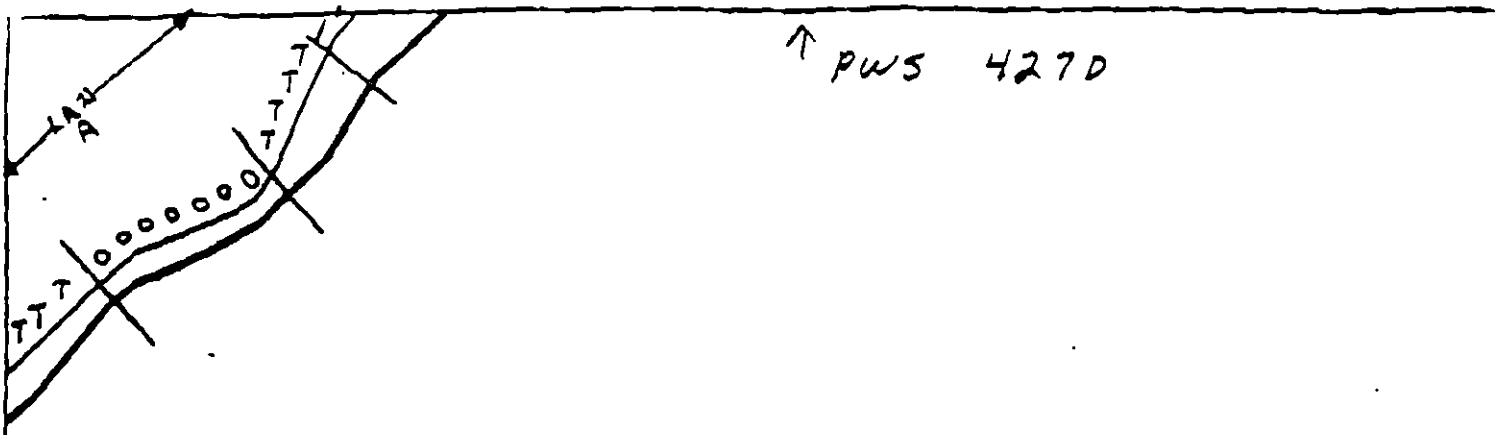
Oiled Vegetation

1 ⇐ Photo location, direction, and number

# LAZI-M

PHOTO LOCATIONS






↑ PWS 427D

← PWS 427A

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

# LA-21

ADEC Segment Length: 3057m

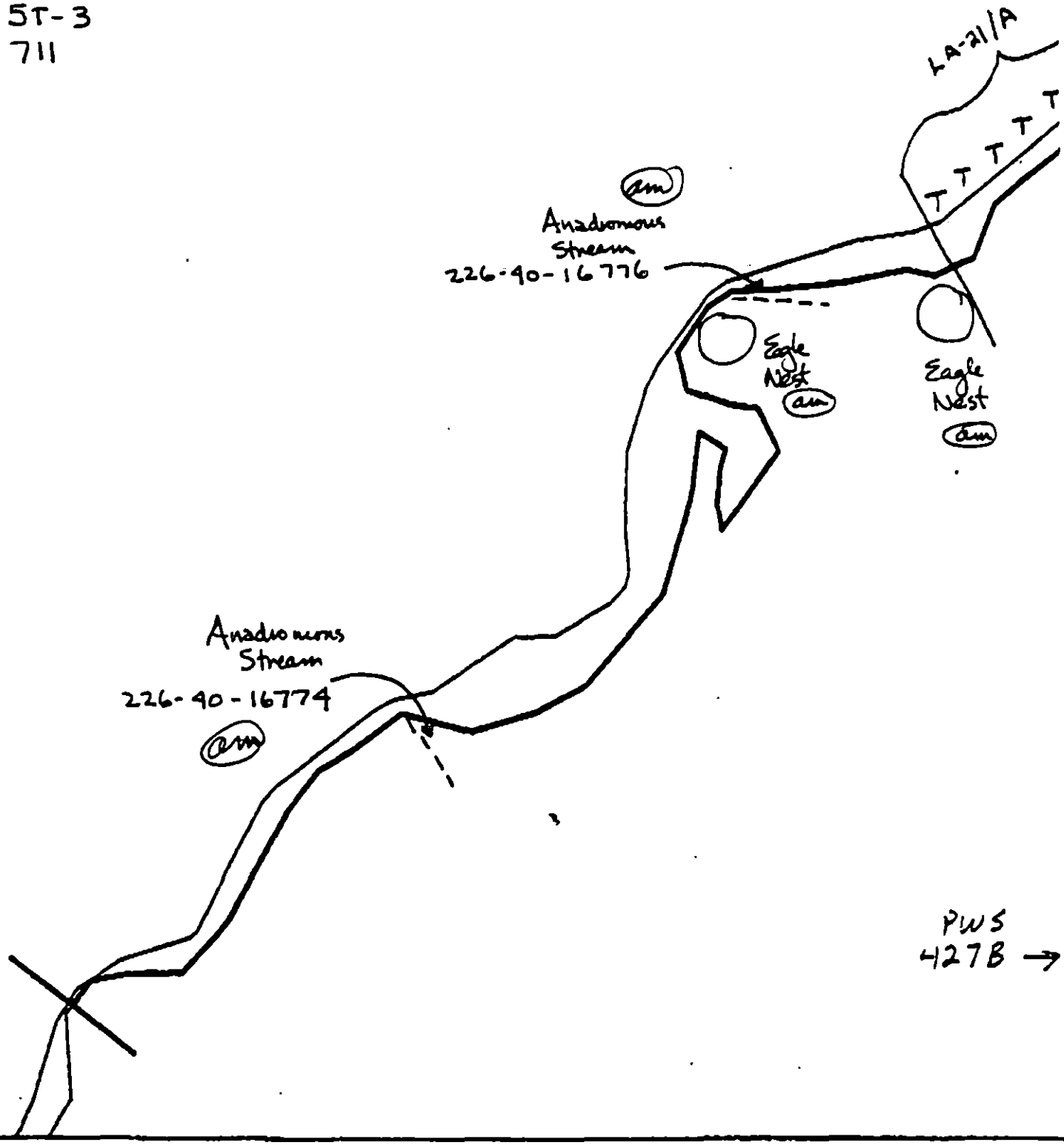
0 100 200 300
METERS

Map Key: PWS-427b
Name: Reimer
Date: 4/7/90
Date Entered:

# LA-21

ECOLOGY MAP

1A, 1B
5T-3
711



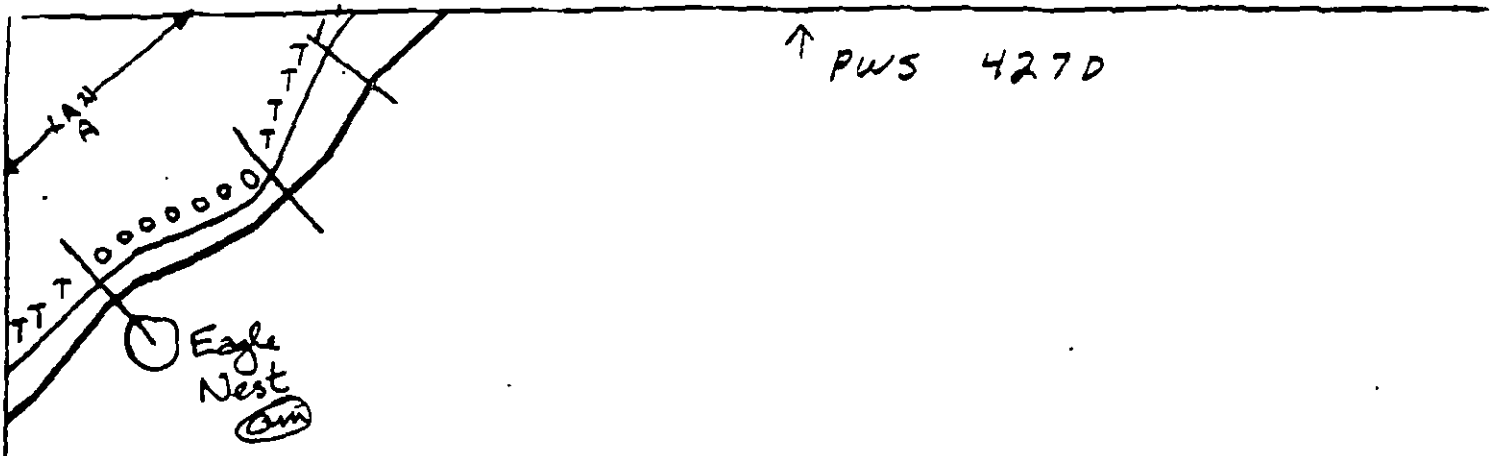

XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
0000 No Oil

LA-21

ADEC Segment Length: 3057m

0 100 200 300
METERS

Map Key: PWS-427a
Name: Reimer
Date: 4/7/90
Date Entered:




↑ PWS 427D

← PWS 427A

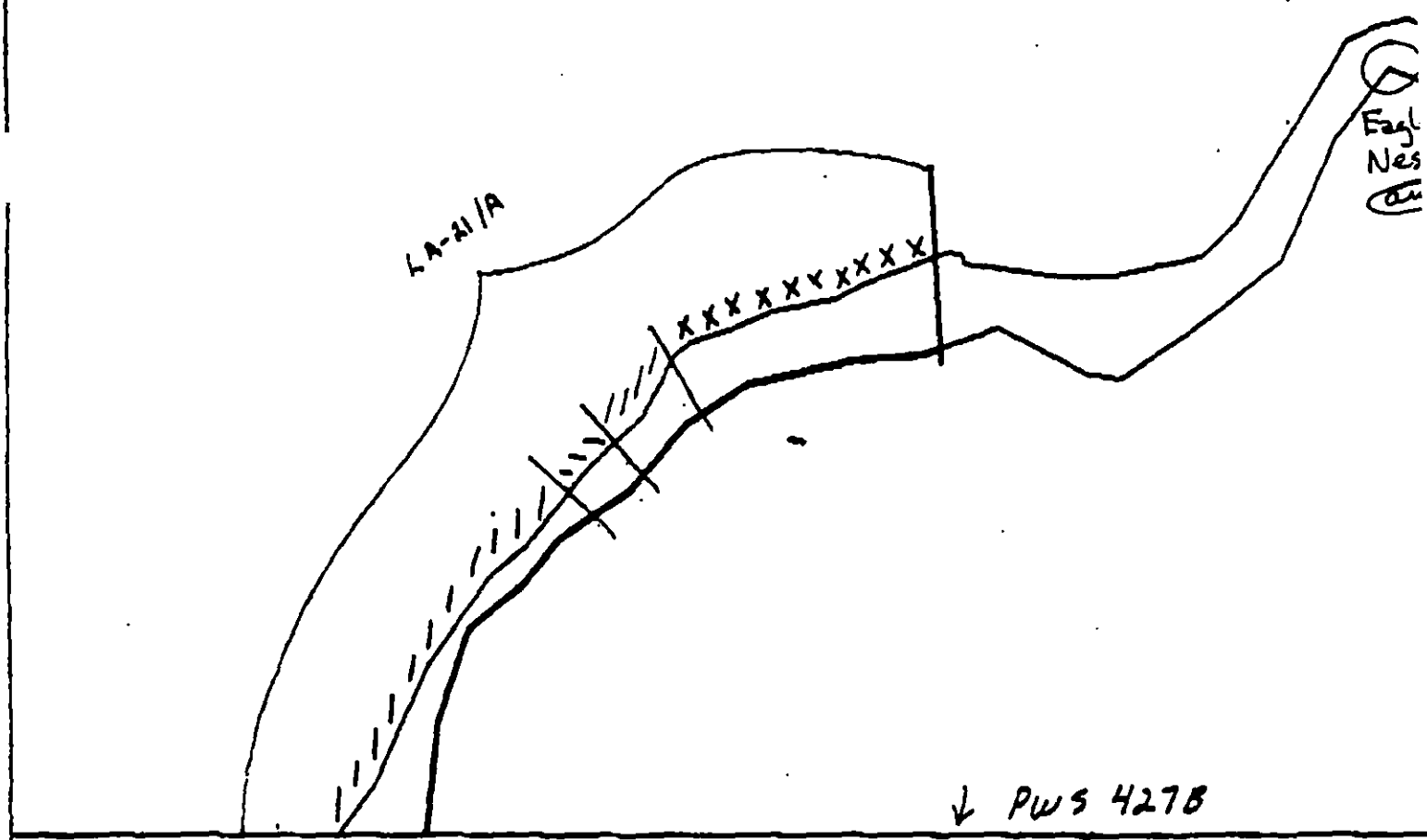
XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
0000 No Oil

# LA-21

ADEC Segment Length: 3057m

0 100 200 300
METERS

Map Key: PWS-427b
Name: Reimer
Date: 4/7/90
Date Entered:




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

# LA-21

ADEC Segment Length: 3057m

0 100 200 300
METERS

Map Key: PWS-427d
Name: Reimer
Date: 4/7/90
Date Entered:

# ADDENDUM: SUBDIVISION CONSTRAINTS

-SEGMENT LA-21 SUBDIVISION A ( 1 of 2 )

| WORK WINDOW | |
|---|---|
| Manual Pickup | **OPEN** |
| Bioremediation<br>Spot Washing<br>Other Approved Treatment | **WORK PRIOR TO 8/15** |

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

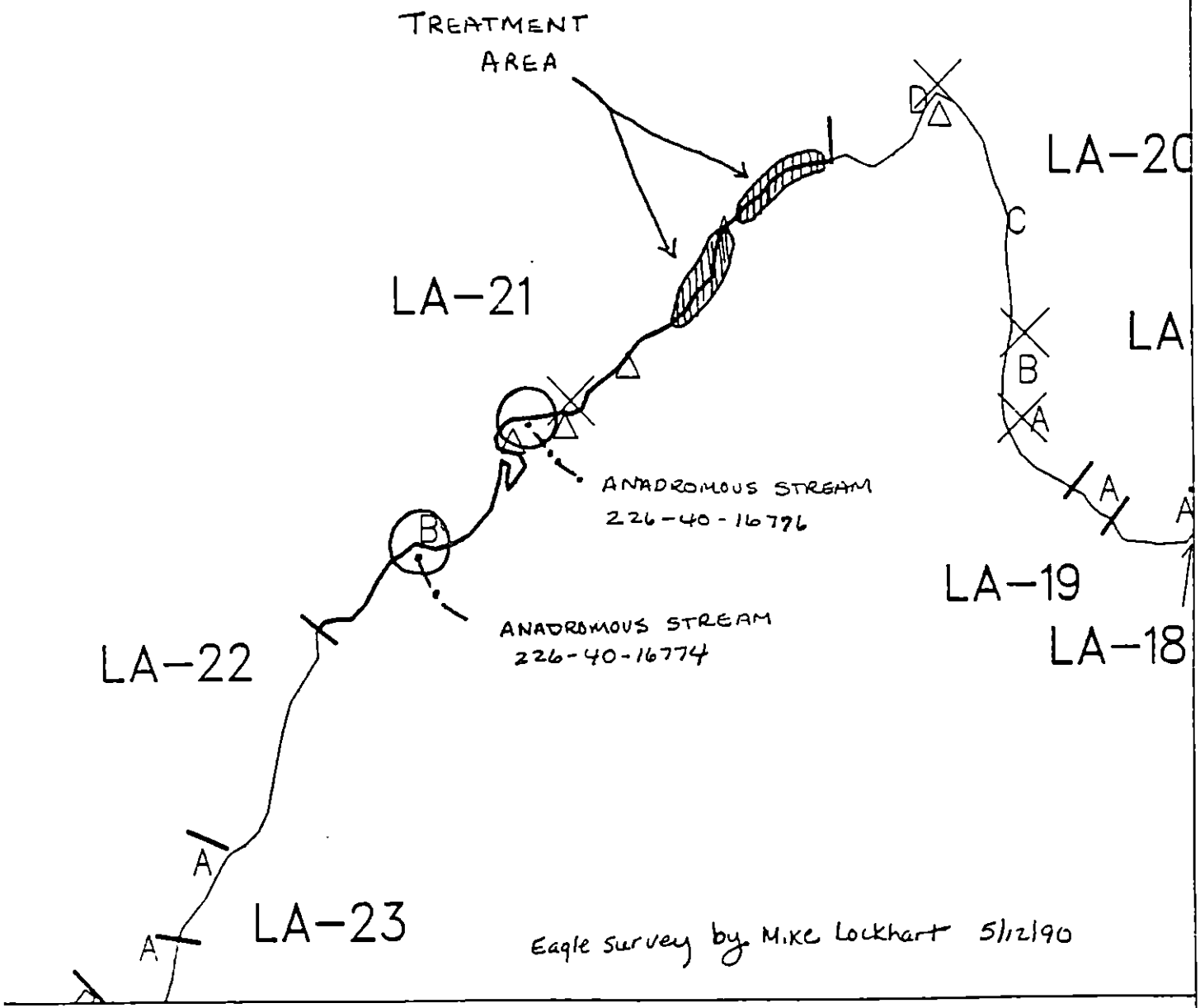
| | | |
|---|---|---|
| **1A,1B** | **Salmon Stream** | NO CONSTRAINT. ADF&G catalogued anadromous streams (226-40-16776 and 16774) are more than 100m from work areas. |
| **5T** | **Bald Eagle Nest** | NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site. |
| **7II** | **Subsistence: Deer Harvesting** | Closed to bioremediation, spot washing and other approved treatment after 8/15. No constraint to manual pickup. |

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC G.A. Reiter for DATE 6/10/90

Date 6/10/90




EXXON

Exxon Company, USA

# ECOLOGY MAP

## SEGMENT LA-21

SUBDIVISION A (1 of 2)

METERS

★ Seabird Colony

△ Active Eagle Nest

△ Inactive Eagle Nest

## SHORELINE EVALUATION

SEGMENT ST/ LA-21 SUBDIVISION B (2 OF 2) DATE 4/7/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**
ADF&G anadromous streams no. 226-40-16774, 16776.
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-3 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

**SUBDIVISION ECOLOGICAL CONSTRAINTS:**
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Subdivision B - two anadromous streams present; 2 eagle nests and one more eagle nest within 400m of subdivision B.

SHPO SIGNATURE: J. Michael McMahon DATE: 4/23/90

**OILING CATEGORIZATION:**

Wide 142 m: Medium 636 m: Narrow 90 m: V.Light 70 m: No Oil 769 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 45+ cm

**RECOMMENDATIONS:**

| | |
|---|---|
| ____No Treatment Recommended | ____Snare/Absorbent Booms |
| X Treatment Recommended | X Oil Snares (pom poms) |
| X Manual Pickup | ____Absorbents (pads,rolls,etc) |
| X Bioremediation | X Spot Washing: X Wands |
| ____Tarmat: ____Breakup | ____ Beach Cleaner |
| ____Removal | ____Other (see comments) |

COMMENTS: Recommended treatment includes 1) manual pick up of oiled debris, 2) bioremediation of areas shown on attached sketch map, ~~but not within 100m of anadromous fish stream~~. Work should be conducted between 6/1 and 7/10 after approval of USFWS regarding eagle nest. Streams to be surveyed during ANAD SCAT.

TAG COMMENTS: ____

TAG APPROVAL DATE: 4/23/90.
ADEC Art Weiner Art Weiner
EXXON Andy Teal
NOAA Jaya Talbott
USCG Kenneth Keane

FOSC: ____ DATE: 5-16-90

NOTIFY CVC 24HRS. IN ADVANCE of work

# PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

| | | |
|---|---|---|
| ~~1A~~ | | **Salmon stream mouth - fry outmigration (3/1 to 5/15)** |
| ~~1B~~ | | **Salmon stream mouth - spawning (7/10 to 8/31)** |
| | | No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits. |
| 1C | | **Salmon fry nursery area (4/31 to 7/31)** |
| 1D | | **Esther Hatchery release (4/15 to 6/1)** |
| 1E | | **Main Bay Hatchery release (4/20 to 5/10)** |
| 1F | | **Sawmill Bay Hatchery release (4/15 to 6/1)** |
| 1G | | **Cannery Creek Hatchery release (4/21 to 6/1)** |
| 1H | | **Remote release site** |
| 1I | | **Gill net area (6/7 to 6/31)** |
| 1J | | **Purse seine area (7/20 to 9/30)** |
| 1K | | **Purse seine hook-off (7/20 to 9/30)** |
| 1L | | **Set net sites (6/11 to 7/25)** |
| | | For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints. |
| 2M | | **Herring spawning (4/1 to 6/15)** |
| | | Restrict boat traffic to essential minimum. Avoid damage to 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 8/1)** |
| | | **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 (5/1 to 9/15)** |
| 6V | | **Anchorages (6/1 to 9/15)** |
| 6W | | **Forest Service cabins (6/1 to 9/15)** |
| 6X | | **Lodge (6/1 to 9/15)** |
| 6Y | | **Special use destination** |
| 7Z | **Subsistence area:** | **Salmon harvesting (5/1 to 9/30)** |
| 7HH | | **Finfish harvesting** |
| ~~7II~~ | | **Deer harvesting (8/15 to 2/28)** |
| 7JJ | | **Invertebrate harvesting** |
| | | For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints. |

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ LA-21 SUBDIVISION: B DATE 4/07/90

**USCG**
NAME R. HOWARD SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED
COMMENTS

**ADEC**
NAME J. LYNN MARTIN SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED
COMMENTS

AGREE WITH EXXON OPS. RECOMMENDATION FOR SPOT BIOREMEDIATION OF AREA "B" (SEE ATTACHED MAP) AND MANUAL REMOVAL OF SMALL POOLED AREAS.
AREA "A" (SEE ATTACHED MAP) SHOULD BE REVIEWED FURTHER BY ANAD SCAT DUE TO THE BROKEN OIL COVER THAT ACCURED ON THE NORTH SIDE OF THE STREAM.

**LAND MANAGER**
NAME Patrick SEUMANEF SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED
COMMENTS

## SHORELINE OILING SUMMARY

REVISION NO 09/28/89

OG Reimer USCG Hubbard SEGMENT ST/ LA-21
BIO Zamora LAND REP Selanoff (CVI) SUBDIVISION B (2 of 2)
EXXON Garcia ADEC Martin TIME 16 : 47 to 18 : 11
TEAM NO.: 16 TIDE LEVEL: +1 to +1.5 DATE 4 / 7 / 90
EST. SUBDIVISION LENGTH: 1273 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock Snow
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: North to South
SURFACE SEDIMENTS: R 2 % B 20 % C 50 % P 28 % G 0 % S 0 % M 0 % V 0 %
SLOPE : Lang 98 % Hang 2 % Vert ____ % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W 100 m M 450 m N 100 m VL 130 m NO 503 m

### SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AC | AB | AP | AS | BR | RW | OL | SL | TL | SU | US | MS | LI |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | ✓ | X | | | X✓ | | | | X | X✓ | ✓ | |
| COAT | | | X | ✓ | | X✓ | | | | | X✓ | X | |
| STAIN | | | X | | | X | | | | | X | X | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | X | | | | | | X | | | X | X | |
| NO OIL | | | | | | | | | | | | | X |

PAVEMENT: H F S 0 sq. m by 0 cm
PATTIES / TARBALLS 0 BAGS
NEAR SHORE SHEEN? NO BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | | | |
| Debris | | | |

DEBRIS COLLECTED ☐ YES ☒ NO
TYPE 0
#BAGS 0

Photographs:
Roll No GT-160-4
Frames 24-36

### SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm-cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | | UO | UC | BR | RW | OL | SL | TL | SU | US | MS | U | | |
| 1 | 30 | | | | | X | - | | | | | | | | | X | | | | GPC |
| 2 | 30 | | | | | X | - | | | | | | | | | X | | | | CPG |
| 3 | 20 | | | | X | | 5-20 | X | | | | | X | | | | X | | | GP |
| 4 | 45 | | | | X | | 5-45 | X | | | | | X | | | X | | | | GP |
| 5 | 35 | X | | | | | 5-35 | X | | | | | X | | | | X | | | GPC |
| 6 | 20 | | | | | X | - | | | | | | | | | X | | | | GPC |

COMMENTS Long cobble, pebble scattered boulder beach. The western end of the subsegment has medium oiling 20%, patchy coating on cobble and boulders for 200 m. The following 100m have patchy cover on rock and boulders around headland. The next 200 meters is clean. The area around the stream 5-60 meters has wide oiling in the form of patchy stain on the north side of the stream, however shows sub surface oiling in pits 10 meters above access to the beach. The South side of the stream has a 12 m x 45m patch of Brocken Cover (60%) a Section of film in granule sediments extends for the next 140 m, followed by a patchy cover (15%) 5 m board. The last 300 meters of subsegment is clean.


REVIEWED JW DATE 4/13/90

## SHORELINE OILING SUMMARY (PAGE 2 of 7)

REVISION 03/22/98

SEGMENT ST/ 1A-21 SUBDIVISION B

## SUBSURFACE OIL (CONTINUED)

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | A N A | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | (CM-CM) | UO | UC | | | | | | SU | UI | MI | LI | | |
| 7 | 30 | | | | | X | - | | | | | | | | | X | | | | PG |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
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COMMENTS

REVIEWED JW DATE 4/13/98

## SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / LA 21 (1645 ON) Subdivision B Date (mo / day / yr) 4/7/90

Time ( 24 hr ) 1825 OFF Biologist TONY ZAMORA

( A ) Substrate type and % of segments:
( 1 ) Bedrock 2 ( 2 ) Boulder 20 ( 3 ) Cobble 50 ( 4 ) Pebble 28 ( 5 ) Sand — ( 6 ) Silt —

( B ) Overall % cover of biota ( % of segment ): Dense 5 Moderate 70 Low 25

( 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)

Photographs:
Roll No. ST-16-4
Frames 24-36

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | X | 2 | 2 | X | 2 | X | 2 | 2 | 2 | 2 | 2 | |
| 3 | ③ | 3 | 3 | X | 3 | 3 | 3 | 3 | X | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | X | 2 | 2 | 2 | 2 | X | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**GASTROPODS**

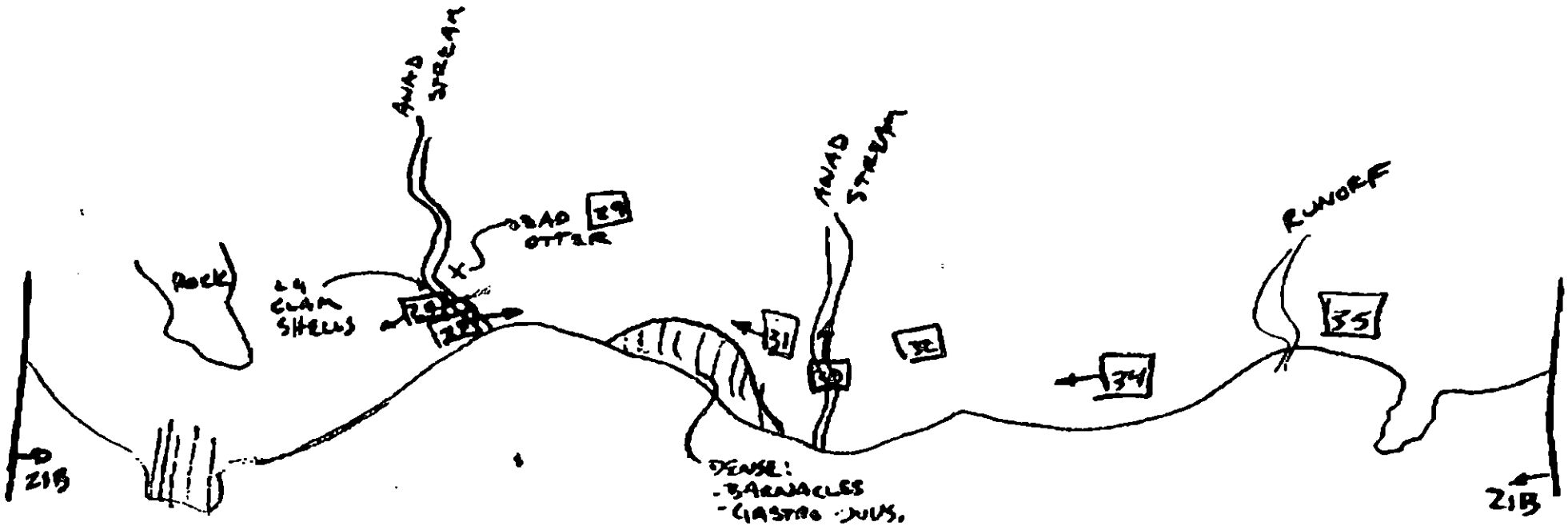
| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | X | X | X | 2 | 2 | X | 2 | 2 | 2 | |
| 3 | 3 | 3 | X | X | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | X | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | X | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

Wildlife Observations/ General Comments:
-OBSERVED: 1 OTTER, 2 GULLS, FOUND DEAD OTTER.
-LARGE AMPHIPODS IN MI.
-EGGS: GUNNEL, NUCELLA, UNID FISH (ON CBL IN MI)
Ecological Considerations: 7II, 1A/B, 7J5
-GUNNELS UNDER COBBLE IN LI.
-LI: ACARIA, PALMARIA, ULVA, POLYSIPHONIA, NUCELLA LAM.

LA21B


ROCK
24
CLAM
SHELLS
ROAD
OTTER
29
28
27
31
30
32
34
35
RUNOFF
21B
21B
DENSE:
- BARNACLES
- CRASSO. JULIS.

OG Reimer

SEGMENT ST/ LA-21

SUBDIVISION B

DATE 4 / 7 90

**CHECKLIST**

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

**LEGEND**

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

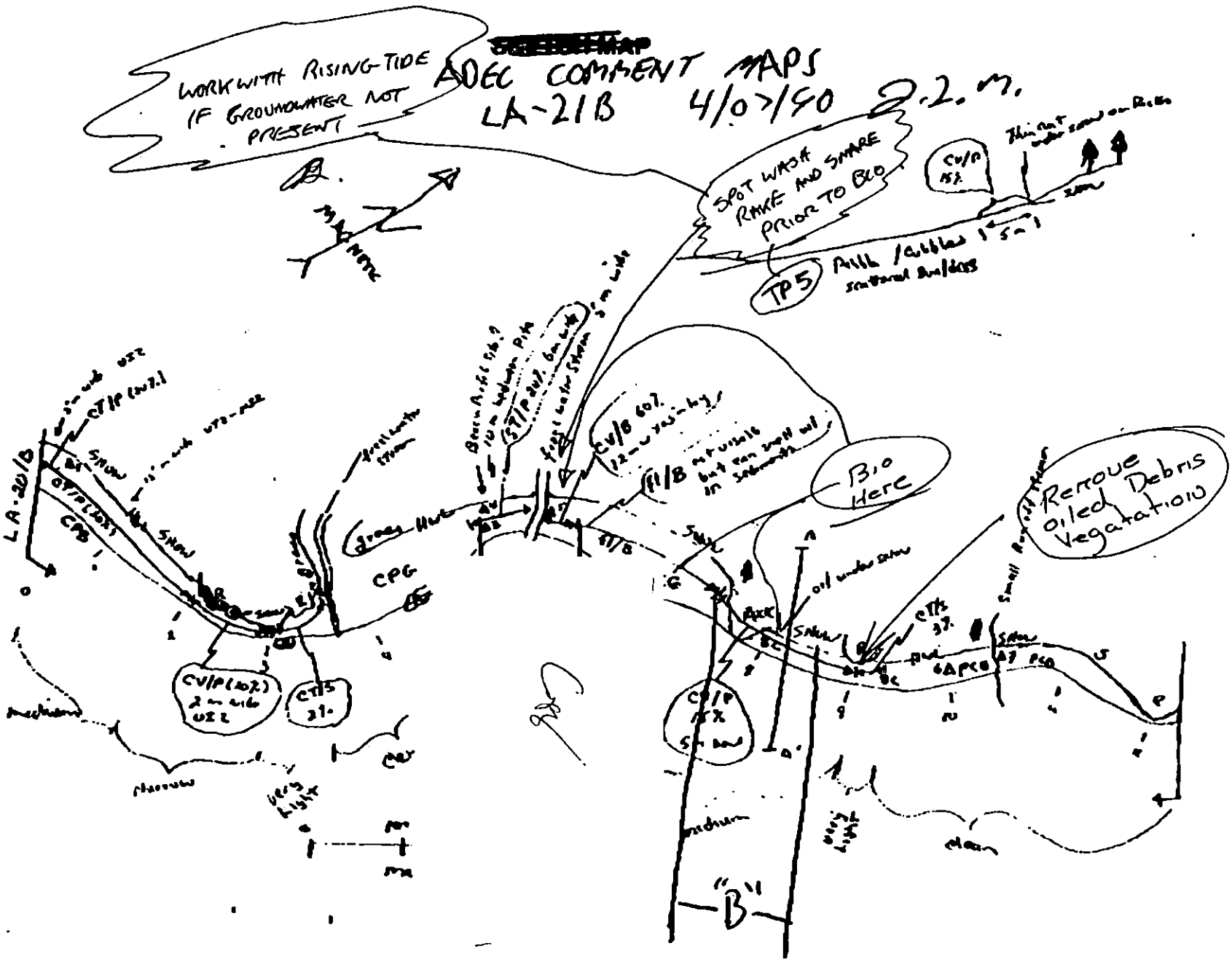
CT/D Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 ⇨ Photo location, direction, and number




Oil Character Length (m): AP — PO — CV 365 CT 200 ST 65 MS — PT — TB — FL 110 NO 503

REVISION 03/2000

OG Rev ___

SEGMENT ST/ LA-21

SUBDIVISION B

DATE 4 / 7 90

**CHECKLIST**

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

**LEGEND**

1 ▲

Pit - No Subsurface Oil

2 ▲

Pit - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

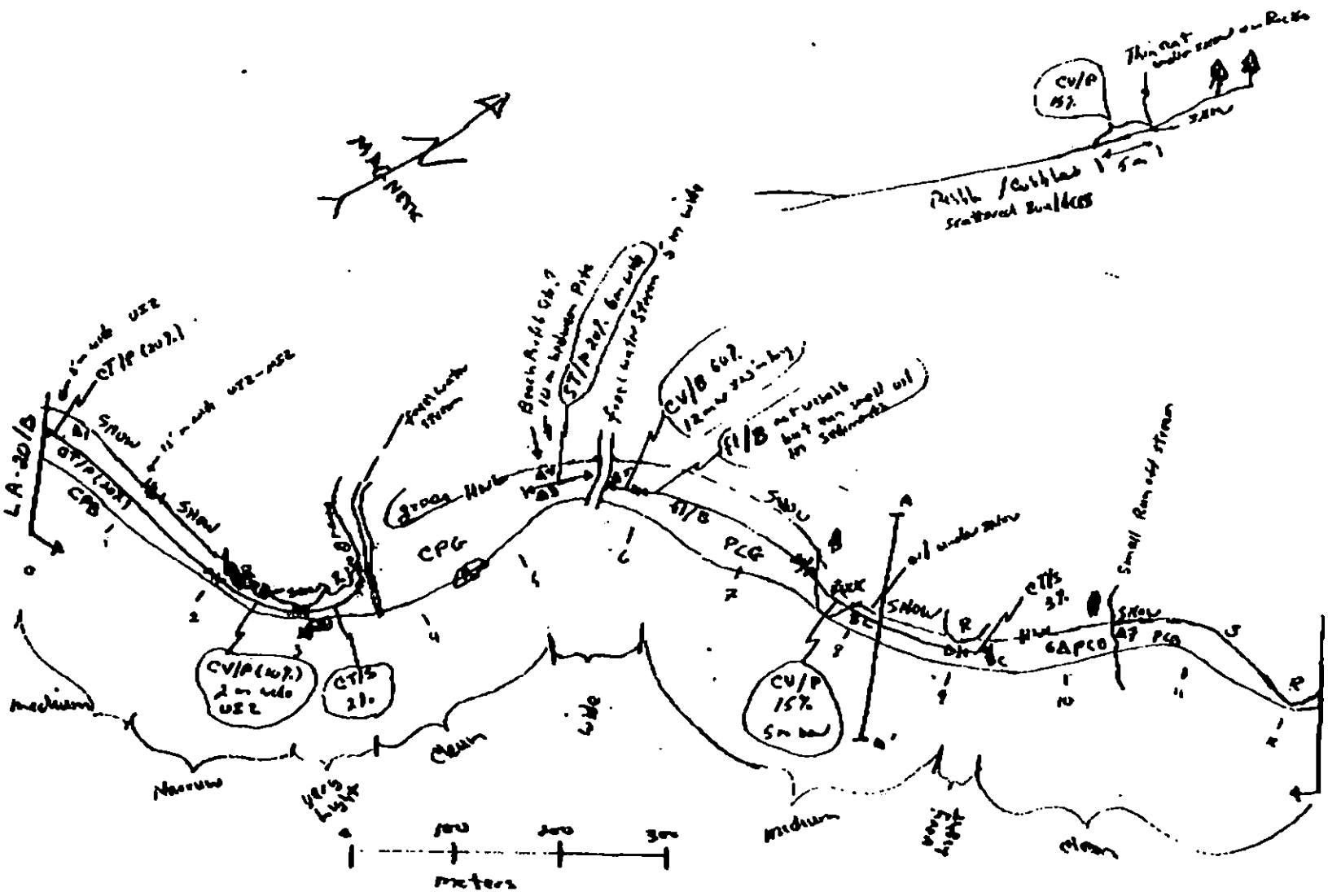
CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oiled Vegetation

1 ◆▸
Photo location, direction, and number

# S CH MAP



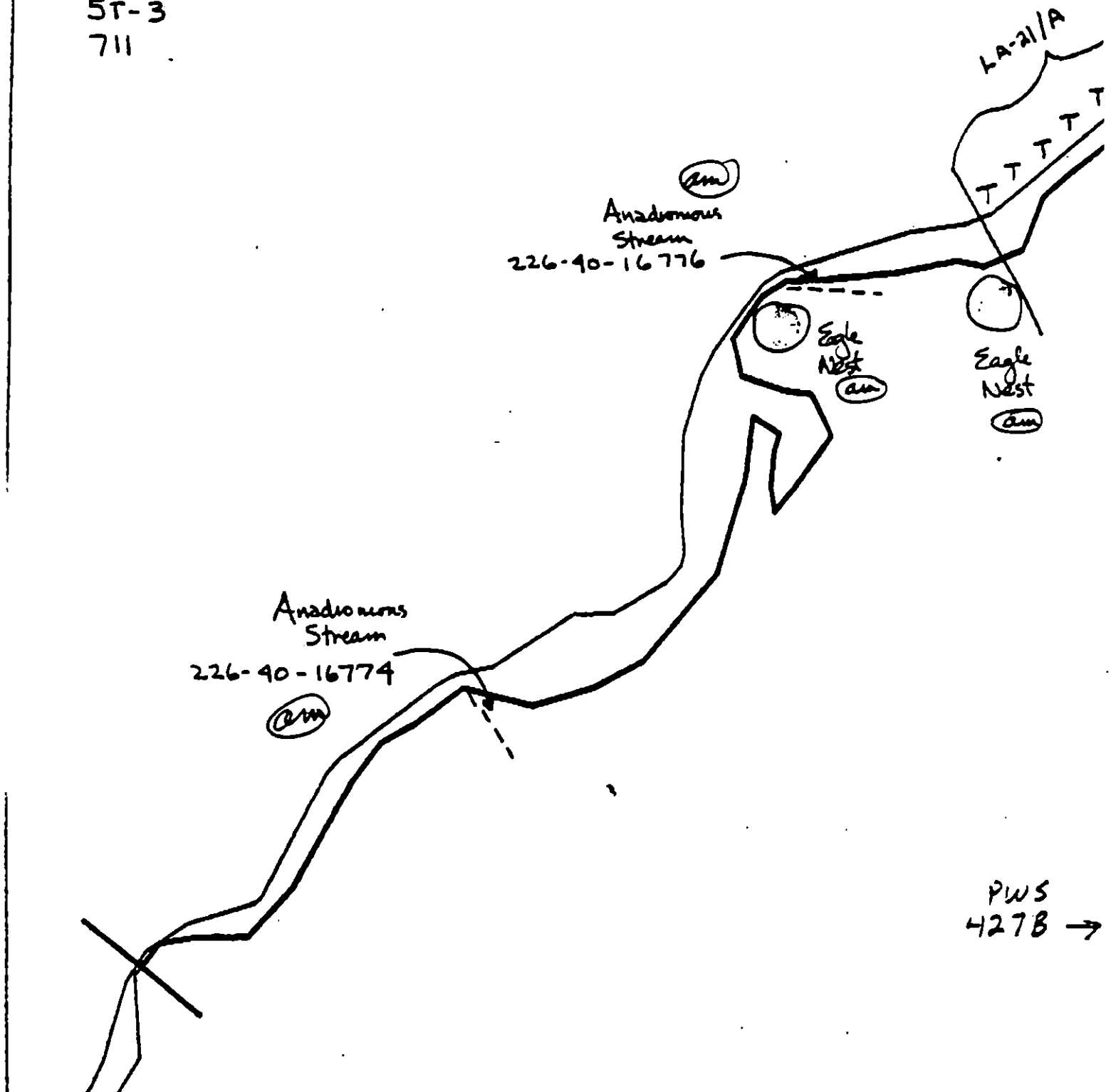

Oil Character Length (m): AP — PO — CV 365 CT 200 ST 65 MS — PT — TB — FL 140 NO 503

REVISION 03/04/90

# LA-21

ECOLOGY MAP

1A, 1B
5T-3
711



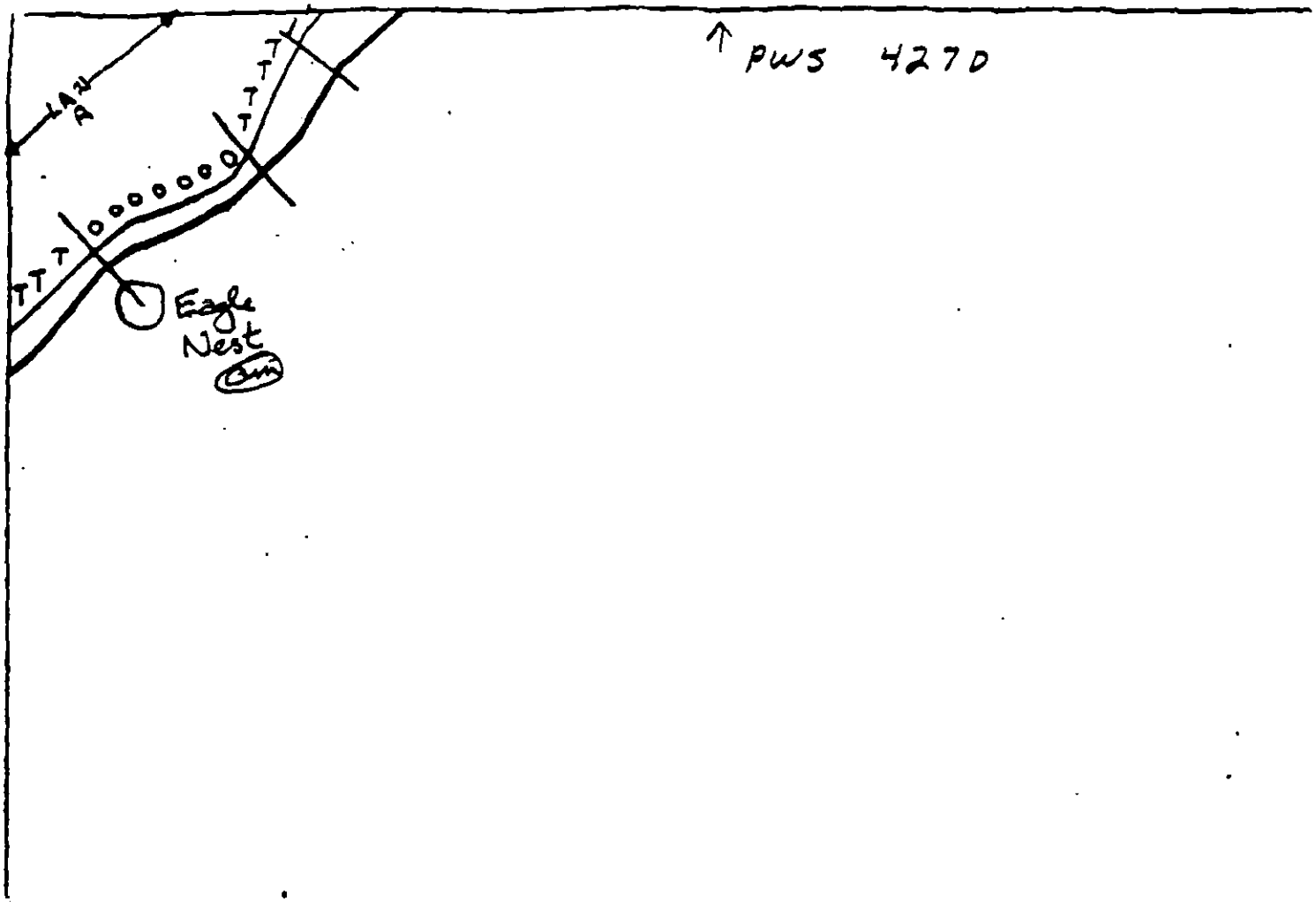

XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
0000 No Oil

LA-21

ADEC Segment Length: 3057m

0 100 200 300
METERS

Map Key: PWS-427c
Name: Reimer
Date: 4/7/90
Data Entered:



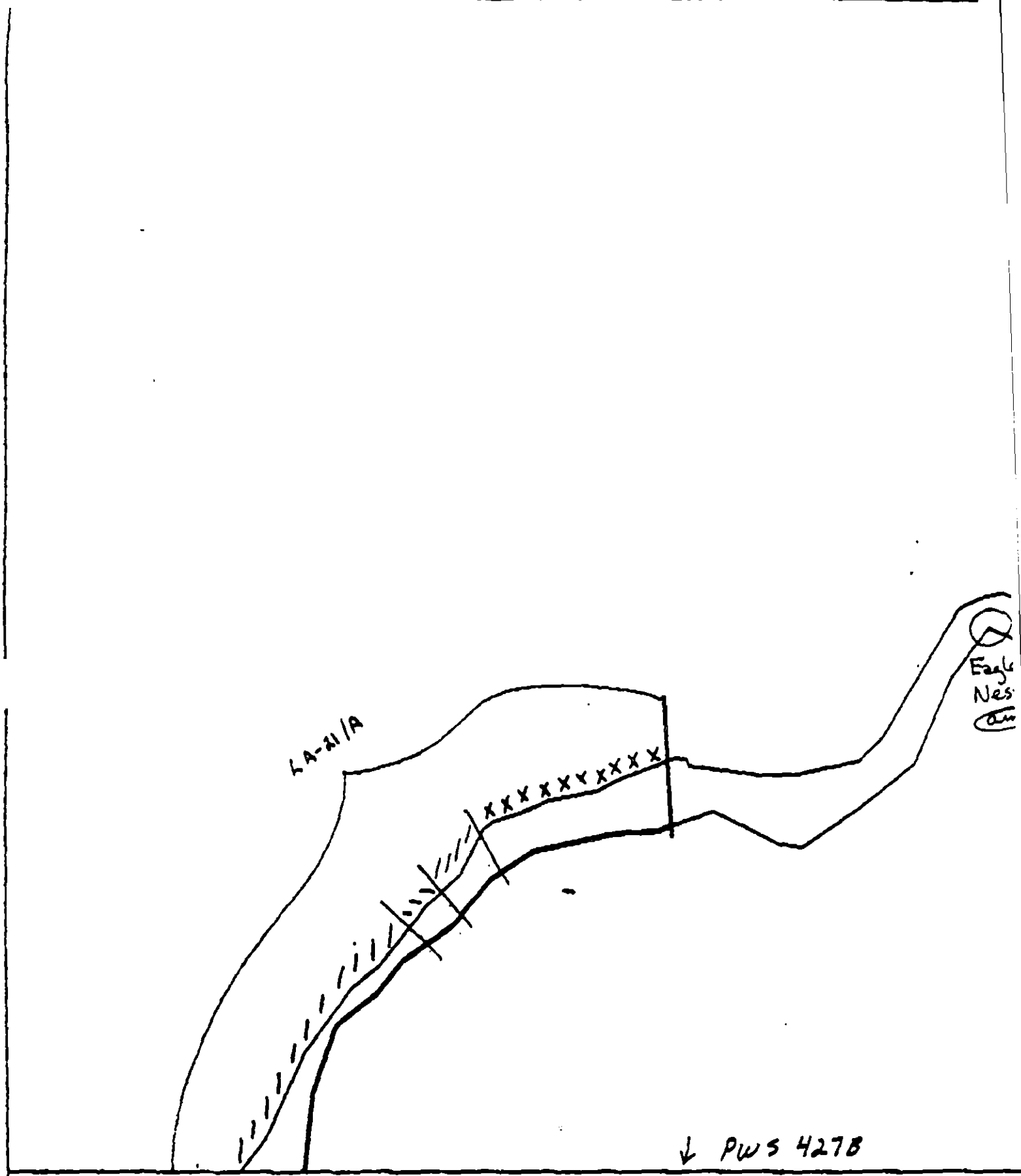

XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
0000 No Oil

LA-21

ADEC Segment Length: 3057m

0 100 200 300
METERS

Map Key: PWS-427b
Name: Reimer
Date: 4/7/90
Date Entered:




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

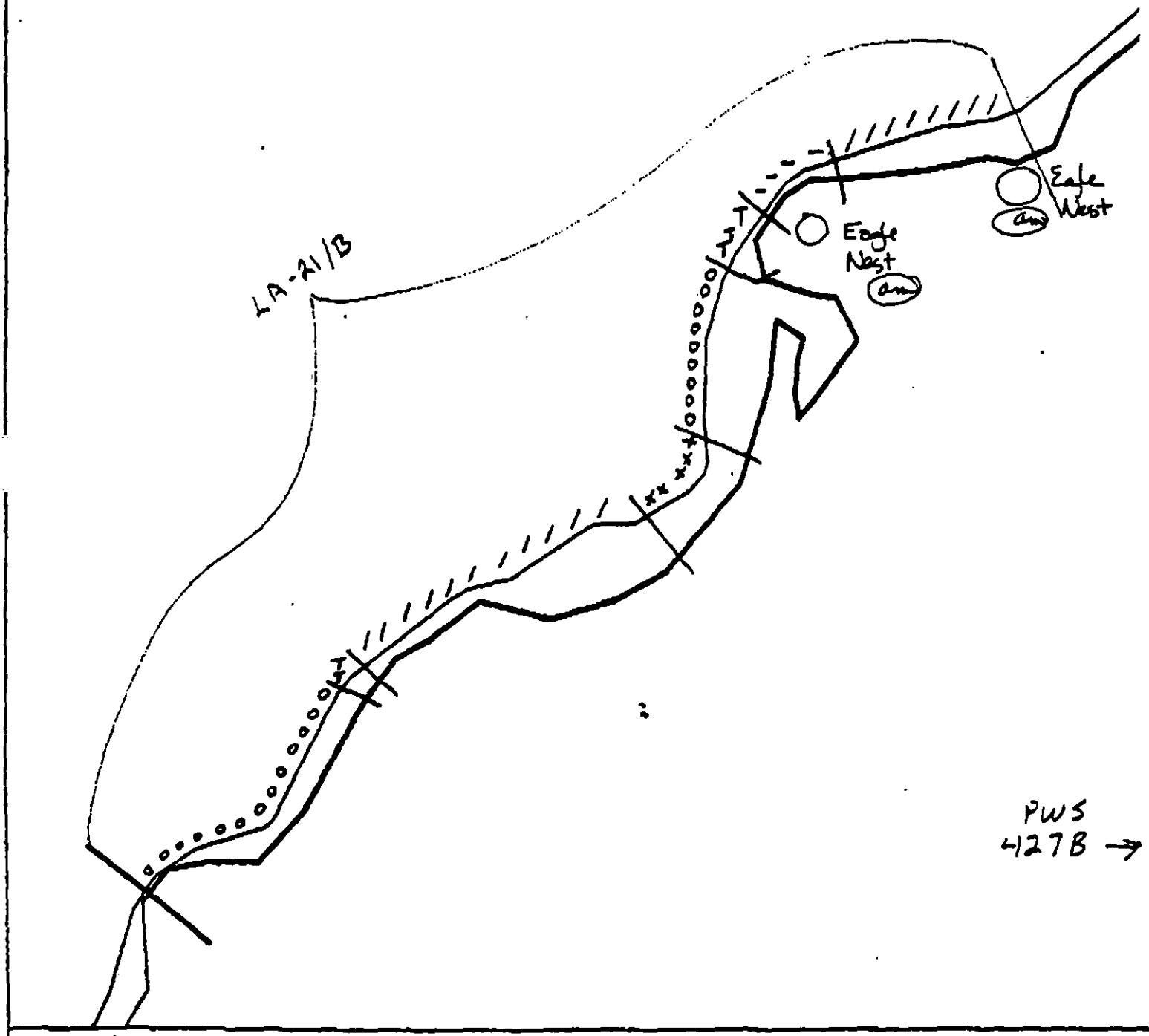
# LA-21

ADEC Segment Length: 3057m

0 100 200 300
METERS

Map Key: PWS-427d
Name: Reindeer
Date: 4/7/90
Date Entered:

# LA-21




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

LA-21

ADEC Segment Length: 3057m

0 100 200 300
METERS

Map Key: PWS-427a
Name: Reimer
Date: 4/7/90
Date Entered:

# ADDENDUM: SUBDIVISION CONSTRAINTS

## SEGMENT LA-21 SUBDIVISION B ( 2 of 2 )

| WORK WINDOW | |
|---|---|
| Manual Pickup | **OPEN** |
| Spot Washing | **OPEN** |
| Bioremediation & Other Approved Treatment Less Than 100m From Stream | **WORK PRIOR TO 7/10 (ADF&G MONITOR REQ.)** |
| Bioremediation & Other Approved Treatment More Than 100m From Stream | **OPEN** |

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

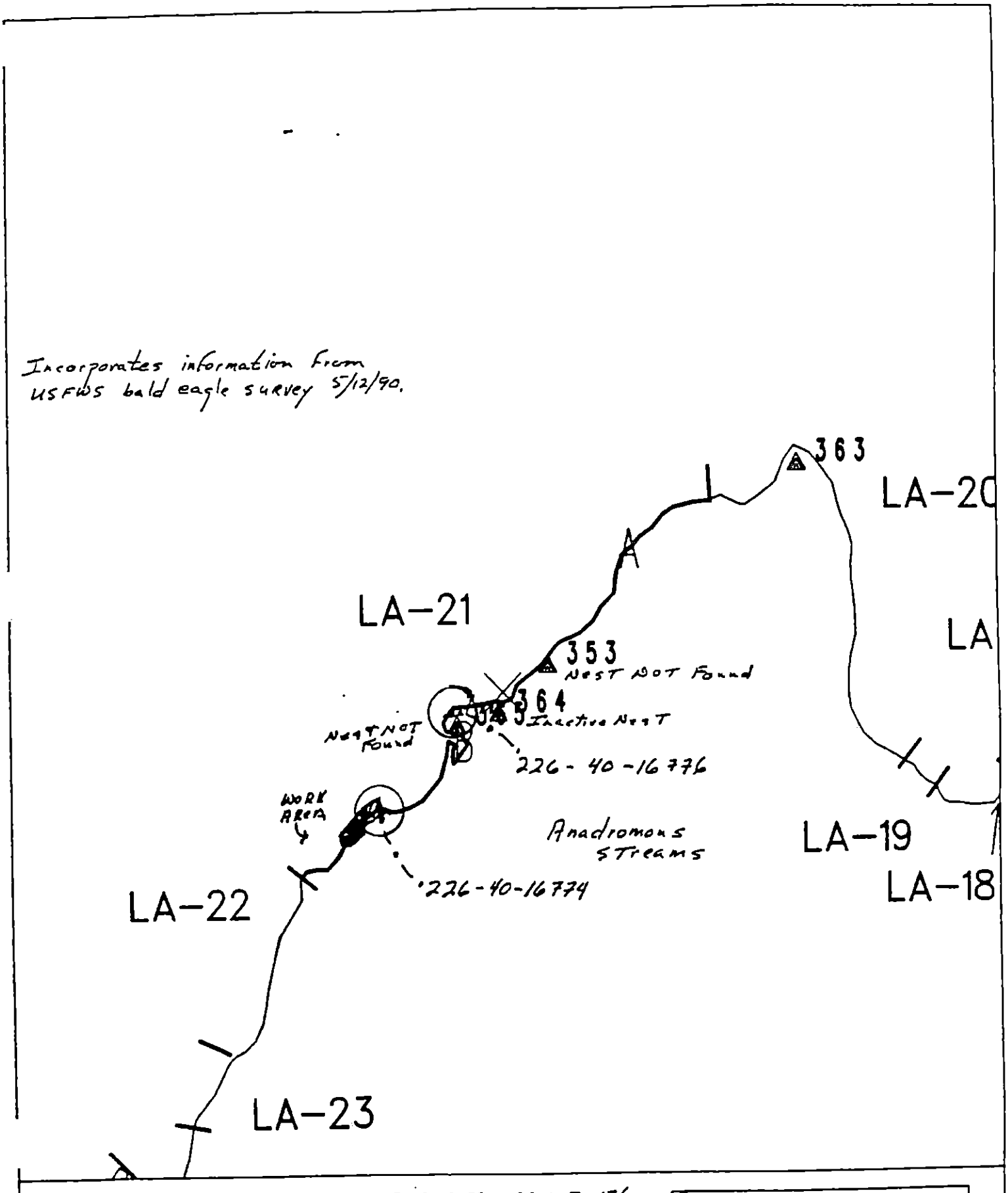
| | | |
|---|---|---|
| **1A,1B** | **Salmon Stream** | ADF&G catalogued anadromous streams (226-40-16776 and 16774) are in this subdivision. This subdivision is closed to bioremediation and other approved treatment less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation and other approved treatment are permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation and other approved treatment more than 100m from stream. No constraint to manual pickup and spot washing. |
| **5T** | **Bald Eagle Nest** | NO CONSTRAINT. USFWS bald eagle impact assessment completed on 5/12/90 by Mike Lockhart indicates no active nests within 400m of the work area. |
| **7II** | **Subsistenct: Deer Harvesting** | Closed to bioremediation and other approved treatment after 8/15. No constraint to manual pickup and spot washing. |

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic and beach disturbance to essential minimum after 8/15. No disturbance to stream bed or bank. No flushing of pollutants or sediments into stream drainage; do not allow inipol to enter stream flow. On-site examination and consultation by ADF&G monitor is required prior to bioremediation in order to authorize a setback distance from the stream during chemical application; if ADF&G monitor's presence is impossible, authorization may be given by the ADEC monitor. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

**SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM (STREAM NOS. 226-40-16776 & 226-40-16774) FOR ADDITIONAL CONSTRAINT INFORMATION**

FOSC G.A. Reiten for Date 6/10/90


Incorporates information from USFWS bald eagle survey 5/12/90.
363
LA-20
LA-21
353
Nest Not Found
364
Inactive Nest
Nest Not Found
226-40-16776
WORK AREA
Anadromous Streams
LA-19
LA-18
226-40-16774
LA-22
LA-23
ECOLOGY MAP 5/30
SEGMENT LA-21
SUBDIVISION B (2 of 2)
Seabird Colony
Eagle Nest
EXXON
Exxon Company, USA

# ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ LA-21 STREAM NO: 226-40-16774 DATE 4/20/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**
Subject stream and 226-40-16676, Ps, 12/89 also located within Subdivision B.
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-3 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

**SUBDIVISION ECOLOGICAL CONSTRAINTS:**
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Subject stream located within Subdivision B.

SHPO SIGNATURE: J. David McMahan DATE: 5/10/90

Subsurface Oil Observed: Yes X No ____ Maximum Depth 35 cm

**RECOMMENDATIONS:**

| | |
|---|---|
| ____No Treatment Recommended | ____Snare/Absorbent Booms |
| X Treatment Recommended | ____Oil Snares (pom poms) |
| ____Manual Pickup | ____Absorbents (pads,rolls,etc) |
| X Bioremediation | ____Spot Washing:____Wands |
| X Tarmat Removal | ____Beach Cleaner |
| | ____Other (see comments) |

COMMENTS: Recommended treatment includes 1) manual removal of tarmat and 2) bioremediation of areas with subsurface oil shown on attached sketch map. Work should be conducted between 6/1 and 7/10 with approval of ADF&G regarding bioremediation of stream banks.

TAG COMMENTS: ____

TAG APPROVAL DATE: 5/10/90
ADEC Art Weiner
EXXON Andy Tan
NOAA Burl Wescott
USCG D.D. Rome

FOSC: ____ DATE: 5-18-90

NOTIFY CVC 24 HRS. IN ADVANCE OF WORK

# PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G John Morison 267-2324

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 July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D Esther Hatchery release (4/15 to 6/15)
1E Main Bay Hatchery release (4/20 to 6/15)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or 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: 1E ADF&G Larry Peltz 424-3214
1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzomoto 424-7511

1I Gill net area (6/7 to 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 unoiled 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 Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of 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
ADF&G Don Calkins 267-2403

5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Rothy 267-2206

5T All Bald Eagle nests (3/1 to 8/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U Recreation: Tent sites (6/1 to 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
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

22/4

# FIELD SHORELINE COMMENT SHEET

226-40

SEGMENT ST/LA 024 SUBDIVISION: 16774 DATE 4/20/90

USCG
NAME CWO2 J. MCMAHON SIGNATURE J McMahon

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

1. APPROX. A 10 X 20M ZONE ADJACENT TO RIGHT SIDE OF STREAM (LOOKING ON SHORE), 4-6CM DEEP NEAR PIT 1 TO BE REMOVED AND BAGGED.
2. THE OUTER PROPORTION OF THE ABOVE, APPROX ALL EXCEPT A 2 FOOT BUFFER TO BE BIOREMEDIATED.

~~ADF&G~~
~~ADEC~~ MICHAEL WIEDMER
NAME ~~ALT TEAM MEMBER~~ SIGNATURE

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

NOTES: OIL PENETRATION MAY BE DEEPER THAN THE 4-6 CM STATED ABOVE. ONE PIT REVEALED OIL FROM THE SURFACE TO 35 CM. ALL OILED MATERIAL, REGARDLESS OF DEPTH OF PENETRATION, SHOULD BE MANUALLY REMOVED, BAGGED, AND TAKEN FROM SITE. ATTENTION MUST BE PAID TO THE BERM IMMEDIATELY ADJACENT TO THE SURFACE OIL. CURRENTLY IS A LAYER OF 35 CM OF CLEAN MATERIAL IN THIS BERM COVERS A LENS OF OIL.

LAND MANAGER
NAME NO TEAM MEMBER SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

AS THIS BERM APPEARS UNSTABLE, ~~IF~~ BY THE TIME TREATMENT BEGINS AT THIS SITE, SIGNIFICANT PORTIONS OF THE OIL AT THIS SITE MAY BE BURIED

ASC # 226-40-16774

Segment LA-021

Observations A deposit of heavy oil penetrates the substrate immediately adjacent to the upper-mid intertidal portion of the stream. This area has a surface armor of large cobble overlying small gravels. A high tide berm may be advancing over this oil deposit. Tar from this deposit is exposed in the stream channel along the southwest bank and is leaking sheen into the stream. Tarry/moussy oil penetrates the sediment approximately 4 cm at the present stream bank. Oil penetration may be deeper further from the stream.

Treatment Recommendations The complete layer of oiled substrate within this deposit should be manually removed, bagged, and taken from the site for safe disposal. Four-wheelers should be used to facilitate removal of material from beach. Excavation should begin on the side of the patch most distant from the stream channel. Clean material from the adjacent berm should be backfilled into the excavated area soon after oiled material is removed. In no circumstances should clean material be deposited over any remaining oiled substrate. Immediately after removal of the oiled substrate adjacent to the stream, boulders from the opposite shore (see ADF&G Multi-Assessment Data Form diagram for general location) should be placed along the bank to prevent migration of the channel into the treated area. All activities must occur between 15 May and 15 July, 1990.

ASC # 226-40-16772

Segment LA-023

Observations Only lightly stained logs in storm berm.

Treatment Recommendations If future observations do not reveal significant quantities of buried oil, no treatment is recommended.

# SHORELINE OILING SUMMARY (ANAD.) 26/49

OG William Reid USCG McMahon SEGMENT ST/ LA21
BIO Michael Fawcett LAND REP Tom Crowe - ADFG SURVEY ID 225-10-16724 OF
EXXON Gus Garcia ADFG Mike Wiedmer Time : to :
TEAM NO. 15 TIDE LEVEL +1ft DATE 20 / APR / 90
EST. SUBDIVISION LENGTH: 50 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo
SURFACE SEDIMENTS: R ___ % B ___ % C 60 % P 40 % G ___ % S ___ % M ___ % V ___
SLOPE: Lang 100 % Hang ___ % Vert ___ % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W ___ m M 20 m N ___ m VL ___ m NO 30

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | AB | P | R | | | | | | SW | SI | MI | LI |
| ASPHALT PAVEMENT | | | X | | | X | | | | | | X | |
| POOLED | | | | | | | | | | | | | |
| COVER | | | | | | | | | | | | | |
| COAT | | | | | | | | | | | | | |
| STAIN | | | | | | | | | | | | | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | | | | | | | | | | |
| NO OIL | | | | | | | | | | X | X | | X |

PAVEMENT M (E) S 100 sq. m by 4
PATTIES / TARBALLS 0 BI
NEAR SHORE SHEEN? (NO) BR RW SL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | | | |
| Debris | | | |

Did You Coll
DEBRIS
☐ YES ☒ NO
TYPE ___
#BAGS ___

Photographs:
Roll No. AS-15-1
Frames 26-29

## SUBSURFACE OIL * OILED INTERVAL 4.5cm IN PIT NOS. 1 AND 3 DOES NOT CONSTITUTE SUBSURFACE OI

| | PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SHEEN (YN) | | SURFAC SUBSURF/ SEDIMEN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | OP | OR | OL | OF | NO | | WO | SO | | | | | | SW | SI | MI | LI | | | | |
| * | 1 | 60 | | | X | | | 0-35 | | X | | X | | | | | | X | | | N | | G/C |
| | 2 | 40 | | | | | X | - | | | | | | | | | | X | | | N | | P/G |
| * | 3 | 15 | | | X | | | 0-4 | | X | | X | | | | | | X | | | N | | G/C |
| | 4 | 40 | | | | | X | - | | | | | | | | | X | | | | N | | G/P/C |
| | 5 | 30 | | | | | X | - | | | | | | | | | | X | | | N | | G/P/C |
| | 6 | 30 | | | | | X | - | | | | | | | | | | X | | | N | | G/P |

COMMENTS

REVIEWED JW DATE 4-25-90

27/49

## SHORELINE OILING SUMMARY (PAGE 2)

SEGMENT ST/ LA21 STREAM: 16234 OF

### SUBSURFACE OIL (CONTINUED)

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (COLOR) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SHEEN (Y/N) | | SURFACE SUBSURFA SEDIMENT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | | SO | UC | | | | | | SU | MI | MB | LI | | | | |
| 7 | 25 | | | | | X | - | | | | | | | | | | X | | | N | | G/P |
| 8 | 25 | | | | | X | - | | | | | | | | | | X | | | N | | G/P/C |
| | | | | | | | - | | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | | |
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| | | | | | | | - | | | | | | | | | | | | | | | |

COMMENTS

REVIEWED JW DATE 4-25-90

OG WILLIAM REID

SEGMENT ST/ L121

STREAM 1674

DATE 20 / APR 90

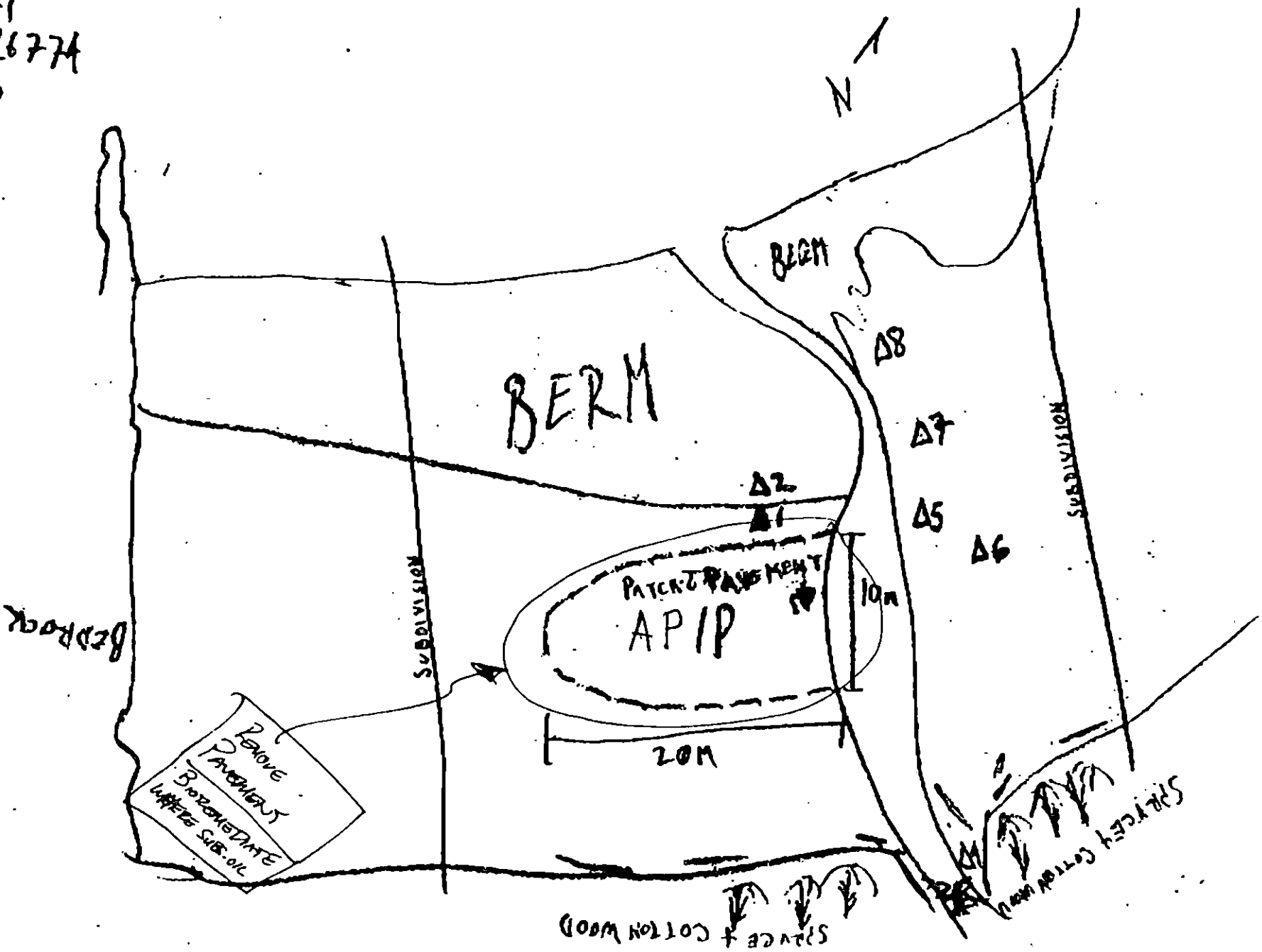
## CHECKLIST

- N Arrow
- Approx. Scale
- Sagittal Bndry
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. HWL/LWL
- SSL
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

## LEGEND

- Pit - No Subsurface Oil
- Pit - Subsurface Oil
- CT/C Continuous Distribution
- CT/B Broken Distribution
- CT/P Patchy Distribution
- CT/S Splashed Distribution
- Oiled Vegetation
- Photo location, direction, and number

## SKETCH MAP




Oil Character Length (m): AP_____ PO_____ CV_____ CT_____ ST_____ MS_____ PT_____ TB_____ FL_____ NO_____

30/41

ADF&G MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: BS (SS) OS TS AVS SCM HHS PTA
METHOD: Aerial (Ground) Boat

2 REGION: (PWS) KP,CI K,AP

3 DATE: 4/20/90
4 START TIME: 1700
5 STOP TIME: 1736
6 SEGMENT #: CA-021
7 STATION #:
8 K-UNIT:
9 STAT AREA:
10 LAT:
11 LONG:
12 SOURCE: Map Loran
13 LOCATION: N.W. LATOUCHE IS.
14 DESCRIPTION:

15 HIGH TIDE TIMES: 1007 / 2304
16 HIGH TIDE HTS: 9.0 / 9.4'
17 LOW TIDE TIMES: 0400 / 1634
18 LOW TIDE HTS: 4.5' / 1.6'
19 TIDE HT AT SURVEY: 1.72'
Ebb Slack (Flood) Slack
20 USGS QUAD: SEWARD A3

21 TEAM RECORDER: M. WISDOM
22 OBSERVERS: T. CROWE
23 AGENCY: ADF&G
24 PHOTOS TAKEN: Y (N)
Roll #: Frame:
25 VIDEO TAKEN: Y (N) TAPE #:
Start: End:
26 SAMPLES TAKEN? Y (N) Number
Oil
Sediments
Biological
Water

EXTENT OF OIL

| | SHORELINE L | W | N² | % | STREAM L | W | N² | % |
|---|---|---|---|---|---|---|---|---|
| 27 SURFACE COVERAGE | 100' | 75' | | 15 | 75 | 3 | | 2 |
| 28 SURFACE THICKNESS | 0 | 1mm | 2mm | | 0.5cm | | | |
| 29 PENETRATION | 35 | | | | 5cm | | | |

30 OVERALL OIL IMPACT: N VL L (M) H
31 OIL TYPE: Pooled (Mousse) Tar Asphalt Sticky (Stain)
32 OILED DEBRIS? Y (N)
33 SHORELINE TYPE: Headland Low-lying Rocks (Beach) Cove Lagoon Marsh
34 WAVE EXPOSURE: High (Moderate) Low
35 SUBSTRATE TYPE: Bedrock Boulder 5 Cobble 90 Gravel 5 Sand Mud/silt

36 CATALOGED ANAD. FISH STREAM? Y N
37 CATALOG #: 226-40-16774
38 STREAM NAME:
39 OIL IN STREAM BED? (Y) N
40 OIL ON STREAM BANKS? (Y) N
41 OIL ON BEACH ADJACENT TO MOUTH? (Y) N (within 30 meters)
42 OIL WITHIN 1 MILE OF STREAM? (Y) N
Where:
43 ANADROMOUS FISH PRESENT? (Y) N FRY PRESUMED
44 ANADROMOUS FISH OBSERVATION

| Species | Aerial | Ground |
|---|---|---|
| | | |
| | | |
| | | |
| | | |

COMMENTS: PATCH OF OILED SUBSTRATE IMMEDIATELY ADJACENT TO SW BANK OF STREAM. DEPTH OF PENETRATION TO 35 CM. THICK SURFACE LENS 4-10 CM THICK. SUGGESTED TREATMENT: MANUAL REMOVAL OF THICK SURFACE CONTAMINATION, REPLACEMENT OF HEAVY RIP-RAP ADJACENT TO CHANNEL TO PREVENT CHANN. MIGRATION!

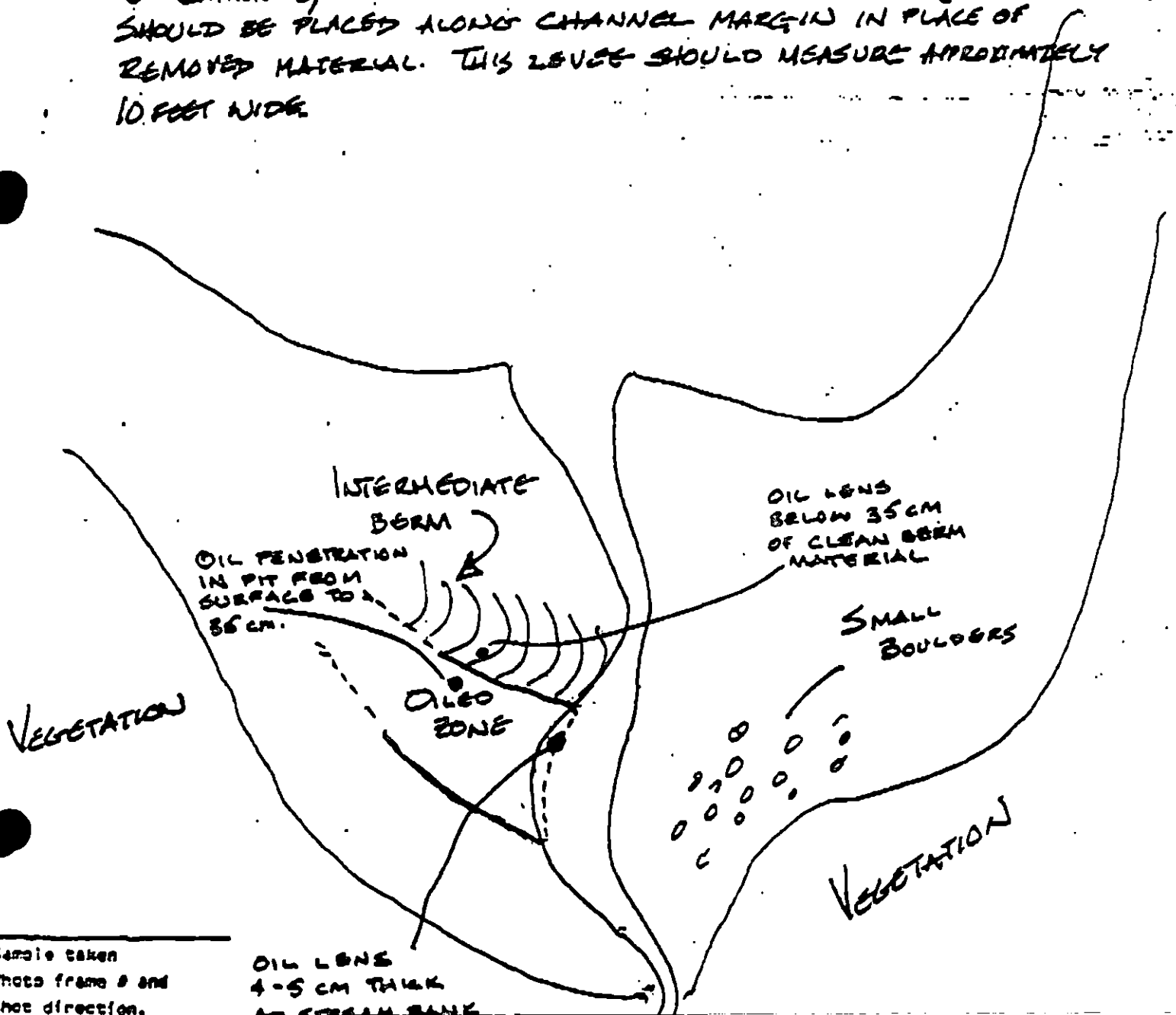
CA-021 31/49
226-40-16774

4B PHOTOLOG

| ...E(S) | DESCRIPTION |
|---|---|
| | |

4B OIL DISTRISUTION DIAGRAM

OILED ZONE EXTENDS INTO STREAM CHANNEL AS DRAWN. RECOMMEND THAT DENSE SURFACE LENS (VARYING THICKNESS AVER FROM 4 TO 10 CM) BE MANUALLY REMOVED. TO PREVENT MIGRATI OF CHANNEL, SMALL BOULDERS FROM OPPOSITE BANK (SEE DIAGRAM) SHOULD BE PLACED ALONG CHANNEL MARGIN IN PLACE OF REMOVED MATERIAL. THIS LEVEE SHOULD MEASURE APPROXIMATELY 10 FEET WIDE



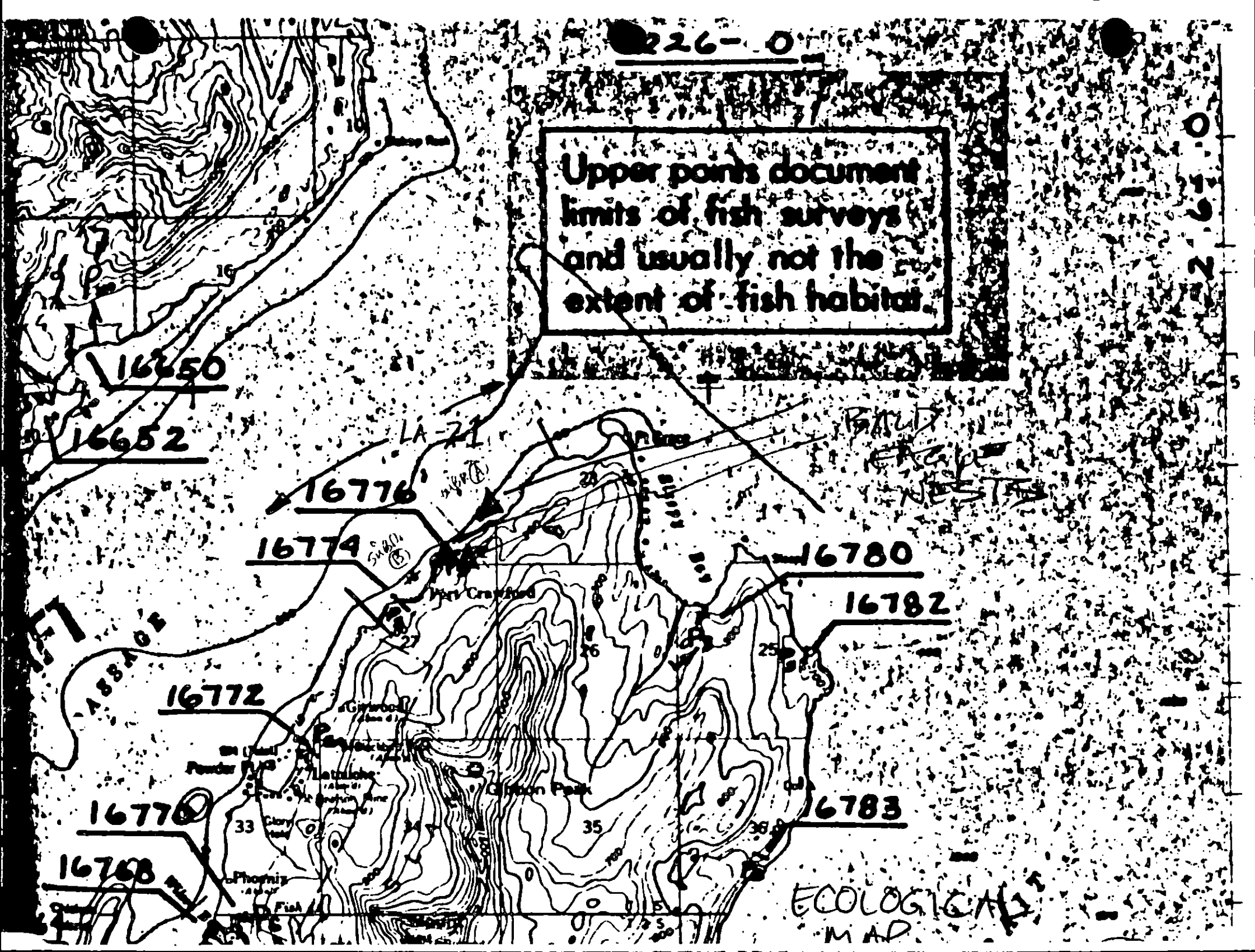

Sample taken
Photo frame # and
shot direction.

29/49

Ecologist's Summary 4/20/90
Segment LA 21
Stream 226-40-16774 Michael Fawcett

The stream mouth lies on a cobble/boulder beach, unstable, with sparse biota. A 20x1 area on west side of stream had a fairly heavy covering of weathered tar-asphalt extending to the stream bank. Disturbing sediment at stream edge produced sheen on water. Manual cleanup and possibly bio remediation suggested. No ecological constraints on cleanup methods are indicated owing to poorly developed community (mainly a film of green algae) that exists on the unstable sediments at this site.

M Fawcett


226-0
Upper points document limits of fish surveys and usually not the extent of fish habitat.
16650
16652
16776
16774
16780
16782
16772
16776
16783
16768
LA-21
Bald Eagle Nests
Ecological Map

# ANADROMOUS FISH STREAM EVALUATION ADDENDUM

## CONSTRAINTS FOR STREAM NO. 226-40-16774

## SEGMENT LA-21 SUBDIVISION B

| WORK WINDOW | |
|---|---|
| Tarmat Removal | OPEN |
| Bioremediation More Than 100m From Stream | OPEN |
| Bioremediation Less Than 100m From Stream | WORK PRIOR TO 7/10 (ADF&G MONITOR REQ.) |

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resourses are uncovered, PHONE 564-3274

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

| | | |
|---|---|---|
| **1A,1B** | **Salmon Stream** | ADF&G catalogued anadromous streams (226-40-16774 and -16776) are in Subdivision B. This subdivision is closed to bioremediation less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation is permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation more than 100m from stream. No constraint to tarmat removal. |
| **5T** | **Bald Eagle Nest** | NO CONSTRAINT. USFWS bald eagle impact assessment conducted on 5/12/90 by Mike Lockhart indicates no active nests within 400m of the work area. |
| **7II** | **Subsistence: Deer Harvesting** | Closed to bioremediation after 8/15. No constraint to tarmat removal. |

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. No flushing of pollutants or sediments into stream drainage; do not allow inipol to enter stream flow. On-site examination and consultation by ADF&G monitor is required prior to bioremediation in order to authorize a setback distance from the stream during chemical application; if ADF&G monitor's presence is impossible, authorization may be given by the ADEC monitor. Restrict boat and air traffic and beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

**SEE SUBDIVISION CONSTRAINT ADDENDUM LA-21B FOR ADDITIONAL CONSTRAINT INFORMATION.**

FOSC G.A. Reitan for DATE 6/10/90

# ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ LA-21 STREAM NO: 226-40-16776 DATE 4/20/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-3 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

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

SHPO SIGNATURE: J. David McMahan DATE: 5/8/90

Subsurface Oil Observed: Yes_____ No X Maximum Depth_____

**RECOMMENDATIONS:**

| | |
|---|---|
| X No Treatment Recommended | _____Snare/Absorbent Booms |
| _____Treatment Recommended | _____Oil Snares (pom poms) |
| _____Manual Pickup | _____Absorbents (pads,rolls,etc) |
| _____Bioremediation | _____Spot Washing:_____Wands |
| _____Tarmat Removal | _____Beach Cleaner |
| | _____Other (see comments) |

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 5/7/90:
ADEC Art Weiner Art Weiner
EXXON Andy Tan Andy Tan
NOAA Gary Petrone Gary Petrone
USCG G.A. Reiter G.A. Reiter FOSC: [illegible] DATE: 5-18-90

Notify EVS 24 hrs. in advance of work

# PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

**1A** Salmon stream mouth - fry outmigration (3/1 to 5/15)
**1B** Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G John Morison 267-2324

**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 July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

**1D** Esther Hatchery release (4/15 to 6/15)
**1E** Main Bay Hatchery release (4/20 to 6/15)
**1F** Sawmill Bay Hatchery release (4/15 to 6/1)
**1G** Cannery Creek Hatchery release (4/21 to 6/1)
**1H** Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or 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: 1E ADF&G Larry Peltz 424-3214
1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzomoto 424-7511

**1I** Gill net area (8/7 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 unoiled 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** Harbor seal and sea lion pupping (5/15 to 7/1)
**3O, 3Q** Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of 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
ADF&G Don Calkins 267-2403

**5R** Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

**5S** Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Rothy 267-2206

**5T** All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

**6U** Recreation: Tent sites (6/1 to 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** Subsistance area: Salmon harvesting (5/1 to 9/30)
**7HH** Finfish harvesting
**7II** Deer harvesting (8/15 to 2/28)
**7JJ** Invertebrate harvesting
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

Alaska Department of Fish and Game

ANADSCAT Observations and Recommendations
Team 15 - Michael Wiedmer and Tom Crowe

20 April 1990

ASC # 226-40-16785

Segment LA-031

Observations Very light stain on surface armor observed more than 50 yards north of stream. One partially oiled drift log observed on storm berm south of stream. No buried oil observed in test pits. No other visible signs of significant quantities of buried oil.

Treatment Recommendations If future observations do not reveal significant quantities of buried oil, no treatment is recommended.

ASC # 226-40-16788

Segment LA-029

Observations Scattered stained surface cobbles and boulders found throughout anadromous fish stream zone. One out of four test pits revealed a layer of buried mousse 5 to 10 cm thick underneath 10 cm of clean substrate. Results from other pits indicate that this mousse layer was restricted to a small area.

Treatment Recommendations If future observations do not reveal significant quantities of buried oil, no treatment is recommended.

ASC # 226-40-16776

Segment LA-021

Observations Stain and some light tar and light mousse scattered through anadromous fish stream zone. No significant quantities of buried oil observed.

Treatment Recommendations If future observations do not reveal significant quantities of buried oil, no treatment is recommended.

# FIELD SHORELINE COMMENT SHEET

4/49

SEGMENT ST / LA 021 SUBDIVISION: 16776 DATE 4/20/90

**USCG**
NAME CWO2 J. MC MAHON SIGNATURE J. McMahon

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

~~ADF&G~~
~~ADEC~~
NAME ~~M Tom Hamilton~~ MICHAEL WIEDMER SIGNATURE Michael Wiedmer

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

**LAND MANAGER**
NAME ~~M Tom Hamilton~~ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

# SHORELINE OILING SUMMARY (ANAD.) 1147 REVISION 0.

OG William Reid USCG McMahon SEGMENT ST/ GA21
BIO Michael Fawcett LAND REP Tom Graves - ADFG STRATUM 32640167761 OF
EXXON Gus Garcia ADFG Mike Wardner Time : to :
TEAM NO. 15 TIDE LEVEL +1 FT DATE 20 / APR / 90
EST. SUBDIVISION LENGTH: 40 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo
SURFACE SEDIMENTS: R ___ % B ___ % C 65 % P 35 % G ___ % S ___ % M ___ % V ___
SLOPE : Lang 100 % Hang ___ % Vert ___ % WAVE EXPOSURE: ☐ Low ☒ Med ☐ Hi
OIL CATEGORY LENGTH: W ___ m M ___ m N ___ m VL 40 m NO ___

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | /0 | /B | /P | /A | | | | | | SW | WI | MI | U |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | | | | | | | | | | | | |
| COAT | | | | | | | | | | | | | |
| STAIN | | | | X | | X | | | | | X | | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | | | | | | | | | | |
| NO OIL | NONE | | | | | | | | | X | | X | X |

PAVEMENT H F S 0 sq. m by 0
PATTIES / TARBALLS 0
NEAR SHORE SHEEN? (NO) BR RW SL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | | | |
| Debris | | | |

Did you Col
DEBRIS
☐ YES ☒ N
TYPE ___
#BAGS ___

Photographs:
Roll No. ___
Frames ___

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SHEEN (Y/N) | ▼ | SURFA SUBSUR SEDIME |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | | WO | SO | | | | | | SW | WI | MI | U | | | | |
| 1 | 15 | | | | | X | - | | | | | | | | | | X | | | N | 5 | G/P |
| 2 | 20 | | | | | X | - | | | | | | | | | X | | | | N | 12 | G/P |
| 3 | 35 | | | | | X | - | | | | | | | | | | X | | | N | 20 | G/P |
| | | | | | | | - | | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | | |

COMMENTS

REVIEWED JW DATE 4-26-9

EXXON DPS P.09
TO EXXON CMD CORDOVA
APR-21-1990 10:41 FROM

OC WI 1 REP

SEGMENT ST/ LA 21

STREAM 226-10-16776

DATE 20 APR 90

8/49

**SKETCH MAP**

**CHECKLIST**

- N Arrow
- Approx. Scale
- Seg/Sub Brkpy
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. HWL/AWL
- SSL
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

**LEGEND**

1 ▲
Pit - No Subsurface Oil

2 ▲
Pit - Subsurface Oil

CT/C
Continuous Distribution

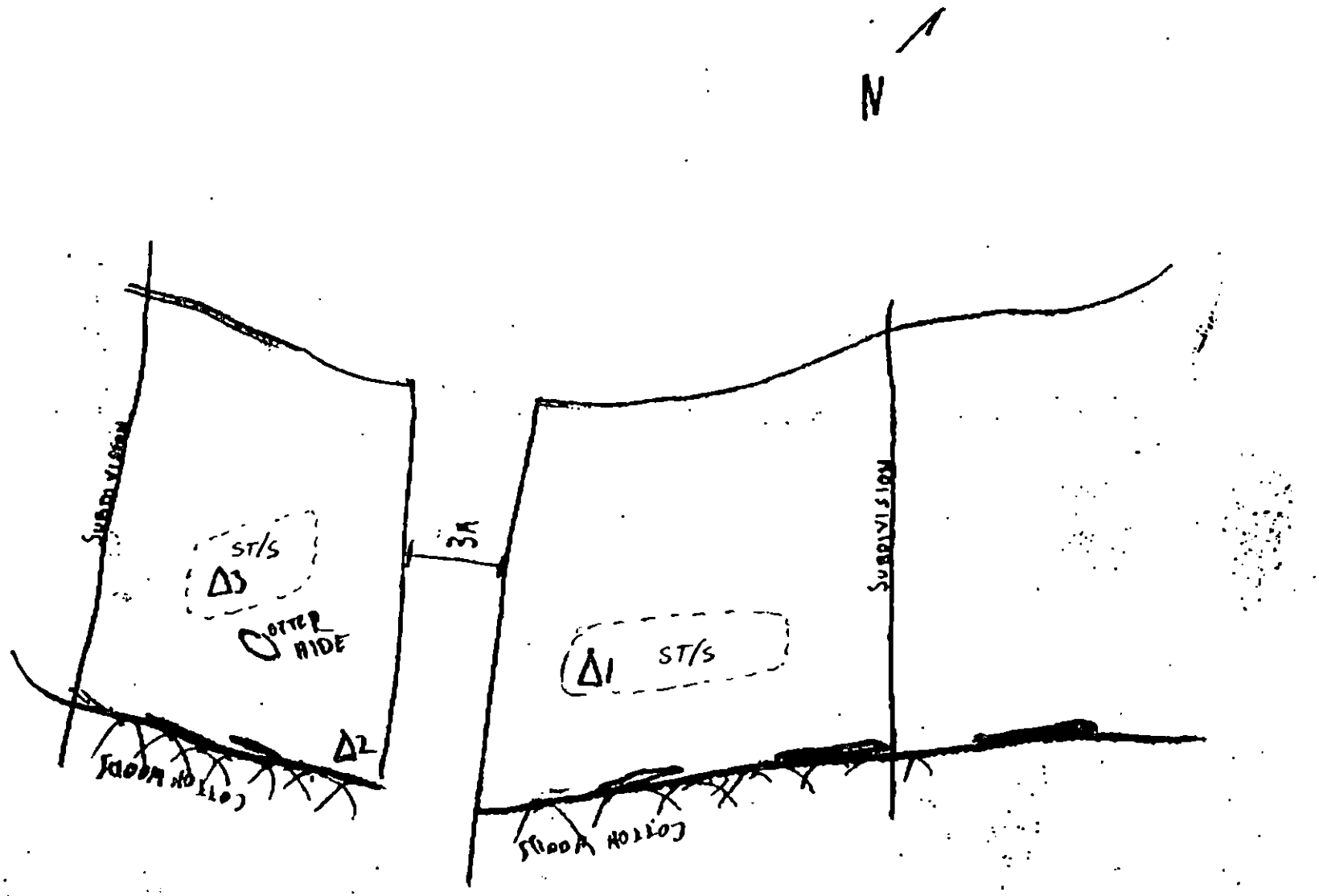
CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oiled Vegetation

Photo location, direction, and number




Oil Character Length (m): AP_____ FO_____ CV_____ CT_____ ST_____ MB_____ PT_____ TB_____ FL_____ NO_____

10/49

ADF&G MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: BS (SS) DS TS AVS SCHA HMHS PTA 2 REGION: (PWS) KP,CI K,AP

METHOD: Aerial (Ground) Seas

3 DATE: 4/20/90 16 HIGH TIDE TIMES: 1007, 2304 21 TEAM RECORDER: M. WIEDUER

4 START TIME: ~~1~~ 1605 16 HIGH TIDE HTS: 9.0', 9.4' 22 OBSERVERS: T. CROWE

5 STOP TIME: 1615 17 LOW TIDE TIMES: ~~1~~ 0300, 1634 23 AGENCY: ADF&G

6 SEGMENT #: LA-021 18 LOW TIDE HTS: 4.5', 1.6' 24 PHOTOS TAKEN: Y (N)

7 STATION #: _____ 19 TIDE HT AT SURVEY: 1.7' Roll #: _____ Frame: _____

8 K-UNIT: _____ Ebb (Slack) Flood Slack 25 VIDEO TAKEN: Y (N) TAPE#: _____

9 STAT AREA: _____ 20 USGS QUAD: _____ Start: _____ End: _____

10 LAT: _____ 11 LONG: _____ 26 SAMPLES TAKEN? Y (N) Number

12 SOURCE: Map Loran Oil _____

13 LOCATION: N.W. LATOUCHE Is. Sediment _____

14 DESCRIPTION: _____ Biological _____

Water _____

EXTENT OF OIL

| | SHORELINE L | SHORELINE W | SHORELINE Ht | SHORELINE % | STREAM L | STREAM W | STREAM Ht | STREAM % |
|---|---|---|---|---|---|---|---|---|
| 27 SURFACE COVERAGE | 100ft | 30yds | | <1 | 30 | 6 | | 0 |
| 28 SURFACE THICKNESS | 0 | 0 | 0 | | 0 | 0 | 0 | |
| 29 PENETRATION | 0 | 0 | 0 | | 0 | 0 | 0 | |

30 OVERALL OIL IMPACT: N (VL) L N H

31 OIL TYPE: Pooled Mousse Tar Asphalt Sticky (Stain)

32 OILED DEBRIS? Y (N)

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

34 WAVE EXPOSURE: High (Moderate) Low

35 SUBSTRATE TYPE: Bedrock _____ Boulder 5 Cobble 75 Gravel 20 Sand _____ Mud/silt _____

36 CATALOGED ANAD. FISH STREAM? (Y) N

37 CATALOG #: 226-40-16776

38 STREAM NAME: _____

39 OIL IN STREAM BED? Y (N)

40 OIL ON STREAM BANKS? (Y) N

41 OIL ON BEACH ADJACENT TO MOUTH? (Y) N (within 50 meters)

42 OIL WITHIN 1 MILE OF STREAM? (Y) N Where: _____

43 ANADROMOUS FISH PRESENT? (Y) N FRY PRESUMED

44 ANADROMOUS FISH OBSERVATION

| Species | Aerial | Ground |
|---|---|---|
| | | |
| | | |
| | | |
| | | |

COMMENTS: SLIGHT STAIN ON SCATTERED BOULDERS & COBBLES NO OIL OBSERVED IN UPPER 35 CM. LUXURIANT ALGAL GROWTH IN LOWER INTERTIDAL - FEW GRAZERS OBSERVED - ONE DEAD OTTER CARCASS - NOT FRESH. THIN FILM ON BOTTOM OF SOME BOULDERS.

TREATMENT RECOMMENDED

9/49

Ecologist's Summary 4/20/90
Segment L A 21
Stream 226-90-16776

The Stream mouth lies on a long boulder/cobble beach, unstable, with sparse biota. Oil stains scattered among cobbles and pebbles in UTZ. No cleanup recommended.

M H Fawcett

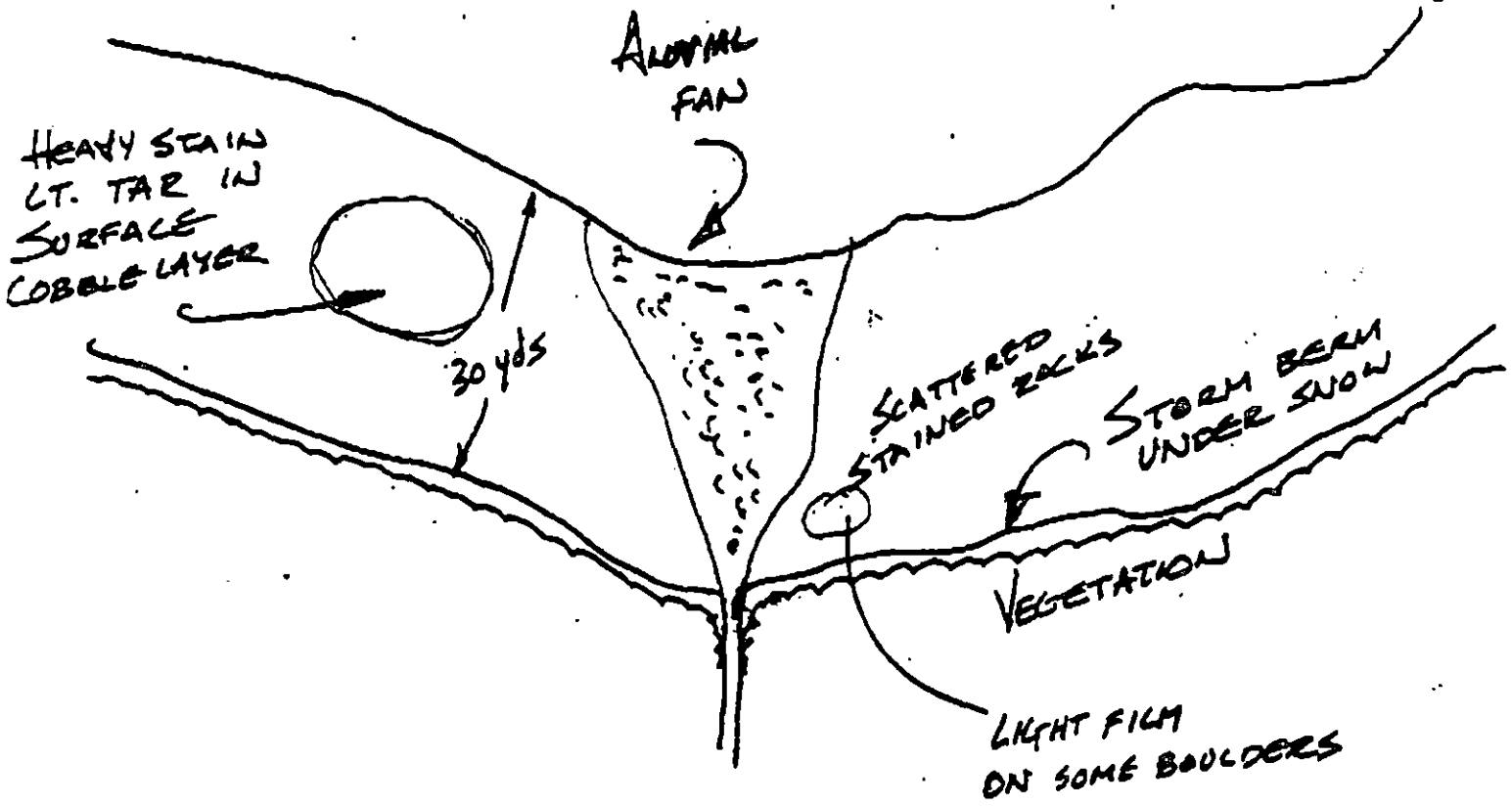
LA-021 11/49

226-40-16776

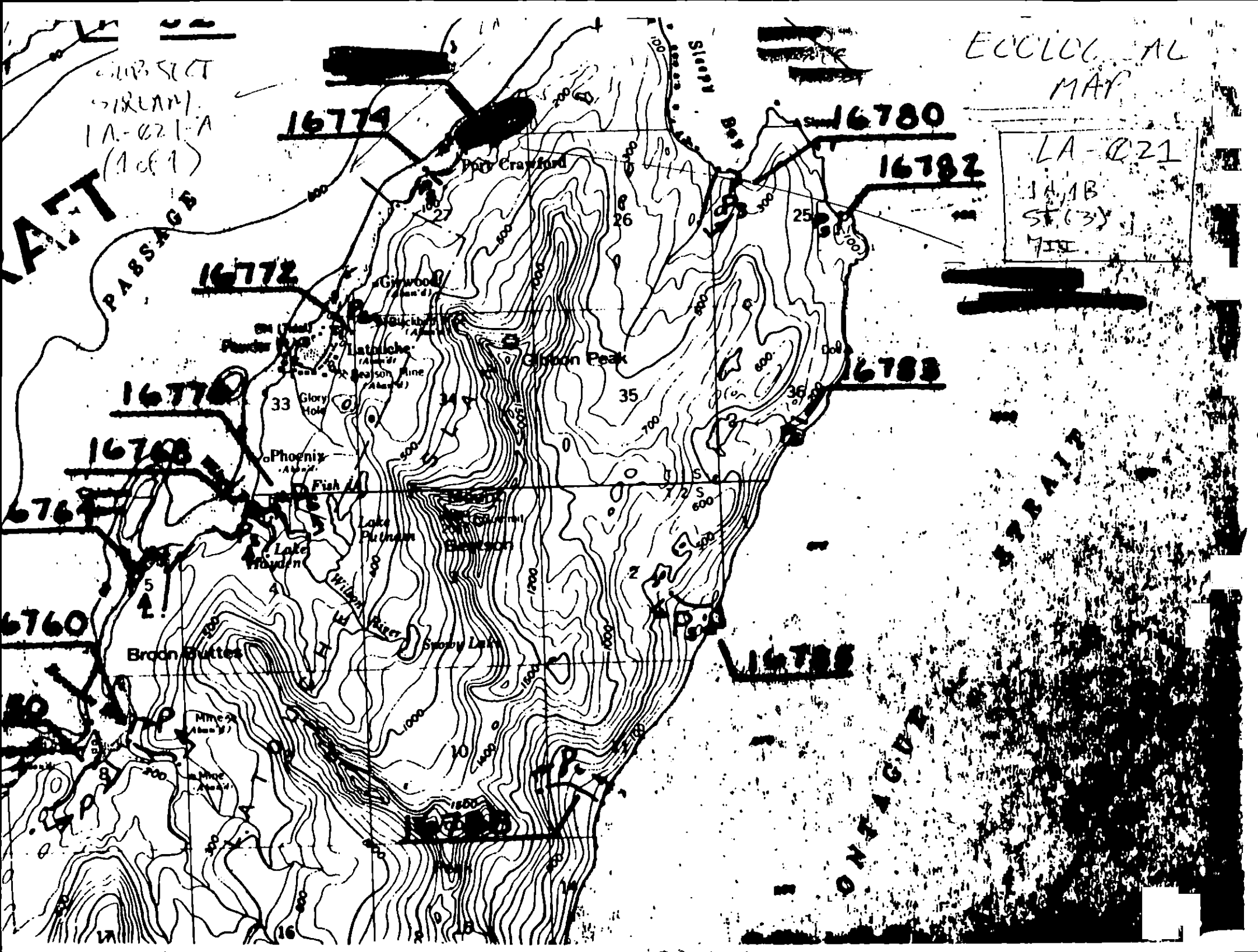
4B PHOTOLOG

| (S) | DESCRIPTION |
|---|---|
| | |

4C OIL DISTRIBUTION DIAGRAM




Sample taken
Photo frame # and
shot direction.


ECOLOGICAL MAP
LA-021
1A,1B
SF(3)
MIL
16774
16780
16782
16772
16770
16768
16760
16788
16786
Port Crawford
Latouche
Glipton Peak
Phoenix
Fish
Lake Hayden
Lake Putnam
Wilson River
Snowy Lake
Broon Buttes
Mine
PASSAGE
33
34
35
36
25
26
27
2
4
5
8
10
16
18

# SHORELINE EVALUATION

SEGMENT ST/ LA-23 SUBDIVISION A (1 OF 1) DATE 4/1/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**
Near Sawmill Bay hatchery (1F) - 4/20 to 5/10; Deer harvesting (7II) - 8/15 to 2/28; Salmon stream fry outmigration (1A) - 3/1 to 5/15 and spawning (1B) - 7/10 to 8/31. Avoid disturbance of stream or adjacent substrate; Contact ADF&G Habitat Division prior to treatment.

**SUBDIVISION ECOLOGICAL CONSTRAINTS:**
Avoid unnecessary disturbance of substrate and biota. See attached Ecological Constraint Sheet.

SHPO SIGNATURE: Marla Stillman DATE: 4/17/90

**OILING CATEGORIZATION:**

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 15 m: No Oil 350 m
Subsurface Oil Observed: Yes ___ No X Maximum Depth ___

**RECOMMENDATIONS:**

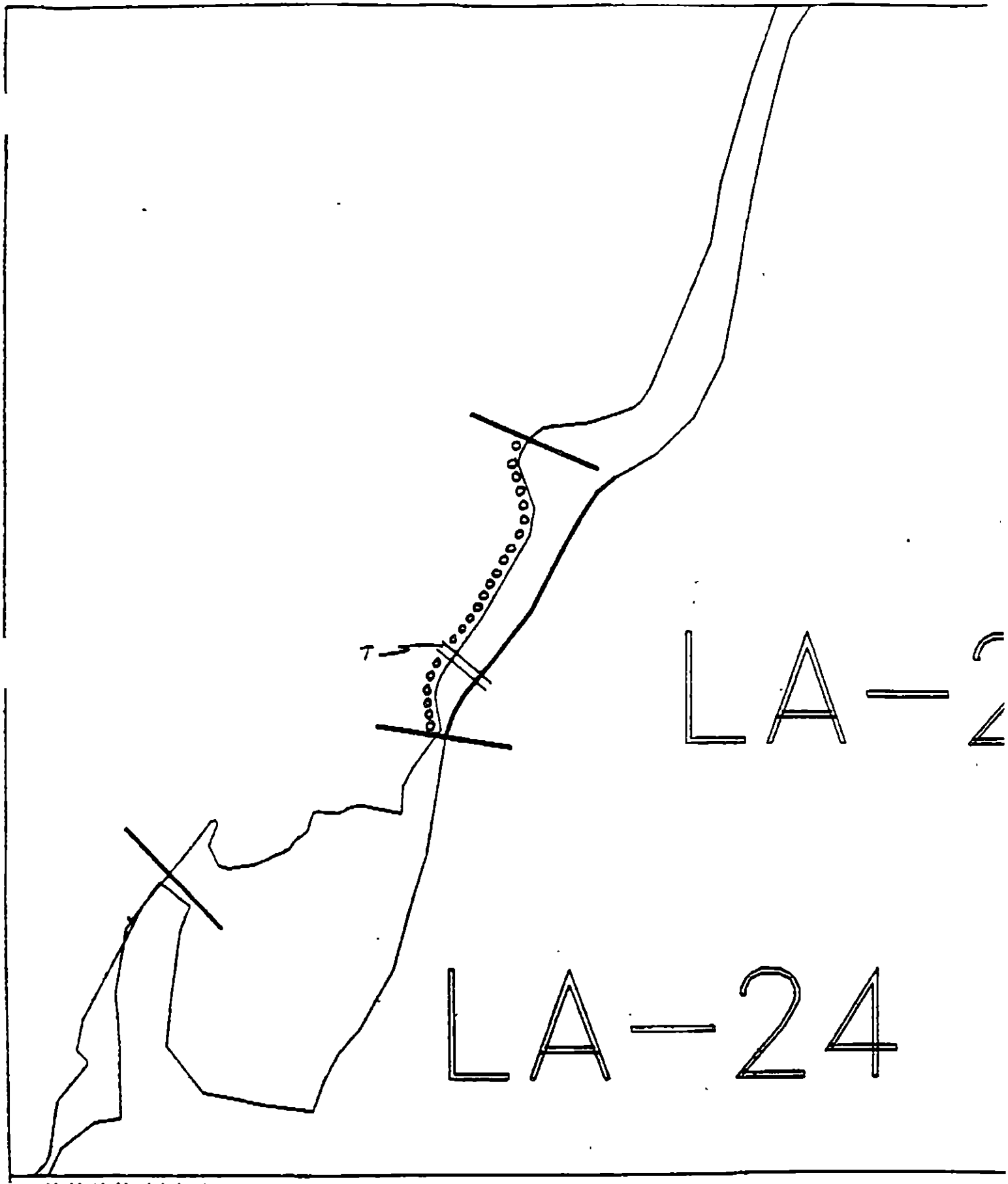
| | |
|---|---|
| ___ No Treatment Recommended | ___ Snare/Absorbent Booms |
| X Treatment Recommended | ___ Oil Snares (pom poms) |
| X Manual Pickup | ___ Absorbents (pads,rolls,etc) |
| ___ Bioremediation | ___ Spot Washing: ___ Wands |
| X Tarmat: ___ Breakup | ___ Beach Cleaner |
| X Removal | ___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

COMMENTS: Recommend manual pick up of oil spill related debris (pom-pom) and removal of tarmat as shown on attached sketch map. Treatment activities should be conducted from 5/15 to 7/10 based on above constraints.

**TAG COMMENTS:**

TAG APPROVAL DATE: 4/16/90
ADEC A. Kitchen
EXXON Andy Teas
NOAA Bud Wescott Bud Lindquist
USCG G.A. Reiter G.A. Reiter

FOSC: [signature] DATE: 5-9-90
crc Rep to be present




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

LA-23

ADEC Segment Length: 385m

0 100 200 300
METERS

Map Key: PWS-429
Name: REIMER
Date: 4/1/90
Date Entered:

# FIELD SHORELINE COMMENT SHEET

1-APR-90

SEGMENT ST / LA-23 SUBDIVISION: _____ DATE [redacted]

**USCG**
NAME Randolph W. Hubbard SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

Ref: Land manager comments.

**ADEC**
NAME J. LYNN MARTIN SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED
COMMENTS

MANUAL REMOVAL OF ASPHALT PAVEMENT AND DEBRIS.

**LAND MANAGER** (CHENEGA)
NAME Patrick SELANOFF SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

I Recommend to Have this segment be examined again at a Later Date. because when I talked to a Deckhand off of the Boat "GLACIER" he told Hubbard & I that when they pulled their Lcm up on to the beach ~~[illegible]~~ their was a sheen of oil around the boat, also on Departing the beach with the helicopter I noticed two patches of ~~moose mats~~ appro: 50 meters by 100 meter.

Kelp with suspected sheen
REVISION NO. 03/21/90
4-10-90 offshore

# SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG REIMER USCG HUBBARD SEGMENT ST/ LA 23
BIO ZAMORA LAND REP Selanoff SUBDIVISION A (1 OF 1)
EXXON GARCIA ADEC MARTIN TIME 15 :20 to 15 :53
TEAM NO.: 16 TIDE LEVEL: +4.0 to +5.0 DATE 4 / 1 / 90
EST. SUBDIVISION LENGTH: 385 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock SNOW
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
SURFACE SEDIMENTS: R 10 % B 10 % C 40 % P 50 % G 5 % S 2 % M — % V 2 %
SLOPE : Lang 100 % Hang ____ % Vert ____ % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W — m M — m N — m VL 5 m (NO) 380 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | rc | ra | rp | rs | | | | | | su | ui | mi | u |
| ASPHALT PAVEMENT | | | | X | | X | | | | | | X | |
| POOLED | | | | | | | | | | | | | |
| COVER | | | | | | | | | | | | | |
| COAT | | | | | | | | | | | | | |
| STAIN | | | | | | | | | | | | | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | | | | | | | | | | |
| NO OIL | | | | | | | | | | S | X | | X |

SNOW

PAVEMENT: (H) F S 1 sq. m by 1 cm
PATTIES / TARBALLS 1 BAGS
NEAR SHORE SHEEN? NO BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | X | | |
| Debris | | | |

DEBRIS COLLECTED ☐ YES ☒ NO
TYPE Pom poms
#BAGS 2
1 - Plastic Bag of oiled Pompoms
Photographs: 2 - looking over at high tide.
Roll No. ST-16-2
Frames 30-35

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm-cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | op | or | ol | of | no | | uo | uc | | | | | | su | ui | mi | u | | |
| 1 | 30 | | | | | X | - | | | | | | | | | X | | | | PGC |
| 2 | 30 | | | | | X | - | | | | | | | | | X | | | | PGS |
| 3 | 30 | | | | | X | - | | | | | | | | | X | | | | PGS |
| 4 | 20 | | | | | X | - | | | | | | | | | | X | | | PC SC |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |

COMMENTS Pebble, Cobble, boulder beach north of the Latouche fuel dump. Considerable man made material in the UIT, The remains of an ore loading dock associated with an old Copper mine. The northern section of the beach is underlain with rock platform which surfaces at the end of the segment forming a small point The only oil found on this section was a small 5m x 3m patch of hard pavement on Cobble and boulders.



REVIEWED JW DATE 4-3-90

OG REIMERS

SEGMENT ST/ LA-23

SUBDIVISION

DATE 4 / 1 90

**CHECKLIST**

- N Arrow
- Approx. Scale
- Seg/Sub Endry
- Oil Dist.
  - Width
  - Length
  - % Cover
- Substrate Character
- Est. HW/LWL
- SSL
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

**LEGEND**

1 △

Pit - No Subsurface Oil

2 ▲

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

Oiled Vegetation

Photo location, direction, and number

## SKETCH MAP

Oil

2 - pompoms

1 - plastic bag filled with pompoms

Small patch of hard asphalt

tree - populous trees

tree - evergreens

AP/H/S 2%

Pompom

#1 wharf pilings

Concrete wharf bottoms

pellets of fuel

SNOW

Bob cat Tracks

Rock outcrop

SNOW

Plastic Bag containing oiled pompoms

Rock

SNOW

Δ3

Δ4

Boulder Δ2

PCB

Δ1

PCB

BC

Beach material is comprised of slaty pebble/cobble scattered granite boulders

Kelp patch

Concrete Marker

Rock covered with old machinery parts

"GLACIER"

Barge Setting up fuel Site

Profile Scale

meters

SNOW

P

PCB

Oil Character Length (m): AP 5 PO — CV — CT — ST — MS — PT — TB — FL — NO 386

REVISION 03/24/98

# SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/22/90

Segment ST / LA 23 Subdivision — Date (mo / day / yr) 4/1/90

Time ( 24 hr ) 1520 1532 Biologist TONY ZAMORA

( A ) Substrate type and % of segments:
( 1 ) Bedrock 10 ( 2 ) Boulder 10 ( 3 ) Cobble 40 ( 4 ) Pebble 50 ( 5 ) Sand 5 ( 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 )

Photographs:
Roll No. ____
Frames ____

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | X | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | X | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | X | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | X | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | X | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | X | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | X | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

Wildlife Observations/ General Comments:

- LOW ZONE NOT EXPOSED DURING SURVEY
- LITTLE BIOTA HERE EXCEPT FOR ROCK OUTCROP AT EDGE
- DEER TRACKS (SEVERAL) WERE SEEN, DEER SKELETON (FRESH) WAS FOUND, SEABIRDS SWIMMING (GREBES?)
- ECOLOGICAL CONSIDERATIONS:
  - 7II, ~~3~~, 72, 5T (THOUGH NONE WERE SEEN)
- CULTURAL RESOURCES AS LATOUCHE TOWNSITE? BOTTLE FOUND DATED 1877

# PWS ECOLOGICAL CONSTRAINTS

| | | |
|---|---|---|
| [redacted] | | Salmon stream mouth - fry outmigration (3/1 to 5/15) |
| 1B | | Salmon stream mouth - spawning (7/10 to 8/31)<br>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) |
| [redacted] | | 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)<br>For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints. |
| 2M | | Herring spawning (4/1 to 6/15)<br>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)<br>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)<br>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)<br>Restrict all activity to essential minimum, especially air traffic. |
| 5T | | All Bald Eagle nests (3/1 to 6/1)<br>Active Bald Eagle nests (3/1 to 9/1)<br>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 |
| [redacted] | | Deer harvesting (8/15 to 2/28) |
| 7JJ | | Invertebrate harvesting<br>For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints. |

# ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ LA-23 A STREAM NO: 226-40-16772 DATE 4/20/90

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

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

SHPO SIGNATURE: J. David McMahan DATE: 5/8/90

Subsurface Oil Observed: Yes____ No X Maximum Depth____

**RECOMMENDATIONS:**

| | |
|---|---|
| X No Treatment Recommended | _____Snare/Absorbent Booms |
| _____Treatment Recommended | _____Oil Snares (pom poms) |
| _____Manual Pickup | _____Absorbents (pads,rolls,etc) |
| _____Bioremediation | _____Spot Washing:_____Wands |
| _____Tarmat Removal | _____Beach Cleaner |
| | _____Other (see comments) |

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 5/7/90.
ADEC Art Weiner Art Weiner
EXXON Andy Teal Andy Teal FOSC: [signature] DATE: 5-18-90
NOAA Lacy Petrosa Lacy Petrosa
USCG C.A. Reiter C.A. Reiter ~~notify CVC others. in advance of work~~

# PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A **Salmon stream mouth - fry outmigration (3/1 to 5/15)**
1B **Salmon stream mouth - spawning (7/10 to 8/31)**
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G John Morison 267-2324

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 July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D **Esther Hatchery release (4/15 to 6/15)**
1E **Main Bay Hatchery release (4/20 to 6/15)**
1F **Sawmill Bay Hatchery release (4/15 to 6/1)**
1G **Cannery Creek Hatchery release (4/21 to 6/1)**
1H **Remote release site**
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or 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: 1E ADF&G Larry Peltz 424-3214
1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzomoto 424-7511

1I **Gill net area (6/7 to 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 unoiled 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 **Harbor seal and sea lion pupping (5/15 to 7/1)**
3O, 3Q **Harbor seal and sea lion molting (8/15 to 9/15)**
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of 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
ADF&G Don Calkins 267-2403

5R **Seabird colony (5/1 to 9/1)**
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S **Shorebird/waterfowl concentration (4/1 to 5/15)**
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Rothy 267-2206

5T **All Bald Eagle nests (3/1 to 6/1)**
**Active Bald Eagle nests (3/1 to 9/1)**
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U **Recreation: Tent sites (6/1 to 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**
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

ASC #: 226-40-16774

Segment: LA-021

Observations: A deposit of heavy oil penetrates the substrate immediately adjacent to the upper-mid intertidal portion of the stream. This area has a surface armor of large cobble overlying small gravels. A high tide berm may be advancing over this oil deposit. Tar from this deposit is exposed in the stream channel along the southwest bank and is leaking sheen into the stream. Tarry/moussy oil penetrates the sediment approximately 4 cm at the present stream bank. Oil penetration may be deeper further from the stream.

Treatment Recommendations: The complete layer of oiled substrate within this deposit should be manually removed, bagged, and taken from the site for safe disposal. Four-wheelers should be used to facilitate removal of material from beach. Excavation should begin on the side of the patch most distant from the stream channel. Clean material from the adjacent berm should be backfilled into the excavated area soon after oiled material is removed. In no circumstances should clean material be deposited over any remaining oiled substrate. Immediately after removal of the oiled substrate adjacent to the stream, boulders from the opposite shore (see ADF&G Multi-Assessment Data Form diagram for general location) should be placed along the bank to prevent migration of the channel into the treated area. All activities must occur between 15 May and 15 July, 1990.

ASC #: 226-40-16772

Segment: LA-023

Observations: Only lightly stained logs in storm berm.

Treatment Recommendations: If future observations do not reveal significant quantities of buried oil, no treatment is recommended.

# SHORELINE OILING SUMMARY (ANAD.) 43/49

OG William Reid USCG McMahon SEGMENT ST/ LA2 3
BIO Michael Fawcett LAND REP Tom Grove ~ADFG S STRIP M226-10-16772 OF
EXXON Gus Garcia ADFG Mike Wiedner Time : to :
TEAM NO. 15 TIDE LEVEL +2 ft DATE 20 / APR / 90
EST. SUBDIVISION LENGTH: 50 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☐ Rock
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo
SURFACE SEDIMENTS: R ___ % B ___ % C 75 % P 25 % G ___ % S ___ % M ___ % V ___
SLOPE : Lang 90 % Hang 10 % Vert ___ % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 50

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | A | P | R | | | | | | SW | SE | MI | U |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | | | | | | | | | | | | |
| COAT | | | | | | | | | | | | | |
| STAIN | | | | | | | | | | | | | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | | | | | | | | | | |
| NO OIL | NONE | | | | | | | | | X | X | X | X |

PAVEMENT H F S 0 sq. m by 0
PATTIES / TARBALLS 0 BA
NEAR SHORE SHEEN? (NO) SR RW SL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | | | |
| Debris | | | |

Did You Coll
DEBRIS
☐ YES ☒ NO
TYPE
#BAGS

Photographs:
Roll No.
Frames

## SUBSURFACE OIL NO PITS

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm-cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SHEEN (Y/N) | ▼ | SURFAC SUBSURF/ SEDIMEN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CP | CR | CL | MF | NO | | SO | WO | | | | | | SU | MI | MI | U | | | | |
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COMMENTS

REVIEWED JW DATE 4-25-9

OG WILLIAM REID

SEGMENT ST/ LA23

STREAM 22610-16772

DATE 20 / APR 90

## SKETCH MAP

**CHECKLIST**

- ___ N Arrow
- ___ Approx. Scale
- ___ Bag/Sub Boxty
- ___ Oil Dist.
- ___ Width
- ___ Length
- ___ % Cover
- ___ Substrate Character
- ___ Est. HWL/LWL
- ___ SSL
- ___ Profile Location(s)
- ___ Profile(s)
- ___ Pit Location(s)
- ___ Photo Location(s)

**LEGEND**

1 ▲
Pit - No Subsurface Oil

2 ▲
Pit - Subsurface Oil

CT/C
Continuous Distribution

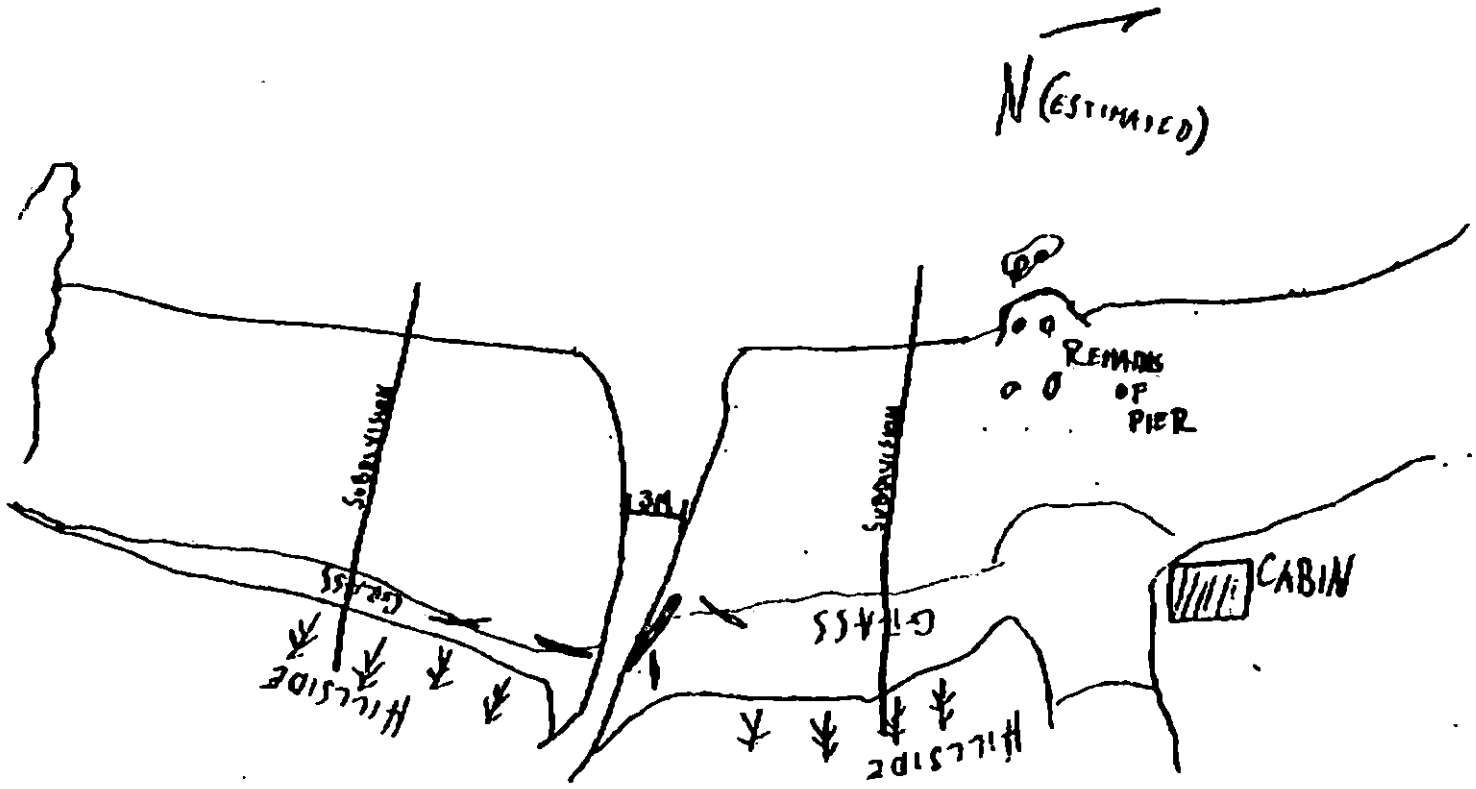
CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oiled Vegetation

Photo location, direction, and number




Oil Character Length (m): AP_____ PO_____ CV_____ CT_____ ST_____ MB_____ PT_____ TB_____ FL_____ NO_____

ADF&G MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: BS SS DS TS AVS SCAT ANAD PTA — 2 REGION: PWS KP,CI K,AP

METHOD: Aerial Ground Boat

3 DATE: 4/20/90 — 16 HIGH TIDE TIMES: ~~0000~~ 1007 / ~~2300~~ 2304

4 START TIME: 1800 — 16 HIGH TIDE HTS: 9.0' / 9.4'

5 STOP TIME: 1820 — 17 LOW TIDE TIMES: ~~0000~~ 0408 / ~~1630~~ 1634

6 SEGMENT #: EA-23 — 18 LOW TIDE HTS: 4.5' / 1.6'

7 STATION #: N/A — 19 TIDE HT AT SURVEY: 2.49'

8 K-UNIT: N/A — Ebb Slack (Flood) Slack

9 STAT AREA: N/A — 20 USCG QUAD: Seal A-3

10 LAT: _____ — 11 LONG: _____

12 SOURCE: Map . Loran

13 LOCATION: _____

14 DESCRIPTION: _____

21 TEAM RECORDER: Tom Crowe

22 OBSERVERS: ANADSCAT #15

23 AGENCY: EXXON/ADF&G

24 PHOTOS TAKEN: Y (N)

Roll #: _____ Frame: _____

25 VIDEO TAKEN: Y (N) TAPE #: _____

Start: _____ End: _____

26 SAMPLES TAKEN? Y (N) Number

Oil _____

Sediment _____

Biological _____

Water _____

EXTENT OF OIL

| | SHORELINE L | SHORELINE W | SHORELINE H | SHORELINE % | STREAM L | STREAM W | STREAM H | STREAM % |
|---|---|---|---|---|---|---|---|---|
| 27 SURFACE COVERAGE | 100 90s | 90s | 70s | 0 | 50 | 5 | 100 | 0 |
| 28 SURFACE THICKNESS | None | — | — | | — | — | — | |
| 29 PENETRATION | None | — | — | | — | — | — | |

30 OVERALL OIL IMPACT: H (VL) L M H

31 OIL TYPE: Pooled Mousse Tar Asphalt Sticky (Stain)

32 OILED DEBRIS? (Y) N

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

34 WAVE EXPOSURE: High (Moderate) Low

35 SUBSTRATE TYPE: Bedrock _____ Boulder _____ Cobble _____

Gravel ✓ Sand ✓ Mud/silt _____

36 CATALOGED ANAD. FISH STREAM? (Y) N

37 CATALOG #: 226-40-16772

38 STREAM NAME: N/A

39 OIL IN STREAM BED? Y (N)

40 OIL ON STREAM BANKS? Y (N)

41 OIL ON BEACH ADJACENT TO MOUTH? Y (N) (within 50 meters)

42 OIL WITHIN 1 MILE OF STREAM? Y (N)

Where: _____

43 ANADROMOUS FISH PRESENT? Y (N)

44 ANADROMOUS FISH OBSERVATION

| Species | Aerial | Ground |
|---|---|---|
| | | |
| | | |
| | | |
| | | |

COMMENTS: VERY LIGHT. ONLY SIGN OF OIL IS STAIN ON LOGS WHERE THIS STREAM CUTS THROUGH STORM BERM. NO TREATMENT RECOMMENDED

Ecologist's Summary 4/20/90
Segment LA-23
Stream #226-40-16722 Michael Fawcett

No oil was found at this site except for a few light splatters on drift logs. One mature eagle in tree. No cleanup recommended.

M H Fawcett

# SHORELINE EVALUATION

SEGMENT ST/ LA-24 SUBDIVISION A (1 OF 1) DATE 4/1/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

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

SHPO SIGNATURE: Charles E Holmes DATE: 4/20/90

**OILING CATEGORIZATION:**

Wide 0 m: Medium 94 m: Narrow 69 m: V.Light 0 m: No Oil 725 m
Subsurface Oil Observed: Yes____ No X Maximum Depth_____

**RECOMMENDATIONS:**

| | |
|---|---|
| ____No Treatment Recommended | ____Snare/Absorbent Booms |
| X Treatment Recommended | ____Oil Snares (pom poms) |
| X Manual Pickup | ____Absorbents (pads,rolls,etc) |
| ____Bioremediation | ____Spot Washing:____Wands |
| X Tarmat: ____Breakup | ____ Beach Cleaner |
| X Removal | ____Other (see comments) |

COMMENTS: Recommend removal of tarmats and manual pick up of mousse patties as shown on sketch map. Work should be conducted between 6/1 and 7/10 to avoid fry outmigration and salmon spawning constraints, and hatchery release constraints. Work may begin 5/1 with approval from ADF&G.

TAG COMMENTS:

TAG APPROVAL DATE: 4/19/90.
ADEC AL WEINER
EXXON ANDY TEAL
NOAA Earl Worcott
USCG KENNETH KEANE

FOSC: DATE: 5-9-90
CVC Rep to be present

# PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

| | | |
|---|---|---|
| 1A | | Salmon stream mouth - fry outmigration (3/1 to 5/15) |
| 1B | | Salmon stream mouth - spawning (7/10 to 8/31) |
| | | No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits. |
| 1C | | Salmon fry nursery area (4/31 to 7/31) |
| 1D | | Esther Hatchery release (4/15 to 6/1) |
| 1E | | Main Bay Hatchery release (4/20 to 5/10) |
| 1F | | Sawmill Bay Hatchery release (4/15 to 6/1) |
| 1G | | Cannery Creek Hatchery release (4/21 to 6/1) |
| 1H | | Remote release site |
| 1I | | Gill net area (6/7 to 8/31) |
| 1J | | Purse seine area (7/20 to 9/30) |
| 1K | | Purse seine hook-off (7/20 to 9/30) |
| 1L | | Set net sites (6/11 to 7/25) |
| | | For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints. |
| 2M | | Herring spawning (4/1 to 6/15) |
| | | Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations. |
| 3N, 3P | | Harbor seal and sea lion pupping (5/15 to 7/1) |
| 3O, 3Q | | Harbor seal and sea lion molting (8/15 to 9/15) |
| | | Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. |
| 5R | | Seabird colony (5/1 to 9/1) |
| | | Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment. |
| 5S | | Shorebird/waterfowl concentration (4/1 to 5/15) |
| | | Restrict all activity to essential minimum, especially air traffic. |
| 5T | | All Bald Eagle nests (3/1 to 6/1) |
| | | Active Bald Eagle nests (3/1 to 9/1) |
| | | Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates. |
| 6U | Recreation: | Tent sites (6/1 to 9/15) |
| 6V | | Anchorages (6/1 to 9/15) |
| 6W | | Forest Service cabins (6/1 to 9/15) |
| 6X | | Lodge (6/1 to 9/15) |
| 6Y | | Special use destination |
| 7Z | Subsistence area: | Salmon harvesting (5/1 to 9/30) |
| 7HH | | Finfish harvesting |
| 7II | | Deer harvesting (8/15 to 2/28) |
| 7JJ | | Invertebrate harvesting |
| | | For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints. |

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / GA-24 SUBDIVISION: — DATE 4-1-90

**USCG**
NAME R. W. Hubbard SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

1. Light Tilling to foam surface soil

**ADEC**
NAME J. LYNN MARTIN SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED
COMMENTS

MANUAL REMOVAL OF TARMATS

MECHANICAL CLEANUP OF SUBSURFACE MOUSSE + TILING OF FILM FOR AGITATION

**LAND MANAGER** CHENEGA
NAME Patrick SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Ref. to ADEC comment

# SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Reimer USCG Hubbard SEGMENT ST/ LA-24
BIO Zapora LAND REP Selanoff SUBDIVISION A (1 OF 1)
EXXON Garcia ADEC Martin TIME 14 :30 to 15 : 20
TEAM NO.: 16 TIDE LEVEL: +2.1 to +4.0 DATE 4 / 1 / 90
EST. SUBDIVISION LENGTH: 494 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock Landing strip / gravel
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
SURFACE SEDIMENTS: R 10 % B — % C — % P 60 % G 20 % S 10 % M — % V — %
SLOPE : Lang 90 % Hang 10 % Vert — % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W — m M 40 m N 10 m VL — m NO 444 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | /C | /B | /P | /S | SHN/BR | DRK/RW | GY/SL | DRK/TL | LGR/ | SU | UI | MI | LI |
| ASPHALT PAVEMENT | | | X | | | | | X | | | X | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | | | | | | | | | | | | |
| COAT | | | | | | | | | | | | | |
| STAIN | | | | | | | | | | | | | |
| MOUSSE | | | X | | | | | X | | | X | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | X | | | | | | X | | | X | X | |
| NO OIL | | | | | | | | | | | | | |

PAVEMENT: H F (S) 10 sq. m by 3 cm

PATTIES / TARBALLS 3 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | | | |
| Debris | | | |

DEBRIS COLLECTED ☐ YES ☒ NO

TYPE

#BAGS

Photographs:

Roll No.

Frames NONE

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (CM-CM) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OS | NO | | UO | UC | SHN/BR | DRK/RW | GY/SL | DRK/TL | LGR/ | SU | UI | MI | LI | | |
| 1 | 70 | | | | | X | - | | | | | | | | | X | | | | SG P |
| 2 | 40 | | | | | X | - | | | | | | | | | | X | | | SG P |
| 3 | 20 | | | | | X | - | | | | | | | | | X | | | | SG P |
| 4 | 20 | | | | | X | - | | | | | | | | | X | | | | SG P |
| 5 | 20 | | | | | X | - | | | | | | | | | | X | | | SG P |
| 6 | 20 | | | | | X | - | | | | | | | | | X | | | | SG P |

COMMENTS This segment consists of a wide beach and tidal flat associated with a freshwater stream. The southern border of the segment is bounded by a short length of rock cliff. The mouth facing shoreline in front of the cliff forms a small cove which has dropout tarball oil. a broken film covers the upper and mid IT cove. a 2-3 m wide band of patchy asphalt pavement is found at the base of rock and rubble at UIT. No other oil was found.



REVIEWED DATE 4-3-90

## SHORELINE OILING SUMMARY (PAGE 2 of 2)

REVISION 09/22/89

SEGMENT ST/ AA 24 SUBDIVISION A

## SUBSURFACE OIL (CONTINUED)

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm-cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | | UO | UC | | | | | | SU | UI | MI | U | | |
| 7 | 20 | | | | | X | - | | | | | | | | | X | | | | PGS |
| | | | | | | | - | | | | | | | | | | | | | |
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COMMENTS

REVIEWED JW DATE 4-3-90

OG Penn

SEGMENT ST/ LA-44

SUBDIVISION —

DATE 4 / 1 90

**CHECKLIST**

- ✓ N Arrow
- — Approx. Scale
- ✓ Seg/Sub Bndry
- — Oil Dist.
- — Width
- — Length
- — % Cover
- — Substrate Character
- ✓ Est. HWL/LWL
- — SSL
- — Profile Location(s)
- ✓ Profile(s)
- — Pit Location(s)
- — Photo Location(s)

**LEGEND**

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

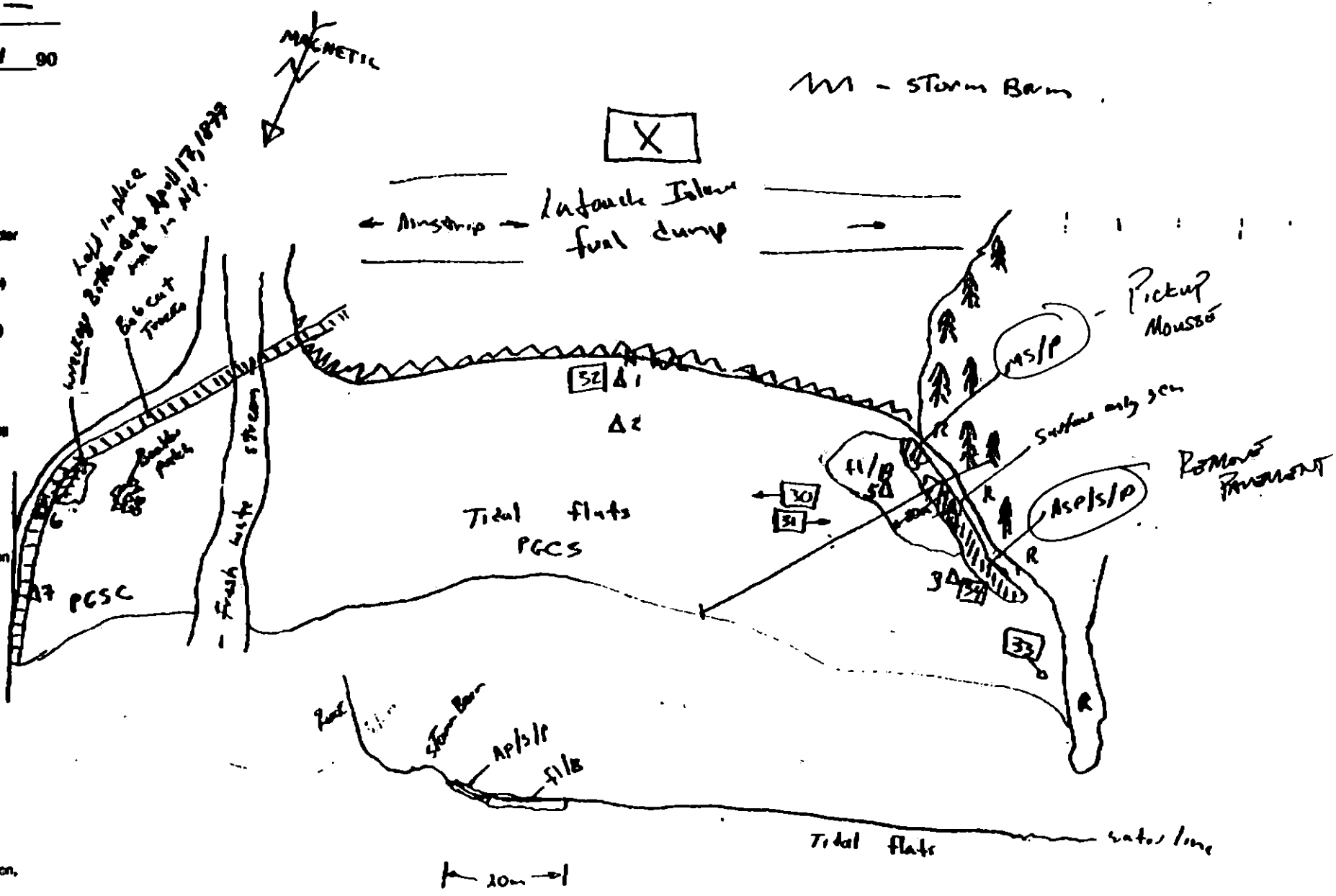
CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

Photo location, direction, and number

**SKETCH MAP**




Oil Character Length (m): AP 50 PO — CV — CT — ST — MS — PT — TB — FL 40 NO 444

REVISION CHANGE

## SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / LA 24 Subdivision — Date (mo / day / yr) 4/1/90

Time ( 24 hr ) 1420 1930 Biologist TONY ZAMORA

( A ) Substrate type and % of segments:
( 1 ) Bedrock 10 ( 2 ) Boulder — ( 3 ) Cobble — ( 4 ) Pebble 60 ( 5 ) Sand 20 ( 6 ) Silt 10

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

( 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 )

Photographs: Roll No. 55-16-2
Frames 30-34

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | X | 2 | X | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | X | 3 | X | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | X | 4 | X | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | X | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | X | 2 | X | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**FUCUS**

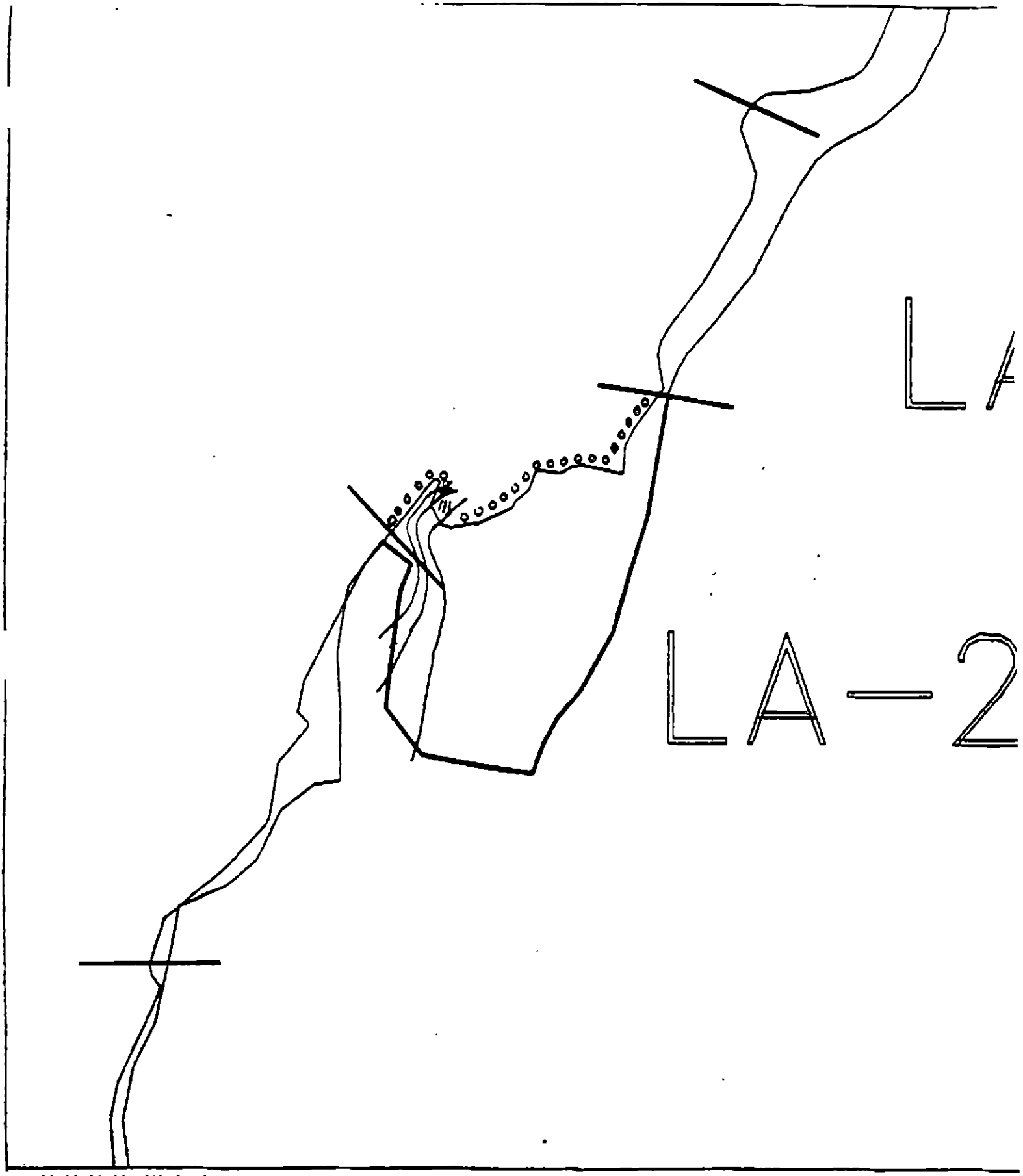
| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | X | 2 | X | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | X | 3 | X | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

- Wildlife Observations/ General Comments:
- LOW ZONE NOT EXPOSED DURING SURVEY
- LITTLE BIOTA HERE EXCEPT FOR THE ROCK OUTCROP AT EDGE
- BARNACLES ON LARGE (>5cm) PEBBLE IN MID ZONE

- ECOLOGICAL CONSIDERATIONS: → LA-24 NOT ON LIST
  - ANADROMOUS STREAM, (7-11) ADD 1A, 1B, 1F

- THIS SITE IS A CULTURAL RESOURCE(?) AS THE LATOUCHE




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

# LA-24

ADEC Segment Length: 889m

0 100 200 300
METERS

Map Key: PWS-430
Name: Reimer
Date: 4/1/90
Date Entered:

# ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT LA-24 SUBDIVISION A ( 1 of 1 )

| WORK WINDOW | |
|---|---|
| Manual Pickup<br>Tarmat Removal | **OPEN** |

## ARCHAEOLOGICAL MONITOR REQUIRED ON SITE.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

| | | |
|---|---|---|
| **1A,1B** | **Salmon Stream** | NO CONSTRAINT. The stream in this subdivision is not an ADF&G catalogued anadromous stream. |
| **1F** | **Sawmill Bay Hatchery Release** | No constraint to manual pickup and tarmat removal. |
| **7II** | **Subsistence: Deer Harvesting** | No constraint to manual pickup and tarmat removal. |
| **7Z** | **Subsistence: Salmon Harvesting** | No constraint to manual pickup and tarmat removal. |

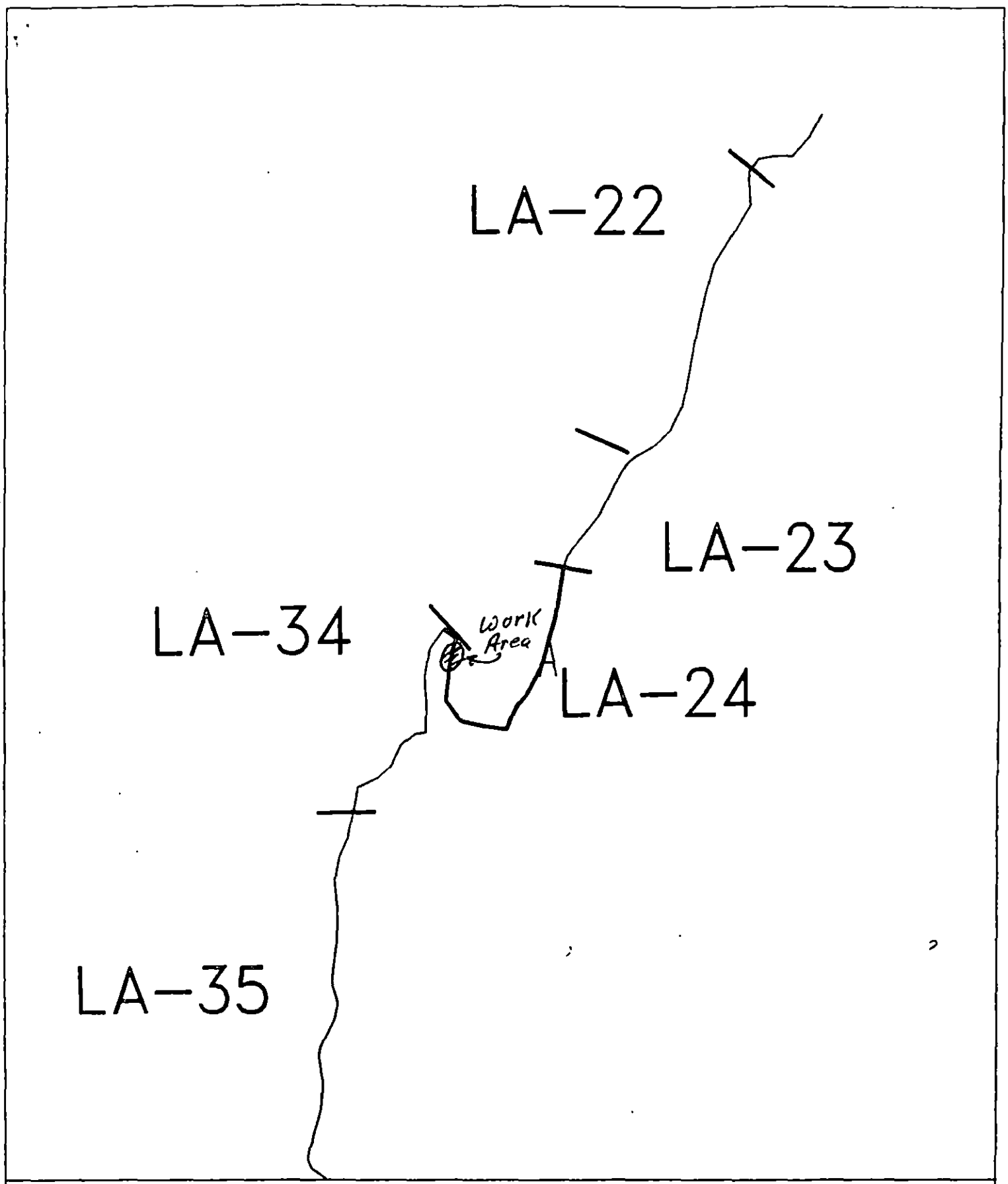
OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 5/29/90.
ADEC ART WEINER Art Weiner
EXXON Andy TSAI
NOAA Buescott Buescott
USCG G.A. REITER G.A. Reiter

FOSC [signature] DATE MAY 29 1990

Prepared By: Andrea Meyer WTK Date 5/28/90




EXXON

Exxon Company, USA
Map Key: PWS-LA-24
May 11, 1990

# ECOLOGY MAP
## SEGMENT LA-24
SUBDIVISION A (1 of 1)

METERS
0 360 720

★ Seabird Colony
△ Eagle Nest

1 inch = 1182 feet

# SHORELINE EVALUATION

SEGMENT ST/ LA-25 SUBDIVISION A (1 OF 2) DATE 4/2/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**
5T-4 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7JJ Subsistence area: Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

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

SHPO SIGNATURE: Charles E. Holmes DATE: 4/23/90

**OILING CATEGORIZATION:**

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 2131 m
Subsurface Oil Observed: Yes____ No X Maximum Depth____

**RECOMMENDATIONS:**

| | |
|---|---|
| X No Treatment Recommended | ____Snare/Absorbent Booms |
| ____Treatment Recommended | ____Oil Snares (pom poms) |
| ____Manual Pickup | ____Absorbents (pads,rolls,etc) |
| ____Bioremediation | ____Spot Washing:____Wands |
| ____Tarmat: ____Breakup | ____ Beach Cleaner |
| ____Removal | ____Other (see comments) |

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 4/21/90.
ADEC ART WEINER Art Weiner
EXXON ANDY TSEA
NOAA Burl Wescott
USCG KENNETH KEANE

FOSC: _____ DATE: 5-12-90

# PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

| | | |
|---|---|---|
| 1A | | Salmon stream mouth - fry outmigration (3/1 to 5/15) |
| 1B | | Salmon stream mouth - spawning (7/10 to 8/31) |
| | | No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits. |
| 1C | | Salmon fry nursery area (4/31 to 7/31) |
| 1D | | Esther Hatchery release (4/15 to 6/1) |
| 1E | | Main Bay Hatchery release (4/20 to 5/10) |
| 1F | | Sawmill Bay Hatchery release (4/15 to 6/1) |
| 1G | | Cannery Creek Hatchery release (4/21 to 6/1) |
| 1H | | Remote release site |
| 1I | | Gill net area (6/7 to 6/31) |
| 1J | | Purse seine area (7/20 to 9/30) |
| 1K | | Purse seine hook-off (7/20 to 9/30) |
| 1L | | Set net sites (6/11 to 7/25) |
| | | For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints. |
| 2M | | Herring spawning (4/1 to 6/15) |
| | | Restrict boat traffic to essential minimum. Avoid damage to 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 (5/1 to 9/15) |
| 6V | | Anchorages (5/1 to 9/15) |
| 6W | | Forest Service cabins (5/1 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 | | 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 / LA-25 SUBDIVISION: A DATE 4/2/90

~~USCG~~ NOAA
NAME GARY SHIGENAKA SIGNATURE Gary Shigenaka

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

SUBDIVISION WAS A RELATIVELY LENGTHY SECTION THAT INCLUDED BOULDER BEACHES ABUTTING SCREE AND STEEP BANKS ALONG THE NORTHERN PORTION, TO TREED ROCKY FACES ALONG THE SOUTHERN PORTION. RAPIDLY DETERIORATING WEATHER PRECLUDED SAFE BEACH LANDINGS AND SO SUBDIVISION WAS SURVEYED BY BOAT. WEATHERED STAIN WAS OBSERVED ON ISOLATED SEAWARD FACING BOULDERS.

SURVEY WAS DISCONTINUED DUE TO WEATHER CONDITIONS, PRIMARILY BUILDING SEAS.

ADEC
NAME John Hoyo SIGNATURE

☑ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Due to weather 3' seas & difficult access we were only able to survey aprox. ½ of segment. Survey was from skiff, some tar splash stains observed.

Recommend southern portion of segment be surveyed from helicopter as beach is boulder down to 4-5 ft + wave energy probably safe access from skiff on most days.

LAND MANAGER
NAME RITA A. MIRAGLIA SIGNATURE Rita A. Miraglia

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

I PARTICIPATED IN THE SCAT EVALUATION OF THIS SEGMENT AND WILL REPORT BACK TO CAC.

# SHORELINE OILING SUMMARY

REVISION NO. 03/20/90

OG Mike Foget USCG NOAA Gary Shigenaka SEGMENT ST/ LA-25
BIO Richard Ambrose LAND REP Rita A. Miraglia SUBDIVISION A
EXXON Larry Olson ADEC John Hayes TIME 16:10 to 17:00
TEAM NO.: 11 TIDE LEVEL: +3.0 to +4.2 DATE 4/2/90
EST. SUBDIVISION LENGTH: 2340 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock steep rocky mt. backshore
SURVEYED FROM: ☐ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N1 to S
SURFACE SEDIMENTS: R 5 % B 65 % C 25 % P 5 % G 0 % S — % M 0 % V 0 %
SLOPE: Lang 70 % Hang 25 % Vert 5 % WAVE EXPOSURE: ☐ Low ☐ Med ☑ High
OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 5 m NO 2335 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AC | AB | AP | AS | BRN/BLK | DBR/MRN | ORG | RBW | LTBW | SU | UI | MI | U |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | | | | | | | | | | | | |
| COAT | | | | | | | | | | | | | |
| STAIN | | | | | | | | | | | | | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | | | | | | | | | | |
| NO OIL | | | | | | | | | | X | X | X | X |

PAVEMENT: H F S 0 sq. m by 0 cm
PATTIES / TARBALLS 0 BAGS
NEAR SHORE SHEEN? (NO) BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | | | |
| Debris | | | |

DEBRIS COLLECTED ☐ YES ☒ NO
TYPE 0
#BAGS 0

Photographs:
Roll No. 0
Frames 0

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm-cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | | TO | UO | BRN/BLK | DBR/MRN | ORG | RBW | LTBW | SU | UI | MI | U | | |
| | | | | | | | • | | | | | | | | | | | | | |
| | | | | | | | • | | | | | | | | | | | | | |
| | | | | | | | • | | | | | | | | | | | | | |
| | | | | | | | • | | | | | | | | | | | | | |
| | | | | | | | • | | | | | | | | | | | | | |
| | | | | | | | • | | | | | | | | | | | | | |

COMMENTS No Pits were made due to unaccessability of beach segment was surveyed from the zodiac (boat). No oil was observed from the boat in this subdivision with the exception of a few CVS .2mx1m stains on the exposed boulders in the HIZ towards the southern end of the subdivision.

MA 6.1 (1/11/91)

# SHORELINE ECOLOGICAL SUMMARY

REVISION: 10/22/90

Segment ST / LA025 Subdivision A Date (mo / day / yr) 4/2/90

Time ( 24 hr ) 1610 hrs Biologist Ambrose

( A ) Substrate type and % of segments:
( 1 ) Bedrock 5 ( 2 ) Boulder 65 ( 3 ) Cobble 25 ( 4 ) Pebble 5 ( 5 ) Sand - ( 6 ) Silt -

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

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

Photographs:
Roll No. —
Frames —

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | X | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | X | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | X | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

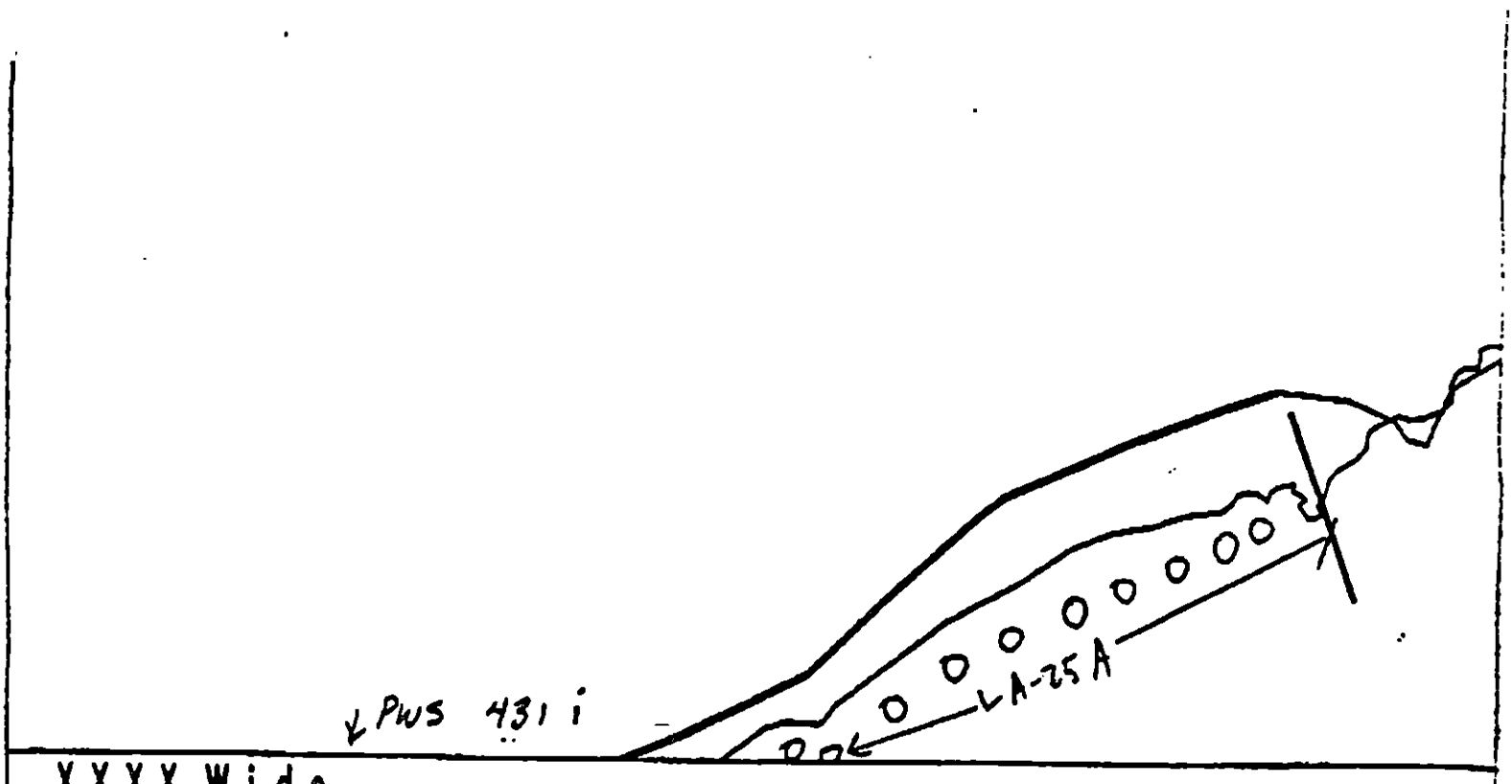
**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | X | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

Wildlife Observations/ General Comments: * Eagles (see below), 7 otters, 2 seals, 25 cormorants, 4 murres, 2 crows, 3 harlequin ducks, 1 merganser, 5 gulls. Very dense Nereocystis bed offshore. Moderate to dense cover in narrow band in the mid/low intertidal, with cover denser towards south end of island. Towards S end of segment, mussels form a dense band in mid intertidal.

Ecological Considerations: 7HH, 7I1, 1IJ, 5T-2: 9 mature bald eagles & 1 immature eagle seen, but no nests.

*Note: (a) part of this segment surveyed by boat, farther from shore than usual.



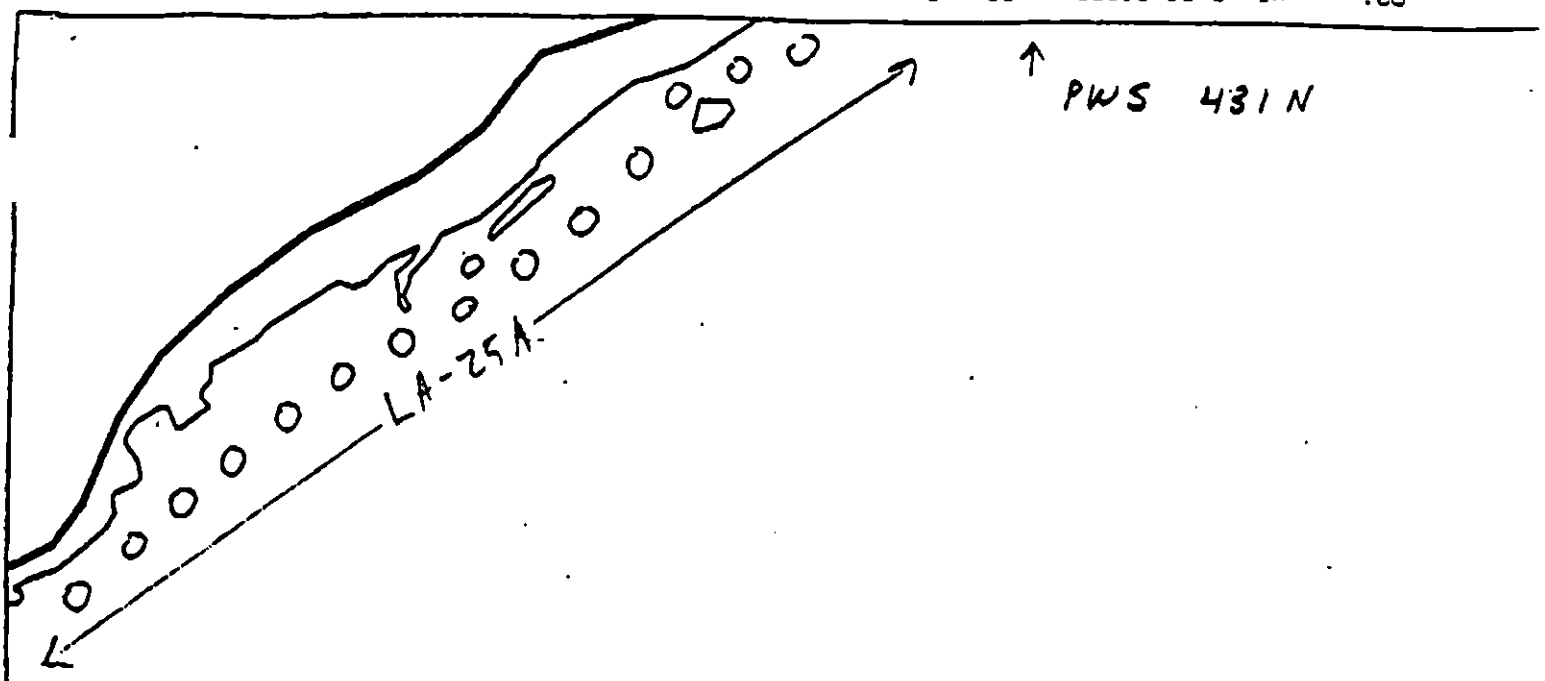

XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
0000 No Oil

LA-25A

ADEC Segment Length: 6107m

0 100 200 300

Map Key: PWS-431n
Name: Mike Foget
Date: 4/2/90
Data Entered:




← PWS 431 H

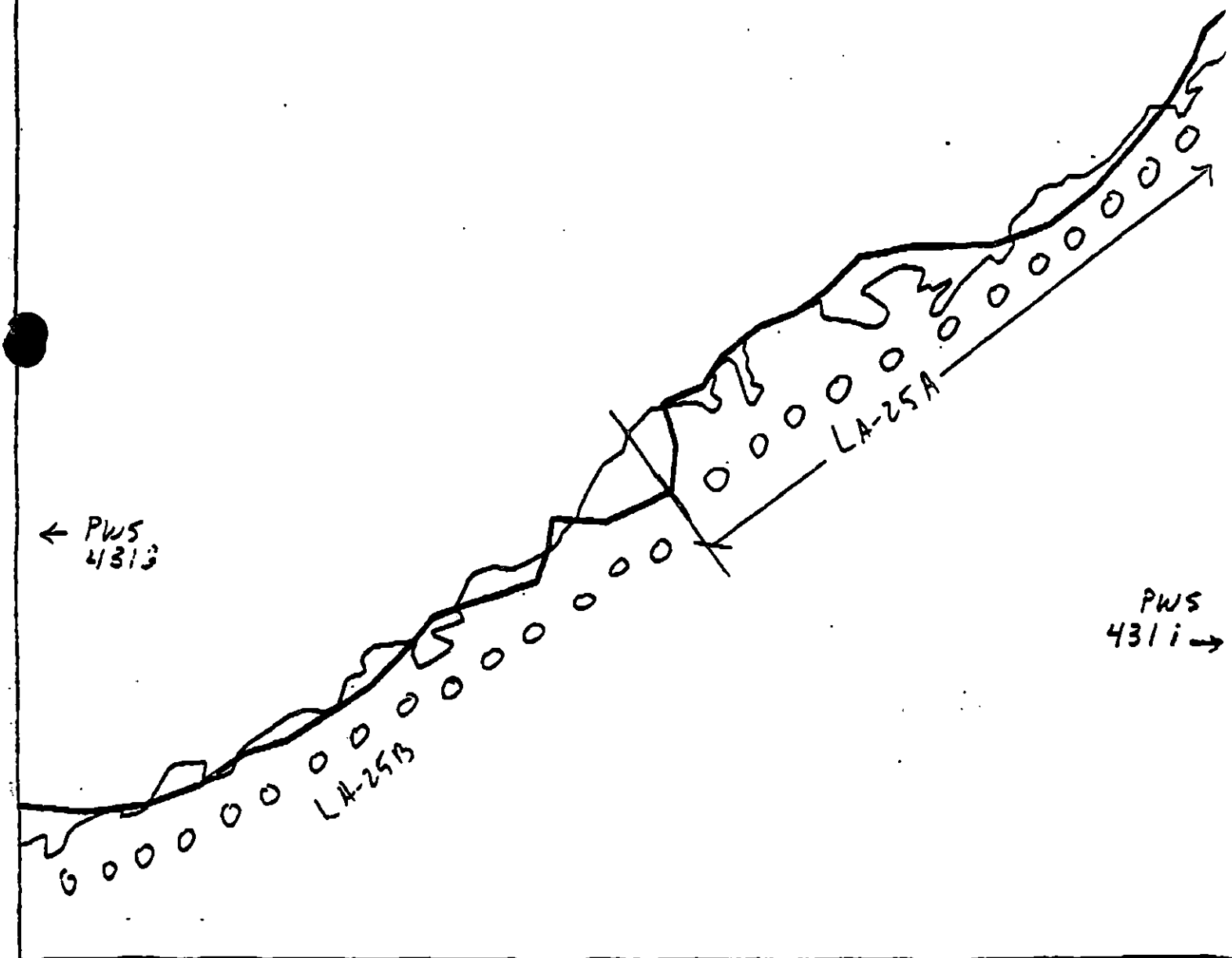
XXXX Wide
//// Medium
---- Narrow
TTTT Very Light

# LA-25

ADEC Segment Length: 8107m

0 100 200 300

Map Key: PWS-4311
Name: Mike Foget
Date: 4/2/90




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

# LA-25

ADEC Segment Length: 6107m

Map Key: PWS-431h
Name: Mike Taylor
Date: 4/12/90

# SHORELINE EVALUATION

SEGMENT ST/ LA-25 SUBDIVISION B (2 OF 2) DATE 4/2/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**

5T-4 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7JJ Subsistence area: Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

**SUBDIVISION ECOLOGICAL CONSTRAINTS:**

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

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

**OILING CATEGORIZATION:**

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 3976 m
Subsurface Oil Observed: Yes ____ No X Maximum Depth ____

**RECOMMENDATIONS:**

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

COMMENTS: ____

TAG COMMENTS: ____

TAG APPROVAL DATE: 4/21/90
ADEC ART WEINER
EXXON AMOY TEAL
NOAA BILL WESCOTT
USCG KENNETH KEANE

FOSC: [signature] DATE: 5-12-90

# PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

| | | |
|---|---|---|
| 1A | | Salmon stream mouth - fry outmigration (3/1 to 5/15) |
| 1B | | Salmon stream mouth - spawning (7/10 to 8/31) |
| | | No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits. |
| 1C | | Salmon fry nursery area (4/31 to 7/31) |
| 1D | | Esther Hatchery release (4/15 to 6/1) |
| 1E | | Main Bay Hatchery release (4/20 to 5/10) |
| 1F | | Sawmill Bay Hatchery release (4/15 to 6/1) |
| 1G | | Cannery Creek Hatchery release (4/21 to 6/1) |
| 1H | | Remote release site |
| 1I | | Gill net area (6/7 to 8/31) |
| 1J | | Purse seine area (7/20 to 9/30) |
| 1K | | Purse seine hook-off (7/20 to 9/30) |
| 1L | | Set net sites (6/11 to 7/25) |
| | | For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints. |
| 2M | | Herring spawning (4/1 to 6/15) |
| | | Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations. |
| 3N, 3P | | Harbor seal and sea lion pupping (5/15 to 7/1) |
| 3O, 3Q | | Harbor seal and sea lion molting (8/15 to 9/15) |
| | | Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. |
| 5R | | Seabird colony (5/1 to 9/1) |
| | | Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment. |
| 5S | | Shorebird/waterfowl concentration (4/1 to 5/15) |
| | | Restrict all activity to essential minimum, especially air traffic. |
| 5T | | All Bald Eagle nests (3/1 to 6/1) |
| | | Active Bald Eagle nests (3/1 to 9/1) |
| | | Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates. |
| 6U | Recreation: | Tent sites (6/1 to 9/15) |
| 6V | | Anchorages (6/1 to 9/15) |
| 6W | | Forest Service cabins (6/1 to 9/15) |
| 6X | | Lodge (6/1 to 9/15) |
| 6Y | | Special use destination |
| 7Z | Subsistance area: | Salmon harvesting (6/1 to 9/30) |
| 7HH | | Finfish harvesting |
| 7II | | Deer harvesting (8/15 to 2/28) |
| 7JJ | | Invertebrate harvesting |
| | | For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints. |

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA-25 SUBDIVISION: B DATE 4/9/90

~~SCG~~ NOAA
NAME GARY SHIGENAKA SIGNATURE Gary Shigenaka

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS
SUBDIVISION CONSISTED OF THE REMAINDER OF THE SEGMENT NOT SURVEYED ON 4/2 BECAUSE OF DETERIORATING WEATHER CONDITIONS. DESPITE IDEAL WEATHER TODAY DUEING CONTINUATION OF THE SEGMENT (CLEAR, LIGHT WINDS) SURF CONDITIONS PRECLUDED ANY POSSIBILITY OF BEACH LANDINGS. AS A RESULT, SUBDIVISION WAS SURVEYED FROM THE INFLATABLE. NO OILING WAS OBSERVED. FIVE DEER WERE OBSERVED ON THE BEACH AT THE SOUTHERN END, AND SEVERAL EAGLES WERE SIGHTED ALONG THE SHORE.

**ADEC**
NAME John Hayes SIGNATURE [signature]

☑ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS
Shoreline sub segment was observed from skiff due to high swell rocky shoreline we assessed segment from upper 200m. [redacted]. No oiling was observed from skiff.
The beach is a high energy one & surrounding shorelines showed that the tar stain & splatter were being weathered with wave action.

**LAND MANAGER**
NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS
Land manager was not present, due to weather delays

# SHORELINE OILING SUMMARY

REVISION NO. 03/28/90

OG Mike Foget NOAA ~~USCG~~ Gary Shigenaka SEGMENT ST/ LA-25
BIO Richard Ambrose LAND REP James A Barker SUBDIVISION B (1 of 2)
EXXON Larry Olsen ADEC John Hayes TIME 9:15 to 10:30
TEAM NO.: 1 TIDE LEVEL: 0.9 to 4.2 DATE 4 / 9 / 90
EST. SUBDIVISION LENGTH: 5469 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock Steep rocky cliff backshore
SURVEYED FROM: ☐ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
SURFACE SEDIMENTS: R 70 % B 20 % C 10 % P 0 % G 0 % S 0 % M 0 % V 0 %
SLOPE : Lang 30 % Hang 40 % Vert 30 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 5469 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | /C | /S | /P | /S | | | | | | SU | UI | MI | LI |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | | | | | | | | | | | | |
| COAT | | | | | | | | | | | | | |
| STAIN | | | | | | | | | | | | | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | | | | | | | | | | |
| NO OIL | | | | | | | | | | X | X | X | X |

PAVEMENT: H F S 0 sq. m by 0 cm
PATTIES / TARBALLS 0 BAGS
NEAR SHORE SHEEN? (NO) BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | | | |
| Debris | | | |

DEBRIS COLLECTED ☐ YES ☒ NO
TYPE 0
#BAGS 0

Photographs:
Roll No. 0
Frames 0

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm-cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OP | NO | | UO | UC | | | | | | SU | UI | MI | LI | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |

COMMENTS No Pits were excavated due to the inaccessability of the shore zone. No Oil was observed in this area. The shore zone consists of Rocky headlands with a few Pocket cobble / Boulder Beaches



REVIEWED M.F. DATE 4/11/90

## SHORELINE ECOLOGICAL SUMMARY

REVISION: 07/2/98

Segment ST / LA025 Subdivision B Date (mo / day / yr) 4/9/90

Time ( 24 hr ) 0915 hrs Biologist Ambrose

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

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

( 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 )

Photographs:
Roll No. —
Frames —

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | ~~1M~~ | ~~1L~~ | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | ~~2~~ | ~~2~~ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | ~~1M~~ | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | ~~2~~ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**GASTROPODS**

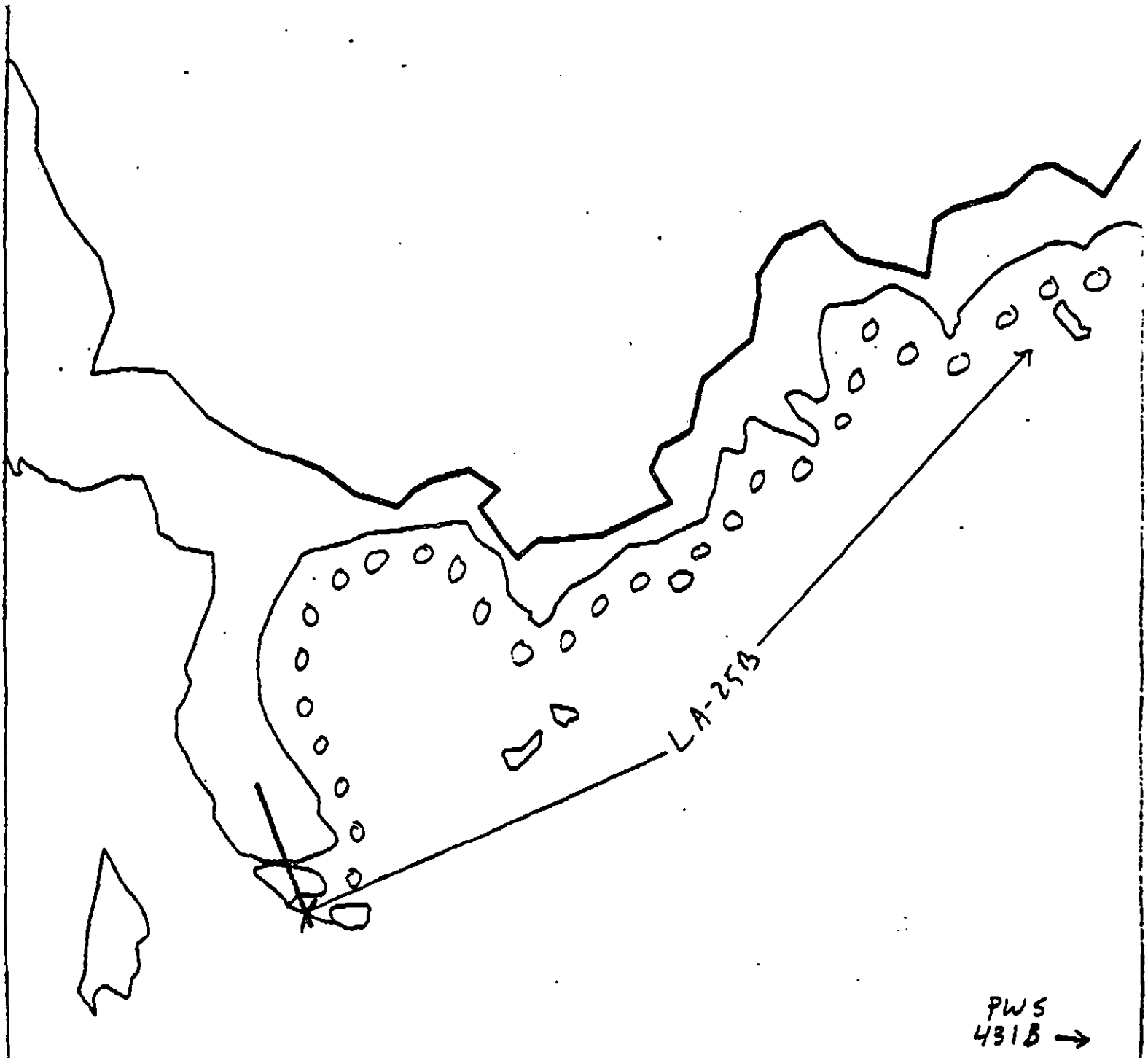
| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | ~~1M~~ | 1L | ~~1U~~ | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | ~~2~~ | 2 | ~~2~~ | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

Wildlife Observations/ General Comments: 1 otter, 1 deer, 5 cormorants, 3 Harlequin ducks, 18 gulls, 5 oystercatchers, eagles (see below).
Dense Nereocystis bed offshore. Moderate to dense cover in a band in mid/low intertidal, sparser above and below. Mussels form dense band in mid intertidal.

Ecological Considerations:
7HH, 7I1, 1IJ, 5T-2: 4 eagles seen. In the first pair, one was immature and the other appeared to be part-way between immature and mature. A second pair of mature bald eagles flew by the first pair.




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

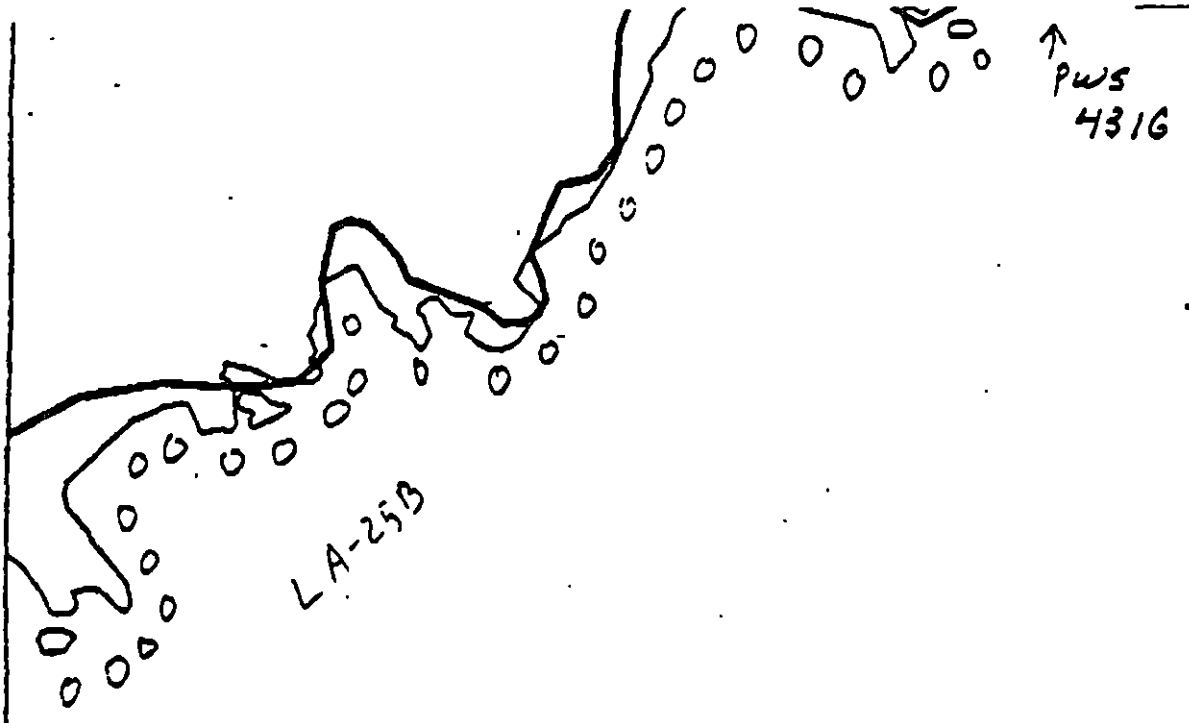
# LA-25

ADEC Segment Length: 8107m

0 100 200 300
METERS

N

Map Key: PWS-431a
Name: Mike Fogel
Date: 4/9/90
Date Entered:




↑ PWS 431G

← PWS 431A

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

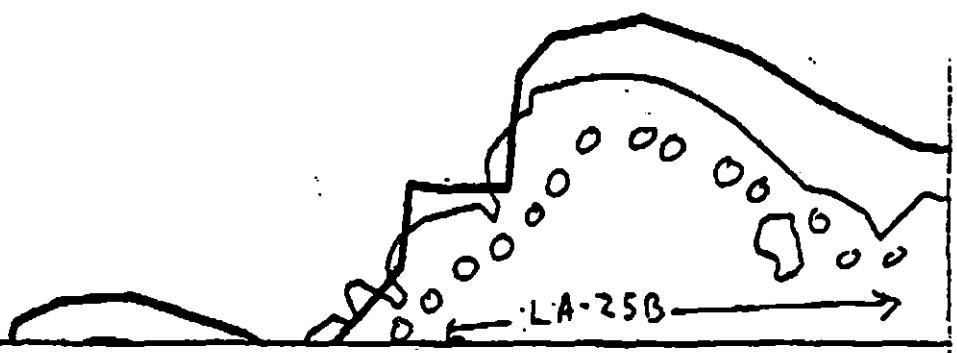
# LA-25

ADEC Segment Length: 6107m

0 100 200 300
METERS

Map Key: PWS-431b
Name: Mike Foget
Date: 4/9/90
Date Entered:

PWS 431H →




↓ PWS 431B

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

LA-25B

ADEC Segment Length: 6107m

0 100 200 300
METERS

Map Key: PWS-431g
Name: Mike Foget
Date: 4/9/90
Date Entered:

# SHORELINE EVALUATION

SEGMENT ST/ LA-26 SUBDIVISION A (1 OF 1) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Gill net area (1I) - 6/7 to 8/31; and purse seine area (1J) - 7/20 to 9/20; deer harvest (7II) - 8/15 to 2/28. Contact ADF&G for specific dates and locations. No specific constraints.

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

SHPO SIGNATURE: Charles Z Holman DATE: April 14, 1990

**OILING CATEGORIZATION:**

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 5416 m
Subsurface Oil Observed: Yes____ No X Maximum Depth_____

**RECOMMENDATIONS:**

| | |
|---|---|
| X No Treatment Recommended | _____Snare/Absorbent Booms |
| _____Treatment Recommended | _____Oil Snares (pom poms) |
| _____Manual Pickup | _____Absorbents (pads,rolls,etc) |
| _____Bioremediation | _____Spot Washing:_____Wands |
| _____Tarmat: _____Breakup | _____ Beach Cleaner |
| _____Removal | _____Other (see comments) |

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/14/90.

ADEC JOHN BAUER John Bauer
EXXON ANDY TER Andy Ter FOSC: [signature] DATE: 5-6-90
NOAA Burt Wescott Burt Wescott
USCG G.A. REITER G.A. Reiter

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA-26 SUBDIVISION: A DATE 4/2/90

~~USCG~~ NOAA
NAME GARY SHIGENAKA SIGNATURE Gary Shigenaka

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

SEGMENT WAS A COBBLE-BOULDER BEACH WITH SCRUB VEGETATION ABOVE THE BERM ABUTTING HIGH BANK SCREE. NO OIL WAS OBSERVED ON THE BEACH. HEALTHY POPULATIONS OF AMPHIPODS WERE FOUND BENEATH COBBLE.

**ADEC**
NAME John Hayes SIGNATURE

☑ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

No oil observed on this segment.

**LAND MANAGER** CAC
NAME RITA MIRAGLIA SIGNATURE Rita A. Miraglia

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

I PARTICIPATED IN THE SSAT INSPECTION OF THIS SEGMENT AS A REPRESENTATIVE OF THE LANDOWNER AND WILL BE REPORTING BACK TO CAC.

REVISION NO. 04/21/88

# SHORELINE OILING SUMMARY

REVISION NO. 03/28/90

OG Mike Foget NOAA USCG Gary Shigenaka SEGMENT ST/ LA-26
BIO Richard Ambrose LAND REP Rita A. Miraglia SUBDIVISION A (1 of 1)
EXXON Larry Olson ADEC John Hayes TIME 15:30 to 16:10
TEAM NO.: 11 TIDE LEVEL: 2.6 to 3.3 DATE 4/3/90
EST. SUBDIVISION LENGTH: 5526 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock Steep Mt. side backshore
SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
SURFACE SEDIMENTS: R — % B 35 % C 35 % P 15 % G 10 % S 5 % M — % V — %
SLOPE: Lang 100 % Hang — % Vert — % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
OIL CATEGORY LENGTH: W — m M — m N — m VL — m NO 5526 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AC | AB | AP | AS | Silver/Gray | Brown/Black | Orange/Red | Rainbow/Sheen | Clear/Mousse | BU | UI | MI | U |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | | | | | | | | | | | | |
| COAT | | | | | | | | | | | | | |
| STAIN | | | | | | | | | | | | | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | | | | | | | | | | |
| NO OIL | | | | | | | | | | X | X | X | X |

PAVEMENT: H F S — sq. m by — cm

PATTIES / TARBALLS — BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | | | |
| Debris | X | | |

DEBRIS COLLECTED ☒ YES ☒ NO
TYPE rope
#BAGS

Photographs:
Roll No. —
Frames —

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm-cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | | UO | UO | Silver/Gray | Brown/Black | Orange/Red | Rainbow/Sheen | Clear/Mousse | BU | UI | MI | U | | |
| 1 | 20 | | | | | X | - | | X | | | | | | X | | | | | C, P, C |
| 2 | 15 | | | | | X | - | | X | | | | | | | X | | | | C, P, C |
| 3 | 25 | | | | | X | - | | X | | | | | | | X | | | | C, P, C |
| 4 | 15 | | | | | X | - | | X | | | | | | | X | | | | C |
| 5 | 10 | | | | | X | - | | X | | | | | | X | | | | | C |
| | | | | | | | - | | | | | | | | | | | | | |

COMMENTS NO oil was observed in this segment. Shore zone consists of Low angle Boulder/Cobble Beaches w/ a steep rocky Mountain for Backshore



REVIEWED JW DATE 4-5-90

# SHORELINE ECOLOGICAL SUMMARY

REVISION: 6/87A

Segment ST / LA026 Subdivision A Date (mo / day / yr) 4/2/90

Time ( 24 hr ) 1525 Biologist Ambrose

( A ) Substrate type and % of segments:
( 1 ) Bedrock — ( 2 ) Boulder 35 ( 3 ) Cobble 35 ( 4 ) Pebble 15 ( 5 ) Sand 15 ( 6 ) Silt —

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

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

Photographs:
Roll No. ST-11-2
Frames 5

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | X | 2 | 2 | (3) | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | (3) | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | (3) | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | X | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

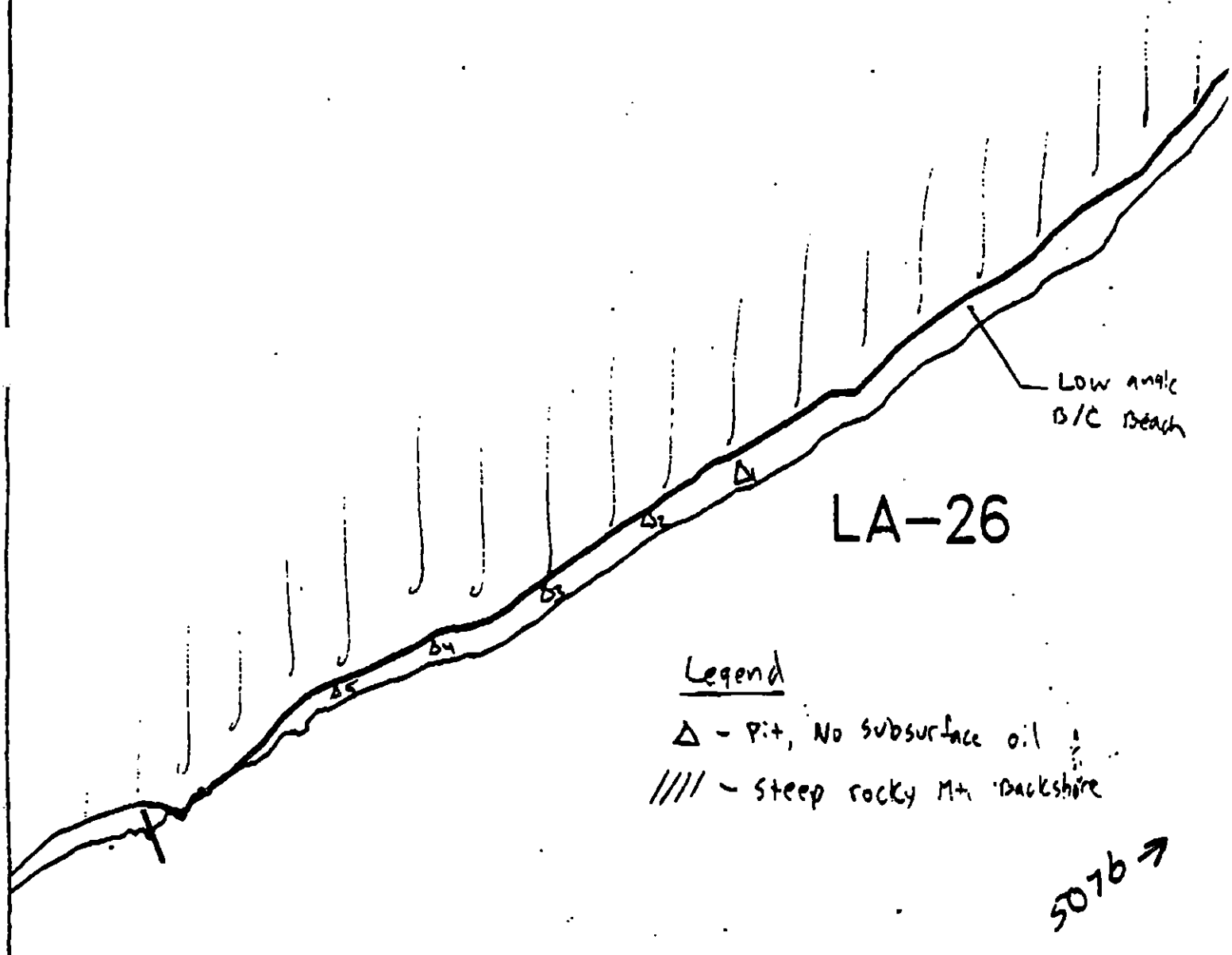
Wildlife Observations/ General Comments: Eagles (see below), 10 crows, 1 gull, 2 sea lions, 4 common mergansers, and 9 harbor seals hauled out on an offshore rock. Although upper part of beach is barren, portions of mid- and low intertidal have dense cover of algae, with scattered Mytilus patches.

Ecological Considerations:

7.11; 11.J: Not relevant.

Did see one pair of mature bald eagles (possibly the same as noted for LA030B), and one lone mature eagle.

Sketch map




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

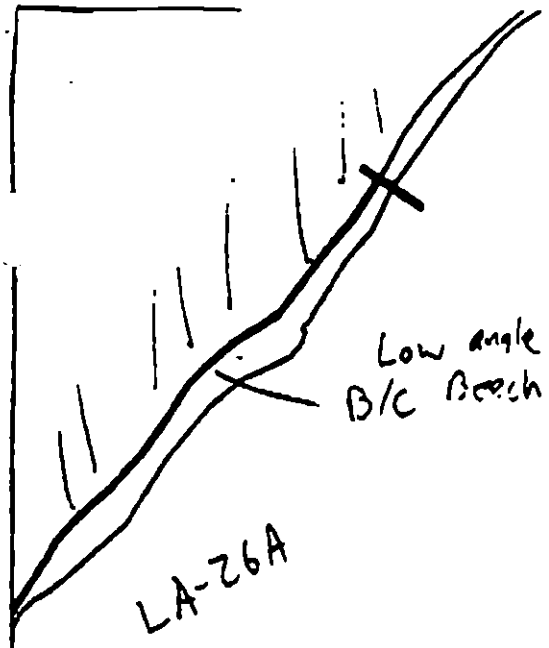
LA-26A

ADEC Segment Length: 5526m

0 300 600 900
METERS

Map Key: PWS-507a
Name: Mike Fojet
Date: 4/2/10
Date Entered:

sketch map




← 507A

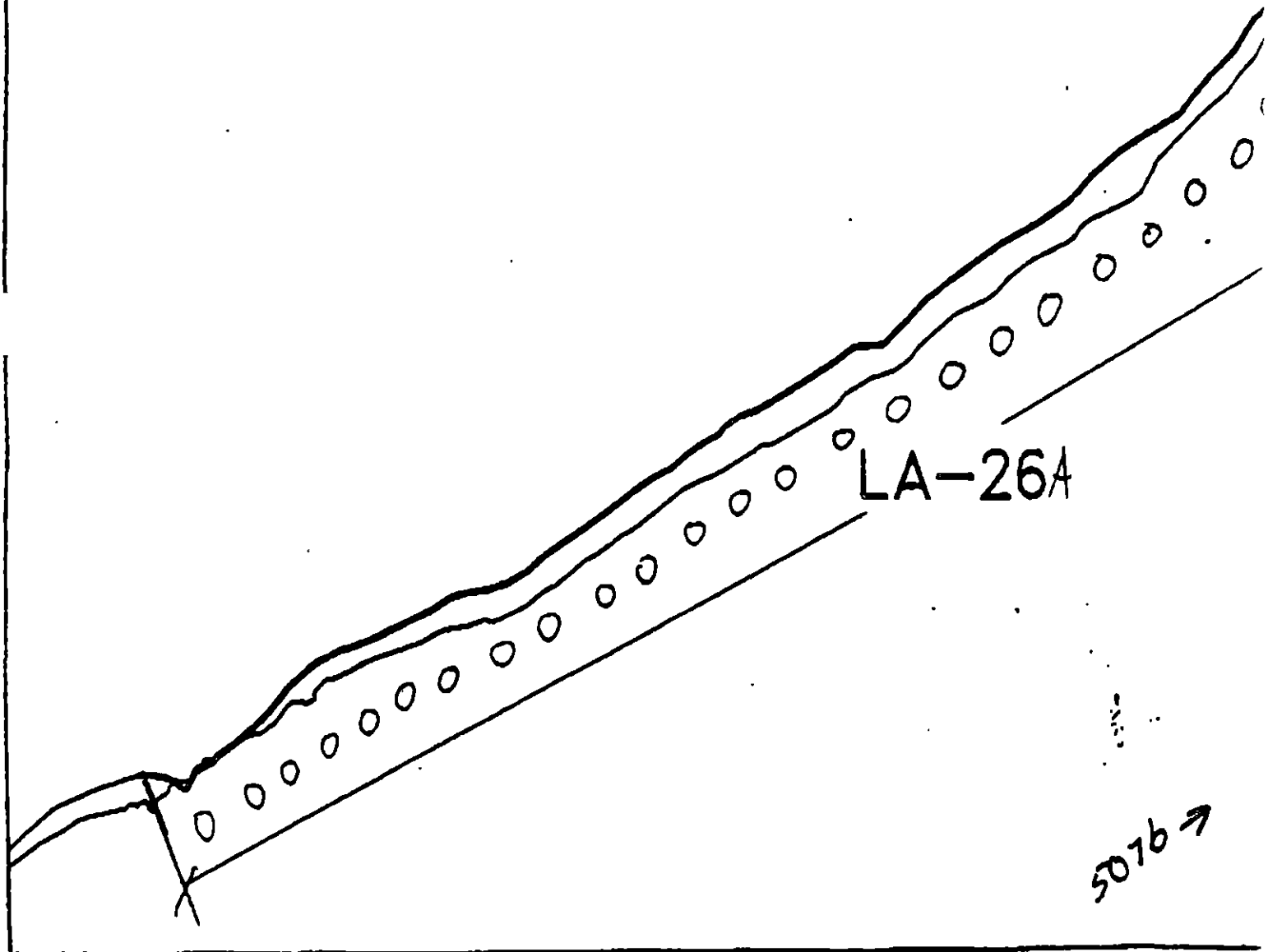
XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
0000 No Oil

LA-26A

ADEC Segment Length: 5526m

0 300 600 900
METERS

Map Key: PWS-507b
Name: Mike Forest
Date: 4/2/90
Date Entered:



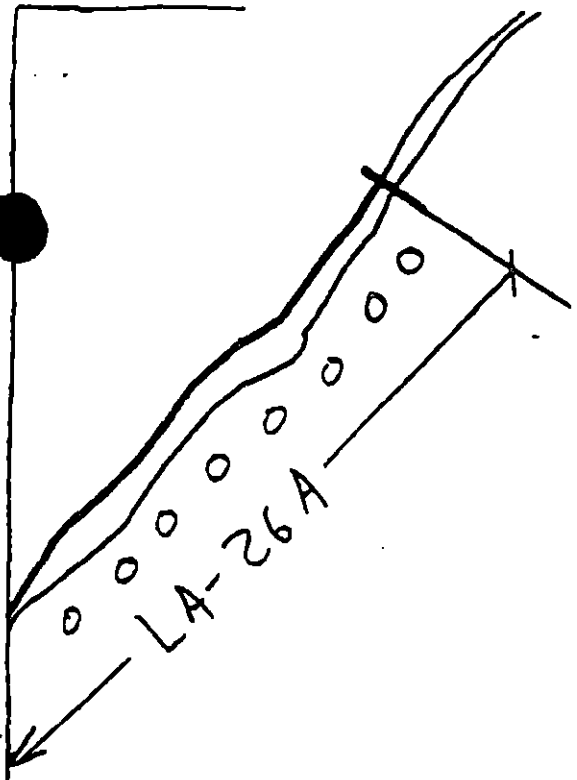

XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
0000 No Oil

LA-26A

ADEC Segment Length: 5526m

0 300 600 900
METERS

Map Key: PWS-507a
Name: Mike Foget
Date: 4/2/90
Date Entered:




507A

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

# LA-26

ADEC Segment Length: 5526m

0 500 600 800
METERS

Map Key: PWS-507b
Name: Mike Foget
Date: 4/2/90
Date Entered:

# SHORELINE EVALUATION

SEGMENT ST/ LA-27 SUBDIVISION A (1 OF 1) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Salmon gill net area (1I) - 6/7 to 8/31 (contact ADF&G for specific dates and locations). Purse seine area (1J) - 7/20 to 9/30 (contact ADF&G for specific dates and locations). Deer harvesting (7II) - 8/15 to 2/28.

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

SHPO SIGNATURE: Charles E. Holmes DATE: April 12, 1990

**OILING CATEGORIZATION:**

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 566 m: No Oil 978 m
Subsurface Oil Observed: Yes____ No X Maximum Depth_____

**RECOMMENDATIONS:**

| | |
|---|---|
| X No Treatment Recommended | _____Snare/Absorbent Booms |
| _____Treatment Recommended | _____Oil Snares (pom poms) |
| _____Manual Pickup | _____Absorbents (pads,rolls,etc) |
| _____Bioremediation | _____Spot Washing:_____Wands |
| _____Tarmat: _____Breakup | _____ Beach Cleaner |
| _____Removal | _____Other (see comments) |

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/12/90
ADEC JOHN BAUER John Bauer
EXXON ANDY TSAR
NOAA Burl Wescott Burl Wescott
USCG M.J. HALL

FOSC: [signature] DATE: 5-6-90

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA-27 SUBDIVISION: DATE 4/2/90

~~USCG~~ NOAA
NAME GARY SHIGENAKA SIGNATURE Gary Shigenaka

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

SEGMENT CONSISTED OF A PORTION OF THE EASTERN SHORELINE OF LATOUCHE ISLAND. THE NORTH PORTION OF THE SEGMENT WAS A COBBLE AND SAND BEACH. A 1-2 M BAND OF OILING IN THE FORM OF STAIN AND COVER ON COBBLE WAS ENCOUNTERED AND EXTENDED ALONG THAT PORTION OF THE BEACH WITH A NORTHERLY ORIENTATION. OILING DID NOT APPEAR TO EXTEND INTO THE SEDIMENTS, AND THAT WHICH WAS OBSERVED ON COBBLE WAS HIGHLY WEATHERED. AMPHIPODS WERE FOUND BENEATH COBBLE IN THE OILED BAND. THE SUPRATIDAL WAS NOT CONTAMINATED. A LARGE AMOUNT OF DEER SCAT WAS FOUND ALONG THE STORM BERM.

THE OCCURRENCE OF STAIN ON COBBLE AND ROCKS BECAME LESS APPARENT AS THE ORIENTATION OF THE BEACH BECAME MORE EASTERLY. CONTINUING SOUTH ALONG THE COASTLINE, EVIDENCE OF OILING DIMINISHED. A SPOT CHECK OF THE SOUTHERN PORTION OF THE SEGMENT REVEALED NO OILING.

**ADEC**
NAME John Hayes SIGNATURE

☑ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

Very light tar stain band. No SS contamination observed. High energy beach.

**LAND MANAGER** CAC
NAME RITA A. MIRAGLIA SIGNATURE Rita A. Miraglia

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

I PARTICIPATED IN THE SCAT EVALUATION OF THIS SEGMENT AND WILL REPORT BACK TO CAC.

# SHORELINE OILING SUMMARY

OG Mike Foget NOAA/USCG Gary Shigenaka SEGMENT ST/ LA-27
BIO Richard Ambrose LAND REP Rita A. Miraglia SUBDIVISION A (1 OF 1)
EXXON Larry Olson ADEC John Hayes TIME 14:40 to 15:30
TEAM NO.: 11 TIDE LEVEL: 1.8 to 2.6 DATE 4/2/90
EST. SUBDIVISION LENGTH: 1562 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock 10 m of scrub + snow up on a 5m bac:
SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
SURFACE SEDIMENTS: R — % B — % C 30 % P 30 % G 20 % S 20 % M — % V — %
SLOPE : Lang 100 % Hang — % Vert — % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
OIL CATEGORY LENGTH: W ____ m M ____ m N ____ m VL 600 m NO 962 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ro | ra | rp | rs | | | | | | su | ui | mi | li |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | | | | | | | | | | | | |
| COAT | | | | | | | | | | | | | |
| STAIN | | | | X | | | | | | X | X | | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | | | | | | | | | | |
| NO OIL | | | | | | | | | | | X | X | X |

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

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | | | |
| Debris | | | |

DEBRIS COLLECTED ☐ YES ☒ NO
TYPE —
#BAGS —

Photographs:
Roll No. —
Frames —

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm-cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | op | or | ol | of | no | | uo | uc | | | | | | su | ui | mi | li | | |
| 1 | 35 | | | | | X | - | | X | | | | | | | X | | | | S, G, S C |
| 2 | 10 | | | | | X | - | | X | | | | | | | | | X | | S, C |
| 3 | 40 | | | | | X | - | | X | | | | | | | | X | | | S, P, S, C |
| 4 | 20 | | | | | X | - | | X | | | | | | | X | | | | C |
| 5 | 25 | | | | | X | - | | X | | | | | | | | X | | | S, P, C |
| 6 | 20 | | | | | X | - | | X | | | | | | | | X | | | S, P, C |
| 7 | 10 | | | | | X | | | X | | | | | | | X | | | | C |

COMMENTS

A very light discontinuous spattered 1m x 600m tar zone was located in the supra ITZ. The oil stains were located on cobble and looked highly weathered. No oil was found underneath cobbles. This 600 meter zone was located on the Northern end of the Seaman-

Page 1 of 1 REVIEWED BW DATE 4-5-90

## SHORELINE ECOLOGICAL SUMMARY

REVISION: 6/28/84

Segment ST / LA027 Subdivision A Date (mo / day / yr) 4/2/90

Time ( 24 hr ) 1440hrs Biologist Ambrose

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

( B ) Overall % cover of biota ( % of segment ): Dense 0 Moderate 0 Low 100

( 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)

Photographs:
Roll No. —
Frames —

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | X | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

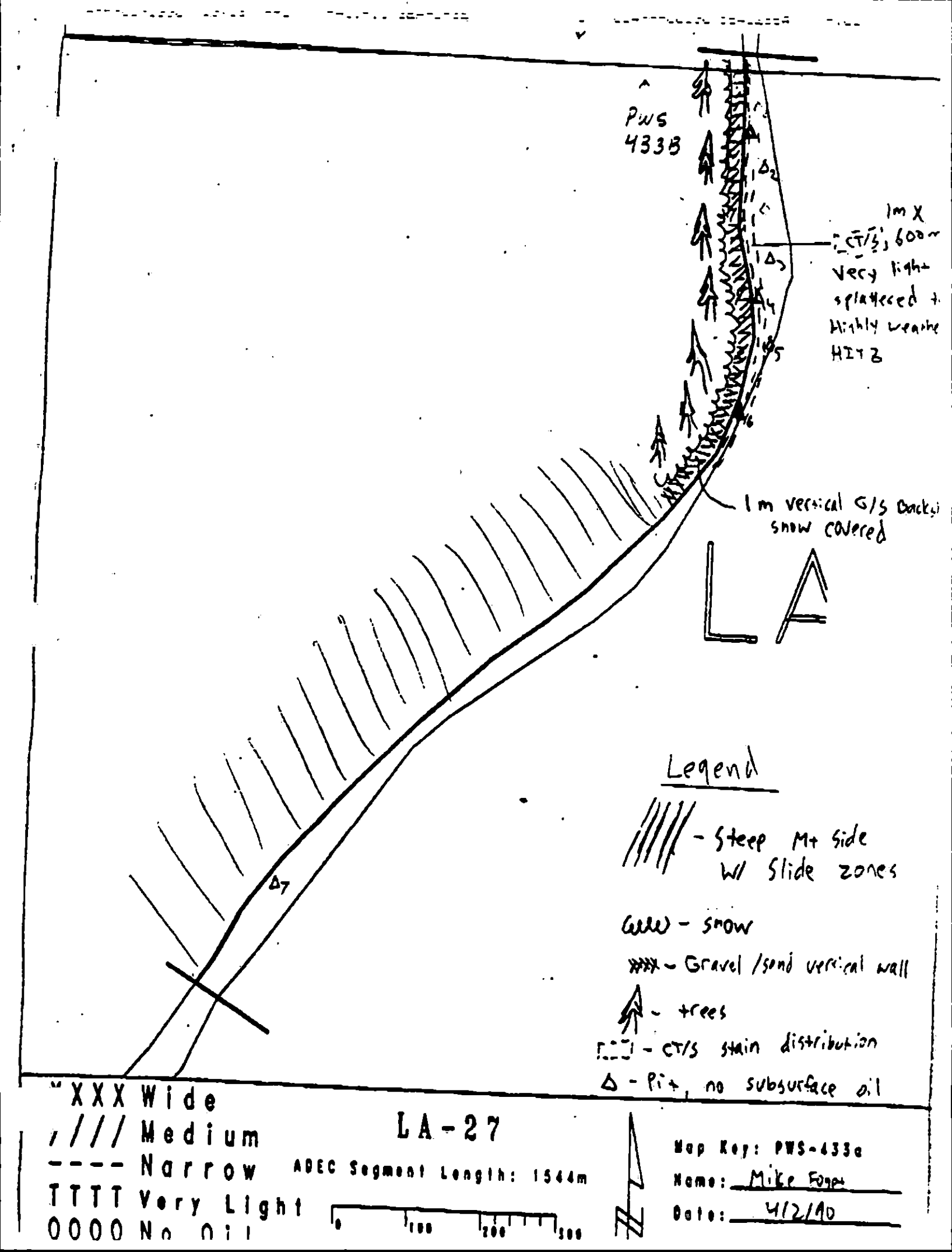
**FUCUS**

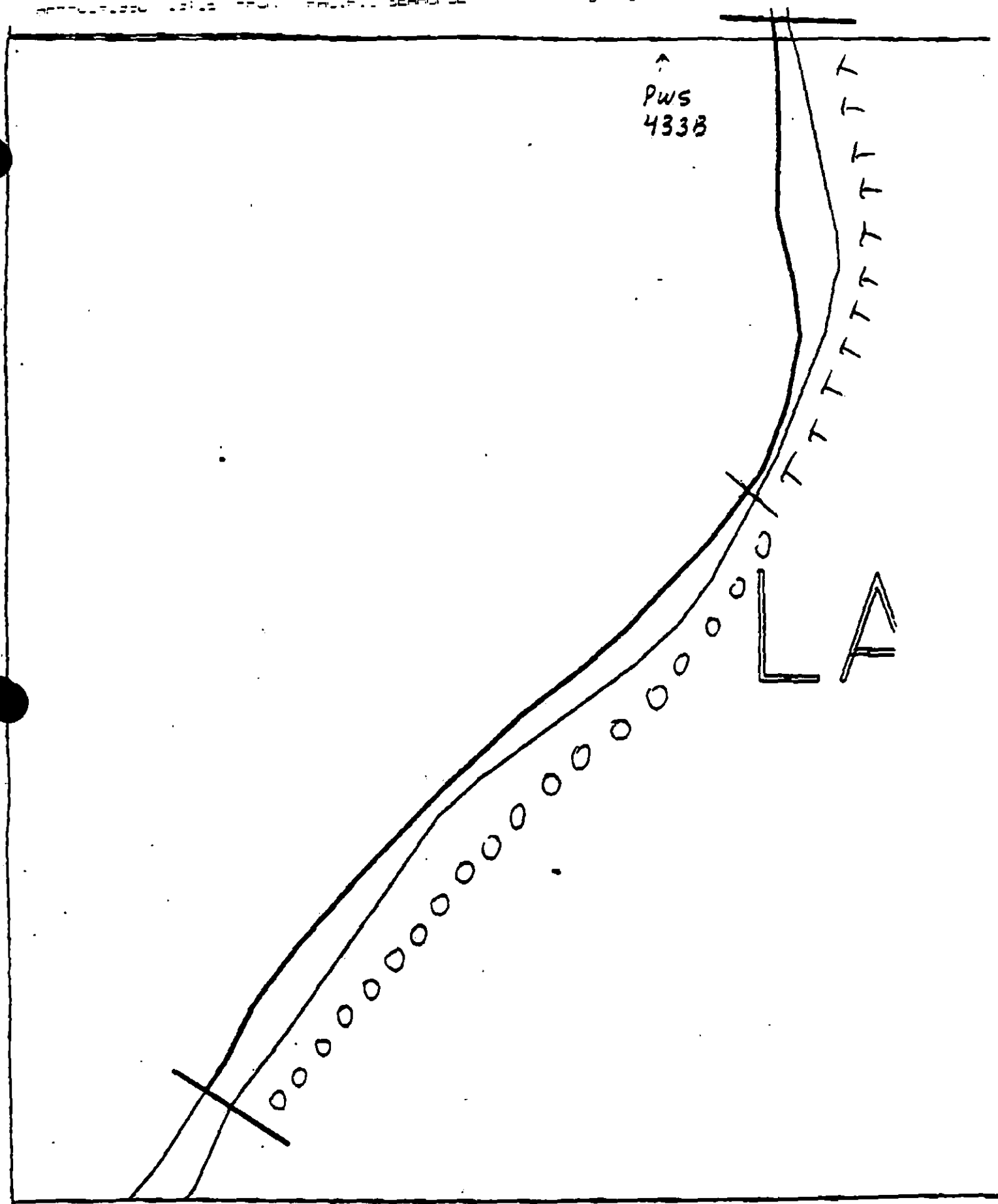
| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**Wildlife Observations/ General Comments:** Eagles (see below), 4 murres, 13 unid. sea birds, 2 deer tracks and lots of deer scat, 2 ducks, gull.
A very barren cobble beach, with practically no biota.

**Ecological Considerations:**
711; 11,J; 5T: One pair of mature eagles (may be the same pair as in LA030B); no nests.


PWS 433B
Δ2
Δ3
Δ4
Δ5
Δ6
Δ7
1m X
CT/S, 600~
Very light splattered + Highly weathe HIZ
1m vertical C/S Backs snow covered
LA
Legend
- Steep Mt Side W/ Slide zones
- Snow
- Gravel /sand vertical wall
- trees
- CT/S stain distribution
Δ - Pit, no subsurface oil
XXX Wide
/// Medium
---- Narrow
TTTT Very Light
0000 No Oil
LA-27
ADEC Segment Length: 1544m
0
100
200
300
Map Key: PWS-433a
Name: Mike Fogel
Date: 4/2/10




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

# LA-27A

ADEC Segment Length: 1544m
Exxon - 1562

0 100 200 300

Map Key: PWS-433a
Name: Mike Pope
Date: 4/2/90

# ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ LA-29 STREAM NO: 226-40-16788 DATE 4/20/90

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

**SUBDIVISION ECOLOGICAL CONSTRAINTS:**
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. The subject stream is located in Subdivision A (1 of 1).

SHPO SIGNATURE: J. David McMahan DATE: 5/8/90

Subsurface Oil Observed: Yes X No ____ Maximum Depth 15 cm

**RECOMMENDATIONS:**

| | |
|---|---|
| X No Treatment Recommended | ____Snare/Absorbent Booms |
| ____Treatment Recommended | ____Oil Snares (pom poms) |
| ____Manual Pickup | ____Absorbents (pads,rolls,etc) |
| ____Bioremediation | ____Spot Washing: ____Wands |
| ____Tarmat Removal | ____Beach Cleaner |
| | ____Other (see comments) |

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 5/7/90

ADEC Art Werner Art Werner

EXXON Andy Teal Andy Teal FOSC: _____ DATE: 5-16-90

NOAA Gary Petrae Gary Petrae

USCG G.A. Reiter G.A. Reiter

# PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

**Salmon stream mouth - fry outmigration (3/1 to 5/15)**
**Salmon stream mouth - spawning (7/10 to 8/31)**
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G John Morison 267-2324

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 July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D **Esther Hatchery release (4/15 to 6/15)**
1E **Main Bay Hatchery release (4/20 to 6/15)**
1F **Sawmill Bay Hatchery release (4/15 to 6/1)**
1G **Cannery Creek Hatchery release (4/21 to 6/1)**
1H **Remote release site**
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or 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: 1E ADF&G Larry Peltz 424-3214
1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzomoto 424-7511

1I **Gill net area (6/7 to 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 unoiled 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 **Harbor seal and sea lion pupping (5/15 to 7/1)**
3O, 3Q **Harbor seal and sea lion molting (8/15 to 9/15)**
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of 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
ADF&G Don Calkins 267-2403

5R **Seabird colony (5/1 to 9/1)**
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S **Shorebird/waterfowl concentration (4/1 to 5/15)**
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Rothy 267-2206

5T **All Bald Eagle nests (3/1 to 8/1)**
**Active Bald Eagle nests (3/1 to 9/1)**
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U **Recreation: Tent sites (5/1 to 9/15)**
6V **Anchorages (5/1 to 9/15)**
6W **Forest Service cabins (5/1 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 **Invertebrate harvesting**
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

13/49

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / CA 29 SUBDIVISION: 16788 DATE _____

**USCG**
NAME Elroy L. McMahon SIGNATURE J. McMahon

☑ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

~~ADF&G~~ ~~ADEC~~ Michael Wiemer
NAME ~~No Team member~~ SIGNATURE Michael Wiemer

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

**LAND MANAGER**
NAME No Team member SIGNATURE _____

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

Alaska Department of Fish and Game

ANADSCAT Observations and Recommendations
Team 15 - Michael Wiedmer and Tom Crowe

20 April 1990

ASC # 226-40-16785

Segment LA-031

Observations Very light stain on surface armor observed more than 50 yards north of stream. One partially oiled drift log observed on storm berm south of stream. No buried oil observed in test pits. No other visible signs of significant quantities of buried oil.

Treatment Recommendations If future observations do not reveal significant quantities of buried oil, no treatment is recommended.

ASC # 226-40-16788

Segment LA-029

Observations Scattered stained surface cobbles and boulders found throughout anadromous fish stream zone. One out of four test pits revealed a layer of buried mousse 5 to 10 cm thick underneath 10 cm of clean substrate. Results from other pits indicate that this mousse layer was restricted to a small area.

Treatment Recommendations If future observations do not reveal significant quantities of buried oil, no treatment is recommended.

ASC # 226-40-16776

Segment LA-021

Observations Stain and some light tar and light mousse scattered through anadromous fish stream zone. No significant quantities of buried oil observed.

Treatment Recommendations If future observations do not reveal significant quantities of buried oil, no treatment is recommended.

# SHORELINE OILING SUMMARY (ANAD.) 16/49 REVISION NO. 00

OG William Reid USCG McMahon SEGMENT ST/ LA-29
BIO Michael Fawcett LAND REP _____ STRATA 2276 40 163 OF
EXXON Gus Garcia ADFG Mike Wiedner Time: ___ to ___
TEAM NO. 15 TIDE LEVEL +3 FT DATE 20 / APR / 90
EST. SUBDIVISION LENGTH: 60 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock _____
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo
SURFACE SEDIMENTS: R ___ % B 20 % C 30 % P 50 % G ___ % S ___ % M ___ % V ___
SLOPE: Lang 100 % Hang ___ % Vert ___ % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 50 m NO 10

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AC | AB | AP | AR | SHN | SHM | SHL | SHC | SHF | SU | MI | MB | LI |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | | | | | | | | | | | | |
| COAT | | | | | | | | | | | | | |
| STAIN | | | | X | | X | | | | | | X | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | | | | | | | | | | |
| NO OIL | | | | | | | | | | X | X | | X |

PAVEMENT H F S 0 sq. m by 0
PATTIES / TARBALLS 0 BAG
NEAR SHORE SHEEN? (NO) BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | | | |
| Debris | | | |

Did you collect DEBRIS ☐ YES ☒ NO
TYPE _____
#BAGS _____

Photographs:
Roll No. _____
Frames _____

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SHEEN (Y/N) | | SURFACE SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | | UO | MO | | | | | | SU | MI | MB | LI | | | | |
| 1 | 15 | | | | | X | - | | | | | | | | | | X | | | N | | P/G |
| 2 | 25 | | | | X | | 10-15 | | X | X | | | | | | X | | | | N | | P/G |
| 3 | 25 | | | | | X | - | | | | | | | | | X | | | | N | | P/G |
| 4 | 20 | | | | | X | - | | | | | | | | | | X | | | N | | P/G |
| | | | | | | | - | | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | | |

COMMENTS

SLIGHT SCATTERED STAINING

OTTER SKULL TAKEN BY Tom Crowe (A.D.F.G.)

REVIEWED JW DATE 4-26-90

OG William Reid

SEGMENT ST/ LA29

17/49

STREAM 22610-16788

DATE ____/____90

## SKETCH MAP

**CHECKLIST**

___N Arrow
___Approx. Scale
___Seg/Sub Bndry
___Oil Dist.
___Width
___Length
___% Cover
___Substrate Character
___Est. HWL/LWL
___SSL
___Profile Location(s)
___Profile(s)
___Pit Location(s)
___Photo Location(s)

**LEGEND**

1 ▲
Pit - No Subsurface Oil

2 ▲
Pit - Subsurface Oil

CT/C
Continuous Distribution

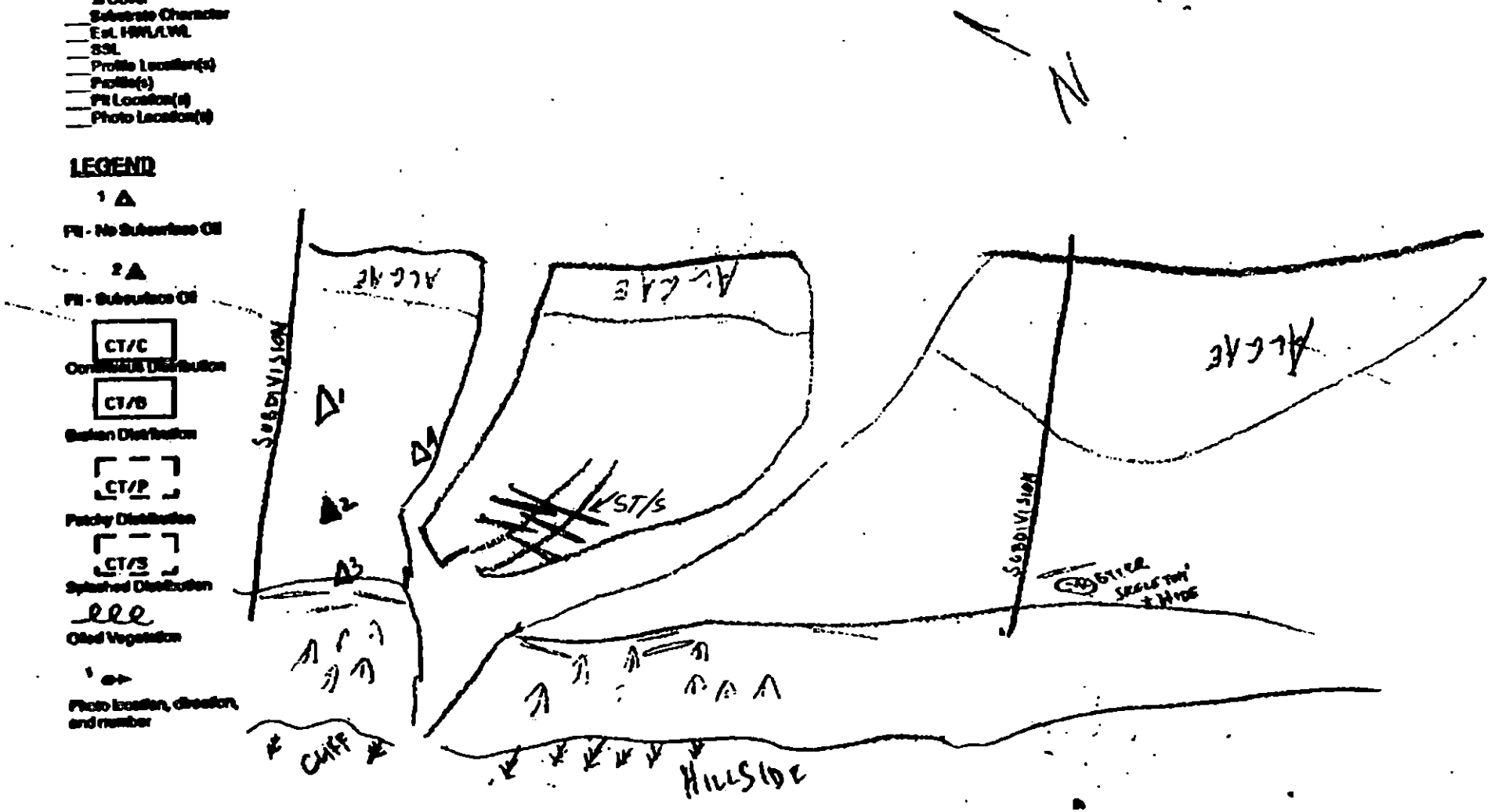
CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

lee
Oiled Vegetation

1 ⇨
Photo location, direction, and number




Oil Character Length (m): AP_____ PO_____ CV_____ CT_____ ST_____ MS_____ PT_____ TB_____ FL_____ NO_____

REVISED

19/49

ADF&G MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: BS (SS) DS TS AVS SCHA HHHS PTA 2 REGION: (PWS) KP,CI K,AP

METHOD: Aerial (Ground) Boat

3 DATE: 4/20/90 10 HIGH TIDE TIMES: 1007 / 2304 21 TEAM RECORDER: M. WIEDMER

4 START TIME: 1500 16 HIGH TIDE HTS: 9.0' / 9.4' 22 OBSERVERS: T. CROWE

5 STOP TIME: 1530 17 LOW TIDE TIMES: 0400 / 1634 23 AGENCY: ADF&G

6 SEGMENT #: LA-029 18 LOW TIDE HTS: 4.5' / 1.6' 24 PHOTOS TAKEN: Y (N)

7 STATION #: _____ 19 TIDE HT AT SURVEY: 2.68' Roll #: _____ Frame: _____

8 K-UNIT: _____ (Ebb) Flood Slack 25 VIDEO TAKEN: Y (N) TAPE#: _____

9 STAT AREA: _____ 20 USCG QUAD: SEWARD A-3 Start: _____ End: _____

10 LAT: _____ 11 LONG: _____ 26 SAMPLES TAKEN? Y (N) Number

12 SOURCE: Map Loran Oil _____

13 LOCATION: S.E. LATOUCHE I/S. Sediment _____

14 DESCRIPTION: _____ Biological _____

Water _____

EXTENT OF OIL

| | SHORELINE L | W | M² | % | STREAM L | W | M² | % |
|---|---|---|---|---|---|---|---|---|
| 27 SURFACE COVERAGE | 100 | 20 | | <1 | 20 | 6 | | 0 |
| 28 SURFACE THICKNESS | <1 mm | | | | 0 | 0 | 0 | |
| 29 PENETRATION | 10 | | | | 0 | | | |

30 OVERALL OIL IMPACT: N (VL) L N H

31 OIL TYPE: Pooled Mousse Tar Asphalt (Sticky) (Stain)

32 OILED DEBRIS? Y (N)

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

34 WAVE EXPOSURE: (High) Moderate Low

35 SUBSTRATE TYPE: Bedrock _____ Boulder 33 Cobble 33 Gravel 33 Sand _____ Mud/silt _____

36 CATALOGED ANAD. FISH STREAM? (Y) N

37 CATALOG #: 226-40-16788

38 STREAM NAME: _____

39 OIL IN STREAM BED? Y (N)

40 OIL ON STREAM BANKS? (Y) N STAIN

41 OIL ON BEACH ADJACENT TO MOUTH? Y N (within 50 meters)

42 OIL WITHIN 1 MILE OF STREAM? (Y) N Where: _____

43 ANADROMOUS FISH PRESENT? (Y) N FRY PRESUMED

44 ANADROMOUS FISH OBSERVATION

| Species | Aerial | Ground |
|---|---|---|
| | | |

COMMENTS: STAINS ON SCATTERED ROCKS IN ZONE OF INTEREST. ONE PIT IN A REVEALED BURIED MOUSSE (5-10 CM BAND OVERLAIN BY 10 CM CLEAN SUBSTRATE) NO TREATMENT RECOMMENDED. COMPLETE SKELETON OF DEAD ADULT SEA OTTER

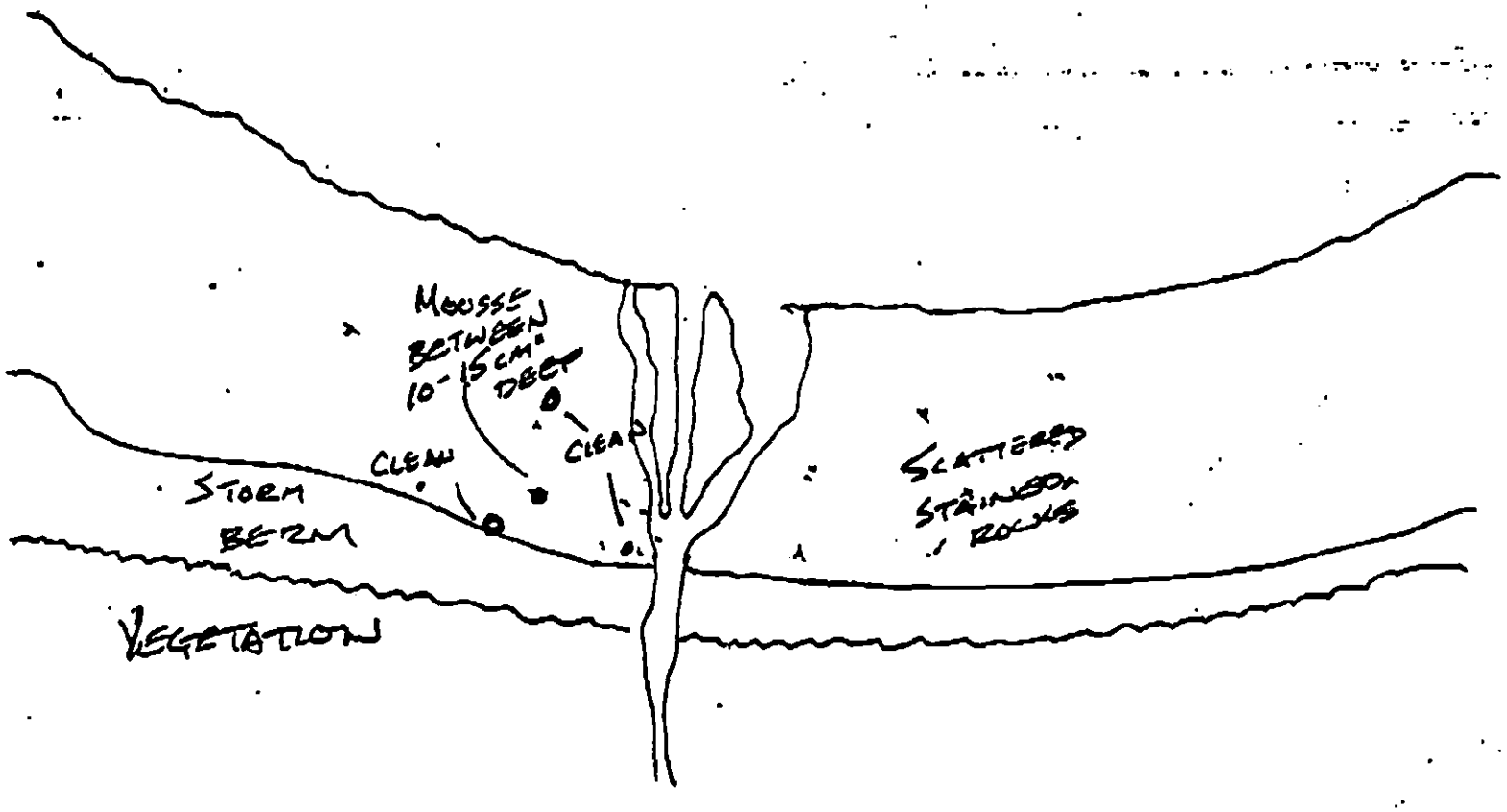
LA-029 29/49

226-40-16788

4B PHOTOLOG

| S) | DESCRIPTION |
|---|---|
| | |

4C OIL DISTRIBUTION DIAGRAM

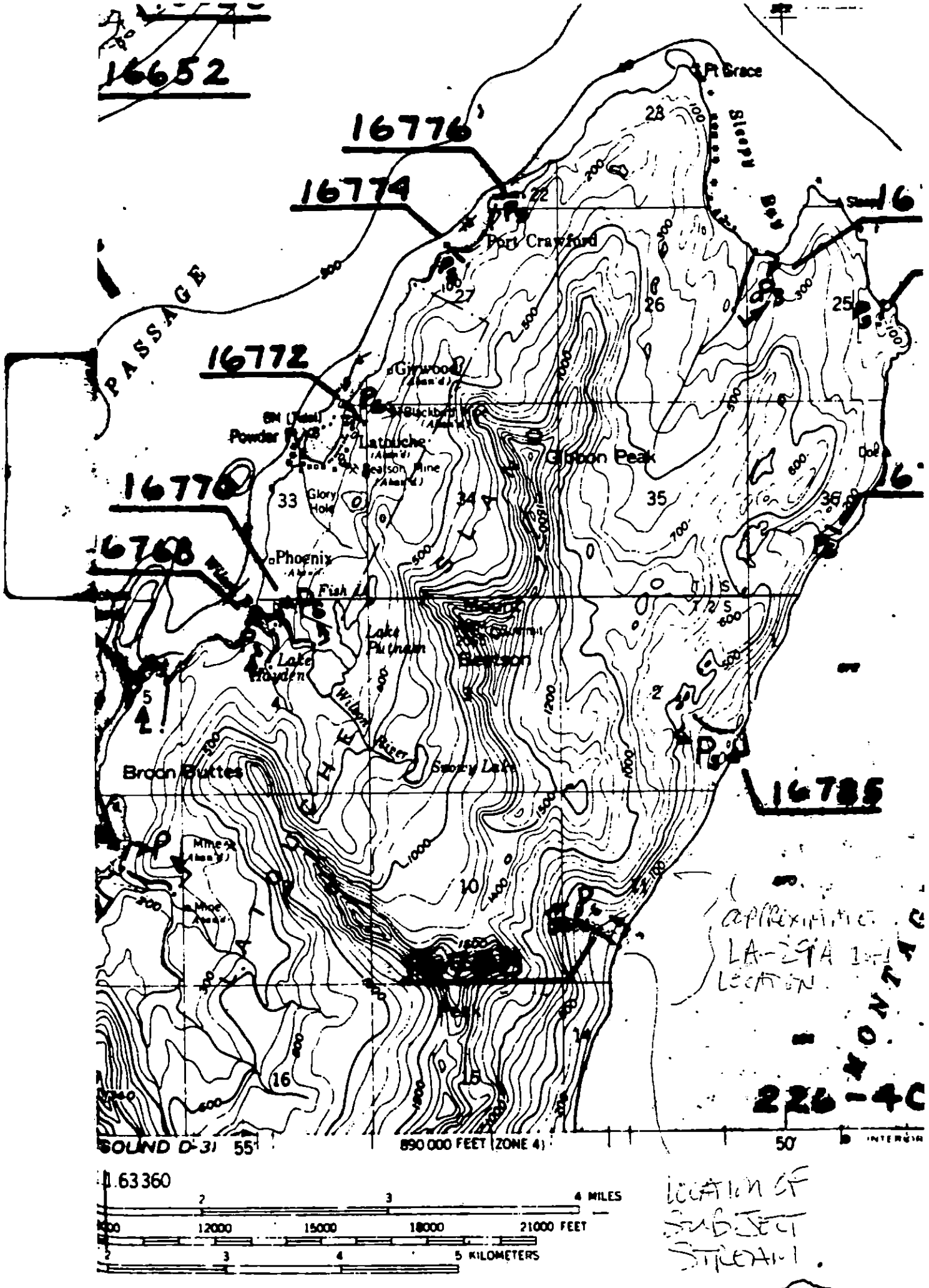



Sample taken
Photo frame # and
shot direction.

Ecologist's Summary 4/20/90
Segment LA 29
Stream 226-40-16788 Michael Fawcett

Stream mouth lies on a boulder/cobble/pebble beach. Scattered light stains of oil were found in MTZ. Dense Mussels, barnacles, and Fucus occupy boulders in MTZ-LTZ. No cleanup recommended. Remains of dead sea otter found on UTZ berm. No obvious oil or tag, but all that was left was skeleton and bits of fur. Skull collected by Tom Crowe (ADF&G). several otters seen feeding near shore.

M H Fawcett


16652
16776
16774
16772
16770
16768
16785
PASSAGE
Port Crawford
Girdwood
Latouche
Powder
Gilpin Peak
Glory Hole
Phoenix
Fish
Lake Hayden
Lake Putnam
Bertson
Broon Buttes
Wilbon
Fraser
Sawmill Creek
Mine
Moe
Sleepy
Pt Grace
16
25
26
27
28
22
33
34
35
36
10
15
16
5
4
2
1
MONTAGUE
226-4C
SOUND 0-31
55
890 000 FEET (ZONE 4)
50
1:63360
4 MILES
21000 FEET
5 KILOMETERS
approximate LA-STA 1+1 location
location of subject stream

# SHORELINE EVALUATION

SEGMENT ST/ LA-30 SUBDIVISION A (1 OF 2) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Bald eagle nest (5T) - 3/1 to 6/1; Subsistence finfish harvest (7HH).

SUBDIVISION ECOLOGICAL CONSTRAINTS: (5T) -Restrict air traffic to essential minimum. Air approach and takeoff from and to seaward only. Contact USFWS prior to treatment for confirmation dates and avoidance minimums. (7HH) - Contact ADF&G and Chenega Corp. for dates, locations, constraints. Avoid distrubance/damage to unoiled substrate and biota.

SHPO SIGNATURE: [signature] DATE: April 14, 1990

**OILING CATEGORIZATION:**

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 114 m: No Oil 642 m
Subsurface Oil Observed: Yes____ No X Maximum Depth_____

**RECOMMENDATIONS:**

| | |
|---|---|
| X No Treatment Recommended | ____Snare/Absorbent Booms |
| ____Treatment Recommended | ____Oil Snares (pom poms) |
| ____Manual Pickup | ____Absorbents (pads,rolls,etc) |
| ____Bioremediation | ____Spot Washing:____Wands |
| ____Tarmat: ____Breakup | ____ Beach Cleaner |
| ____Removal | ____Other (see comments) |

COMMENTS: Bioremediate area of stain as indicated on sketch map. Work after 6/1. High human use area.

TAG COMMENTS: No Treatment Recommended - High Energy

TAG APPROVAL DATE: 4/13/90.

ADEC JOHN BAUER [signature]
EXXON ANDY TEAS [signature] FOSC: [signature] DATE: 5-6-90
NOAA Burl Wescott [signature]
USCG G.A. REITER [signature]

LA-30 A & B

# PWS ECOLOGICAL CONSTRAINTS

April 6, 1990

Salmon Stream-Mouth (No. )

1A 1B Salmon Fry outmigration (1A) ~~March~~ 3/1 to ~~May~~ 5/15 and spawning (1B) ~~July~~ 7/10 to ~~August~~ 8/31. No disturbance of stream bed or banks unless authorized by ADF&G. Contact ADF&G Habitat Division prior to ~~cleanup~~ treatment for permits.

3N 3P 3O 3Q Harbor seal and sea lion pupping (3N, 3P) ~~May~~ 5/15 to ~~July~~ 7/1 and molting (3O, 3Q) ~~August~~ 8/15 to ~~September~~ 9/15. Restrict boat and air traffic to essential minimum. Contact ADF&G and USF&WS prior to cleanup. Cleanup to be completed prior to ~~May~~ 5/15 or between ~~July~~ 7/1 and ~~August~~ 8/15 unless otherwise approved by ADF&G and/or USF&WS.

3N 3P Harbor seal and/or sea lion pupping (3N, 3P) 5/15 to 7/1. Restrict boat and air traffic to essential minimum. NO activity in area 5/15 to 7/1 unless authorized by ADF&G and/or USF&WS. Contact ADF&G and USF&WS prior to cleanup in any case.

3O 3Q Harbor seal and/or sea lion molting (3O, 3Q) 8/15 to 9/15. Restrict boat and air traffic to essential minimum. No activity in area 8/15 to 9/15 unless authorized by ADF&G and/or USF&WS. Contact ADF&G and USF&WS prior to cleanup in any case.

(1) SEG 5T ~~Active~~ Bald Eagle nests (5T) ~~March~~ 3/1 to ~~June~~ 7/1. (5T) Restrict air traffic to essential minimum. Air approach and takeoff from and to seaward only. Contact USF&WS prior to cleanup, for confirmation of dates and avoidance minimums. (1 SUB)

5R Seabird colony (5R) ~~May~~ 5/1 to ~~September~~ 9/1. Restrict air traffic to essential minimum. Contact ADF&G and USF&WS prior to cleanup.

2M Herring spawning (2M) ~~April~~ 4/1 to ~~June~~ 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.

General Restriction for subsegments:
Avoid disturbance/damage of any unnecessary to unoiled substrate and biota.

(3 SUB)

April 6, 1990

1C Fry nursery area (1C) 4/31 to 7/31. Contact ADF&G for exact dates, locations, constraints.

1D Esther Hatch release (1D) 4/15 to 6/1. Contact ADF&G for dates, locations, constraints.

1E Main Bay Hatchery release (1E) 4/20 to 5/10. Contact ADF&G for dates, locations, constraints.

1F Sawmill Bay Hatchery release (1E) 4/20 to 5/10. Contact ADF&G for dates, locations, constraints.

1G Cannery Creek Hatchery release (1G) 4/21 to 6/1. Contact ADF&G for dates, locations, constraints.

1H Remote release site (1H). Contact ADF&G for dates, locations, constraints.

1I Gill net area (1I) 6/7 to 8/31. Contact ADF&G for dates, locations, constraints.

1J Purse seine area (1J) 7/21 to 9/30. Contact ADF&G for dates, locations, constraints.

1K Purse seine hook-off (1K) 7/20 to 9/30. Contact ADF&G for dates, locations, constraints.

1L Set net sites (1L) 6/11 to 7/25. Contact ADF&G for dates, locations, constraints.

7Z Subsistence salmon harvest (7Z) 5/1 to 9/30. Contact ADF&G and Chenega Corp. for dates, locations, constraints. 2 SUB

7HH (2) Subsistence finfish harvest (7HH). (7HH) Contact ADF&G and Chenega Corp. for dates, locations, constraints.

7JJ Subsistence invertebrate harvest (7JJ). Contact ADF&G and Chenega Corp. for dates, locations, constraints.

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA-30 SUBDIVISION: A DATE 4/2/90

~~USCG~~ NOAA
NAME GARY SHIGENAKA SIGNATURE Gary Shigenaka

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS
SUBDIVISION CONSISTED OF BOULDER BEACH. SPLATTERS OF HIGHLY WEATHERED OIL WERE NOTED ON ROCKS IN THE UPPER INTERTIDAL. EXPOSURE TO STORMS HAS APPARENTLY DEGRADED MUCH OF THE OIL ON THE ROCK SURFACES.

ADEC
NAME John Hayes SIGNATURE

☑ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS
No subsurface penetration observed. Surface oiling consisted of occasional tar stains on boulders. Beach is high energy. One section (band) had a 1 x 100m area of tar stain that was >1mm & weathering well.

LAND MANAGER CAC
NAME P-A A. MIRAGLIA SIGNATURE Rita A Miraglia

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS
I PARTICIPATED IN THE SCAT EVALUATION OF THIS SEGMENT AND WILL REPORT BACK TO CAC.

# SHORELINE OILING SUMMARY

REVISION NO. 0/19/90

OG Mike Foget USCG NOAA Gary Shigenaka SEGMENT ST/ LA-30
BIO Richard Ambrose LAND REP Rita A. Miraglia SUBDIVISION A (1 OF 2)
EXXON Larry Olson ADEC John Hayes TIME 13:10 to 13:50
TEAM NO.: 11 TIDE LEVEL: 1.0 to 0.9 DATE 4/3/90
EST. SUBDIVISION LENGTH: 780 m ☐ Sun ☐ Clouds ☒ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock very steep mountain side backshore
SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
SURFACE SEDIMENTS: R 5 % B 40 % C 30 % P 20 % G 5 % S — % M — % V — %
SLOPE : Long 100 % Hang — % Vert — % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
OIL CATEGORY LENGTH: W — m M — m N — m VL 100 m NO 680 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ac | ab | p | a | | | | | | su | u | m | l |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | | | | | | | | | | | | |
| COAT | | | | | | | | | | | | | |
| STAIN | | | | X | | X | | | | | X | | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | | | | | | | | | | |
| NO OIL | | | | | | | | | | X | | X | X |

PAVEMENT: H F S — sq. m by — cm

PATTIES / TARBALLS — BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | | | |
| Debris | | | |

DEBRIS COLLECTED ☐ YES ☒ NO

TYPE

#BAGS

Photographs:

Roll No. —

Frames —

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | op | cr | ol | cf | no | cm-cm | vo | uc | | | | | | su | u | m | l | | |
| 1 | 15 | | | | | X | - | | X | | | | | | | X | | | | P |
| 2 | 15 | | | | | X | - | | X | | | | | | | X | | | | P |
| 3 | 20 | | | | | X | - | | X | | | | | | X | | | | | P |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |

COMMENTS Some very light oiling was observed in the HIZ, The oiling was a splattered distribution and was a very light stain. The oil (tar) appears to have been weathered by the High wave exposure.

JW 4-5-90

# SHORELINE ECOLOGICAL SUMMARY

Segment ST / LA030 Subdivision A Date (mo / day / yr) 4/2/90

Time ( 24 hr ) 1310 hrs Biologist Ambrose

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

( B ) Overall % cover of biota ( % of segment ): Dense 2 Moderate 18 Low 80

( 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 )

Photographs:
Roll No. ST-11-2
Frames 1

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | ⊗ | ② | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | ⊗ | ⊗ | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | ⊗ | 2 | 2 | 2 | X | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**FUCUS**

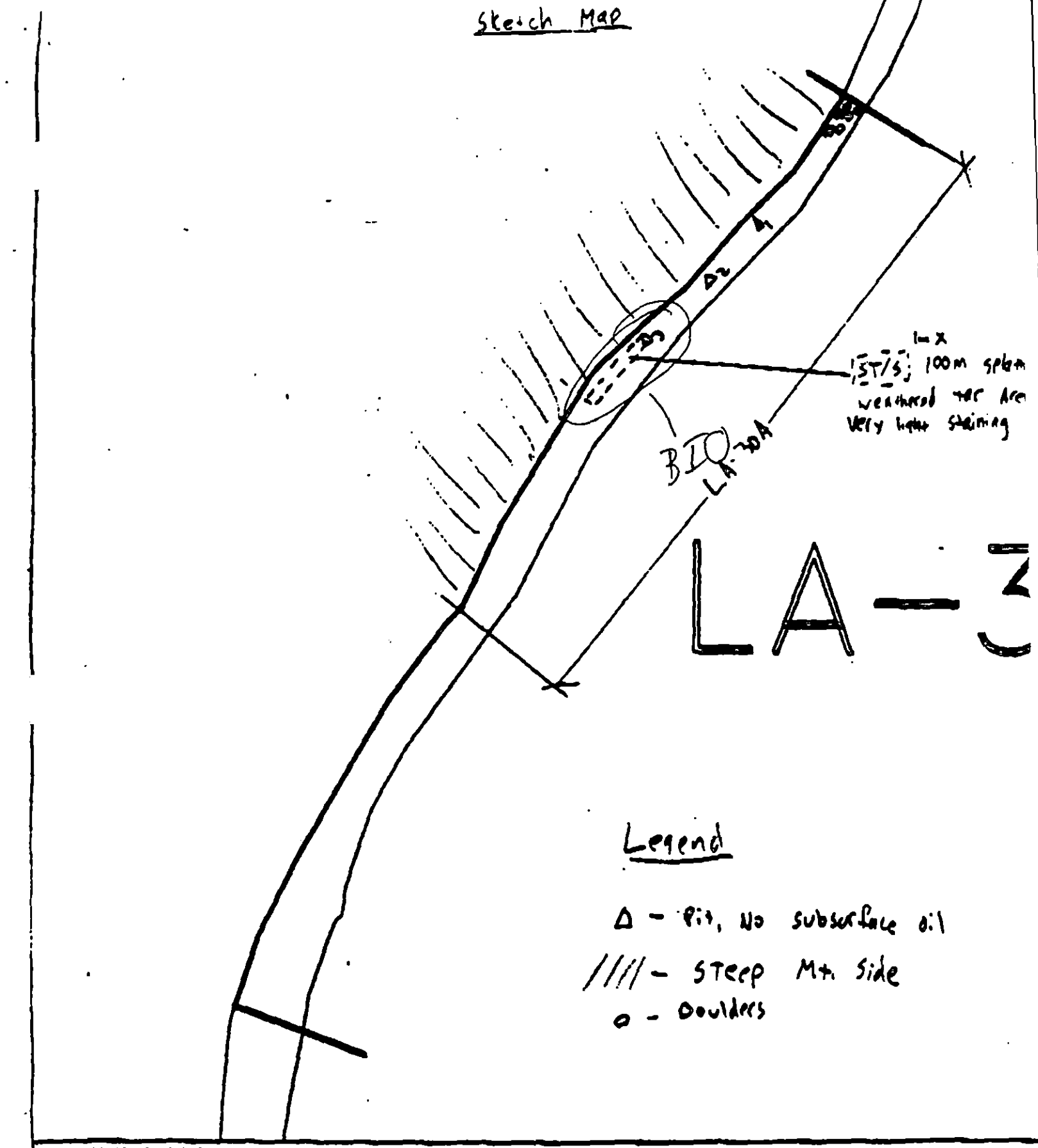
| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | X | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

Wildlife Observations/ General Comments: One otter & deer scat found. Overall, a barren intertidal; only dense cover is in a small section where big boulders predominate. Dense Nereocystis bed offshore.

Ecological Considerations:

7HH, 7I1, 5T: One mature bald eagle seen, but not any nests.

Sketch Map



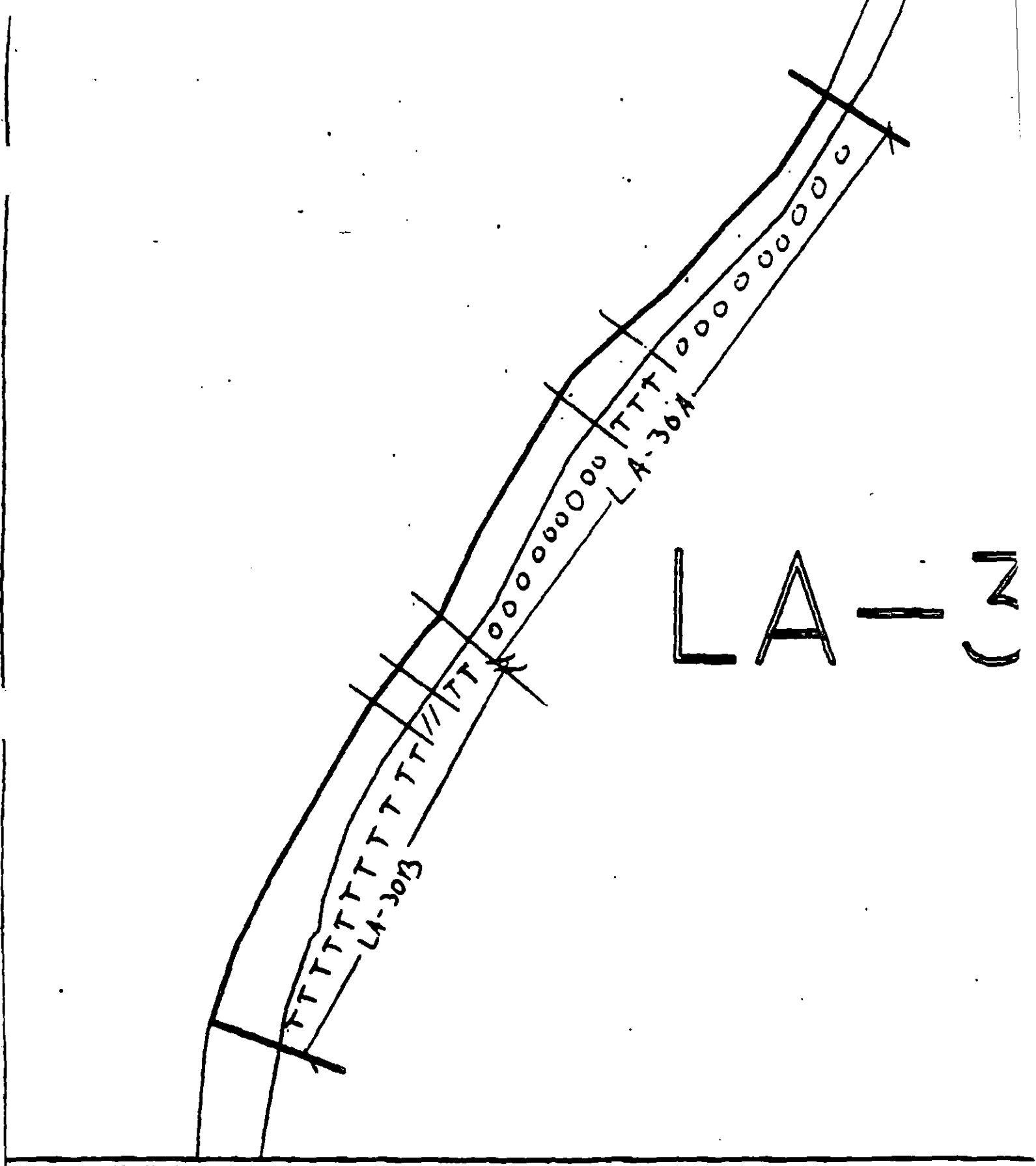

XXXX Wide
//// Medium
--- Narrow
TTTT Very Light
0000 No Oil

LA-30A

ADEC Segment Length: 1312m

0 100 200 300
METERS

Map Key: PWS-436
Name: Mike Fogt
Date: 4/2/10
Date Entered:




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

# LA-30

ADEC Segment Length: 1312m

0 100 200 300
METERS

Map Key: PWS-458
Name: Mike Foget
Date: 4/2/98
Date Entered:

# SHORELINE EVALUATION

SEGMENT ST/ LA-30 SUBDIVISION B (2 OF 2) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Bald eagle nest (5T) - 3/1 to 6/1; Subsistence finfish harvest (7HH).

SUBDIVISION ECOLOGICAL CONSTRAINTS: (5T) -Restrict air traffic to essential minimum. Air approach and takeoff from and to seaward only. Contact USFWS prior to treatment for confirmation dates and avoidance minimums. (7HH) - Contact ADF&G and Chenega Corp. for dates, locations, constraints. Avoid distrubance/damage to unoiled substrate and biota.

SHPO SIGNATURE: [signature] DATE: April 14, 1990

**OILING CATEGORIZATION:**

Wide 0 m: Medium 50 m: Narrow 0 m: V.Light 506 m: No Oil 0 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 25 cm

**RECOMMENDATIONS:**

| | |
|---|---|
| X No Treatment Recommended | ____Snare/Absorbent Booms |
| ____Treatment Recommended | ____Oil Snares (pom poms) |
| ____Manual Pickup | ____Absorbents (pads,rolls,etc) |
| ____Bioremediation | ____Spot Washing: ____Wands |
| ____Tarmat: ____Breakup | ____ Beach Cleaner |
| ____Removal | ____Other (see comments) |

COMMENTS: Bioremediate areas of surface coat and stain as indicated on sketch map. Work after 6/1.

TAG COMMENTS: NO TREATMENT RECOMMENDED - HIGH ENERGY

TAG APPROVAL DATE: 4/13/90.

ADEC JOHN BAUER [signature]
EXXON ANDY BAR [signature] FOSC: [signature] DATE: 5-6-90
NOAA [signature]
USCG G.A. REITER [signature]

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / 1A-30 SUBDIVISION: B DATE 4/2/90

~~USCG~~ NOAA
NAME GARY SHIGENAKA SIGNATURE Gary Shigenaka

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

SUBDIVISION CONSISTED LARGELY OF A MIXED COBBLE-BOULDER BEACH. EXTREMELY WEATHERED STAIN WAS FOUND ON ROCKS IN THE UPPER INTERTIDAL. ALTHOUGH MOST OF THE SUPRATIDAL WAS COVERED BY SNOW, SOME EXPOSED DRIFTWOOD LOGS HAD SPLASHES OF OIL ON THEM. IT IS POSSIBLE THAT THE SUPRATIDAL MAY CONTAIN MORE EVIDENCE OF OILING.

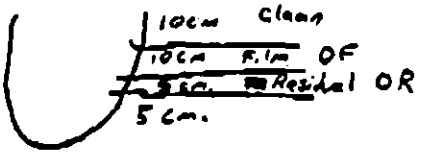
APPROXIMATELY MIDWAY IN THE SUBDIVISION, OILING BECAME MORE EVIDENT, WITH THE LANDWARD FACES OF BOULDERS SHOWING SOME DEGREE OF STAIN OR COAT. THE AFFECTED ZONE ALSO BECAME WIDER THAN THE PREVIOUS BAND JUST BELOW THE SUPRATIDAL. THE WIDER ZONE IN THE UPPER INTERTIDAL WAS ESTIMATED TO BE 15 M. A SHALLOW PIT DUG IN THIS ZONE REVEALED A THIN FILM OF RESIDUAL OIL DOWN TO 3 CM WITH CLEAN SEDIMENTS BENEATH. A LEGITIMATE PIT DUG SLIGHTLY TO THE SOUTH AND ABOUT 3 M LOWER IN THE INTERTIDAL GAVE A LAYERING OF CLEAN SEDIMENTS OVER SEDIMENTS WITH A FILM RESIDUAL OVER A LENS OF HEAVIER RESIDUAL OIL OVER CLEAN SEDIMENTS, AS DESCRIBED IN ATTACHED DOCUMENTATION.

THE BAND OF CONSISTENT OILING EXTENDED SOUTH TO THE END OF THE SUBDIVISION.

**ADEC**
NAME John Hayes SIGNATURE

☑ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

Surface oiling observed was for stain from the UIT2 to MIT2. Staining was light coat continuous 15m wx 400m L on boulders. (See sketch map)
Subsurface oiling was found at one isolated spot. Test pit showed SS oiling.
Beach is very high energy and difficult Test pit to access. Wave energy is shutting surface oiling.




**LAND MANAGER** CAC
NAME RITA A. MIRAGLIA SIGNATURE Rita A. Miraglia

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

I PARTICIPATED IN THE SSAT EVALUATION OF THIS SEGMENT AND WILL REPORT BACK TO CAC. SUBSURFACE OIL WAS OBSERVED.

PW

# SHORELINE OILING SUMMARY

REVISION NO. 03/09/90

OG Mike Fogel NOAA USCG Gary Shigenaka SEGMENT ST/ LA-30
BIO Richard Ambrose LAND REP Rita A. Maglia SUBDIVISION B (2 OF 2)
EXXON Larry Olson ADEC John Hayes TIME 13:50 to 14:30
TEAM NO.: 11 TIDE LEVEL: +1.0 to +1.5 DATE 4/3/90
EST. SUBDIVISION LENGTH: 517 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock steep rocky Mt. Back Shore
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
SURFACE SEDIMENTS: R — % B 40 % C 40 % P 15 % G 5 % S — % M — % V — %
SLOPE: Lang 100 % Hang — % Vert — % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
OIL CATEGORY LENGTH: W — m M 50 m N — m VL 467 m NO — m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | /C | /S | /P | /S | SHEEN | BRN/RED | ORG | BRN/BLK | BLK | SU | UI | MI | LI |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | | | | | | | | | | | | |
| COAT | | | √ | | | √ | | | | | √ | √ | |
| STAIN | | | | X | | X | | | | X | X | X | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | | | | | | | | | | |
| NO OIL | | | | | | | | | | | | | X |

PAVEMENT: H F S — sq. m by — cm

PATTIES / TARBALLS — BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | ? | |
| Vegetation | | | |
| Trash | | | |
| Debris | | | |

? subsurface covered by snow

DEBRIS COLLECTED ☐ YES ☒ NO

TYPE —

#BAGS —

Photographs:

Roll No. ST-11-2

Frames 2-4

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm-cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE - SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | | UO | UC | SHEEN | BRN/RED | ORG | BRN/BLK | BLK | SU | UI | MI | LI | | |
| 1 | 15 | | | | | X | - | | X | | | | | | X | | | | | P |
| 2 | 20 | | | | | X | - | | X | | | | | | X | | | | | P, G, P |
| 3 | 10 | | | | | X | - | | X | | | | | | | X | | | | C, C |
| 4 | 15 | | | | | X | - | | X | | | | | | | | X | | | P, C |
| 5 | 30 | | | | | X | - | | X | | | | | | X | | | | | P, C |
| 6 | 10 | | | | | X | - | | X | | | | | | X | | | | | C, G, C |

COMMENTS This whole segment has some degree of oiling most of which is a 10m wide CT/S very light stain. This ranges mostly in the HI:Z and MI:Z with some staining in the SU ZTZ. Some stained logs appear to be in the SU ZTZ but most of this area is under snow. There is a large 2m diameter Boulder on the Northern part of this segment. Approx. 10m South of this is a 15m X 50m CT/P tar covered area. In this area there is some subsurface oiling. This occurs as a 5cm lens 20cm deep. This whole subsegment has a high wave exposure and most staining appears on the lee side of cobble and Boulders.



REVIEWED JW DATE 4-5-90

## SHORELINE OILING SUMMARY (PAGE 2 of 2)

REVISION 03/22/90

SEGMENT ST/ LA-30 SUBDIVISION B

### SUBSURFACE OIL (CONTINUED)

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (CM-CM) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | | UO | UC | | | | | | SU | SI | MI | LI | | |
| 7 | 10 | | | | | X | - | | X | | | | | | | | X | | | C,G,C (water sheen No sheen) |
| 6 | 30 | | | | X | | 10-20 | X | | | X | | | | | X | | | | C,G,C,G |
| 8 | 30 | | X | | | | 10-25 | | X | | | | X | | | X | | | | C,G,C,G |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
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COMMENTS PIT NO. 8 CONTAINS "OF" FROM 10-20 cm.

REVIEWED JW DATE 4-5-90

# SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/22/90

Segment ST / LA030 Subdivision 8 Date (mo / day / yr) 4/2/90

Time ( 24 hr ) 1350 hrs Biologist Ambrose

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

( B ) Overall % cover of biota ( % of segment ): Dense 5 Moderate 15 Low 80

( 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 )

Photographs:
Roll No. –
Frames –

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | X | X | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | X | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | X | X | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | X | 2 | 2 | 2 | X | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | X | X | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | X | X | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

Wildlife Observations/ General Comments: Eagles (see below), lots of deer tracks; along segment LA029, saw mink, 2 gulls, 1 cormorant. A barren intertidal except for a narrow mid/low tidal band with Fucus.

Ecological Considerations:
7HH, 7I1, 5T: 3 mature bald eagles seen; one was paired; no nests.

OG Mike Foget

SEGMENT No. LA-30

SUBDIVISION B

DATE 4, 2 90

**CHECKLIST**

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

**LEGEND**

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

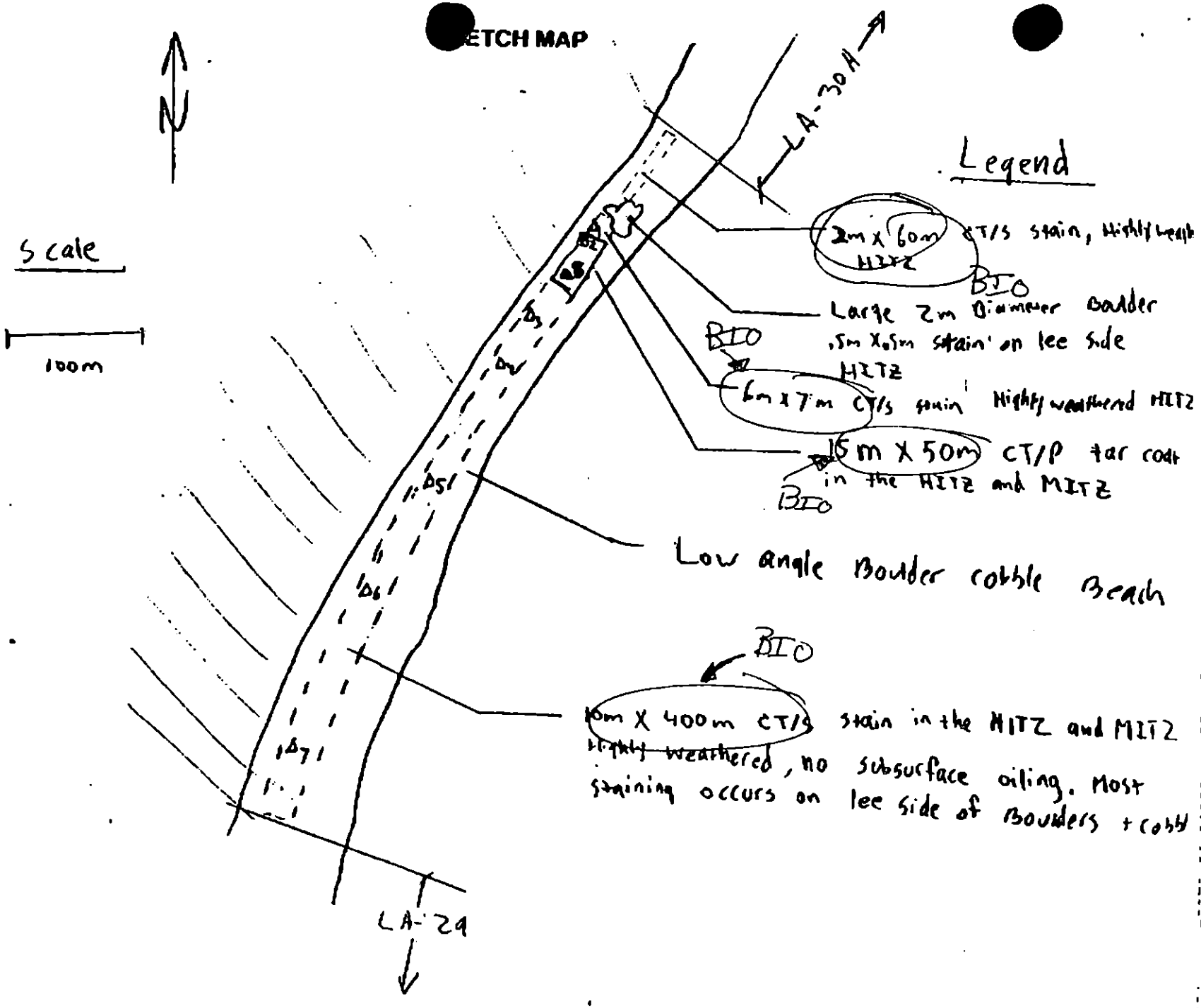
CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

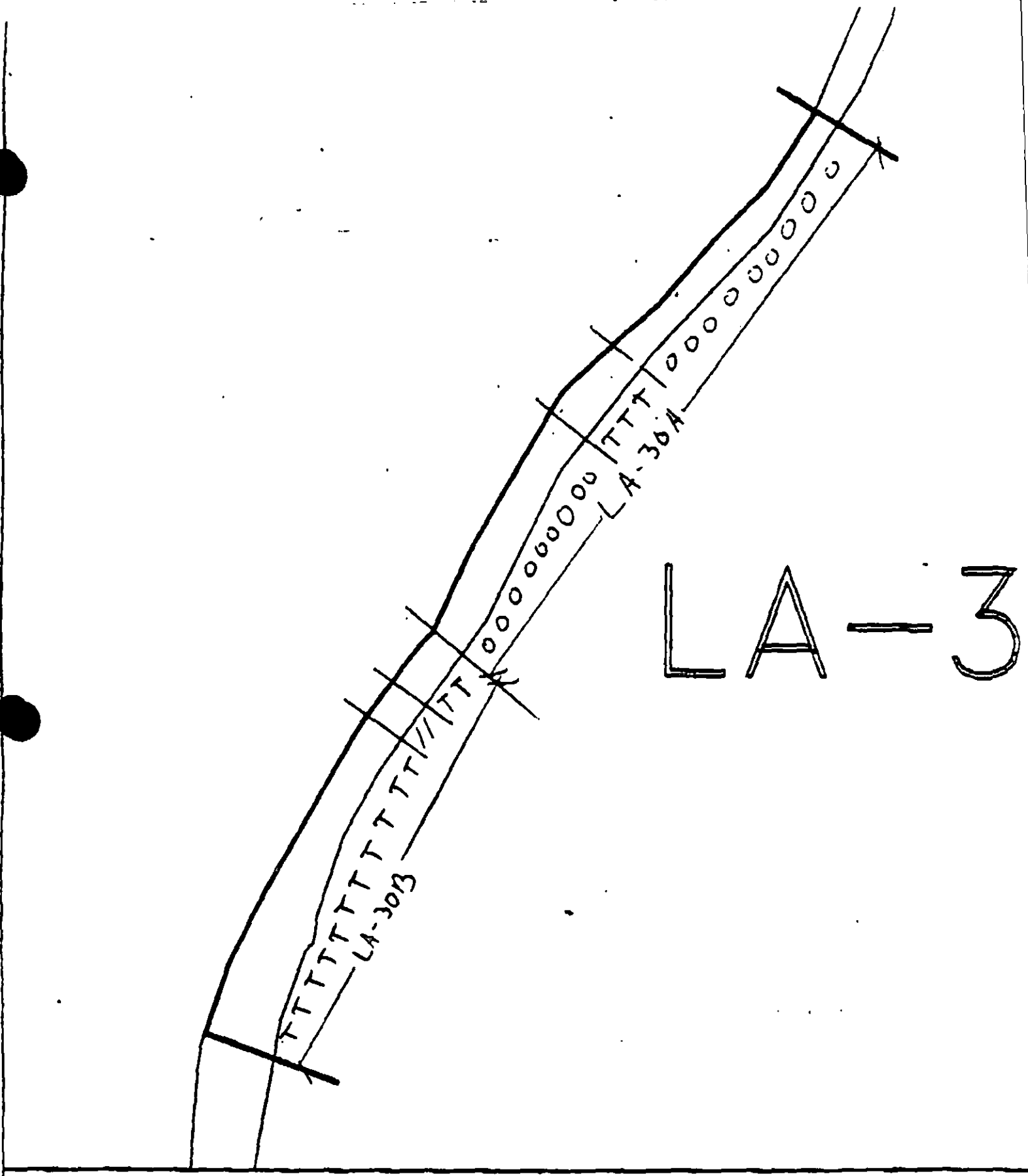
1 ⇨ Photo location, direction, and number

# SKETCH MAP




Oil Character Length (m): AP — PO — CV — CT 50 ST 467 MS — PT — TB — FL — NO —

REVISION/ERRATA




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

LA-30

ADEC Segment Length: 1312m

0 100 200 300
METERS

Map Key: PWS-436
Name: Mike Foget
Date: 4/2/96
Date Entered:

# SHORELINE EVALUATION

SEGMENT ST/ LA-31 SUBDIVISION A (1 OF 2) DATE 4/8/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**
ADF&G anadromous stream no. 226-40-16785.
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
7HH Subsistence area: Finfish harvesting
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

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

SHPO SIGNATURE: J. David McMahan DATE: 4/23/90

**OILING CATEGORIZATION:**

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 198 m: No Oil 931 m
Subsurface Oil Observed: Yes____ No X Maximum Depth_____

**RECOMMENDATIONS:**

| | |
|---|---|
| X No Treatment Recommended | _____Snare/Absorbent Booms |
| _____Treatment Recommended | _____Oil Snares (pom poms) |
| _____Manual Pickup | _____Absorbents (pads,rolls,etc) |
| _____Bioremediation | _____Spot Washing:_____Wands |
| _____Tarmat: _____Breakup | _____ Beach Cleaner |
| _____Removal | _____Other (see comments) |

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 4/23/90.
ADEC ART WEGNER
EXXON ANDY TEAL
NOAA Joseph Talbert
USCG KENNETH KEANE
FOSC: DATE: 5-12-90

# PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

| | | |
|---|---|---|
| 1A | Salmon stream mouth - fry outmigration (3/1 to 5/15) | |
| 1B | Salmon stream mouth - spawning (7/10 to 8/31) | |
| | No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits. | |
| 1C | Salmon fry nursery area (4/31 to 7/31) | |
| 1D | Esther Hatchery release (4/15 to 6/1) | |
| 1E | Main Bay Hatchery release (4/20 to 5/10) | |
| 1F | Sawmill Bay Hatchery release (4/15 to 6/1) | |
| 1G | Cannery Creek Hatchery release (4/21 to 6/1) | |
| 1H | Remote release site | |
| 1I | Gill net area (6/7 to 8/31) | |
| 1J | Purse seine area (7/20 to 9/30) | |
| 1K | Purse seine hook-off (7/20 to 9/30) | |
| 1L | Set net sites (6/11 to 7/25) | |
| | For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints. | |
| 2M | Herring spawning (4/1 to 6/15) | |
| | Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations. | |
| 3N, 3P | Harbor seal and sea lion pupping (5/15 to 7/1) | |
| 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 8/1) | |
| | Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment. | |
| 5S | Shorebird/waterfowl concentration (4/1 to 5/15) | |
| | Restrict all activity to essential minimum, especially air traffic. | |
| 5T | All Bald Eagle nests (3/1 to 6/1) | |
| | Active Bald Eagle nests (3/1 to 9/1) | |
| | Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates. | |
| 6U | Recreation: | Tent sites (6/1 to 9/15) |
| 6V | | Anchorages (6/1 to 9/15) |
| 6W | | Forest Service cabins (6/1 to 9/15) |
| 6X | | Lodge (6/1 to 9/15) |
| 6Y | | Special use destination |
| 7Z | Subsistence area: | Salmon harvesting (5/1 to 9/30) |
| 7HH | | Finfish harvesting |
| 7II | | Deer harvesting (8/15 to 2/28) |
| 7JJ | | Invertebrate harvesting |
| | For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints. | |

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / CA-31 SUBDIVISION: A DATE 4/18/90

**USCG**
NAME R Hubbard SIGNATURE R Hubbard

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

**ADEC**
NAME J. LYNN MARTIN SIGNATURE J. Lynn Martin

☑ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

ONLY OIL FOUND WAS A LIGHT STAIN ON ROCKS

**LAND MANAGER**
NAME Patrick Selanders SIGNATURE Patrick Selanders

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

I agree with ADEC

# SHORELINE OILING SUMMARY

REVISION NO. 05/22/89

OG Reimer USCG Hubbard SEGMENT ST/ LA-31
BIO Zamora LAND REP Selanoff (CVC) SUBDIVISION B (1042)
EXXON Garcia ADEC Martin TIME 16 : 20 to 18 : 21
TEAM NO.: 16 TIDE LEVEL: -.5 to +1 DATE 4 / 8 / 90
EST. SUBDIVISION LENGTH: 1120 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock snow
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: North to South
SURFACE SEDIMENTS: R 20 % B 30 % C 30 % P 20 % G 0 % S 0 % M 0 % V 0 %
SLOPE : Lang 80 % Hang 20 % Vert 0 % WAVE EXPOSURE: ☐ Low ☐ Med ☐ High
OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 200 m NO 920 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | /C | /B | /P | /S | BRN/BLK | DRK BRN | OLIVE | DRK GRY | LT GRY | SU | UI | MI | LI |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | | | | | | | | | | | | |
| COAT | | | | X | | X | | | | X | | | |
| STAIN | | | | X | | X | | | | | X | X | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | | | | | | | | | | |
| NO OIL | | | | | | | | | | | | | X |

PAVEMENT: H F S 0 sq. m by 0 cm
PATTIES / TARBALLS 0 BAGS
NEAR SHORE SHEEN? NO BR RW SL TL

| OILED DEBRIS | AMOUNT | | |
|---|---|---|---|
| | SM | MD | LG |
| Logs | | | |
| Vegetation | | | |
| Trash | | | |
| Debris | | | |

DEBRIS COLLECTED ☐ YES ☒ NO
TYPE 0
#BAGS 0

Photographs:
Roll No. ST-16-6
Frames 20-37

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (CM-CM) | BELOW | | OIL / FILM COLOR | | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | | UO | UC | BRN/BLK | DRK BRN | OLIVE | DRK GRY | LT GRY | | SU | UI | MI | LI | | |
| 1 | 30 | | | | | X | - | | | | | | | | | | X | | | | C P G S |
| 2 | 26 | | | | | X | - | | | | | | | | | | | X | | | P G |
| 3 | 35 | | | | | X | - | | | | | | | | | | | X | | | P C |
| 4 | 30 | | | | | X | - | | | | | | | | | | X | | | | P C |
| 5 | 15 | | | | | X | - | | | | | | | | | | X | | | | C |
| 6 | 35 | | | | | X | - | | | | | | | | | | | X | | | P C G S B |

COMMENTS Coarse sediment beach with frequent rock outcrops across shore face. The upper ITZ is typically mantled with large block and boulders. The northern 2/3 of the sub segment is backed by steep rock cliff. The southern 1/3 levels out in the backshore associated with a freshwater stream. This section is backed by a well developed pebble, cobble storm berm. The only oil found is associated with the storm berm and appears as a stain/coat on the surface of pebble and cobble. No oil was found in pits.


REVIEWED JW DATE 4/12/90

## SHORELINE OILING SUMMARY (PAGE 2 of 2)

REVISION 03/22/90

SEGMENT ST/ LA-31 SUBDIVISION A

## SUBSURFACE OIL (CONTINUED)

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (CM-CM) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | | UO | UC | | | | | | SU | UI | MI | LI | | |
| 7 | 20 | | | | | X | - | | | | | | | | X | | | | | PC |
| 8 | 30 | | | | | X | - | | | | | | | | | X | | | | PC |
| 9 | 40 | | | | | X | - | | | | | | | | X | | | | | PC |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
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| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |

COMMENTS

REVIEWED_____ DATE_____

# SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/23/90

Segment ST / LA 31 (1620 ON) Subdivision A Date (mo / day / yr) 6/8/90

Time ( 24 hr ) 1521 OFF Biologist TONY ZAMORA

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

( B ) Overall % cover of biota ( % of segment ): Dense 7 Moderate 83 Low 10

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

Photographs:
Roll No. ST-16-6
Frames 20-37

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | X | 2 | X | 2 | X | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | X | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | X | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | X | X | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | 3 | X | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | X | 2 | X | X | 2 | X | 2 | X | 2 | 2 | 2 | |
| 3 | X | 3 | X | 3 | 3 | 3 | 3 | X | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | X | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | X | 2 | X | 2 | 2 | X | 2 | 2 | |
| 3 | 3 | 3 | 3 | X | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| X | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

Wildlife Observations/ General Comments:
- NEREOCYSTIS KELP BED OFF SHORE
- DENSE AMPHIPODS UNDER COBBLE & BOULDER IN MI
- DENSE ALGAE COVER IN MI & LI - FILAMENTOUS GREEN, MIXED REDS
- LLL CREEK @ 1600 PROBABLY NOT SALMON SPAWNING
- LITTORINE EGGS
- WILDLIFE SITES - EAGLE, 2 OTTERS

ECOLOGICAL CONSIDERATIONS:
ST-1, 7II, 7JJ, 7HH

OG Reimer

SEGMENT ST/ 31

SUBDIVISION A

DATE 4 / 8 90

**CHECKLIST**

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

**LEGEND**

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

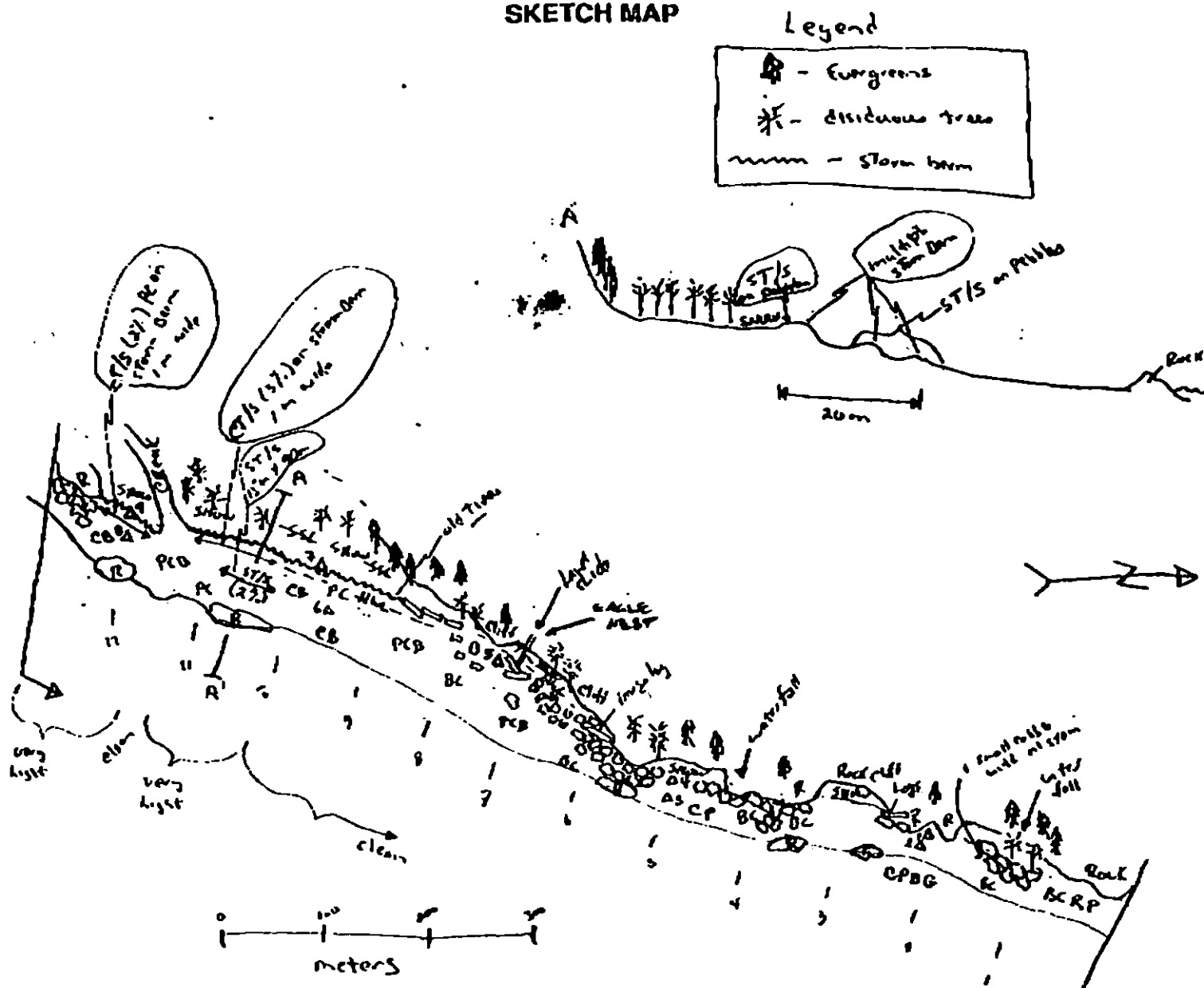
CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

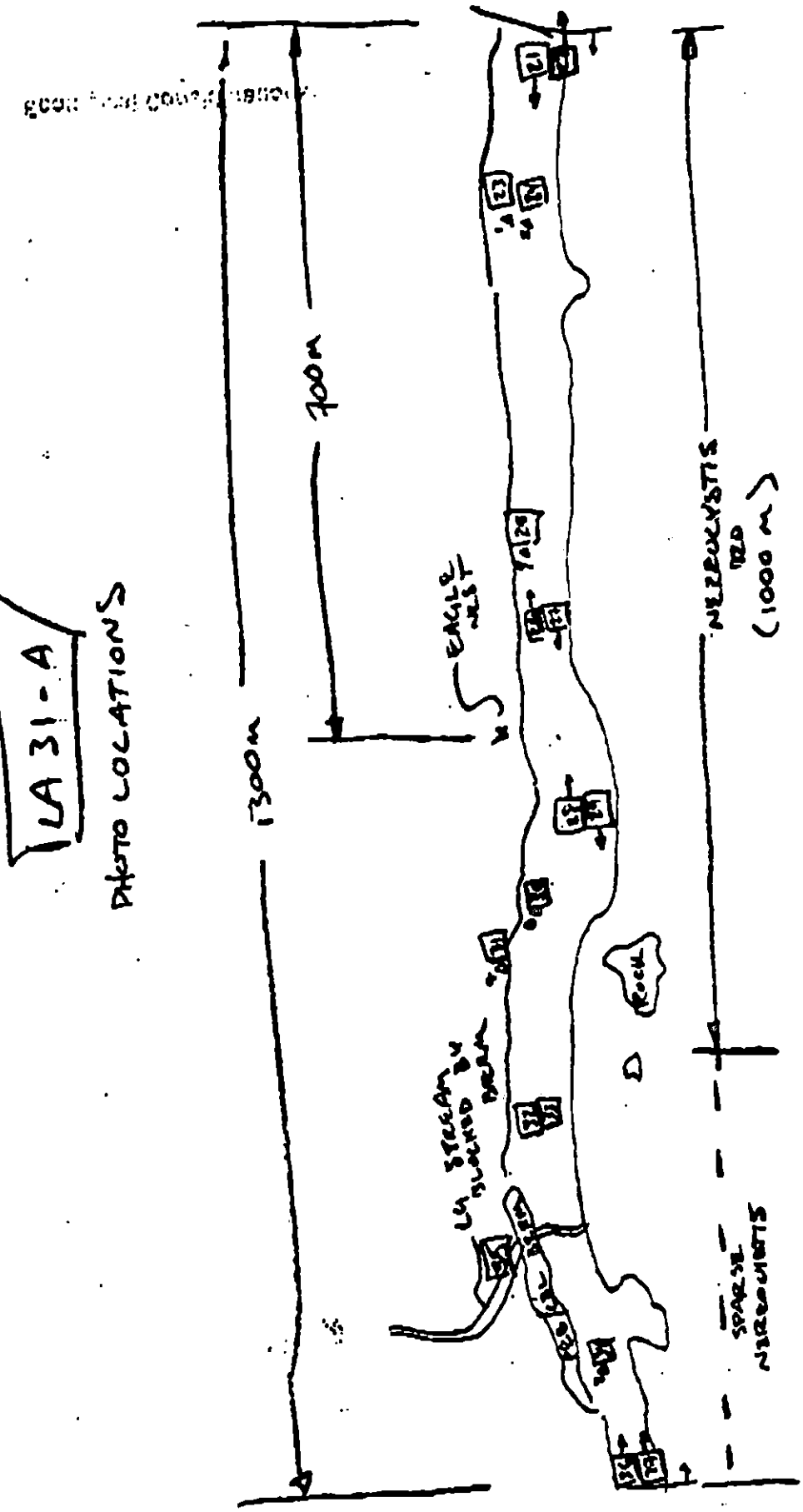
1 ⇨ Photo location, direction, and number

**SKETCH MAP**

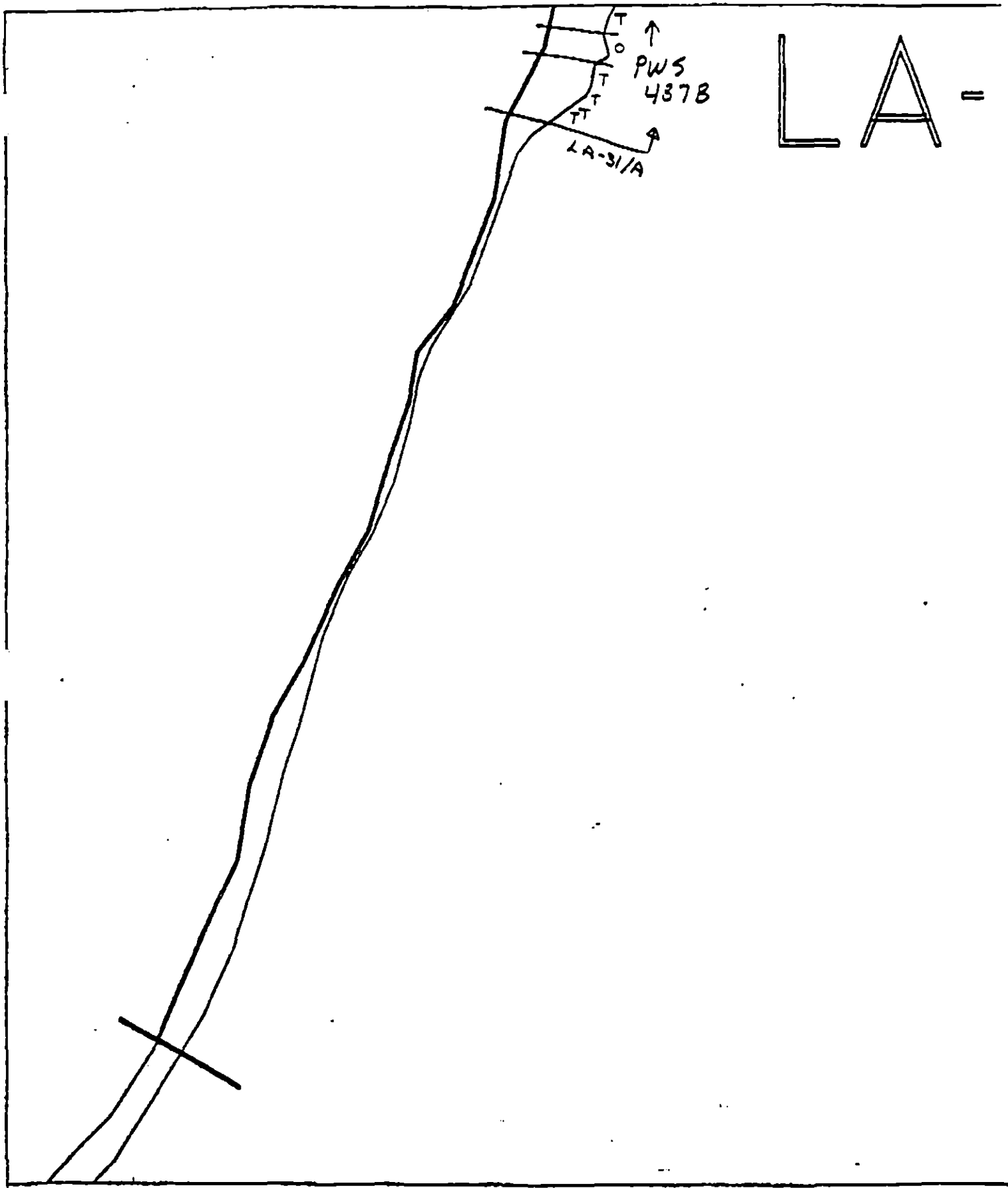



Oil Character Length (m): AP ___ PO ___ CV ___ CT ___ ST 200 MS ___ PT ___ TB ___ FL ___ NO 920

REVISION: 03/24/90


LA 31-A
PHOTO LOCATIONS
1300m
700m
EAGLE NEST
NEBULOSTIS
TED
(1000 M)
SPARSE
NEBULOSTIS

24




LA -

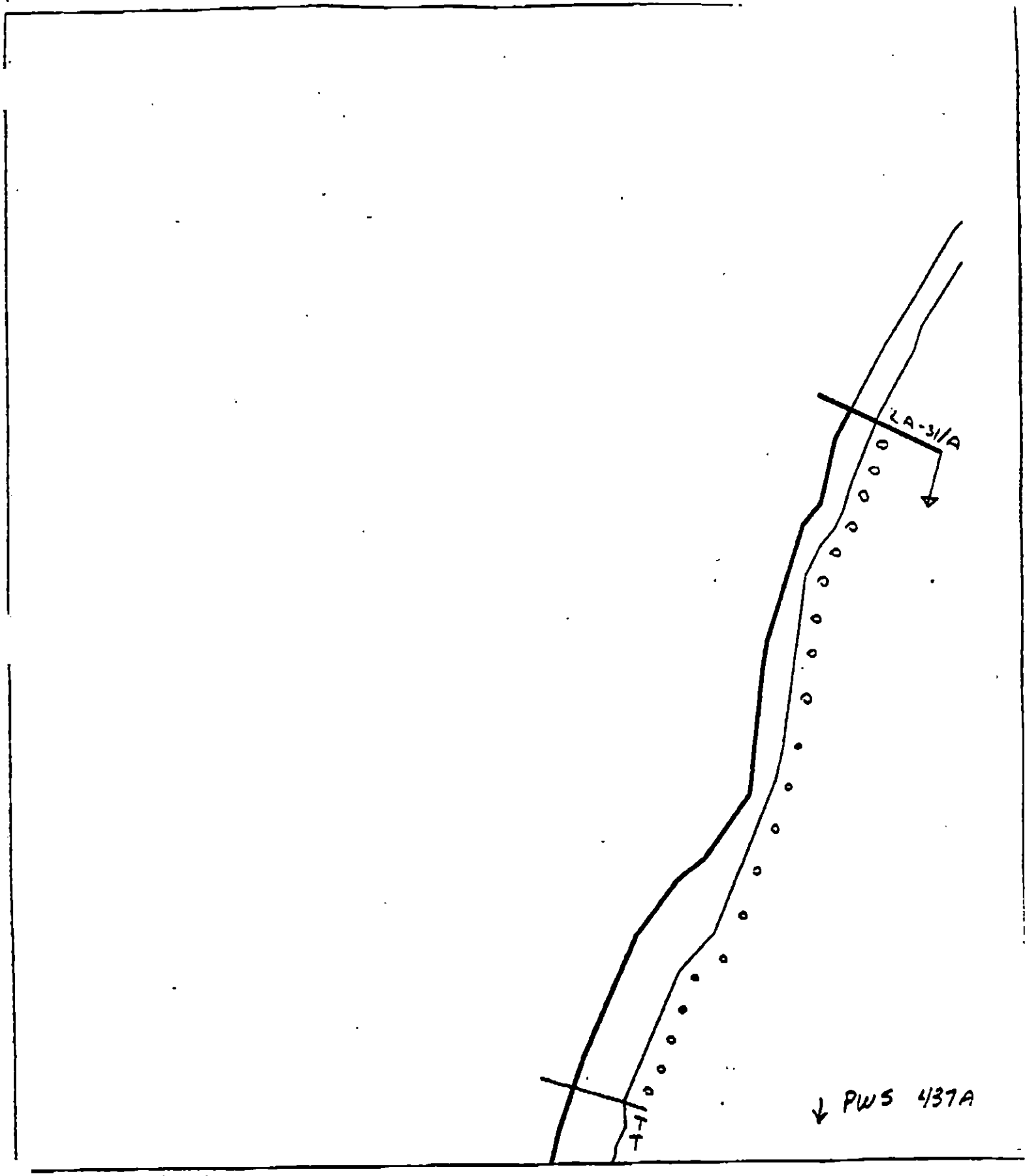
XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
0000 No Oil

LA-31/A

ADEC Segment Length: 229m

0 100 200 300
METERS

Map Key: PWS-437a
Name: Reimer
Date: 4/8/90
Data Entered:




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

# LA-31/A

ADEC Segment Length: 2291m
Error Length : 230m

0 100 200 300
Meters

Map Key: PWS-437b
Name: Reimer
Date: 4/8/90
Date Entered:

# SHORELINE EVALUATION

SEGMENT ST/ LA-31 SUBDIVISION B (2 OF 2) DATE 4/8/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**
ADF&G anadromous stream no. 226-40-16785.
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
7HH Subsistence area: Finfish harvesting
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

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

SHPO SIGNATURE: J. David McNabb DATE: 4/23/90

**OILING CATEGORIZATION:**

Wide 0 m: Medium 100 m: Narrow 0 m: V.Light 277 m: No Oil 786 m
Subsurface Oil Observed: Yes___ No X Maximum Depth_____

**RECOMMENDATIONS:**

| | |
|---|---|
| X No Treatment Recommended | ___Snare/Absorbent Booms |
| ___Treatment Recommended | ___Oil Snares (pom poms) |
| ___Manual Pickup | ___Absorbents (pads,rolls,etc) |
| ___Bioremediation | ___Spot Washing:___Wands |
| ___Tarmat: ___Breakup | ___ Beach Cleaner |
| ___Removal | ___Other (see comments) |

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 4/23/90
ADEC Art Weiner
EXXON Andy Tagal
NOAA Joseph C. Talbott
USCG Kenneth Kenny
FOSC: _____ DATE: 5-12-90

# PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

| | | |
|---|---|---|
| 1A<br>1B | | **Salmon stream mouth - fry outmigration (3/1 to 5/15)**<br>**Salmon stream mouth - spawning (7/10 to 8/31)**<br>No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits. |
| 1C | | **Salmon fry nursery area (4/31 to 7/31)** |
| 1D | | **Esther Hatchery release (4/15 to 6/1)** |
| 1E | | **Main Bay Hatchery release (4/20 to 5/10)** |
| 1F | | **Sawmill Bay Hatchery release (4/15 to 6/1)** |
| 1G | | **Cannery Creek Hatchery release (4/21 to 6/1)** |
| 1H | | **Remote release site** |
| 1I | | **Gill net area (6/7 to 8/31)** |
| 1J | | **Purse seine area (7/20 to 9/30)** |
| 1K | | **Purse seine hook-off (7/20 to 9/30)** |
| 1L | | **Set net sites (6/11 to 7/25)**<br>For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints. |
| 2M | | **Herring spawning (4/1 to 6/15)**<br>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<br>3O, 3Q | | **Harbor seal and sea lion pupping (5/15 to 7/1)**<br>**Harbor seal and sea lion molting (8/15 to 9/15)**<br>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)**<br>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)**<br>Restrict all activity to essential minimum, especially air traffic. |
| 6T | | **All Bald Eagle nests (3/1 to 6/1)**<br>**Active Bald Eagle nests (3/1 to 9/1)**<br>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**<br>For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints. |

# SHORELINE OILING SUMMARY

REVISION NO. 08-22-90

OG Reimer USCG Hubbard SEGMENT ST/ LA-31
BIO Zamora LAND REP Selanoff (Cruc) SUBDIVISION B (2042)
EXXON Garcia ADEC Martin TIME 18 : 22 to 19 : 15
TEAM NO.: 16 TIDE LEVEL: +1 to +1 DATE 4 / 8 /90
EST. SUBDIVISION LENGTH: 1184 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock Snow
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: North to South
SURFACE SEDIMENTS: R 20 % B 35 % C 30 % P 20 % G 5 % S 0 % M 0 % V 0 %
SLOPE : Lang 80 % Hang 20 % Vert 0 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
OIL CATEGORY LENGTH: W 0 m M 100 m N 0 m VL 320 m NO 764 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AC | AB | AP | AS | BRN/BLK | ORG/BRN | ORG | ORG/YEL | YEL | SU | U | M | L |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | | X | | | X | | | | X | | | |
| COAT | | | | X | | X | | | | X | X | X | |
| STAIN | | | | X | | X | | | | X | X | | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | | | | | | | | | | |
| NO OIL | | | | | | | | | | | | | X |

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

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | | | |
| Debris | | | |

DEBRIS COLLECTED ☐ YES ☒ NO

TYPE 0

#BAGS 0

Photographs:

Roll No. ST-16-7

Frames 1-13

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (CM-CM) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | | UO | UC | BRN/BLK | ORG/BRN | ORG | ORG/YEL | YEL | SU | U | M | L | | |
| 1 | 30 | | | | | X | • | | | | | | | | | X | | | | PC |
| 2 | 30 | | | | | X | • | | | | | | | | | | X | | | PC |
| 3 | 30 | | | | | X | • | | | | | | | | | X | | | | PCC |
| 4 | 30 | | | | | X | • | | | | | | | | | | X | | | PCC |
| 5 | 30 | | | | | X | • | | | | | | | | | X | | | | PCC |
| | | | | | | | • | | | | | | | | | | | | | |

COMMENTS Rocky, boulder, cobble shoreline. The majority of the beach shoreline is rock cliff and frequent outcrops of rock are found in the shoreface. The remainder of the beach is mantled with large blocks, boulders, cobbles with small pockets areas which have pebble, cobble beaches. The majority of the oil along this section is sporadic coats or stains, mostly in the MIZ as supratidal coats, in crevices between rock and boulders where it was sheltered from the winter storms. One medium band was found at the north end of the sub-section, 50 m long by 15' in wide patchy oil on rocks (15%), and another band 15' wide in the upper/MID tidal zone on a cobble boulder beach (20%).

Page 1 of ____

REVIEWED JW DATE 4/13/90

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA-31 SUBDIVISION: B DATE 4/08/90

**USCG**
NAME R. Hubbard SIGNATURE [signature]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

**ADEC**
NAME J. LYNN MARTIN SIGNATURE [signature]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

DUE TO THE FACT THAT PATCHY OILED AREAS WERE A VERY LITTLE COAT TO STAIN

**LAND MANAGER**
NAME Patrick Sehlhoff SIGNATURE [signature]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

# SHORELINE ECOLOGICAL SUMMARY

REVISION: 8/22/89

Segment ST / LA 31 (1921 ON) Subdivision B Date (mo / day / yr) 4/8/90

Time ( 24 hr ) 1930 OFF Biologist TONY ZAMORA

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

( B ) Overall % cover of biota ( % of segment ): Dense 5 Moderate 80 Low 15

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

Photographs:
Roll No. ST-16-7
Frames 1-13

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | X | 2 | 2 | 2 | X | X | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | X | X | 3 | 3 | 3 | X | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | X | 4 | X | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | X | X | 2 | 2 | X | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | XL | X | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | X | 2 | X | 2 | X | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | X | 3 | X | 3 | X | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | X | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | X | 1L | X | 1M | XL | 1U | 1M | 1L | 1U | 1M | X | |
| 2 | 2 | 2 | 2 | X | X | 2 | X | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | X | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

Wildlife Observations/ General Comments:
- DENSE ALGAL COVER ON BOULDERS & COBBLE IN LOW & MID ZONES
- GASTROPOD EGGS! (LITTORINE & NUDIBRANCH?)
- SPARSE NEREOCYSTIS OFFSHORE

Ecological Considerations: 7HH, 7II,

WILDLIFE: 1 EAGLE, 2 CROW, MOOSE SCAT, OWL (OR EAGLE?) PELLETS

NOTE - PHOTO LOCATIONS NOT LOCATED

APR-09-1990 15:12 FROM PACIFIC SEAHORSE TO 01#---0013075643771# P.11

OG Reimer

SEGMENT ST/ LA-31

SUBDIVISION B

DATE 4 / 8 90

## SKETCH MAP

**CHECKLIST**

- N Arrow
- Approx. Scale
- Seg/Sub Bndry
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. HWL/LWL
- SSC
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

**LEGEND**

1 △ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

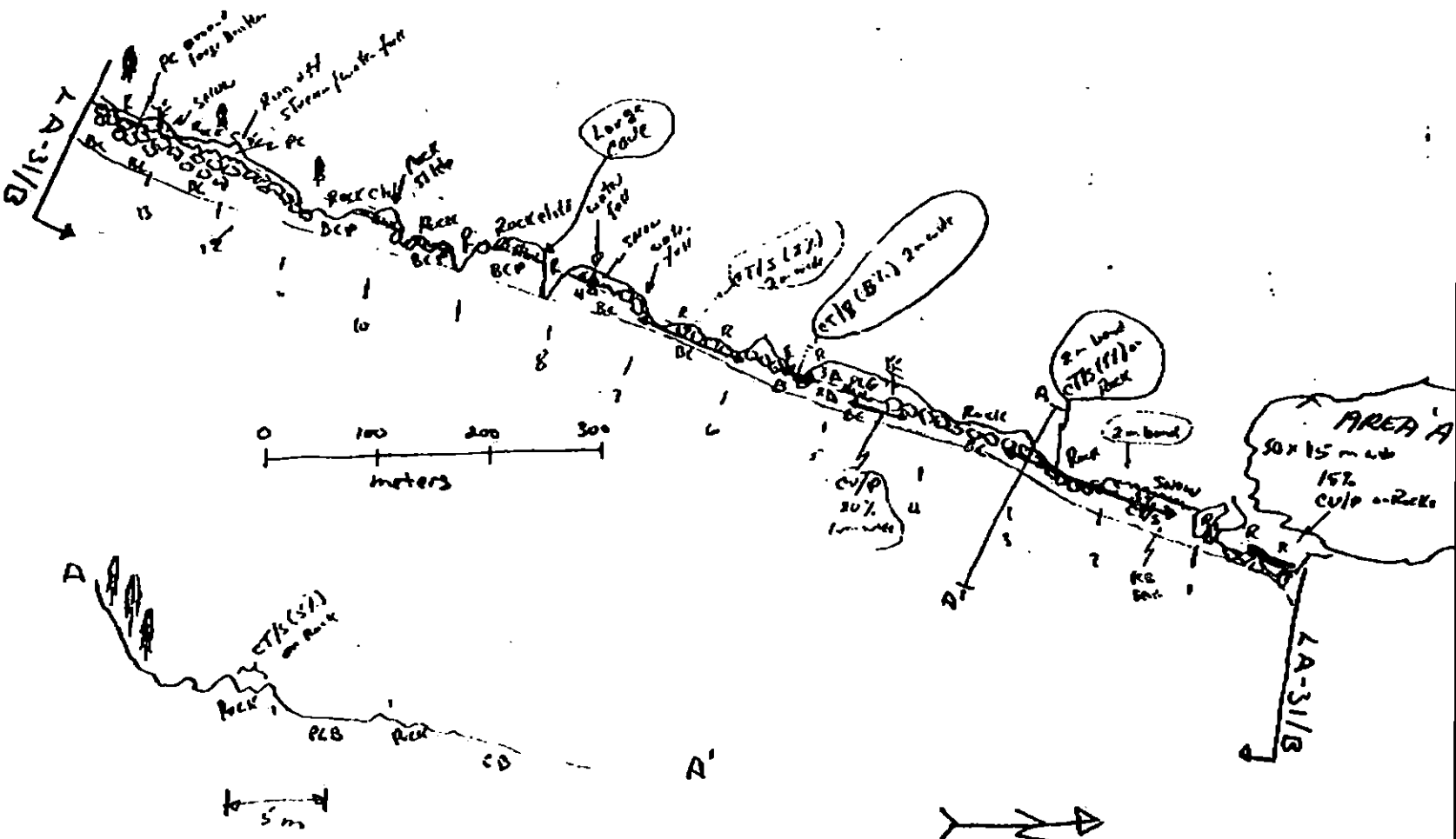
CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

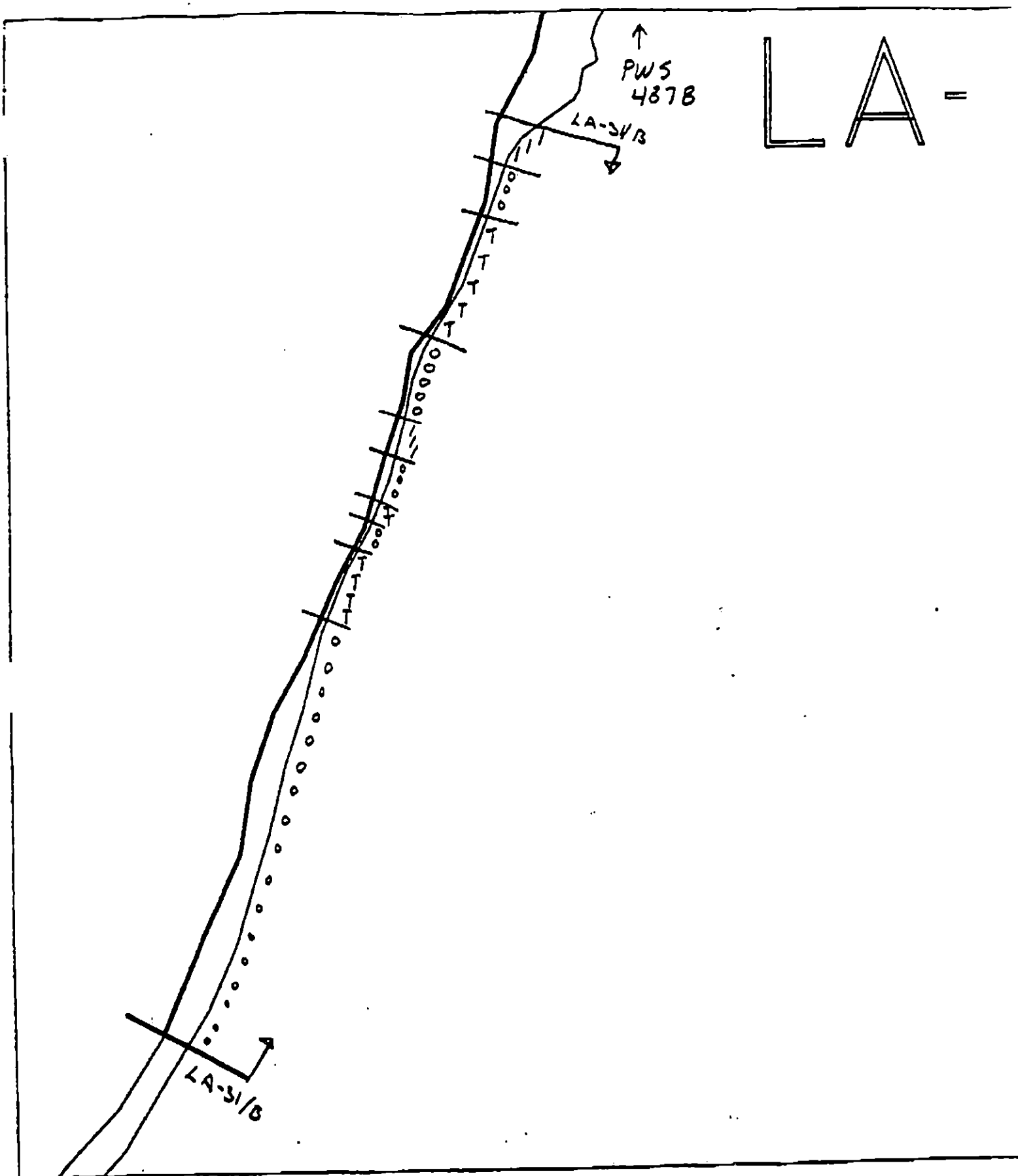
Oiled Vegetation

1 Photo location, direction, and number




Oil Character Length (m): AP — PO — CV 100 CT 320 ST — MS — PT — TB — FL — NO 764

REVISION:




LA -

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

LA-31/B

ADEC Segment Length: 2291m

0 100 200 300
METERS

Map Key: PWS-437a
Name: Reimer
Date: 4/8/90
Data Entered:

# SHORELINE EVALUATION

SEGMENT ST/ LA-32 SUBDIVISION A (1 OF 1) DATE 4/9/90

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

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

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

**OILING CATEGORIZATION:**

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 283 m: No Oil 635 m
Subsurface Oil Observed: Yes____ No X Maximum Depth_____

**RECOMMENDATIONS:**

| | |
|---|---|
| X No Treatment Recommended | _____Snare/Absorbent Booms |
| _____Treatment Recommended | _____Oil Snares (pom poms) |
| _____Manual Pickup | _____Absorbents (pads,rolls,etc) |
| _____Bioremediation | _____Spot Washing:_____Wands |
| _____Tarmat: _____Breakup | _____ Beach Cleaner |
| _____Removal | _____Other (see comments) |

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 4/20/90
ADEC ART WEINER [signature]
EXXON ANDY TEAL [signature]
NOAA Burl Wescott [signature]
USCG KENNETH KEANE [signature]

FOSC: [signature] DATE: 4-26-90

# PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

| | | |
|---|---|---|
| 1A | | **Salmon stream mouth - fry outmigration (3/1 to 5/15)** |
| 1B | | **Salmon stream mouth - spawning (7/10 to 8/31)**<br>No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits. |
| 1C | | **Salmon fry nursery area (4/31 to 7/31)** |
| 1D | | **Esther Hatchery release (4/15 to 6/1)** |
| 1E | | **Main Bay Hatchery release (4/20 to 5/10)** |
| 1F | | **Sawmill Bay Hatchery release (4/15 to 6/1)** |
| 1G | | **Cannery Creek Hatchery release (4/21 to 6/1)** |
| 1H | | **Remote release site** |
| 1I | | **Gill net area (6/7 to 8/31)** |
| 1J | | **Purse seine area (7/20 to 9/30)** |
| 1K | | **Purse seine hook-off (7/20 to 9/30)** |
| 1L | | **Set net sites (6/11 to 7/25)**<br>For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints. |
| 2M | | **Herring spawning (4/1 to 6/15)**<br>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)**<br>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)**<br>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)**<br>Restrict all activity to essential minimum, especially air traffic. |
| 5T | | **All Bald Eagle nests (3/1 to 6/1)**<br>**Active Bald Eagle nests (3/1 to 9/1)**<br>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**<br>For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints. |

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA-32 SUBDIVISION: DATE 4/9/90

~~USCG~~ NOAA
NAME GARY SHIGENAKA SIGNATURE Gary Shigenaka cit.

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

SEGMENT CONSISTED OF THE SHORELINE OF IZMAYLOU ISLAND, LOCATED OFF THE WEST COAST OF LATOUCHE ISLAND. SOME EVIDENCE OF OILING WAS OBSERVED, BUT OVERALL THE ISLAND WAS NOT HEAVILY CONTAMINATED. ON THE NORTHWEST SIDE OF THE SHORELINE, A PATCH OF EXPOSED BEDROCK AND BOULDER CONTAINED COAT AND COVER, AND SHEEN WAS OBSERVED IN TIDE POOLS OF THIS AREA. ON A SET OF ROCKS WITH FACES ORIENTED TOWARD THE SUN, TAR PATCHES WERE OBSERVED TO BE CRACKING AND SHINEY, LESS BRITTLE TAR WAS EVIDENT IN THE CRACKS. SOME WEATHERED STAIN WAS FOUND AT ISOLATED LOCATIONS AT OTHER LOCATIONS ON THE ISLAND, BUT THIS WAS LIGHT IN NATURE. BEAR SCAT WAS SEEN IN THE SUPRATIDAL ON THE NORTHEASTERN SHORELINE.

**ADEC**
NAME John Hayes SIGNATURE

☑ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Oiling on Island is sparse and shoreline is stable.
I recall this North Shore being bioremediated last fall and indications are that this combined with weathering cleaned the cobble to light stain as this shore was moderately oiled when I did a P.A. on 9/25/89. No treatment recommended for this Island. It has good exposure to wave action from Latouche Passage and will continue to weather.

**LAND MANAGER**
NAME SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

# SHORELINE OILING SUMMARY

REVISION NO. 09/28/89

OG Mike Foget NOAA ~~USCG~~ Gary Shigenaka SEGMENT ST/ LA-32
BIO Richard Ambrose LAND REP James A Dorsey SUBDIVISION A
EXXON Larry Olsen ADEC John Harris TIME 18 : 15 to 19 : 30
TEAM NO.: 11 TIDE LEVEL: 2.5 to 0.7 DATE 4 / 9 / 90
EST. SUBDIVISION LENGTH: 1436 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock Snow on the supra ITZ
SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
SURFACE SEDIMENTS: R 15 % B 50 % C 30 % P 5 % G 0 % S 0 % M 0 % V 0 %
SLOPE : Lang 95 % Hang 5 % Ver 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 280 m NO 1156 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | | | | | | | | | | | | |
| COAT | | | | ✓ | | ✓ | | | | | ✓ | | |
| STAIN | | | | X | | X | | | | X | X | | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | X | | | | X | | | X | | |
| NO OIL | | | | | | | | | | | | X | X |

PAVEMENT: H F S 0 sq. m by 0 cm
PATTIES / TARBALLS 0 BAGS
NEAR SHORE SHEEN? (NO) BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | | | |
| Debris | | | |

DEBRIS COLLECTED ☐ YES ☒ NO
TYPE 0
#BAGS 0

Photographs:
Roll No. ST-11-3
Frames 8

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OO | OR | OL | OF | NO | FROM-CM | UO | UC | | | | | | SU | U | M | L | | |
| 1 | 20 | | | | | X | • | | | | | | | | X | | | | | C,P,S |
| 2 | 20 | | | | | X | • | | | | | | | | X | | | | | C,P,S |
| 3 | 15 | | | | | X | • | | | | • | | | | | X | | | | C,P,S |
| 4 | 20 | | | | | X | • | | | | | | | | X | | | | | C,P |
| 5 | 20 | | | | | X | • | | | | | | | | | X | | | | P,G |
| | | | | | | | • | | | | | | | | | | | | | |

COMMENTS Oiling occurs on the Northern side of the island (see map). Oil is very weathered and is a CT/S very light spattered distribution in the supra and HITZ. The beach on the Northern end is a Low angle cobble beach. The rock outcrop on the Northwest part of the Island has a 3m x 2m CT/P coating w/ some rainbow sheen in the tide pools. The rest of the island mostly consists of Boulder Beaches w/ some rock outcrops.


REVIEWED ____ DATE 4/11/90

## SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22

Segment ST / LA032 Subdivision A Date (mo / day / yr) 9-9-90

Time (24 hr) 1815 hrs Biologist Ambrose

(A) Substrate type and % of segments:
(1) Bedrock 15 (2) Boulder 50 (3) Cobble 30 (4) Pebble 5 (5) Sand — (6) Silt —

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

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

Photographs:
Roll No. ST-11-5
Frames 9, 10

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | X | 1M | 1L | 1U | X | 1L | 1U | ③ | 1L | |
| 2 | 2 | 2 | 2 | 2 | X | 2 | X | 2 | ② | ② | ② | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | 3 | ③ | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | X | 1L | X | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | X | 3 | 3 | X | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | X | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | X | X | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | X | X | X | 1M | 1L | 1U | ① | 1L | |
| 2 | 2 | 2 | 2 | X | X | 2 | 2 | 2 | X | 2 | ② | |
| 3 | 3 | 3 | 3 | 3 | X | 3 | X | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**Wildlife Observations/ General Comments:**

(See next page)

**Ecological Considerations:**

711: No relevant observations.

On NW end, rock outcrop has moderate cover of Fucus, but there would be no ecological constraints on access from cobble beach.

On NE end, there are abundant mussels between the cobbles in and below the area with Stairs that would be vulnerable to damage during clean-up operations.

4-9-90

Segment LA032A Izmaloc Island 1815 hrs

Wildlife observations: otter
2 seals
7 scoters
deer scat
1 oystercatcher
1 magpie
1 Harlequin duck
bear scat

Island has dense cover on bedrock flats on N and S ends of the island; in the low intertidal, Fucus and Rhodomela together comprised about 90% cover, and overall, there was extensive, dense cover in the low and mid tidal zones. On the north end, there is extensive Mytilus cover between the cobbles. On the cobble beaches, there is (1) dense cover of filamentous algae and rare Fucus in the low intertidal, but otherwise there is only sparse cover on the east side of the island, and (2) a narrow dense band and moderate cover, with 50-60% sparse cover.

There was recruitment of barnacles, mussels and Fucus.

On the north side of the island, barnacles on bedrock in the upper intertidal were coated with oil, and most of the barnacles were dead.

OG Mike [redacted]ct

SEGMENT ST/ LA-32

SUBDIVISION A

DATE 4 / 9 90

**CHECKLIST**

- ___ N Arrow
- ___ Approx. Scale
- ___ Seg/Sub Endry
- ___ Oil Dist.
  - Width
  - Length
  - % Cover
- ___ Substrate Character
- ___ Est. HWL/WL
- ___ SSL
- ___ Profile Location(s)
- ___ Profile(s)
- ___ Pit Location(s)
- ___ Photo Location(s)

**LEGEND**

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

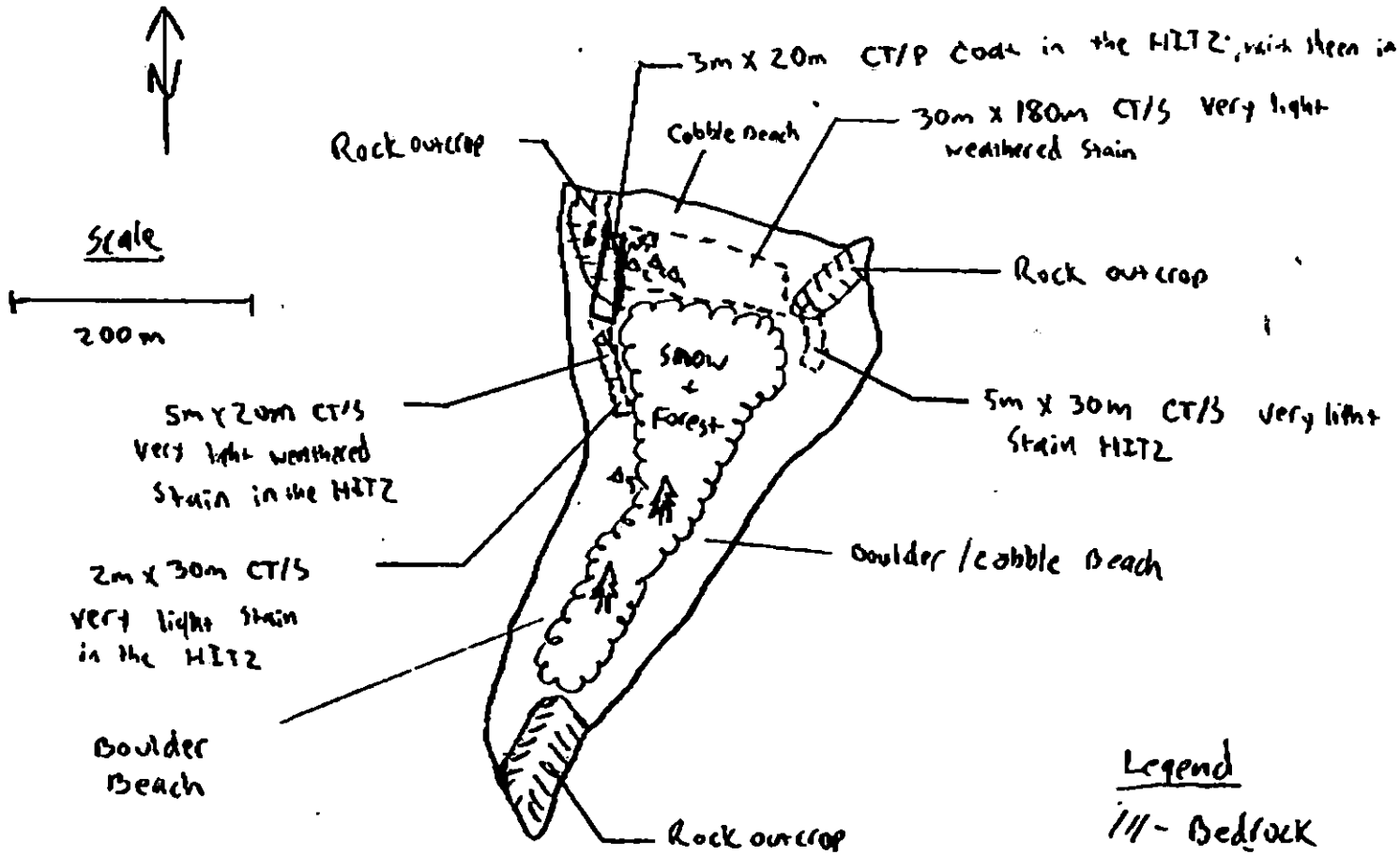
CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 ⇔ Photo location, direction, and number

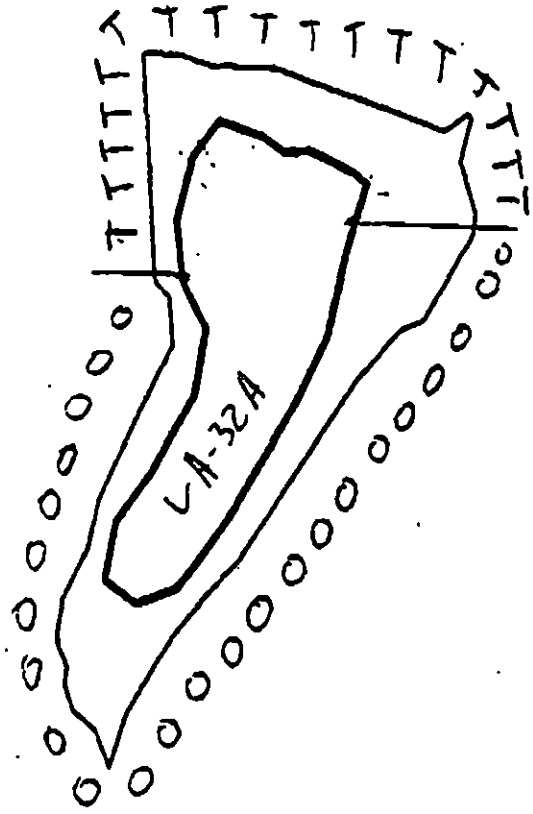
## SKETCH MAP




Oil Character Length (m): AP 0 PO 0 CV 0 CT 20 ST 260 MS 0 PT 0 TB 0 FL 0 NO 1156

REVISION 6/95/00

APR-10-1990 10:05 FROM PACIFIC SEAHORSE TO 011---001907504377 P.03




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

# LA-32A

ADEC Segment Length: 917m

0 100 200 300
METERS

Map Key: PWS-438
Name: Mike Foget
Date: 4/9/90
Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ LA-33 SUBDIVISION A (1 OF 1) DATE 4/9/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

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

35
(1)

SHPO SIGNATURE: Charles E. Holmes DATE: 4/23/90

**OILING CATEGORIZATION:**

Wide 0 m: Medium 52 m: Narrow 0 m: V.Light 495 m: No Oil 782 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) |
| ____Bioremediation | ____Spot Washing:____Wands |
| X Tarmat: ____Breakup | ____ Beach Cleaner |
| X Removal | ____Other (see comments) |

COMMENTS: Recommend manual removal of patties. Work should be conducted after 5/1.

TAG COMMENTS:

TAG APPROVAL DATE: 4/21/90.
ADEC Art Weiler
EXXON Randy Eaton
NOAA Burl Wescott
USCG Kenneth Keane

FOSC: ____ DATE: 5-1-90
Land manager's comments noted - however, concur with TAG recommendations.

# PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

| | | |
|---|---|---|
| 1A | Salmon stream mouth - fry outmigration (3/1 to 5/15) | |
| 1B | Salmon stream mouth - spawning (7/10 to 8/31) | |
| | No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits. | |
| 1C | Salmon fry nursery area (4/31 to 7/31) | |
| 1D | Esther Hatchery release (4/15 to 6/1) | |
| 1E | Main Bay Hatchery release (4/20 to 5/10) | |
| 1F | Sawmill Bay Hatchery release (4/15 to 6/1) | |
| 1G | Cannery Creek Hatchery release (4/21 to 6/1) | |
| 1H | Remote release site | |
| 1I | Gill net area (6/7 to 8/31) | |
| 1J | Purse seine area (7/20 to 9/30) | |
| 1K | Purse seine hook-off (7/20 to 9/30) | |
| 1L | Set net sites (6/11 to 7/25) | |
| | For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints. | |
| 2M | Herring spawning (4/1 to 6/15) | |
| | Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations. | |
| 3N, 3P | Harbor seal and sea lion pupping (5/15 to 7/1) | |
| 3O, 3Q | Harbor seal and sea lion molting (8/15 to 9/15) | |
| | Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. | |
| 5R | Seabird colony (5/1 to 9/1) | |
| | Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment. | |
| 5S | Shorebird/waterfowl concentration (4/1 to 5/15) | |
| | Restrict all activity to essential minimum, especially air traffic. | |
| 5T | All Bald Eagle nests (3/1 to 6/1) | |
| | Active Bald Eagle nests (3/1 to 9/1) | |
| | Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates. | |
| 6U | Recreation: | Tent sites (6/1 to 9/15) |
| 6V | | Anchorages (6/1 to 9/15) |
| 6W | | Forest Service cabins (6/1 to 9/15) |
| 6X | | Lodge (6/1 to 9/15) |
| 6Y | | Special use destination |
| 7Z | Subsistence area: | Salmon harvesting (5/1 to 9/30) |
| 7HH | | Finfish harvesting |
| 7II | | Deer harvesting (8/15 to 2/28) |
| 7JJ | | Invertebrate harvesting |
| | For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints. | |

# SHORELINE EVALUATION

SEGMENT ST/ LA-33 SUBDIVISION A (1 OF 1) DATE 4/9/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

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

SHPO SIGNATURE: Charles E. Holmes DATE: 4/23/90

**OILING CATEGORIZATION:**

Wide 0 m: Medium 52 m: Narrow 0 m: V.Light 495 m: No Oil 782 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) |
| ____Bioremediation | ____Spot Washing:____Wands |
| X Tarmat: ____Breakup | ____ Beach Cleaner |
| X Removal | ____Other (see comments) |

COMMENTS: Recommend manual removal of patties. Work should be conducted after 5/1.

TAG COMMENTS: ____

TAG APPROVAL DATE: 4/21/90.
ADEC Art Weiner
EXXON Jerry Ger
NOAA Burl Wescott
USCG KENNETH KEANE

FOSC: ____ DATE: 5-1-90
Land manager's comments noted - however, concur with TAG recommendation.

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA-33 SUBDIVISION: LA-33 DATE 4/9/90

~~USCG~~ NOAA
NAME GARY SHIGENAKA SIGNATURE Gary Shigenaka

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

SEGMENT CONSISTED OF THE SHORELINE OF CHICKEN ISLAND, OFF THE WEST COAST OF LATOUCHE ISLAND. THE SHORELINE WAS GENERALLY RUGGED, COMPRISED LARGELY OF EXPOSED BEDROCK AND BOULDERS. THE OILING OBSERVED WAS HEAVIEST AT THE NORTH END, AND DIMINISHED TO THE SOUTH. THE EASTERN SIDE OF THE ISLAND WAS IMPACTED MORE NOTICEABLY THAN THE WESTERN SIDE. EXPOSED SHALE BEDROCK ON THE NORTHERN SHORELINE HELD WATER WITH RAINBOW SHEEN, AND ROCK FACES SHOWED COAT AND COVER IN THE UPPER INTERTIDAL. IN A LOCATION WHERE SEDIMENTS COULD ACCUMULATE AND A PIT WAS DUG, RESIDUAL WAS FOUND TO A DEPTH OF 7 CM (AFTER WHICH BEDROCK WAS ENCOUNTERED). ALONG THE EASTERN SIDE OF THE ISLAND, A BAND OF DISCONTINUOUS STAIN, COAT, AND COVER WAS OBSERVED, NARROWING FROM 5 M IN WIDTH AT THE NORTH END TO 3 M IN WIDTH AT THE CENTRAL PORTION OF THE ISLAND TO 1 M OF LIGHT WEATHERED STAIN AT THE SOUTH END (THIS BAND OCCUPIED IN THE UPPER INTERTIDAL). BIO OBSERVED AN APPROXIMATELY 1 M X 5 M PATCH OF TAR PATTIES IN THE MIDDLE INTERTIDAL ZONE AT THE CENTRAL PART OF THE EASTERN SHORELINE. ALMOST NO EVIDENCE OF OILING WAS SEEN AT THE SOUTHERN END OF THE ISLAND, AND ONLY LIGHT WEATHERED STAIN WAS FOUND ON THE WESTERN SIDE.

**ADEC**
NAME John Hayes SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

Oiling as indicated on sheen map on this Island consisted of tar patties on East Side of Island and Weathered Oil on NorthWest Tip. Both these areas I recommend for treatment. Recommend manual cleanup of the patties and possibly mechanical treatment or mechanical treatment for NorthWest Corner. This Island is really on the ~~border~~ borderline for treatment or natural weathering which has been working here. Although we did observe sheen in the tide pools of the NorthWest Corner on the Bedrock/Shale. Also this Island is in close proximity to Seward Bay + Port Dick Hatchery. It should be watched carefully this summer for possible sheening towards the hatchery.

**LAND MANAGER**
NAME JAMES A BARKER SIGNATURE James A Baker

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

SSAT TEAM STARTED ON N. END OF CHICKEN IS. OIL STAIN OBSERVED 3-10 m WIDE 5-30 m LENGTH, DISCONTINUOUS STAIN CLEARLY VISIBLE UNDER ROCKS, OVERTURNING ROCK REVEALED STICKY TAR. HAND DUG, SATURATION DOWN TO BEDROCK TEAM CONT SOUTH ON EAST SIDE, TAR PATTIES FREQUENT BAND 3-6 m WIDE RUNNING ½ OF EAST SIDE OF SEGMENT. STAIN PRESENT MID TO HIGH TIDE MARK. REQUEST CONCENTRATION ON N. - NE END OF SEGMENT. THIS CUT AT N. END SOUTH SIDE HAS WEATHERED OIL, BUT HAS DONE LITTLE IN REMOVAL OF TAR PATTIES. CREW COULD CLEAN UP WITH RAKES + SHOVELS

REVISION NO. 03/21/90

# SHORELINE OILING SUMMARY

REVISION NO. 03/07/90

OG Mike Foget NOAA ~~USCG~~ Gary Shigenaka SEGMENT ST/ LA-33
BIO Richard Ambrose LAND REP James A Dorsey SUBDIVISION A (1 of 1)
EXXON Larry Olson ADEC John Hayes TIME 17 : 30 to 18 : 10
TEAM NO.: 11 TIDE LEVEL: 4.9 to 2.5 DATE 4 / 9 / 90
EST. SUBDIVISION LENGTH: 1592 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock Shown in the style CT2
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
SURFACE SEDIMENTS: R 10 % B 30 % C 40 % P 10 % G 5 % S 5 % M 0 % V 0 %
SLOPE: Lang 55 % Hang 40 % Vert 5 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W 0 m M 60 m N 0 m VL 510 m NO 1022 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | RC | RI | RM | RU | BLK/DK BRN | DK/MED BRN | OR/LT BRN | DRK/MED TN | LT TN | SU | UI | MI | UU |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | | | | | | | | | | | | |
| COAT | | | X | | | X | | | | | X | | |
| STAIN | | | | | | | | | | | | | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | X | | X | | | | | X | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | X | | | X | | | | | X | | |
| NO OIL | | | | | | | | | | X | | X | X |

PAVEMENT: H F (S) 1 sq. m by 3 cm
(PATTIES) TARBALLS 1 BAGS
NEAR SHORE SHEEN? NO BR (RW) SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | | | |
| Debris | | | |

DEBRIS COLLECTED ☐ YES ☒ NO
TYPE O
#BAGS 0

Photographs:
Roll No. ST-11-3
Frames 1-6

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm-cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CP | OR | CL | OF | NO | | UO | UC | BLK/DK BRN | DK/MED BRN | OR/LT BRN | DRK/MED TN | LT TN | SU | UI | MI | UU | | |
| 1 | 7 | | X | | | | 0-7 | X | | | | | | X | | X | | | | P,R |
| 2 | 20 | | | | | X | - | | X | | | | | | | X | | | | P,R |
| 3 | 10 | | | | | X | - | | X | | - | | | | | X | | | | G,R |
| 4 | 20 | | | | | X | - | | X | | | | | | X | | | | | G,P,C |
| 5 | 30 | | | | | X | - | | X | | | | | | | X | | | | P,S |
| | | | | | | | - | | | | | | | | | | | | | |

COMMENTS Oiling occurs on the northern and eastern side of the Island. The rock outcrop on the North end of the island had some moderate oiling. CT/P Patchy distribution of coated oil w/ some Pooling and asphalt Patties in the HITZ. On the eastern side of the Island the amount of oiling decreases from the Northern side to the Southern. A wider band (5m) CT/S stain w/ some asphalt patties was located on the North eastern Part and a thinner (1m) band of CT/S staining occurs on the South eastern Part of the Island



REVIEWED ___ DATE 4/13/90

## SHORELINE ECOLOGICAL SUMMARY

REVISION: 6/90

Segment ST / LA033 Subdivision A Date (mo / day / yr) 9-9-90

Time (24 hr) 1730 hrs Biologist Ambrosa

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

(B) Overall % cover of biota (% of segment): Dense 25 Moderate 20 Low 55

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

Photographs:
Roll No. ST-11-3
Frames 7

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | X | 2 | 2 | 2 | X | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | X | X | X | 3 | 3 | ③ | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | X | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | X | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | X | X | X | X | X | 2 | 2 | ② | 2 | |
| 3 | 3 | 3 | 3 | 3 | X | 3 | X | 3 | 3 | ③ | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**Wildlife Observations/ General Comments:** 13 crows.

Island consists of bedrock flats on N & S ends, with fairly dense cover, and cobble boulder beaches on E & W sides. East beach is very sparse; west beach has more cover, with moderate Fucus and barnacles and filamentous algae covering rocks in low intertidal.

**Ecological Considerations:** Recruitment by barnacles, mussels & Fucus, and littorine egg masses.

T11: No relevant observations

Near oil on north end, there was moderate cover in the lower and middle intertidal, which would be susceptible to runoff of oil, hot water or chemicals) or trampling. However, there is no vegetation close to the oiled areas.

The beach on the east side of the island, where there was also some oil, is very sparse and would not present any particular ecologically problems.

OG Mike Foget

SEGMENT [redacted] A-33

SUBDIVISION A

DATE 4 / 9 90

**CHECKLIST**

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

**LEGEND**

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 ⇒ Photo location, direction, and number

**[redacted]TCH MAP**

N

Scale

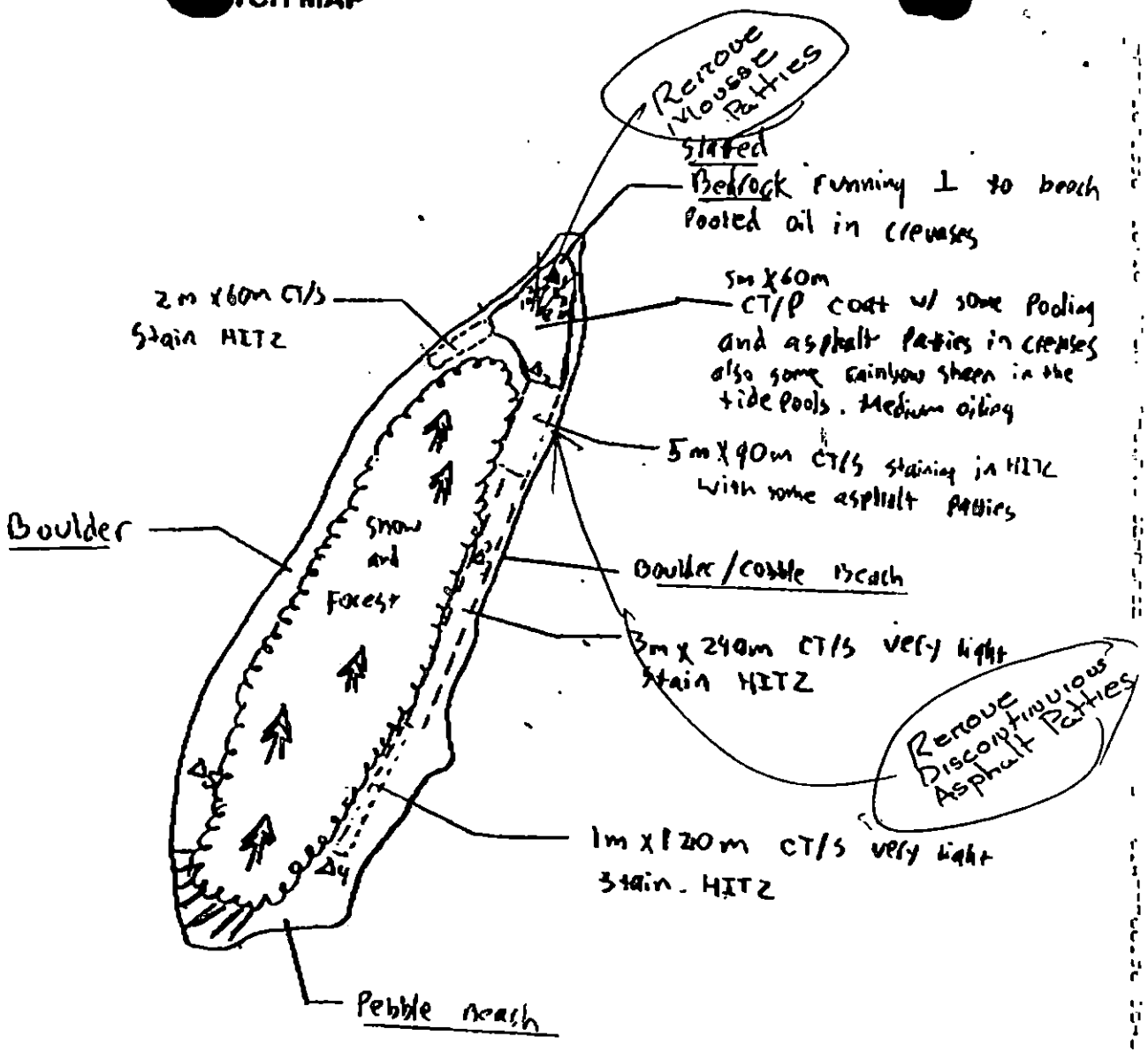
200m

Legend

/// - Bed Rock

(snow) - Snow

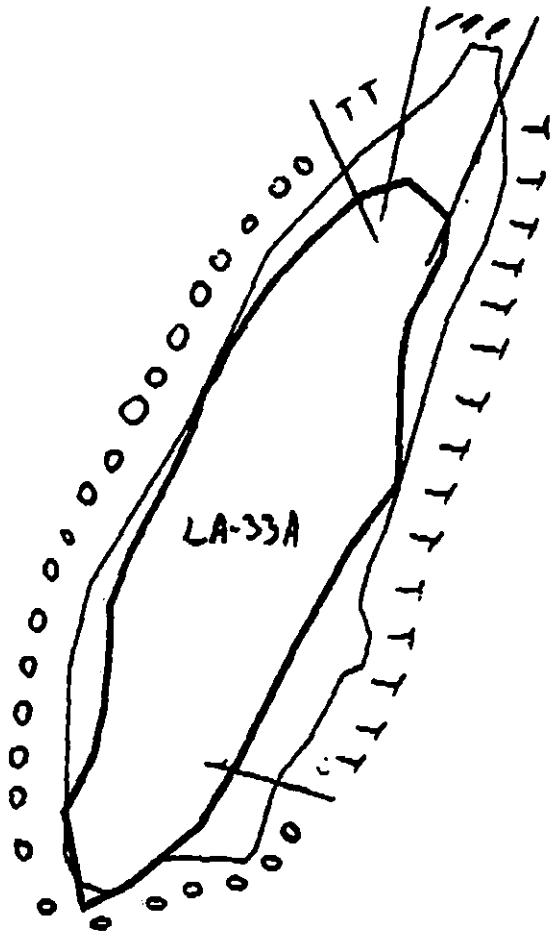
- Forest




Oil Character Length (m): AP 5 PO 5 CV - CT 60 ST 510 MS - PT - TB - FL 2 NO 1022

REVISED 8/90

LA-




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

LA-33A

ADEC Segment Length: 1328m

0 100 200 300
METERS

Map Key: PWS-439
Name: Mike Foget
Date: 4/9/90
Date Entered:

# ADDENDUM: SUBDIVISION CONSTRAINTS

## SEGMENT LA-33 SUBDIVISION A ( 1 of 1 )

| WORK WINDOW | |
|---|---|
| Manual Pickup<br>Tarmat Removal | **OPEN** |

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

| | | |
|---|---|---|
| 711 | **Subsistence: Deer Harvesting** | No constraint to manual pickup and tarmat removal. |

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 5/29/90.
ADEC Art Weiner Art Weiner
EXXON Andy Tarr
NOAA B Wescott
USCG G.A. Reiter G.A. Reiter

FOSC _____ DATE MAY 29 1990

Prepared By: Andrea Meyer WPK Date 5/27/90

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT LA 33 SUBDIVISION A DATED 5-29-90

MODIFICATION

1. REASON FOR MODIFICATION

MOUSSE AND SUBSURFACE OIL (OR) REMAIN ON POCKET BEACH ON NORTH SIDE OF ISLAND, AND COATS, MOUSSE, AND OR SEDIMENTS REMAIN ON THE NORTH HALF OF THE EAST SIDE OF ISLAND.

2. SUGGESTED ADJUSTMENT TO WORK PLAN

BIOREMEDIATE POCKET BEACH ON NORTH SIDE OF ISLAND AND NORTH HALF OF THE EAST SIDE OF THE ISLAND WHERE OIL IS PRESENT.

3. TIMING ISSUES

TII SUBSISTENCE AREA: DEER HARVESTING (8/15 to 2-28)

ADEC [signature]

EXXON - Not present - work was done ≈ 10 days ago.

USCG [signature] Supreme Tech, USCG - Concur 5/29

LAND MANAGER Leigh Carlson (If field rep is on scene)

WORK PLAN ADDENDUM

Segment PWS LA-33 Subdivision A Dated 6-04/90.

MODIFICATION

1. REASON FOR MODIFICATION

REQUEST FOR ADDITIONAL WORK EFFORT AS PER ATTACHED WORK ADDENDUM.

2. ADJUSTMENT TO WORK PLAN

ADD BIOREMEDIATION FOR THE POCKET BEACH ON THE NORTH SIDE OF THE ISLAND AND NORTH HALF OF THE EAST SIDE OF THE ISLAND.

SHPO APPROVAL NEEDED YES ✓ SHPO SIGNATURE [signature] 6/6/90
NO ____

TAG APPROVAL DATE 6/04/90.
ADEC [signature]
EXXON [signature] FOSC [signature] DATE 7 June 1990
NOAA [signature]
USCG [signature]

# WORK PLAN ADDENDUM

PWS
--gment LA-33 Subdivision A Dated 6-04/90.

MODIFICATION

1. REASON FOR MODIFICATION

REQUEST FOR ADDITIONAL WORK EFFORT AS PER ATTACHED WORK ADDENDUM.

2. ADJUSTMENT TO WORK PLAN

→ ADD BIOREMEDIATION FOR THE POCKET BEACH ON THE NORTH SIDE OF THE ISLAND AND NORTH HALF OF THE EAST SIDE OF THE ISLAND.

SHPO APPROVAL NEEDED YES ✓ SHPO SIGNATURE Charles E. Holman 6/6/90
NO ____

TAG APPROVAL DATE 6/04/90.
ADEC Kay Marie Rhein (POA)
EXXON Andy Tagg
NOAA Jason Talbott
USCG G.A. Reiter

FOSC [signature] DATE 7 June 1990

Add Bioremediation to Constraint Addendum
Tank 6/13/90

OG Mik[redacted]oger

SEGMENT ST/ CA-33

SUBDIVISION A

DATE 4 / 9 90

**CHECKLIST**

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

**LEGEND**

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 ⇐ Photo location, direction, and number

N

Scale

200m

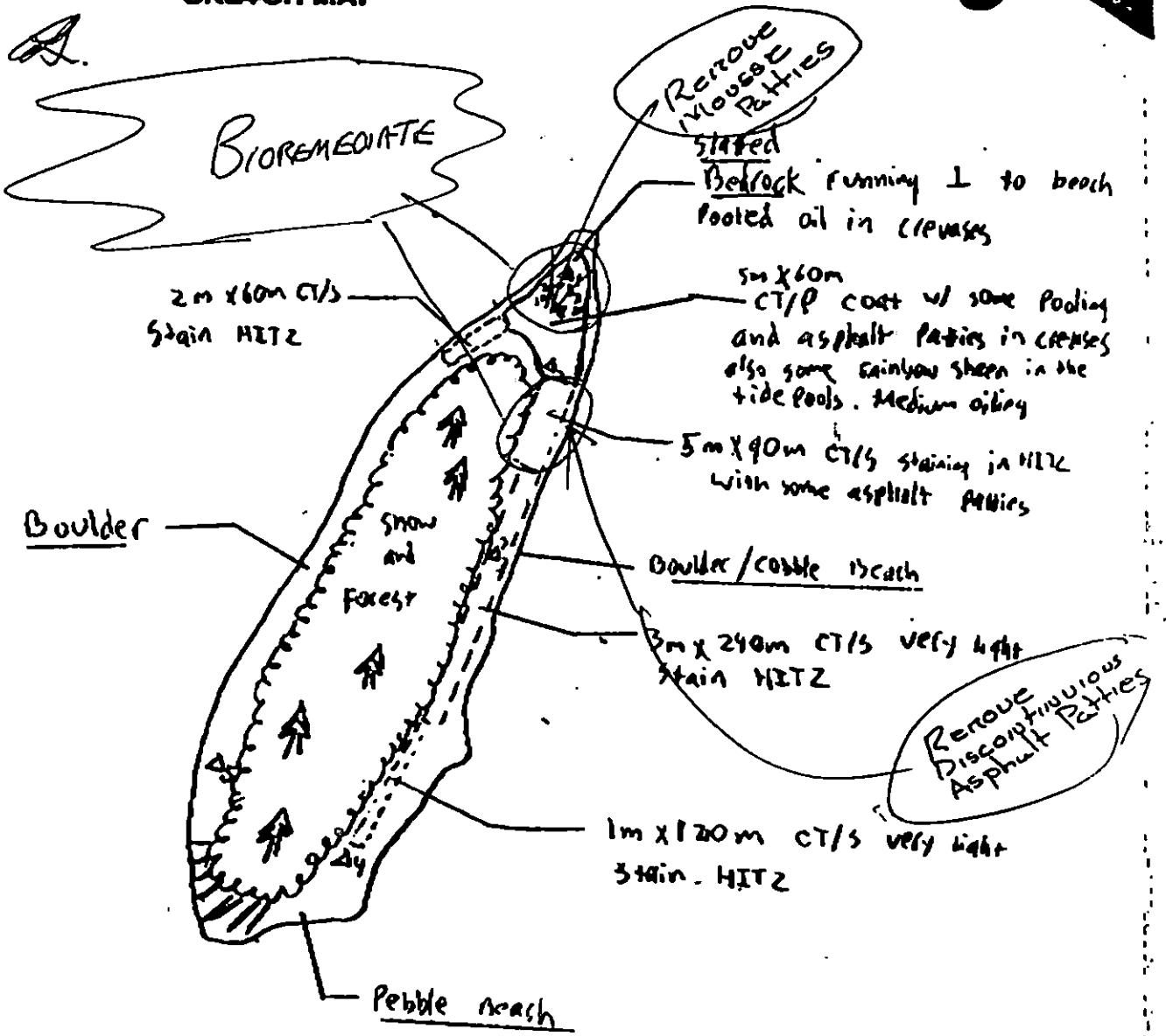
Legend

/// - Bed Rock

(snow) - Snow

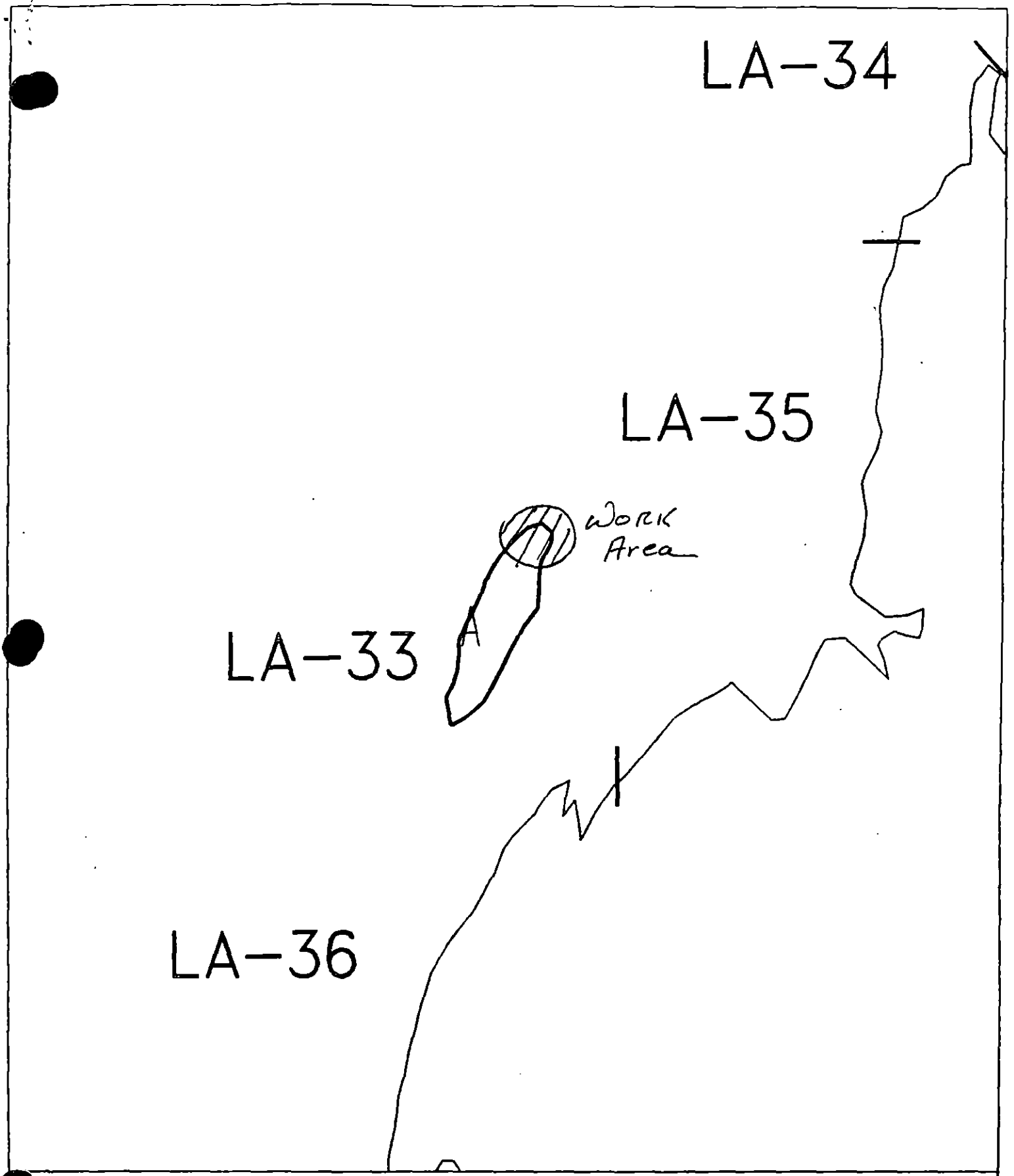
- Forest

## SKETCH MAP




Oil Character Length (mi): AP 5 PO 5 CV - CT 60 ST 510 MS - PT - TB - FL 2 NO 1022

REVISION 03/2000




EXXON

Exxon Company, USA
Map Key: PMS-LA-33
May 11, 1990

# ECOLOGY MAP
## SEGMENT LA-33
SUBDIVISION A (1 of 1)

METERS
0 364 728

★ Seabird Colony
▲ Eagle Nest

1 inch = 1195 feet

REVISION 1 6/13/90

# ADDENDUM: SUBDIVISION CONSTRAINTS

## SEGMENT LA-33 SUBDIVISION A ( 1 of 1 )

| WORK WINDOW | |
|---|---|
| Manual Pickup<br>Tarmat Removal | OPEN |
| Bioremediation | WORK PRIOR TO 8/15 |

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

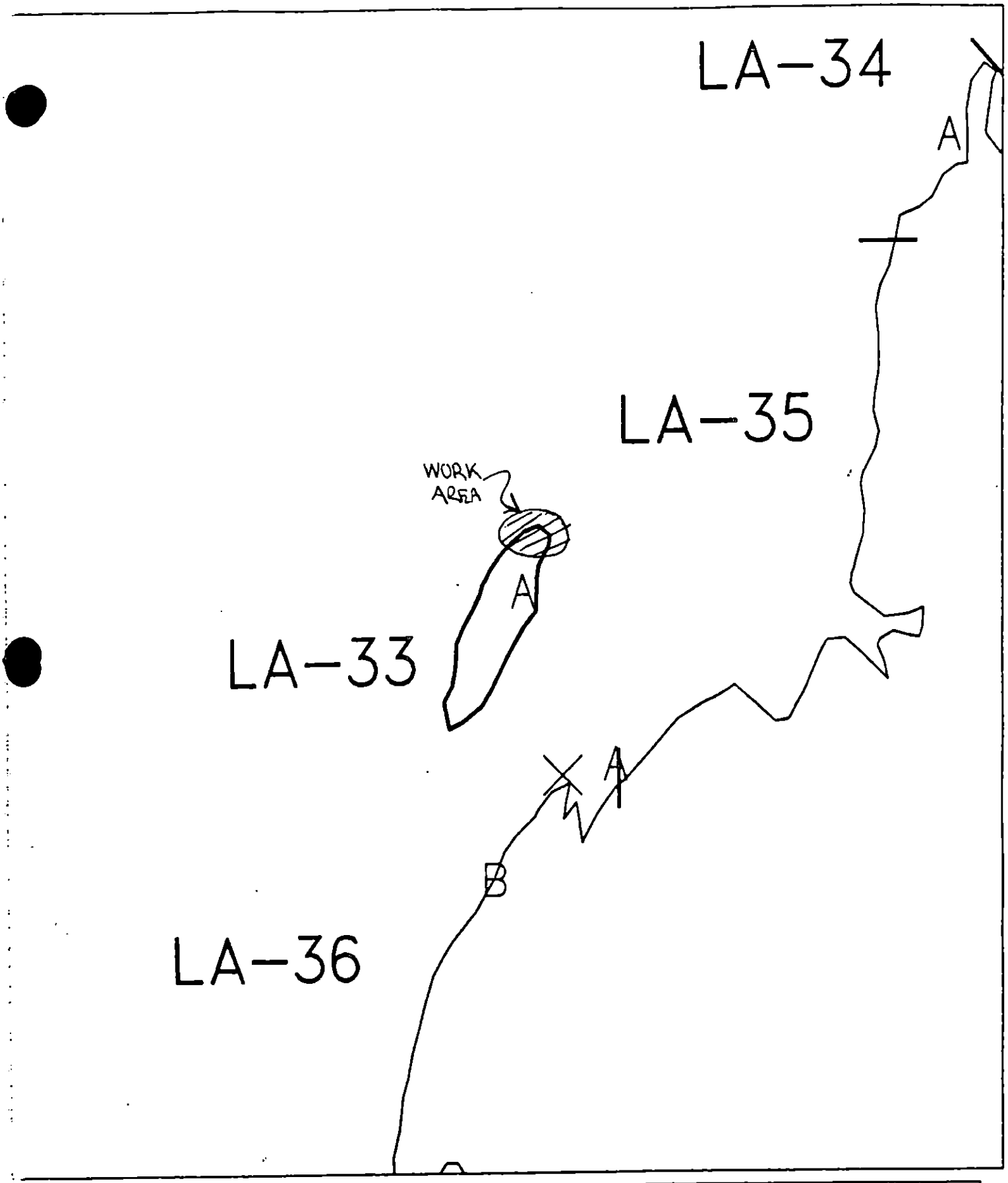
| | | |
|---|---|---|
| 7II | **Subsistence: Deer Harvesting** | Closed to bioremediation after 8/15. No constraint to manual pickup and tarmat removal. |

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC _____ Date 6/14/90

Prepared by _____ Date 6/14/90




EXXON

Exxon Company, USA
Map Key: PNS-LA-33
June 09, 1990

# ECOLOGY MAP

SEGMENT LA-33

SUBDIVISION A (1 of 1)

METERS

0 364 728

★ Seabird Colony

△ Active Eagle Nest

△ Inactive Eagle Nest

1 inch = 1195 feet

# SHORELINE EVALUATION

SEGMENT ST/ LA-34 SUBDIVISION A (1 OF 1) DATE 4/9/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7HH Subsistence area: Finfish harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

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

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

**OILING CATEGORIZATION:**

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 618 m
Subsurface Oil Observed: Yes____ No X Maximum Depth_____

**RECOMMENDATIONS:**

| | |
|---|---|
| X No Treatment Recommended | _____Snare/Absorbent Booms |
| _____Treatment Recommended | _____Oil Snares (pom poms) |
| _____Manual Pickup | _____Absorbents (pads,rolls,etc) |
| _____Bioremediation | _____Spot Washing:_____Wands |
| _____Tarmat: _____Breakup | _____ Beach Cleaner |
| _____Removal | _____Other (see comments) |

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 4/20/90
ADEC ART WEINER Art Weiner
EXXON ANDY TEAL
NOAA Burl Wescott
USCG KENNETH KEANE

FOSC: _____ DATE: 5-9-90

# PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

| | | |
|---|---|---|
| 1A | | Salmon stream mouth - fry outmigration (3/1 to 5/15) |
| 1B | | Salmon stream mouth - spawning (7/10 to 8/31) |
| | | No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits. |
| 1C | | Salmon fry nursery area (4/31 to 7/31) |
| 1D | | Esther Hatchery release (4/15 to 6/1) |
| 1E | | Main Bay Hatchery release (4/20 to 5/10) |
| 1F | | Sawmill Bay Hatchery release (4/15 to 6/1) |
| 1G | | Cannery Creek Hatchery release (4/21 to 6/1) |
| 1H | | Remote release site |
| 1I | | Gill net area (6/7 to 6/31) |
| 1J | | Purse seine area (7/20 to 9/30) |
| 1K | | Purse seine hook-off (7/20 to 9/30) |
| 1L | | Set net sites (6/11 to 7/25) |
| | | For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints. |
| 2M | | Herring spawning (4/1 to 6/15) |
| | | Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations. |
| 3N, 3P | | Harbor seal and sea lion pupping (5/15 to 7/1) |
| 3O, 3Q | | Harbor seal and sea lion molting (8/15 to 9/15) |
| | | Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. |
| 5R | | Seabird colony (5/1 to 9/1) |
| | | Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment. |
| 5S | | Shorebird/waterfowl concentration (4/1 to 5/15) |
| | | Restrict all activity to essential minimum, especially air traffic. |
| 5T | | All Bald Eagle nests (3/1 to 6/1) |
| | | Active Bald Eagle nests (3/1 to 9/1) |
| | | Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates. |
| 6U | Recreation: | Tent sites (6/1 to 9/15) |
| 6V | | Anchorages (6/1 to 9/15) |
| 6W | | Forest Service cabins (6/1 to 9/15) |
| 6X | | Lodge (6/1 to 9/15) |
| 6Y | | Special use destination |
| 7Z | Subsistance area: | Salmon harvesting (5/1 to 9/30) |
| 7HH | | Finfish harvesting |
| 7II | | Deer harvesting (8/15 to 2/28) |
| 7JJ | | Invertebrate harvesting |
| | | For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints. |

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA-34 SUBDIVISION: DATE 4/9/90

~~USCG~~ NOAA
NAME GARY SHIGENAKA SIGNATURE Gary Shigenaka

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS
SEGMENT CONSISTED OF A ROCKY SHORELINE INTERSPERSED WITH COBBLE/BOULDER BEACHES, LOCATED ALONG THE WESTERN SHORE OF LATOUCHE ISLAND. A PORTION OF THE SEGMENT WAS ADJACENT TO AN ABANDONED MINE SITE. NO OILING WAS OBSERVED ALONG THE SEGMENT.

**ADEC**
NAME John Hayes SIGNATURE

☑ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS
No oil was observed on this segment, segment had a history of light oiling in two areas, that was either snow covered or weathered. No treatment recommended.

**LAND MANAGER**
NAME SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

# SHORELINE OILING SUMMARY

REVISION NO. 03/28/90

OG Mike Foget NOAA Gary Shigenaka SEGMENT ST/ LA-34
BIO Richard Ambrose LAND REP [redacted] SUBDIVISION A (1 of 1)
EXXON Larry Olsen ADEC John Hayes TIME 17:00 to 17:20
TEAM NO.: 11 TIDE LEVEL: 6.0 to 4.9 DATE 4 / 9 / 90
EST. SUBDIVISION LENGTH: 611 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock supra ZTZ covered by snow
SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
SURFACE SEDIMENTS: R 60 % B 15 % C 10 % P 10 % G 5 % S 0 % M 0 % V 0 %
SLOPE : Lang 30 % Hang 30 % Vert 40 % WAVE EXPOSURE: ☐ Low ☒ Mod ☐ High
OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 611 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AC | AB | P | R | | | | | | SU | UI | MI | U |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | | | | | | | | | | | | |
| COAT | | | | | | | | | | | | | |
| STAIN | | | | | | | | | | | | | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | | | | | | | | | | |
| NO OIL | | | | | | | | | | X | X | X | X |

PAVEMENT: H F S 0 sq. m by 0 cm
PATTIES / TARBALLS 0 BAGS
NEAR SHORE SHEEN? (NO) BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | | | |
| Debris | | | |

DEBRIS COLLECTED ☐ YES ☒ NO
TYPE 0
#BAGS 0

Photographs:
Roll No. 0
Frames 0

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm-cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OS | NO | | UO | UC | | | | | | SU | UI | MI | U | | |
| 1 | 40 | | | | | X | - | | X | | | | | | X | | | | | P, G, S |
| 2 | 30 | | | | | X | - | | X | | | | | | X | | | | | P |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |

COMMENTS No oiling was observed in this segment. Shore zone consisted of Bed Rock / Boulders with a few pocket cobble / pebble beaches



REVIEWED M.F. DATE 4/11/90

# SHORELINE ECOLOGICAL SUMMARY

REVISION 10/28/91

Segment ST / LA034 Subdivision A Date (mo / day / yr) 9/9/90

Time ( 24 hr ) 1700 Biologist Ambrose

( A ) Substrate type and % of segments:
( 1 ) Bedrock 60 ( 2 ) Boulder 15 ( 3 ) Cobble 10 ( 4 ) Pebble 10 ( 5 ) Sand 5 ( 6 ) Silt —

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

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

Photographs:
Roll No. —
Frames —

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | X | X | X | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | X | 3 | X | 3 | X | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | X | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | X | X | X | 2 | 2 | ② | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | X | X | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

Wildlife Observations/ General Comments: 4 gulls, 4 dolphins (unknown species).
Very short section with a few pocket beaches, which had moderate filamentous green algae in lower intertidal, and bedrock walls with moderate Fucus in mid tidal zone.

Ecological Considerations:
711, 7HH: No relevant observations.
No oil observed.

OO Mike [redacted]yet

SEGMENT ST/ LA-34

SUBDIVISION A

DATE 4/9/90

## SKETCH MAP

**CHECKLIST**

- N Arrow
- Approx. Scale
- Seg/Sub Bndry
- Oil Obsl.
- Width
- Length
- % Cover
- Substrate Character
- Elev. HWL/LWL
- SSL
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

**LEGEND**

1 ▲
Pit - No Subsurface Oil

2 ▲
Pit - Subsurface Oil

CT/C
Continuous Distribution

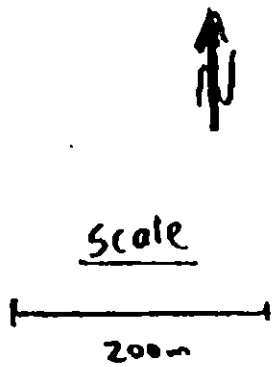
CT/B
Broken Distribution

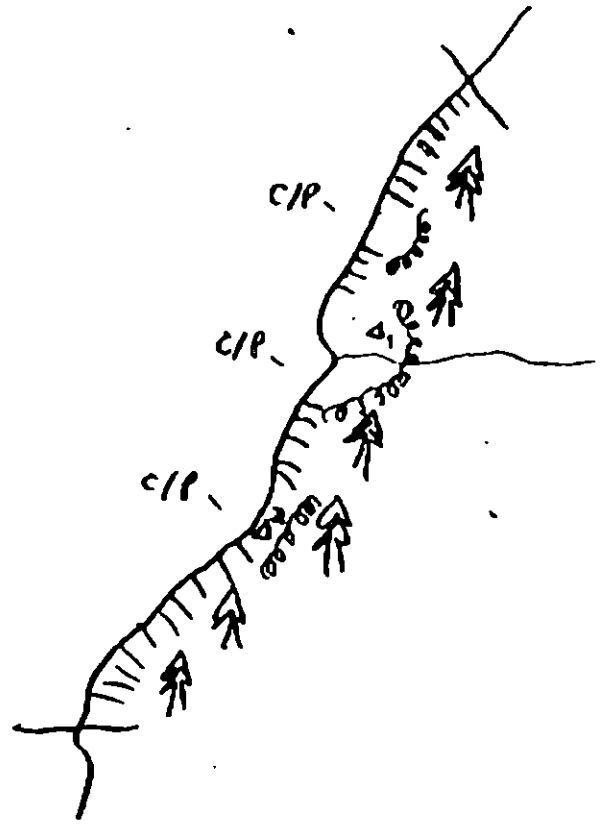
CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oiled Vegetation

1 ⇨
Photo location, direction, and number



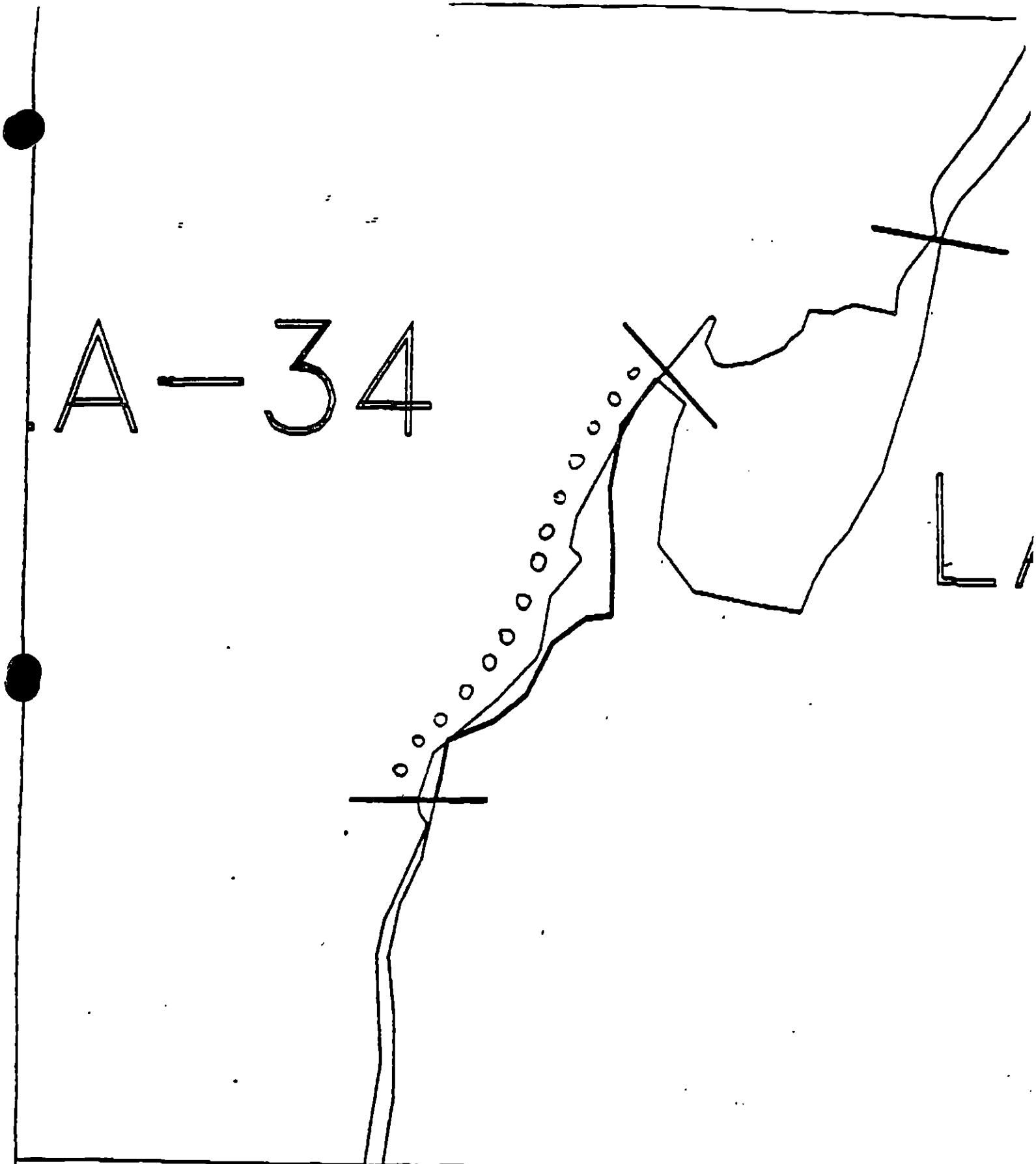

Legend

//// - Boulder / Bedrock

200m - Snow in the Supra IT2

- trees

Oil Character Length (m): AP___ PO___ CV___ CT___ ST___ MS___ PT___ TB___ FL___ NO 611




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

LA-34A

ADEC Segment Length: 618m

0 100 200 300
METERS

N

Map Key: PWS-448
Name: Mike Foget
Date: 4/9/90
Date Entered:

# SHORELINE EVALUATION

SEGMENT ST/ LA-36 SUBDIVISION A (1 OF 2) DATE 4/5/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**
ADF&G anadromous stream no. 226-40-16764
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
4GG Alaska State Parks
5T All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
See attached Ecological Constraint sheet for specific constraints and contacts.

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

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

**OILING CATEGORIZATION:**

Wide 0 m: Medium 74 m: Narrow 0 m: V.Light 41 m: No Oil 363 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 5 cm

**RECOMMENDATIONS:**

| | |
|---|---|
| ____No Treatment Recommended | ____Snare/Absorbent Booms |
| X Treatment Recommended | ____Oil Snares (pom poms) |
| ____Manual Pickup | ____Absorbents (pads,rolls,etc) |
| X Bioremediation | ____Spot Washing: ____Wands |
| ____Tarmat: ____Breakup | ____ Beach Cleaner |
| ____Removal | ____Other (see comments) |

COMMENTS: Recommend bioremediation of areas shown on sketch map. Work should be conducted between 6/1 and 7/10 as a result of eagle nesting constraints and spawning stream constraints. (USFWS should be contacted prior to treatment to determine if eagle nest site has become active.

TAG COMMENTS: _____

TAG APPROVAL DATE: 4/19/90.
ADEC ART WEINER
EXXON AMOCO TGA
NOAA Bud Wescott
USCG KENNETH KEENE
FOSC: Do not treat DATE: 5-1-90

# PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

[redacted] (7/10 to 8/31)

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

| | |
|---|---|
| 1C | Salmon fry nursery area (4/31 to 7/31) |
| 1D | Esther Hatchery release (4/15 to 6/1) |
| 1E | Main Bay Hatchery release (4/20 to 5/10) |
| 1F | Sawmill Bay Hatchery release (4/15 to 6/1) |
| 1G | Cannery Creek Hatchery release (4/21 to 6/1) |
| 1H | Remote release site |
| 1I | Gill net area (6/7 to 6/31) |
| 1J | Purse seine area (7/20 to 9/30) |
| 1K | Purse seine hook-off (7/20 to 9/30) |
| 1L | Set net sites (6/11 to 7/25) |

For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

2M — Herring spawning (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to 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 (6/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

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

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

5T — [redacted]
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 | [redacted] | |
| 7HH | | Finfish harvesting |
| 7II | [redacted] | |
| 7JJ | | Invertebrate harvesting |

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

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA-36 SUBDIVISION: A DATE 4/5/90

USCG NOAA
NAME GARY SHIGENAKA SIGNATURE Gary Shigenaka

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

SUBDIVISION CONSISTED OF A NORTHERLY FACING COBBLE BEACH ALONG THE WEST-CENTRAL SHORE OF LATOUCHE ISLAND, EAST OF CHICKEN ISLAND. THE SUBDIVISION WAS BISECTED BY AN ANADROMOUS STREAM IN WHICH DAVIES AND MOORE HAD INSTALLED FISH SAMPLING APPARATUS. NORTH OF THE STREAM, NO EVIDENCE OF OILING WAS FOUND. ON THE SOUTH SIDE OF THE STREAM, EVIDENCE OF OILING WAS OBSERVED IN THE MID- TO UPPER INTERTIDAL ZONE. SHEEN WAS SEEN IN TIDAL DRAINAGE OF THIS AREA, AND GLOBULAR OIL ON WATER WAS FOUND BENEATH COBBLES. ALTHOUGH ESTIMATION OF THE DEPTH OF PENETRATION OF THE OIL INTO SEDIMENTS WAS DIFFICULT DUE TO RAPID FILLING OF PITS WITH WATER, IT WAS NOTED TO BE APPROXIMATELY 5 CM. SCULPINS OR OTHER SIMILAR FISH WERE SEEN IN A SHEENED TIDEPOOL; APPARENTLY ROBUST POPULATIONS OF AMPHIPODS WERE FOUND IN RELATIVELY HEAVILY OILED SURFACE SEDIMENTS UNDER ROCKS. A MUSSEL BED WAS LOCATED IN THE LOWER PORTION OF THE AFFECTED AREA. THE APPROXIMATE SIZE OF THE IMPACTED AREA WAS 5-10 M ACROSS TIDAL ZONES, AND 30 M IN LENGTH. IN THE ADJACENT BOULDERS LYING TO THE SOUTH, WEATHERED SPLASHES WERE OBSERVED. NO OILING WAS SEEN IN THE IMMEDIATE VICINITY OF OR DIRECTLY IN THE STREAM. HOWEVER, THE STREAM AND THE MUSSEL BEDS REPRESENT LIKELY CONSTRAINTS FOR TREATMENT OPTIONS.

ADEC
NAME John Hayes SIGNATURE

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

Recommend beach assessment team + ANAD SCAT team, segment subdivision has anadromous stream with oiling within 25 yds. of stream. See sketch map. We dug pits on both banks of stream in upper + middle T2's & found no surface or ~~sub~~ S.S. contamination. Oiling is isolated to M+U T2's. Most of the oiling was in U1T2 in a band aprx 30m L x 5m W, sheen was bleeding down to M1T2. S.S. penetration was aprx 2cm. in M1T2 - Although interstitial water filling pits made it difficult to determine extent of S.S. oiling. Treatment recommended after assessment from ANAD SCAT team + F+G. rep.

LAND MANAGER
NAME SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Sol.

# SHORELINE OILING SUMMARY

REVISION NO. 03/28/90

OG Mike Foget NOAA/OSSD Gary Shigenaka SEGMENT ST/ LA-36
BIO Richard Ambrose LAND REP Rita A. Maglia SUBDIVISION A (1 OF 2)
EXXON Larry Olson ADEC John Hayes TIME 17:10 to 18:00
TEAM NO.: 11 TIDE LEVEL: 1.0 to 1.0 DATE 4/5/90
EST. SUBDIVISION LENGTH: 200 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock Snow in the Supra ZTZ
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
SURFACE SEDIMENTS: R 10 % B 35 % C 35 % P 15 % G 15 % S — % M — % V — %
SLOPE: Lang 100 % Hang — % Vert — % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W — m M 30 m N — m VL 15 m NO 155 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PC | PB | P | A | BRN/BLK | BRN/ORG | ORG | ORG/YEL | LT/SHN | SU | U | M | L |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | | X | | | X | | | | | X | | |
| COAT | | | | | | | | | | | | | |
| STAIN | | | | X | | | | | X | | X | | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | X | | X | V | | | | | X | V | |
| NO OIL | | | | | | | | | | X | | | X |

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

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | | | |
| Debris | | | |

DEBRIS COLLECTED ☐ YES ☒ NO
TYPE —
#BAGS —

Photographs:
Roll No. SF-11-2
Frames 9-12

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | | UO | UC | BRN/BLK | BRN/ORG | ORG | ORG/YEL | LT/SHN | SU | U | M | L | | |
| 1 | 15 | | | | | X | - | | X | | | | | | | | X | | | C, G |
| 2 | 20 | | | | | X | - | | | | | | | | X | | | | | P, C |
| 3 | 15 | | | | | X | - | | | | | | | | X | | | | | P, C ($H_2O$ on Scm) |
| 4 | 15 | | | | X | | 0-2 | X | | | X | | | | | X | | | | C, G ($H_2O$ on Scm) |
| 5 | 15 | | | | | X | - | | | | | | | | | | X | | | C, G, C |
| 6 | 15 | | | | | X | - | | | | | | | | | X | | | | G, C |

COMMENTS Oiling in this subsegment consisted mostly of a CT/P cover w/ a medium distribution in the MIZ. the patch is a 5m X 30m size with a rainbow and globular sheen underneath the cobbles. Below this in the MIZ is a area 10m X 30m with surface rainbow sheen and no subsurface sheen. There is also some CT/S staining in the MIZ among the Double Rock outcrop about 15m x 0.3m in size

 REVIEWED [signature] DATE 4-9-90

## SHORELINE OILING SUMMARY (PAGE 2 of 2)

REVISION 03/23/90

SEGMENT ST/ LA-36 SUBDIVISION A (1 OF 2)

## SUBSURFACE OIL (CONTINUED)

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | (CM-CM) | UO | UC | | | | | | SU | UI | MI | LI | | |
| 7 | 15 | | | | | X | - | | X | | | | | | | | X | | | G, P, G (H2O on Surface) |
| 8 | 30 | | | | | X | - | | X | | | | | | | | X | | | G, C, G |
| 9 | 25 | | | | | X | - | | X | | | | | | | X | | | | C, P, C |
| 10 | 20 | | | | | X | - | | X | | | | | | | X | | | | P, C |
| 11 | 15 | | X | | | | 0-5 | | X | | X | | | | | X | | | | C, G, C |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |

COMMENTS

REVIEWED JW DATE 4-9-90

SEGMENT LH-36

SUBDIVISION A

DATE 9 / 5 90

**CHECKLIST**

- ___ N Arrow
- ___ Approx. Scale
- ___ Seg/Sub Bndry
- ___ Oil Dist.
  - Width
  - Length
  - % Cover
- ___ Substrate Character
- ___ Est. HWL/LWL
- ___ SSI
- ___ Profile Location(s)
- ___ Profile(s)
- ___ Pit Location(s)
- ___ Photo Location(s)

**LEGEND**

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 ⟶ Photo location, direction, and number

**SKETCH MAP**

N

Scale 20 m

15m X 0.3m CT/S discontinous tar stain along vertical boulder / Rock outcrop

Low angle B/C Beach

Bedrock/ Boulder outcrop

CT/P tar cover Patchy Medium 5m x 30m. Free oil Globules underneath cobble Rainbow sheen

10m x 30m surface rainbow sheen, no sub-surface oil

Δ0 Δ1 Δ2 Δ3 Δ4 Δ5 Δ6 Δ7 Δ8

Legend

snow covered supra I/T

trees

Oil Character Length (m): AP — PO — CV 30 CT — ST 15 MS — PT — TB — FL 30 NO 165

REVISION/COMMENTS

## SHORELINE ECOLOGICAL SUMMARY

REVISION: 09/87

Segment ST / LA036 Subdivision A Date (mo / day / yr) 4/5/90

Time ( 24 hr ) 1710 hrs Biologist Ambrose

(A) Substrate type and % of segments:
(1) Bedrock 10 (2) Boulder 25 (3) Cobble 35 (4) Pebble 15 (5) Sand 15 (6) Silt –

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

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

Photographs:
Roll No. –
Frames –

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | X | X | X | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | X | X | X | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | (4) | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | X | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | X | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | X | 2 | X | 2 | X | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | X | X | X | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**Wildlife Observations/ General Comments:** 4 Harlequin ducks, 5 unid. sea birds, 1 gull. Main beach in cove had cobble/pebble substrate with generally sparse cover, except for dense mussel bed (see Addendum). Boulders/cobbles on either side of beach had moderate to dense cover.

**Ecological Considerations:**

711, 7Z, 5T-2, 466: No eagles or nests seen.

A possibly anadromous stream bisects cove, with oil found within 25 m on south side. Dense mussel bed (and scattered mussels) occurs between oiled area and water – would be susceptible to trampling (see Addendum).

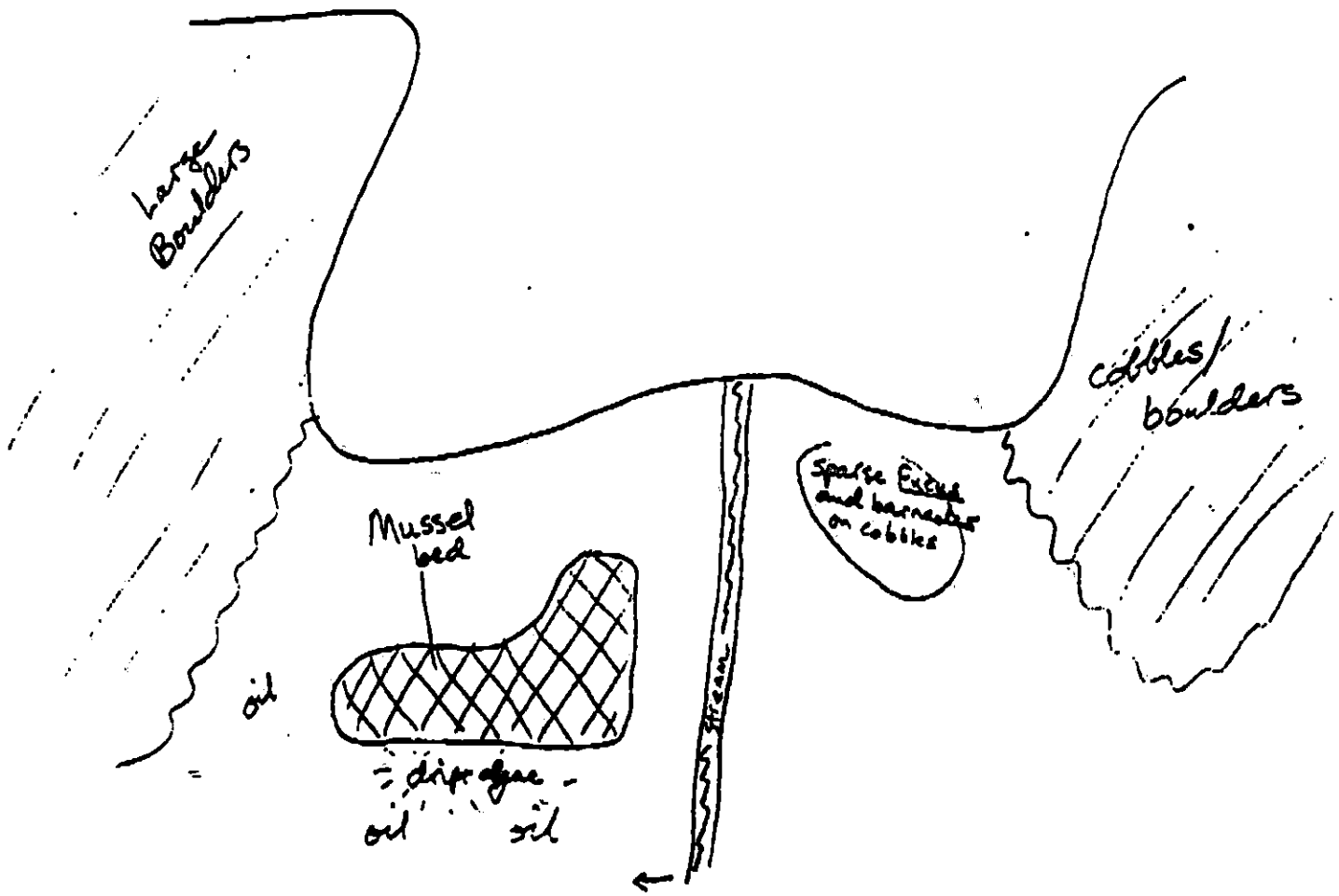
Segment LH056H

Addendum

Rosario

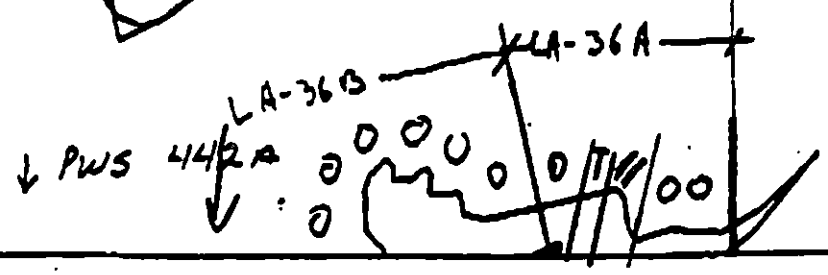
4/5/90

Oil found in the cove that constitutes subdivision A, which also has an anadromous stream and an extensive mussel bed.




Note: Sparse Mytilus occurs throughout area south of stream






XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
0000 No. 0 : 1

# LA-36

ADEC Segment Length: 1872m

0 100 200 300

Map Key: PWS-442b
Name: Mike Foget
Date: 4/5/90
Date Entered:

# SHORELINE EVALUATION

SEGMENT ST/ LA-36 SUBDIVISION B (2 OF 2) DATE 4/5/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**

4GG Alaska State Parks
5T All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
See attached Ecological Constraint sheet for specific constraints and contacts.

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

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

**OILING CATEGORIZATION:**

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 32 m: No Oil 1362 m
Subsurface Oil Observed: Yes ____ No X Maximum Depth ____

**RECOMMENDATIONS:**

| | |
|---|---|
| X No Treatment Recommended | ____Snare/Absorbent Booms |
| ____Treatment Recommended | ____Oil Snares (pom poms) |
| ____Manual Pickup | ____Absorbents (pads,rolls,etc) |
| ____Bioremediation | ____Spot Washing: ____Wands |
| ____Tarmat: ____Breakup | ____ Beach Cleaner |
| ____Removal | ____Other (see comments) |

COMMENTS: ____

TAG COMMENTS: ____

TAG APPROVAL DATE: 4/19/90.
ADEC ART WEINER
EXXON AMY TAR
NOAA Burl Wescott
USCG KENNETH KOTAS
FOSC: [signature] DATE: 5-9-90

# PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

| | | |
|---|---|---|
| 1A | | Salmon stream mouth - fry outmigration (3/1 to 5/15) |
| 1B | | Salmon stream mouth - spawning (7/10 to 8/31) |
| | | No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits. |
| 1C | | Salmon fry nursery area (4/31 to 7/31) |
| 1D | | Esther Hatchery release (4/15 to 6/1) |
| 1E | | Main Bay Hatchery release (4/20 to 5/10) |
| 1F | | Sawmill Bay Hatchery release (4/15 to 6/1) |
| 1G | | Cannery Creek Hatchery release (4/21 to 6/1) |
| 1H | | Remote release site |
| 1I | | Gill net area (6/7 to 8/31) |
| 1J | | Purse seine area (7/20 to 9/30) |
| 1K | | Purse seine hook-off (7/20 to 9/30) |
| 1L | | Set net sites (6/11 to 7/25) |
| | | For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints. |
| 2M | | Herring spawning (4/1 to 6/15) |
| | | Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations. |
| 3N, 3P | | Harbor seal and sea lion pupping (5/15 to 7/1) |
| 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 8/1) |
| | | Active Bald Eagle nests (3/1 to 9/1) |
| | | Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates. |
| 6U | Recreation: | Tent sites (6/1 to 9/15) |
| 6V | | Anchorages (6/1 to 9/15) |
| 6W | | Forest Service cabins (6/1 to 9/15) |
| 6X | | Lodge (6/1 to 9/15) |
| 6Y | | Special use destination |
| 7Z | Subsistence area: | Salmon harvesting (5/1 to 9/30) |
| 7HH | | Finfish harvesting |
| 7II | | Deer harvesting (8/15 to 2/28) |
| 7JJ | | Invertebrate harvesting |
| | | For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints. |

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA-36 SUBDIVISION: B DATE 4/5/90

~~USCG~~ NOAA

NAME GARY SHIGENAKA SIGNATURE Gary Shigenaka

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

SUBDIVISION WAS A COBBLE BEACH SHORELINE THAT WAS A CONTINUATION OF LA-36A TO THE SOUTH. WEATHERED SPLASHES OF STAIN WERE OBSERVED VERY SPORADICALLY ON COBBLE ROCKS IN THE UPPER INTERTIDAL ZONE, WITH SEVERAL OF THESE OCCURRENCES ON THE UNDERSIDES OF COBBLES. THIS SUGGESTED THAT WEATHERING OF EXISTING STAIN WAS READILY OCCURRING TO EXPOSED FACES. NEAR THE SOUTHERN TERMINUS OF THE SUBDIVISION, A FULL SKELETON OF A SEA OTTER WAS FOUND IN THE UPPER INTERTIDAL. THE CARCASS WAS WELL-DECOMPOSED. NO EVIDENCE OF OILING WAS SEEN ON THE REMAINS.

THE SUPRATIDAL WAS COVERED BY SNOW AND WAS NOT ASSESSED.

**ADEC**

NAME John Hayes SIGNATURE

☑ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Sporadic tar pits + stains observed. Beach was well weathered and most staining was on lee side of boulders and under cobbles. No S.S. oiling observed in test pits dug.

**LAND MANAGER**

NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

# SHORELINE OILING SUMMARY

REVISION NO. 0

OG Mike Foget NOAA Gary Shigenaka SEGMENT ST/ LA-36
BIO Richard Ambrose LAND REP SUBDIVISION B (2 of 2)
EXXON Larry Olsen ADEC John Hayes TIME 15:00 to 18:30
TEAM NO.: 11 TIDE LEVEL: 1.0 to DATE 4/5/90
EST. SUBDIVISION LENGTH: 1780 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☒ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock supra intertidal is covered by spo
SURVEYED FROM: ☒ Foot ☒ Boat ☐ Heli WORKING DIRECTION: N to S
SURFACE SEDIMENTS: R 5 % B 30 % C 35 % P 15 % G 15 % S — % M — % V —
SLOPE: Lang 100 % Hang — % Vert — % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W — m M — m N — m VL 30 m NO 1769 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | rc | ra | rp | rs | | | | | | su | ui | mi | li |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | | | | | | | | | | | | |
| COAT | | | | | | | | | | | | | |
| STAIN | | | | X | | X | | | | | X | | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | | | | | | | | | | |
| NO OIL | | | | | | | | | | X | | X | X |

PAVEMENT: H F S — sq. m by — sq. m

PATTIES / TARBALLS — BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | | | |
| Debris | | | |

DEBRIS COLLECTED ☐ YES ☒ NO

TYPE

#BAGS

Photographs:

Roll No. —

Frames —

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm-cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OP | NO | | UO | UC | | | | | | su | ui | mi | li | | |
| 1 | 5 | | | | | X | - | | X | | | | | | | | X | | | C, G, M |
| 2 | 15 | | | | | X | - | | X | | | | | | | X | - | | | C, G, M |
| 3 | 15 | | | | | X | - | | X | | - | | | | | X | | | | C, G, M |
| 4 | 20 | | | | | X | - | | X | | | | | | X | | | | | G |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |

COMMENTS

Only some very light sporadic staining was observed in this segment. A 1m x 30m strip very light stain occurred in the NE-2 zone where oil appeared to be weathered. A few other stains were also observed in the NE-2 along the shoreline. The shore zone consists mostly of a low energy boulder beach w/ a rock outcrop to the North.



REVIEWED BW DATE 4-9-90

SEGMENT ST/ CA-36

SUBDIVISION D

DATE 9 / 5 80

**CHECKLIST**

- __ Al Areas
- __ Approx. Scale
- __ Segment Study
- __ Oil Dist.
- __ 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/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

Oiled Vegetation

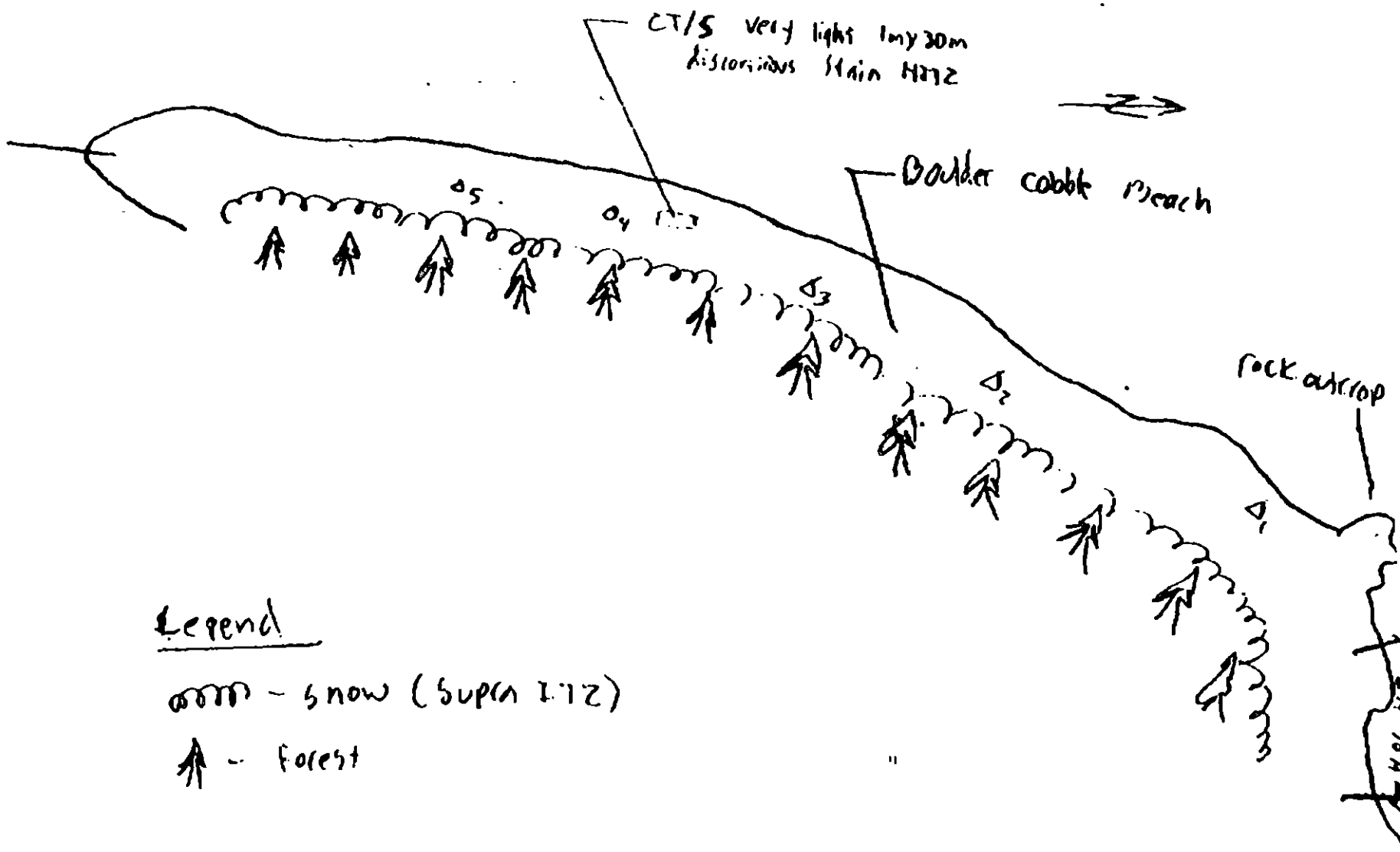
1 ⇔

Photo location, direction, and number

SKETCH MAP CA

scale

200 m




Oil Character Length (m): AP — PO — CV — CT — ST 30 MS — PT — TB — FL — NO 1769

## SHORELINE ECOLOGICAL SUMMARY

REVISION: 09/21

Segment ST / LA036 Subdivision B Date (mo / day / yr) 4/5/90

Time ( 24 hr ) _____ Biologist Ambrose

( A ) Substrate type and % of segments:
( 1 ) Bedrock 5 ( 2 ) Boulder 30 ( 3 ) Cobble 35 ( 4 ) Pebble 15 ( 5 ) Sand 15 ( 6 ) Silt —

( B ) Overall % cover of biota ( % of segment ): Dense 5 Moderate 30 Low 65

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

Photographs:
Roll No. —
Frames —

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | X | X | 2 | 2 | 2 | 2 | 2 | 3 | 2 | |
| 3 | 3 | 3 | 3 | X | 3 | X | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | X | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | X | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

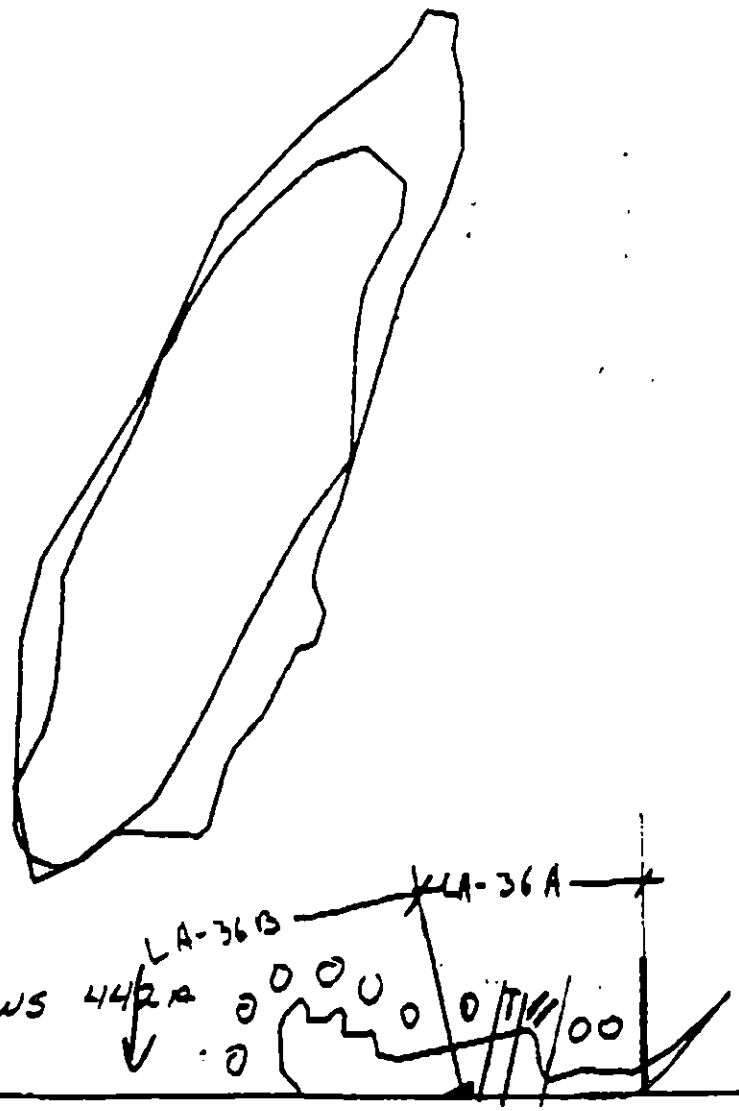
**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | X | X | 2 | 3 | 2 | X | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | X | 3 | X | 3 | X | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**Wildlife Observations/ General Comments:** 1 dead otter (mostly skeleton) in upper intertidal — no sign of oiling.
Moderate cover in mid intertidal, otherwise sparse.

**Ecological Considerations:**

711, 7Z, 5T-2, 466: No eagles or nests seen.



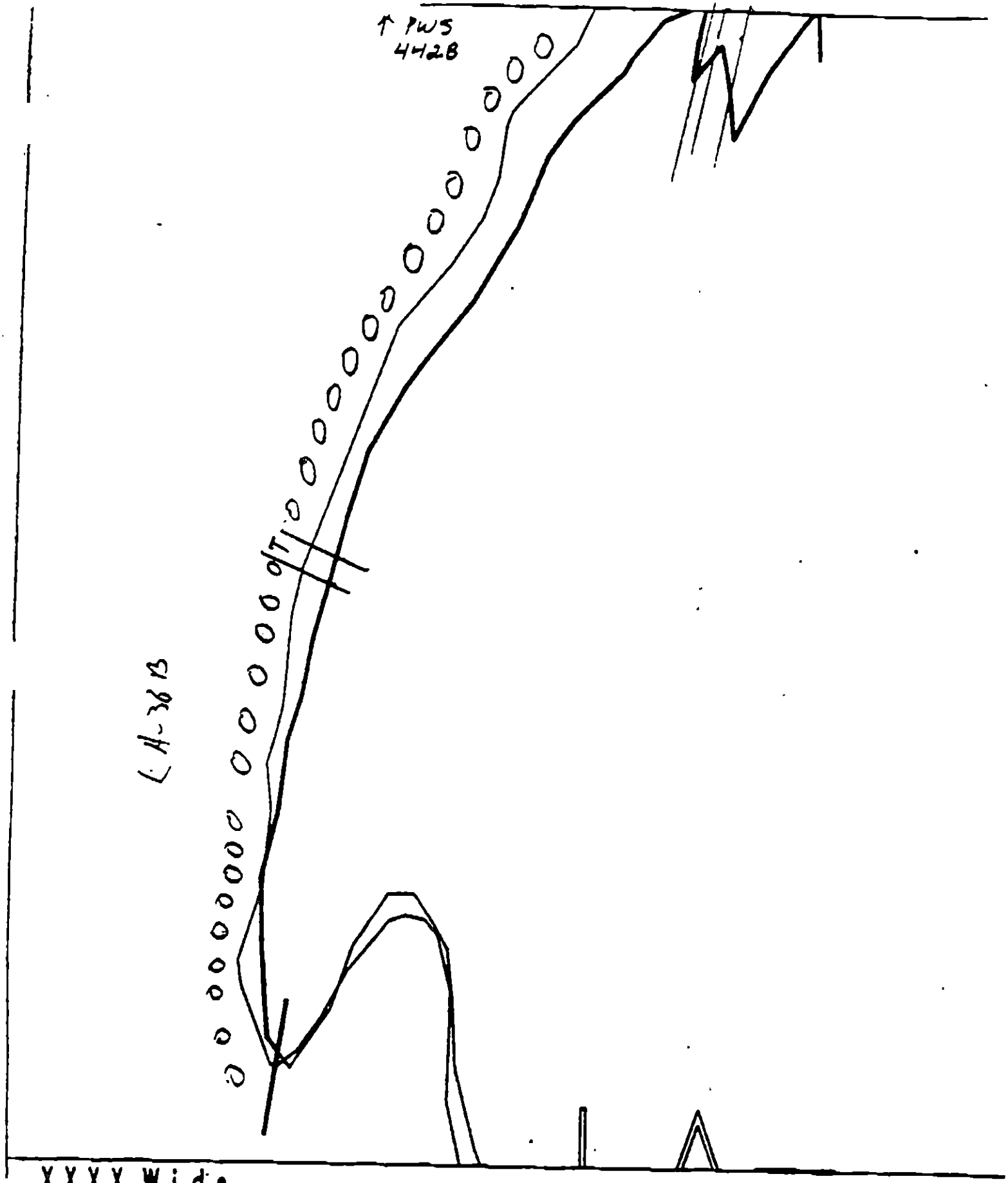

XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
0000 No Oil

# LA-36

ADEC Segment Length: 1872m

0 100 200 300
METERS

Map Key: PWS-442b
Name: Mike Foget
Date: 4/5/90
Date Entered:




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

# LA-36B

ADEC Segment Length: 1872m

0 100 200 300
METERS

Map Key: PWS-442a
Name: Mike Foget
Date: 4/5/90
Date Entered:

# SHORELINE EVALUATION

SEGMENT ST/ LA-37 SUBDIVISION A (1 OF 1) DATE 4/4/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**
Anadromous stream #16764 (1A) Stream mouth out-migration (3/1 to 5/15) (1B) Stream mouth spawning (7/10 to 8/31) Active bald eagle nests (5T-2) - 3/1 to 6/1; Subsistence area for deer harvesting (7II) - 8/15 to 2/28 and salmon harvesting (7Z) - 5/1 to 9/30.

**SUBDIVISION ECOLOGICAL CONSTRAINTS:** (5T) Restrict air traffic to essential minimum. Air approach and take off from and to seaward only. Contact USFWS prior to treatment, for confirmation of dates and avoidance minimums. (7Z) Contact ADF&G and Chenega Corp. for dates, locations, constraints.

SHPO SIGNATURE: Judith E. Bittner DATE: 4/18/90

**OILING CATEGORIZATION:**
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 214 m: No Oil 113 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 10 cm

**RECOMMENDATIONS:**

| | |
|---|---|
| X No Treatment Recommended | ____Snare/Absorbent Booms |
| ____Treatment Recommended | ____Oil Snares (pom poms) |
| ____Manual Pickup | ____Absorbents (pads,rolls,etc) |
| ____Bioremediation | ____Spot Washing: ____Wands |
| ____Tarmat: ____Breakup | ____ Beach Cleaner |
| ____Removal | ____Other (see comments) |

COMMENTS: Anadromous Fish Stream therefore do not recommend bioremediation. (to be classified by ADF&G)

**TAG COMMENTS:**

TAG APPROVAL DATE: 4/18/90.
ADEC Art Weiner Art Weiner
EXXON Andy Teh
NOAA Burt Wescott Burt Wescott
USCG G.A. Reiter G.A. Reiter
FOSC: [signature] DATE: 5-6-90

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA-37 SUBDIVISION: A DATE 4/4/90

[redacted] NOAA
NAME GARY SHIGENAKA SIGNATURE Gary Shigenaka

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

SEGMENT CONSISTED OF A BOULDER-COBBLE SHORELINE (SHALE) ALONG THE WESTERN CENTRAL COAST OF LATOUCHE ISLAND. A LARGE STREAM INTERSECTED THE SEGMENT ABOUT TWO THIRDS OF THE WAY DOWN, MOVING NORTHEAST TO SOUTHWEST. APPROXIMATELY ONE THIRD OF THE LENGTH DOWN THE SEGMENT, TAR SPOTTING WAS OBSERVED IN THE UPPER INTERTIDAL, AND A RESIDUE FILM WAS FOUND BENEATH 5 CM CLEAN SEDIMENTS (GRANULES). THIS OILED LAYER EXTENDED 5 CM. OTHER EVIDENCE OF OILING WAS FOUND CLOSER TO THE STREAM, WITH SPLATTERS AND STAINED ROCKS FOUND ON BOTH ITS NORTH AND SOUTH SIDES IN THE UPPER INTERTIDAL. IN THE MIDDLE INTERTIDAL ADJACENT TO THE STREAM, SHEEN WAS OBSERVED WHEN SURFACE SEDIMENTS WERE DISTURBED, AND A 2 CM FILM COVERED BY 2 CM CLEAN SEDIMENT WAS FOUND. SOUTH OF THE STREAM, A DISCRETE PATCH OF STICKY SURFACE SEDIMENTS AND SHEEN WAS SEEN BUT DID NOT INTRUDE BELOW ABOUT 1 CM.

THE LEADING EDGE OF THE SUPRATIDAL ZONE WAS NOT COVERED BY SNOW IN SOME PLACES, AND APPEARED TO BE FREE OF OILING. HOWEVER, A LARGE PORTION REMAINED UNDER SNOW COVER AND COULD NOT BE ASSESSED.

**ADEC**
NAME John Hayes SIGNATURE

☑ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

We walked this segment and observed one band of surface oiling and three areas with subsurface oiling. The surface oiling was very spotty and consisted of stain and isolated tar spots. Subsurface oiling was a film below a clean surface. Clean gravel ranged from 2-5cm. and ss. Film was from 2-5cm. below clean gravel in isolated areas. Stream on segment may be anadromous and should be checked again for any residual ss. oiling near its banks. Subsurface oiling near stream bank was 2cm. see sketch.

**LAND MANAGER**
NAME RITA A. MIRAGLIA SIGNATURE Rita A. Miraglia

pg. 2 comments attached

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

I PARTICIPATED IN THE SSAT EVALUATION OF THIS SEGMENT AS A REPRESENTATIVE OF THE LANDOWNER AND WILL REPORT BACK TO CAC.

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA-37 SUBDIVISION: A DATE 4/4/90

**SCG**
NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

**ADEC**
NAME John Hayes SIGNATURE _____

☑ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS,

(Continued) We observed a bright rainbow sheen in LITZ. Sheen appeared to be from a recent fuel spill. Possibly from a leak at fuel bladders reported at Latouche receipt or from a recent vessel spill. Fuel had the smell of diesel or other lighter fuel and the rainbow sheen was bright and appeared very recent.

**LAND MANAGER**
NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

# SHORELINE OILING SUMMARY

REVISION NO. 03/22/89

OG Mike Foget NOAA/USCG Gary Shigenaka SEGMENT ST/ LA-37
BIO Richard Ambrose LAND REP Rita A. Miraglia SUBDIVISION A (1 OF 1)
EXXON Larry Olson ADEC John Hayes TIME 13:10 to 14:10
TEAM NO.: 11 TIDE LEVEL: 5.5 to 3.1 DATE 4 / 4 / 90
EST. SUBDIVISION LENGTH: 1527 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock 2m rocky backshore w/ forest also snow 50 2-2
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: — to —
SURFACE SEDIMENTS: R 5 % B 20 % C 30 % P 25 % G 15 % S 5 % M — % V — %
SLOPE : Lang 100 % Hang — % Vert — % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W — m M — m N — m VL 150 m NO 1,377 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | RC | RB | P | R | | | | | | SU | UI | MI | LI |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | | | | | | | | | | | | |
| COAT | | | | | | | | | | | | | |
| STAIN | | | | X | | | | | X | | X | X | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | ✓ | | ✓ | | | | | | | ✓ |
| NO OIL | | | | | | | | | | X | | | |

PAVEMENT: H F S — sq. m by — cm

PATTIES / TARBALLS — BAGS

NEAR SHORE SHEEN? NO SR (RW) SL TL

| DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | | | |
| Debris | X | | |

DEBRIS COLLECTED ☒ YES ☐ NO
TYPE Plastic bottle
#BAGS

Photographs:
Roll No. —
Frames —

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm-cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | | VO | UC | | | | | | SU | UI | MI | LI | | |
| 1 | 20 | | | | | X | - | | X | | | | | | | X | | | | C, P, G |
| 2 | 30 | | | | | X | - | | X | | | | | | | | X | | | C, P, G, M |
| 3 | 15 | | | | | X | - | | X | | | | | | | X | | | | C, G, C |
| 4 | 15 | | | | | X | - | | X | | | | | | | | X | | | C, G, C |
| 5 | 15 | | | | | X | - | | X | | | | | | | X | | | | P, G |
| 6 | 15 | | | | | X | - | | X | | | | | | X | | | | | G, C |

COMMENTS The entire segment was surveyed by foot. A very light oiling (1m x 150m) of tar stains were located in the UIT2 and MIT2. The oiling appeared to be weathered. Some subsurface oiling did occur as a light film. A rainbow sheen w/ strong Hydrocarbon odor appeared in the LIT2 box it is believed not to be EXXON VALDEZ spill related. The same sheen was observed in segment LA-38 no apparent oil nearby. cont.



REVIEWED — DATE 4-7-90

## SHORELINE OILING SUMMARY (PAGE 2 of 2)

REVISION 03/23/98

SEGMENT ST/ LA-37 SUBDIVISION A

### SUBSURFACE OIL (CONTINUED)

| | PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm-cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | A N A | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | OP | OR | OL | OF | NO | | UO | UC | BR-BK | BR-DBR | OL-BR | DBR-BK | BK | SU | UI | MI | LI | | |
| | 7 | 20 | | | | X | | 5-10 | | X | | | | | X | | | X | | | C,P,C |
| | 8 | 20 | | | | | X | · | | X | | | | | | X | | | | | C,P,C |
| | 9 | 25 | | | | | X | · | | X | | | | | | X | | | | | P,C,P,C |
| * | 10 | 20 | | | | X | | 2-5 | | X | | | | X | | | | X | | | C,P,C |
| * | 11 | 15 | | | | X | | 2-4 | | X | | | | X | | | | X | | | P |
| | 12 | 40 | | | | | X | · | | X | | | | | X | X | | | | | P |
| * | 13 | 10 | | | | X | | 0-1 | | X | | | | X | | | | X | | | S,C |
| | | | | | | | | · | | | | | | | | | | | | | |
| | | | | | | | | · | | | | | | | | | | | | | |
| | | | | | | | | · | | | | | | | | | | | | | |
| | | | | | | | | · | | | | | | | | | | | | | |
| | | | | | | | | · | | | | | | | | | | | | | |
| | | | | | | | | · | | | | | | | | | | | | | |
| | | | | | | | | · | | | | | | | | | | | | | |

COMMENTS

the shore zone is a low angle boulder/cobble beach with a wooded backshore snow is located in the supra ITZ.

* OILED INTERVAL < 5 cm IN PIT NOS. 10, 11 AND 13 DOES NOT CONSTITUTE SUBSURFACE OIL

REVIEWED JW DATE 4-7-98

# SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/23/90

Segment ST / LA037 Subdivision A Date (mo / day / yr) 4/4/90

Time ( 24 hr ) 1310hrs Biologist Ambrose

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

( B ) Overall % cover of biota ( % of segment ): Dense 10 Moderate 25 Low 65

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

Photographs:
Roll No. —
Frames —

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| X | 1M | 1L | 1U | 1M | 1L | 1U | X | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | X | X | X | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | X | X | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | X | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | X | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | X | X | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | X | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | X | X | 1L | 1U | 1M | X | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | X | 2 | 2 | 2 | X | X | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | X | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

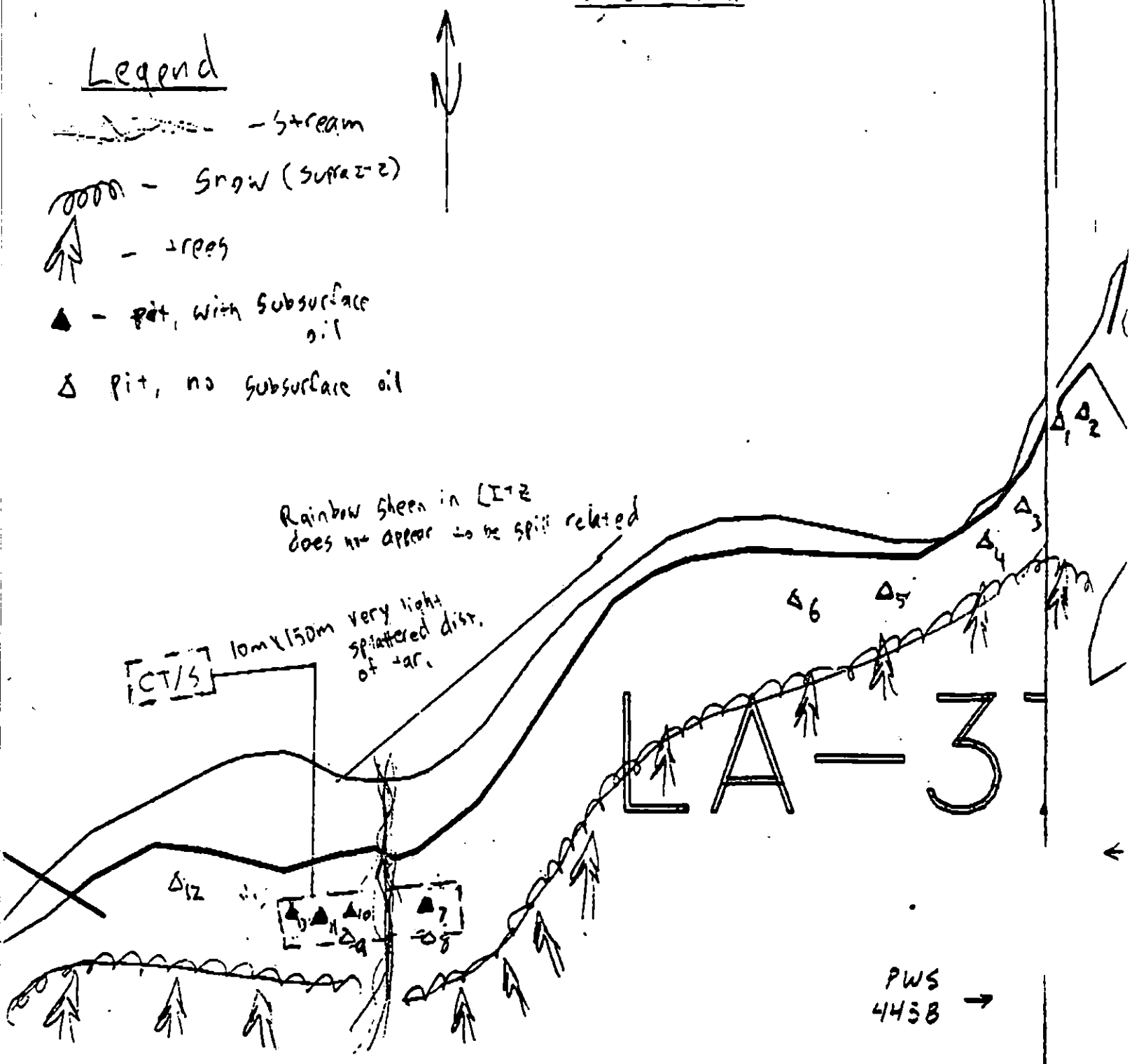
**Wildlife Observations/ General Comments:** 1 mature bald eagle, 7 Canada geese, 50 scoters and one deer track.
Biota fairly sparse in N. part of segment on cobble/boulder beach; cover is higher south of stream. A fair number of barnacle scars & dead barnacles seen.

**Ecological Considerations:**
71, 72: No relevant observations.
One stream that is likely to be anadromous was located in this segment, towards the southern end of segment.

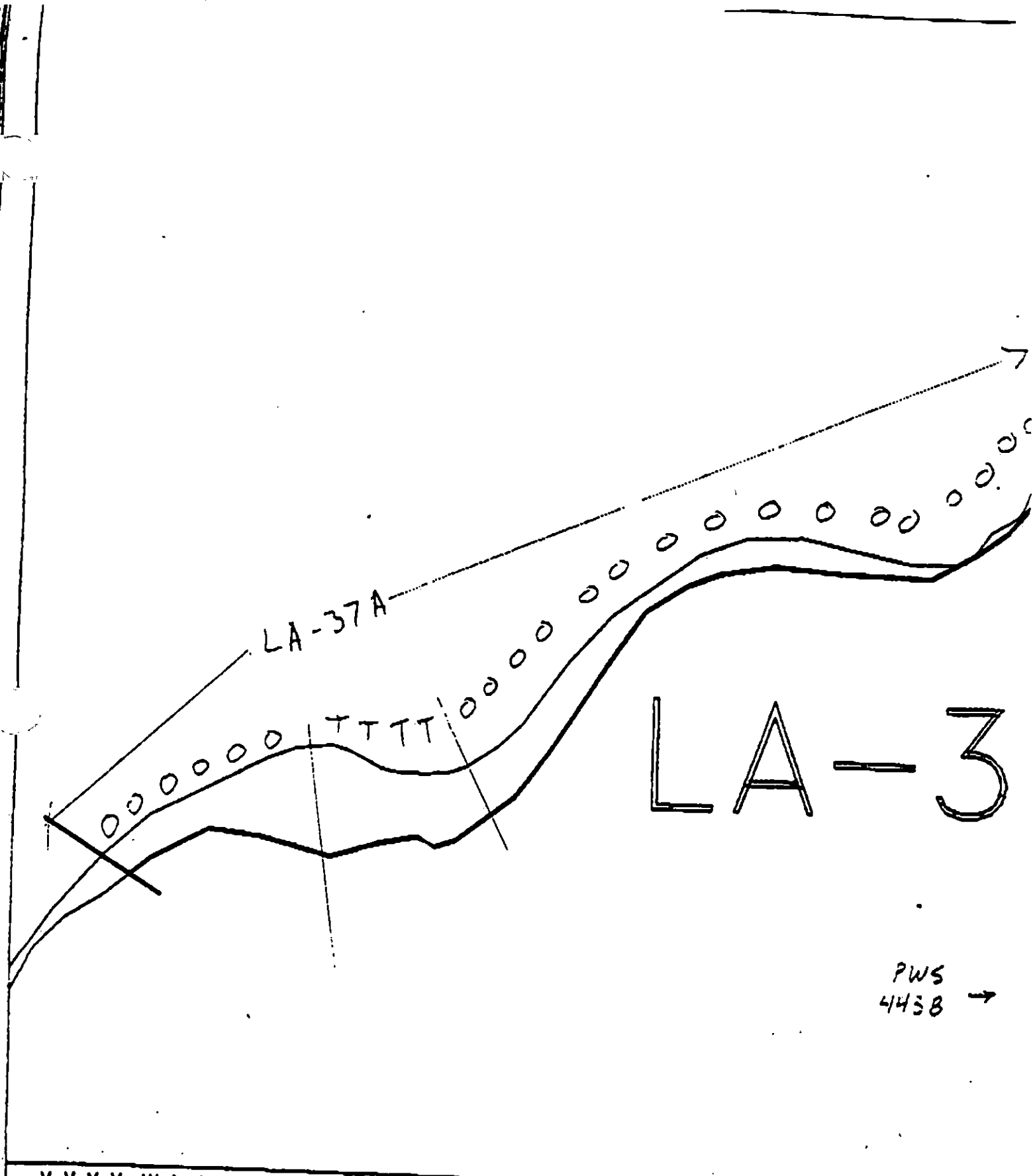
# Sketch Map

## Legend

- Stream
- Snow (supra-2)
- trees
- ▲ - pit, with subsurface oil
- Δ pit, no subsurface oil




| | | | |
|---|---|---|---|
| XXX Wide | LA-37A | Map Key: PWS-443a | XX |
| / Medium | ADEC Segment Length: 1397m | Name: Mike Foget | // |
| --- Narrow | 0 100 200 300 METERS | Date: 4/4/90 | -- |
| TTT Very Light | | Date Entered: | TT |
| 000 No Oil | | | 00 |




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

LA-37

ADEC Segment Length: 1397m

0 100 200 300
METERS

Map Key: PWS-443a
Name: Mike Fogt
Date: 4/4/90
Date Entered:




# LA-43

← PWS 443A

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

LA-37

ADEC Segment Length: 1397m

0 100 200 300
METERS

Map Key: PWS-443b
Name: Mike Eaget
Date: 4/4/96
Date Entered:

# SHORELINE EVALUATION

SEGMENT ST/ LA-38 SUBDIVISION A (1 OF 1) DATE 4/4/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**
Subsistence area for deer harvesting (7II) - 8/15 to 2/28.

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

SHPO SIGNATURE: Charles E. Holmes DATE: April 14, 1990

**OILING CATEGORIZATION:**
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 167 m: No Oil 3261 m
Subsurface Oil Observed: Yes ____ No X Maximum Depth ____

**RECOMMENDATIONS:**

| | |
|---|---|
| ____No Treatment Recommended | ____Snare/Absorbent Booms |
| X Treatment Recommended | ____Oil Snares (pom poms) |
| ____Manual Pickup | ____Absorbents (pads,rolls,etc) |
| X Bioremediation | ____Spot Washing: ____Wands |
| X Tarmat: ____Breakup | ____ Beach Cleaner |
| X Removal | ____Other (see comments) |

COMMENTS: Recommend manual removal of small asphalt mat and biormediation of area shown on attached sketch map.

CUSTOMBLEN SMALL AREA AS NECESSARY.

TAG COMMENTS:

TAG APPROVAL DATE: 4/14/90
ADEC JOHN BAUER John Bauer
EXXON AVOY TEAC
NOAA Burl Wescott
USCG G.A. Reiter G.A. Reiter

FOSC: [signature] DATE: 5-3-90

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA-38 SUBDIVISION: DATE 4/4/90

~~DCG~~ NOAA
NAME GARY SHIGENAKA SIGNATURE Gary Shigenaka

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

SEGMENT WAS COBBLE AND BOULDER SHORELINE. EVIDENCE OF OILING WAS OBSERVED AT THIS LOCATION; HOWEVER, THE NATURE OF OILING WAS NOT CONSISTENT WITH OTHER OBSERVED SEGMENTS. A SHEEN WAS NOTED AS THE SHORELINE ASSESSMENT TEAM PUT ASHORE. EXAMINATION OF COBBLES AND SEDIMENTS JUST ABOVE THE TIDE LINE (UPPER PORTION OF THE LOWER INTERTIDAL) SHOWED THAT SURFACE SEDIMENTS ONLY (1-2 CM) WERE AFFECTED. THE SEDIMENTS HAD A DISTINCT FUEL ODOR BUT DID NOT LEAVE A HEAVY RESIDUE WHEN RUBBED BETWEEN FINGERS. THE BEACH WAS IN AN AREA OF A GROUNDWATER SEEP. SAMPLING FARTHER UP INTO THE MIDDLE INTERTIDAL SHOWED CONTINUED PRESENCE OF SHEEN IN THE SEEPAGE, BUT TO A LESSER DEGREE THAN IN THE LOWER INTERTIDAL. NO SHEEN WAS OBSERVED IN THE UPPER INTERTIDAL. NO OTHER EVIDENCE OF OILING WAS OBSERVED IN THE IMMEDIATE VICINITY OF THE SHEEN ZONE (I.E. SPLATTERS OR STAIN). DUE TO THE UNUSUAL NATURE OF THIS OCCURRENCE, THE SHEEN SAMPLING KIT WAS SENT FOR AND THE O'BRIEN OIL POLLUTION SERVICES REP COLLECTED SAMPLES OF THE SHEEN AND WATER.

SOUTH OF THIS LOCATION SPORADIC INSTANCES OF WEATHERED ASPHALT WERE ENCOUNTERED IN THE UPPER INTERTIDAL, WITH THE LARGEST OBSERVED OCCURRENCE ABOUT ½ M SQUARE. OILING DID NOT EXTEND BELOW THE SURFACE 2 CM.

**ADEC**
NAME John Hayes SIGNATURE

☑ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

Rainbow sheen seen earlier in LA-37 was more pronounced in LA-38. OOps rep on board took a sample of sheen to be tested in Ank. Sheen was in LIT2 at MITZ. (see sketch map)

South of the sheen (which map) we observed some weathered asphalt patties isolated. There (2) were broken up to ~~spread~~ enhance weathering. Some Isolated tar spots were also observed. There was no S.S. oiling.

**LAND MANAGER**
NAME RITA A. MIRAGLIA SIGNATURE Rita A. Miraglia

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

I PARTICIPATED IN THE SSAT EVALUATION OF THIS SEGMENT AS A REPRESENTATIVE OF THE LANDOWNER AND WILL BE REPORTING BACK TO CAC.

# SHORELINE OILING SUMMARY

REVISION NO. 00/00/00

OG: Mike Fogel NOAA Gary Shigenaka SEGMENT ST/ LA-38
BIO Richard Ambrose LAND REP Rita A. Miraglia SUBDIVISION A (1 OF 1)
EXXON Larry Olson ADEC John Hayes TIME 14:10 to 15:45
TEAM NO.: 11 TIDE LEVEL: 3.1 to 1.3 DATE 4/5/90
EST. SUBDIVISION LENGTH: 2491 m ☒ Sun ☐ Clouds ☐ Fog ☒ Rain ☐ Snow
UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☐ Rock snow located in the SU ZTZ
SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
SURFACE SEDIMENTS: R 5 % B 25 % C 30 % P 20 % G 10 % S 10 % M — % V — %
SLOPE: Lang 100 % Hang — % Vert — % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W — m M — m N — m VL 150 m NO 2331 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AD | AB | AP | AS | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | SU | SI | MI | LI |
| ASPHALT PAVEMENT | | | | X | | X | | | | | X | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | | | | | | | | | | | | |
| COAT | | | | | | | | | | | | | |
| STAIN | | | | X | | X | | | | | X | | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | ✓ | | | ✓ | | | | | | ✓ | ✓ |
| NO OIL | | | | | | | | | | X | | | |

PAVEMENT: H F (S) 1 sq. m by 3 cm
(PATTIES) / TARBALLS 1 BAGS
NEAR SHORE SHEEN? NO BR (RW) SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | | | |
| Debris | | | |

DEBRIS COLLECTED ☐ YES ☒ NO
TYPE —
#BAGS

Photographs:
Roll No. ST-11-2
Frames 6

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm-cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OP | NO | | UO | UC | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | SU | WI | MI | LI | | |
| 1 | 15 | | | | | X | - | | X | | | | | | | X | | | | C, G, C (0-10 cm) |
| 2 | 10 | | | | X | | 0-2 | | X | | | | X | | | | X | | | C, G, C (5-10 cm) |
| 3 | 10 | | | | X | | 0-2 | | X | | X | | | | | | | X | | C (7-10 cm) |
| 4 | 15 | | | | | X | - | | X | | | | | | | X | | | | C, P, C |
| 5 | 15 | | | | | X | - | | X | | | | | | | X | | | | G, C |
| 6 | 15 | | | | | X | - | | X | | | | | | | | X | | | G, C |

COMMENTS ★ - The rainbow sheen observed in the Northern Part of the segment was believed not to come as a result of the Oil spill. No oil or subsurface oiling (i.e. brown / black coal, asphalt or stain) was observed in the area, also the sheen occurred only in the LITZ, MITZ and just offshore. No sheen was observed in the MITZ or Supra. ITZ. A sheen sample and a water sample were collected by OBrien Oil Pollution Services (OOPS), and will be sent on 4/5 for sample analysis in anchorage


REVIEWED [signature] DATE 4-7-90

## SHORELINE OILING SUMMARY (PAGE 2 of 2)

REVISION 03/22/10

SEGMENT ST/ CA-38 SUBDIVISION A (1 of 1)

### SUBSURFACE OIL (CONTINUED)

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | - (CM-CM) | UO | UC | | | | | | SU | UI | MI | LI | | |
| 7 | 20 | | | | | X | - | | X | | | | | | X | | | | | P,G |
| 8 | 20 | | | | | X | - | | X | | | | | | | | X | | | C,P,G,C |
| 9 | 20 | | | | | X | - | | X | | | | | | | | | X | | G (H2O at 2cm) |
| 10 | 15 | | | | | X | - | | X | | | | | | | X | | | | P (H2O at 10cm) |
| 11 | 20 | | | | | X | - | | X | | | | | | X | | | | | G |
| 12 | 20 | | | | | X | - | | X | | | | | | | X | | | | G |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |

COMMENTS

an 2m x 150m very light tar staining was observed in the HITZ, some small asphalt patties were observed among the boulder/cobbles. The oil appears to be weathered (tar stains). The shore zone consists of a low angle boulder cobble beach.

REVIEWED JW DATE 4-7-90

# SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/88/88

Segment ST / LA038 Subdivision A Date (mo / day / yr) 4/4/90

Time ( 24 hr ) 1415hrs Biologist Ambrose

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

( B ) Overall % cover of biota ( % of segment ): Dense 15 Moderate 25 Low 60

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

Photographs:
Roll No. –
Frames –

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | X | 2 | X | 2 | X | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | X | 3 | X | 3 | X | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 3 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**ASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | X | X | 2 | 2 | 2 | X | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | X | X | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | X | X | 2 | X | 2 | X | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | X | X | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | X | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**Wildlife Observations/ General Comments:** 3 otters, 2 sea lions, 1 mature bald eagle, 1 black legged kittiwake, 7 oystercatchers, 1 cormorant, 2 harlequin ducks, 1 seal, 2 sets of deer tracks,

**Ecological Considerations:** A long segment with many different habitats; some parts had dense cover, while others were sparse. Overall, there was moderate density in the mid intertidal, and upper and lower zones were fairly sparse. Many dead clams (including Saxidomus gigantea and Clinocardium nuttallii).

711: No relevant observations.

OG Mik Piper

SEGMENT Sit 4-38

SUBDIVISION A

DATE 4/4 90

**CHECKLIST**

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

**LEGEND**

1 ▲

Pit - No Subsurface Oil

2 ▲

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

Oiled Vegetation

1 ⇐

Photo location, direction, and number

# S CH MAP

Scale

200 m

N

Approx 200 m rainbow Sheen observed in the LITZ, MITZ and just off shore

Remove Asphalt + Bag

CT/S 2m x 150m Stain/tar area splattered distribution in the HITZ, w/ some small asphalt patties

$\Delta_1$ $\Delta_2$ $\Delta_3$ $\Delta_4$ $\Delta_5$ $\Delta_6$ $\Delta_7$ $\Delta_8$ $\Delta_9$ $\Delta_{10}$ $\Delta_{11}$ $\Delta_{12}$

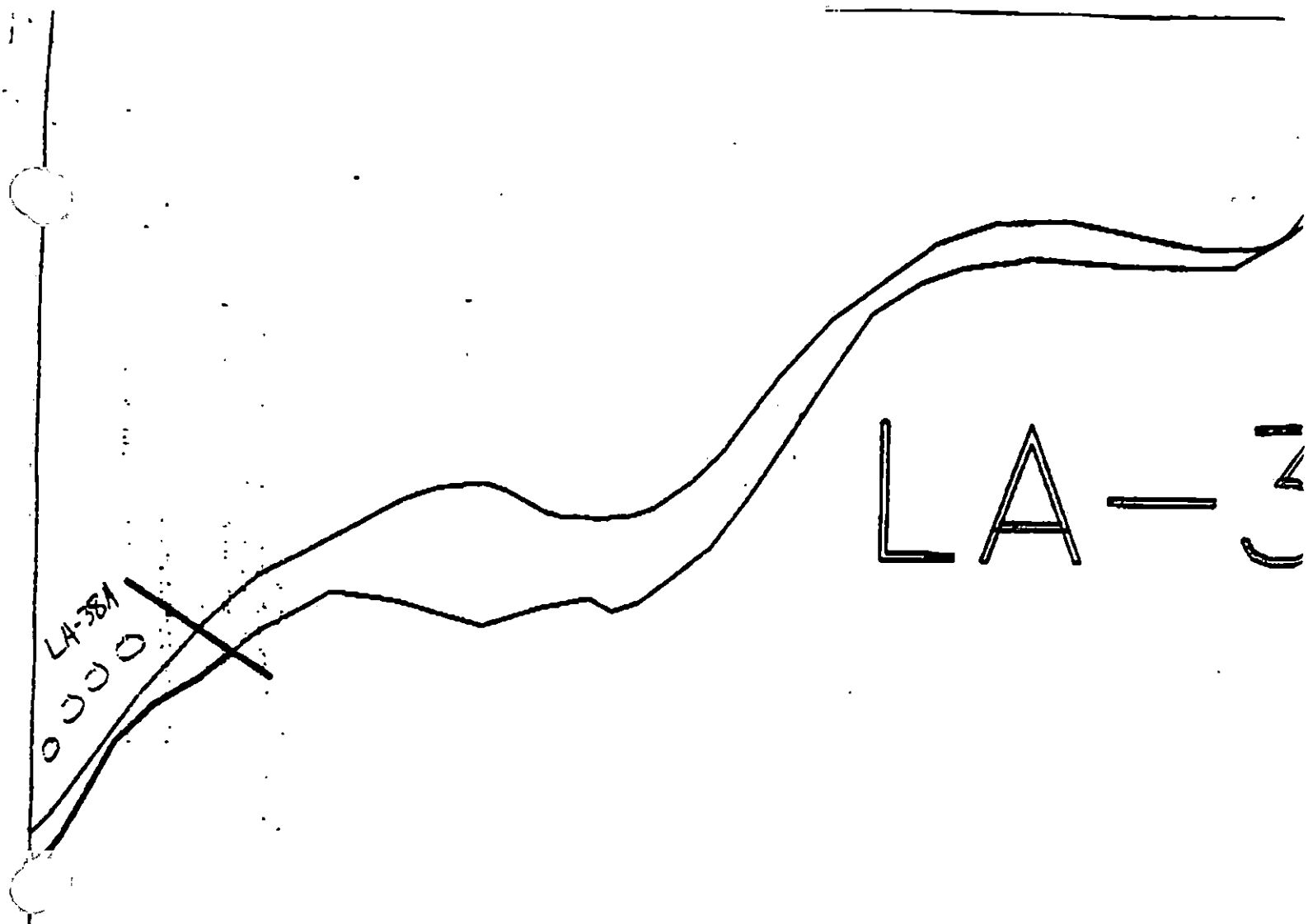
Legend

↑ - trees (forest)

(0000) - Snow (Supra 3:2)

Oil Character Length (m): AP 1 PO — CV — CT — ST 150 MS — PT — TB — FL — NO 233

REVISIONS




← PWS
4-4-90

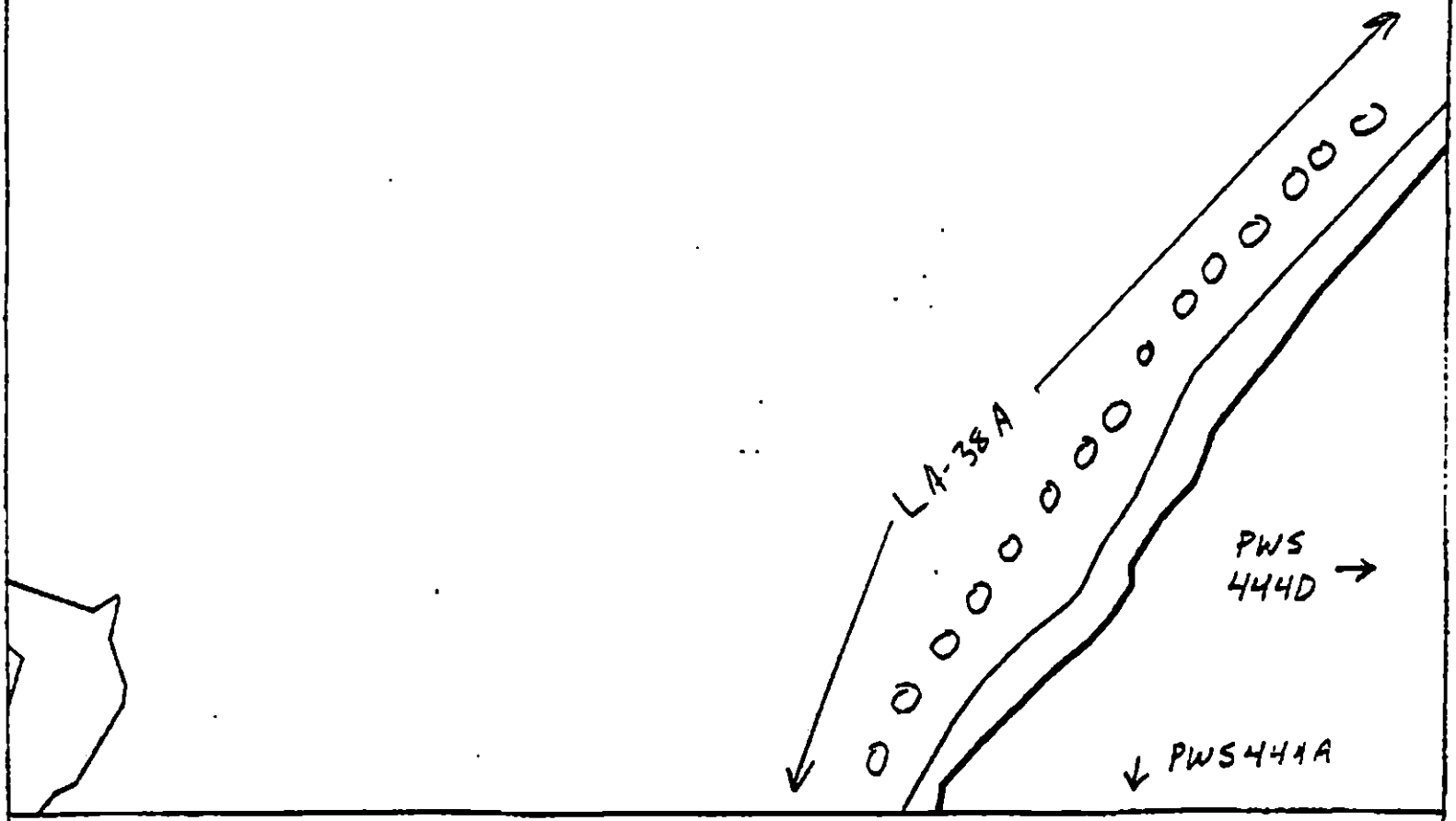
XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
0000 No Oil

LA-38A

ADEC Segment Length: 3427m

0 100 200 300
METERS

Map Key: PWS-4444
Name: Mike Foyer
Date: 4/4/90
Date Entered:




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

# LA-384

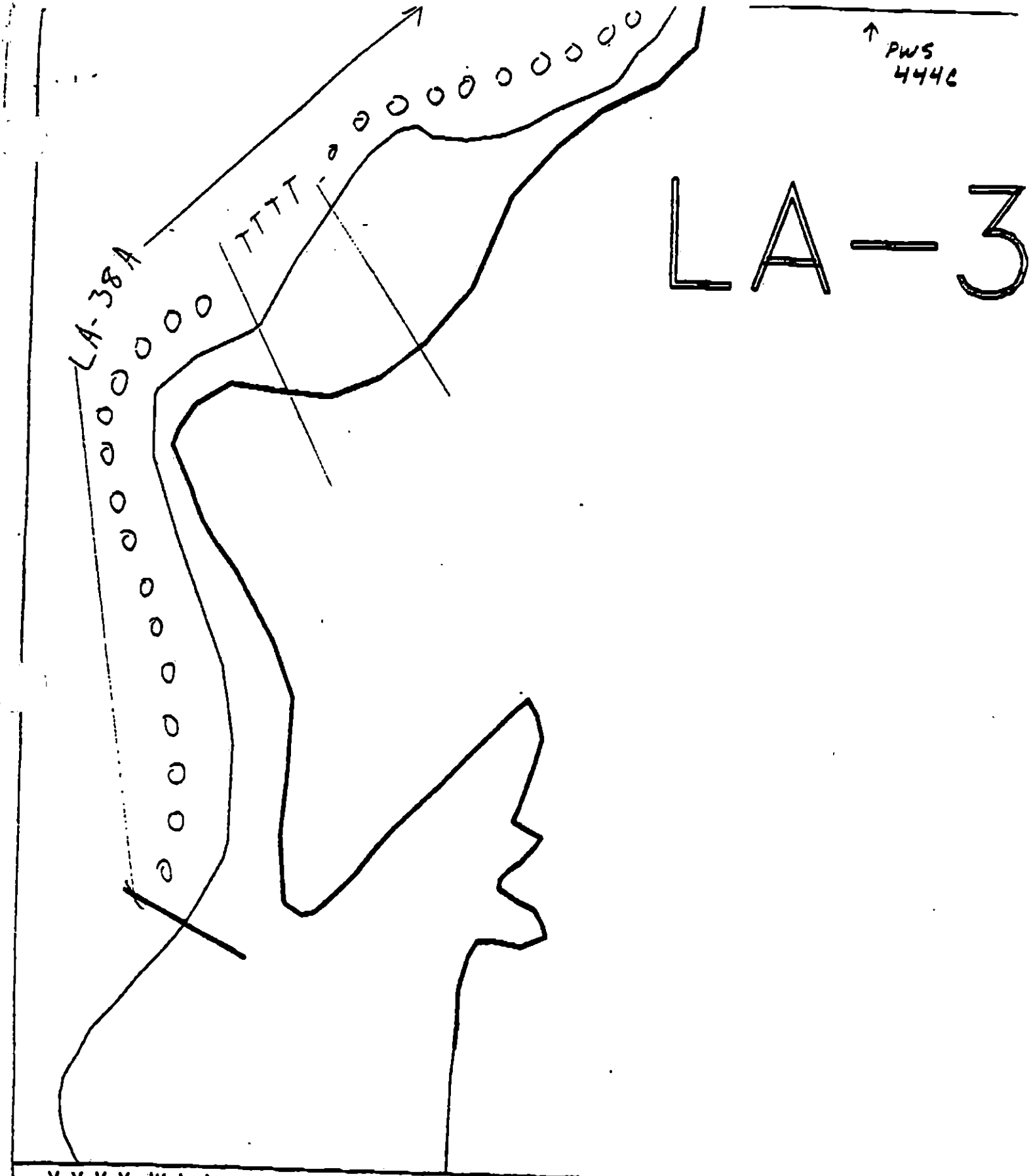
ADEC Segment Length: 3427m

0 100 200 300
METERS

Map Key: PWS-444c
Name: Mike Foget
Date: 4/4/90
Date Entered:

PWS 444c

# LA-3




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

## LA-38A

ADEC Segment Length: 3427m

0 100 200 300
METERS

Map Key: PWS-444c
Name: Mike Foget
Date: 4/4/90
Date Entered:

# SHORELINE EVALUATION

SEGMENT ST/ LA-39 SUBDIVISION A (1 OF 1) DATE 4/4/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**
Salmon stream mouths (ADF&G catalogue 226-40-16715; 226-40-16720; 226-40-16730 REV 12/89) - fry out migration (1A) - 3/1 to 5/15 and spawning (1B) - 7/10 to 8/31; Subsistence area for deer harvesting (7II) - 8/15 to 2/28.

**SUBDIVISION ECOLOGICAL CONSTRAINTS:** (1A, 1B) No disturbance of stream bed or banks unless authorized by ADF&G. Contact ADF&G Habitat Division prior to treatment for permits.

SHPO SIGNATURE: Charles E Holmes DATE: April 14, 1990

**OILING CATEGORIZATION:**
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 55 m: No Oil 3029 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 |
| X Tarmat: ___ Breakup | ___ Beach Cleaner |
| X Removal | ___ Other (see comments) |

COMMENTS: Recommend manual removal of small tarmat. ~~and bioremediation of areas indicated on attached sketch map but do not bioremediate within 100 meters of anadromous streams or clarify with ADF&G.~~ Treatment activities should be conducted between 5/15 and 7/10.

TAG COMMENTS:

TAG APPROVAL DATE: 4/14/90
ADEC JOHN BAUER
EXXON ANDY TOR
NOAA Bud Wright
USCG G.A. REITER

FOSC: ___ DATE: 5-6-90

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA-39 SUBDIVISION: DATE 4/4/90

**KSG** NOAA
NAME GARY SHIGENAKA SIGNATURE Gary Shigenaka

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

SEGMENT CONSISTED OF A PORTION OF COBBLE-BOULDER-EXPOSED BEDROCK SHORELINE (WITH VARYING PROPORTIONS OF EACH COMPONENT) ALONG THE WESTERN CENTRAL COAST OF LATOUCHE ISLAND. THE BEACH SOMETIMES BROADENED TO ABOUT ½ KM AND WAS INFLUENCED BY AT LEAST 3 SIGNIFICANT STREAMS. NO EVIDENCE OF OILING WAS OBSERVED ALONG THE NORTHERN PORTION OF THE SEGMENT WHICH INCLUDED THE 3 STREAMS. IN THE SOUTHERN PART OF THE SEGMENT, AN APPROXIMATELY 8M X 40m PATCH OF WEATHERED STAIN AND TAR SPLATCHES WAS FOUND. OCCURRENCE OF OILING WAS LIGHT. ON THE SMALL PENINSULA IMMEDIATELY TO THE NORTH OF THIS PATCH (SEE SKETCH MAP), THE OG FOUND A TAR MAT AND SOME WEATHERED SPLASHES.

TRACKS OF DEER AND AN UNIDENTIFIED OTHER MAMMAL (LIKELY RIVER OTTER) WERE OBSERVED IN A SANDY PART OF THE SEGMENT. THE SUBSTRATE WAS EXPOSED IN SOME PLACES AND APPEARED TO BE CLEAN.

**ADEC**
NAME John Hayes SIGNATURE

☑ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Two small patches of staining observed in UIT2. Staining was light + discontinuous. Northern section of segment had three streams, one was very likely anadromous. No oil was observed in vicinity of streams. Dames + Moore was doing a fish study at one of the streams.

**LAND MANAGER**
NAME RITA A. MIRAGLIA SIGNATURE Rita A. Miraglia

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

I PARTICIPATED IN THE SSAT EVALUATION OF THIS SEGMENT AS A REPRESENTATIVE OF THE LANDOWNER AND WILL REPORT BACK TO CAC.

# SHORELINE OILING SUMMARY

REVISION NO. 0/08/90

OG Mike Foget NOAA USCG Gary Shigenaka SEGMENT ST/ LA-39
BIO Richard Ambrose LAND REP Rita A. Milaglia SUBDIVISION A (1 OF 1)
EXXON Larry Olson ADEC John Hayes TIME 15:45 to 16:30
TEAM NO.: 11 TIDE LEVEL: 1.3 to 1.2 DATE 4/4/90
ST. SUBDIVISION LENGTH: 2751 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☐ Rock Forested wetlands w/some rocks, mos- SURFACE covered w/ snow
SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
SURFACE SEDIMENTS: R — % B 20 % C 20 % P 20 % G 20 % S 20 % M — % V — %
SLOPE: Lang 100 % Hang — % Vert — % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W — m M — m N — m VL 43 m NO 2708 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PC | R | P | A | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | SU | U | M | L |
| ASPHALT PAVEMENT | | | | X | | X | | | | | X | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | | | | | | | | | | | | |
| COAT | | | | | | | | | | | | | |
| STAIN | | | | X | | X | | | | | X | | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | | | | | | | | | | |
| NO OIL | | | | | | | | | | X | | X | X |

PAVEMENT: H F (S) 1 sq. m by 3 cm
PATTIES / TARBALLS 1 BAGS
NEAR SHORE SHEEN? (NO) BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | | | |
| Debris | | | |

DEBRIS COLLECTED ☐ YES ☒ NO
TYPE
#BAGS

Photographs:
Roll No.
Frames

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm-cm) | BELOW | | OIL / FILM COLOR | | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | | UO | UC | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | SU | U | M | L | | |
| 1 | 15 | | | | | X | - | | X | | | | | | | | | X | | | P, G |
| 2 | 20 | | | | | X | - | | X | | | | | | | | | X | | | G, S |
| 3 | 20 | | | | | X | - | | X | | | | | | | X | | | | | G |
| 4 | 20 | | | | | X | - | | X | | | | | | | | X | | | | G |
| 5 | 60 | | | | | X | - | | X | | | | | | | | X | | | | G, S |
| 6 | 30 | | | | | X | - | | X | | | | | | | | X | | | | S, P, C, S |

COMMENTS Oiling was observed in the middle of the segment by the isthmus/peninsula. There was a 2m x .5m discontinous CT/S stain located in the HITZ. On the Beach near the Peninsula was a weathered 8m x 10m discontinous CT/S stain in the HITZ. The shore zone consists mostly of cobble/pebble beach, the southern end of the segment consist of a sandy beach.

Page 1 of 1 REVIEWED RW DATE 4-7-90

# SHORELINE ECOLOGICAL SUMMARY

REVISION: 8/23/88

Segment ST / LA039 Subdivision A Date (mo / day / yr) 4/4/90

Time ( 24 hr ) 1550 hrs Biologist Ambrose

( A ) Substrate type and % of segments:
( 1 ) Bedrock 1 ( 2 ) Boulder 19 ( 3 ) Cobble 20 ( 4 ) Pebble 20 ( 5 ) Sand 40 ( 6 ) Silt —

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

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

Photographs:
Roll No. —
Frames —

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | X | X | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | X | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | X | X | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | X | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | X | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | X | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | X | X | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | X | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | X | X | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | X | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**Wildlife Observations/ General Comments:** See addendum.
Generally moderate to low density of organisms, with patches of high densities, especially around the streams (see addendum).

**Ecological Considerations:**

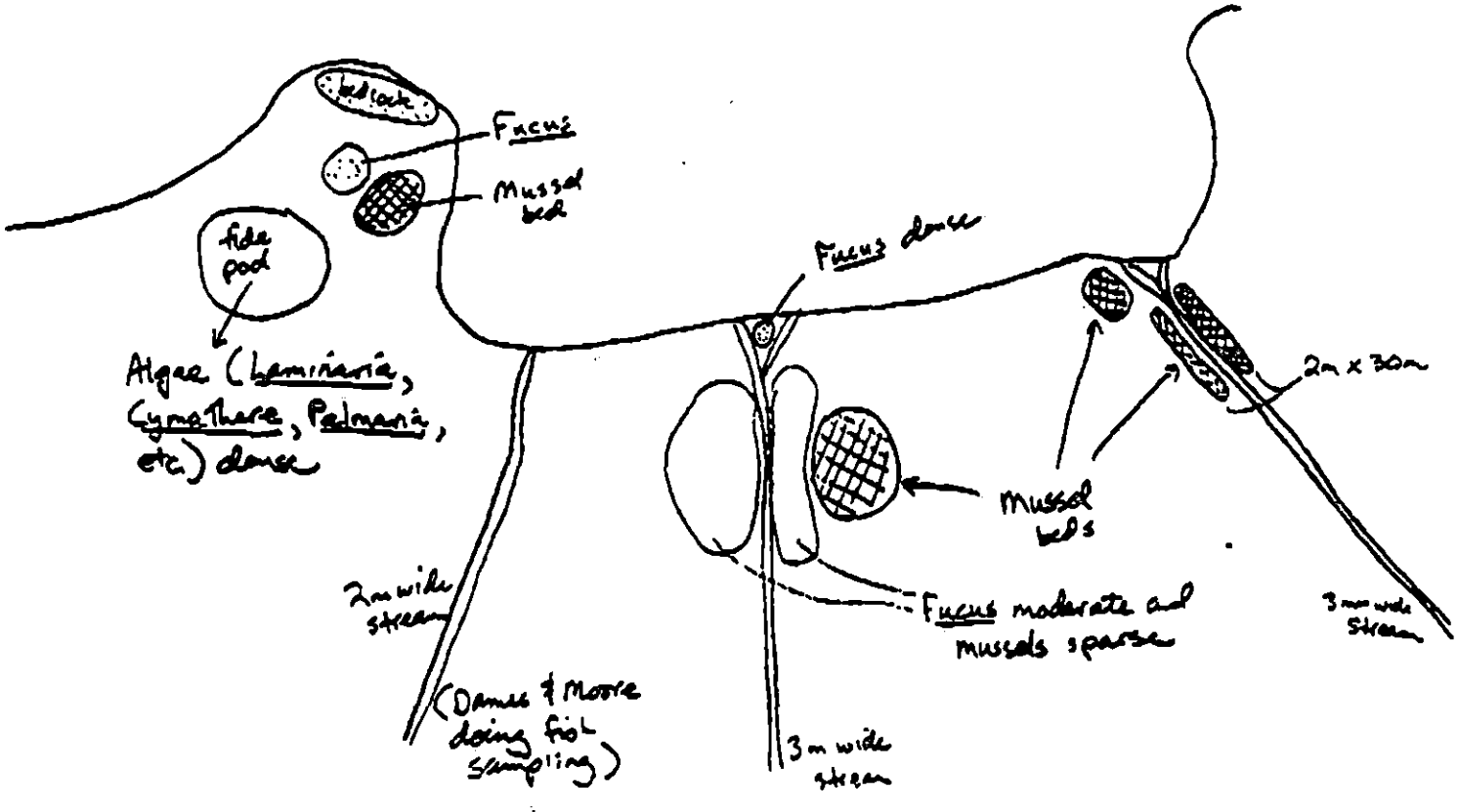
T11, 5T: No eagles seen on this segment.

good anadromous-like streams noted (see addendum).

Addendum 4/4/90

Wildlife observations:
2 oystercatchers
8 Canada geese
1 otter
3 seals
24 sea birds, incl. scoters
40 crows
4 deer tracks
2 oystercatchers
1 gull
1 track of marten or river otter

3 Anadromous streams found in this segment:



OC M Foget

SEGMENT ... A-39

SUBDIVISION A

DATE 4 / 4 90

**CHECKLIST**

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

**LEGEND**

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 ⇐ Photo location, direction, and number

**TCH MAP**

N

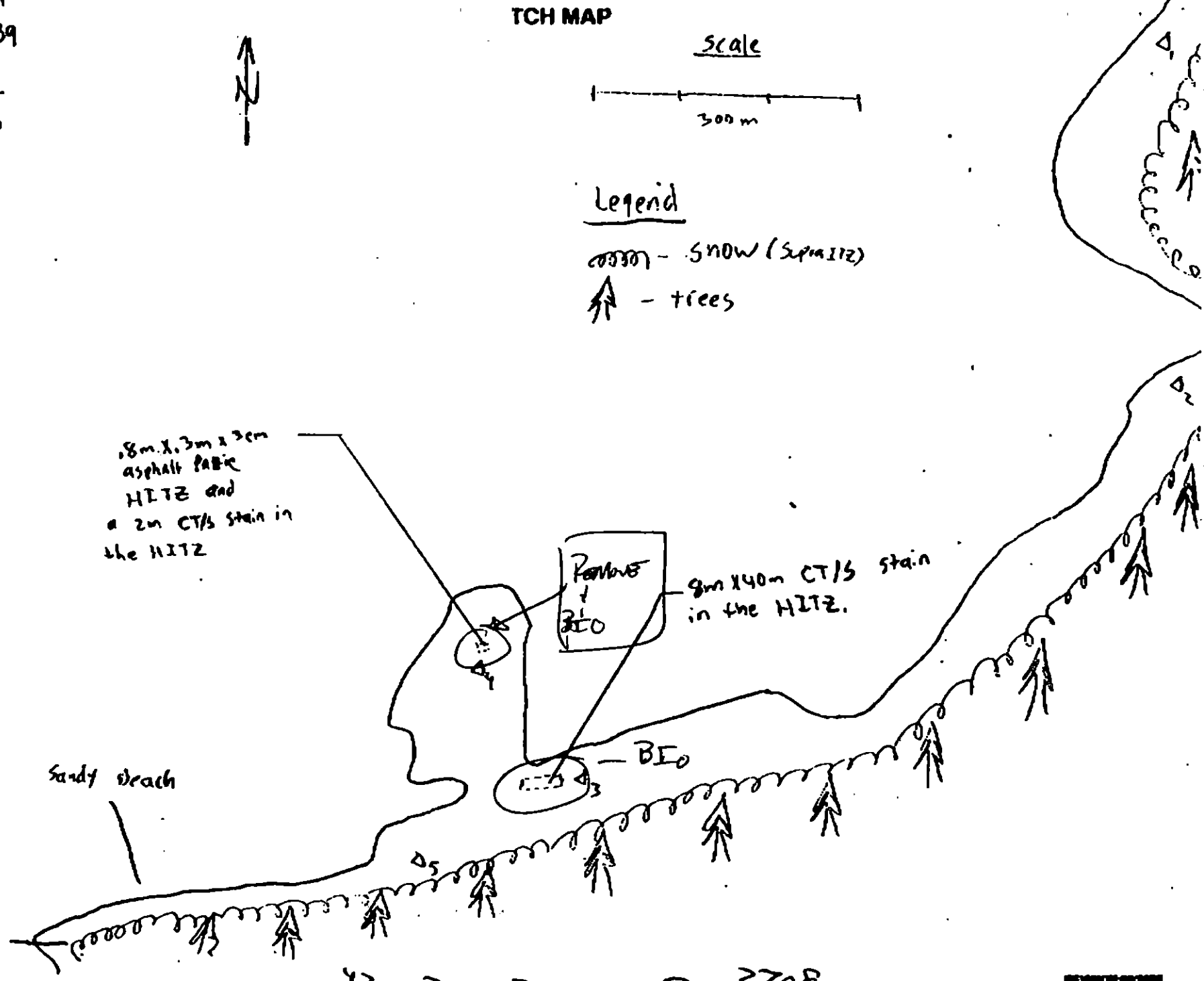
Scale

300 m

Legend

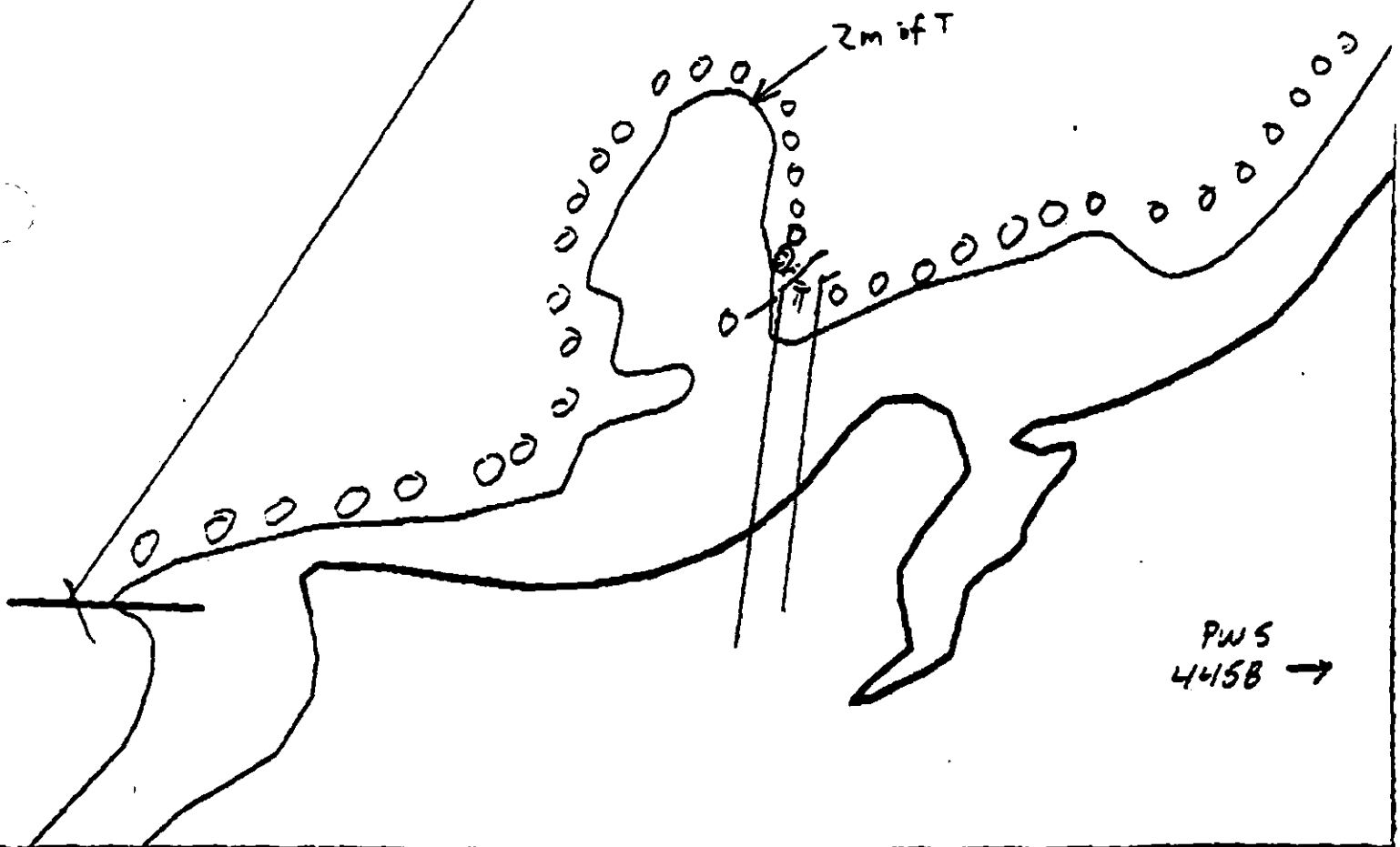
~~~ - snow (Spring)

↑ - trees




Oil Character Length (m): AP 1 PO — CV — CT — ST 42 MS — PT — TB — FL — NO 2708
~~~

# LA-39A →



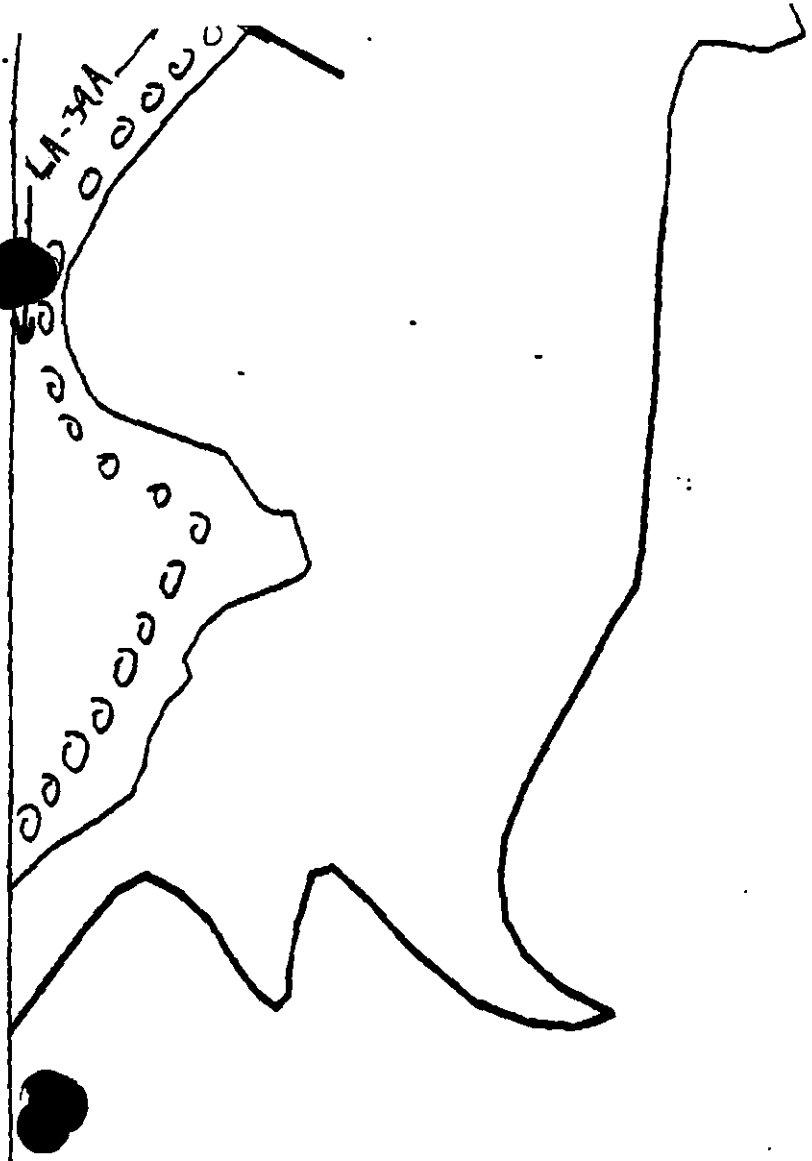

XXXX Wide
//// Medium
-- Narrow
TTTT Very Light
0000 No Oil

LA-39A

ADEC Segment Length: 3084m

0 100 200 300
METERS

Map Key: PWS-445a
Name: Mike Fogel
Date: 4/4/90
Data Entered:




← PWS 4-5A

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

LA-39A

ADEC Segment Length: 3084m

0 100 200 300
METERS

Map Key: PWS-445b
Name: Mike Foyct
Date: 4/4/90
Date Entered:

WORK PLAN MODIFICATION RECOMMENDATION ASAP

SEGMENT LA-39 SUBDIVISION A (SITE 1) (A2) DATED 8/1/90

MODIFICATION

1. REASON FOR MODIFICATION:

An area approx. 30m x 1m of tarmat/Asphalt will need to be removed this year ('90) if possible. It is likely this oiling was not located during the SSAT or summer cleanup operations. In addition, an area on cobble/gravel spit will require further tarmat removal in area of previous work (1990).

2. SUGGESTED ADJUSTMENT TO WORK PLAN:

One 10 person work crew would be able to complete removal of tarmat/Asphalt in approx .5 days (5 mandays). Area was partially treated by ASAP crew aboard Alberta Tide.

3. TIMING ISSUES: Area is of relatively low priority and should be considered for treatment (1990) after more heavily oiled segments have been treated.

4. ADDITIONAL COMMENTS:

ADEC Robert B. McC

EXXON Randall K. Boyer

USCG

LAND MANAGER CVC (If field rep is on scene)

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT EA-39 (SITE 1) SUBDIVISION A(1/2) DATED 8-1-90

MODIFICATION

1. REASON FOR MODIFICATION:

ASAP located on 2 areas of format requiring further work on EV-39.

2. SUGGESTED ADJUSTMENT TO WORK PLAN:

ASAP-VECO crew worked for approx. 1.5 hours removing approx. 50% of format on EV-26; THIS INCLUDED 2 supersacks removed.

3. TIMING ISSUES:

4. ADDITIONAL COMMENTS:

ADEC Bob McCrea Robert B. McCrea

EXXON Randall L. Boyer

USCG

LAND MANAGER Steve Ward (If field rep is on scene)

TOTAL P.05

FIELD SHORELINE ASSESSMENT SHEET

**SEGMENT AS/** LA 38 **SUBDIVISION:** A **SITE:** 1 **DATE** 8/AUG 90

**USCG/** NOAA

**NAME** DON ORVIS (USCG) DAVE NICE (NOAA) **SIGNATURE** Don R. Orvis / Dave Nice

☒ **YES** ☐ **NO** **PRIORITY SITE FOR REASSESSMENT IN 1991**

**REASON:** APPROX. ½ OF AFFECTED AREA WAS CLEANED ON SITE. REMAINING OBVIOUS AREA WILL TAKE SMALL AMOUNT OF TIME TO COMPLETE REMOVAL. RECOMMEND LOW PRIORITY CLEANUP THIS YEAR. REASSESS FOR RESIDUAL IN 1991.

**ADEC**

**NAME** BOB McCREA **SIGNATURE** Robert B. McCrea

☒ **YES** ☐ **NO** **PRIORITY SITE FOR REASSESSMENT IN 1991**

**REASON:** An area of tarmat (≈ 1m x 30m) was located just to the west of most southerly stream on segment. Approx ½ of this tarmat/AP was removed by ASAP-VECO crew. ~~[redacted]~~ I recommend that this remaining tarmat/AP receive a low priority rating for further treatment this year ('90). In addition a small area where AP was removed by '90 summer cleanup crew should ~~[redacted]~~ receive additional treatment this year ('90). This area occurs at end of cobble/gravel spit approx 150m west of most southerly stream

**LAND MANAGER**

**NAME** Steve Ward CVC **SIGNATURE** Steve Ward

☒ **YES** ☐ **NO** **PRIORITY SITE FOR REASSESSMENT IN 1991**

**REASON:** there is Enough tarmat in this area to warrant additional work this Fall. However this is not in my opinion a High priority area and the timing is not going to Effect the area (Shearing ect) I think this area must be looked in the Spring with Sub Surface Contamination Being the High priority target

**EXXON**

**NAME** RANDALL K. BOYER **SIGNATURE** Randall K. Boyer

☒ **YES** ☐ **NO** **PRIORITY SITE FOR REASSESSMENT IN 1991**

**REASON:**

IN AN AREA DESCRIBED AS COVER ON THE SUBDIVISION THE ASAP CREW LOCATED A DISTINCTIVE AP/C AREA. ASAP VECO REMOVED 60% OF THE 1 X 30 METER STRIP. A SMALL MANUAL CREW COULD FINISH THIS SUBDIVISION IN 2 HRS. A WORK ORDER MOD. HAS BEEN FILED FOR COMPLETION IN 1990. REVISION NO. 7/25/90 REASSESS IN 1991 TO DETERMINE TARMAT EXISTENCE.

FIELD SHORELINE COMMENT SHEET

SEGMENT AS / LA-39 SUBDIVISION: A SITE: 2 DATE 31 AUG 90

**USCG**

NAME Don Davis (USCG) SIGNATURE

☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

VERY SMALL PATCH ON AN EXPOSED "SPIT" OF LAND. VERY SHALLOW PENETRATION OF OIL IN SUBSURFACE. I EXPECT HIGH CONDITIONS AND WINTER WEATHER WILL STRIP THE PATCH OF REMAINING OIL.

**ADEC**

NAME Bob McCready SIGNATURE Robert G McCready

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Residual oil remains in an area of tarmat removal from cleanup of summer of '90. I don't recommend treatment in 1990 but do recommend reassessment in spring of '91. Area in question is distinct spit of cobble/boulder and gravel spit at west end of segment.

**LAND MANAGER**

NAME Steve Ward CVC SIGNATURE

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Very Lite Residual oil Remaining. I don't Recomend Heatment in 90 But it will Surely need A spring Assessment and A close Look For Sub-Surface oil.

**EXXON**

NAME Randall K. Boyer SIGNATURE Randall K. Boyer

☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

HIGH ENERGY BEACH FOR MINOR OILING NO REASSESSMENT REQUIRED.

3 RANDY BOYER LA-39

SG LINDSAY NAKASHIMA ~~SGS~~ NOAA DAVE NOE SUBDIVISION A

ADEC BOB McCREADY LAND REP STEVE WARD TOTAL NO SITES 2

DATE 8/1/90 TIME 15:45 to 17:30 TIDE LEVEL 15.5 to 15.5

TOTAL EST LENGTH OF SHORELINE SURVEYED: 150 m

SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WEATHER: ☐ Sun ☐ Clouds ☐ Fog ☒ Rain ☐ Snow

OIL CATEGORY LENGTH: W ___ m M ___ m N 45 m VL ___ m NO ___ m US 2934 m

## SURFACE OIL

### SITE 1

| CHARACTER | DISTRIBUTION /C | /B | /P | /S | OILED ZONES SU | UI | MI | LI |
|---|---|---|---|---|---|---|---|---|
| ASPHALT | | P | | | | X | | |
| S.O.R. | | | | | | | | |
| POOLED | | | | | | | | |
| COVER | | | | | | | | |
| COAT | | | I | | | X | | |
| STAIN | | | | | | | | |
| MOUSSE | | | | | | | | |
| PATTIES/T.B. | | | " | | | | | |
| FILM | | | | | | | | |
| NO OIL | | | | | X | | X | X |
| EST. SITE LENGTH | | | | | 65 m | | | |

### SITE 2

| DISTRIBUTION /C | /B | /P | /S | OILED ZONES SU | UI | MI | LI |
|---|---|---|---|---|---|---|---|
| | | X | | | X | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | X | | X | X |
| | | | | 30m | | | |

### SITE 3

| DISTRIBUTION /C | /B | /P | /S | OILED ZONES SU | UI | MI | LI |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |
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| | | | | | | | |

## SUBSURFACE OIL

| SITE NO. | PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER OP | OR | OF | NO | OILED INTERVAL (cm-cm) | CLEAN BELOW (Y/N) | PIT ZONE SU | UI | MI | LI | SURFACE-SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 8 | | | X | | 0-4 | Y | | X | | | S/P/G |
| 2 | 1 | 10 | | | X | | 0-2 | Y | | X | | | G/P/G/C |
| | | | | | | | • | | | | | | |
| | | | | | | | • | | | | | | |
| | | | | | | | • | | | | | | |
| | | | | | | | • | | | | | | |
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| | | | | | | | • | | | | | | |
| | | | | | | | • | | | | | | |
| | | | | | | | • | | | | | | |
| | | | | | | | • | | | | | | |

Photographs:

Roll No. 001

Frames 3

Reviewed 8/6/90 JW

COMMENTS

SITE 1: 65 m of ASPHALT ON SITE
- MOUSSE/ASPHALT - DARK BROWN COLOR, IN SHALE WITH VERTICAL BEDDING/LINEATIONS
- 1 AREA - MANUAL PICK-UP OCCURRED ALONG 30 OF 65 (m) AT EASTERN END OF SITE
- 100 BAGS BROUGHT ON BOARD

REVISION NO. 7/27/90

SITE 2: PATCHY ASPHALT, ON ISLAND/TOMBOLO (INTERTIDAL)
- AREA 1m X 4m (LONG)

.... Lake Roger

SEGMENT ST/ LA-39

SUBDIVISION A

DATE 4 / 4 90

**CHECKLIST**

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

**LEGEND**

1 ▲

Pit - No Subsurface Oil

2 ▲

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

Oiled Vegetation

Photo location, direction, and number

# SKETCH MAP

Scale

1 ---------- 300 m

Legend

oooo - snow (Spring '12)

- trees

ISLAND/INTERTIDAL TOMBOLO
AP/P
1m x 4m
SITE 2
8/1/90.

.8m x .3m x 3cm asphalt fabric
HITB dead
a 2m CT/S stain in the HITB

PIT 1 8/1/90

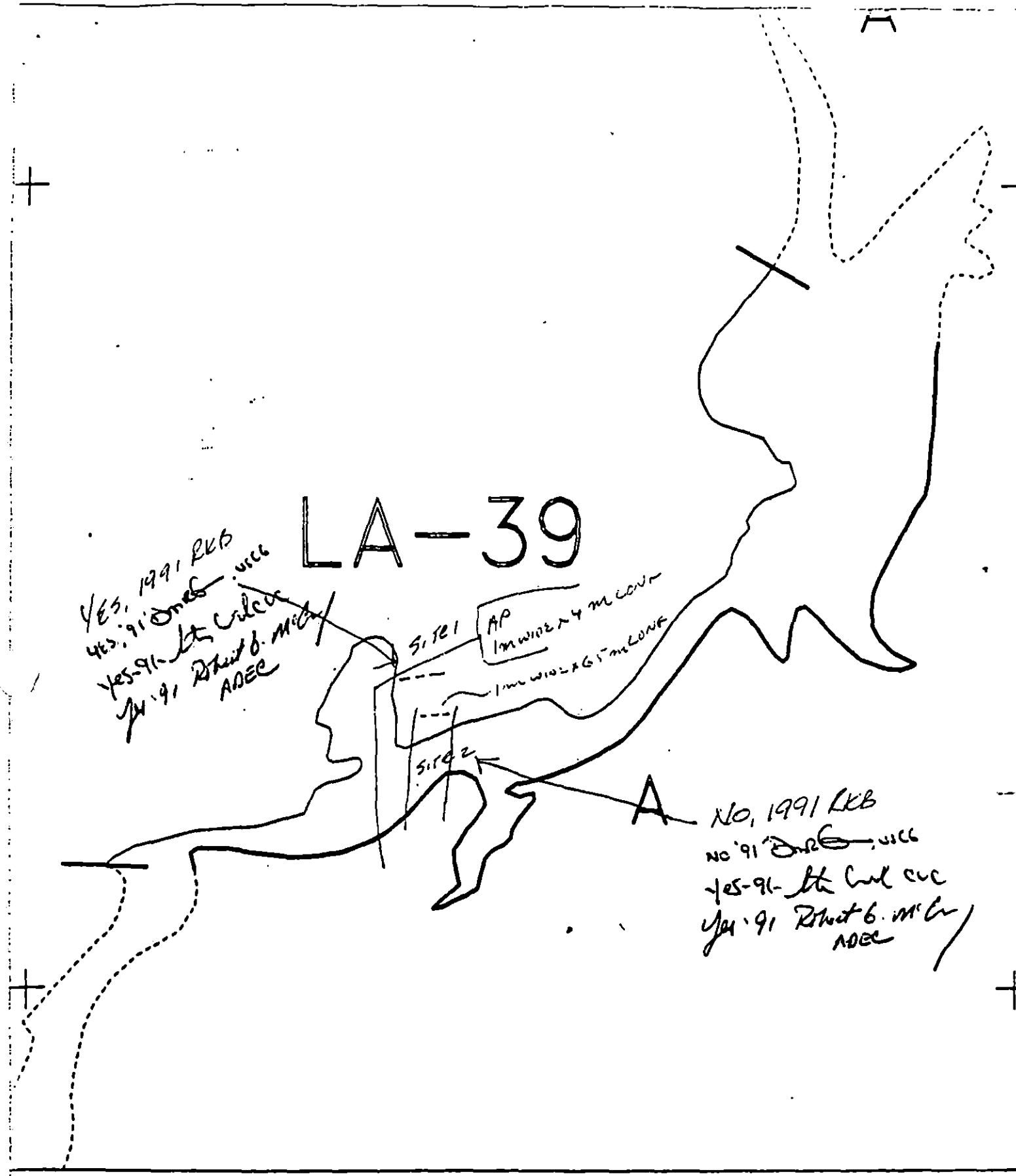
Remove 1 3EO

2m x 40m CT/S stain in the HITB.

Sandy beach

SITE 1 8/1/90
AP/B
-65m long ≃ 1m wide
-30m picked up by TEAM 3 - AT EASTERN END OF SITE
-2 PHOTOS TAKEN

Oil Character List: # AP 1 PO — CV — CT — ST 42 MS — F — TB —




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

# LA-39 A

ADEC Subsegment Length: 3084m

METERS

0 246 492

AK State Plane Zone 4 1:9852

ple-39a

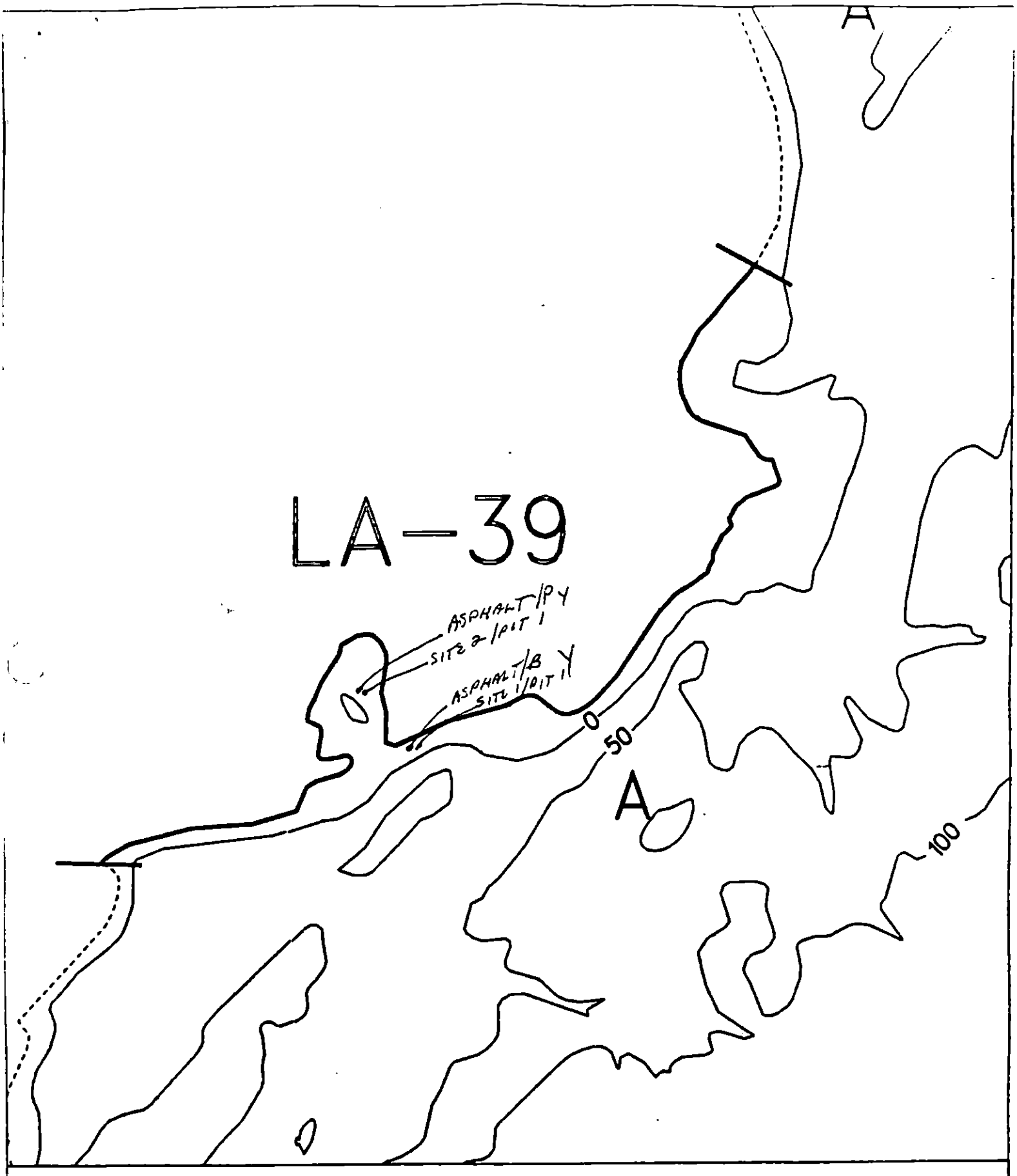
Subdivision Field Map

Map Key: PWSLA-39A

Name:

Date: 8/1/96

Date Entered:




# SEGMENT LA-39

Segment Location Map

Map Key: PWSLA-39

July 19, 1990

1:9692

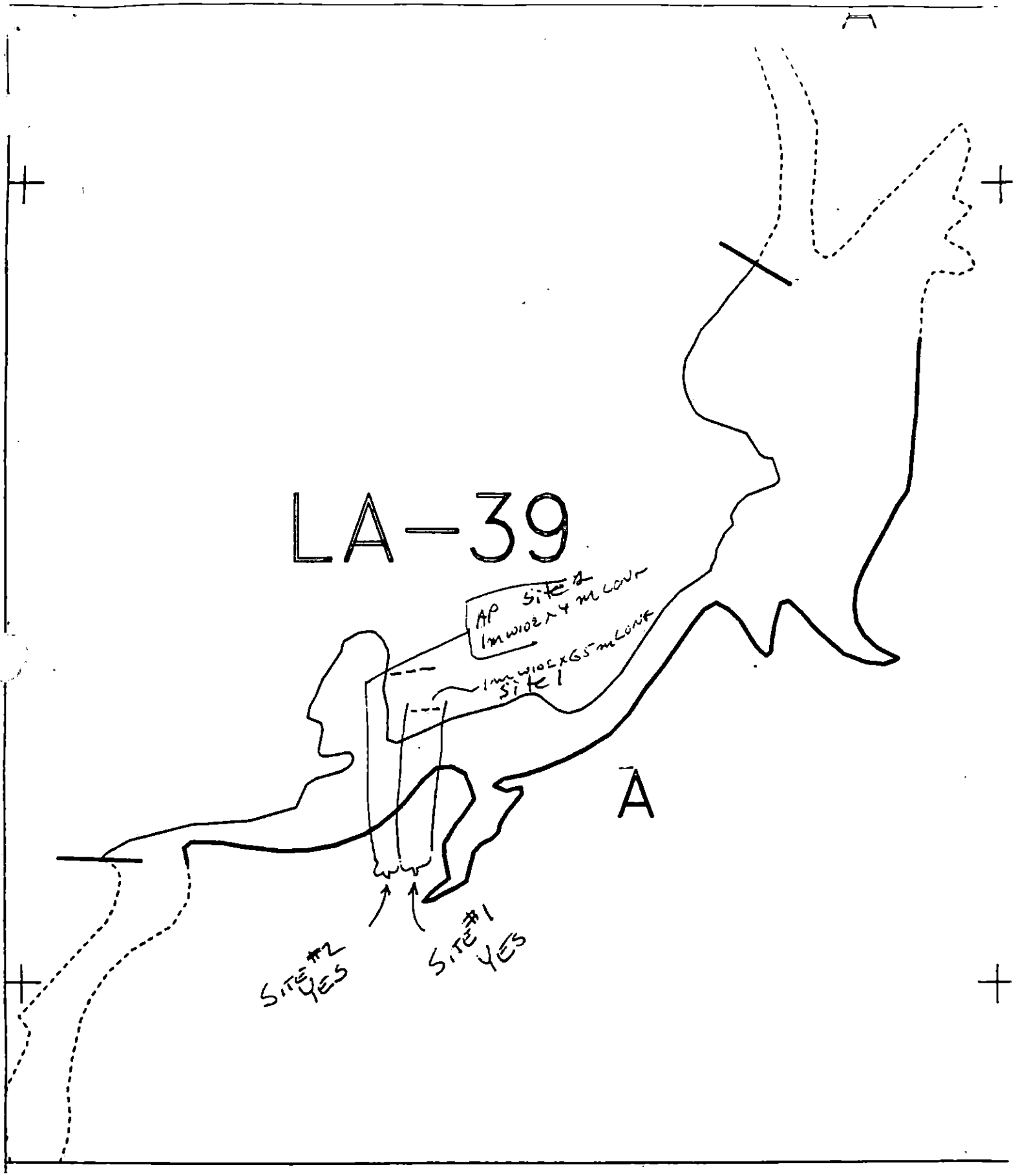
METERS

0 246 492

EXXON

N

AIAKASHIMA




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

# LA-39 A

ADEC Subsegment Length: 3084m

METERS

0 246 492

AK State Plane Zone 4 1:9692

ple-39a

EXXON

Subdivision Field Map

Map Key: PWSLA-39A

Name: LINDSAY NAKATANI

Date: 8/1/90

Date Entered:

ASAP DATA ENTRY FORM PAGE 1 OF 2

GENERAL DATA

SEG ID: LA-39 SBDV: A SITE: 1 TEAM: 3 DATE: 8-1-90
SITE LGTH 65m OIL CATEGORIES: W - M - N 85 VL - NO - U 2934
1991 REASSESSMENT: USCG: Yes ADEC: Yes LDMGR: Yes EXXON: Yes

SURFACE DATA

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

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

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

CHAR #: 4 OIL CHAR: No OIL DIST: CONT — BRKN — PTCH — SPLH —
TIDAL ZONE: SU X UI — MI X LI X

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 ____

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 ____

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: LA-39 SUBDIV: A SITE: 1

PIT # 1 PIT DEPTH 8cm OIL CHARACTER OF OIL INTVAL: FROM 0 TO 4
CLEAN BELOW: Y PIT ZONE: SU - UI X MI - LI -
SUBSURF SEDIMENT: BRK - BLD - COB - PEB X GRN X SAN X MUD - VEG -

PIT #___ 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 #___ 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 #___ 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 #___ 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 #___ 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 #___ 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 #___ 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 #___ 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 #___ 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___

ASAP DATA ENTRY FORM PAGE 1 OF 9

GENERAL DATA

SEG ID: LA-39 SBDV: A SITE: 2 TEAM: 3 DATE: 8-1-90
SITE LGTH 30m OIL CATEGORIES: W - M - N 95 VL - NO - U 2934
1991 REASSESSMENT: USCG: Yes ADEC: Yes LDMGR: Yes EXXON: Yes

SURFACE DATA

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

CHAR #: 2 OIL CHAR: NO OIL DIST: CONT — BRKN — PTCH — SPLH —
TIDAL ZONE: SU X UI — MI X LI X

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 ____

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 ____

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 ____

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 PAGE 2 OF 2

SEGMENT ID: LA-39 SUBDIV: A SITE: 2

PIT # 1 PIT DEPTH 10cm OIL CHARACTER OF OIL INTVAL: FROM 0 TO 2cm
CLEAN BELOW: Y PIT ZONE: SU — UI X MI — LI —
SUBSURF SEDIMENT: BRK — BLD — COB X PEB X GRN X SAN — MUD — VEG —

PIT #___ 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 #___ 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 #___ 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 #___ 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 #___ 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 #___ 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 #___ 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 #___ 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 #___ 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___

# SHORELINE EVALUATION

SEGMENT ST/ LA-40 SUBDIVISION A (1 OF 1) DATE 4/4/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**
Active bald eagle nest (5T) - 3/1 to 6/1; Subsistence area for deer harvesting (7II) - 8/15 to 2/28.

**SUBDIVISION ECOLOGICAL CONSTRAINTS:** (5T) Restrict air traffic to essential minimum. Air approach and take off from and to seaward only. Contact USFWS prior to treatment, for confirmation of dates and avoidance minimums.

SHPO SIGNATURE: Charles E. Holmes DATE: April 14, 1990

**OILING CATEGORIZATION:**
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 3453 m
Subsurface Oil Observed: Yes____ No X Maximum Depth_____

**RECOMMENDATIONS:**

| | |
|---|---|
| X No Treatment Recommended | ____Snare/Absorbent Booms |
| ____Treatment Recommended | ____Oil Snares (pom poms) |
| ____Manual Pickup | ____Absorbents (pads,rolls,etc) |
| ____Bioremediation | ____Spot Washing:____Wands |
| ____Tarmat: ____Breakup | ____ Beach Cleaner |
| ____Removal | ____Other (see comments) |

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/14/90
ADEC JOHN BAUER
EXXON ANDY TOM FOSC: DATE: 5-6-90
NOAA Burl Wescott
USCG G.A. REITER G.A. Reiter

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA-40 SUBDIVISION: DATE 4/4/90

~~USCG~~ NOAA
NAME GARY SHIGENAKA SIGNATURE Gary Shigenaka

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS
SEGMENT WAS A MIX OF SHORELINE TYPES RANGING FROM SAND TO COBBLE TO BOULDER TO EXPOSED BEDROCK. NO OIL WAS OBSERVED IN THIS SEGMENT.
THE SUPRATIDAL WAS COVERED BY SNOW IN MOST PORTIONS OF THE SEGMENT.

**ADEC**
NAME John Hoyer SIGNATURE

☑ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS
No oil observed on this segment.

**LAND MANAGER**
NAME RITA A. MIRAGLIA SIGNATURE Rita A. Miraglia

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS
I PARTICIPATED IN THE SSAT EVALUATION OF THIS SEGMENT AS A REPRESENTATIVE OF THE LANDOWNER AND WILL REPORT BACK TO CAC.

# SHORELINE OILING SUMMARY

REVISION NO. 03/28/90

OG Mike Foget NOAA/USCG Gary Shigenaka SEGMENT ST/ LA-40
BIO Richard Ambrose LAND REP Rita A. Miraglia SUBDIVISION A (1 OF 1)
EXXON Larry Olson ADEC John Hayes TIME 16 : 20 to 17 : 30
TEAM NO.: 11 TIDE LEVEL: 1.2 to 2.0 DATE 4 / 4 / 90
EST. SUBDIVISION LENGTH: 2192 m ☐ Sun ☑ Clouds ☐ Fog ☒ Rain ☒ Snow
UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☐ Rock Forested backshore w/ steep inland bluffs
SURVEYED FROM: ☐ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
SURFACE SEDIMENTS: R 10 % B 10 % C 30 % P 20 % G 15 % S 15 % M — % V — %
SLOPE : Lang 100 % Hang — % Vert — % WAVE EXPOSURE: ☐ Low ☑ Med ☒ High
OIL CATEGORY LENGTH: W — m M — m N — m VL — m NO 2192 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | /C | /B | /P | /S | | | | | | SU | UI | MI | U |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | | | | | | | | | | | | |
| COAT | | | | | | | | | | | | | |
| STAIN | | | | | | | | | | | | | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | | | | | | | | | | |
| NO OIL | | | | | | | | | | X | X | X | X |

PAVEMENT: H F S — sq. m by — cm

PATTIES / TARBALLS — BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | | | |
| Debris | | | |

DEBRIS COLLECTED ☐ YES ☒ NO

TYPE

#BAGS

Photographs:

Roll No.

Frames

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (TOP-BOT) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | | UO | UC | | | | | | SU | UI | MI | U | | |
| 1 | 5 | | | | | X | - | | X | | | | | | | X | | | | S, R |
| 2 | 10 | | | | | X | - | | X | | | | | | | X | | | | S, R |
| 3 | 30 | | | | | X | - | | X | | | | | | X | | | | | C, S, P |
| 4 | 25 | | | | | X | - | | X | | | | | | | X | | | | G, S |
| 5 | 20 | | | | | X | - | | X | | | | | | X | | | | | C, G, C |
| | | | | | | | - | | | | | | | | | | | | | |

COMMENTS No oil was observed in this segment. The shore zone in the Northern Para is mostly boulder / cobble beach. The area where pits 1-3 were dug is upfilled bedrock w/ sand and the rest of the segment is low angle cobble beach.



REVIEWED JW DATE 4/7/90

# SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/97/98

Segment ST / LA040 Subdivision A Date (mo / day / yr) 4/4/90

Time ( 24 hr ) 1640 hrs Biologist Ambrose

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

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

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

Photographs:
Roll No. –
Frames –

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | X | 2 | X | X | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | X | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | X | X | 2 | (1) | (1) | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | X | X | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| X | X | 1L | 1U | 1M | 1L | (1) | (1) | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | X | 2 | 2 | 2 | X | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | X | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

Wildlife Observations/ General Comments: 4 black scoters, 1 otter, 1 gull, 2 deer and 3 deer tracks.

Ecological Considerations: Segment was a mixture of cobble/boulder beaches and bedrock area. cobble/boulder areas had sparse to moderate cover, bedrock areas had dense cover. Sparse mussel bed occurred before and in Montgomery Bay.

711, ST-2: No eagles or nests seen.

OG M Foget

SEGMENT ST/ LA-40

SUBDIVISION A

DATE 4 / 4 90

**CHECKLIST**

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

**LEGEND**

1 △
Pit - No Subsurface Oil

2 ▲
Pit - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oiled Vegetation

1 ⇨
Photo location, direction, and number

# SKETCH MAP

N

Scale

200 m

Legend

↑ - trees (forest)

(00000) - snow (SUPRA IT2)

Boulder cobble beach

Bedrock/sand beach

$\Delta_1$ $\Delta_2$ $\Delta_3$

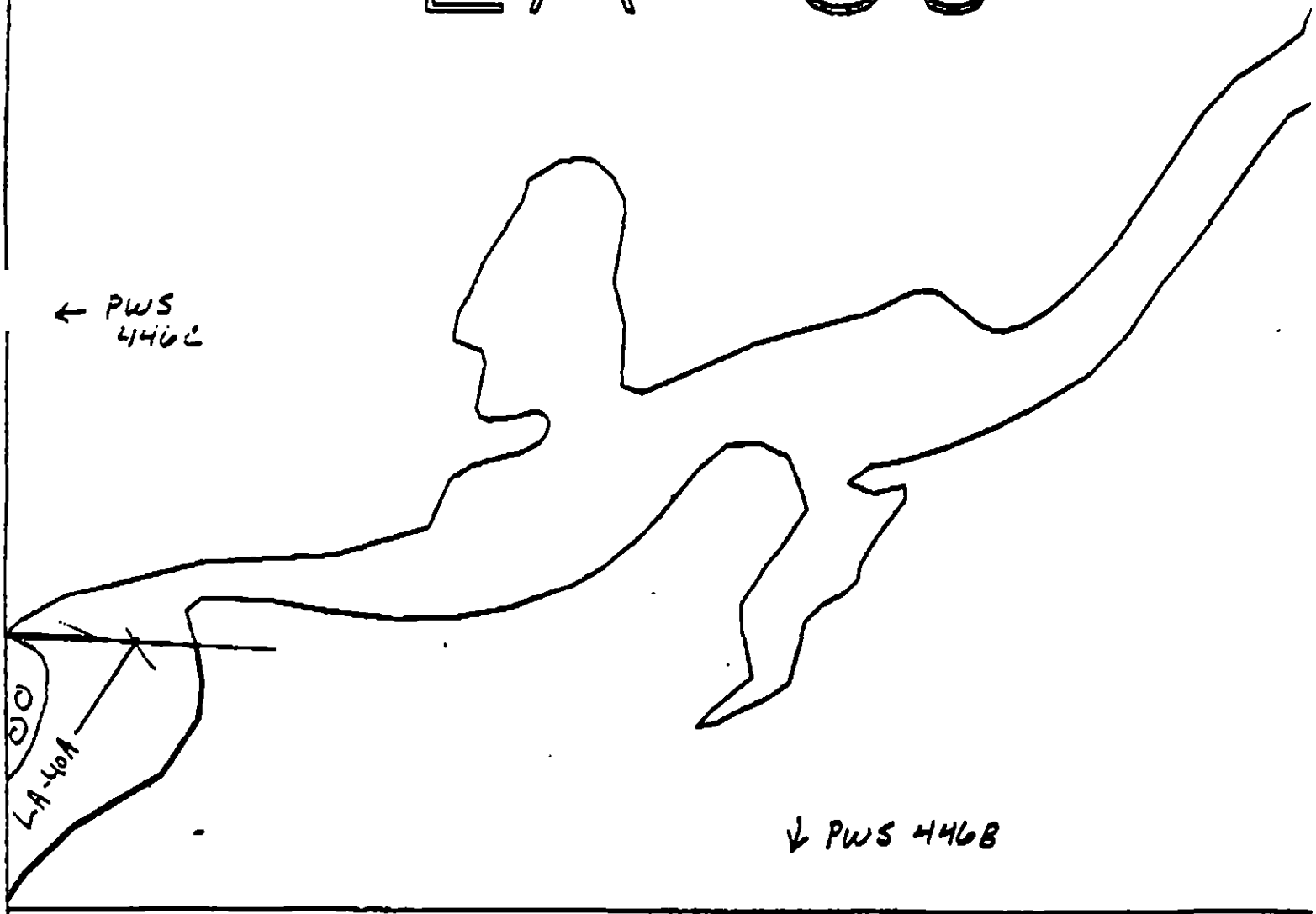
Cobble beach

$\Delta_5$ $\Delta_4$

Oil Character Length (m): AP ___ PO ___ CV ___ CT ___ ST ___ MS ___ PT ___ TB ___ FL ___ NO 2192

REVISIONS

# LA-39



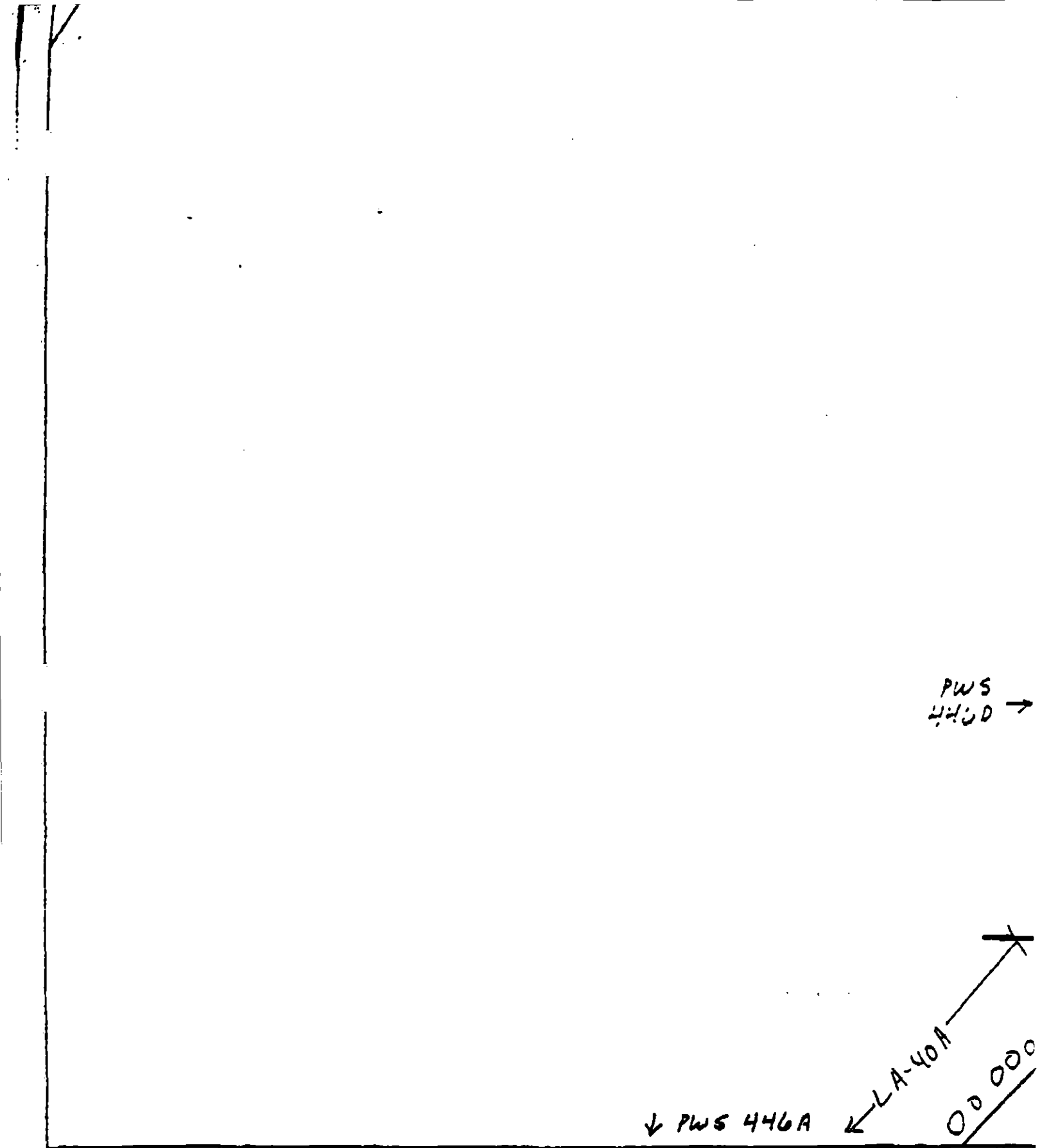

XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
0000 No Oil

LA-40A

ADEC Segment Length: 3453m

0 100 200 300
METERS

Map Key: PWS-446C
Name: Mike Foget
Date: 4/4/90
Date Entered:




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

# LA-40

ADEC Segment Length: 3453m

0 100 200 300
METERS

Map Key: PWS-446a
Name: Mike Forey
Date: 4/4/90
Date Entered:

↑ PWS 446D

← PWS 446A

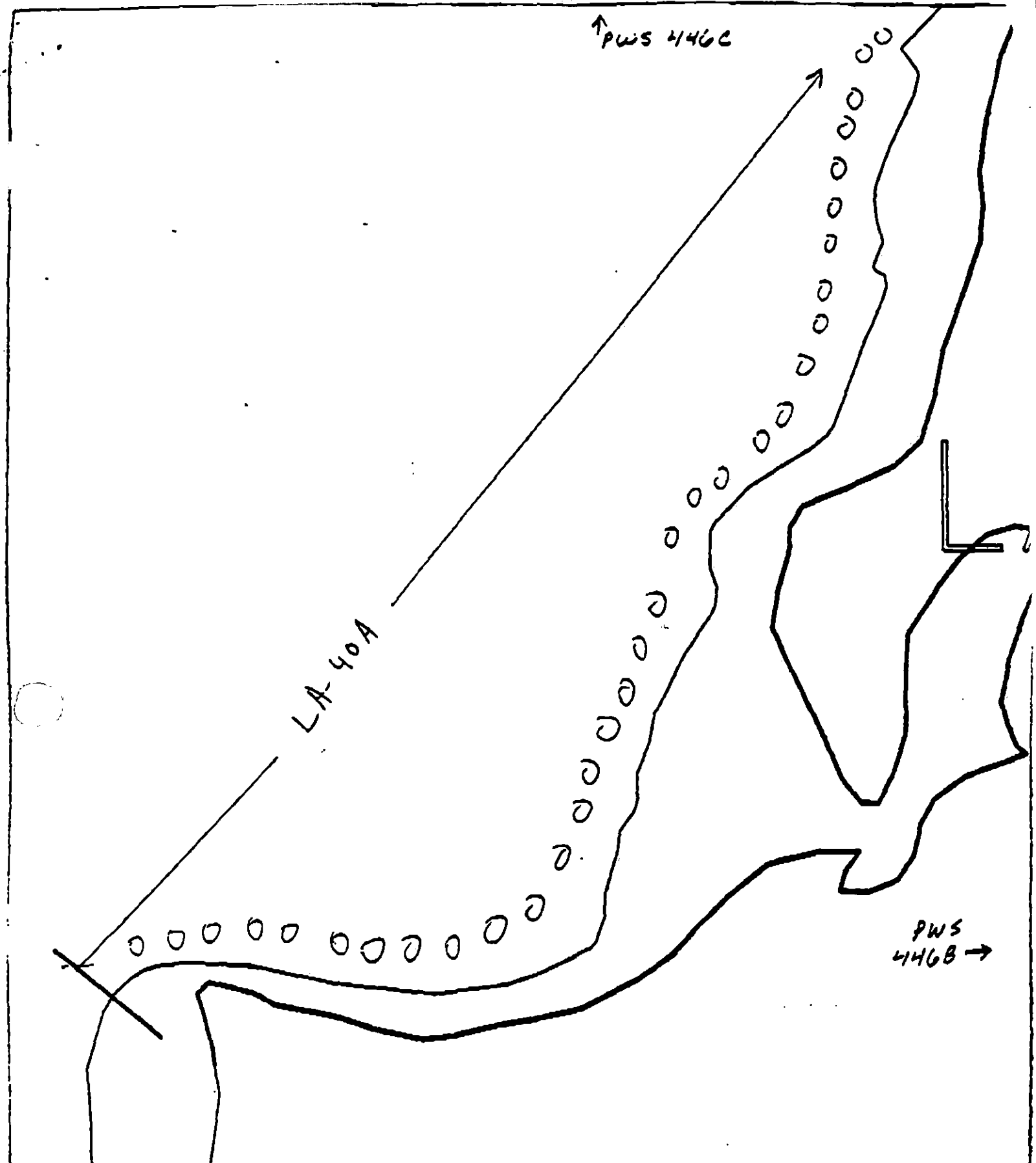
XXXX Wide
'/// Medium
--- Narrow
TTTT Very Light
0000 No Oil

LA-40A

ADEC Segment Length: 3453m

0 100 200 300
METERS

Map Key: PWS-446b
Name: Mike Foget
Date: 4/4/90
Date Entered:




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

# LA-40A

ADEC Segment Length: 3453m

0 100 200 300
METERS

Map Key: PWS-446c
Name: Mike Boyce
Date: 4/4/90
Date Entered:

# SHORELINE EVALUATION

SEGMENT ST/ LA-41 SUBDIVISION A (1 OF 1) DATE 4/5/90

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

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

SHPO SIGNATURE: _____ DATE: 4/18/90

**OILING CATEGORIZATION:**

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 27 m: No Oil 3862 m
Subsurface Oil Observed: Yes____ No X Maximum Depth_____

**RECOMMENDATIONS:**

| | |
|---|---|
| X No Treatment Recommended | _____Snare/Absorbent Booms |
| _____Treatment Recommended | _____Oil Snares (pom poms) |
| _____Manual Pickup | _____Absorbents (pads,rolls,etc) |
| _____Bioremediation | _____Spot Washing:_____Wands |
| _____Tarmat: _____Breakup | _____ Beach Cleaner |
| _____Removal | _____Other (see comments) |

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 4/18/90
ADEC JOHN BAUER
EXXON
NOAA Bud Wescott
USCG G.A. BAUER

FOSC: _____ DATE: 5-6-90

# PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

| | | |
|---|---|---|
| 1A | | Salmon stream mouth - fry outmigration (3/1 to 5/15) |
| 1B | | Salmon stream mouth - spawning (7/10 to 8/31)<br>No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits. |
| 1C | | Salmon fry nursery area (4/31 to 7/31) |
| 1D | | Esther Hatchery release (4/15 to 6/1) |
| 1E | | Main Bay Hatchery release (4/20 to 5/10) |
| 1F | | Sawmill Bay Hatchery release (4/15 to 6/1) |
| 1G | | Cannery Creek Hatchery release (4/21 to 6/1) |
| 1H | | Remote release site |
| 1I | | Gill net area (6/7 to 8/31) |
| 1J | | Purse seine area (7/20 to 9/30) |
| 1K | | Purse seine hook-off (7/20 to 9/30) |
| 1L | | Set net sites (6/11 to 7/25)<br>For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints. |
| 2M | | Herring spawning (4/1 to 6/15)<br>Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations. |
| 3N, 3P | | Harbor seal and sea lion pupping (5/15 to 7/1) |
| 3O, 3Q | | Harbor seal and sea lion molting (8/15 to 9/15)<br>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)<br>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)<br>Restrict all activity to essential minimum, especially air traffic. |
| 5T | | All Bald Eagle nests (5/1 to 8/1)<br>Active Bald Eagle nests (3/1 to 6/1)<br>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 (5/1 to 9/15) |
| 6V | | Anchorages (5/1 to 9/15) |
| 6W | | Forest Service cabins (5/1 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 | | Invertebrate harvesting<br>For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints. |

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA-41 SUBDIVISION: DATE 4/4-4/5/90

SG NOAA
NAME GARY SHIGENAKA SIGNATURE Gary Shigenaka

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

SEGMENT CONSISTED OF COBBLE AND/OR BOULDER BEACHES ALONG THE SOUTHWEST SHORELINE OF LATOUCHE ISLAND. SURVEY OF THE SEGMENT BEGAN ON 4/4/90 BUT WAS BROKEN OFF DUE TO BUILDING SEAS, POOR VISIBILITY, AND SNOW. ASSESSMENT WAS CONTINUED AND COMPLETED ON 4/5/90. AT THE SOUTHERNMOST END OF THE SEGMENT AN AREA OF ROCKY OUTCROPPING WAS ENCOUNTERED THAT WAS THE SUBJECT OF MUCH DISCUSSION. EXTENSIVE PORTIONS OF THE SURFACE AREA OF THE ROCKS WERE COVERED WITH A BLACK COATING THAT WAS DESCRIBED BY SOME MEMBERS OF THE TEAM AS TAR STAIN, AND BY OTHERS AS A LICHEN OR ALGAL GROWTH. SCRAPINGS AND OTHER CLOSE EXAMINATIONS FAILED TO RESOLVE THE DISAGREEMENT. ALTHOUGH COVERAGE OF THE ROCK OUTCROPPING BY THE UNIDENTIFIED COATING WAS EXTENSIVE (APPROX 3 M HIGH X 50 M BAND) THERE WAS NO OTHER EVIDENCE OF OILING IN THIS IMMEDIATE VICINITY. MY OPINION (AND THAT OF OTHERS) WAS THAT THE COATING WAS OF ALGAL ORIGIN RATHER THAN PETROLEUM. HOWEVER, OTHER MEMBERS OF THE SSAT WERE CERTAIN THAT THE COATING WAS IN FACT TAR. THUS DEADLOCKED, WE AGREED TO NONCONSENSUS. WET WEATHER CONDITIONS MADE A DIFFICULT TASK OF DIFFERENTIATION EVEN MORE DIFFICULT. A QUICK MEANS OF DISTINGUISHING BETWEEN TAR AND LICHEN — FOR EXAMPLE, A VIAL OF ORGANIC SOLVENT IN WHICH SCRAPINGS OF TAR WOULD DISSOLVE BUT ALGAE OR LICHEN WOULD NOT BECAUSE OF CELLULOSE CONTENT — WOULD BE DESIRABLE IN THE FIELD. (COMMENTS CONTINUED ON NEXT PAGE)

**ADEC**
NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

**LAND MANAGER**
NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA - 41 SUBDIVISION: DATE 4/4 - 4/5/90

~~SCG~~ NOAA
NAME GARY SHIGENAKA SIGNATURE Gary Shigenaka

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

(COMMENTS FOR LA-41, CONTINUED)

NORTH OF THE POINT WHERE THE ROCK OUTCROP WAS ENCOUNTERED, SOME SPORADIC STAIN SPLATTERS AND A SINGLE SPOT OF TAR WERE OBSERVED ON BOULDERS IN THE UPPER INTERTIDAL ZONE. IN A SANDY PORTION OF THIS BEACH, DEER TRACKS AND SCAT WERE FOUND.

THE REMAINDER OF THE SEGMENT, LARGELY COBBLE-BOULDER BEACH, WAS FREE FROM EVIDENCE OF OILING. A LARGE PORTION OF THE SUPRATIDAL WAS COVERED BY SNOW, BUT IN THOSE AREAS WHERE IT WAS NOT, IT APPEARED TO BE CLEAN. AT THE NORTHERN END OF THE SEGMENT, DEER AND RIVER OTTER TRACKS WERE SEEN IN THE SAND JUST BELOW THE SUPRATIDAL.

THE CAC LANDOWNER REP ACCOMPANIED US ON 4/4 WHEN WE BEGAN OUR SURVEY OF LA-40. ON 4/5, SHE DEPARTED AND SO THE REMAINDER OF THE SEGMENT WAS ASSESSED WITH NO REP.

**ADEC**
NAME Tesha Hoyer SIGNATURE

☑ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

We walked much of the segment and dug numerous pits. No subsurface contamination was observed on this segment. Surface contamination consisted of tar staining on boulders in southern portion of segment. Staining was intermittent and occasionally heavy in UITZ.

**LAND MANAGER**
NAME SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

South end of the segment, The shore zone consists Mostly of Low angle cobble sta
W/ some Boulder/cobble Beaches. Thier was some black lichen located



REVIEWED_____ DATE_____

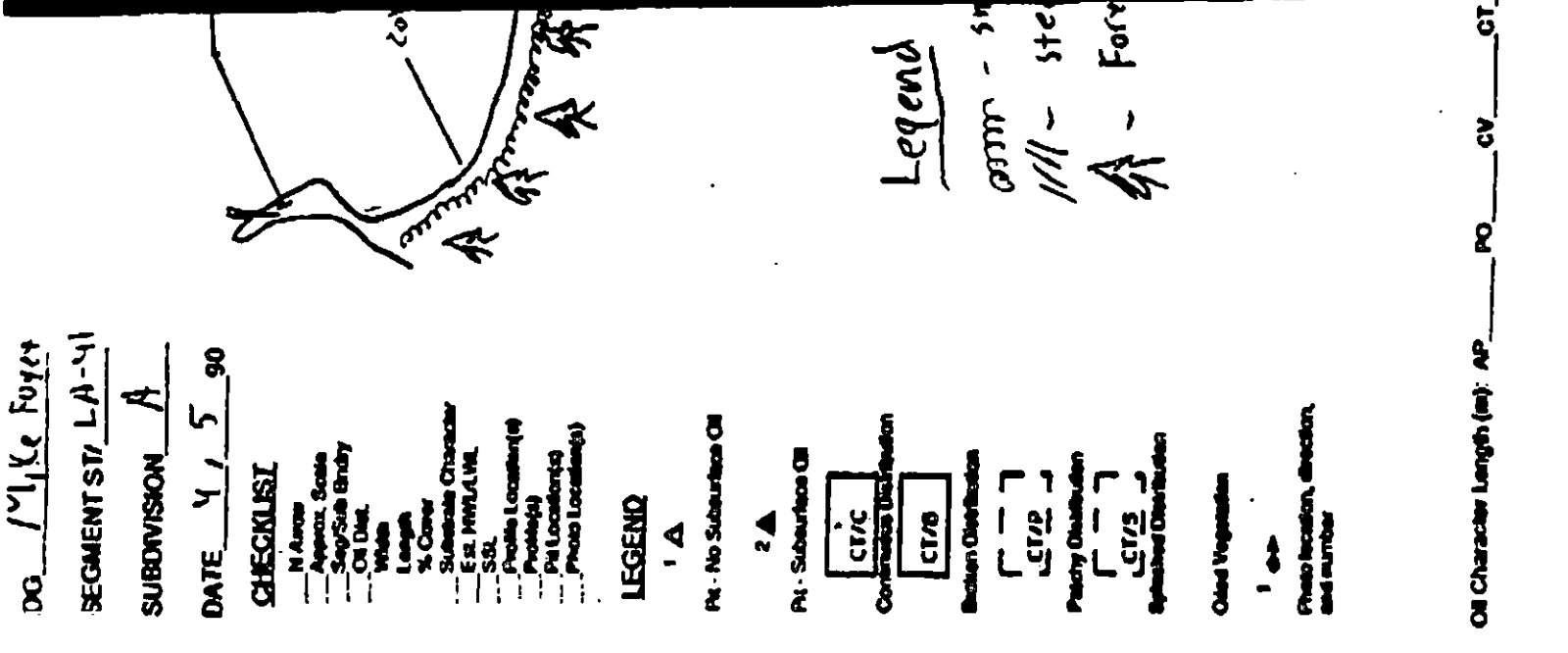
**LAND MANAGER**

NAME_____SIGNATURE_____

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

REVISION NO. 03/21/88



# SHORELINE OILING SUMMARY

REVISION NO. 03/30/90

OG Mike Foget NOAA Gary Shigenaka SEGMENT ST/ 41
BIO Richard Ambrose LAND REP [redacted] SUBDIVISION A
EXXON Larry Olson ADEC John Hayes TIME 14 :20 to 16 :30
TEAM NO.: 11 TIDE LEVEL: 5.0 to 1.5 DATE 4 / 5 / 90
EST. SUBDIVISION LENGTH: 3828 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☒ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock Lower part of segment has Forested backshore/ is r
SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
SURFACE SEDIMENTS: R 5 % B 30 % C 40 % P 10 % G 5 % S 5 % M — % V — %
SLOPE : Lang 100 % Hang — % Vert — % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
OIL CATEGORY LENGTH: W — m M — m N — m VL 20 m NO 3808 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | rc | ra | rp | rs | | | | | | su | ui | mi | li |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | | | | | | | | | | | | |
| COAT | | | | | | | | | | | | | |
| STAIN | | | | X | | X | | | | | X | | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | | | | | | | | | | |
| NO OIL | | | | | | | | | | X | | X | X |

PAVEMENT: H F S — sq. m by — cm

PATTIES / TARBALLS — BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | | | |
| Debris | | | |

DEBRIS COLLECTED ☐ YES ☒ NO

TYPE —

#BAGS —

Photographs:

Roll No. —

Frames —

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | op | or | ol | of | no | from-cm | uo | uc | | | | | | su | ui | mi | li | | |
| 1 | 10 | | | | | X | - | | X | | | | | | | X | | | | C, G, C |
| 2 | 20 | | | | | X | - | | X | | | | | | X | | | | | G, P, S |
| 3 | 15 | | | | | X | - | | X | | | | | | | | X | | | G, R |
| 4 | 10 | | | | | X | - | | X | | | | | | | X | | | | P, R |
| 5 | 15 | | | | | X | - | | X | | | | | | | | X | | | S, C |
| 6 | 20 | | | | | X | - | | X | | | | | | | X | | | | S, C |

COMMENTS

No oil was observed in the segment with the exception of a 1m x 20 m c+/s tar stain in the MHTZ located in a rock outcrop at South end of the segment. The shore zone consists Mostly of Low angle Cobble beach w/ some boulder/cobble breaching. There was some black lichen located



REVIEWED — DATE —

## SHORELINE OILING SUMMARY (PAGE 2 of 3)

REVISION 10/13/98

SEGMENT ST/ L4-41 SUBDIVISION A

## SUBSURFACE OIL (CONTINUED)

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL | BELOW | | OIL / FILM COLOR | | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OP | NO | (CM-CM) | UO | UC | | | | | | | SU | UI | MI | U | | |
| 7 | 30 | | | | | X | - | | X | | | | | | | | X | | | | S (water at 10cm) |
| 8 | 15 | | | | | X | - | | X | | | | | | | X | | | | | S |
| 9 | 10 | | | | | X | - | | X | | | | | | | | | X | | | C |
| 10 | 10 | | | | | X | - | | X | | | | | | | | X | | | | C |
| 11 | 15 | | | | | X | - | | X | | | | | | | | | X | | | S C |
| 12 | 30 | | | | | X | - | | X | | | | | | | | X | | | | G |
| | | | | | | | - | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | |

COMMENTS

in the southern end of the segment located amongst the rock outcrop in the UTZ. this made the identification of the extent oil staining in this area difficult. It was identified as the Imx zone C+/S band.

REVIEWED_____ DATE_____

# SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/23/88

Segment ST / LA041 Subdivision A Date (mo / day / yr) 4/5/90

Time ( 24 hr ) 1430hrs Biologist Ambrose

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

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

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

Photographs:
Roll No. ST-11-2
Frames 7-8

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | X | X | X | X | 2 | X | ② | ② | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | ③ | X | 3 | 3 | ③ | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | X | X | 2 | ② | 2 | ② | |
| 3 | 3 | 3 | 3 | X | 3 | 3 | 3 | 3 | ③ | 3 | X | NOT PRESENT |
| 4 | 4 | 4 | 4 | X | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**GASTROPODS**

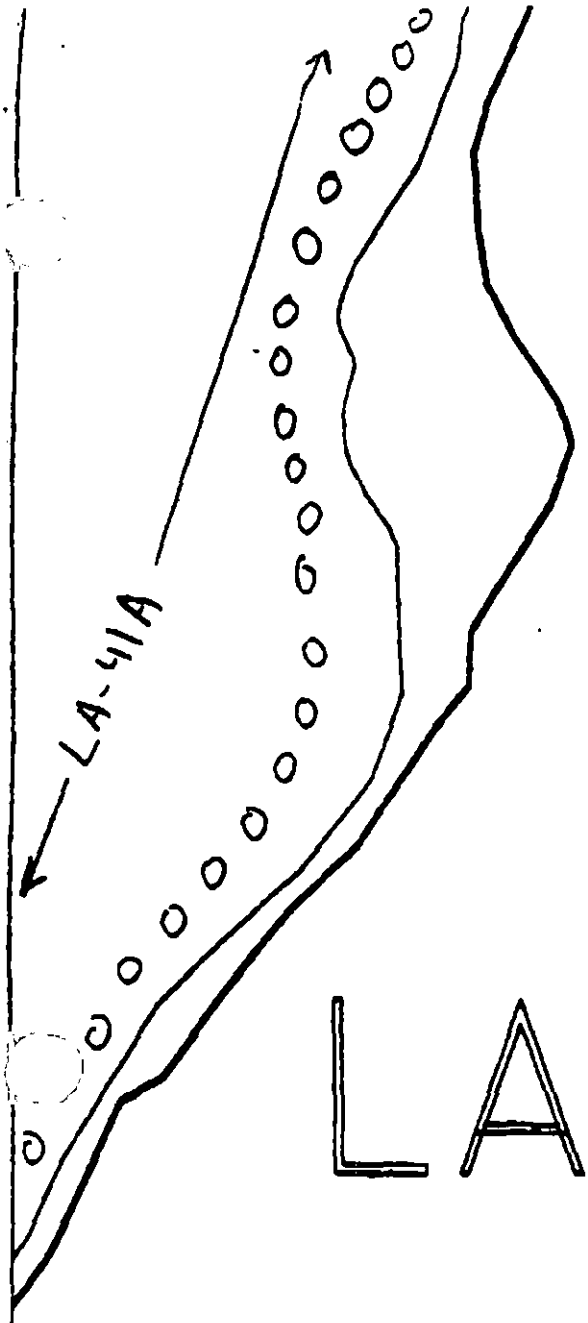
| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | X | 2 | X | 2 | 2 | 2 | 2 | X | |
| 3 | 3 | 3 | 3 | 3 | 3 | X | X | 3 | 3 | 3 | X | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| X | X | 1L | 1U | 1M | X | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | X | X | 2 | 2 | 2 | 2 | 2 | ② | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**Wildlife Observations/ General Comments:** 1 otter, 1 common merganser, 2 white-winged scoters, 1 goldeneye, 2 buffleheads, 3 unid. birds.
LA041 is a diverse section, with a mix of bedrock (w/generally dense cover), point (with boulders w/moderate cover) and coves and cobble beaches (with low cover). There
**Ecological Considerations:** were several mussel beds along the segment.

711, ST: No bald eagles or nests seen.




↑ PWS 447F

# LA-41

← PWS 447C

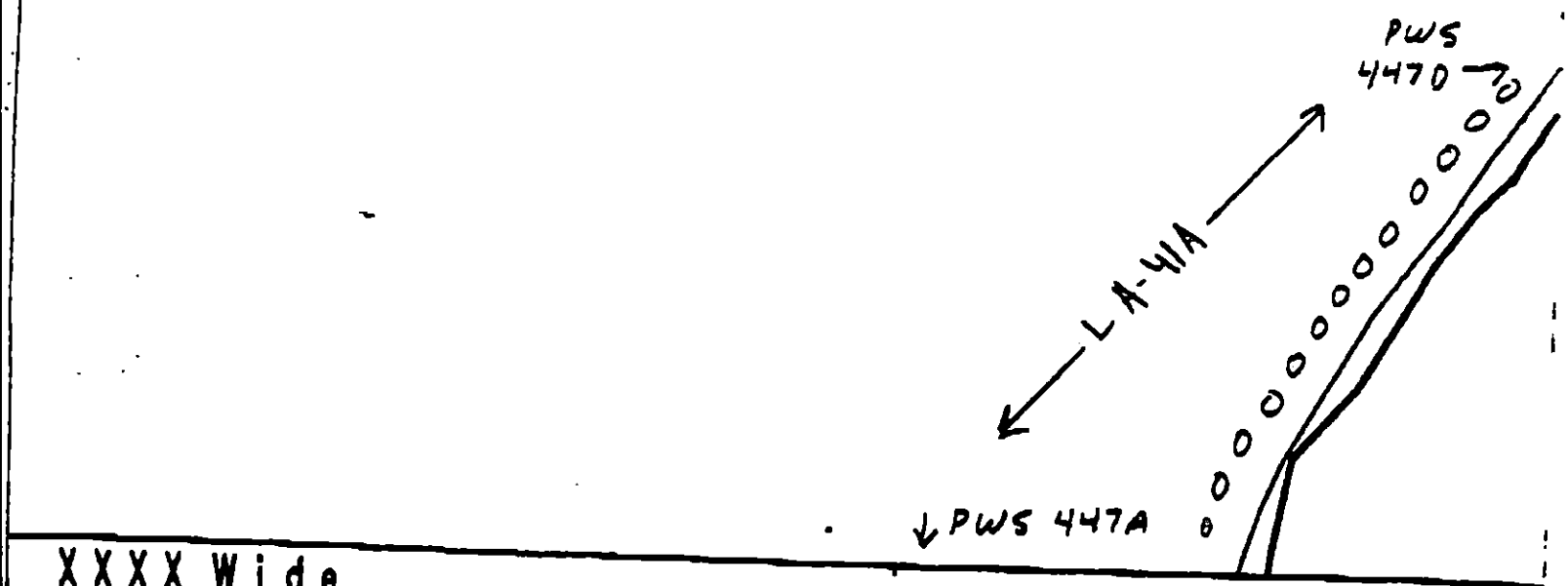
XXXX Wide
/// Medium
---- Narrow
TTTT Very Light
0000 No Oil

LA-41A

ADEC Segment Length: 3889m

0 100 200 300
METERS

Map Key: PWS-447d
Name: Mike Foget
Date: 4/5/90
Date Entered:



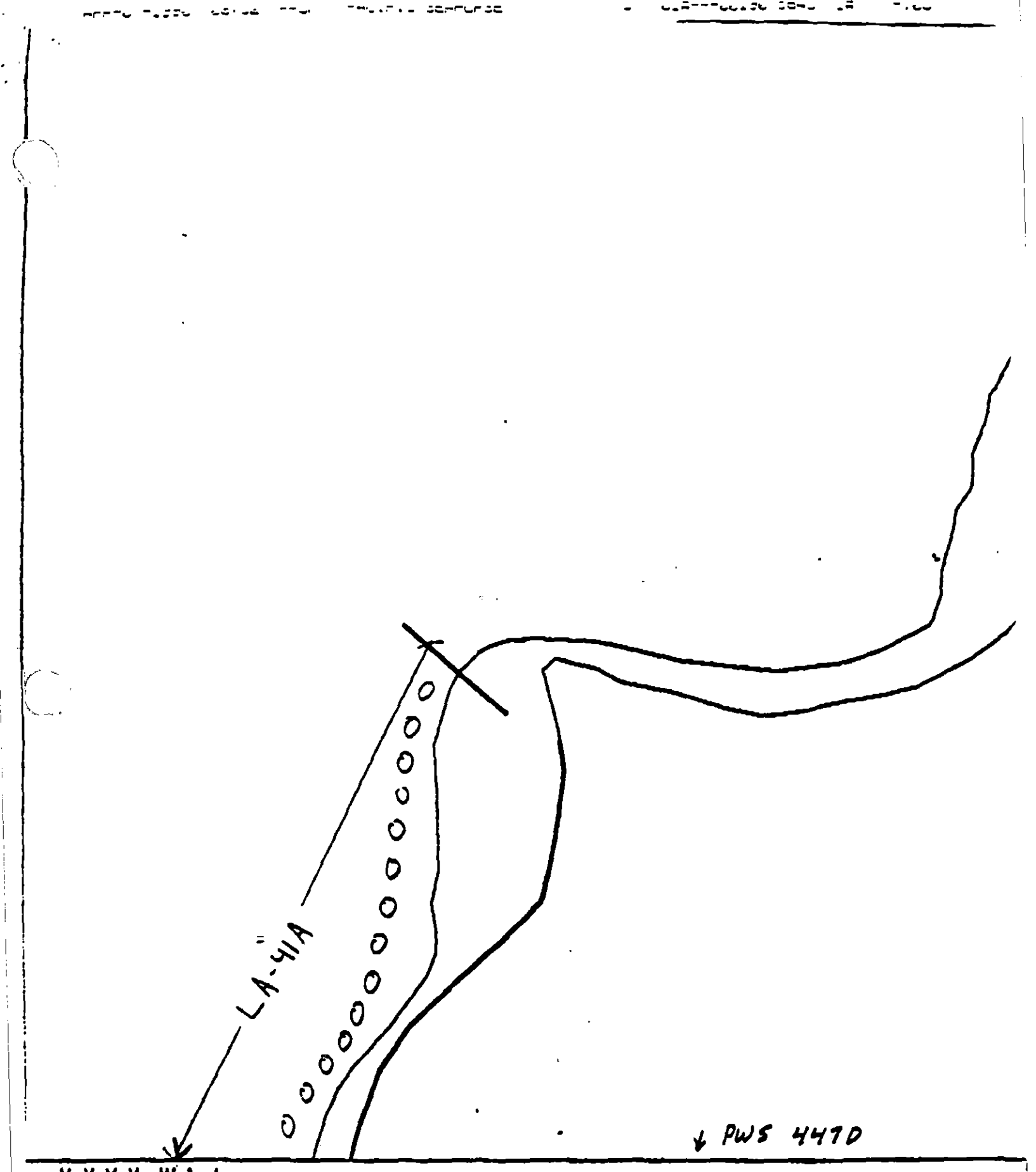

XXXX Wide
// Medium
---- Narrow
TTTT Very Light
OOOO No Oil

# LA-41A

ADEC Segment Length: 3889m

0 100 200 300
METERS

Map Key: PWS-447c
Name: Mike Foget
Date: 4/5/90
Date Entered:



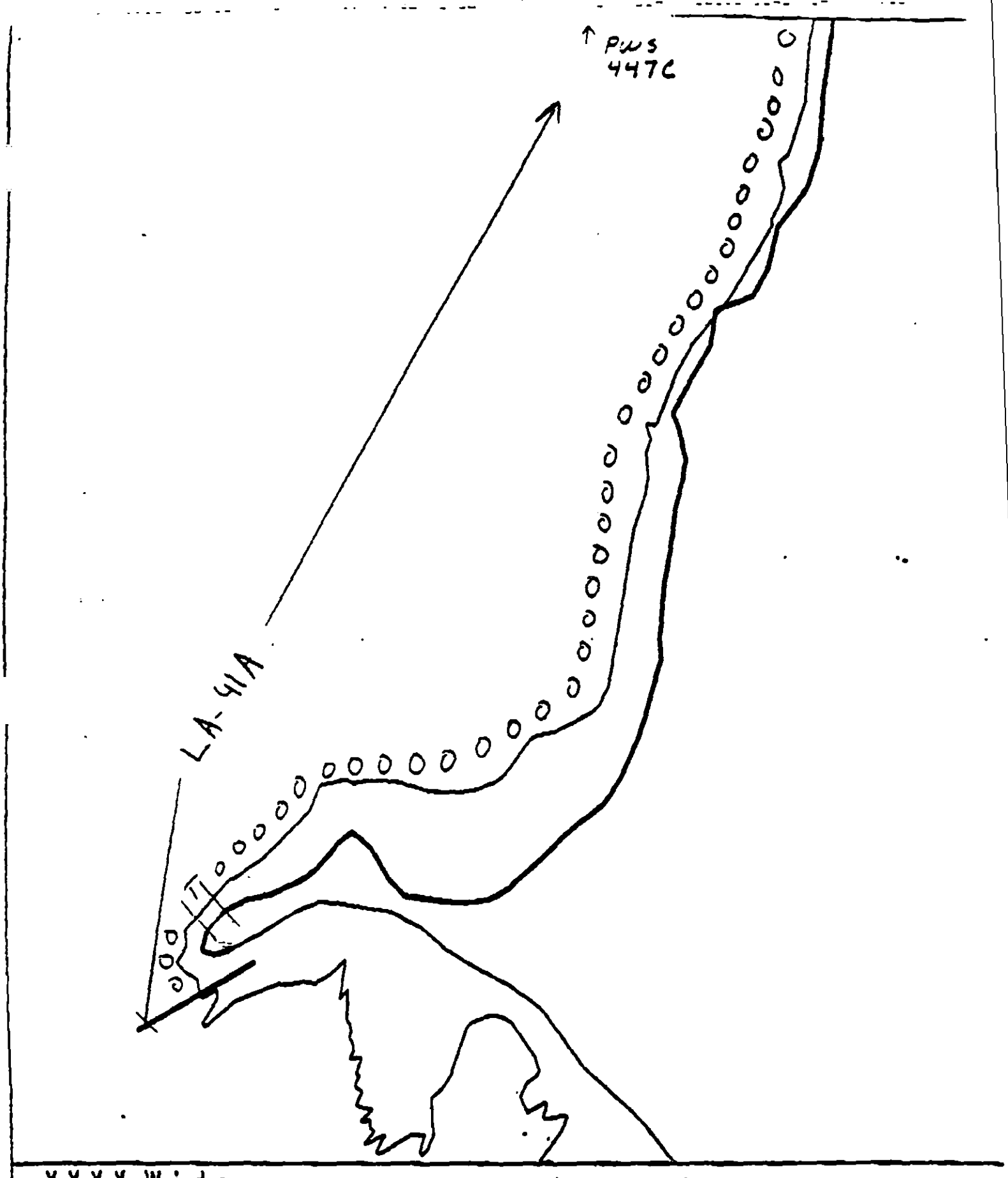

XXXX Wide
/// Medium
---- Narrow
TTTT Very Light
0000 No Oil

# LA-41A

ADEC Segment Length: 3889m

0 100 200 300
METERS

Map Key: PWS-4471
Name: Mike Foget
Date: 4/5/90
Date Entered:



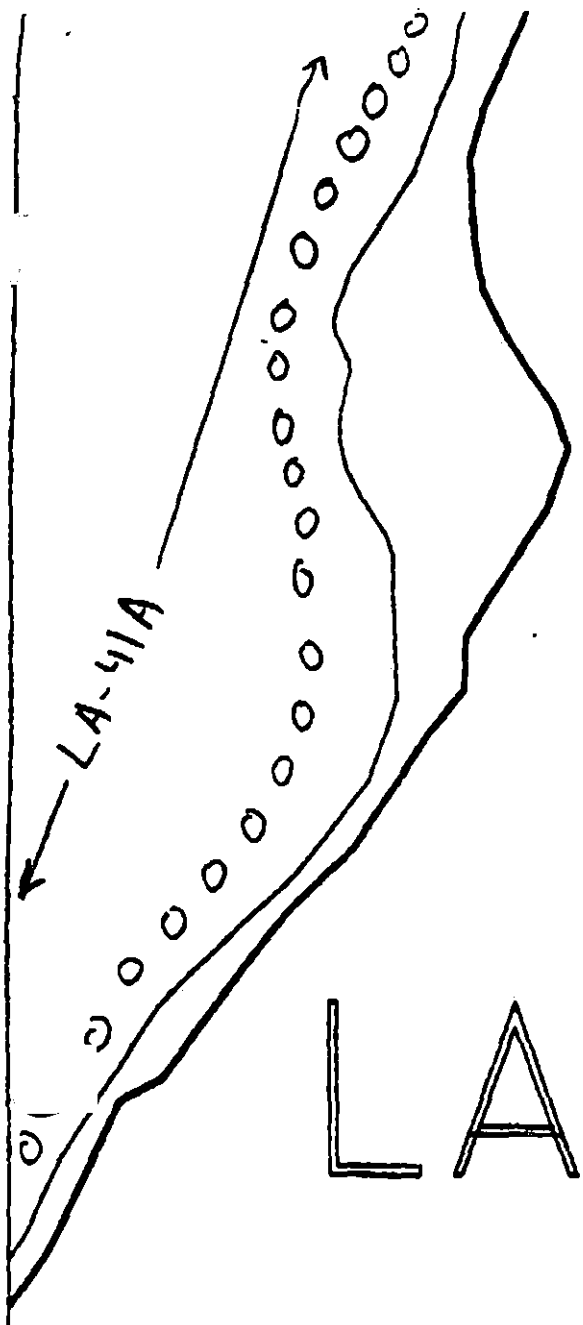

XXXX Wide
/// Medium
---- Narrow
TTTT Very Light
0000 No Oil

# LA-41A

ADEC Segment Length: 3889m

0 100 200 300
METERS

Map Key: PWS-447a
Name: Mike Foget
Date: 4/5/90
Date Entered:




↑ PWS 447F

# LA-41

← PWS 447C

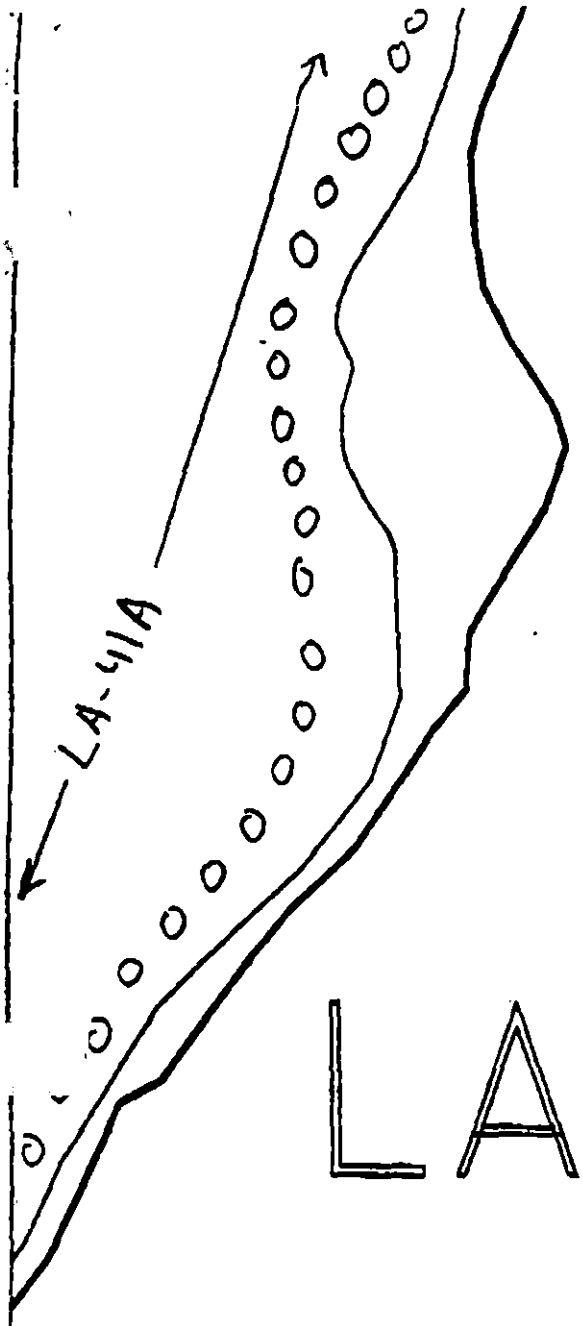
XXXX Wide
'/// Medium
--- Narrow
TTTT Very Light
0000 No Oil

## LA-41A

ADEC Segment Length: 3889m

0 100 200 300
METERS

Map Key: PWS-447d
Name: Mike Foget
Date: 4/5/90
Date Entered:




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

LA-41A

ADEC Segment Length: 3889m

0 100 200 300
METERS

Map Key: PWS-447d
Name: Mike Foget
Date: 4/5/90
Date Entered:

# SHORELINE EVALUATION

SEGMENT ST/ LA-42 SUBDIVISION A (1 OF 1) DATE 4/9/90

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

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

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

**OILING CATEGORIZATION:**

Wide 0 m: Medium 56 m: Narrow 0 m: V.Light 94 m: No Oil 1781 m
Subsurface Oil Observed: Yes____ No X Maximum Depth_____

**RECOMMENDATIONS:**

| | |
|---|---|
| X No Treatment Recommended | _____Snare/Absorbent Booms |
| _____Treatment Recommended | _____Oil Snares (pom poms) |
| _____Manual Pickup | _____Absorbents (pads,rolls,etc) |
| _____Bioremediation | _____Spot Washing:_____Wands |
| _____Tarmat: _____Breakup | _____ Beach Cleaner |
| _____Removal | _____Other (see comments) |

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 4/19/90
ADEC ART WERNER
EXXON [signature]
NOAA Bill Wescott
USCG KENNETH KENNIS

FOSC: [signature] DATE: 5-12-90

# PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

| | | |
|---|---|---|
| 1A | | Salmon stream mouth - fry outmigration (3/1 to 5/15) |
| 1B | | Salmon stream mouth - spawning (7/10 to 8/31) |
| | | No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits. |
| 1C | | Salmon fry nursery area (4/31 to 7/31) |
| 1D | | Esther Hatchery release (4/15 to 6/1) |
| 1E | | Main Bay Hatchery release (4/20 to 5/10) |
| 1F | | Sawmill Bay Hatchery release (4/15 to 6/1) |
| 1G | | Cannery Creek Hatchery release (4/21 to 6/1) |
| 1H | | Remote release site |
| 1I | | Gill net area (6/7 to 8/31) |
| 1J | | Purse seine area (7/20 to 9/30) |
| 1K | | Purse seine hook-off (7/20 to 9/30) |
| 1L | | Set net sites (6/11 to 7/25) |
| | | For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints. |
| 2M | | Herring spawning (4/1 to 6/15) |
| | | Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations. |
| 3N, 3P | | Harbor seal and sea lion pupping (5/15 to 7/1) |
| 3O, 3Q | | Harbor seal and sea lion molting (8/15 to 9/15) |
| | | Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. |
| 5R | | Seabird colony (5/1 to 9/1) |
| | | Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment. |
| 5S | | Shorebird/waterfowl concentration (4/1 to 5/15) |
| | | Restrict all activity to essential minimum, especially air traffic. |
| 5T | | All Bald Eagle nests (3/1 to 6/1) |
| | | Active Bald Eagle nests (3/1 to 9/1) |
| | | Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates. |
| 6U | Recreation: | Tent sites (6/1 to 9/15) |
| 6V | | Anchorages (6/1 to 9/15) |
| 6W | | Forest Service cabins (6/1 to 9/15) |
| 6X | | Lodge (6/1 to 9/15) |
| 6Y | | Special use destination |
| 7Z | Subsistance area: | Salmon harvesting (5/1 to 9/30) |
| 7HH | | Finfish harvesting |
| 7II | | Deer harvesting (8/15 to 2/28) |
| 7JJ | | Invertebrate harvesting |
| | | For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints. |

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LA-42 SUBDIVISION: DATE 4/9/90

~~USCG~~ NOAA
NAME GARY SHIGENAKA SIGNATURE Gary Shigenaka

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

SEGMENT CONSISTED OF A VERY RUGGED SHORELINE AT THE SOUTHERN TIP OF LATOUCHE ISLAND. IT WAS CHARACTERIZED BY ROCK OUTCROPPINGS AND BOULDERS, AND LOW BROAD (ROCKY) BEACHES EXTENDING FOR A CONSIDERABLE DISTANCE AT LOW TIDE. SPORADIC EVIDENCE OF OILING WAS OBSERVED ALONG THE LENGTH OF THE SEGMENT, AND THIS TOOK THE FORM OF WEATHERED SPLASHES AND A FEW BANDS OF COVER/COAT ON ROCK FACES IN THE UPPER INTERTIDAL ZONE. IN A FEW LOCATIONS, SHEEN WAS OBSERVED ON WATER SURFACES, BUT PITS AND CLOSE EXAMINATION OF THE IMMEDIATE AREA REVEALED NO OBVIOUS PETROLEUM-RELATED SOURCE. LARGE AMOUNTS OF DECAYING ALGAE WERE APPARENT ALONG THE SHORE, AND IT IS POSSIBLE THAT AT LEAST SOME OF THE SHEEN WAS ORGANIC IN ORIGIN. THE OG AND ADEC REP EXAMINED THE SOUTHERNMOST TIP OF THE ISLAND AND SEGMENT AND FOUND A WIDE SWATH OF STAIN AND COVER ON THE BEDROCK OUTCROPPING, BUT ALSO OBSERVED THAT IT WAS WELL-WEATHERED IN THE EXTREMELY EXPOSED ENVIRONMENT.

BEAR TRACKS WERE UBIQUITOUS ALONG THE SUPRATIDAL. A SET OF BEAR TRACKS WERE OBSERVED, AND UNIDENTIFIED SCAT WAS FOUND ALONG THE SUPRATIDAL AND IN THE SNOW ABOVE THE SUPRA.

**ADEC**
NAME John Hayes SIGNATURE

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

Shoreline segment LA-42 had oiling in the form of tar balls + splash + stain patches. The shoreline has significantly improved from when I did a P.A. on it last fall. No treatment recommended at this time as the process of weathering to stain from wave action.

**LAND MANAGER**
NAME SIGNATURE

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

Land Manager was not present due to weather delays

# SHORELINE OILING SUMMARY

REVISION NO. 03/08/90

OG Mike Foget NOAA Gary Shigenaka SEGMENT ST/ LA-42
BIO Richard Ambrose LAND REP James A Barker SUBDIVISION A (1 of 1)
EXXON Larry Olson ADEC John Hayes TIME 7:40 to 9:15
TEAM NO.: 11 TIDE LEVEL: -0.4 to 0.9 DATE 4/9/90
EST. SUBDIVISION LENGTH: 4167 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☐ Rock Snow covered Forested grassy uplands
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: W to S
SURFACE SEDIMENTS: R 10 % B 0 % C 5 % P 5 % G 0 % S 0 % M 0 % V — %
SLOPE: Long 90 % Hang 5 % Vert 5 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
OIL CATEGORY LENGTH: W 0 m M 150 m N 0 m VL 85 m NO 3932 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | rc | ra | (P) | ra | | | | | | su | ui | mi | li |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | | | | | | | | | | | | |
| COAT | | | X | | | X | | | | | X | | |
| STAIN | | | X | | | X | | | | | X | | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | ✓ | | | | ✓ | | | ✓ | | |
| NO OIL | | | | | | | | | | X | | X | X |

PAVEMENT: H F S 0 sq. m by 0 cm
PATTIES / TARBALLS 0 BAGS
NEAR SHORE SHEEN? (NO) BR RW SL TL

| DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | | | |
| Debris | X | | |

DEBRIS COLLECTED ☒ YES ☐ NO
TYPE Bevi, Seal plas
#BAGS 1

Photographs:
Roll No. ST-11-2
Frames 32

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm-cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | op | or | ol | of | no | | vo | vc | | | | | | su | ui | mi | li | | |
| 1 | 15 | | | | | X | - | | X | | | | | | | X | | | | P, G |
| 2 | 40 | | | | | X | - | | X | | | | | | X | | | | | S |
| 3 | 30 | | | | | X | - | | X | | | | | | X | | | | | P, G |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |

COMMENTS Shore zone consists mostly of low angle uplifted bedrock, which runs perpendicular (⊥) to the shoreline, with a Granule/Pebble storm berm. Most of the storm berm is covered by snow and Kelp. The oil observed (see map) was mostly CT/P staining in the HIZ. The staining was very weathered. Some translucent sheen was observed in some of the tide pools located in the HIZ but no subsurface oiling or heavy oiling was observed. At the southern end of the segment their is a 10m x 150m CT/P stain

 Coated tar in the HIZ that runs ⊥ REVIEWED MH DATE 4/11/90

OG Mik 1e1

SEGMENT ST/ LB-42

SUBDIVISION A

DATE 4 / 9 90

**CHECKLIST**

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

**LEGEND**

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 ⇨ Photo location, direction, and number

## SKETCH MAP

D1 C2

D2

1m x 30 CT/S stain on vert. Rock face HITZ

Shore zone consists of Low angle uplifted fractured Bedrock Bedding planes run ⊥ to the shore line

D3

32

anadromous streams

Scale

200m

Legend

- trees
- sm - Snow

1m x 15m CT/P Stain HITZ ⊥ to shoreline. Stain is on vertical rock face in the protected site

1m x 10m CT/P Stain in the HITZ. Stain runs ⊥ to shore line along uplifted bed rock.

5m x 30m CT/S stain in the HITZ along rock face.

10m x 150m CT/P Stain/Coat in HITZ, Highly weathered along the rock face oiling is ⊥ to shoreline

Oil Character Length (m): AP ___ PO ___ CV ___ CT 100 ST 135 MS ___ PT ___ TB ___ FL ___ NO 3932

# SHORELINE ECOLOGICAL SUMMARY

REVISED 9/88/90

Segment ST / LA042 Subdivision A Date (mo / day / yr) 4/9/90

Time ( 24 hr ) 0740hrs Biologist Ambrose

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

( B ) Overall % cover of biota ( % of segment ): Dense 65 Moderate 25 Low 10

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

Photographs:
Roll No. ST-11-2
Frames 32

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | X | X | X | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | X | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | 3 | ③ | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | X | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| X | 1M | 1L | 1U | X | X | 1U | 1M | 1L | 1U | 1M | 1L | |
| X | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**FUCUS**

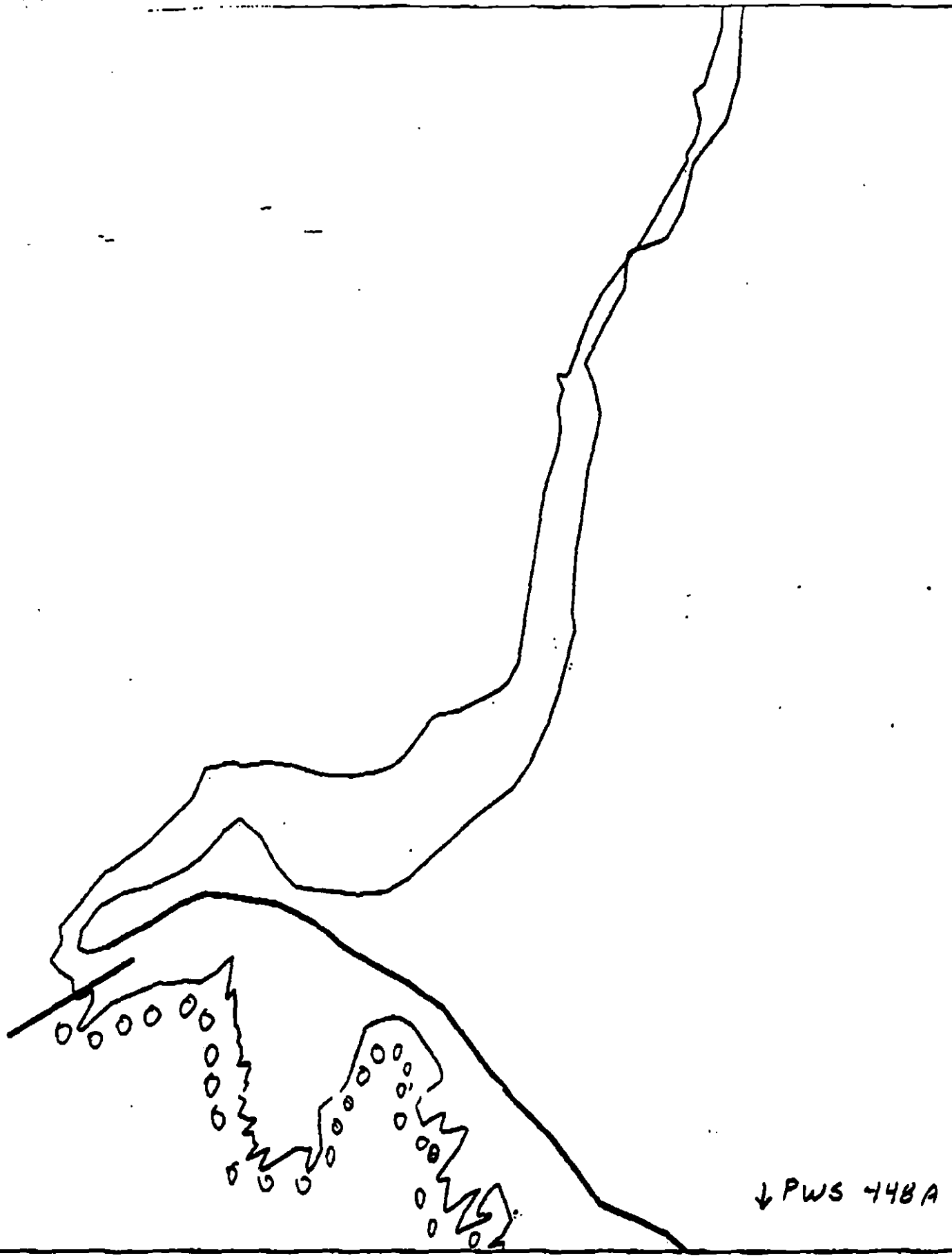
| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| X | X | X | 1U | 1M | 1L | (1U) | 1M | 1L | 1U | 1M | 1L | |
| X | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | X | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

Wildlife Observations/ General Comments: 5 deer (and lots of tracks), unid. (bear?) scat, bear tracks, weathered whale bones (2), 50 bufflehead, 2 Harlequin ducks, 3 otters.
Very extensive, dense and rich intertidal region, with many tidepools and channels thru bedrock. Nearly 100% cover in low intertidal, abundant algal drift. Phyllospadix in pools.

Ecological Considerations: Very dense Nereocystis bed offshore of entire segment.

711, 7HH: No relevant observations.

2 anadromous streams occur in this segment; no oil was observed near either of them.



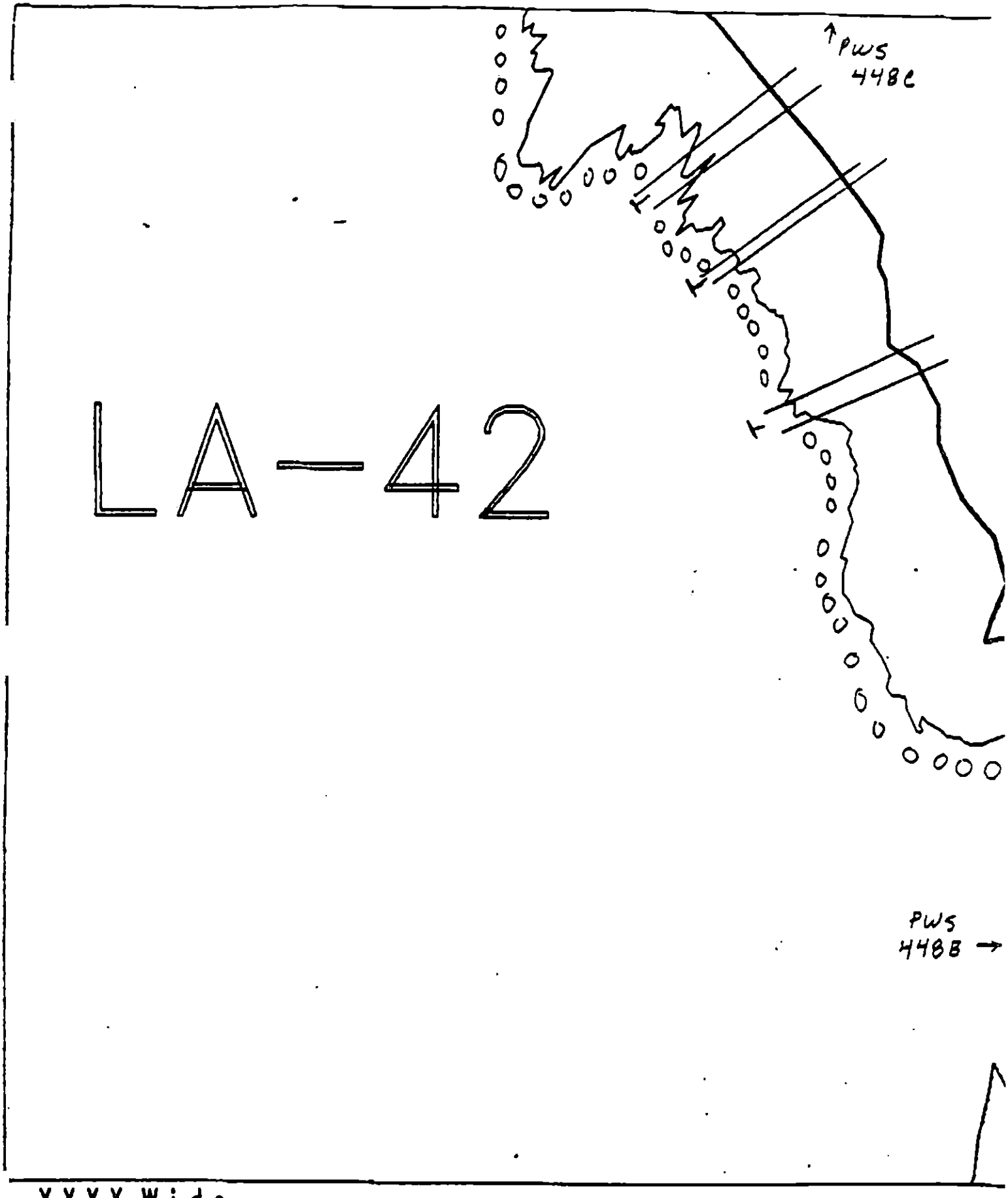

XXXX Wide
//// Medium
---- Narrow
TTTT Very Light

# LA-42

ADEC Segment Length: 1931m

0 100 200 300

Map Key: PWS-448c
Name: Mike Forgey
Date: 4/9/90




# LA-42

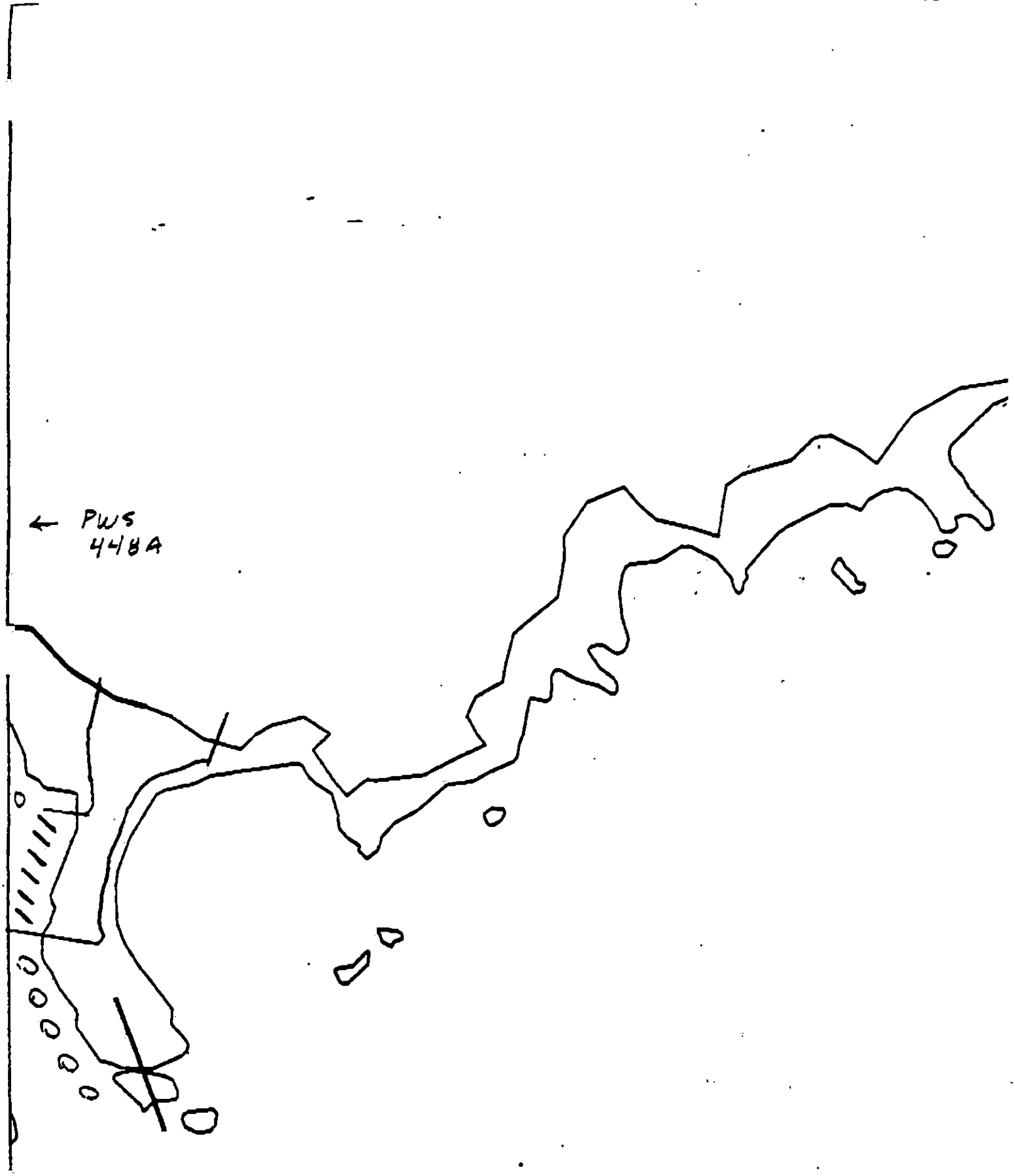
XXXX Wide
//// Medium
---- Narrow
TTTT Very Light

## LA-42

ADEC Segment Length: 1951m

0 100 200 300

Map Key: PWS-448a
Name: Mike Foget
Date: 4/9/90




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

# LA-42

ADEC Segment Length: 1931m

0 100 200 300

Map Key: PWS-448b
Name: Mike Foga
Date: 4/9/90
Date Entered:

## SHORELINE EVALUATION

SEGMENT ST/ LN-01 SUBDIVISION A (1 OF 1) DATE 4/20/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**
2M Herring spawning (4/1 to 6/15)
5T All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6U Recreation: Tent sites (6/1 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

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

SHPO SIGNATURE: J. David McMahan DATE: 5/1/90

**OILING CATEGORIZATION:**

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 527 m: No Oil 657 m
Subsurface Oil Observed: Yes____ No X Maximum Depth_____

**RECOMMENDATIONS:**

| | |
|---|---|
| ____No Treatment Recommended | ____Snare/Absorbent Booms |
| X Treatment Recommended | ____Oil Snares (pom poms) |
| X Manual Pickup | ____Absorbents (pads,rolls,etc) |
| ____Bioremediation | ____Spot Washing:____Wands |
| X Tarmat Removal | ____Beach Cleaner |
| | ____Other (see comments) |

COMMENTS: Recommended treatment includes 1) manual removal of oiled vegetation and cleanup debris in area indicated on sketch map and 2) manual removal of tarmat in area indicated on sketch map. Work should be conducted after 6/15 with approval of USFWS due to eagle nest constraint.

TAG COMMENTS:_____

TAG APPROVAL DATE: 4/30/90
ADEC ART WEINER
EXXON KEITH TEAL
NOAA Gary Petrosa
USCG KENNETH KLINE

FOSC: _____ DATE: 5-12-90

# PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A **Salmon stream mouth - fry outmigration (3/1 to 5/15)**
1B **Salmon stream mouth - spawning (7/10 to 8/31)**
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G John Morrison 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 Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D **Esther Hatchery release (4/15 to 6/1)**
1E **Main Bay Hatchery release (4/20 to 6/10)**
1F **Sawmill Bay Hatchery release (4/15 to 6/1)**
1G **Cannery Creek Hatchery release (4/21 to 6/1)**
1H **Remote release site**
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or 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: 1E ADF&G Larry Peltz 424-3214
1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzomoto 424-7511

1I **Gill net area (6/7 to 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 unoiled 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

N, 3P **Harbor seal and sea lion pupping (5/15 to 7/1)**
O, 3Q **Harbor seal and sea lion molting (8/15 to 9/15)**
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of 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
ADF&G Don Calkins 267-2403

5R **Seabird colony (5/1 to 9/1)**
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S **Shorebird/waterfowl concentration (4/1 to 5/15)**
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Rothy 267-2206

5T **All Bald Eagle nests (3/1 to 6/1)**
**Active Bald Eagle nests (3/1 to 8/1)**
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
ADF&G Jeff Hughes 267-2201

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**

7[illegible] **Subsistence area: Salmon harvesting (5/1 to 9/30)**
**Finfish harvesting**
**Deer harvesting (8/15 to 2/28)**
7JJ **Invertebrate harvesting**
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

[illegible] AMV 4/24/90

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ LN-001 SUBDIVISION: A DATE 4/20/90

USCG
NAME SCOTT RAMSFORD SIGNATURE Scott Ramsford MST1

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

ADEC
NAME Lori J. Stratton SIGNATURE Lori J. Stratton

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

The low angle beaches had very light coat splashes and stains on boulders. Loc #1 had pockets of penetrated oil to 2 cm. into sediments. Soft mousse pavement at HITZ extended over 4 x 1½ meter area, 2 cm thick (See Location #2). The pavement should be shovelled up and bagged. Subsurface oil 5 cm thick lay under 2 cm surface substrate and consisted of oiled vegetation, debris and gravel + pebbles. The area extended over app. 60 m along the SUTZ back of beach (in storm berm). See Location #3. Five to Six spots of cover (over 1 m² area) penetrated to 3 cm at UITZ. (Over →

LAND MANAGER
NAME U.S. Forest Service SIGNATURE Leo Keeler

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Approximately 20-25 bags of oiled Pom Poms, absorbent boom and debris found as mapped. Oil sheen/coat also found.

Treatment should be to pick up oiled debris and possible (low priority) treatment of pavement patch. Rest of oil identified as splashes and broken coats ...

(AOGC comments cont.)

The penetrated oiled areas are not thick enough to necessitate treatment.

The Storm berm area should be treated. (loc. #3) The oiled rock + vegetation can be turned over to expose it to weathering and heavier oiled debris should be bagged.

There is enough oiled pop pompoms, mats + snare booms to have a crew come and clean up, so the pavement area + oiled berm should be treated at this time.

# SHORELINE OILING SUMMARY

REVISION NO. 04/1988

OG G. MACDONALD USCG S. RANSFORD SEGMENT ST/ LN-1
BIO M.A. SCOTT LAND REP L. KOELSCH NPS SUBDIVISION A (1 OF 1)
EXXON [illegible] ADEC LORI STRATTON TIME 14:35 to 16:40
MM NO. 5 TIDE LEVEL +2 to 1.75 FT DATE 4 / 20 / 90
T. SUBDIVISION LENGTH: 1450 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☑ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: W to E
SURFACE SEDIMENTS: R 20 % B 50 % C 15 % P 10 % G 5 % S 0 % M 0 % V 0 %
SLOPE: Lang 60 % Hang 20 % Vert 20 % WAVE EXPOSURE: ☐ Low ☐ Mod ☒ High
OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 540 m NO 910 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| mousse | c | a | p | s | | | | | | sw | w | m | u |
| PAVEMENT | | | | X | | | | X | | | X | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | | | X | | | | X | | | X | | |
| COAT | | | | X | | X | | | | | X | | |
| STAIN | | | | X | | X | | | | | X | | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| M | | | | | | | | | | | | | |
| NO OIL | | | | | | | | | | X | | X | X |

PAVEMENT H F (S) 5 sq. m by 5 cm
PATTIES / TARBALLS 0 BAGS
NEAR SHORE SHEEN? (NO) BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | X | | |
| Trash | X | | |
| Debris | | | |

DID YOU COLLECT DEBRIS?
YES ☐ NO ☒
TYPE 0
#BAGS 0

Photographs:
Roll No. ST-S-3
Frames —

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SHEEN (Y/N) | ▼ | SURFACE-SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | co | cn | cl | cr | no | | bo | bc | | | | | | sw | w | m | u | | | | |
| 1 | 30 | | | | | X | - - - | | | | | | | | X | | | | | | - | PG |
| 2 | 15 | | | | | X | - - - | | | | | | | | | X | | | | | - | CP |
| 3 | 26 | | | | | X | - - - | | | | | | | | X | | | | | | - | PG |
| 4 | 30 | | | | | X | - - - | | | | | | | | | X | | | | | 10 | SGP |
| 5 | 10 | | | | | X | - - - | | | | | | | | | | X | | | | 8 | BGB |
| 6 | 30 | | | | | X | - - - | | | | | | | | X | | | | | | - | GP |

COMMENTS Exposed, low angle BCP veneer over raised bedrock, bordered by steep rocky outcrops; Surface oil as ST; CT/S @ HWTZ; plus trace mousse pavement. Subsurface oil as oiled vegetation in storm berm.

REVIEWED YW DATE 4/22/90

OG G.M[illegible]DNALD

SEGMENT STRAND-1

SUBDIVISION A

DATE 4/20/90

**CHECKLIST**

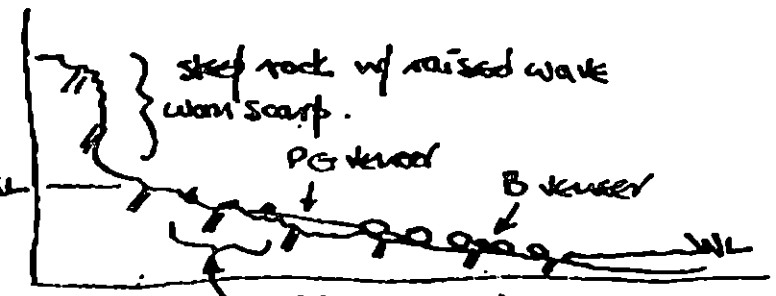
- N Arrow
- Approx. Scale
- Bag/Bale Birdy
- Oil Dist.
  - Width
  - Length
  - % Cover
- Substrate Character
- Est. HWL/LWL
- SSL
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

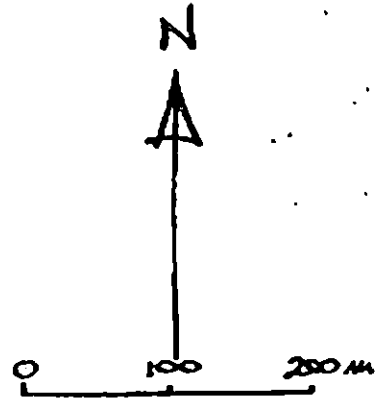
**LEGEND**

- 1 △ Pit - No Subsurface Oil
- 2 △ Pit - Subsurface Oil
- CT/C Continuous Distribution
- CT/B Broken Distribution
- CT/P Patchy Distribution
- CT/S Splashed Distribution
- Oiled Vegetation
- Photo location, direction, and number
  - ST, CT/S, oiled bowlder/shore

# S CH MAP

## PROFILE - TYPICAL




14:35 HRS

MANUALLY REMOVE TARMAT

bedrock, v. sparing forced sheen from mousse.

1 hi E, low L beach. PGS upper; BC over R lower beachface. DBL tar ST, CT/S @ HTTZ; < 1% - faint; abraded.

2 3 over R

3 C beach

CT, MS/S @ HTTZ 1 m²

3-5 m wide tar ST, CT/S @ HTTZ, < 1% + rare BG tar.

BCR beach

DBR oiled @ CV 63 cm. 1 m² deep.

CT, ST/S < ½ m x 25 m @ < 10%

16.40 HRS

oiled rock

low L, B veneer over bedrock - a raised wave cut platform.

lagoon

CPB beach

CT/S on B HTTZ; < 2%, 2 m x 10 m

storm berm w/ oiled vegetation & driftwood. 2 m x 60 m x 5 cms. @ SWTZ.

MANUALLY REMOVE OILED VEGETATION AND CLEANUP DEBRIS IN SITZ

Oil Character Length (m): AP 5 PO — CV — CT 310 ST 200 MS 1 PT — TB — FL — NO 910

Mousse

# SHORELINE ECOLOGICAL SUMMARY

REVISION: 5/95/98

Segment ST / LN-01 Subdivision A Date (mo / day / yr) 4/20/98

Time (24 hr) 1430-1650 Biologist MASCOTT

(A) Substrate type and % of segment:
(1) Bedrock 20 (2) Boulder 50 (3) Cobble 15 (4) Pebble 15 (5) Sand — (6) Silt —

(B) Overall % cover of biota (% of segment): Dense 60 Moderate 15 Low 25

(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 (S)

Photographs:
Roll No. ST-3-3
Frames 9

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | X | 2 | 2 | S | S | X | 2 | 2 | S | |
| 3 | 3 | 3 | 3 | 3 | 3 | S | S | S | 3 | X | X | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | S | S | S | X | X | X | |
| 5 | 5 | 5 | 5 | 5 | 5 | S | S | S | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | X | 2 | S | S | X | X | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | S | S | S | S | S | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | S | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | S | S | X | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | S | X | X | X | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | X | X | X | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | X | 2 | 2 | 2 | 2 | X | 2 | X | 2 | S | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | S | X | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | S | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

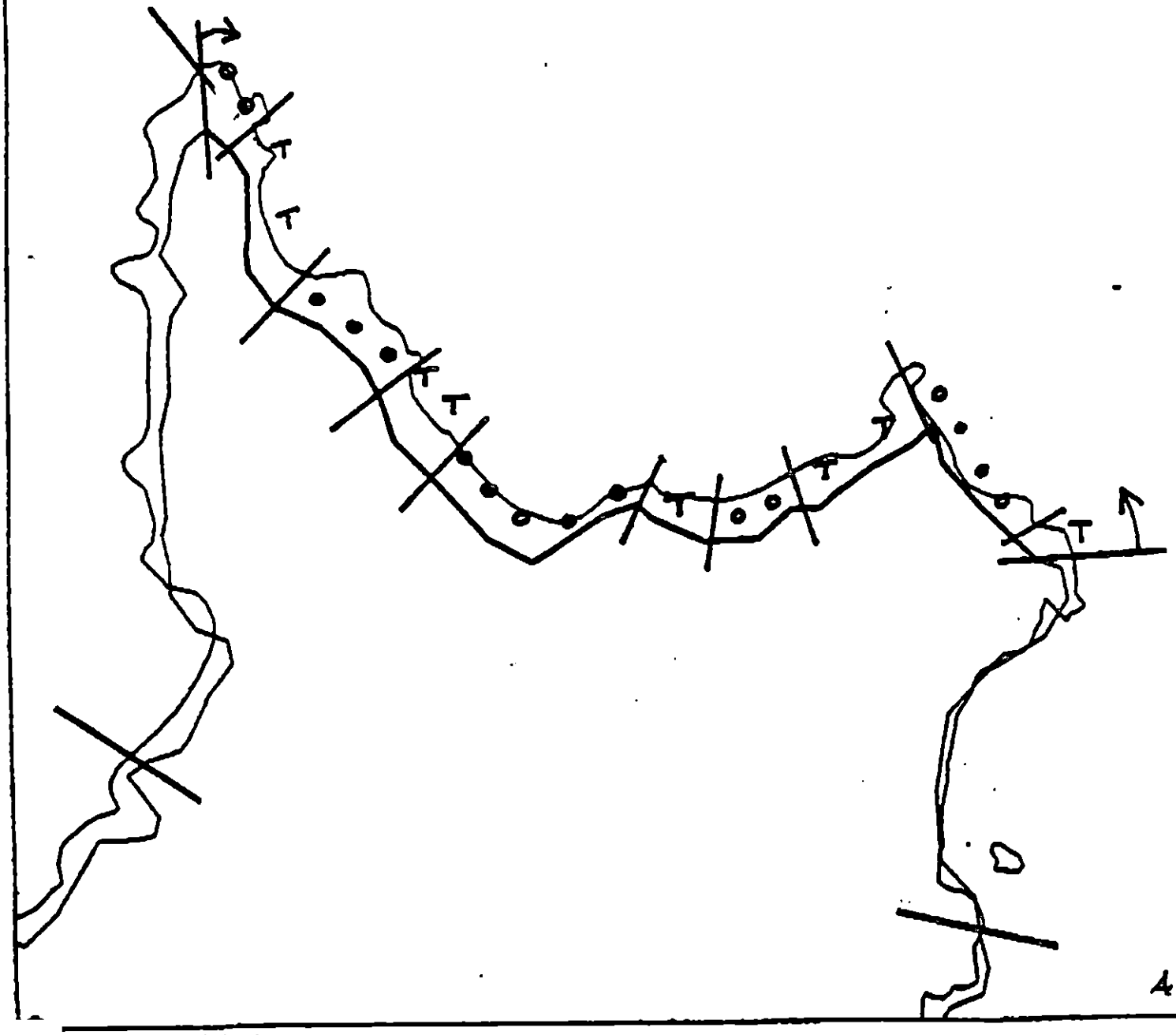
**Wildlife Observations/ General Comments:**
1 sea otter
4 bald eagles
1 dead otter (in ATB, no dx)
1 Cormorant

nearly point at west end of segment: in upper numerous Saxidomus shells w/ fewer Mytilus + Nucella shells in cobbles between boulders, no obvious perturbation; surrounding community - no disturbance

**Ecological Considerations:**
small stream (~600 m from east end of segment), possible anadromous stream (if permanent - needs later observation)

dense, diverse community particularly on rock + boulder; extensive algal covering
Fucus - dense, reproductive; barnacle spat throughout; dense (patchy) - well developed Mytilus beds; new settlement of Mytilus sparse/rare throughout

# LN-01



4.

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

## LN-1A

ADEC Segment Length: 1450m

0 100 200 300

Map Key: PWS-526
Name: G. MACDONALD
Date: 4/20/90
Date Entered:

# ADDENDUM: SUBDIVISION CONSTRAINTS

## SEGMENT LN-1 SUBDIVISION A ( 1 of 1 )

| WORK WINDOW | |
|---|---|
| Manual Pickup<br>Tarmat Removal | OPEN |

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

| | | |
|---|---|---|
| **2M** | **Herring Spawning** | NO CONSTRAINT. Authorized by Evelyn Biggs/ADF&G on 5/17/90 to Exxon/Tom Kelley. |
| **5T** | **Bald Eagle Nest** | NO CONSTRAINT. USFWS bald eagle impact assessment conducted on 5/15/90 by Mike Lockhart indicates no active nests within 400m of the work area. |

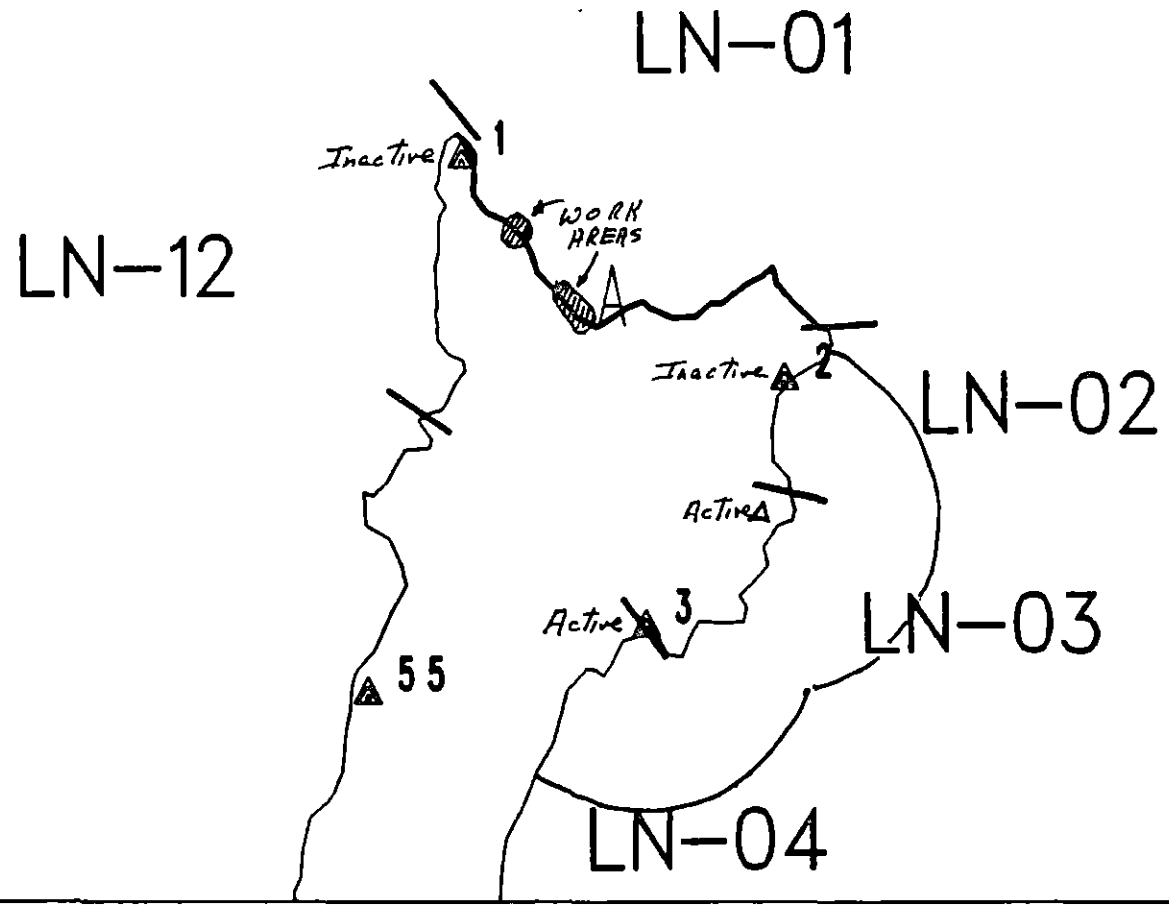
OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 6/04/90
ADEC Ray Means
EXXON Andy Team
NOAA Joseph Talbott
USCG
FOSC DATE 6/4/90

Prepared By: Date 6/2/90

Incorporates information from USFWS bald eagle survey 5/15/90




EXXON

Exxon Company, USA
Map Key: PWS-LN-1
May 11, 1990

# ECOLOGY MAP 6/1

## SEGMENT LN-1

SUBDIVISION A (1 of 1)

METERS

0 432 864

★ Seabird Colony

△ Eagle Nest

1 inch = 1417 feet

REVISION L
7/27/90

# ADDENDUM: SUBDIVISION CONSTRAINTS

## SEGMENT LN-1 SUBDIVISION A ( 1 of 1 )

| WORK WINDOW | |
|---|---|
| Manual Pickup<br>Tarmat Removal | OPEN |
| BIOREMEDIATION | OPEN |

7/27

ADD BIOREMEDIATION WITH CUSTOM BLEED AS PER WORK PLAN ADDENDUM DATED 6/15/90

7-27-

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

| | | |
|---|---|---|
| 2M | Herring Spawning | NO CONSTRAINT. Authorized by Evelyn Biggs/ADF&G on 5/17/90 to Exxon/Tom Kelley. |
| 5T | Bald Eagle Nest | NO CONSTRAINT. USFWS bald eagle impact assessment conducted on 5/15/90 by Mike Lockhart indicates no active nests within 400m of the work area. |

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 6/04/90
ADEC Ray Morris
EXXON Andy Team
NOAA Joseph Talbott
USCG G.A. Peter

FOSC [signature] DATE 6/4/90

Prepared By: [signature] Date 6/2/90

WORK PLAN MODIFICATION RECOMMENDATION

Kenai 6-15

SEGMENT [redacted] SUBDIVISION A DATED 6-11-90

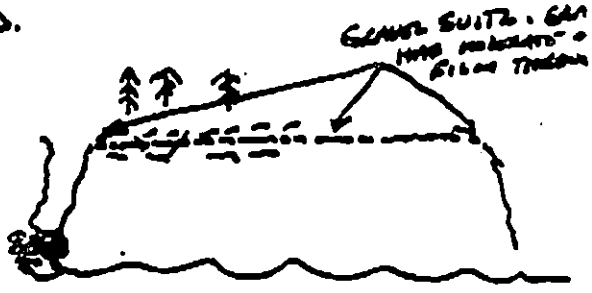
MODIFICATION

1. REASON FOR MODIFICATION

OIL FILM REMAINS IN THE SUPRATIDAL AREA. THE STORM BERM HAS A CONSISTENT LUBRICATION THAT WOULD POSSIBLY RESPOND TO BIOREMEDIATION.

2. SUGGESTED ADJUSTMENT TO WORK PLAN

APPLY BIOREMEDIATION AND THEN REEVALUATE AFTER THE APPROPRIATE TIME PERIOD.



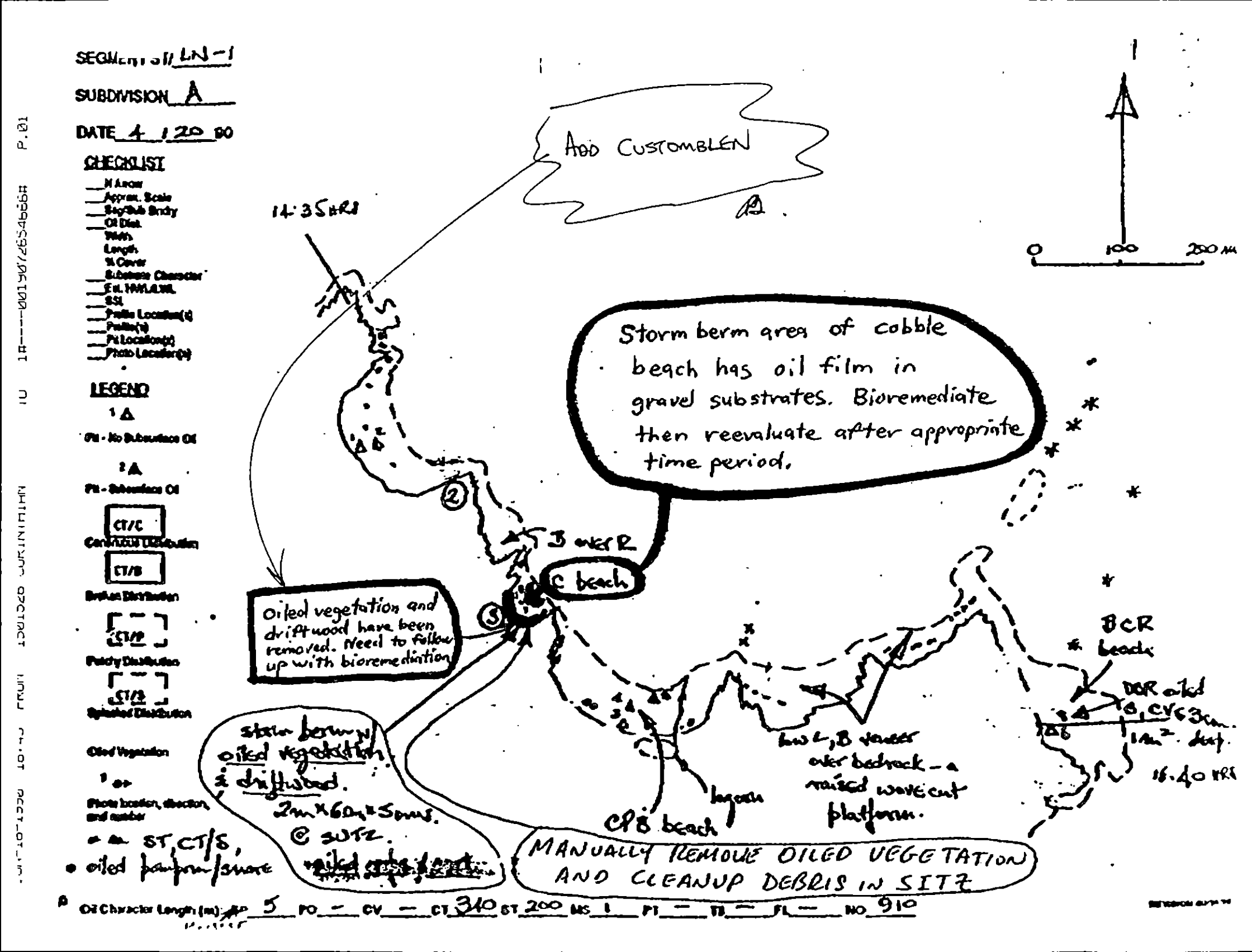
3. TIMING ISSUES

ADEC Dick Gardner 6-11-90

EXXON R C Hamel

USCG [illegible] LCDR USCG 6/11/90

LAND MANAGER _____ (If field rep is on scene)


SEGMENT # LN-1
SUBDIVISION A
DATE 4 / 20 / 90
CHECKLIST
N Arrow
Approx. Scale
Map/Stub Entry
Oil Dist.
Width
Length
% Cover
Substrate Character
Est. HWL/LWL
SSI
Profile Location(s)
Profile(s)
Pit Location(s)
Photo Location(s)
LEGEND
1 A
OU - No Subsurface Oil
2 A
PR - Subsurface Oil
CT/C
Continuous Distribution
CT/B
Broken Distribution
CT/P
Patchy Distribution
CT/S
Splashed Distribution
Oiled Vegetation
Photo location, direction and number
ST, CT/S, oiled pan/pan/shore
ADD CUSTOMBLEN
14:35 HRS
Storm berm area of cobble beach has oil film in gravel substrates. Bioremediate then reevaluate after appropriate time period.
3 over R
C beach
Oiled vegetation and driftwood have been removed. Need to follow up with bioremediation
storm berm oiled vegetation & driftwood. 2m x 60m x 5cms. @ SITZ.
CP8 beach
lagoon
low L,B veneer over bedrock - a raised wave cut platform.
BCR beach
DCR oiled 10, CVC 3cm. 1m² deep
16.40 HRS
MANUALLY REMOVE OILED VEGETATION AND CLEANUP DEBRIS IN SITZ
0
100
200 M
Oil Character Length (m): AP 5 PO — CV — CT 310 ST 200 MS 1 PI — TB — FL — NO 910

WORK PLAN ADDENDUM

Segment LN-001 A Subdivision A Dated 6-15-90

MODIFICATION

1. REASON FOR MODIFICATION

REQUEST FOR THE ADDITION OF BIOREMEDIATION FROM THE FIELD MONITORS + SUPERVISORS.

2. ADJUSTMENT TO WORK PLAN

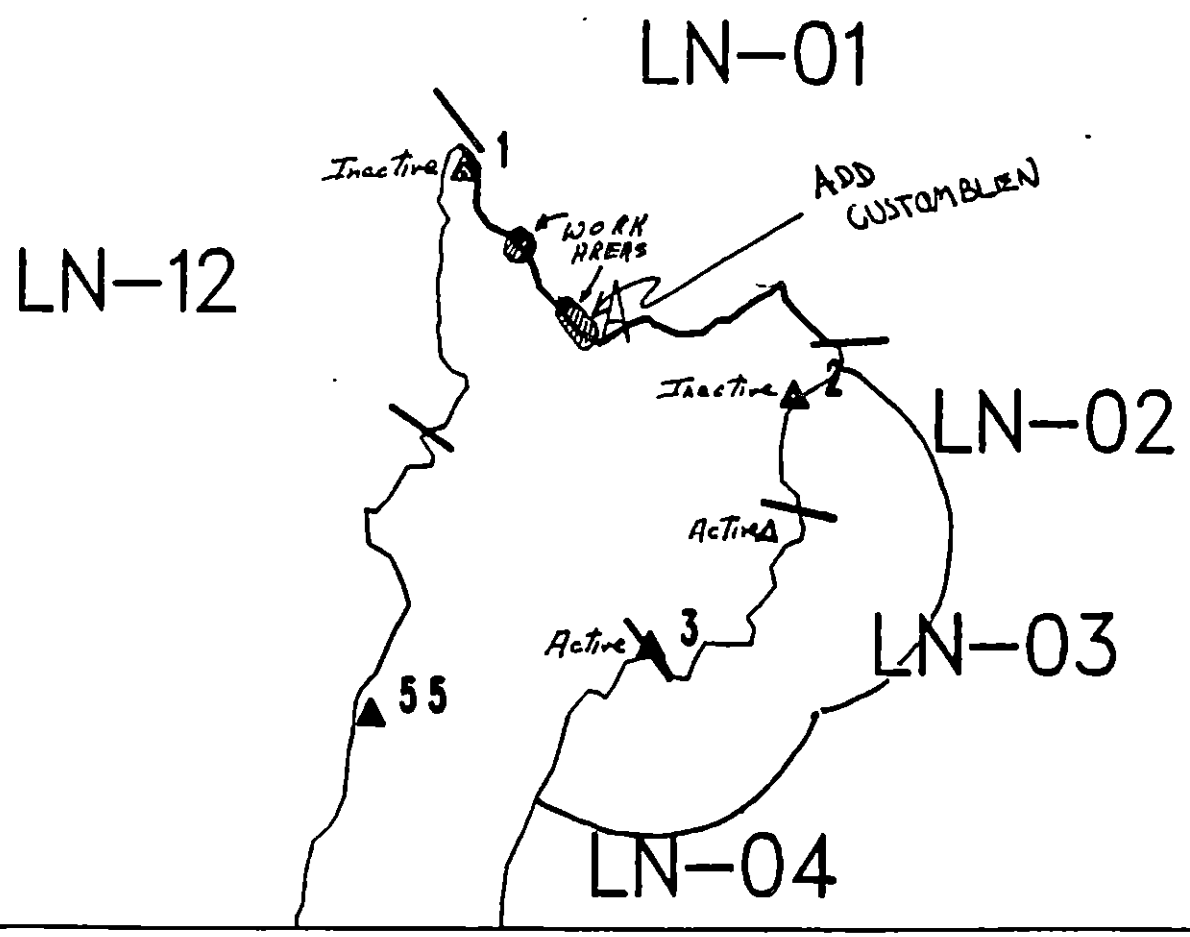
· ADD CUSTOMBLEN TO THE OILED AREA OF THE STORM BERM AS INDICATED.

SHPO APPROVAL NEEDED YES X SHPO SIGNATURE 6/22/90
NO ____

TAG APPROVAL DATE 6/20/90
ADEC Ray Mendez
EXXON Andy Tea
NOAA Joseph Talbott
USCG G.A. REITER G.A. Reiter

FOSC DATE 7-10-90

Incorporates information from USFWS bald eagle survey 5/15/90




EXXON

Exxon Company, USA
Map Key: PMS-LN-1
May 11, 1990

# ECOLOGY MAP 6/1

## SEGMENT LN-1

SUBDIVISION A (1 of 1)

METERS

0 ... 822 ... 1644

★ Seabird Colony

▲ Eagle Nest

1 inch = 1417 feet

# SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Bald eagle nest (5T) - 3/1 to 6/1; Herring spawning (2M) - 4/1 to 6/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: (5T) - Restrict air traffic to essential minimum. Air approach and takeoff from and to seaward only. Contact USFWS prior to treatment for confirmation dates and avoidance minimums. (2M) - Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

SHPO SIGNATURE: Charles E Holmes DATE: April 14, 1990

**OILING CATEGORIZATION:**

Wide 0 m: Medium 80 m: Narrow 0 m: V.Light 116 m: No Oil 249 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 15+ cm

**RECOMMENDATIONS:**

| | |
|---|---|
| ____No Treatment Recommended | ____Snare/Absorbent Booms |
| X Treatment Recommended | ____Oil Snares (pom poms) |
| X Manual Pickup | ____Absorbents (pads,rolls,etc) |
| X Bioremediation | ____Spot Washing: ____Wands |
| ____Tarmat: ____Breakup | ____ Beach Cleaner |
| ____Removal | ____Other (see comments) |

COMMENTS: Bioremediate area of coat indicated on sketch map. Pick-up mousse/tar balls as shown. Work after 6/1 based on herring constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/18/90
ADEC JOHN BAUER John Bauer
EXXON ANDY TOAZ
NOAA Burl Wescott
USCG G.A. Reiter G.A. REITER

FOSC: [signature] DATE: 4-30-90

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LN-02 SUBDIVISION: A 1 of 1 DATE 4/1/90

**USCG**
NAME David S. Thomas SIGNATURE

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

**ADEC**
NAME Clara S. Crosby SIGNATURE Clara S. Crosby

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Mechanical treatment of the ~~Southern~~ Northern end of LN002 Recommended - cc.

**LAND MANAGER**
NAME MARSHA MARTIN / DNR SIGNATURE Marsha Martin

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

# SHORELINE OILING SUMMARY

REVISION NO. 03-22-90

OG Rick GILLIE USCG BM 1 Thomas SEGMENT ST/ LN-02
BIO DAVE Lobser LAND REP Marsha Martin SUBDIVISION A 1 of 1
EXXON FRANK Boy ADEC Clara Crosby (ADNR) TIME 14:00 to 15:00
TEAM NO.: 13 TIDE LEVEL: +1 to +3 DATE 4 / 1 / 90
EST. SUBDIVISION LENGTH: 491 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
SURFACE SEDIMENTS: R 60 % B 25 % C 5 % P 5 % G 5 % S 0 % M 0 % V 0 %
SLOPE: Lang 40 % Hang 30 % Vert 30 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
OIL CATEGORY LENGTH: W 86 m M 0 m N 120 m VL 0 m NO 285 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION /C | B | /P | /S | OIL / FILM COLOR SBR/BR | DBL/RW | GY/SL | DBR/TL | LBR | IMPACTED ZONES SU | UI | MI | LI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | | X | | | | | X | | | X | | |
| COAT | X | | | | | | | X | | | X | X | |
| STAIN | | | | | | | | | | | | | |
| MOUSSE | | | | X | | | | X | | | X | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | X | | X | | | | | X | | |
| FILM | | | | | | | | | | | | | |
| NO OIL | | | | | | | | | | X | | | X |

PAVEMENT: H F S N/A sq m by ____ cm
PATTIES / TARBALLS 1 BAGS
NEAR SHORE SHEEN? (NO) BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | X | | |
| Debris | | | |

DEBRIS COLLECTED ☐ YES ☒ NO
TYPE T
#BAGS ____

Photographs:
Roll No. ST-13-1
Frames 32, 33

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER OP | OR | OL | OF | NO | OILED INTERVAL (CM-CM) | BELOW UO | UC | OIL / FILM COLOR SBL/BR | DBL/RW | GY/SL | DBR/TL | LBR | PIT ZONE SU | UI | MI | LI | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15 | | | | | X | - | | | | | | | | | X | | | | C, G |
| 2 | 15 | X | | | | | 5-15 | X | | | | | X | | | X | | | | C, G |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |

COMMENTS



REVIEWED [signature] DATE 4-4-90

# SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / LN002 Subdivision A Date (mo / day / yr) 4-1-90

Time ( 24 hr ) 14:00 Biologist David Lohz

( A ) Substrate type and % of segments:
( 1 ) Bedrock 60 ( 2 ) Boulder 30 ( 3 ) Cobble 10 ( 4 ) Pebble 5 ( 5 ) Sand 5 ( 6 ) Silt ____

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

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

Photographs:
Roll No. ST-13-1
Frames 33-34

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | X | 1U | X | 1L | X | 1M | 1L |
| 2 | 2 | 2 | 2 | X | 2 | X | 2 | X | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | X | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | (1M) | 1L |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | X | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | X | 1L | 1U | 1M | 1L | X | 1M | X |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | X | X | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | X | 1U | X | 1L | X | 1M | 1L |
| 2 | 2 | X | 2 | X | 2 | 2 | ② | ② | X | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | ③ | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

Wildlife Observations/ General Comments:

present in low intertidal - Enteromorpha, Ralfsia, Ulva, Scytosiphon, Kathrina tunicata, Epiactus, Nucella, coralline algae, Halosacion
mid intertidal - Enteromorpha, coralline algae, Nucella, Ulva, Pagurus
- Approximately 12 porpoises were sited while en route from Perry Island.

Ecological Considerations:

3. Species richness of bedrock in mid and low-intertidal appears hi

2 none observed
5T - none observed

If clean-up is decided upon for this area, caution should be used to avoid disturbing the dense mussel beds in the mid-intertidal, and the dense Fucus bed

SIG KICK GILLIE

SEGMENT ~~LN-01~~ LN-02

SUBDIVISION ~~A~~ A

DATE 4 / 1 90

## CHECKLIST

- _N Arrow
- _ Approx. Scale
- _ Seg/Sub Bndry
- _ Oil Dist.
  - Width
  - Length
  - % Cover
- _ Substrate Character
- _ Est. HWL/LWL
- _ SSL
  - Profile Location(s)
  - Profile(s)
- _ Pit Location(s)
- _ Photo Location(s)

## LEGEND

1 △ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

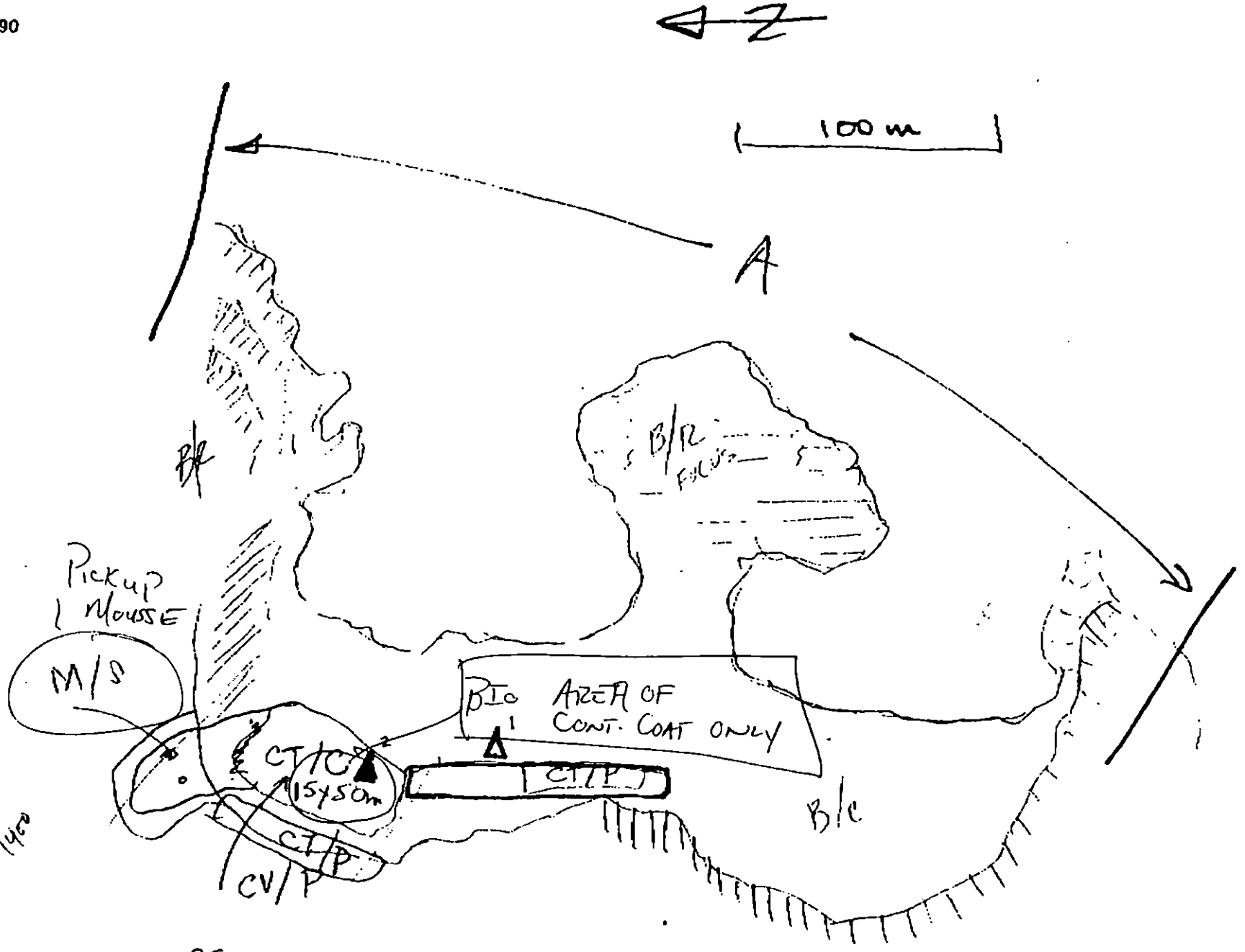
CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 ➨ Photo location, direction, and number

## ETCH MAP

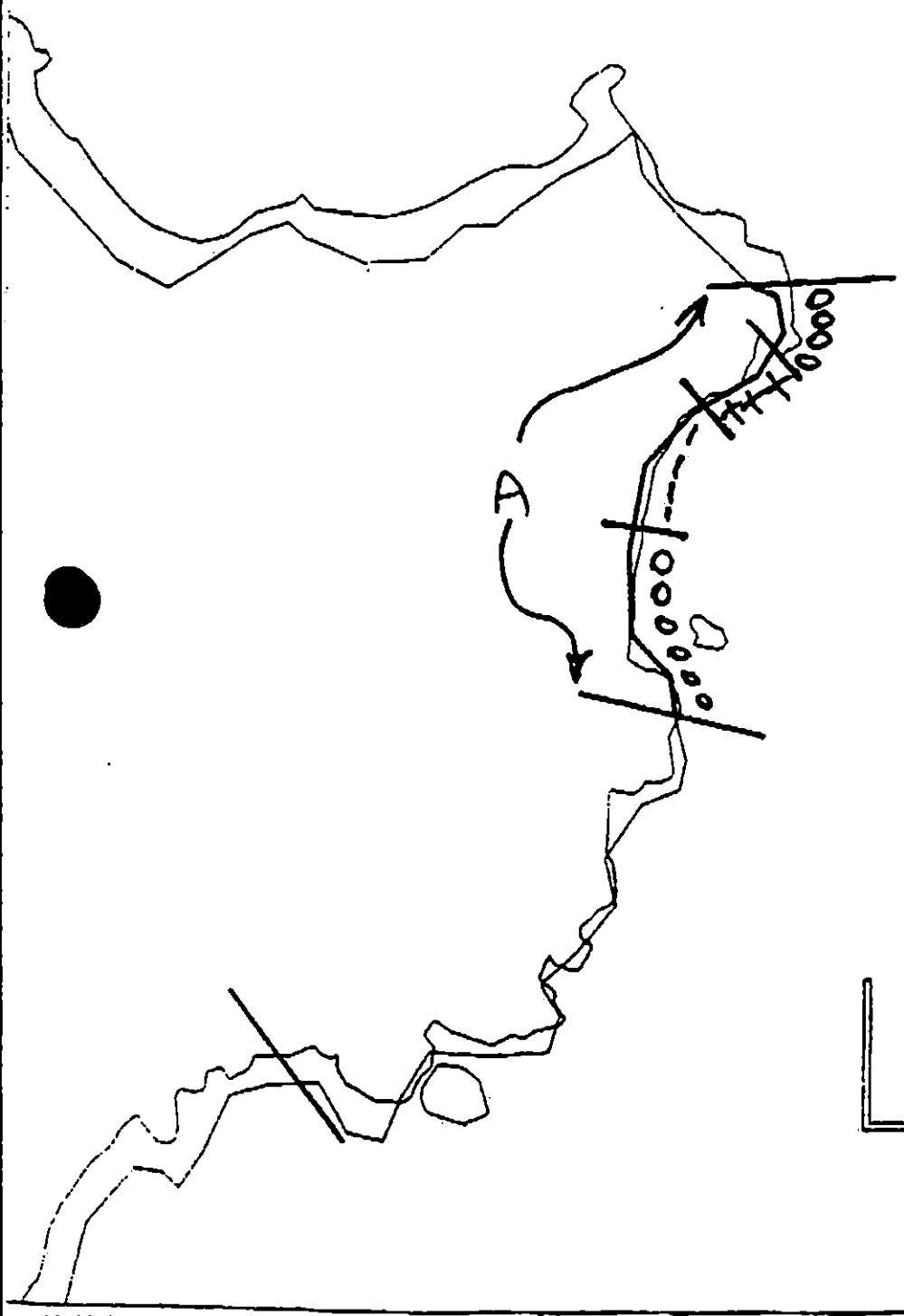



Oil Character Length (m): AP_____ PO_____ CV 25 CT 100 ST_____ MS 5 PT_____ TB 1 FL_____ NO 285

REVISION:03/24/98

SEGMENT: ST/LN-02

SUBDIVISION: A, 1 of 1




LN-0

LN-0

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

LN-2

ADEC Segment Length: 444m

0 100 200 300

Map Key: PWS-455

Name: GILLIE

Date: 4-1-90

Data Entered:

# ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT LN-2 SUBDIVISION A ( 1 of 1 )

| WORK WINDOW | |
|---|---|
| Manual Pickup | CLOSED |
| Bioremediation | CLOSED |

## ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

| | | |
|---|---|---|
| **2M** | **Herring Spawning** | NO CONSTRAINT. Authorized by Evelyn Biggs/ADF&G on 5/17/90 to Exxon/Tom Kelley. |
| **5T** | **Bald Eagle Nest** | USFWS bald eagle impact assessment conducted on 5/15/90 by Mike Lockhart indicates an active nest within 400m of the work area. Closed to manual pickup and bioremediation. |

OTHER ECOLOGICAL CONSIDERATIONS

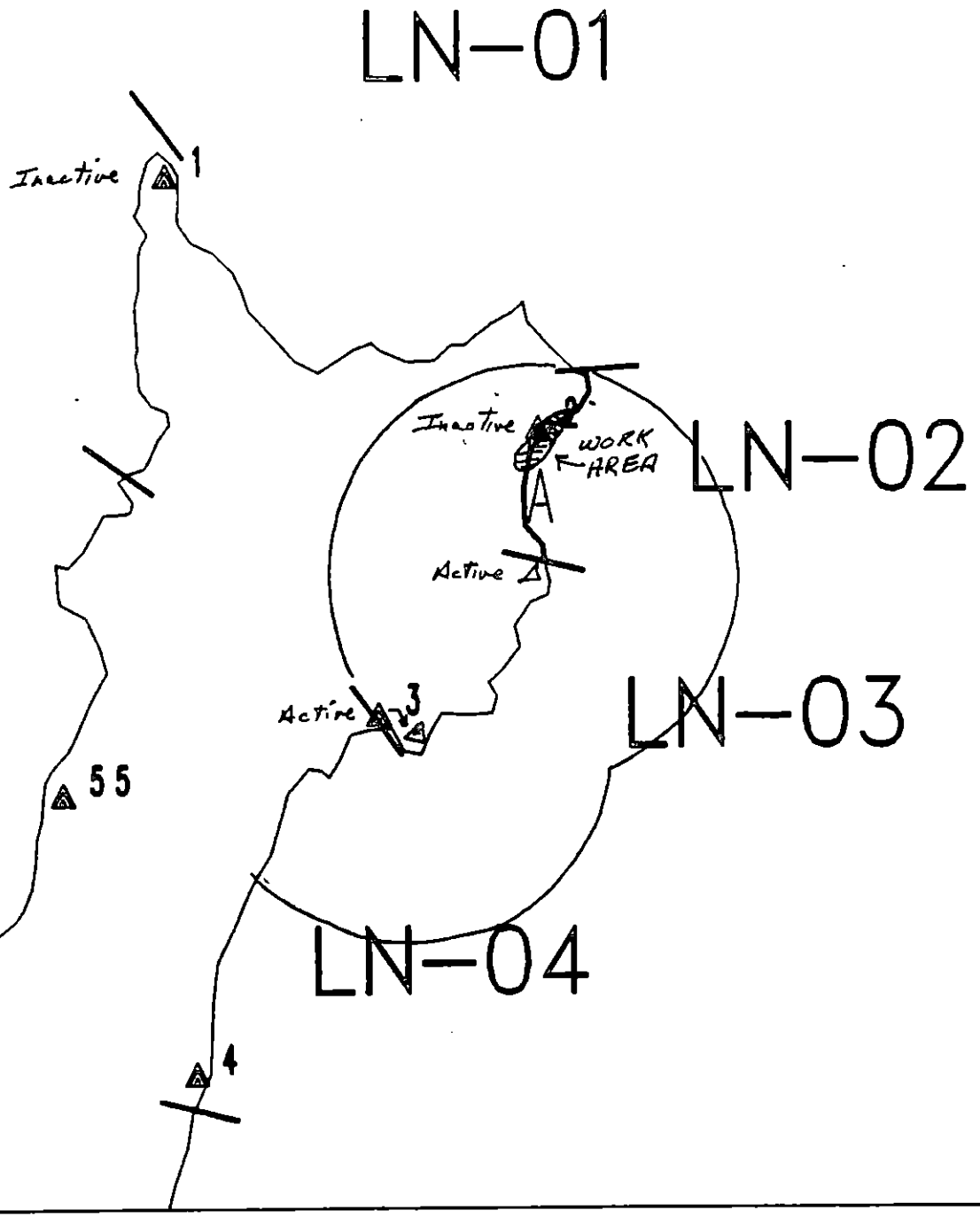
If the bald eagle constraint is removed, other ecological considerations will apply.

TAG APPROVAL DATE 6/04/90.
ADEC Ray Meggers
EXXON Anor Tem
NOAA Joseph Talbott
USCG G.A. Reiter

FOSC [signature] DATE 6/4/90

Prepared By: [signature] Date 6/2/90

Incorporates information from USFWS bald eagle survey 5/15/90.




EXXON

Exxon Company, USA
Map Key: PWS-LN-2
May 11, 1990

# ECOLOGY MAP 6/1

SEGMENT LN-2

SUBDIVISION A (1 of 1)

METERS

0 335 669

★ Seabird Colony

▲ Eagle Nest

1 inch = 1098 feet

# SHORELINE EVALUATION

SEGMENT ST/ LN-03 SUBDIVISION A (1 OF 1) DATE 4/20/90

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

**SUBDIVISION ECOLOGICAL CONSTRAINTS:**
Avoid any unnecessary disturbance or damage to unoiled biota and substrate. One bald eagle nest in segment.

SHPO SIGNATURE: David McMahan DATE: 5/1/90

**OILING CATEGORIZATION:**

Wide 0 m: Medium 0 m: Narrow 10 m: V.Light 99 m: No Oil 527 m
Subsurface Oil Observed: Yes____ No X Maximum Depth_____

**RECOMMENDATIONS:**

| | |
|---|---|
| X No Treatment Recommended | _____Snare/Absorbent Booms |
| _____Treatment Recommended | _____Oil Snares (pom poms) |
| _____Manual Pickup | _____Absorbents (pads,rolls,etc) |
| _____Bioremediation | _____Spot Washing:_____Wands |
| _____Tarmat Removal | _____Beach Cleaner |
| | _____Other (see comments) |

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 4/30/90
ADEC ART WEINER Art Weiner
EXXON ANDY TEAR
NOAA Gary Petrosa Gary Petrosa
USCG _____

FOSC: _____ DATE: 5-9-90

# PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A **Salmon stream mouth - fry outmigration (3/1 to 5/15)**
1B **Salmon stream mouth - spawning (7/10 to 8/31)**
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without acherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G John Morrison 267-2324

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 July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D **Esther Hatchery release (4/15 to 6/1)**
1E **Main Bay Hatchery release (4/20 to 6/10)**
1F **Sawmill Bay Hatchery release (4/15 to 6/1)**
1G **Cannery Creek Hatchery release (4/21 to 6/1)**
1H **Remote release site**
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or 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: 1E ADF&G Larry Peltz 424-3214
1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzomoto 424-7511

1I **Gill net area (6/7 to 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 unoiled 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 **Harbor seal and sea lion pupping (5/15 to 7/1)**
3O, 3Q **Harbor seal and sea lion molting (8/15 to 9/15)**
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of 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
ADF&G Don Calkins 267-2403

5R **Seabird colony (5/1 to 9/1)**
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S **Shorebird/waterfowl concentration (4/1 to 5/15)**
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Rothy 267-2206

5T **All Bald Eagle nests (3/1 to 6/1)**
**Active Bald Eagle nests (3/1 to 9/1)**
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Jeff Hughes 267-2201

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

7Z **Subsistence area: Salmon harvesting (6/1 to 9/30)**
7H **Finfish harvesting**
7II **Deer harvesting (8/15 to 2/28)**
JJ **Invertebrate harvesting**
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LW-003 SUBDIVISION: A DATE 4/20/90

CG
NAME SCOTT RAINSFORD SIGNATURE Scott Rainsford (MST)

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

ADEC
NAME Lori J. Stratton SIGNATURE Lori J. Stratton

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

The segment was high angle rock with narrow and very light cover, coat splashes and patches on boulders. One area (1.5 m²) had saturated sediments of oil cover penetrated to 5 cm. Another area (Loc #2) had cover (narrow) extending over a 25 m area through fissures on bedrock Islet. Rainbow sheen was in tidal pools. The only way to clean area would be to use hot water (spot wash) but damage to healthy biota would ensue + tidal pools surround oiled boulder/bedrock area. Eagle nesting area is present. No treatment rec. due to cons.

LAND MANAGER
NAME U.S. Forest Service SIGNATURE Lee Kealey

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

Minimum amount of oil found as observed by D.E.C. Does not warrant physical or biological enhancement type treatments. Continue Natural Cleaning.

32

(NOT included in Ub...)

# SHORELINE OILING SUMMARY

REVISION NO. 8/7/90

OG G. MACDONALD USCG S. RANSFORD SEGMENT ST/ LN-3
BIO MA. 360TH LAND REP L. KEELER NPS SUBDIVISION A (1 OF 1)
EXXON J. BUTLER ADEC L. STRATTON TIME 17:00 to 17:50
TEAM NO. 3 TIDE LEVEL +1.5' to +2 FT DATE 4 / 28 / 90
EST. SUBDIVISION LENGTH: 640 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rocky
SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
SURFACE SEDIMENTS: R 70 % B 20 % C 10 % P TR % G TR % S 0 % M 0 % V 0 %
SLOPE : Lang 10 % Hang 60 % Vert 30 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W 0 m M 0 m N 35 m VL 60 m NO 545 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | A | P | S | | | | | | SW | W | M | U |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | X | | | | X | | | X | | |
| COVER | | | | | | | | | | | X | | |
| COAT | | | X | X | | | | X | | | X | | |
| STAIN | | | | | | | | | | | | | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | | | | | | | | | | |
| NO OIL | | | | | | | | | | X | | X | X |

PAVEMENT H F S 0 sq. m by 0 cm
PATTIES / TARBALLS 0 BAGS
NEAR SHORE SHEEN? (NO) BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | | | |
| Debris | | | |

DID YOU COLLECT DEBRIS?
YES ☐ NO ☒
TYPE a
#BAGS 0

Photographs:
Roll No. ST-B-3
Frames 4, 5

## SUBSURFACE OIL Rocky Shore.

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SHEEN (Y/N) | ▼ | SURFACE · SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CO | OR | SL | OT | NO | | SW | W | | | | | | SW | W | M | U | | | | |
| 1 | 30 | | | | | X | - - - | | | | | | | | | X | | | | | - | GP |
| | | | | | | | · | | | | | | | | | | | | | | | |
| | | | | | | | · | | | | | | | | | | | | | | | |
| | | | | | | | · | | | | | | | | | | | | | | | |
| | | | | | | | · | | | | | | | | | | | | | | | |
| | | | | | | | · | | | | | | | | | | | | | | | |

COMMENTS Exposed steep rocky shore w/ raised wave-worn benches. Surface oil only, oo CT/P/S & HTTZ in small pocket and in channels in small islet. Oil is DSL tar, dry & slightly flaky in part.

REVIEWED JW DATE 4/29/90

OG G. DONALD

SEGMENT ST/ LN-3

SUBDIVISION A

DATE 4 / 20 90

**CHECKLIST**

- ___ N Arrow
- ___ Approx. Scale
- ___ Begin/End Bndry
- ___ Oil Dist.
- ___ Width
- ___ Length
- ___ % Cover
- ___ Substrate Character
- ___ Est. HWL/LWL
- ___ SSL
- ___ Profile Location(s)
- ___ Profile(s)
- ___ Pit Location(s)
- ___ Photo Location(s)

**LEGEND**

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/D Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

Photo location, direction, and number

# SKETCH MAP

0 55 110 M

Steep rocky shore ≤ 5m high

17.05 HRS

LOCATION ① Boulder pocket; fav CT/S, SBL on B, > 10%, ¼ trace PO in interstices, < 1 m²; @ HITZ

5m x 20m x ≤ 5cms

½ m x 20m

17.50 HRS

NO OIL

rugged rock benches

N

LOCATION ② SBL fav CT/S in rock channels only; 15m @ N, 10 m @ VL; total 25m long; trace RW sheen in tidepools. possible seal haulout; islet perimeter clean.

(60 VL, 35 N.)

CT/S

Oil Character Length (m): AP — PO — CV — CT 95 ST — MS — PT — TB — FL — NO 545

# SHORELINE ECOLOGICAL SUMMARY

Segment ST# LM-03 Subdivision A Date (mo / day / yr) 4/20/92

Time (24 hr) 1300 Biologist MA Scott

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

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

(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)

Photographs:
Roll No. 92-3-3
Frames 4-5

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | X | 2 | X | 2 | 2 | 2 | 2 | X |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | X | 3 | X |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | X | X | X |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | X | 2 | X | 2 | X |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | X | X | X | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | X | X | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | X | X | X |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

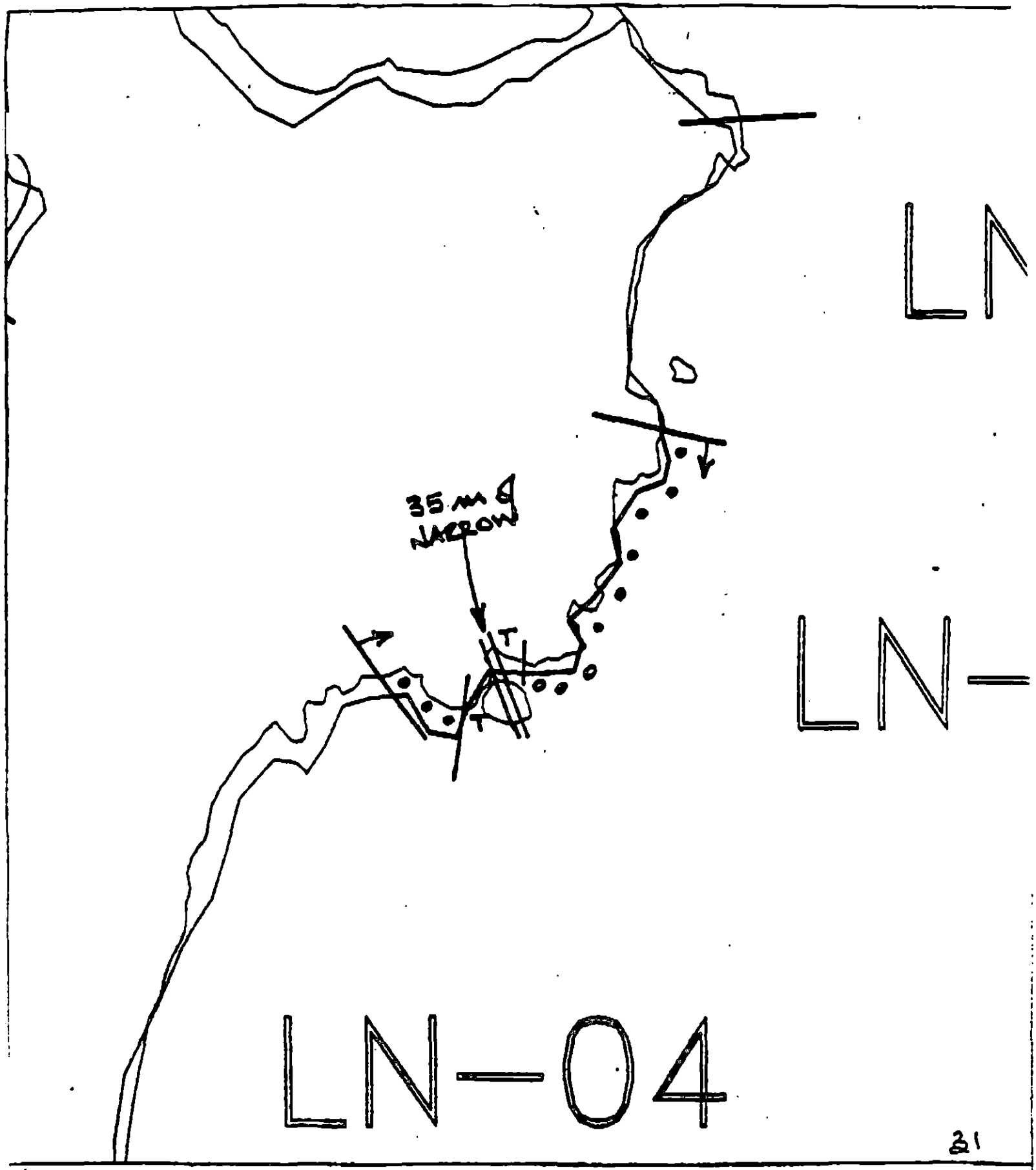
**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | X | 1L | 1U | X | 1L | 1U | 1M | X | X | 1M | 1L |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | X | X | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | X | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**Wildlife Observations/ General Comments:**
1 sea otter 1 seal
eagle nest – observed ~200 m to east of one shown on "eco-map"
6 eagles
1 cormorant

**Ecological Considerations:**
1 eagle nest (to east of oiled cove)
extensive mussel beds on some boulders
MYTUS – dense, diverse algae (on some of boulders)
rocky point at south end of cove w/ soil looks like a possible haulout area (although not identified on resource list & no seals hauled out)
new settlement of barnacles throughout
" " " Mytilus – patchy (crevices)




21

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

LN-3A

ADEC Segment Length: 636m

0 100 200 300
METERS

Map Key: PWS-456
Name: G. MACDONALD
Date: 4/20/90
Date Entered:

# SHORELINE EVALUATION

SEGMENT ST/ LN-04 SUBDIVISION A (1 OF 1) DATE 4/20/90

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

SHPO SIGNATURE: Charles E. Holmes DATE: 5/3/90

**OILING CATEGORIZATION:**

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 276 m: No Oil 625 m
Subsurface Oil Observed: Yes____ No X Maximum Depth_____

**RECOMMENDATIONS:**

| | |
|---|---|
| X No Treatment Recommended | ____Snare/Absorbent Booms |
| X Treatment Recommended | ____Oil Snares (pom poms) |
| X Manual Pickup | ____Absorbents (pads,rolls,etc) |
| ____Bioremediation | ____Spot Washing:____Wands |
| ____Tarmat Removal | ____Beach Cleaner |
| | ____Other (see comments) |

COMMENTS: _____

TAG COMMENTS: MANUAL ACKUP OF OILED NET WHEN IN AREA.

TAG APPROVAL DATE: 4/30/90
ADEC Art Weiner
EXXON Andy Tear
NOAA Gary Petrone
USCG Kenneth Keane

FOSC: _____ DATE: 5-8-90

# PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G John Morrison 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 Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D Esther Hatchery release (4/15 to 6/1)
1E Main Bay Hatchery release (4/20 to 6/10)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or 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: 1E ADF&G Larry Peltz 424-3214
1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzomoto 424-7511

1I Gill net area (6/7 to 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 unoiled 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 Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of 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
ADF&G Don Calkins 267-2403

5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Rothy 267-2206

5T All Bald Eagle nests (3/1 to 8/1)
Active Bald Eagle nests (3/1 to 8/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 8/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Jeff Hughes 267-2201

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

Subsistence area: Salmon harvesting (5/1 to 9/30)
Finfish harvesting
Deer harvesting (8/15 to 2/28)
7JJ Invertebrate harvesting
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LN-004 SUBDIVISION: A DATE 4/20/90

**USCG**
NAME SCOTT RAINSFORD SIGNATURE Scott Rainsford MST1

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

**ADEC**
NAME Lori J. Stratton SIGNATURE Lori J. Stratton

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

Low angle beaches had very light splash coats on cobble, pebble and boulders, in UI + SU. Segment is well exposed to weathering. The high exposure and insignificant oiling does not warrant treatment.

**LAND MANAGER**
NAME U.S. Fish & Wildlife SIGNATURE Leo Fuller

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

Oil found as splashes and small coats in protected areas, primarily as small patches as can mapped. No mechanical or biological enhancement warranted

Continue: Natural Cleanup

# SHORELINE OILING SUMMARY

OG S. MACDONALD USCG S. RAMSFORD SEGMENT ST/ LW-4
BIO M.A. [redacted] LAND REP L. KEELER NPS SUBDIVISION A (1 OF 1)
EXXON [redacted] L. STRAFFORD TIME 17:[redacted] to 18:[redacted]
[redacted] TIDE LEVEL +2.6 to +4 FT DATE 4/[redacted]/89
[redacted] Swell m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☒ Snow
UPLANDS [redacted] ☐ Grass ☐ Forest ☒ Rock
SURVEYED FROM [redacted] ☒ Boat ☐ Helo WORKING DIRECTION: N to [redacted]
SURFACE SEDIMENTS: R 10 % B 20 % C 50 % P 15 % G 5 % S 0 % M 0 % V 0 %
SLOPE: Long 70 % Hang 20 % Vert 10 % WAVE EXPOSURE: ☐ Low ☒ Mod ☒ High
OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 300 m NO 600 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | a | c | o | a | [redacted] | | | | | sw | ui | mi | li |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | | | | | | | | | | | | |
| COAT | | | | X | | X | | | | X | X | | |
| STAIN | | | | | | | | | | | | | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| [redacted] | | | | | | | | | | | | | |
| NO OIL | | | | | | | | | | | | X | X |

PAVEMENT H F S 0 sq. m by 0 cm
PATTIES / TARBALLS 0 BAGS
NEAR SHORE SHEEN? (NO) BR RW SL TL

| OILED DEBRIS | AMOUNT [redacted] | | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | X | | |
| Debris | | | |

DID YOU COLLECT [redacted]?
YES ☐ NO ☒
[redacted] 0
[redacted] 0

Photographer:
Roll No. ST-2-3
Frames —

## SUBSURFACE OIL BCP veneer on bedrock common.

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED [redacted] | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | [redacted] | [redacted] | SURFACE - SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | sw | ss | cl | co | mi | | ss | cs | [redacted] | | | | | es | is | ms | ls | | | | |
| 1 | 25 | [redacted] | | | | | | | | | | | | | | X | | | | | - | PG |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |

COMMENTS Moderate - hi. exposure sloping w/ well rounded cbl veneer over well worn bedrock - bwl beaches rimmed by steep cliffs. Surface oil on DBL tar cts @ HHTZ + LWTZ.
No subsurface oil.

REVIEWED JW DATE 4/22/89

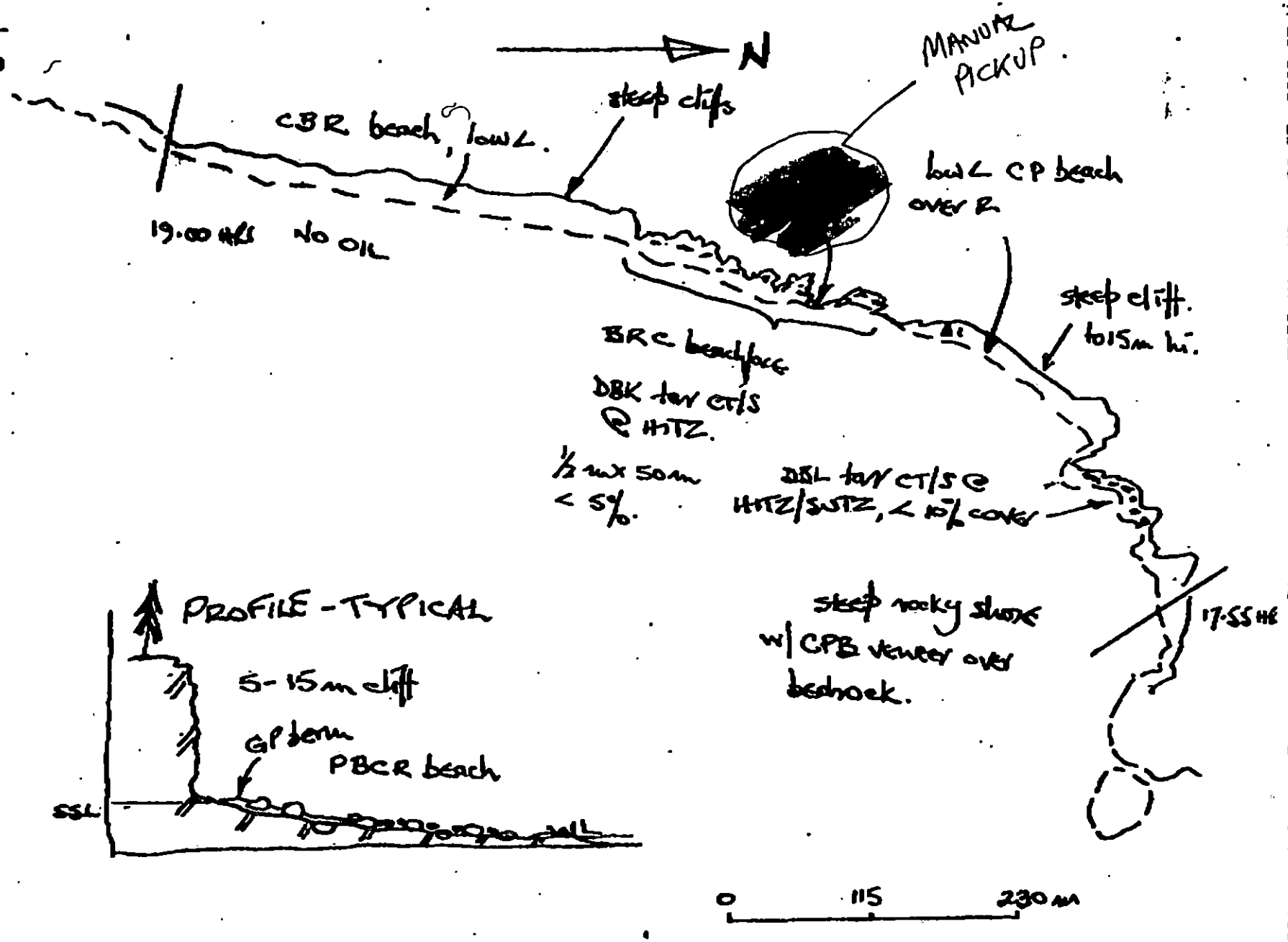
OG S. MACDONALD

SEGMENT ST. 1-4

SUBDIVISION A

DATE 4/20/90

SKETCH MAP




CHECKLIST

- N Arrow
- Approx. Scale
- Segment Body
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. HWL/LWL
- SSL
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

LEGEND

1 △ Pit - No Subsurface Oil

2 △ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 ⇨ Photo location, direction, and number

• • • CT/S

Oil Character Length (m): AP ___ PO ___ CV ___ CT 300 ST ___ MS ___ PT ___ TB ___ FL ___ NO 600

REVISION 08/90

APR-21-1990 21:52 FROM MV BELLAH CANDIES TO EXXON SOAT P.13

# SHORELINE ECOLOGICAL SUMMARY

Segment ST [illegible] Subdivision A Date (mo / day / yr) 4/20/90

Time (24 hr) 1900 Biologist MA Scott

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

(B) Overall % cover of biota ( % of segment ): Dense 20 Moderate 15 Low 65

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

Photographs:
Roll No. ST-3-3
Frames Ø

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | 2 | 2 | X | X | 2 | X | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | X | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | X | 2 | X | X | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | X | X | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | X | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

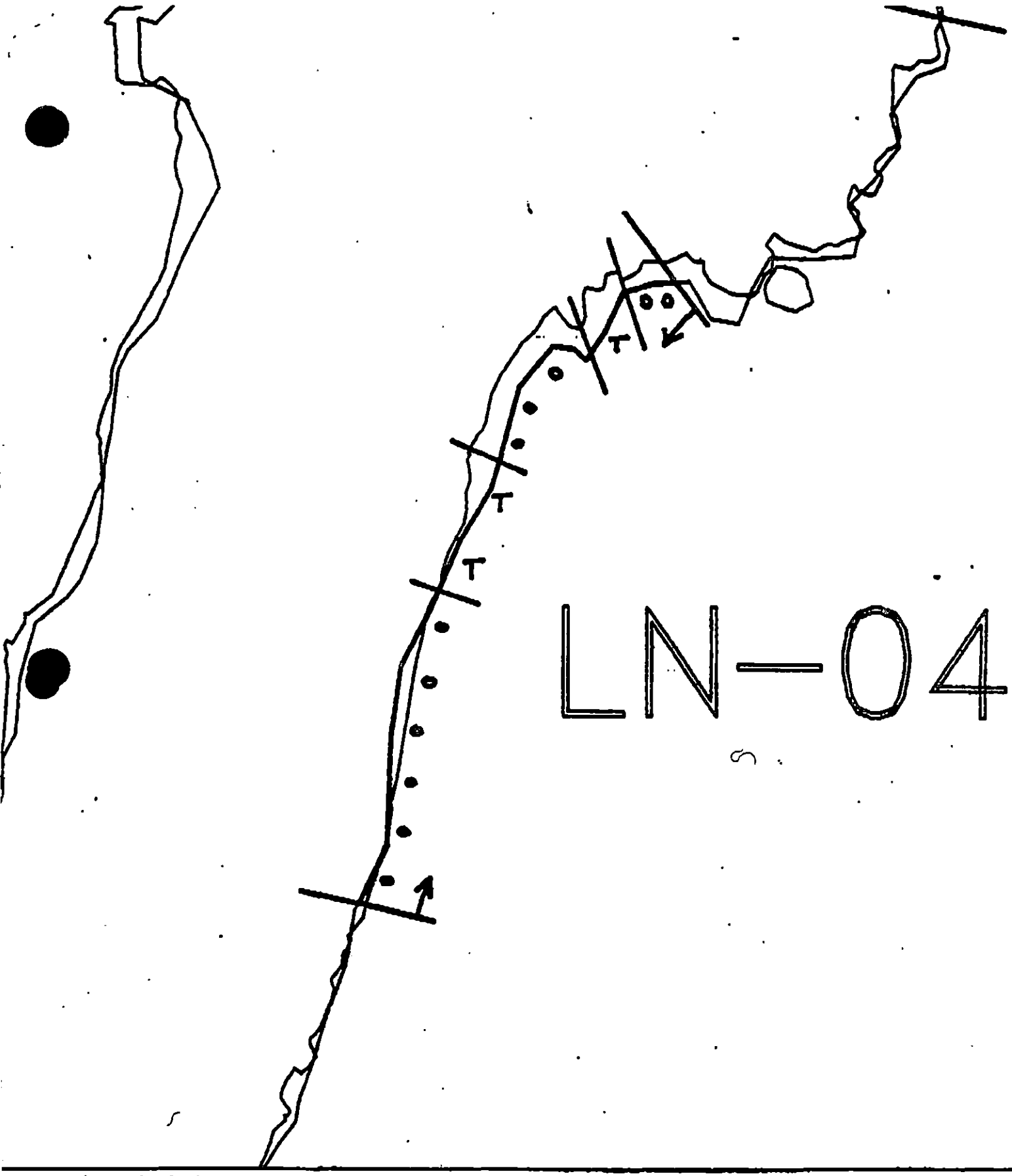
**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | [illegible] | | 2 | X | 2 | 2 | 2 | X | X |
| 3 | 3 | 3 | [illegible] | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 |
| 4 | 4 | 4 | [illegible] | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 5 |
| 5 | 5 | 5 | [illegible] | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 |
| 6 | 6 | 6 | [illegible] | 6 | 6 | 6 | 6 | 6 | 6 | | |

NOT PRESENT

Wildlife Observational/General Comments:
eagle not shown on eco-map at north end - not observed (see note on Segment LN-03A)
1 dead otter
1 sea otter
1 bald eagle

Ecological Considerations:
patches of dense mytilus beds + rock + boulders
M + LTE = rock + kelp, dense, diverse algae




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

LN-4A

ADEC Segment Length: 902m

0 100 200 300
METERS

Map Key: PWS-457.
Name: G-MACDONALD
Date: 4/20/90
Date Entered: 13

# ADDENDUM: SUBDIVISION CONSTRAINTS

## SEGMENT LN-4 SUBDIVISION A ( 1 of 1 )

| WORK WINDOW | |
|---|---|
| Manual Pickup More Than 400m From Active Nest | **OPEN** |
| Manual Pickup Less Than 400m From Active Nest | **CLOSED** |

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

| | | |
|---|---|---|
| **2M** | **Herring Spawning** | NO CONSTRAINT. Authorized by Evelyn Biggs/ADF&G on 5/17/90 to Exxon/Tom Kelley. |
| **5T** | **Bald Eagle Nest** | USFWS bald eagle impact assessment conducted on 5/26/90 by Mike Lockhart indicates an active eagle nest in Subdivision A. Closed to manual pickup less than 400m from active nest. No constraint to manual pickup more than 400m from active nest. |

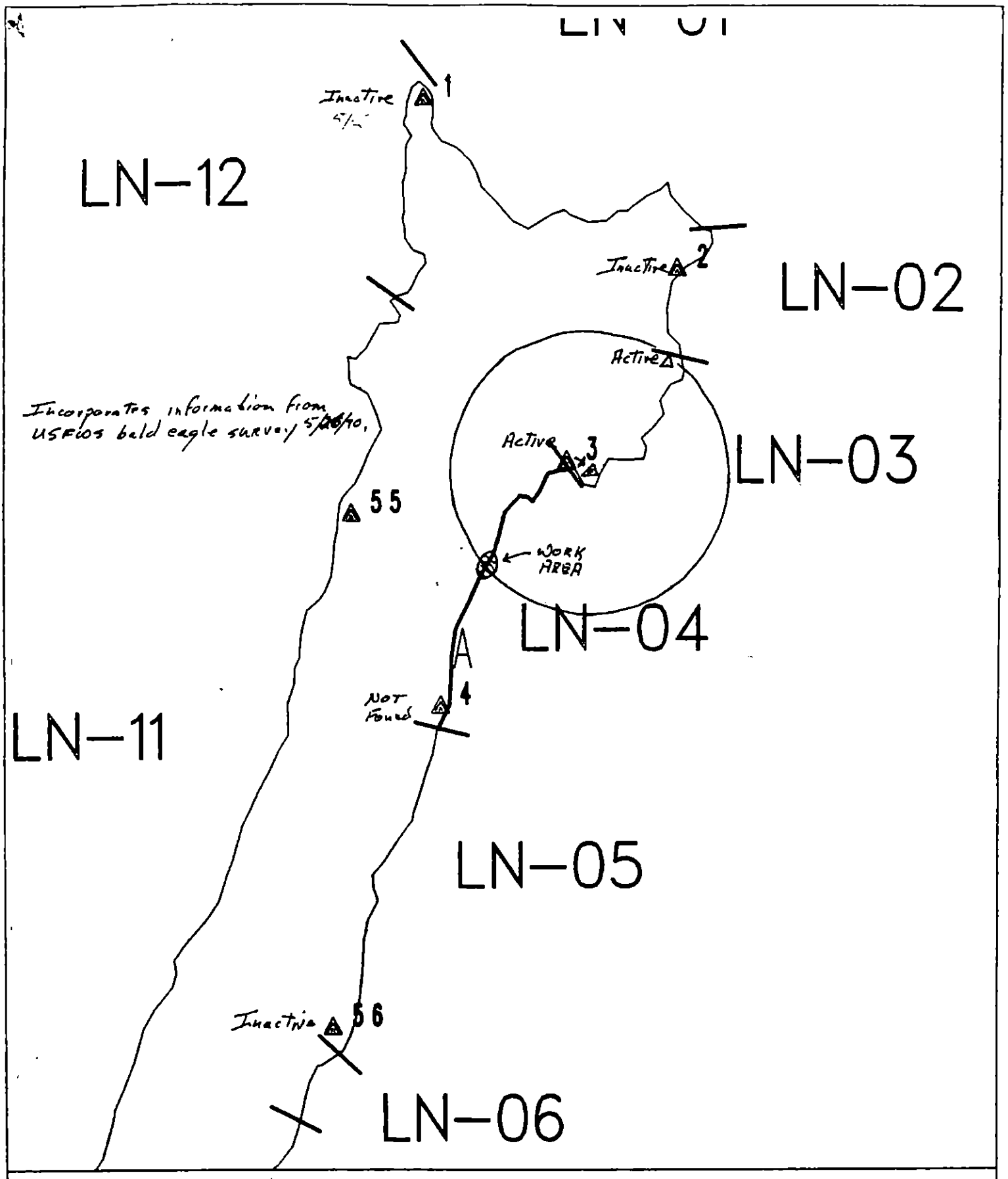
OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 6/04/90.
ADEC Ray Morris
EXXON Andy Teas
NOAA Joseph Talbott
USCG C.A. Reiter

FOSC _____ Date 6/4/90

Prepared by _____ Date 6/2/90




EXXON

Exxon Company, USA
Map Key: PWS-LN-4
May 11, 1990

# ECOLOGY MAP 6/2

SEGMENT LN-4

SUBDIVISION A (1 of 1)

METERS

0 369 738

★ Seabird Colony

▲ Eagle Nest

1 inch = 1211 feet

# SHORELINE EVALUATION

SEGMENT ST/ LN-05 SUBDIVISION A (1 OF 1) DATE 4/1/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**
2M Herring spawning (4/1 to 6/15)
5T All bald eagle nests (3/1 to 6/1)
Active bald eagle nests (3/1 to 9/1)

**SUBDIVISION ECOLOGICAL CONSTRAINTS:**
Avoid unnecessary disturbance or damage to unoiled biota and substrate.
See attached Ecological Constraint Sheet.

SHPO SIGNATURE: Charles E Holmes DATE: April 14, 1990

**OILING CATEGORIZATION:**

Wide 105m: Medium 22 m: Narrow 39 m: V.Light 46 m: No Oil 786 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 10 cm

**RECOMMENDATIONS:**

| | |
|---|---|
| ____No Treatment Recommended | ____Snare/Absorbent Booms |
| X Treatment Recommended | ____Oil Snares (pom poms) |
| X Manual Pickup | ____Absorbents (pads,rolls,etc) |
| X Bioremediation | ____Spot Washing: ____Wands |
| ____Tarmat: ____Breakup | ____ Beach Cleaner |
| ____Removal | ____Other (see comments) |

COMMENTS: Recommend manual removal of mousse and bioremediation of areas shown on attached sketch map. Activities should be conducted after 6/15 per above constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/14/90
ADEC JOHN BAUER John Bauer
EXXON ANDY LEAL
NOAA Bud Wescott Bud Wescott
USCG G.A. REITER G.A. Reiter FOSC: [signature] DATE: 4-22-90

# PWS ECOLOGICAL CONSTRAINTS

LN-005

| | | |
|---|---|---|
| 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 uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations. | |
| 3N, 3P | Harbor seal and sea lion pupping (5/15 to 7/1) | |
| 3O, 3Q | Harbor seal and sea lion molting (8/15 to 9/15) | |
| | Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. | |
| 5R | Seabird colony (5/1 to 9/1) | |
| | Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment. | |
| 5S | Shorebird/waterfowl concentration (4/1 to 5/15) | |
| | Restrict all activity to essential minimum, especially air traffic. | |
| 5T | All Bald Eagle nests (3/1 to 6/1) | |
| | Active Bald Eagle nests (3/1 to 9/1) | |
| | Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates. | |
| 6U | Recreation: | Tent sites (5/1 to 9/15) |
| 6V | | Anchorages (5/1 to 9/15) |
| 6W | | Forest Service cabins (5/1 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 | | 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 / LN-05 SUBDIVISION: A, 1 of 1 DATE 4/1/90

**USCG**
NAME David S. Thomas SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

**ADEC**
NAME Clara S. Crosby. SIGNATURE Clara S Crosby

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

STRONGLY SUGGEST TREATMENT OF SITE #3 → (SKETCH)
OILING - HEAVY — MOUSSE POOLED IN SPOTS TO 7.5 CM.
OIL IS MOBILE - IN THAT BROWN SHEENS WERE NOTED IN RUNOFF. INTENSIVE MECHANICAL TREATMENT RECOMMENDED.
SUGGESTED Treatment for SITE #1 (possible wash/flush) — mechanical

**LAND MANAGER**
NAME MARSHA MARTIN/DNR SIGNATURE Marsha Martin

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

# SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Rick GILLIE USCG BM 1 Thomas SEGMENT ST/ LN-05
LAND REP Marsha Martin SUBDIVISION A- 1 of 1
EXXON FRANK Box ADEC Clara Crosby TIME 15:00 to 16:45
TEAM NO.: 13 TIDE LEVEL: +3 to +5 DATE 4 / 1 / 90
EST. SUBDIVISION LENGTH: 1,168 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
SURFACE SEDIMENTS: R 50 % B 30 % C 10 % P 5 % G 5 % S 0 % M 0 % V 0 %
SLOPE : Lang 10 % Hang 40 % Vert 50 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
OIL CATEGORY LENGTH: W 180 m M 10 m N 50 m VL 20 m NO 928 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION /C | /B | /P | /S | OIL / FILM COLOR SHEN | DBL RW | DBL BR | DBL TL | LABR | IMPACTED ZONES SU | UI | MI | LI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | X | | | | X | | | X | | |
| [illegible] | | | | | | | | | | | | | |
| COAT | X | | * | ✓ | | | | X | | | X | X | |
| STAIN | | | | X | | | | X | | | X | | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | | | | | | | | | | |
| NO OIL | | | | | | | | | | | | | |

PAVEMENT: H F S N/A sq. m by _____ cm
PATTIES / TARBALLS N/A BAGS
NEAR SHORE SHEEN? (NO) BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | | | |
| Debris | | | |

DEBRIS COLLECTED ☐ YES ☒ NO
TYPE _____
#BAGS _____

Photographs:
Roll No. JT-13-1
Frames 35

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER OP | OR | OL | OF | NO | OILED INTERVAL (CM-CM) | BELOW UO | UC | OIL / FILM COLOR SHEN | DBL RW | DBL BR | OIL TL | LABR | PIT ZONE SU | UI | MI | LI | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10 | X | | | | | 5-10 | X | | | | | X | | | X | | | | C |
| 2 | 40 | | | | | X | - | | | | | | | | | ■ | X | | | G, S |
| 3 | 10 | X | | | | | 5-10 | X | | | | | X | | | X | | | | P, S |
| 4 | 15 | | | | | X | - | | | | | | | | | X | | | | G |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |

COMMENTS
GENERAL: OILING- 2 AREAS OF WIDE AND NARROW OILING

GEOMORPHOLOGY- NARROW COBBLE AND BOULDER BEACHES ON PREDOMINATLY ROCK CLIFF COAST



REVIEWED JW DATE 4-4-90

# SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / LN005 Subdivision A Date (mo / day / yr) 4-1-90

Time ( 24 hr ) 15:00 Biologist David Cohen

( A ) Substrate type and % of segments:
( 1 ) Bedrock 50 ( 2 ) Boulder 30 ( 3 ) Cobble 10 ( 4 ) Pebble 5 ( 5 ) Sand 5 ( 6 ) Silt ____

( B ) Overall % cover of biota ( % of segment ): Dense 10 Moderate 45 Low 45

( 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 )

Photographs:
Roll No. ST-13-1
Frames 35

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | X | 2 | X | 2 | X | 2 | 2 | 2 | NOT PRESENT |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | X | 2 | 2 | X | 2 | 2 | 2 | 2 | NOT PRESENT |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | X | X | 2 | 2 | 2 | X | 2 | 2 | 2 | NOT PRESENT |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | X | X | X | 2 | 2 | X | 2 | 2 | (1L) | NOT PRESENT |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

Wildlife Observations/ General Comments:
present in low intertidal- Enteromorpha, Scytosiphon, Ectocarpus, Ulva
mid intertidal- Porphyra, Endocladia, coralline algae, Ceramium, Nucella
high intertidal- Porphyra, Enteromorpha
Killdeer, Cormorants, ravens observed in area

Ecological Considerations: 3. small reefs offshore site 2 had seals on them

2M - none observed
5T - none observed

(3)

OG Rick Gillie

SEGMENT ST/ [redacted]-05

SUBDIVISION A, 1 of 1

DATE 4, 1 90

**CHECKLIST**

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

**LEGEND**

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

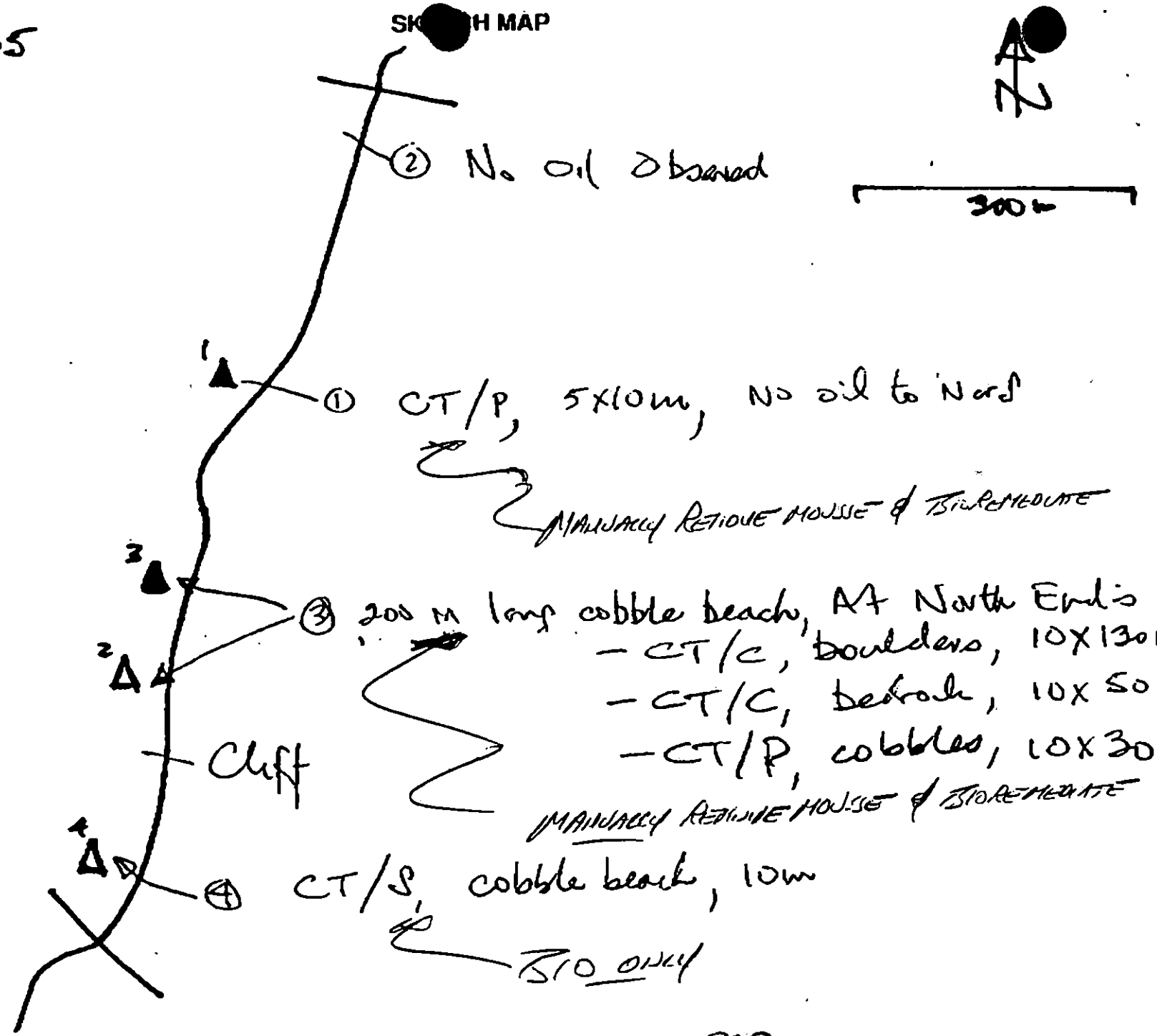
CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 Photo location, direction, and number

**SKETCH MAP**




② No oil observed

① CT/P, 5x10m, No oil to Nearshore
- MANUALLY REMOVE HOUSE & BIOREMEDIATE

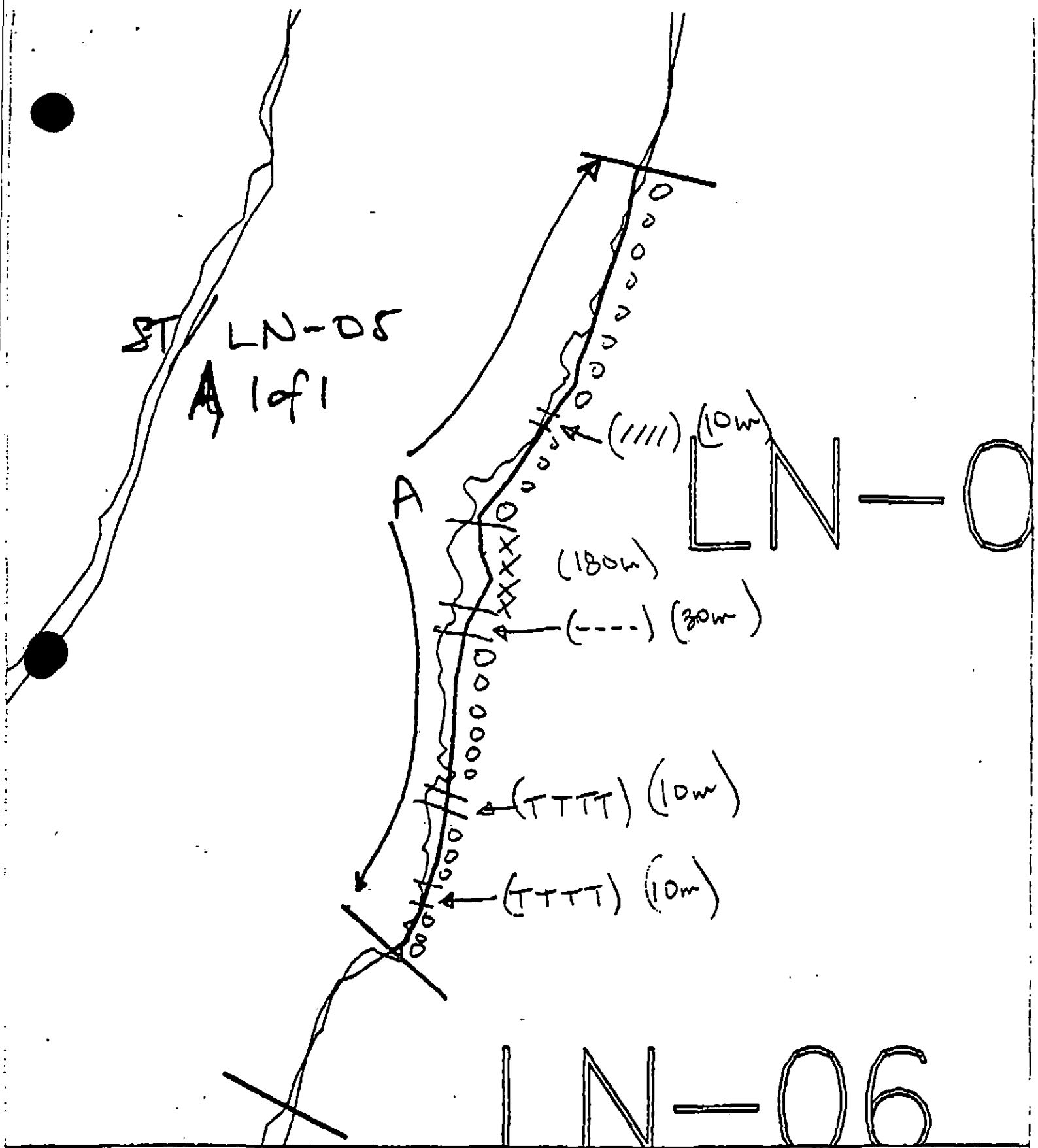
③ 200 m long cobble beach, At North End is
- CT/C, boulders, 10x130m
- CT/C, bedrock, 10x50m
- CT/P, cobbles, 10x30m

MANUALLY REMOVE HOUSE & BIOREMEDIATE

④ CT/S, cobble beach, 10m
- BIO ONLY

Oil Character Length (m): AP 0 PO 10 CV 0 CT 200 ST 50 MS 0 PT 0 TB 0 FL 0 NO 900

REVISION:03/24/00



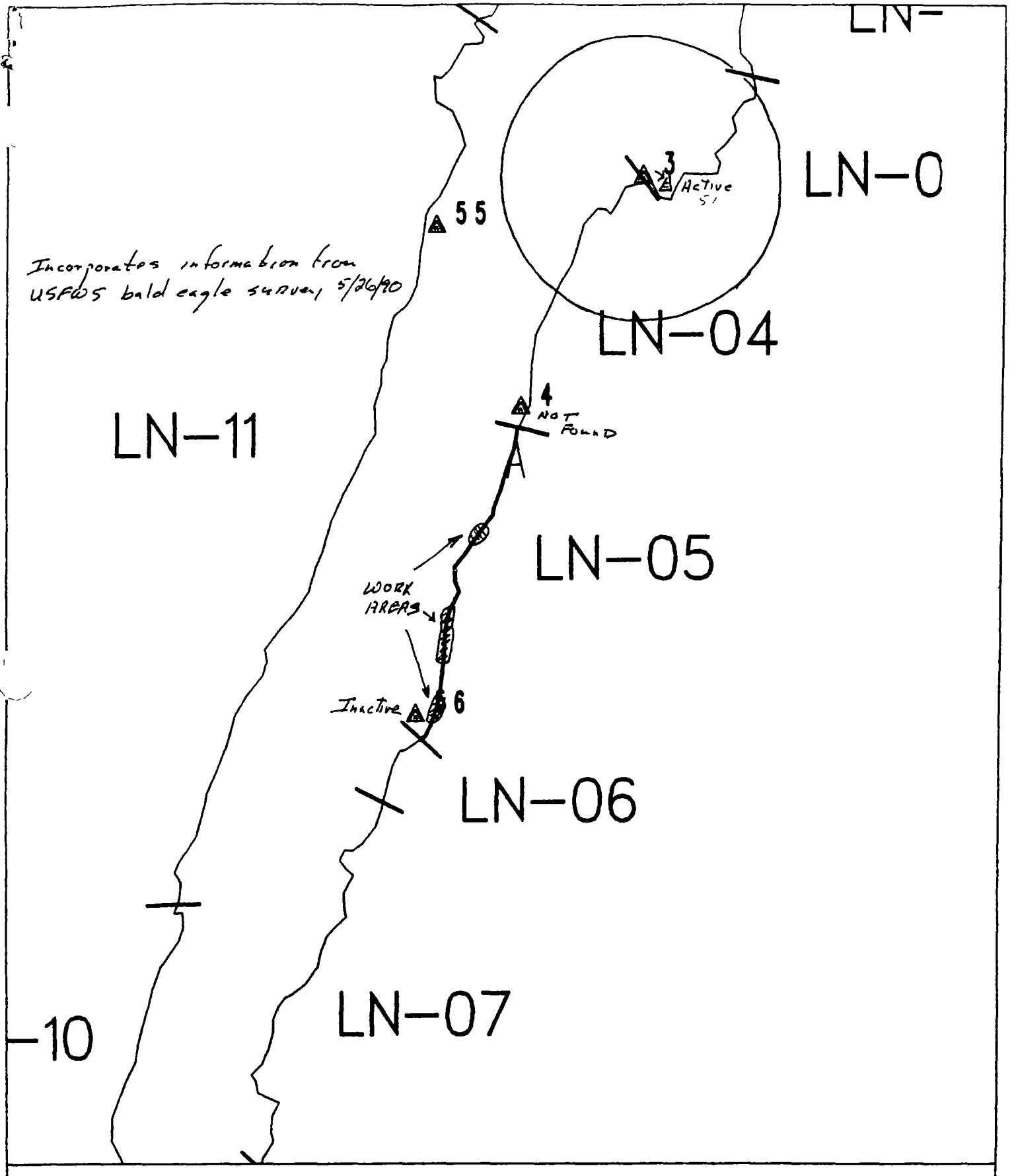

XXXX Wide
/// Medium
---- Narrow
TTTT Very Light
0000 No Oil

LN-5

ADEC Segment Length: 999m

0 100 200 500
METERS

Map Key: PWS-458
Name: GILLIE
Date: 4-1-90
Data Entered:




EXXON

Exxon Company, USA

Map Key: PWS-LN-5

May 11, 1990

# ECOLOGY MAP 4/2

## SEGMENT LN-5

SUBDIVISION A (1 of 1)

METERS

0 362 723

★ Seabird Colony

▲ Eagle Nest

1 inch = 1187 feet

# ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT LN-5 SUBDIVISION A ( 1 of 1 )

| WORK WINDOW | |
|---|---|
| Manual Pickup | OPEN |
| Bioremediation | OPEN |

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

| | | |
|---|---|---|
| **2M** | **Herring Spawning** | NO CONSTRAINT. Authorized by Evelyn Biggs/ADF&G on 5/17/90 to Exxon/Tom Kelley. |
| **5T** | **Bald Eagle Nest** | NO CONSTRAINT. USFWS bald eagle impact assessment completed on 5/26/90 by Mike Lockhart indicates no active nests within 400m of the work area. |

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 6/04/90
ADEC Ruth Morris
EXXON Andy Tea
NOAA Joseph Talbott
USCG G.A. Reiter

FOSC [signature] DATE 6/4/90

Prepared By: [signature] Date 6/2/90

# SHORELINE EVALUATION

SEGMENT ST/ LN-06 SUBDIVISION A (1 OF 1) DATE 4/20/90

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

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

SHPO SIGNATURE: Charles E. Holmes DATE: 5/3/90

**OILING CATEGORIZATION:**

Wide 74 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 161 m
Subsurface Oil Observed: Yes X No ___ Maximum Depth 35+cm

**RECOMMENDATIONS:**

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

COMMENTS: Recommended treatment includes 1) tarmat removal, 2) manual pickup of tarballs, and 3) bioremediation of areas shown on sketch map. Work should be conducted after 6/1 and with USFWS approval based on eagle nest constraints.

TAG COMMENTS: SPOT WASH COVERS PRIOR TO BIO

TAG APPROVAL DATE: 5/3/90.
ADEC ART WEINER
EXXON Andy Teal
NOAA Gary Petrae
USCG KENNETH KOANE

FOSC: _____ DATE: 5-12-90

# PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

| | | |
|---|---|---|
| 1A | | Salmon stream mouth - fry outmigration (3/1 to 5/15) |
| 1B | | Salmon stream mouth - spawning (7/10 to 8/31) |
| | | No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits. |
| 1C | | Salmon fry nursery area (4/31 to 7/31) |
| 1D | | Esther Hatchery release (4/15 to 6/1) |
| 1E | | Main Bay Hatchery release (4/20 to 5/10) |
| 1F | | Sawmill Bay Hatchery release (4/15 to 6/1) |
| 1G | | Cannery Creek Hatchery release (4/21 to 6/1) |
| 1H | | Remote release site |
| 1I | | Gill net area (6/7 to 8/31) |
| 1J | | Purse seine area (7/20 to 9/30) |
| 1K | | Purse seine hook-off (7/20 to 9/30) |
| 1L | | Set net sites (6/11 to 7/25) |
| | | For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints. |
| 2M | | Herring spawning (4/1 to 6/15) |
| | | Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations. |
| 3N, 3P | | Harbor seal and sea lion pupping (5/15 to 7/1) |
| 3O, 3Q | | Harbor seal and sea lion molting (8/15 to 9/15) |
| | | Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. |
| 5R | | Seabird colony (5/1 to 9/1) |
| | | Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment. |
| 5S | | Shorebird/waterfowl concentration (4/1 to 5/15) |
| | | Restrict all activity to essential minimum, especially air traffic. |
| ✓ 5T | | All Bald Eagle nests (3/1 to 8/1) |
| | | Active Bald Eagle nests (3/1 to 9/1) |
| | | Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 8/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates. |
| 6U | Recreation: | Tent sites (5/1 to 9/15) |
| 6V | | Anchorages (5/1 to 9/15) |
| 6W | | Forest Service cabins (5/1 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 | | 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 / LN-06 SUBDIVISION: A DATE 4/20/90

**USCG**
NAME M.J. SHARPE SIGNATURE [signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

**ADEC**
NAME STEPHEN FERGUSON SIGNATURE Stephen Ferguson

☐ NO TREATMENT RECOMMENDED ■ TREATMENT SUGGESTED
COMMENTS
WIDE AREA SHOWN ON SKETCH MAP:
N-SIDE OF LARGE BEACH AREA
(1) MANUAL REMOVAL OF PAVEMENT (10.5(L) X 2 m(W) DEPTH 0.5cm)
(2) MANUAL REMOVAL OF POOLED MOUSSE NEAR TEST PIT #8
(*) (3) HOT WASH AFTER STEPS 1+2 ARE COMPLETED OF N-SIDE OF LARGE BEACH AND ALSO POCKET BEACH JUST NORTH (ON SKETCH MAP) MOST OILING IS IN MIT2 + UPPER MIT2
(4) AFTER (1)+(2)+(3) BIO ??

**LAND MANAGER**
NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS
No ecological considerations listed for the segment. Did observe seals hauled out on the rocks offshore of the segment. Historic 1930's fox pen located in uplands adjacent to oiled area. Recommend treatment as suggested by ADEC above.

## SHORELINE OILING SUMMARY

REVISION NO. 04/13/90

OG K. Ramsey USCG R. Sharpe SEGMENT ST/ LN-06
BIO G. Pendo LAND REP L. Carlson SUBDIVISION A (1 OF 1)
EXXON S. Reid ADEC S. Ferguson TIME 6:45 to 7:45 Pg 1 of 2
TEAM NO. 4 TIDE LEVEL 4' to 5.5' DATE 4/20/90
EST. SUBDIVISION LENGTH: 255 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
SURFACE SEDIMENTS: R 5 % B 33 % C 62 % P 0 % G 0 % S 0 % M 0 % V 0 %
SLOPE: Lang 95 % Hang 5 % Vert 0 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
OIL CATEGORY LENGTH: W 82 m M 0 m N 0 m VL 0 m NO 173 m

### SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | rc | rb | ar | sb | | | | | | su | ui | mi | li |
| ASPHALT PAVEMENT | | | X | | | | | X | | | X | | |
| POOLED | | | X | • | | X | | | | | X | | |
| COVER | X | | • | | | X | | • | | | • | | |
| COAT | X | | • | | | X | | | | | X | • | |
| STAIN | X | | • | | | X | | | | | X | • | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | X | | | | | | X | | | | X | | |
| NO OIL | | | | | | | | | | X | | | X |

PAVEMENT H (F) S 10.5 sq. m by 2.5 cm
PATTIES / TARBALLS — BAGS
NEAR SHORE SHEEN? (NO) BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | | | |
| Debris | | | |

DID YOU COLLECT DEBRIS?
YES ☐ NO ☒
TYPE —
#BAGS —

Photographs:
Roll No. ST-4-3
Frames 1

### SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SHEEN (Y/N) | (cm) | SURFACE-SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | op | on | ol | of | no | | uo | uo | | | | | | su | ui | mi | li | | | | |
| 1 | 30 | | | X | | | 13-20 | | X | | | | X | | | X | | | N | — | — | C, P, G |
| 2 | 35 | | | X | | | 10-17 | | X | | | | X | | | X | | | N | Y | 31 | C, P, G |
| 3 | 25 | | | | | X | — · — | | X | | | | | | | | X | | N | N | 22 | C, P, G |
| 4 | 35 | | | X | | | 20-35 | X | | | | | X | | | X | | | N | Y | 31 | C, P, G |
| 5 | 37 | | | | | X | — · — | | X | | | | | | | X | | | N | N | 33 | C, P, G |
| 6 | 38 | | | | | X | — · — | | X | | | | | | | X | | | N | N | 37 | C, P, G |

COMMENTS This area is a low angle cobble & boulder beach which ends into bed rock on the north side & then a high angle boulder cove. ere WERE areas of oiling described as 1) cobble beach, 2) boulder beach, & 3) cove. 1. Cobble beach- The surface cobbles contained an oil Stain the cracks within the cobble, otherwise appeared clean on surfa Subsurface oil was in an area ≈ 25m long x 12 m wide.

REVIEWED JW DATE 4/23/90

## SHORELINE OILING SUMMARY (PAGE 2)

REVISION 04/13/90

SEGMENT ST/ LN-6 SUBDIVISION A (1 OF 1)

Pg 2 of 2

### SUBSURFACE OIL (CONTINUED)

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER OP | OR | OL | OF | NO | OILED INTERVAL (cm-cm) | BELOW UO | UC | OIL / FILM COLOR | | | | | | PIT ZONE BU | UI | MI | LI | ANA | SHEEN (Y/N) | ▼ | SURFACE · SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 32 | | | X | | | 17-27 | | X | | | | X | | | | X | | | N | Y | 28 | C, P, G |
| 8 | 10 | X | | | | | 0-10 | X | | | | | X | | | | X | | | N | — | - | C, BRX |
| | | | | | | | | | | | | | | | | | | | | | | | |
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COMMENTS This subsurface oil was a lens of dark brown color. Boulder beach (shown on diagram) had pooled mousse trapped behind boulders grading into Asphalt Pavement. There was a continuous cover of saturated sediments just below the top pebbles which covered the length of the area (45m long). The largest pool of mousse was 32cm long x 20cm wide x 2.5-7.5 cm deep. There was also patchy coat + stain which was thick enough to be term

– cobble beach cont- with some mousse on top.

nter tidal zone down to mid tidal zone 3) boulder cove ha a coat/ cover + stain band which was continuous throughout. + Patchy in mid tidal zone. This area covered an area ≈ 35 long x 10m wide. Small patchy areas of pooled mousse trapped in the UI. zone. This segment is fronted by a seal haul out.

REVIEWED JW DATE 4/23/90

OG K. JONES

SEGMENT ST/ LN-6

SUBDIVISION A

DATE 4 / 20 90

**CHECKLIST**

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

**LEGEND**

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

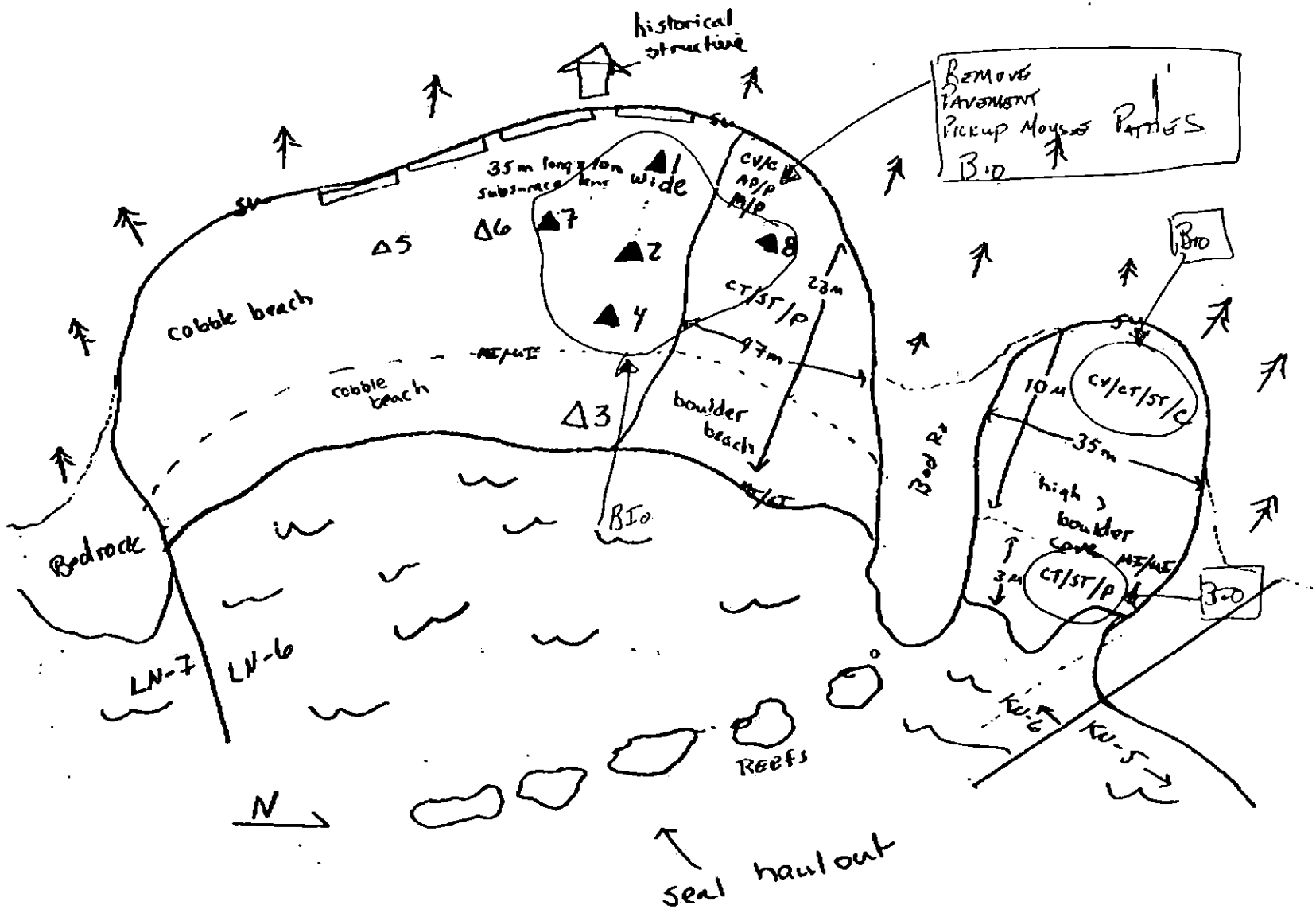
CT/P Patchy Distribution

CT/S Splashed Distribution

lll Oiled Vegetation

1 ⇒ Photo location, direction, and number

**SKETCH MAP**




Oil Character Length (m): AP 47 PO 82 CV 82 CT ____ ST ____ MS ∅ PT ∅ TB ∅ FL 47 NO ____

REVISION RECORD

## SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / LN-6 Subdivision A Date (mo / day / yr) 4-20-90

Time ( 24 hr ) 18:45 Biologist PENN

( A ) Substrate type and % of segments:
( 1 ) Bedrock 5 ( 2 ) Boulder 33 ( 3 ) Cobble 62 ( 4 ) Pebble Ø ( 5 ) Sand Ø ( 6 ) Silt Ø

( B ) Overall % cover of biota ( % of segment ): Dense 5 Moderate 15 Low 60

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

Photographs:
Roll No. —
Frames —

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| X | X | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | NOT PRESENT |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | X | X | 2 | 2 | 2 | 2 | 2 | 2 | 2 | NOT PRESENT |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | NOT PRESENT |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

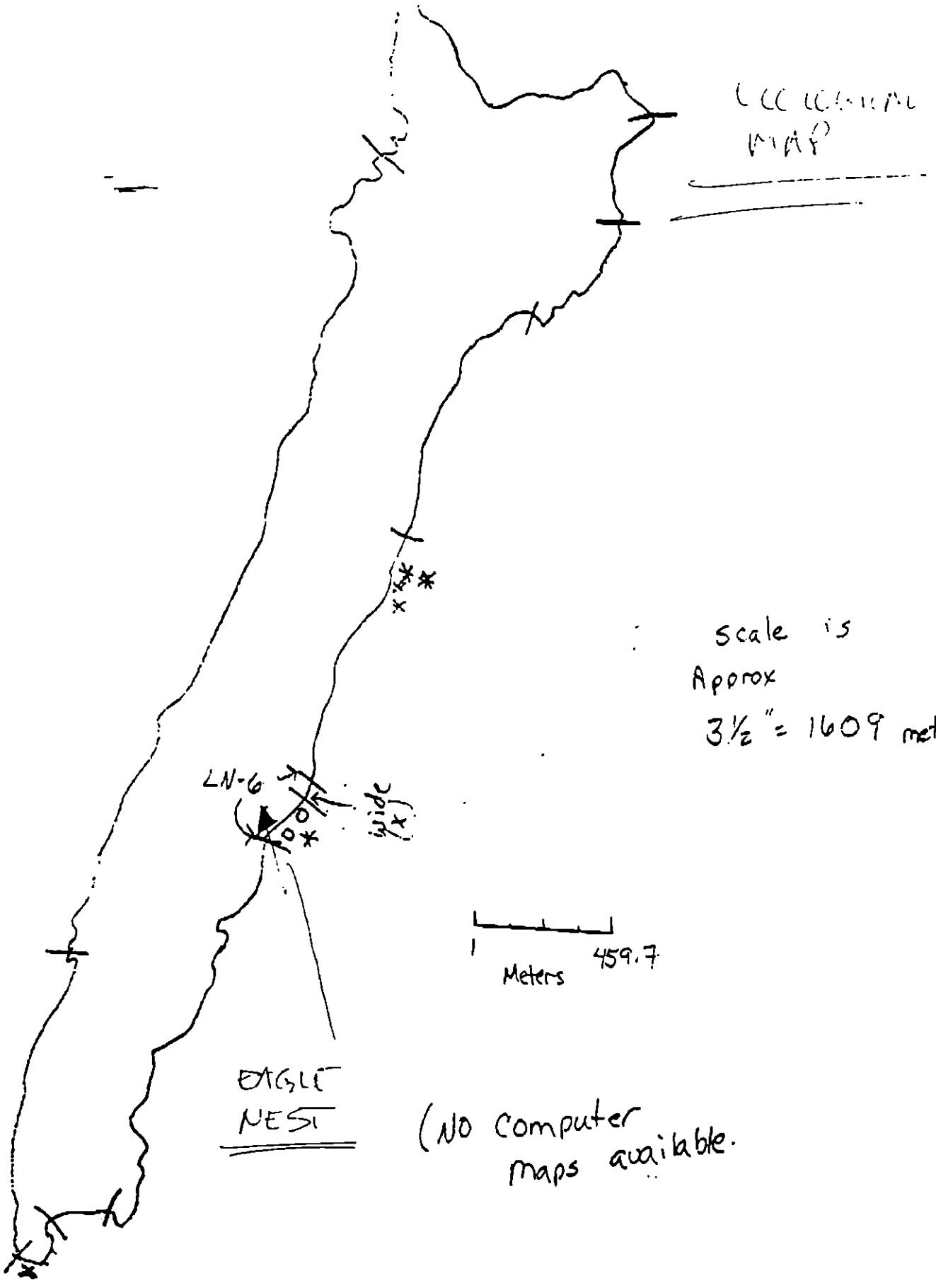
**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | X | X | 2 | 2 | 2 | 2 | 2 | 2 | 2 | NOT PRESENT |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**Wildlife Observations/ General Comments:**

—

**Ecological Considerations:**

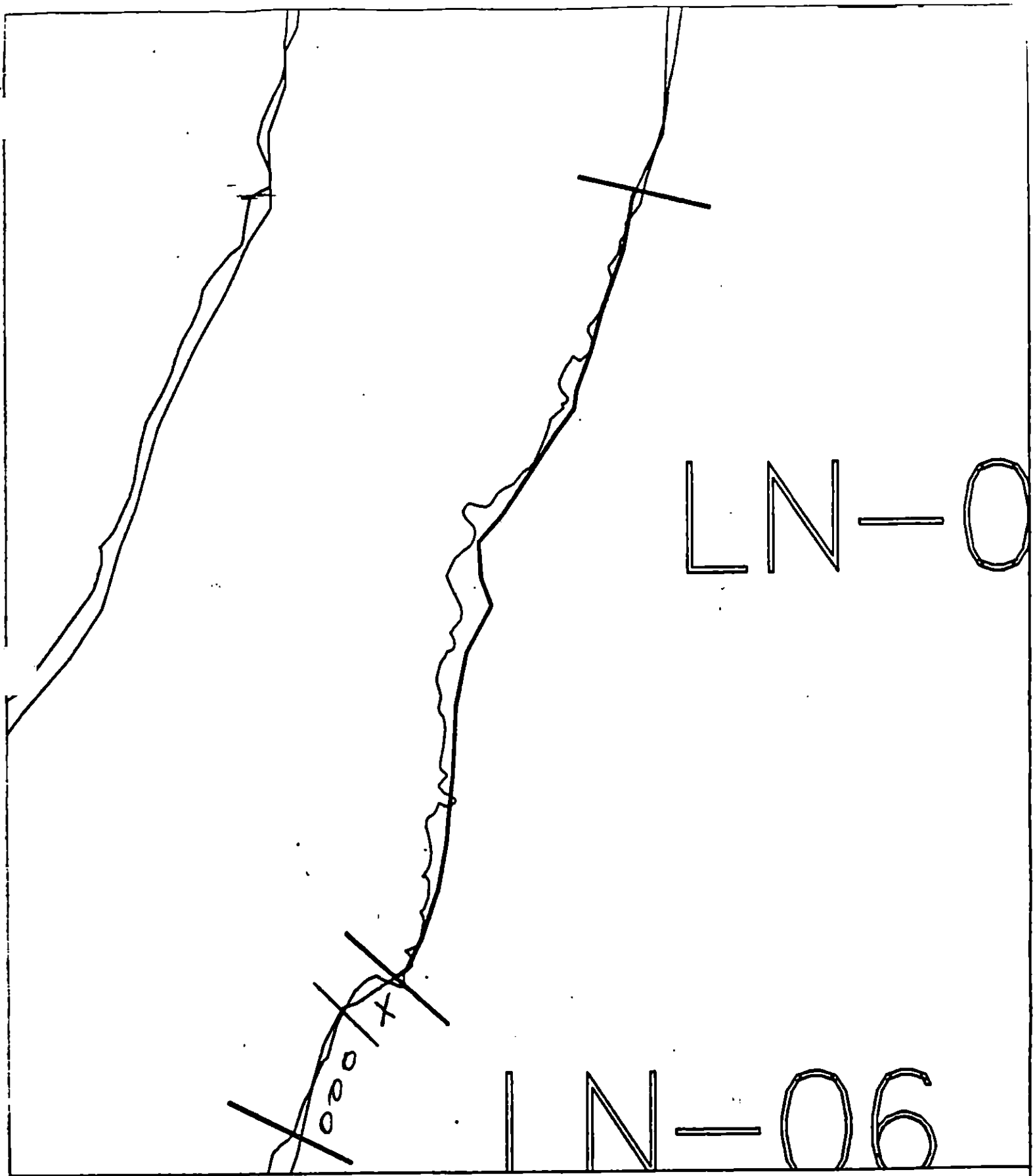



LOCATIONAL MAP

scale is Approx 3½" = 1609 meters

EAGLE NEST

(NO computer maps available.




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

LN-06

ADEC Segment Length: 999m

0 100 200 300
METERS

N

Map Key: PWS-458

Name: _____

Date: _____

Date Entered: _____

# ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT LN-6 SUBDIVISION A ( 1 of 1 )

| WORK WINDOW | |
|---|---|
| Manual Pickup<br>Tarmat Removal | OPEN |
| Bioremediation<br>Spot Washing | OPEN |

## ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

| | | |
|---|---|---|
| 5T | **Bald Eagle Nest** | NO CONSTRAINT. USFWS bald eagle impact assessments completed on 5/15/90 and 5/26/90 by Mike Lockhart indicate no active nests within 400m of the work area. |

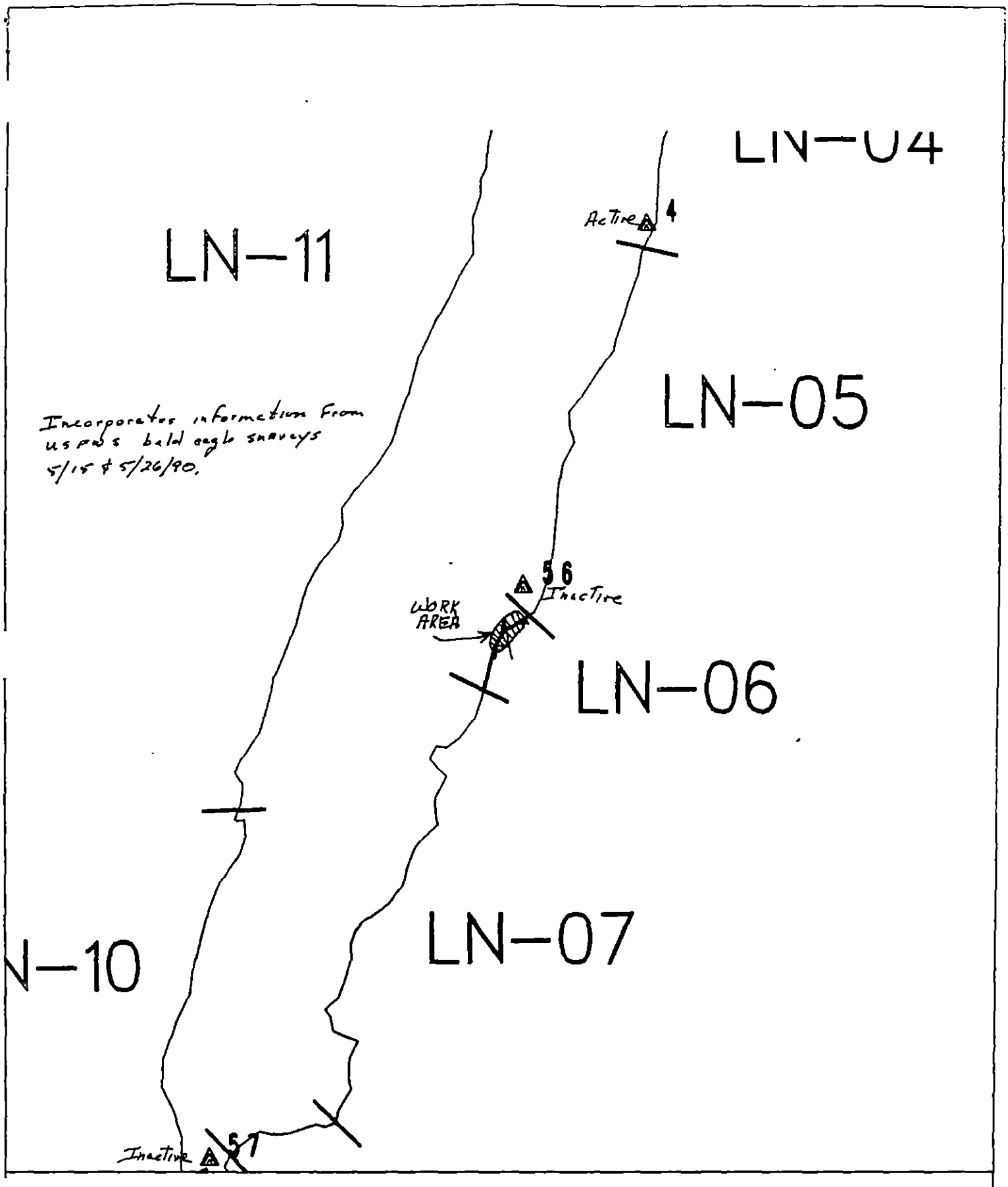
OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 6/04/90.
ADEC Ray Morris's
EXXON ANDY TEAR
NOAA Joseph Tolbott
USCG G.A. REITER

FOSC _____ DATE 6/4/90

Prepared By: _____ Date 6/2/90




EXXON

Exxon Company, USA

Map Key: PWS-LN-6

May 11, 1990

# ECOLOGY MAP

## SEGMENT LN-6

SUBDIVISION A (1 of 1)

METERS

0 331 662

★ Seabird Colony

▲ Eagle Nest

1 inch = 1086 feet

# SHORELINE EVALUATION

SEGMENT ST/ LN-07 SUBDIVISION A (1 OF 1) DATE 4/20/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**

2M Herring spawning (4/1 to 6/15)
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
6Y Recreation: Special use destination
See attached Ecological Constraint sheet for specific constraints and contacts.

**SUBDIVISION ECOLOGICAL CONSTRAINTS:**

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Eagle nest in adjacent segment to North.

SHPO SIGNATURE: [signature] DATE: 5/5/90

**OILING CATEGORIZATION:**

Wide 0 m: Medium 0 m: Narrow 178 m: V.Light 150 m: No Oil 1025 m
Subsurface Oil Observed: Yes____ No X Maximum Depth_____

**RECOMMENDATIONS:**

| | |
|---|---|
| ____No Treatment Recommended | ____Snare/Absorbent Booms |
| X Treatment Recommended | ____Oil Snares (pom poms) |
| X Manual Pickup | ____Absorbents (pads,rolls,etc) |
| X Bioremediation | ____Spot Washing:____Wands |
| ____Tarmat Removal | ____Beach Cleaner |
| | ____Other (see comments) |

COMMENTS: Recommend manual pickup of oiled debris and bioremediation as indicated on sketch map. Work should be conducted between 7/1 and 8/15 based on pinniped constraints with the exception of Inipol application which should be conducted between 7/2 and 7/31.

TAG COMMENTS:

TAG APPROVAL DATE: 5/4/90.
ADEC ART WEINER [signature]
EXXON ANDY TEAL [signature]
NOAA Gary Petrone [signature]
USCG G.A. REITER G.A. Reiter

FOSC: [signature] DATE: 5-9-90

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G John Morison 267-2324

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 July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D Esther Hatchery release (4/15 to 6/1)
1E Main Bay Hatchery release (4/20 to 6/10)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or 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: 1E ADF&G Larry Peltz 424-3214
1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzomoto 424-7511

1I Gill net area (6/7 to 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 unoiled 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

[redacted], 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of 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
ADF&G Don Calkins 267-2403

5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Rothy 267-2206

5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U Recreation: Tent sites (6/1 to 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 Subsistance area: Salmon harvesting (5/1 to 9/30)
7HH Finfish harvesting
7II Deer harvesting (8/15 to 2/28)
7JJ Invertebrate harvesting
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LN-7 SUBDIVISION: A DATE 4/20/90

**SCG**
NAME M. J. SHARPS SIGNATURE M. J. SHARPS

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS
SOME OILED DEBRIS WAS COLLECTED AND SOME LEFT ON THE SHORE.

**ADEC**
NAME STEPHEN FERGUSON SIGNATURE Stephen Ferguson

☐ NO TREATMENT RECOMMENDED ■ TREATMENT SUGGESTED
COMMENTS
RCH MAP A → S-SIDE STORM BERM → BREAK UP → BIO
SKETCH MAP B → CV/C → LOCATED ON ROCK FACE OF BOULDERS AND UNDER SIDE OF BOULDERS, NO TREATMENT RECOMMENDED/UNABLE TO WASH DUE TO BOULDERS SIZE, BIO NOT PRACTICAL DUE AGAIN TO SIZE OF BOULDERS (WHERE OIL IS LOCATED)

**LAND MANAGER**
NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS
Ecological considerations for segment listed as herring spawning area and recreation (special use). The pocket beaches on this segment mainly consisted of large boulders which are hard to walk on or land a skiff on. Recommend storm berm with oil shown on diagram A be broken up and bioremediated.

REVISION NO. 8/2/89

# SHORELINE OILING SUMMARY

REVISION NO. 8/22/90

Page 32

OG K. Ramsey USCG R SHARPE SEGMENT ST/ LN-7
BIO G Penn LAND REP L. Carlson SUBDIVISION A lot
EXXON S. Reid ADEC S. Ferguson TIME 4:30 to 6:45
TEAM NO.: 4 TIDE LEVEL: 1.5 to 4.0 DATE 4/20/90
EST. SUBDIVISION LENGTH: 1389 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
SURFACE SEDIMENTS: R 85 % B 12 % C 3 % P 0 % G 0 % S 0 % M 0 % V 0 %
SLOPE: Lang 0 % Hang 15 % Vert 85 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
OIL CATEGORY LENGTH: W 0 m M 0 m N 160 m VL 36 m NO 119 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | /c | /s | /p | /o | BRK OR | DBR/ OR | DT/ RW | MED/ TL | LBR | su | ui | mi | li |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | | | | | | | | | | |
| COVER | X | | | | | X | | | | | X | | |
| COAT | X | | ▲ | o | | ▲ | | X | ✓ | | X o | ▲ | |
| STAIN | | | • | X | | X • | | | | | X • | | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | X | | | | | | | X | | | X | | |
| NO OIL | | | | | | | | | | X | | | X |

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

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | | | |
| Debris | | X | |

DEBRIS COLLECTED ☒ YES ☐ NO Heidi Pam Pam + Tine
TYPE Webbing
#BAGS 1

Photographs:
Roll No. —
Frames —

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm-cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL' | OF | NO | | UO | UC | BRK OR | DBR/ OR | MED/ TL | DT/ RW | LBR | su | ui | mi | li | | |
| 1 | 30 | | | | | X | — • — | | X | | | | | | | X | | | N | C, P |
| | | | | | | | • | | | | | | | | | | | | | |
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| | | | | | | | • | | | | | | | | | | | | | |

This segment was mainly Pillar basalt Vertical bedrock. There were 2 coves and a couple of small pocket beaches. Attached are illustrations of rock Vertical bedrock with clean. The 1st cove had a LBR cont band of Coat + TL Film on the bottom side of cobbles + over the underlying bedrock trapped in the storm berm. This coverage was ≈ 100 m long (length of cove) and ≈ 2m wide. Bordering the north end of the cove is a climable rockface which leads to a small boulder Pocket. There was a 2-3 m wide x ≈ 100 m long - (next page)

TW 4/23/90

(17)

## SHORELINE OILING SUMMARY (PAGE 2 of 2)

REVISION 03-23-90

SEGMENT ST/ LN-7 SUBDIVISION A

### SUBSURFACE OIL (CONTINUED)

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | (CM-CM) | UO | UC | | | | | | SU | UI | MI | LI | | |
| | | | | | | | | | | | | | | | | | | | | |
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COMMENTS

Patchy coat band starting from the UI/MI line. The second cove located on diagram. This cove was a cobble + boulder MITZ to HITZ zone with boulders up in berm area + from landslide There was a patchy coat + stain (DBK in color) at the base of the slide on the boulders. Along the bedrock in the UI was a continuous coat/ ≈ 1-2m long and goes up under boulders which was under the rock debris at the second landslide. A small amount of OT/splash on the rock wall itself. Otherwise clean.

REVIEWED JW DATE 4/23/90

OG Kinnsey

SEGMENT ST/ LN-7

SUBDIVISION A

DATE 9/1/2090

COVE #1

**SKETCH MAP**

DII PAM A

(9)

**CHECKLIST**

- ✓ N Arrow
- ✓ Approx. Scale
- N/A Seg/Sub Bndry
- Off Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. HWL/LWL
- SSL
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

**LEGEND**

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

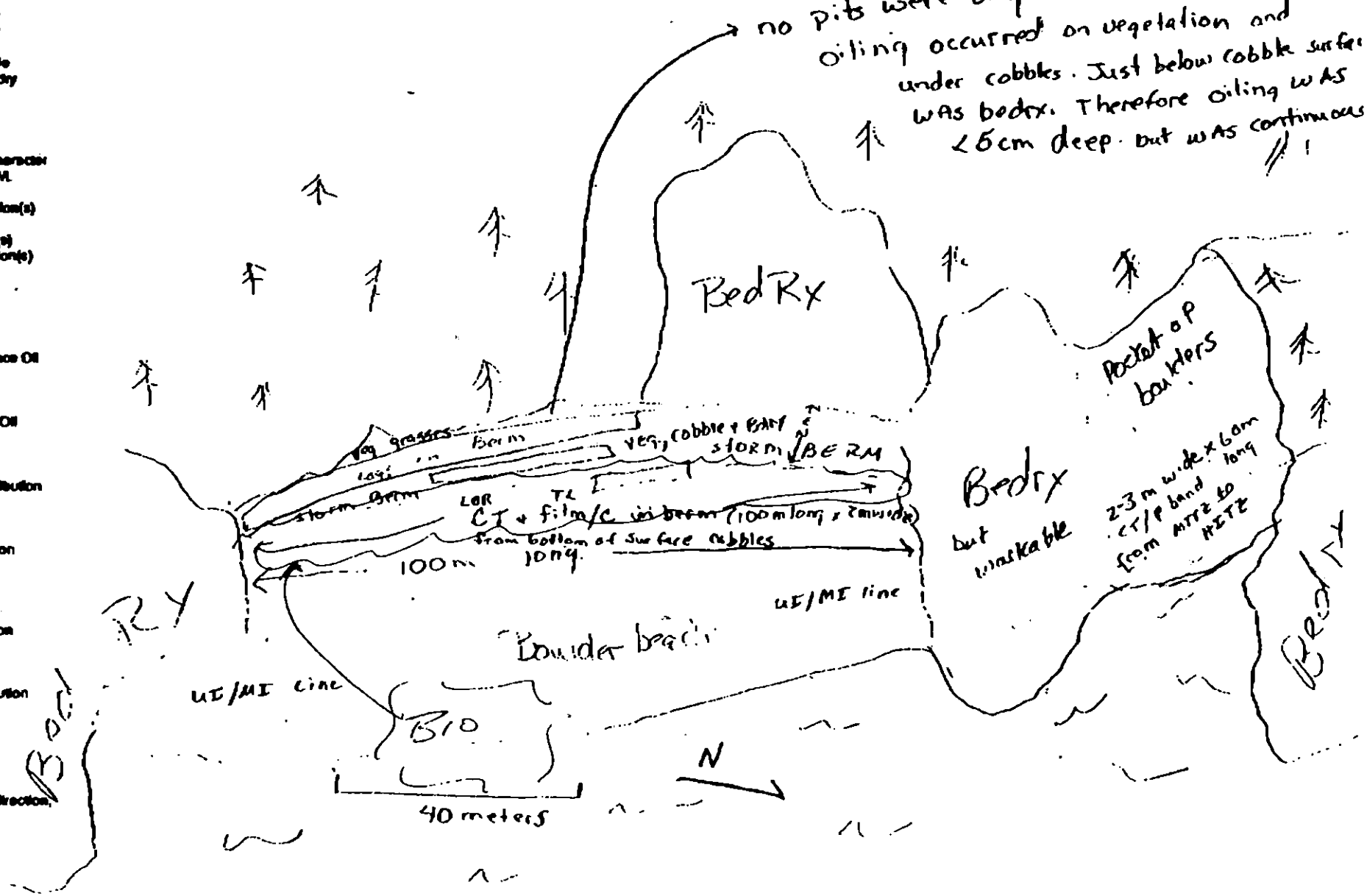
CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 ●→ Photo location, direction, and number




Oil Character Length (m): AP 0 PO 0 CV 2 CT 200 ST 38 MS 0 PT 0 TB 0 FL 100 NO 119

REVISION 8/92/MM

EXXON SCAT P.19

APR-23-1990 15:28 FROM MV BEULAH CHARTIES TO

OG K. Kinnosey

SEGMENT ST/ LN-7

SUBDIVISION A

DATE 4,20 90

**SKETCH MAP**

DIAGRAM B

# COVE #2 - LN-7

**CHECKLIST**

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

**LEGEND**

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

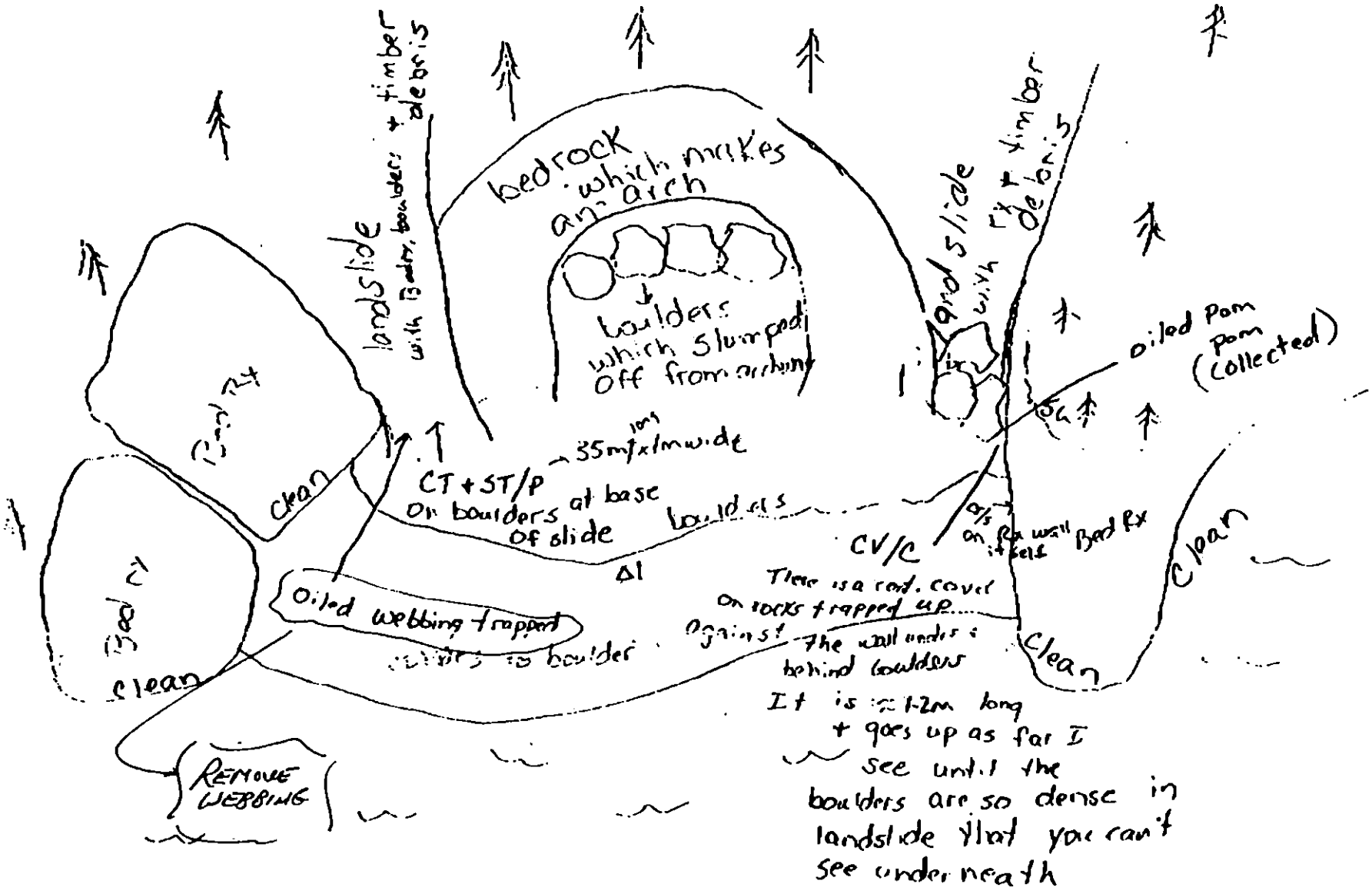
CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 ⇢ Photo location, direction, and number




Oil Character Length (m): AP_____ PO_____ CV_____ CT_____ ST_____ MB_____ PT_____ TB_____ FL_____ NO_____

REVISION 05/01/90

APR-23-1990 15:29 FROM NW BEHLEN CHARTERS TO EXXON SCHT P.20

# SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/88

Segment ST / LN-7 Subdivision A Date (mo / day / yr) 9-20-90

Time (24 hr) 1640 Biologist PENN

(A) Substrate type and % of segments:
(1) Bedrock 85 (2) Boulder 12 (3) Cobble 3 (4) Pebble 0 (5) Sand 0 (6) Silt 0

(B) Overall % cover of biota (% of segment): Dense 15 Moderate 30 Low 50

(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)

Photographs:
Roll No. —
Frames

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ~~1U~~ | ~~1M~~ | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | ~~1U~~ | ~~1M~~ | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | observed NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

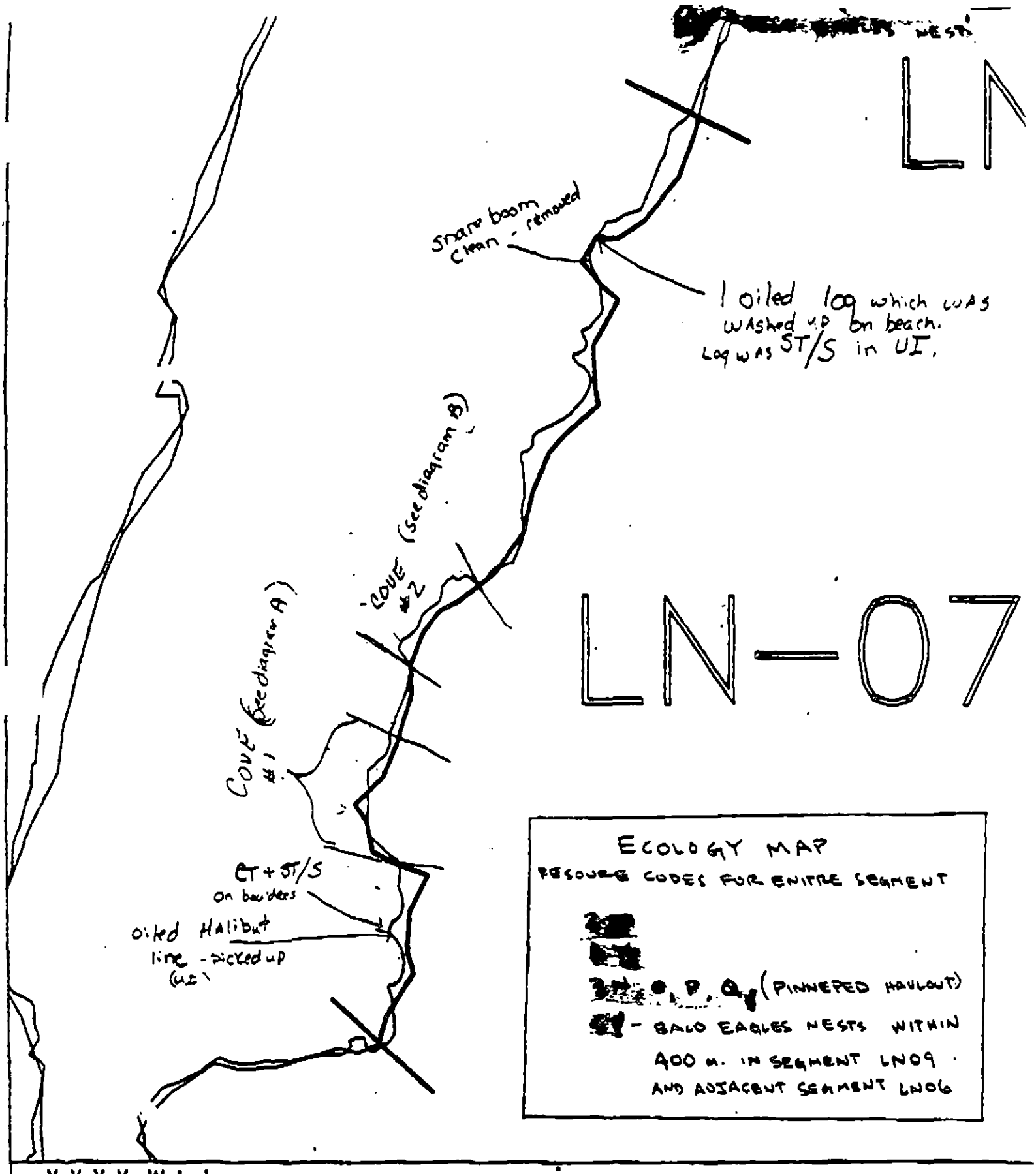
**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | ~~1U~~ | ~~1M~~ | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**Wildlife Observations/ General Comments:**

7 Eagles (2 were immatures) 1 crow 1 otter (sea)
4 Harlequins - 22, 20 5 cormorants
9 fur seals

**Ecological Considerations:**



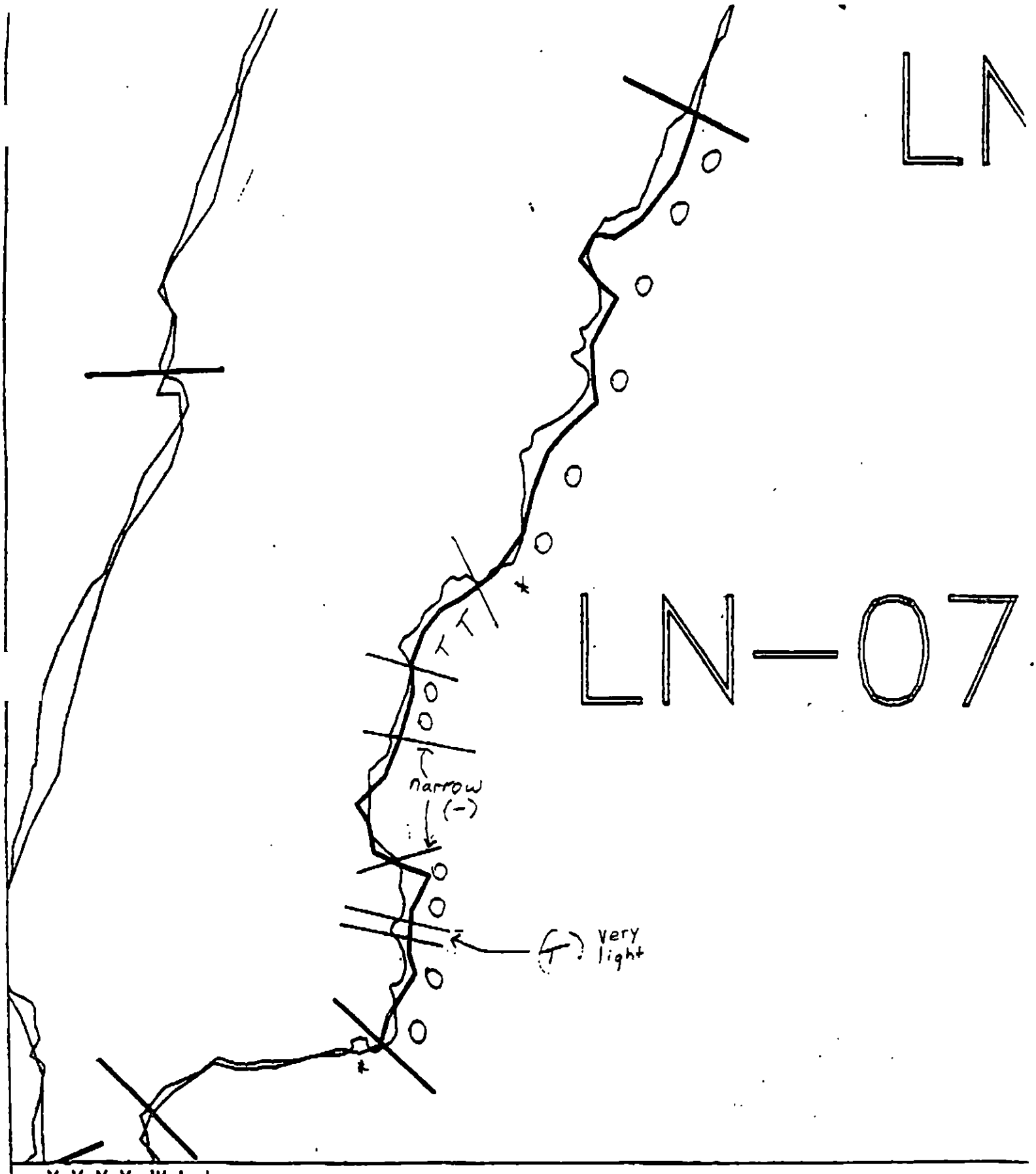

XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
0000 No Oil

LN-7

ADEC Segment Length: 1352m

0 100 200 300
METERS

Map Key: PWS-460
Name: K. RAMSEY
Date: 4/20/90
Date Entered:




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

LN-7

ADEC Segment Length: 1352m

0 100 200 300
METERS

Map Key: PWS-460
Name: K. RAMSEY
Date: 4/20/90
Date Entered:

# SHORELINE EVALUATION

SEGMENT ST/ LN-08 SUBDIVISION A (1 OF 1) DATE 4/20/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**
2M Herring spawning (4/1 to 6/15)
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
Adjacent segment LN-09 has eagle nest (5T)
See attached Ecological Constraint sheet for specific constraints and contacts.

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

SHPO SIGNATURE: [signature] DATE: 5/3/90

**OILING CATEGORIZATION:**

Wide 22 m: Medium 0 m: Narrow 43 m: V.Light 0 m: No Oil 235 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 40+ cm

**RECOMMENDATIONS:**

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

COMMENTS: Recommended treatment includes 1) manual pickup of oiled debris, 2)* rake down storm berm and bioremediate as indicated on sketch map. Bioremediation should be conducted between 7/2 and 7/31 and manual pickup from 7/2 to 8/14 due to pinniped constraints.

TAG COMMENTS: RAKE DOWN STORM BERM USE SORBENTS + SPOTWASH TO REDUCE CONCENTRATION PRIOR TO B/O AS INDICATED ON SKETCH.

TAG APPROVAL DATE: 5/3/90.
ADEC Art Weiner
EXXON Andy Teas
NOAA Gary Peterson
USCG LT Kenneth Venzke

FOSC: [signature] DATE: 5-8-90

# PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A **Salmon stream mouth - fry outmigration (3/1 to 5/15)**
1B **Salmon stream mouth - spawning (7/10 to 8/31)**
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G John Morison 267-2324

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 July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D **Esther Hatchery release (4/15 to 6/1)**
1E **Main Bay Hatchery release (4/20 to 6/10)**
1F **Sawmill Bay Hatchery release (4/15 to 6/1)**
1G **Cannery Creek Hatchery release (4/21 to 6/1)**
1H **Remote release site**
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or 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: 1E ADF&G Larry Peltz 424-3214
1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzomoto 424-7511

1I **Gill net area (6/7 to 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 unoiled 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

✓ **3P, 3P** **Harbor seal and sea lion pupping (5/15 to 7/1)**
✓ **3O, 3Q** **Harbor seal and sea lion molting (8/15 to 9/15)**
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of 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
ADF&G Don Calkins 267-2403

5R **Seabird colony (5/1 to 9/1)**
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S **Shorebird/waterfowl concentration (4/1 to 5/15)**
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Rothy 267-2206

5T **All Bald Eagle nests (3/1 to 6/1)**
**Active Bald Eagle nests (3/1 to 9/1)**
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U **Recreation: Tent sites (6/1 to 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)**
7H **Finfish harvesting**
7I **Deer harvesting (8/15 to 2/28)**
7J **Invertebrate harvesting**
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / ST IN-8 SUBDIVISION: H DATE 4/20/90

**USCG**
NAME M J SHARPE SIGNATURE M. J. SHARPE

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS
2 POM POMS WERE REMOVED, THE OILED DEBRIS IN STORM BERM WAS LEFT AND OILED VEGETATION ALSO WAS LEFT.

**ADEC**
NAME STEPHEN FERGUSON SIGNATURE Stephen Ferguson

☐ NO TREATMENT RECOMMENDED ■ TREATMENT SUGGESTED
COMMENTS (MAIN BEACH)
(1) EV/CT/FM-C IN STORM BERM → RAKE DOWN BERM + Bio
(2) SMALL DOCKET BEACH HOT WATER WASH + Bio
(CT/ST/B) →

**LAND MANAGER**
NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS
Ecological considerations for segment listed as herring spawning area. Recommend oiled storm berm shown on sketch map be moved down the beach and bioremediated. Recommend washing than bioremediation for boulder/cobble pocket cove shown on right side of sketch map.

1 of 2 pages

## SHORELINE OILING SUMMARY

REVISION NO. 08/23/90

OG K. RAMSEY USCG R Sharpe SEGMENT ST/ LN-8
BIO G. Penn LAND REP L. Carlson SUBDIVISION A 1 of 1 sub.
EXXON S. Reid ADEC S. FERGUSON TIME 2:55 to 4:30
TEAM NO.: 4 TIDE LEVEL: 3' to 1.5' DATE 4/20/90
EST. SUBDIVISION LENGTH: 329 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
SURFACE SEDIMENTS: R 7 % B 25 % C 48 % P 20 % G Ø % S Ø % M Ø % V Ø %
SLOPE : Lang 80 % Hang 15 % Vert 5 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
OIL CATEGORY LENGTH: W 35 m M Ø m N 35 m VL Ø m NO 294 m

### SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | RO | RB | RP | RS | BRN/BLK | DBRN/RW | BRN | BL | LBRN/TL | SU | LI | MI | LI |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | | | | | | | | | | |
| COVER | X | | | | | X | | • | | X | X | • | |
| COAT | X | • | | | | • | | X | | X | • | • | |
| STAIN | | • | | | | • | | | | | • | • | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | X | | | | | | | X | | | X | | |
| NO OIL | | | | | | | | | | | | | X |

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

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | X | | |
| Trash | | | |
| Debris | | X | |

DEBRIS COLLECTED ☒ YES ☐ NO
TYPE 2 Tom foams
#BAGS 1

Photographs:
Roll No. —
Frames —

→ a lot of trash is debris line but not oiled Same with logs

### SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm-cm) | BELOW | | OIL / FILM COLOR | | | | | | PIT ZONE | | | | ANA | SHEEN Y/N | SUBSURFACE SEDIMENTS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | | UO | UC | BRN/BLK | BRN | DBRN/RW | BRN | BL | LBRN/TL | SU | LI | MI | LI | | | | |
| 1 | 35 | | | | | X | — • — | | X | | | | | | | | | X | | N | 1 | G, C, P | 30 |
| 2 | 21 | | X | | | | 0 • 20 | | X | | X | | | | | X | | | | N | N | V, C | — |
| 3 | 35 | | | | | X | — • — | | X | | | | | | | | X | | | N | — | P, G, S | — |
| 4 | 15 | X | | | | | 0 • 12 | | X | | | | | X | | | X | | | N | Y | B, C, P, G | 12 |
| 5 | 16 | | X | | | | 0 • 15 | | X | | | | | X | | | X | | | N | Y | B, C, P, G | 14 |
| 6 | 40 | | X | | | | 0 • 40 | X | | | | | | X | | | X | | | N | Y | B, C, P, G | 40 |

This segment consisted of a cobble beach with cobble & pebble berm and a boulder & cobble cove seperated by bedrock outcropping. The beach portion had a continuous cover of bottom coats gueq trapped in the storm berm just under the top cobbles. This more or less graded into a coat & film on the rocks (31m long x1-2m wide band CT/ST/B on boulders & CV/C under rocks) the cove was oiled from mitz to hitz (25m long x 15m wide) when digging pits

TW 4/23/90

(next page)

## SHORELINE OILING SUMMARY (PAGE 1 of 2)

REVISION 03/02/90

SEGMENT ST/ CN-8 SUBDIVISION A lg1

### SUBSURFACE OIL (CONTINUED)

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OF | OR | OL | OF | NO | (CM-CM) | UO | UC | | | | | | SU | UI | MI | LI | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |

COMMENTS The water filled in with residual beads & oil.
Rainbow sheen was seen in runoff.
silver sheen in runoff in MITE.

LI appeared clean

REVIEWED JW DATE 4/23/96

OG K Ramsey

SEGMENT ST/ LN-8

SUBDIVISION A

DATE 4 / 20 90

**CHECKLIST**

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

**LEGEND**

1 △

Pit - No Subsurface Oil

2 ▲

Pit - Subsurface Oil

CT/C — Continuous Distribution

CT/B — Broken Distribution

CT/P — Patchy Distribution

CT/S — Splashed Distribution

Oiled Vegetation

1 ⇢

Photo location, direction, and number

# SKETCH MAP

Oiled debris/s in storm berm

timber debris

2 oiled pom poms

oiled SGR vegetation at sp/ut line

pit 2

pit 3

STORM BERM Δ3 cobbles & pebbles

CV/CT + FM/C in berm

Cobble on veg.

SGR + L 5m x 1-2m wide in Berm just under surface seal

UI/MI

PICK UP OILED DEBRIS RAKE DOWN STORM BERM & BIO

cobble - pebble

Δ1

MI/LI

low angle beach

SPOT WASH + SORBENTS AFTER RAKING

(oiled)

BEDROCK

LN-9

LN-8

50 m (rough scale)

N

CT/ST/B on boulders

x DOL

Oiled [illegible] MITZ (10)

10 MITZ

CV/C (DBR) leaves residue beads + rainbow sheen in water in pits

COVE

▲6

15 m

▲4

▲5

Bedrock

25m

MI/UI line

Silver sheen in rungs

High > cove

Boulder MT

Climbable

High angle to MHW

Oiled

Pom Pom (UI)

PICK UP POM POM

Vertical Bedrock

LN-8

LN-7

Oil Character Length (m): AP 0 PO 0 CV 50 CT 56 ST 56 MS 0 PT 0 TB 0 FL 31 NO 273

REVISION: 8/1998

# SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/02/90

Segment ST / LN-8 Subdivision A Date (mo / day / yr) 4-19-90

Time (24 hr) 1500 Biologist PENA

(A) Substrate type and % of segments:
(1) Bedrock 7 (2) Boulder 25 (3) Cobble 48 (4) Pebble 20 (5) Sand Ø (6) Silt Ø

(B) Overall % cover of biota (% of segment): Dense 35 Moderate 30 Low 40

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

Photographs:
Roll No. ST-4-2
Frames 11

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | (X) | 1M | X | 1U | 1M | X | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | (X) | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | observed |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

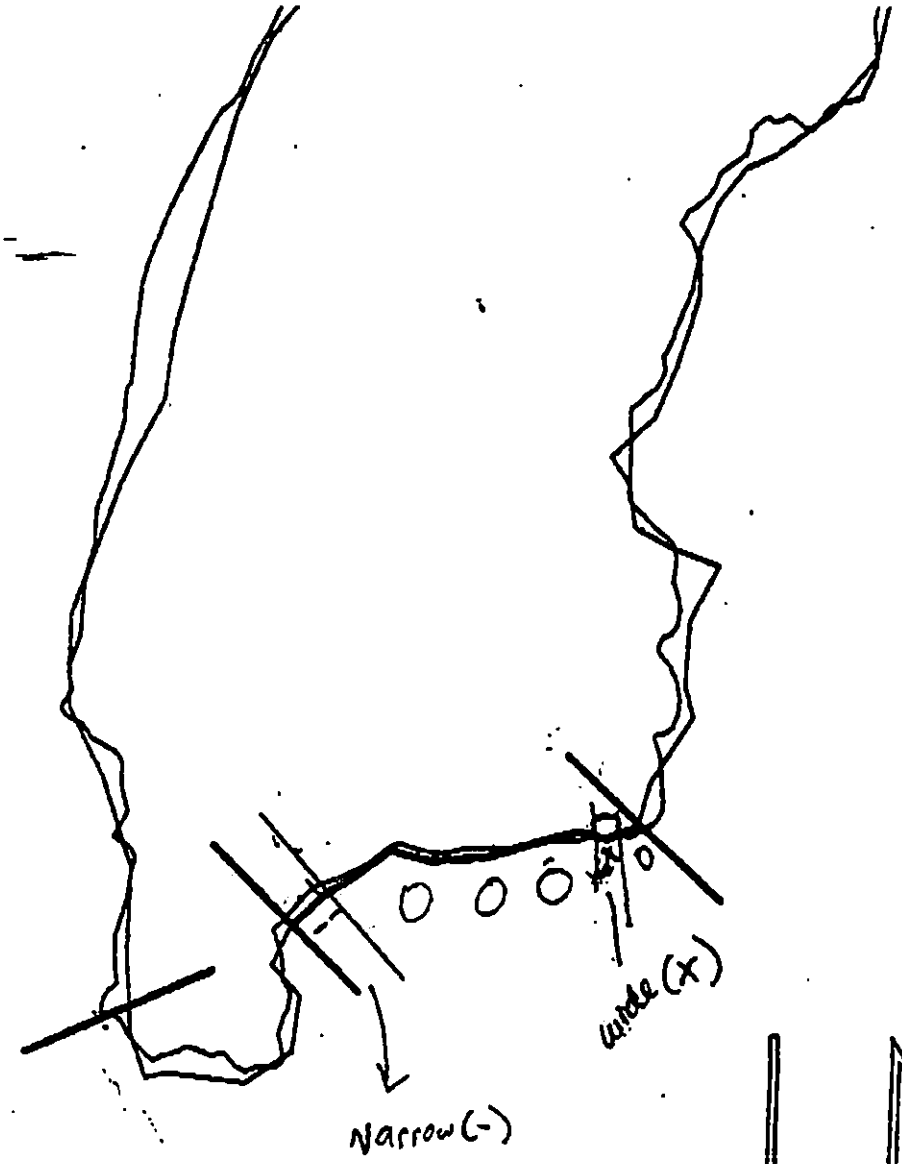
**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | X | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | X | 2 | 2 | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**Wildlife Observations/ General Comments:**

1 seal 1 gull
2 eagles

**Ecological Considerations:**




LN

LN-(

LN-09

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

LN-8

ADEC Segment Length: 299m

0 100 200 300
METERS

Map Key: PWS-461
Name: K. RAMSEY
Date: 4/20/90
Date Entered:

# ADDENDUM: SUBDIVISION CONSTRAINTS

## SEGMENT LN-8 SUBDIVISION A ( 1 of 1 )

| WORK WINDOW | |
|---|---|
| Manual Pickup | OPEN |
| Bioremediation<br>Spot Washing<br>Manual Raking<br>Other Approved Treatment | OPEN |

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

| | | |
|---|---|---|
| **2M** | **Herring Spawning** | NO CONSTRAINT. Authorized by Evelyn Biggs/ADF&G on 5/17/90 to Exxon/Tom Kelley. |
| **3N,O,P,Q** | **Harbor Seal & Sea Lion Pupping and Molting** | NO TIME CONSTRAINT. Authorized per memorandum dated 5/14/90 from Kathryn Frost/ADF&G to Mark Kuwada/ADF&G. |
| **5T** | **Bald Eagle Nest** | NO CONSTRAINT. USFWS bald eagle impact assessment was completed on 5/12/90 by Mike Lockhart. No active nests were found in the survey area and no restrictions apply. |

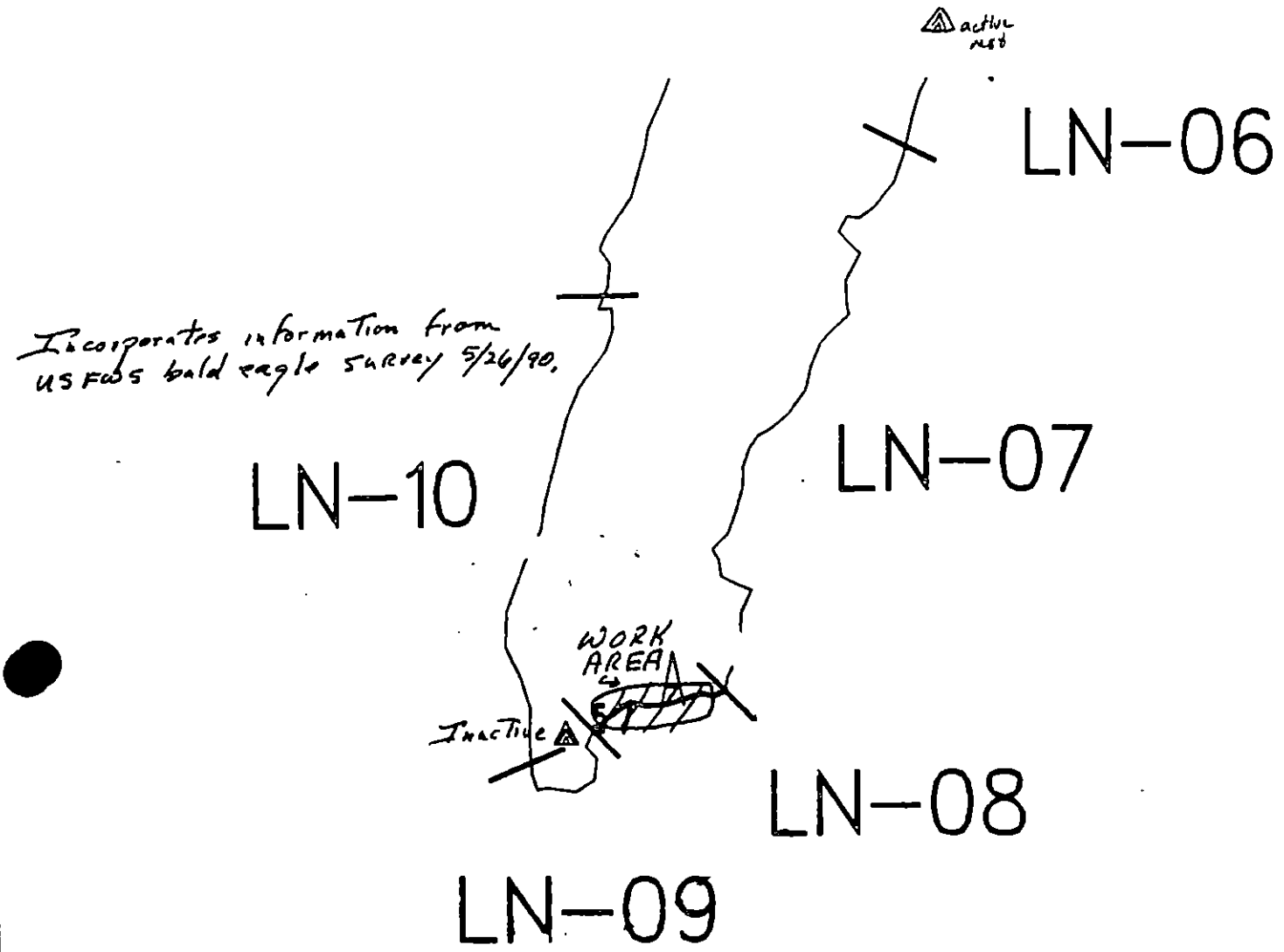
OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 6/04/90.
ADEC Ray Meiers
EXXON Andy Teal
NOAA Joseph Talbott
USCG G.A. Reiter

FOSC [signature] Date 6/4/90

Prepared by [signature] Date 6/3/90




EXXON

Exxon Company, USA
Map Key: PWS-LN-8
May 11, 1990

# ECOLOGY MAP
## SEGMENT LN-8 5/21/90
SUBDIVISION A (1 of 1)

METERS
0 351 781

★ Seabird Colony
△ Eagle Nest

1 inch = 1151 feet

# SHORELINE EVALUATION

SEGMENT ST/ LN-10 SUBDIVISION A (1 OF 1) DATE 4/19/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**
2M Herring spawning (4/1 to 6/15)
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

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

SHPO SIGNATURE: Charles E. Holmes DATE: 5/2/90

**OILING CATEGORIZATION:**

Wide 18 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 1003 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 10+cm

**RECOMMENDATIONS:**

| | |
|---|---|
| X No Treatment Recommended | ____Snare/Absorbent Booms |
| ____Treatment Recommended | ____Oil Snares (pom poms) |
| ____Manual Pickup | ____Absorbents (pads,rolls,etc) |
| ____Bioremediation | ____Spot Washing:____Wands |
| ____Tarmat Removal | ____Beach Cleaner |
| | ____Other (see comments) |

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 5/2/90
ADEC Art Weiner
EXXON Andy Tagg
NOAA Gary Petrone
USCG Kenneth Keane

FOSC: _____ DATE: 5-9-90

# PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G John Morison 267-2324

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 July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D Esther Hatchery release (4/15 to 6/1)
1E Main Bay Hatchery release (4/20 to 6/10)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or 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: 1E ADF&G Larry Peltz 424-3214
1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzomoto 424-7511

1I Gill net area (6/7 to 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

3M 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 unoiled 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

3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of 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
ADF&G Don Calkins 267-2403

5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Rothy 267-2206

5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U Recreation: Tent sites (6/1 to 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 Subsistance area: Salmon harvesting (5/1 to 9/30)
7HH Finfish harvesting
7II Deer harvesting (8/15 to 2/28)
7JJ Invertebrate harvesting
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LN-10 SUBDIVISION: A DATE 4/19/90

**USCG**
NAME M.J. SHARPE SIGNATURE [signature]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

**ADEC**
NAME STEPHEN FERGUSON SIGNATURE [signature]

■ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

(1) DUE TO LARGE SIZE OF BOULDERS CU/B ON SOUTH END OF POCKET COVE - WASH WOULD BE INEFFECTIVE, ALSO LARGE SIZE OF BOULDERS WOULD CAUSE BIO TO BE INEFFECTIVE

(2) HIGH ENERGY AREA → RECOMMEND NATURAL PROCESS TO CONTINUE

**LAND MANAGER**
NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

Ecological considerations for segment listed as herring spawning area. Pocket of oil was minimal and in an area exposed to the waves at southern end of the Island. Not a high recreational use area due to location and make-up of beach (boulders). Treatment not recommended.

REVISION NO. 03/21/90

## SHORELINE OILING SUMMARY

pg 1 of 2 REVISION NO. 04/91

OG K. RAMSEY USCG R. SHARPE SEGMENT ST/ LN-10
BIO G. DENN LAND REP L. Carlson SUBDIVISION A ( 1 OF 1 )
EXXON S. Reid ADEC S. Ferguson TIME 1:20 to 2:55
TEAM NO. 4 TIDE LEVEL 5' to 7' DATE 4 / 19 / 90
EST. SUBDIVISION LENGTH: 1059 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
SURFACE SEDIMENTS: R 5 % B 5 % C 10 % P 20 % G 30 % S 30 % M 0 % V 0 %
SLOPE : Lang 10 % Hang 90 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W 1 m M 0 m N 0 m VL 0 m NO 1058 m

### SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | X | • | | | | | X | | | X | • | |
| COAT | | | | | | | | | | | | | |
| STAIN | | | | | | | | | | | | | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | X | | | X | | | | | | X | X | |
| NO OIL | | | | | | | | | | X | | | X |

PAVEMENT H F S 0 sq. m by 0 cm
PATTIES / TARBALLS 0 BAGS
NEAR SHORE SHEEN? (NO) BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | | | |
| Debris | | | |

DID YOU COLLECT DEBRIS? YES ☐ NO ☒
TYPE 0
#BAGS 0

Photographs:
Roll No. ——
Frames ——

### SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SHEEN (Y/N) | ▼▼ | SURFACE · SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 45 | | | | | X | — · — | | X | | | | | | | X | | | N | N | — | G, S |
| 2 | 17 | | | | | X | — · — | | X | | | | | | | X | | | N | N | 15 | G, S |
| 3 | 28 | | | | | X | — — | | X | | | | | | | | X | | N | N | 25 | G, P, C |
| 4 | 15 | | | | | X | - · - | | X | | | | | | | X | | | N | N | 7 | S, G, C |
| 5 | 20 | | | | | X | — · — | | X | | | | | | | | | X | N | N | 18 | S, G |
| 6 | 40 | | | | | X | — · — | | X | | | | | | | X | | | N | N | — | S, G, P |

COMMENTS There wasn't any observed oil until the pocket at the South end of the section at the LN10/LN-9 border. Here, this oil was a broken cover with a film on rocks which was 7 m wide x 1 M long. As you went to the mitz the cover was no longer present, but the film continued 2 more meters. In the mitz oil mixes with water when digging pits + looks like motor oil.

REVIEWED JW DATE 4/23/90

(over)

(16)

## SHORELINE OILING SUMMARY (PAGE 2)

SEGMENT ST/ KN-10 SUBDIVISION A (1 OF 2)

pg 2 of 2

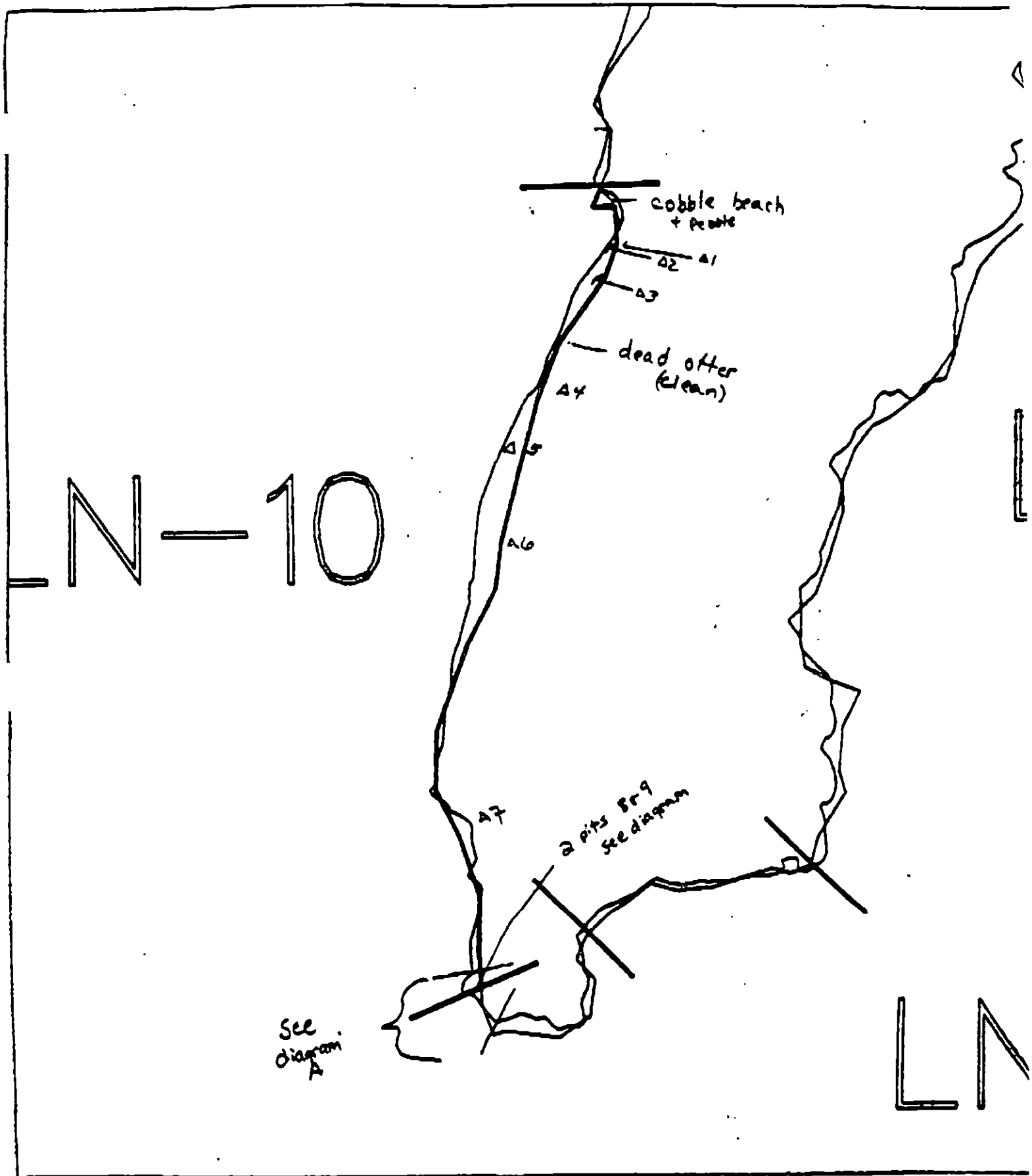
### SUBSURFACE OIL (CONTINUED)

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm-cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SHEEN (YN0) | ! | SURFACE - SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | | UO | UC | | | | | | SU | SI | SS | SL | | | | |
| 7 | 30 | | | | | X | — · — | | X | | | | | | | X | | | | | | S, G, P |
| 8 | 8 | | X | | | | 0·8 | X | | | | | X | | | | X | | N | Y | 4 | B, G, C, R |
| 9 | 10 | | X | | | | 0·10 | X | | | | | X | | | | X | | N | Y | 5 | B, G, C, R |
| | | | | | | | · | | | | | | | | | | | | | | | |
| | | | | | | | · | | | | | | | | | | | | | | | |
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| | | | | | | | · | | | | | | | | | | | | | | | |
| | | | | | | | · | | | | | | | | | | | | | | | |

COMMENTS

By definition the oiling would have be in the wide catagory, but reality is only 1 meter of coverage long + not enough to worry about.

REVIEWED _____ DATE _____




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

**LN-10**

ADEC Segment Length: 1021m

0 100 200 300
METERS

Map Key: PWS-452
Name: K. Ramsey
Date: 4/19/90
Date Entered:

OG K. WISEY

SEGMENT ST/ LV-10

SUBDIVISION A

DATE 4/19 90

**CHECKLIST**

- ✓ N Arrow
- Approx. Scale
- Segment Boundary
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. HWL/LWL
- SSL
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

**LEGEND**

1 ▲
Pn - No Subsurface Oil

2 ▲
Pt - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

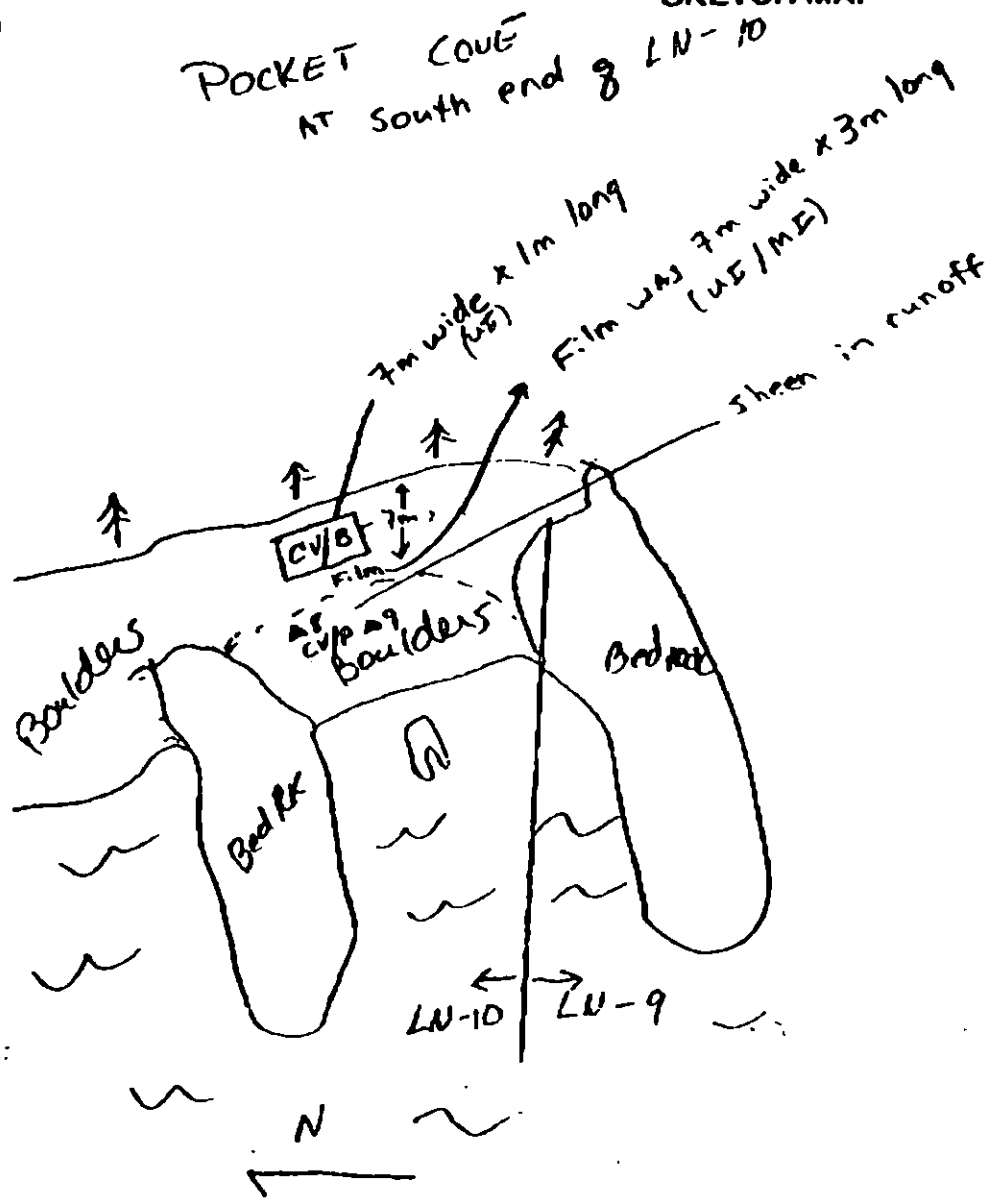
CT/S
Splashed Distribution

Oiled Vegetation

1 ⟶
Photo location, direction, and number

**SKETCH MAP**

POCKET COVE
AT South end of LV-10




Oil Character Length (m): AP Ø PO Ø CV 1 CT Ø ST Ø MB Ø PT Ø TB Ø FL 3 NO 1058

# SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/91

Segment ST / LN-10 Subdivision A Date (mo / day / yr) 04/20/90

Time ( 24 hr ) 1320 Biologist PENN

(A) Substrate type and % of segments:
(1) Bedrock 5 (2) Boulder 5 (3) Cobble 10 (4) Pebble 50 (5) Sand 30 (6) Silt Ø

(B) Overall % cover of biota ( % of segment ): Dense 5 Moderate 70 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)

Photographs:
Roll No. ST-4-2
Frames 6 thru 10

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | X | X | 2 |
| 3 | 3 | 3 | 3 | 3 | X | 3 | 3 | 3 | 2 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**FUCUS**

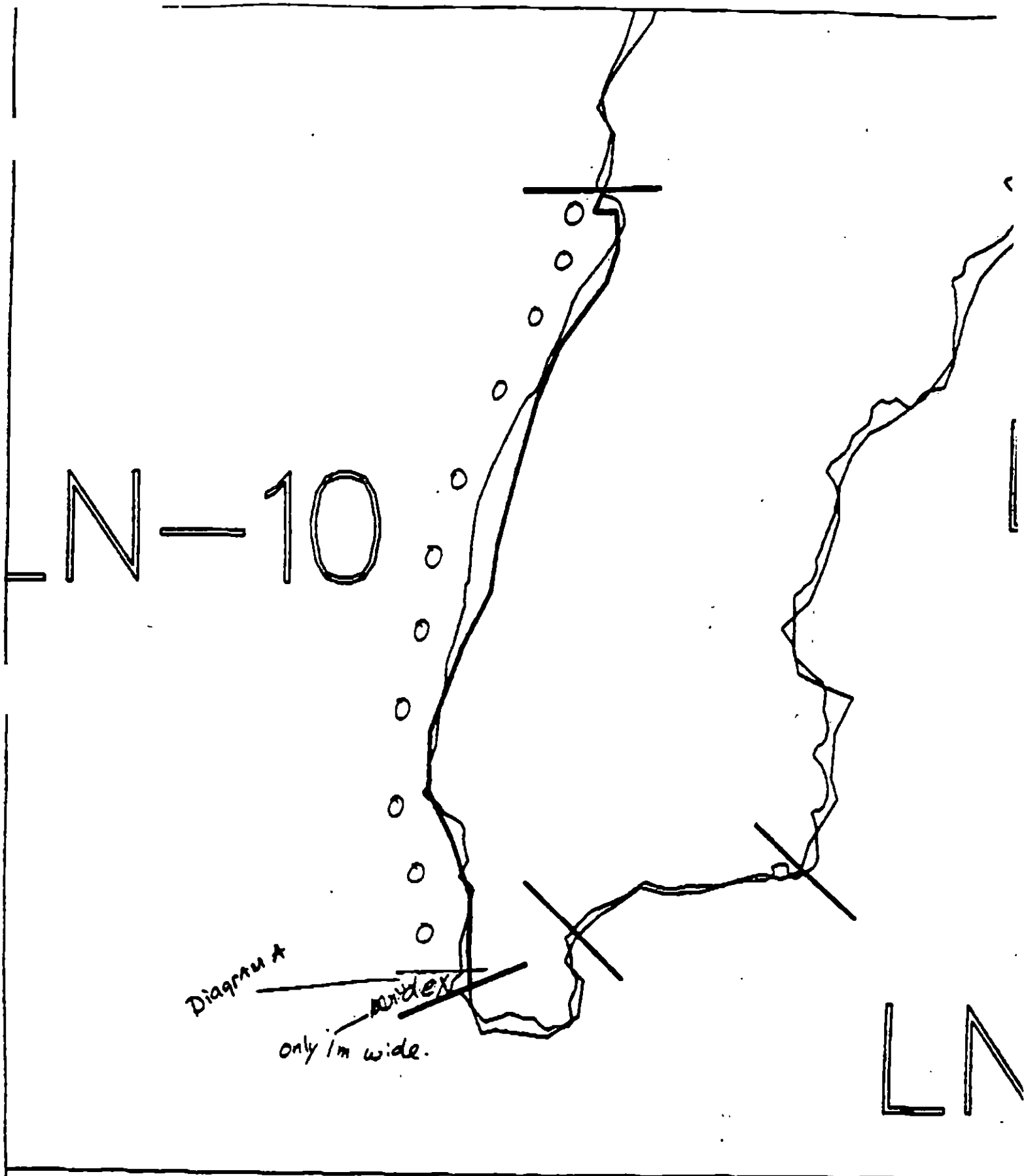
| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

NOT PRESENT

**Wildlife Observations/ General Comments:**

6 River otter
14 Golden eye
2 eagles
2 RAVEN
1 Cormorant
2 Sea lion
3 Harlequins 1♂, 2♀

**Ecological Considerations:**




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

LN-10

ADEC Segment Length: 1021m

0 100 200 300
METERS

N

Map Key: PWS-452
Name: K. RAMSEY
Date: 4/19/90
Date Entered:

# SHORELINE EVALUATION

SEGMENT ST/ LN-12 SUBDIVISION A (1 OF 1) DATE 4/20/90

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

SHPO SIGNATURE: J. David McMahan DATE: 5/1/90

**OILING CATEGORIZATION:**

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 32 m: No Oil 674 m
Subsurface Oil Observed: Yes____ No X Maximum Depth_____

**RECOMMENDATIONS:**

| | |
|---|---|
| X No Treatment Recommended | _____Snare/Absorbent Booms |
| _____Treatment Recommended | _____Oil Snares (pom poms) |
| _____Manual Pickup | _____Absorbents (pads,rolls,etc) |
| _____Bioremediation | _____Spot Washing:_____Wands |
| _____Tarmat Removal | _____Beach Cleaner |
| | _____Other (see comments) |

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 4/30/90.
ADEC ART WEINER Art Weiner
EXXON ANDY TEAL
NOAA Gerry Petrae Gerry Petrae
USCG KENNETH KEHNE

FOSC: _____ DATE: 5-9-90

# KODIAK ECOLOGICAL CONSTRAINTS

| | | |
|---|---|---|
| 1A | **Salmon stream mouth - fry outmigration (4/15 to 7/31)** | |
| 1B | **Salmon stream mouth - spawning (7/15 to 9/10; PEAK 8/15)** | |
| | 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 | **Kotol Bay Hatchery release** | |
| | Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July. | |
| 1H | **Remote release site** | |
| 1I | **Gill net area** | |
| 1J | **Purse seine area** | |
| | Mainland, West side Kodiak, Shuyak & Moser/Olga Bay - 6/9 to 10/1. | |
| | East side Kodiak, East side Afognak - 7/4 to 10/1. | |
| 1K | **Purse seine hook-off** | |
| 1L | **Set net sites** | |
| | USFWS setnet uplands permit 5/15 to 9/15. | |
| | For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints. | |
| 3M | **Herring spawning (4/15 to 6/30)** | |
| | 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 (5/10 to 6/30)** | |
| | Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. | |
| 3O, 3Q | **Harbor seal and sea lion molting (6/15 to 9/15)** | |
| | Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. | |
| 5R | **Seabird colony (5/1 to 8/31)** | |
| | Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment. | |
| 5S | **Shorebird/waterfowl concentration (4/1 to 5/15)** | |
| | Restrict all activity to essential minimum, especially air traffic. | |
| 5T | **All Bald Eagle nests (3/1 to 6/1)** | |
| | **Active Bald Eagle nests (3/1 to 9/1)** | |
| | Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates. | |
| 6U | **Recreation:** | **Tent sites (6/1 to 9/15)** |
| 6V | | **Anchorages (6/1 to 9/15)** |
| 6W | | **Forest Service cabins (6/1 to 9/15)** |
| 6X | | **Lodge (6/1 to 9/15)** |
| 6Y | | **Special use destination** |
| 7Z | **Subsistence area:** | **Salmon harvesting (6/1 to 9/30)** |
| 7HH | | **Finfish harvesting** |
| 7II | | **Deer harvesting (8/1 to 1/7)** |
| 7JJ | | **Invertebrate harvesting** |
| 7KK | | **Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)** |
| | For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints. | |

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LN-012 SUBDIVISION: A DATE 4/20/90

CG
NAME SCOTT CAINSFORD SIGNATURE Scott Rainsford NSTI

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

ADEC
NAME Lori J. Stratton SIGNATURE Lori J. Stratton

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

Segment consisted of predominantly bedrock high angle and granitic pebble + boulder pocket beaches. (See OG maps + sheet).
Oil ~~coat~~ was very light coat splashes on cobbles and boulders (SUTz + UITz) and not enough to warrant treatment.
(Note pre-1989 tarballs + oil on boulders in segment).

LAND MANAGER
NAME U.S. Forest Service SIGNATURE Leo Keeler
Leo Keeler

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

small amount of oil found intermixed with a very old spill.
No sensitive resources present.
Doesn't warrant attention at this stage.
Continue Natural Cleaning Recommended.

REVISION NO. 00/1/89

# SHORELINE OILING SUMMARY

REVISION NO. 04/13/98

OG G. MACDONALD USCG S. RAINSFORD SEGMENT ST/ LN-12
910 M.A. SCOTT LAND REP L. KEGLER NPS SUBDIVISION A (1 OF 1)
EXXON J. BUTLER ADEC L. STRATTON TIME 13:15 to 14:20
TEAM NO. 3 TIDE LEVEL +5 to +3.5 FT DATE 4 / 20 / 90
EST. SUBDIVISION LENGTH: 710 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
SURFACE SEDIMENTS: R 70 % B 10 % C 5 % P 10 % G 5 % S 0 % M 0 % V 0 %
SLOPE : Lang 30 % Hang 50 % Vert 20 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 20 m NO 690 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AS | AS | AP | AB | | | | | | SW | SI | MI | SI |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | | | | | | | | | | | | |
| COAT | | | | X | | X | | | | X | X | | |
| STAIN | | | | | | | | | | | | | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | | | | | | | | | | |
| NO OIL | | | | | | | | | | | | X | X |

PAVEMENT H F S 0 sq. m by 0 cm

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | | | |
| Debris | | | |

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒

TYPE 0

#BAGS 0

Photographs:

Roll No. ST-3-3

Frames 3.

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL cm to cm | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SHEEN (Y/N) | ▼ ▼ | SURFACE - SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OM | OL | OP | MO | | UO | UG | | | | | | SW | SI | MI | SI | | | | |
| 1 | 35 | | | | | X | - - - | | | | | | | | X | | | | | | - | F G |
| 2 | 10 | | | | | X | - - - | | | | | | | | | X | | | | | - | G R |
| 3 | 30 | | | | | X | - - - | | | | | | | | | | X | | | | - | G P |
| | | | | | | | . | | | | | | | | | | | | | | | |
| | | | | | | | . | | | | | | | | | | | | | | | |
| | | | | | | | . | | | | | | | | | | | | | | | |

COMMENTS Steep rocky pillow basalt & breccia shore with BCP & PG low L beaches. Surface oil on trace CT/S @ HTZ-2UTZ and one area of pre-1989 spill dried tar. No subsurface oil.

20

REVIEWED TW DATE 4/22/98

OG G. [redacted]DONALD

SEGMENT ST/ LN-12

SUBDIVISION A

DATE 4/20/90

**CHECKLIST**

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

**SKETCH MAP**

N

step rocky bluff

LWL

HWL

13:15 HRS

cabin

A

B

low L, PG veneer over bedrock

[beach raised ≈ 1 m]

CT/S, 1½ m x 10 m @ HTZ, 1%

BC

P surge gully.

low L, BC P veneer over bedrock

BC pocket over bedrock

med L, RB headland.

14:30 HRS

2m x 15m v. old non-'89 oil; as hard tar w/ entrained Granules & pebbles. <10% cover; some moss growing on this "ancient" tar.

+ trace CT/S as spots @ HTZ 1 m x (2x5m) x ≤ 1%

**LEGEND**

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 ⇨ Photo location, direction, and number

⇨⇨ trace CT/S oil

pillow lava & breccia

3m cliff

PG veneer

WL

A

B

PROFILE

0 110 220 330 m

0 100 200 m

Oil Character Length (m): AP ___ PO ___ CV ___ CT 20 ST ___ MS ___ PT ___ TB ___ FL ___ NO 630

REVISION 03/2000

# SHORELINE ECOLOGICAL SUMMARY

Segment ST / L17-[illegible] Subdivision A Date (mo / day / yr) 7/20/98

Time (24 hr) 1315 Biologist MASCOTT

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

(B) Overall % cover of biota ( % of segment ): Dense 50 Moderate 25 Low 25

(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)

Photographs:
Roll No. 97-3-3
Frames 3

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1M | 1M | 1L | 1U | 1M | 1L | 1M | 1M | 1L |
| 2 | 2 | 2 | X | X | 2 | 2 | 3 | 2 | 3 | 3 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | | | 6 |

NOT PRESENT

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1M | 1M | 1L |
| 2 | 2 | 2 | 2 | X | 2 | 2 | 2 | 2 | X | 3 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | | | 6 |

NOT PRESENT

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1M | 1M | 1L | 1M | 1M | 1L |
| 2 | 2 | 2 | 2 | X | 2 | X | 2 | 2 | 3 | 3 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | | | 6 |

NOT PRESENT

**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1M | 1M | 1L | 1M | 1M | 1L |
| 2 | X | 2 | 2 | 2 | 2 | X | 2 | 2 | X | X | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | | | 6 |

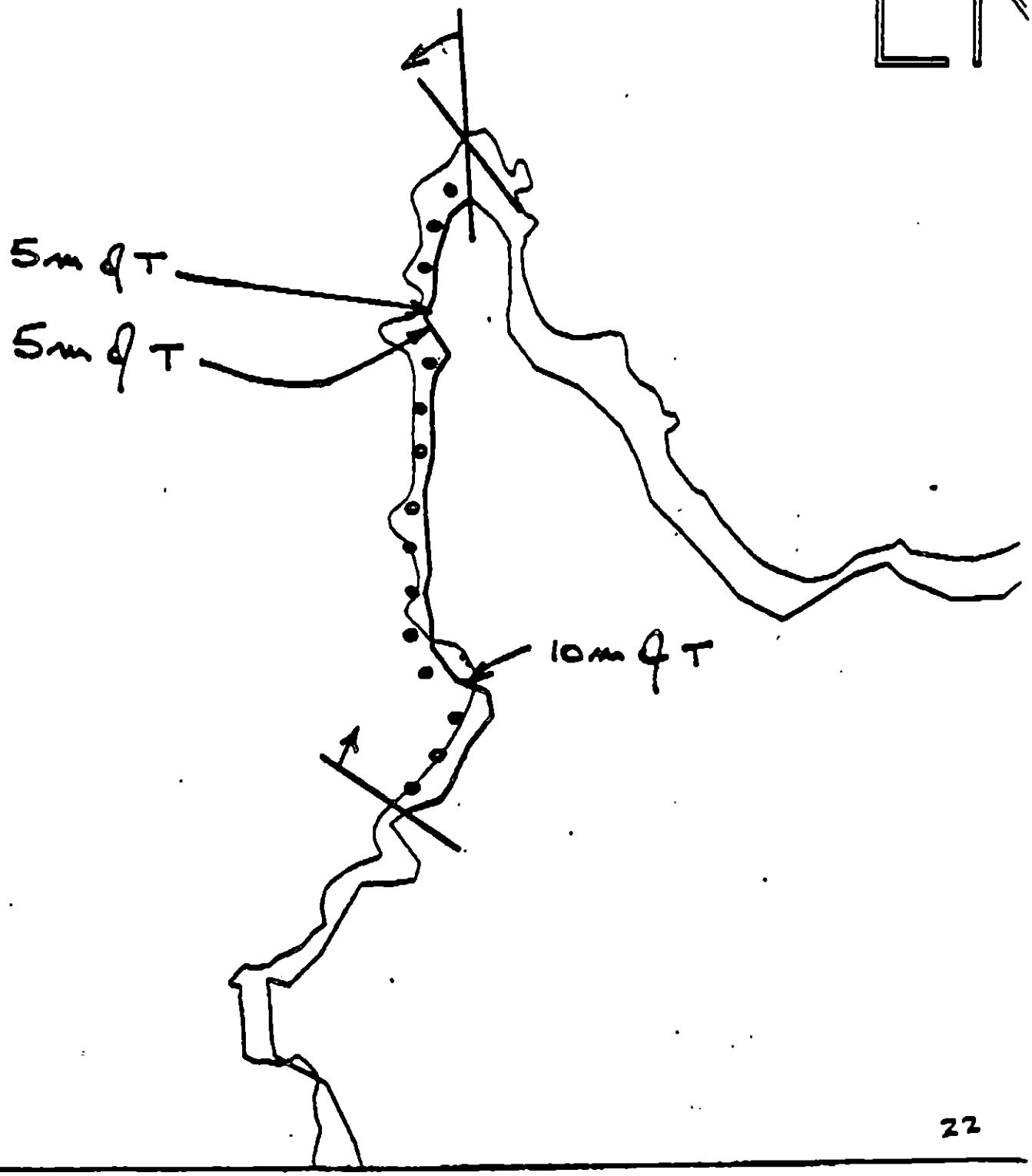
NOT PRESENT

**Wildlife Observations/ General Comments:**
15 eagles (no observations of STE)
1 cormorant
1 sea otter
2 dead otters (no stranding) in STE

**Ecological Considerations:**
1 eagle nest as shown on "eco-map" - pair of eagles observed nearby
MTE - extensive, dense patches of Mytilus beds on rocks + boulders
MA LTE - dense, diverse biota (particularly algae) well established no observed disturb
Fucus - dense in MTE; reproductive throughout
barnacle - spat throughout segment; new settlement of Mytilus + littorines common in crevices/pennes

36

LN




22

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

# LN-12A

ADEC Segment Length: 706m

0 100 200 300
METERS

Map Key: PWS-454
Name: G. MACDONALD
Date: 4/20/90
Date Entered:

# SHORELINE EVALUATION

SEGMENT ST/ LS-48 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Seabird colony (5R) - 5/1 to 9/1; Harbor seal and sea lion pupping (3N, P) - 5/15 to 7/1 and molting (30, Q) - 8/15 to 9/15. Restrict boat and air traffic to essential minimum. Contact ADF&G and USFWS prior to treatment. Complete treatment prior to 5/15 or between 7/1 and 8/15 unless otherwise approved by ADF&G and/or USFWS.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Same as above.

SHPO SIGNATURE: [signature] DATE: April 14, 1990

**OILING CATEGORIZATION:**

Wide 0 m: Medium 244 m: Narrow 0 m: V.Light 0 m: No Oil 280 m
Subsurface Oil Observed: Yes ____ No X Maximum Depth ____

**RECOMMENDATIONS:**

| | |
|---|---|
| ____No Treatment Recommended | ____Snare/Absorbent Booms |
| X Treatment Recommended | ____Oil Snares (pom poms) |
| X Manual Pickup | ____Absorbents (pads,rolls,etc) |
| X Bioremediation | ____Spot Washing: ____Wands |
| ____Tarmat: ____Breakup | ____ Beach Cleaner |
| ____Removal | ____Other (see comments) |

COMMENTS: Treatment activities are recommended as follows: 1) Manual pickup of oiled debris; 2) Bioremediation of areas shown on attached sketch map. Conduct activities before 5/15 and/or between 7/1 and 8/15 or at the direction of the cognizant agencies as described above.

TAG COMMENTS:

TAG APPROVAL DATE: 4/14/90

ADEC JOHN BAUER [signature]
EXXON ANDY TGA [signature] FOSC: [signature] DATE: 4-20-90
NOAA Burl Wright [signature]
USCG G.A. Reiter G.A. Reiter

AS TO #31

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ LS-48 SUBDIVISION: — DATE 4/1/90

**USCG**
NAME Robert Jensen SIGNATURE Robert D Jensen

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Pits dug in storm berm area to a depth of 1 to 1.5 ft deep (with oil). Work crews could hand carry out debris (with small amounts of oil contamination). Area near a seal pupping haul out.

**ADEC**
NAME Roxann T. Hudnall SIGNATURE Roxann T. Hudnall

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Tar and stain in upper intertidal; trapped in crevices of bedrock. Sheening in tidepools
1 Asphalt patch to breakup (see map)

**LAND MANAGER**
NAME U.S. Forest Service SIGNATURE Leo Rieke

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED - Low priority continue natural cleaning
COMMENTS

Oil found in storm berm
Minor amount of oil in cracks of Rocks near haul out
Some heavy stain on Vertical surfaces in scattered locations
Question toxicity of any oil found - well weather

REVISION NO. 03/21/91

DRAFT

REVISION NO. 03/28/90

# SHORELINE OILING SUMMARY

OG Tom Tasic Samples USCG Bob Jensen SEGMENT ST/ LS-48
BIO John Dixon LAND REP Lee Kesler SUBDIVISION No Subdivision (Left)
EXXON Jim Ellison ADEC Rowena Hudnall TIME 08 :56 to 10 :27
TEAM NO.: 9 TIDE LEVEL: +2' to +3' DATE April 1 / 90
EST. SUBDIVISION LENGTH: 693 m ☒ Sun ☑ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: W to E
SURFACE SEDIMENTS: R 75 % B 20 % C 10 % P 5 % G — % S — % M — % V — %
SLOPE : Lang 20 % Hang 80 % Vert ____ % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
OIL CATEGORY LENGTH: W — m M 230 m N — m VL — m NO 463 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | RC | RB | P | RS | | | | | | SU | UI | MI | LI |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | | X | X | | X | | | | | X | X | |
| COAT | | | | | | | | | | | | | |
| STAIN | | | | | | | | | | | | | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | | | | | | | | | | |
| NO OIL | | | | | | | | | | / | | | X |

PAVEMENT: H F S Mo sq. m by ____ cm
PATTIES / TARBALLS No BAGS
NEAR SHORE SHEEN? (NO) BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | X | | |
| Vegetation | X | | |
| Trash | | | |
| Debris | | | |

DEBRIS COLLECTED ☐ YES ☐ NO
TYPE ____
#BAGS ____

Photographs:
Roll No. ST-2-2
Frames 16-18

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (CM-CM) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OP | NO | | UO | UC | | | | | | SU | UI | MI | LI | | |
| *1 | 20 | | X | | | | 0 - 2 | | ✓ | | ✓ | | | | | X | | | No | pb/cb/cn bedrock |
| *2 | 20 | | X | | | | 0 - 3 | | ✓ | | ✓ | | | | | | X | | ✓ | pb/cb on bedrock |
| 3 | 15 | | | | | ✓ | - | | ✓ | | | | | | | | X | | ✓ | pb/cb on bedrock |
| 4 | 10 | | | | | ✓ | - | | ✓ | | | | | | | | | X | ✓ | pb/sd/cb on bedrock |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |

COMMENTS

* Oiled intervals of 0-2 in pit 1 & 0-3 in pit 2 do not constitute subsurface oil.



REVIEWED MH DATE 4-6-90

LS-48 p. 4 of 7

## Little Smith Island, LS-48, April 1, 1990

Segment LS-48 makes up the southern tip of Little Smith Island located due east of Eleanor Island. The coast is exposed to a long fetch to the southwest, and its exposure makes it accessible to waves travelling from the east and southeast.

The shoreline consists mainly of steep fractured bedrock headlands alternating with very small pocket beaches of boulders and cobbles on bedrock intertidal ramps. At the western end of the segment, the headlands trend northeast and the foliation dips 80-90 deg. to the west giving the headlands a very jagged outline. To the east, the section grades into talus and cobble beaches backed by bedrock cliffs.

With the exception of the western and eastern extremities, the segment shows oiling in the form of a 10 to 15 m wide band in the upper intertidal zone. Oil covers some bedrock surfaces, and has accumulated at the base of and around coarse sediments (boulder/cobbles) and in fracture zones. In general coverage does not exceed 10 to 20% and penetration is limited to a few cm of surface sediments.

OG Jean Marie Sempls

SEGMENT ST/ LS-48

SUBDIVISION NONE

DATE April 15/90

# SKETCH MAP

**CHECKLIST**

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

**LEGEND**

1 ▲ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

1 ●► Photo location, direction, and number

LEGEND

Bedrock headlands, cliffs, steep fractured bedrock bluffs, talus of large angular boulders

Pocket beaches cb/Bd/pb.

Profiles

1

2

3

4

5

Profile 1

Profile 2

HWL

LWL

width

length

character

Distribution

12,80 CV/P

12, 50 CV/P/S

ST2-2 F18,17

ST2-3 F18

No oil checked by Zodiac by Foot

WALKED

0 100 200 300

Logs, driftwood, clam

NE

Oil Character Length AP — PO — CV 230 CT — ST — MS — PT — TB — FL — NO 463

LS-48 pg 1

APR-04-1990 22:51 FROM DON BOLLINGER 2152 TO SCAT P.23

LS-48 051

# SHORELINE ECOLOGICAL SUMMARY

REVISION: 07/2/90

Segment ST / LS-48 0900 - Subdivision N/A Date (mo / day / yr) 04/01/90

Time (24 hr) 1040 Biologist Jack DIXON

(A) Substrate type and % of segments:
(1) Bedrock 75 (2) Boulder 20 (3) Cobble 10 (4) Pebble 5 (5) Sand ____ (6) Silt ____

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

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

Photographs:
Roll No. ____
Frames ____

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | X U | X M | 1L | 1U | 1M | X | (1U) | (1M) | (1L) | NOT PRESENT |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | X | X | X | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | X | X | |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | X | X | X | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | X U | 1M | 1L | 1U | X M | 1L | 1U | 1M | X | NOT PRESENT |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | X | X | |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**GASTROPODS**

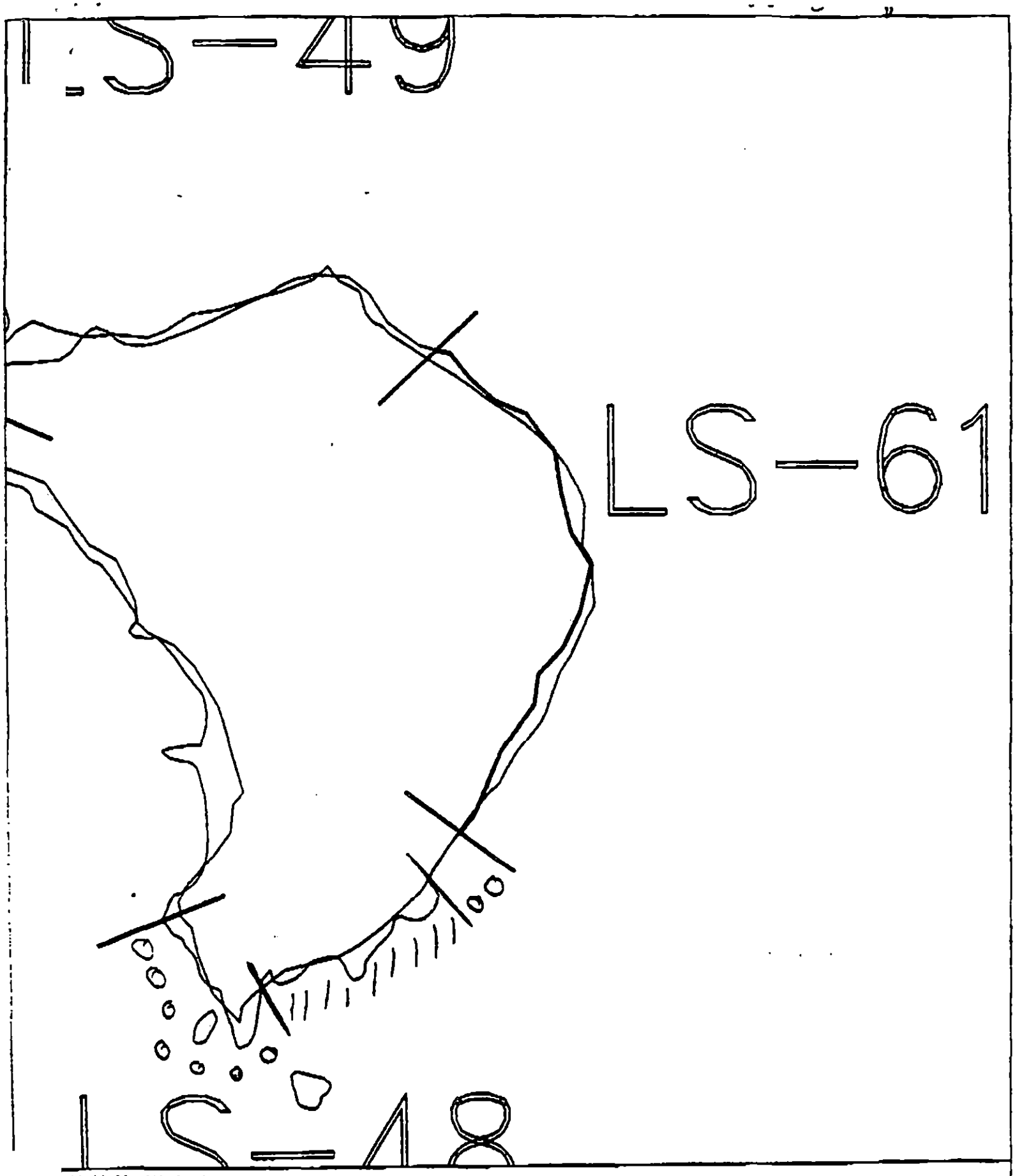
| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | X | X | X | NOT PRESENT |
| 2 | 2 | 2 | 2 | 2 | 2 | X | X | 2 | 2 | 2 | X | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | X | 3 | X | |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | X | 4 | X | 4 | X | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | X U | X M | 1L | (1U) | (1M) | X | 1U | 1M | (1L) | NOT PRESENT |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | X | X | X | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | X | X | |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**Wildlife Observations/ General Comments:** 2 oyster catchers on rocky headland. Several cormorants offshore.

**Ecological Considerations:** The major habitat type in this segment is bedrock outcrop. The biota on this stable substrate is dense & diverse with clear zonation. Interspersed among these outcrops are boulder/cobble pocket beaches, which in this high energy environment are extremely depauperate.
Harbor seal & sea lion pupping & molting site




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

LS-48

~~ADEC Segment Length: 700m~~

0 100 200 300

Map Key: PWS-486
Name: Sam Jarvis Sample
Date: April 1990

# ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT LS-48 SUBDIVISION A ( 1 of 1 )

| WORK WINDOW | |
|---|---|
| Manual Pickup | **CLOSED** |
| Bioremediation | **CLOSED** |

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

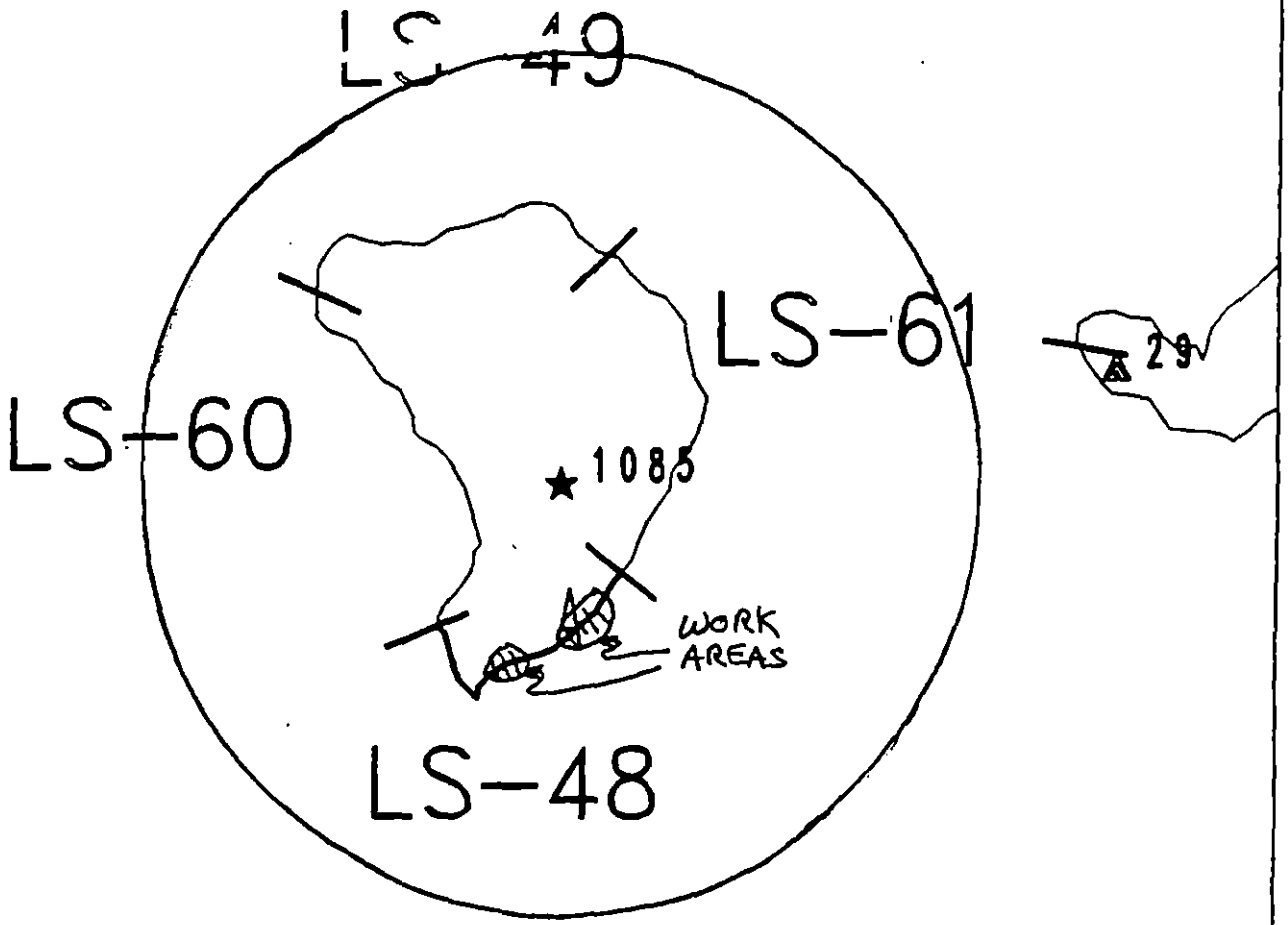
| | | |
|---|---|---|
| **3N,O,P,Q** | **Harbor Seal and Sea Lion Pupping and Molting** | Closed to manual pickup prior to 7/1 and after 8/15. Closed to bioremediation prior to 7/1 and after 7/31. |
| **5R** | **Seabird Colony** | Closed to manual pickup and bioremediation from 5/1 to 9/1. |

OTHER ECOLOGICAL CONSIDERATIONS

Do not apply bioremediation to specific areas where seals are observed to haulout. Do not chase or harass seals or sea lions, and do not approach pups under any circumstances. When working on or near haulouts, complete the job as quickly as possible with minimum personnel, equipment, noise and disturbance. Keep boats and personnel as far from actual haulouts as is practical to do the work specified. Minimize air traffic near haulouts, maintain elevation as is practical, and avoid repeated overflights of the same haulout areas. Aircraft to maintain 800m horizontal and 300m vertical distance from seabird colonies. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

FOSC _____ Date 6/6/90

Prepared by _____ Date 6/4/90




EXXON

Exxon Company, USA
Map Key: PWS-LS-48
May 11, 1990

# ECOLOGY MAP
## SEGMENT LS-48
SUBDIVISION A (1 of 1)

METERS
0 362 725

★ Seabird Colony
▲ Eagle Nest

1 inch = 1189 feet

# SHORELINE EVALUATION

SEGMENT ST/ LS-49 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Harbor seal and sea lion pupping (3N, P) - 5/15 to 7/1 and molting (3O, Q) - 8/15 to 9/15; Tent sites (6U) - 6/1 to 9/15. Restrict boat and air traffic to essential minimum. Contact ADF&G and USFWS prior to treatment. Treatment to be completed prior to 5/15 or between 7/1 and 8/15 unless otherwise approved by ADF&G and/or USFWS. Seabird colony (5R) - 5/1 to 9/1. Air approach and takeoff from and to seaward only.

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

SHPO SIGNATURE: Charles E. Holmes DATE: April 14, 1990

**OILING CATEGORIZATION:**

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 670 m

Subsurface Oil Observed: Yes____ No X Maximum Depth_____

**RECOMMENDATIONS:**

| | |
|---|---|
| X No Treatment Recommended | _____Snare/Absorbent Booms |
| _____Treatment Recommended | _____Oil Snares (pom poms) |
| _____Manual Pickup | _____Absorbents (pads,rolls,etc) |
| _____Bioremediation | _____Spot Washing:_____Wands |
| _____Tarmat: _____Breakup | _____ Beach Cleaner |
| _____Removal | _____Other (see comments) |

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/13/90.

ADEC JOHN BAUER

EXXON ANDY TEAL FOSC: DATE: 4-20-90

NOAA Burl Wescott

USCG C.A. BEITER

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LS 49 A SUBDIVISION: _____ DATE 4-1-90

**SCG**
NAME James C. Gambill SIGNATURE James C. Gambill

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

No oil sighted

**ADEC**
NAME Brian K. FitzSimons SIGNATURE Brian K FitzSimons

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS LS 49 located on north end of Little Smith Consists of @ 3 pocket beaches bordered by headlands— No Oil observed in either the HITZ, MITZ or the LITZ.

**LAND MANAGER**
NAME Carol S Huber SIGNATURE Carol S Huber

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS
No oil observed. Recommend monitoring.

REVISION NO. 03/01/89

# SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG: B. Bergland USCG: J. Gamble SEGMENT ST/: LS-49A
BIO: S. Schroeder LAND REP: S. Hubert (NPS) SUBDIVISION: A 1 OF 1
EXXON: C. Lovins ADEC: B. Fritzsimons TIME: 10 : 00 to 11 : 00
TEAM NO.: 1 TIDE LEVEL: 2 to 4 DATE: 4 / 1 / 90
SHT. SUBDIVISION LENGTH: 660 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W
SURFACE SEDIMENTS: R 40 % B 35 % C 15 % P 10 % G — % S 0 % M 0 % V 0 %
SLOPE: Lang 10 % Hang 10 % Vert 80 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 660 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | /C | /B | /P | /S | | | | | | SU | UI | MI | LI |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | | | | | | | | | | | | |
| COAT | | | | | | | | | | | | | |
| STAIN | | | | | | | | | | | | | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | | | | | | | | | | |
| NO OIL | | | | | | | | | | X | X | X | X |

PAVEMENT: H F S — sq. m by — cm

PATTIES / TARBALLS — BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | | | |
| Trash | | | |
| Debris | | | |

DEBRIS COLLECTED ☐ YES ☒ NO

TYPE —

#BAGS —

Photographs:

Roll No. —

Frames —

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (CM-CM) | BELOW | | OIL / FILM COLOR | | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | | UO | UC | | | | | | | SU | UI | MI | LI | | |
| 1 | 30 | | | | | X | - | | | | | | | | | | X | | | | B/C/P |
| 2 | 30 | | | | | X | - | | | | | | | | | | | X | | | B/C/P |
| 3 | 50 | | | | | X | - | | | | | | | | | | X | | | | B/C/P/G |
| | | | | | | | - | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | |

COMMENTS

Majority of segment consists of steep bedrock cliffs. No oil found in pocket beaches.



REVIEWED DMH DATE 4/3/90

LS-49A-1

## SHORELINE ECOLOGICAL SUMMARY

REVISION: 09/01/89

Segment ST / LS-49 A Subdivision N/A Date (mo / day / yr) 4/1/90

Time ( 24 hr ) 1010 1100 Biologist S. Schroeter

(A) Substrate type and % of segments:
(1) Bedrock 62 (2) Boulder 15 (3) Cobble 18 (4) Pebble 5 (5) Sand Ø (6) Silt Ø

(B) Overall % cover of biota ( % of segment ): Dense 63 Moderate 15 Low 17

(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)

Photographs:
Roll No. ST-1-2
Frames None

**BARNACLES**

| Dense | Moderate | Sparse | Rare |
|---|---|---|---|
| 1U (X) 1M 1L | 1U (X) 1M 1L | 1U 1M (X) 1L | 1U 1M 1L |
| 2 2 | 2 2 | 2 3 | 2 2 |
| 3 3 | 3 3 | 3 3 | 3 3 |
| 4 4 | 4 4 | 4 4 | 4 4 |
| 5 5 | 5 5 | 5 5 | 5 5 |
| 6 6 | 6 6 | 6 6 | 6 6 |

NOT PRESENT

**MYTILUS**

| Dense | Moderate | Sparse | Rare |
|---|---|---|---|
| (X) 1M 1L | 1U (X) 1L | 1U 1M 1L | 1U (X) 1M 1L |
| 2 2 | 2 2 | 2 2 | 2 2 |
| 3 3 | 3 3 | 3 3 | 3 3 |
| 4 4 | 4 4 | 4 4 | 4 4 |
| 5 5 | 5 5 | 5 5 | 5 5 |
| 6 6 | 6 6 | 6 6 | 6 6 |

NOT PRESENT

**GASTROPODS**

| Dense | Moderate | Sparse | Rare |
|---|---|---|---|
| 1U 1M 1L | (X) (X) 1L | 1U 1M 1L | (X) (X) 1L |
| 2 2 | 2 2 | 2 2 | 2 2 |
| 3 3 | 3 3 | 3 3 | 3 3 |
| 4 4 | 4 4 | 4 4 | 4 4 |
| 5 5 | 5 5 | 5 5 | 5 5 |
| 6 6 | 6 6 | 6 6 | 6 6 |

NOT PRESENT

**FUCUS**

| Dense | Moderate | Sparse | Rare |
|---|---|---|---|
| 1U 1M 1L | (X) (X) 1L | 1U 1M 1L | 1U 1M 1L |
| 2 2 | 2 2 | 2 2 | 2 2 |
| 3 3 | 3 3 | 3 3 | 3 3 |
| 4 4 | 4 4 | 4 4 | 4 4 |
| 5 5 | 5 5 | 5 5 | 5 5 |
| 6 6 | 6 6 | 6 6 | 6 6 |

NOT PRESENT

**Wildlife Observations/ General Comments:** No pinnipeds observed; mid + upper intertidal have dense biota, lower intertidal not observed. Designated Harbor seal + Sea Lion pupping + molting area; 2 tent sites

**Ecological Considerations:** Tide levels observed > +1.5 low tide level not observed. Dense populations of Barnacles, Mussels + Fucus on bedrock in upper + mid intertidal. Segment composed predominantly of Bedrock. Gastropods in moderate abundances in middle intertidal. Dense patches of Halosaccion + Fucus on boulders in mid intertidal zone.

OO B Peygland

SEGMENT SM-49

SUBDIVISION A of A

DATE 4 / 1 90

**CHECKLIST**

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

**LEGEND**

1 △ Pit - No Subsurface Oil

2 ▲ Pit - Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

CT/P Patchy Distribution

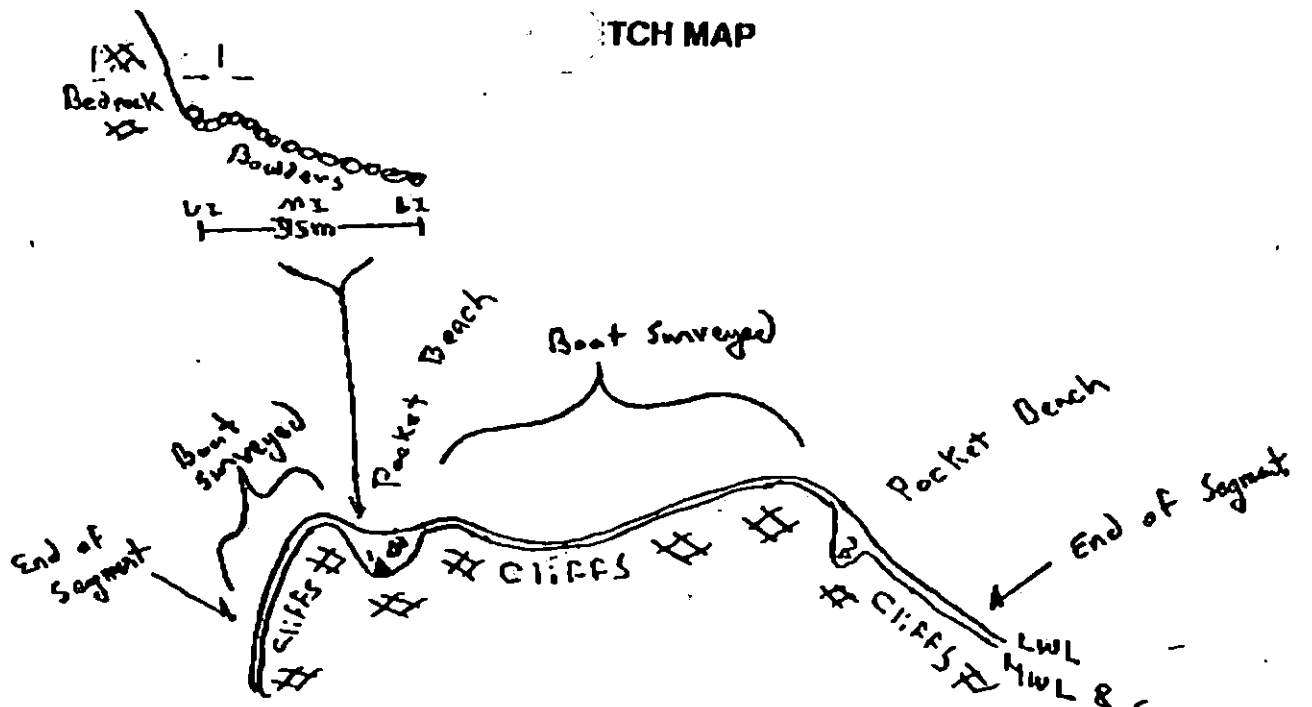
CT/S Splashed Distribution

Oiled Vegetation

1 ⟷ Photo location, direction, and number

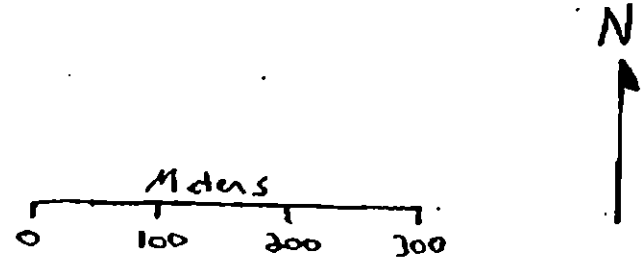
# Exposed Bedrock

**TCH MAP**




Majority of Segment consists of steep bedrock.

No Oil.

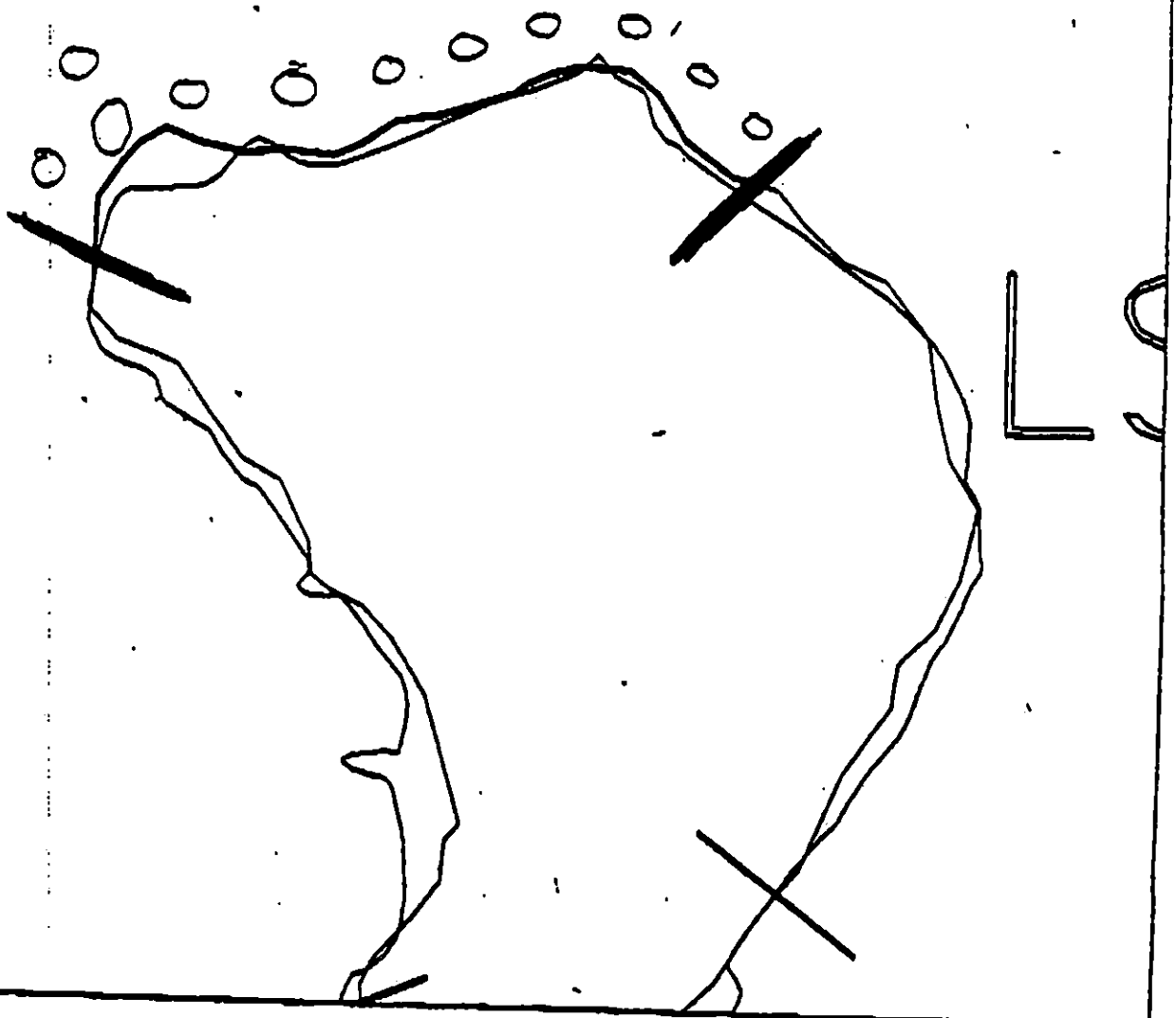



Oil Character Length (m): AP_____ PO_____ CV_____ CT_____ ST_____ MS_____ PT_____ TB_____ FL_____ NO 660

REVISION

Page 3 of 5

# LS-49A



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

LS-49

ADEC Segment Length: 670m

0 100 200 300
METERS

Map Key: PWS-464
Name: B. Berglund
Date: 4/1/90
Date Entered:

Page 7 of 15

# SHORELINE EVALUATION

SEGMENT ST/ LS-60 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

No specific constraints or sensitivities listed. Adjacent to harbor seal and sea lion pupping (3N, P) and molting area, and seabird colony (5R). Restrict boat and air traffic to essential minimum. Complete treatment prior to 5/15 or between 7/1 and 8/15. Contact ADF&G and USF&WS prior to treatment.

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

SHPO SIGNATURE: Charles R Holmes DATE: April 14, 1990

**OILING CATEGORIZATION:**
Wide 0 m: Medium 127 m: Narrow 361 m: V.Light 269 m: No Oil 0 m
Subsurface Oil Observed: Yes X No ____ Maximum Depth 25+ cm

**RECOMMENDATIONS:**

| | |
|---|---|
| ____No Treatment Recommended | ____Snare/Absorbent Booms |
| X Treatment Recommended | ____Oil Snares (pom poms) |
| X Manual Pickup | ____Absorbents (pads,rolls,etc) |
| X Bioremediation | ____Spot Washing: ____Wands |
| ____Tarmat: ____Breakup | ____ Beach Cleaner |
| ____Removal | ____Other (see comments) |

COMMENTS: Manual pickup of mousse patches and bioremediation of area shown on sketch map. Work prior to 5/15 or 7/1 to 8/15 based on constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/13/90
ADEC JOHN BAUER
EXXON ANDY TER FOSC: DATE: 4-20-90
NOAA Bart Wessett
USCG G.A. BAUER

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / LS 6QA SUBDIVISION: _____ DATE 4-1-98

**USCG**
NAME James C Bamb.II SIGNATURE James C Bamb II

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS
Pocket beaches Located on south End, Patchy And Coating of oil on The beach.
Bio The beach

**ADEC**
NAME Brian K. FitzSimons SIGNATURE Brian K. FitzSimons

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS Pocket beach located on southern end of segment consists of patchy coated boulders/cobble on surface overlaying Pebble, Gravel/Cobble over bedrock subsurface with subsurface characteristics of OF + some OR - Possibly Bioremediate.

**LAND MANAGER**
NAME Carol S Huber SIGNATURE Carol S Huber

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS
Very little sign of oil, some staining of cobbles and boulders. Recommend continued natural cleansing and monitoring.

REVISION NO. 03/21/96

4/6

PLUS

# SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG B. Berglund USCG J. Gamble SEGMENT ST/ LS-GBA
BIO S. Schroeder LAND REP C. Tibbett (NFS) SUBDIVISION A
E N C. Levine ADEC B. Fitzsimons TIME 9 :00 to 10 :00
T NO.: 2 TIDE LEVEL: +4 to +2 DATE 4 / 1 / 90
EST. SUBDIVISION LENGTH: 834 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: W to E
SURFACE SEDIMENTS: R 30 % B 30 % C 20 % P 10 % G 10 % S — % M — % V — %
SLOPE : Lang 40 % Hang 20 % Vert 40 % WAVE EXPOSURE: ☐ Low ☐ Med ☐ High
OIL CATEGORY LENGTH: W — m M 60 m N 400 m VL 374 m NO — m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AC | AB | AP | AS | BLK/BR | BRN/ORG | OLIVE | LT BRN | YEL | SU | UI | MI | LI |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | | | | | | | | | | | | |
| COAT | | | X | | | | | X | | | X | | |
| STAIN | | | | | | | | | | | | | |
| MOUSSE | | | X | | | X | | | | | X | | |
| PATTIES | | | | | | | | | | | | | |
| BALLS | | | | | | | | | | | | | |
| | | | | X | | | | X | | | X | | |
| NO OIL | | | | | | | | | | X | | X | X |

PAVEMENT: H F S — sq. m by — cm

PATTIES / TARBALLS — BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | X | | |
| Trash | | | |
| Debris | | | |

DEBRIS COLLECTED ☐ YES ☒ NO.

TYPE —

#BAGS —

Photographs:

Roll No. ST-1-2

Frames 485

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm-cm) | BELOW | | OIL / FILM COLOR | | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | | UO | UC | BLK/BR | BRN/ORG | OLIVE | LT BRN | YEL | | SU | UI | MI | LI | | |
| 1 | 35 | | | | X | | 0 - 35 | X | | | | X | | | | | X | | | | C/P/G/S |
| 2 | 30 | | | | | X | - | | X | | | | | | | | X | | | | C/P/G |
| | | | | | | | - | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | | |

COMMENTS

Very little visible oil in Southern half except in the pocket beach closest to the end of the segment. In that section most of the oil is confined to cracks of bedrock & tops of boulders.

A continious stain was observed in the Northern half along the HWL. However, the steep vertical cliffs prevented landing.



REVIEWED GH DATE 4/9/90

LS-60A-5

# SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/22/88

Segment ST / LS-60A Subdivision N/A Date (mo / day / yr) 4/1/88

Time (24 hr) 0900 to 0947 Biologist S. Schroeter

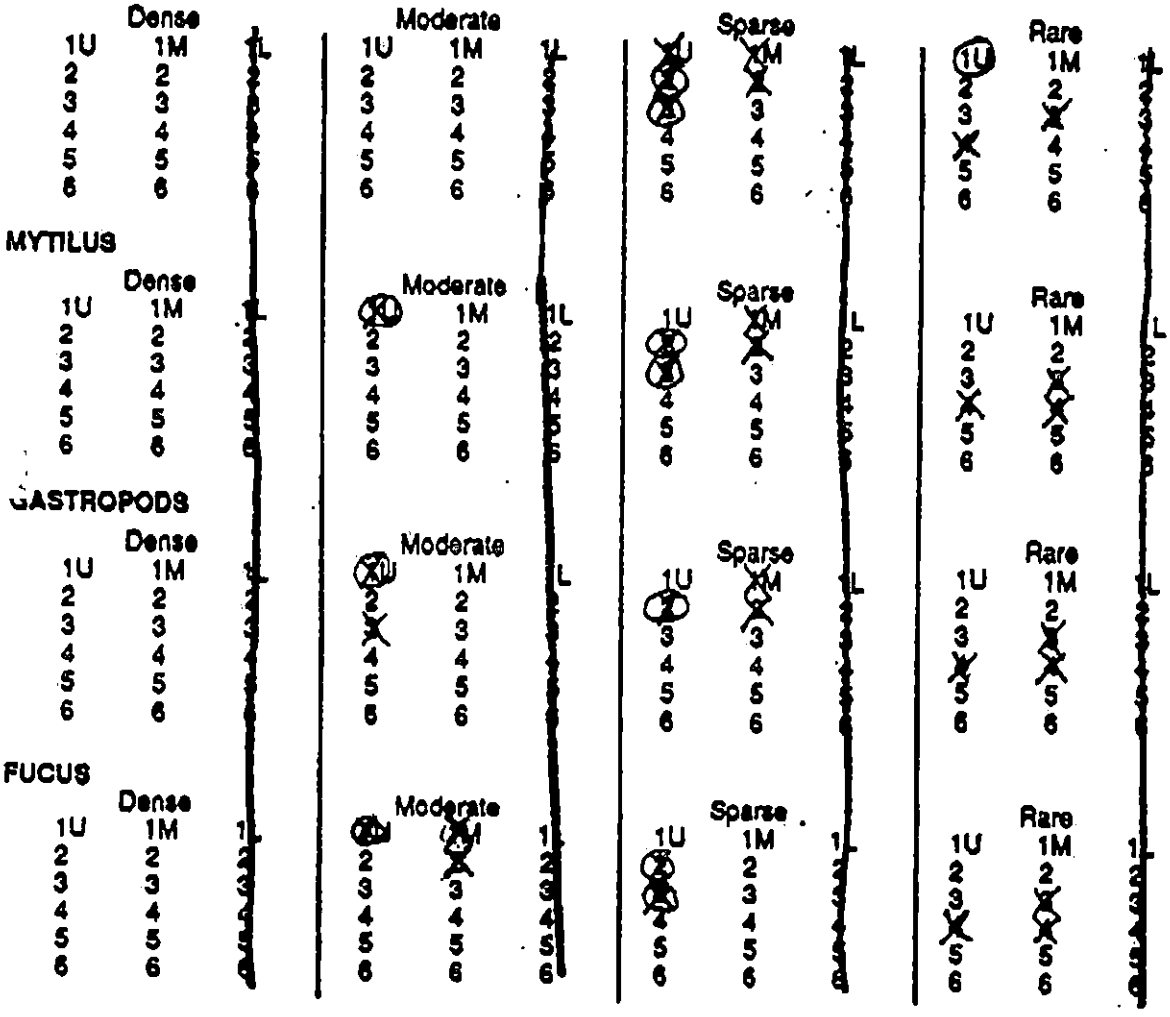
(A) Substrate type and % of segments:
(1) Bedrock 5 (2) Boulder 55 (3) Cobble 30 (4) Pebble 9 (5) Sand 1 (6) Silt Ø

(B) Overall % cover of biota ( % of segment ): Dense 10 Moderate 15 Low 75

(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)

Photographs:
Roll No. ST-1-2
Frames 2,3

**BARNACLES**




NOT PRESENT

**MYTILUS**




NOT PRESENT

**GASTROPODS**




NOT PRESENT

**FUCUS**




NOT PRESENT

Wildlife Observations/ General Comments: Tide Range +4.5 to +7 low intertidal not surveyed. No harbor seals or sealions observed; No sensitivity designations

Ecological Considerations: LS-60A is ~ 70% Boulder + Cobble pocket beach & 30% bedrock outcrops. Most of the biota is concentrated on the bedrock. On bedrock were dense patches of adult + juvenile Mytilus aboles & moderate densities of adult + newly recruited Fucus. Nucella lamellosa + N. lima occurred rarely on + under boulders overlying bedrock. N. scutum & C. Strigatella were also found in moderate to sparse densities on

Segment: LS60A-1 Team #1 LS-60A-B
Date: 4-1-90 Bio: S. Schroeter OG: Bret Berglund

LS60A is predominantly composed of relatively temperate boulder & cobble pocket beaches (~70% of segment length) & densely populated bedrock which comprises ~30% of the segment. The bedrock contained dense patches of adult & juvenile Mytilus & adult & juvenile Fucus. Moderate densities of L. Scutata & Notoacmea scutum (~10-20 $m^{-2}$) occurred under boulders overlaying the bedrock Nucella lima & lamellosa occurred sparsely on boulder overlying bedrock. Due to time of survey, the low intertidal was not observed.

Tide levels ≥ +1.5

MAR-02-1990 22:34 FROM DON BOLLINGER 2152 TO SCAT P.01

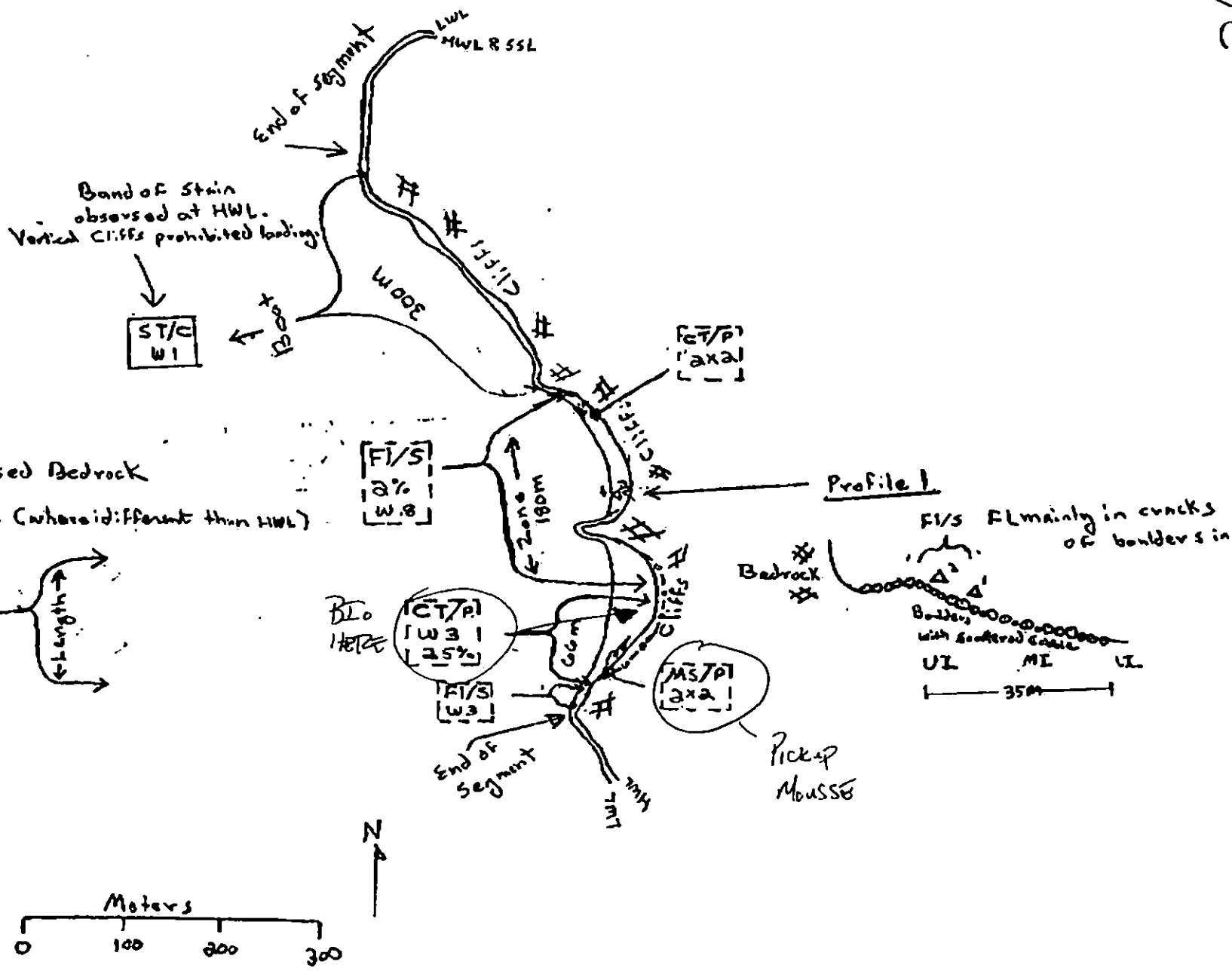
OG B. Berglund

SEGMENT ST/ LS-69A

SUBDIVISION A

DATE 4 / 1 90

## SKETCH MAP




### CHECKLIST

___ N Arrow
___ Approx. Scale
___ Seg/Sub Entry
___ Oil Dist.
___ Width
___ Length
___ % Cover
___ Substrate Character
___ Est. HWL/LWL
___ SSL
___ Profile Location(s)
___ Profile(s)
___ PR Location(s)
___ Photo Location(s)

### LEGEND

1 △ PI - No Subsurface Oil

2 ▲ PI - Subsurface Oil

CT/C — Continuous Distribution

CT/B — Broken Distribution

CT/P — Patchy Distribution

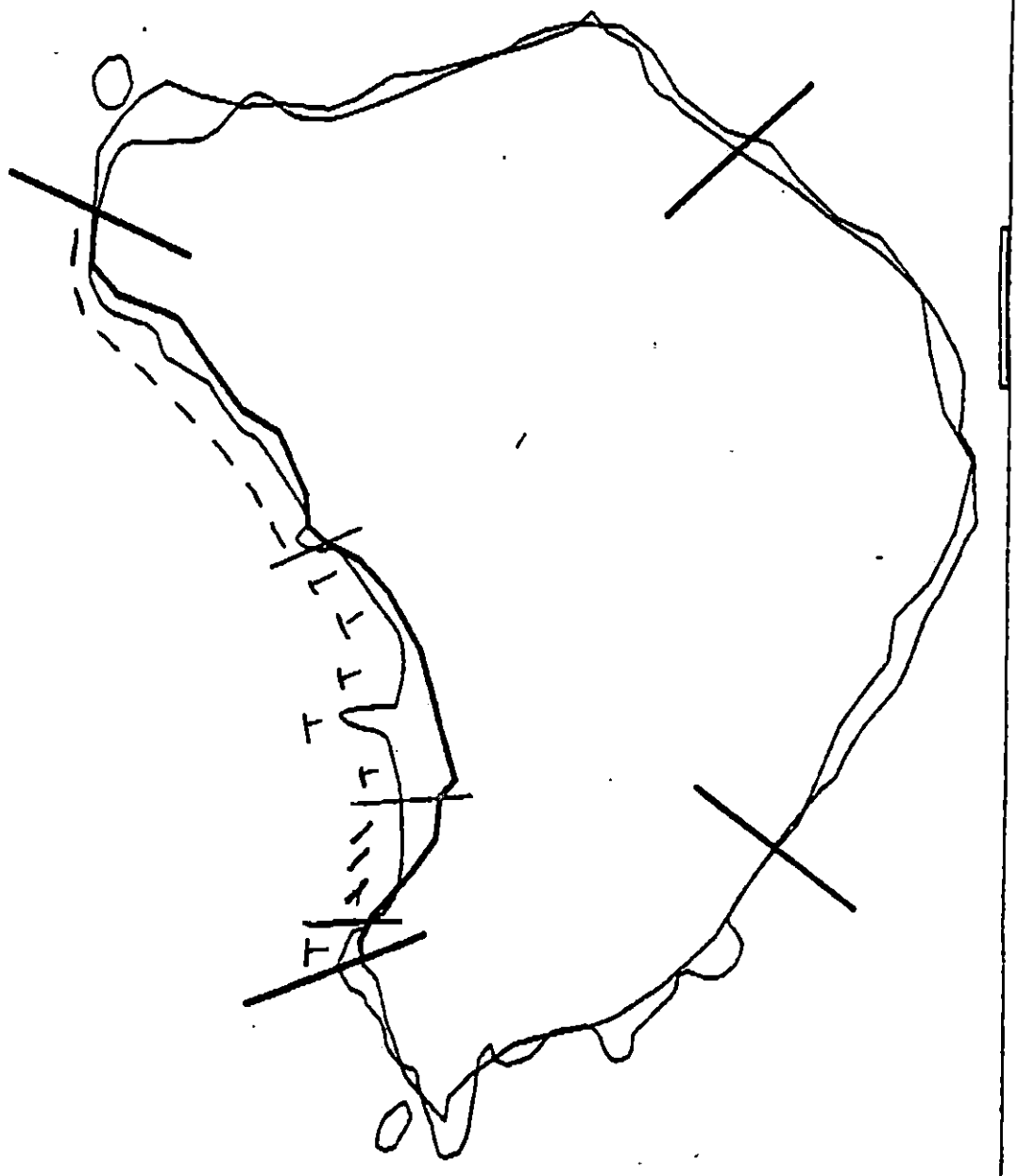
CT/S — Splashed Distribution

Oiled Vegetation

1 ⇒ Photo location, direction, and number

Oil Character Length (m): AP ____ PO ____ CV ____ CT 70 ST 300 MS 2 ____ TB ____ FL 210 NO ____

REVISION/COMMENTS



LS-60A

LS-48

3/6

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

LS-60

ADEC Segment Length: 757m

0 100 200 300
METERS

Map Key: PWS-465
Name: B. Berglund
Date: 4/1/90
Date Entered:

# ADDENDUM: SUBDIVISION CONSTRAINTS

## SEGMENT LS-60 SUBDIVISION A ( 1 of 1 )

| WORK WINDOW | |
|---|---|
| Manual Pickup | CLOSED |
| Bioremediation | CLOSED |

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

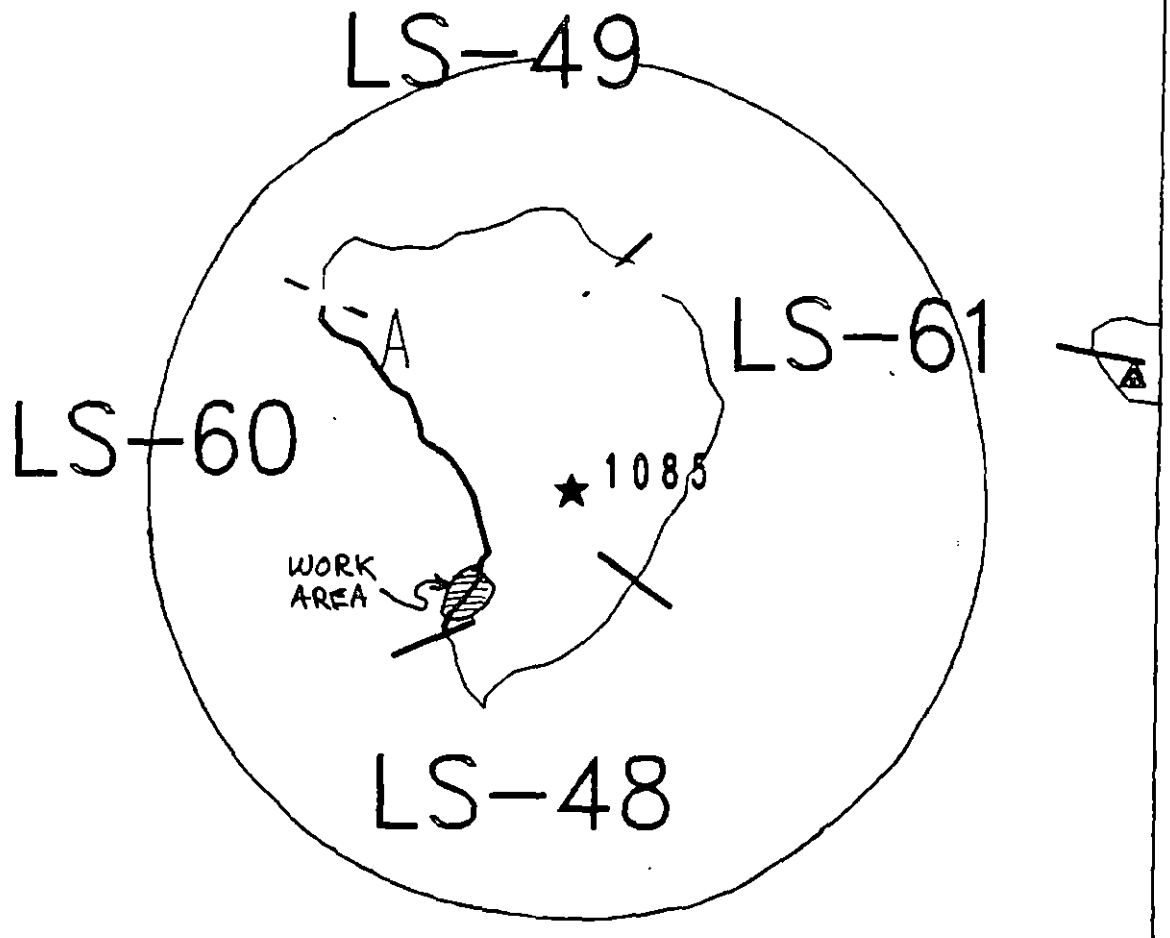
| | | |
|---|---|---|
| **3N,O,P,Q** | **Harbor Seal & Sea Lion Pupping and Molting** | Closed to manual pickup prior to 7/1 and after 8/15. Closed to bioremediation prior to 7/1 and after 7/31. |
| **5R** | **Seabird Colony** | Closed to manual pickup and bioremediation prior to 9/1. |

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum prior to 9/1. No personnel within 800m. Aircraft to maintain 800m horizontal and 300m vertical distance from colony. Do not apply bioremediation to specific areas where seals are observed to haulout. Do not chase or harass seals or sea lions, and do not approach pups under any circumstances. When working on or near haulouts, complete the job as quickly as possible with minimum personnel, equipment, noise and disturbance. Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

FOSC D Zawadzki Date 6/15/90

Prepared by J P Phillips Date 6/14/90




EXXON

Exxon Company, USA

Map Key: PWS-LS-60

# ECOLOGY MAP

## SEGMENT LS-60

SUBDIVISION A (1 of 1)

METERS

0 350 717

★ Seabird Colony

▲ Eagle Nest

1 inch = 1177 feet

# SHORELINE EVALUATION

SEGMENT ST/ LS-61 SUBDIVISION A (1 OF 1) DATE 4/1/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
5R Seabird colony (5/1 to 9/1)

**SUBDIVISION ECOLOGICAL CONSTRAINTS:**
Avoid disturbance/damage to unoiled substrate and biota. See attached Ecological Constraint Sheet.

SHPO SIGNATURE: Charles E. Holmes DATE: April 14, 1990

**OILING CATEGORIZATION:**
Wide 0 m: Medium 0 m: Narrow 416 m: V.Light 0 m: No Oil 284 m
Subsurface Oil Observed: Yes ____ No X Maximum Depth ____

~~**RECOMMENDATIONS:**~~

| | |
|---|---|
| X No Treatment Recommended | ____Snare/Absorbent Booms |
| X Treatment Recommended | ____Oil Snares (pom poms) |
| X Manual Pickup | ____Absorbents (pads,rolls,etc) |
| X Bioremediation | ____Spot Washing: ____Wands |
| ____Tarmat: ____Breakup | ____ Beach Cleaner |
| ____Removal | ____Other (see comments) |

COMMENTS: Recommend manual pick up of oiled vegetation and bioremediate areas shown on attached sketch map. Work should be conducted prior to 5/15 or between 7/1 and 8/15 unless otherwise approved by ADF&G or USFWS.

TAG COMMENTS:
STATE POSITION - NO TREATMENT RECOMMENDED
OIL REMAINING INSUFFICIENT TO WARRENT TREATMENT
TO MINIMIZE DISTURBENCE TO SEALS.

TAG APPROVAL DATE: 4/14/90.
ADEC JOHN BAUER John Bauer
EXXON ANDY TEAL Andy Teal FOSC: ____ DATE: 4-20-90
NOAA Bill Wescott Bill Wescott
USCG G.A. BETRE G.A. Betre

No Treatment!

# 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 6/31)** |
| 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 (6/1 to 9/15)** |
| 6Y | | **Special use destination** |
| 7Z | **Subsistence area:** | **Salmon harvesting (5/1 to 9/30)** |
| 7HH | | **Finfish harvesting** |
| 7II | | **Deer harvesting (8/15 to 2/28)** |
| 7JJ | | **Invertebrate harvesting** |
| | | For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints. |

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ LS-C1 SUBDIVISION: DATE 4/1/90

**USCG**
NAME Robert Jensen SIGNATURE Robert S Jensen

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS
some minor amounts of oil evidence found.

**ADEC**
NAME Rowann T. Hudnall SIGNATURE Rowann T. Hudnall

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS
1 pocket of tar (sling) 15m wide on boulders. (see map)

**LAND MANAGER**
NAME U.S. Forest Service SIGNATURE Leon Kelly

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED - ? Low Pressure
COMMENTS ☒ Continue Natural Cleaning
Oil found in storm berm - scattered
Some stains on vertical surfaces in pebbles
Weather very well weathered

# SHORELINE OILING SUMMARY

REVISION NO. 03/28/90

OG Dan Mann Sample USCG Bob Jensen SEGMENT ST/ Ls-61
BIO Josh Dixon LAND REP Ted Kreger SUBDIVISION No Subdivision (1 of 1)
EXXON Tim Ecoom ADEC Raymond Hudson TIME 10 :30 to 11 :30
TEAM NO.: 2 TIDE LEVEL: -3' to +1' DATE April 1 / 90
EST. SUBDIVISION LENGTH: 706 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: ____ to ____
SURFACE SEDIMENTS: R 40 % B 40 % C 15 % P 5 % G — % S — % M — % V — %
SLOPE : Lang 50 % Hang 50 % Vert — % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
OIL CATEGORY LENGTH: W — m M — m N 440 m VL — m NO 266 m

## SURFACE OIL

| CHARACTER | DISTRIBUTION | | | | OIL / FILM COLOR | | | | | IMPACTED ZONES | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | /C | /B | /P | /S | | | | | | SU | UI | MI | LI |
| ASPHALT PAVEMENT | | | | | | | | | | | | | |
| POOLED | | | | | | | | | | | | | |
| COVER | | | | | | | | | | | | | |
| COAT | | | X | | | X | | | | | X | | |
| STAIN | | | | | | | | | | | | | |
| MOUSSE | | | | | | | | | | | | | |
| PATTIES | | | | | | | | | | | | | |
| TARBALLS | | | | | | | | | | | | | |
| FILM | | | | | | | | | | | | | |
| NO OIL | | | | | | | | | | X | | X | X |

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

| OILED DEBRIS | AMOUNT SM | MD | LG |
|---|---|---|---|
| Logs | | | |
| Vegetation | X | | |
| Trash | | | |
| Debris | | | |

DEBRIS COLLECTED ☐ YES ☒ NO
TYPE ____
#BAGS ____

Photographs:
Roll No. ST-2-2
Frames 20 - 29

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER | | | | | OILED INTERVAL (cm-cm) | BELOW | | OIL / FILM COLOR | | | | | PIT ZONE | | | | ANA | SUBSURFACE SEDIMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OP | OR | OL | OF | NO | | UO | UC | | | | | | SU | UI | MI | LI | | |
| 1 | 30 | | | | | ✓ | - | | | | | | | | | X | | | AB | cb/pb |
| 2 | 20 | | | | | ✓ | - | | | | | | | | | | X | | A | cb/pb |
| 3 | 20 | | | | | ✓ | - | | | | | | | | | | X | | A | cb/pb |
| 4 | 30 | | | | | ✓ | - | | | | | | | | | | | X | A | cb/pb |
| | | | | | | | - | | | | | | | | | | | | | |
| | | | | | | | - | | | | | | | | | | | | | |

COMMENTS



REVIEWED MH DATE 4-6

LS-61 p. 4 of 7

## Little Smith Island, LS-61, April 1, 1990

Segment LS-61 is located on the eastern coast of Little Smith Island, due east of Eleanor Island. The shoreline is exposed to a large fetch to the east that is partially blocked by the presence of Smith Island. The exposure is large such that this segment can receive large amounts of wave energy from the north east or the south east.

The shoreline consists mostly of bedrock cliffs with a talus of large angular boulders at its southern and northern extremities, and a long cobble/boulder beach backed by bedrock cliffs in its central part.

Oiling occurs in the central part as a 1 m wide band of very patchy and discontinuous partially coated boulders and cobbles, and in the northern part, as a patch 12 m wide by 20 m long at the base of boulders with 20% oil coverage.

# SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/22/89

Segment ST / LS-61 Subdivision N/A Date (mo / day / yr) 04/01/90

Time (24 hr) 1040 - 1150 Biologist John Dixon

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

(B) Overall % cover of biota (% of segment): Dense 15 Moderate 30 Low 55

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

Photographs:
Roll No. ____
Frames ____

**BARNACLES**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | X | 2 | X | 2 | X | (3) | (3) | 2 | |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | X | 3 | 2 | 2 | X | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | X | X | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**MYTILUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | X | X | 2 | 2 | 2 | X | |
| 3 | 3 | 3 | 3 | 3 | 3 | X | X | 3 | X | X | X | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | X | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**GASTROPODS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | X | X | 2 | 2 | 2 | X | |
| 3 | 3 | 3 | X | X | 3 | 3 | 3 | X | 3 | 3 | 3 | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | X | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |

**FUCUS**

| Dense | | | Moderate | | | Sparse | | | Rare | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | 1U | 1M | 1L | |
| 2 | 2 | 2 | 2 | 2 | 2 | X | X | X | (1) | (1) | X | |
| 3 | 3 | 3 | 3 | 3 | 3 | 2 | X | 2 | X | X | X | NOT PRESENT |
| 4 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 4 | 4 | 4 | |
| 5 | 5 | 5 | 5 | 5 | 5 | 4 | 4 | 4 | 5 | 5 | 5 | |
| 6 | 6 | 6 | 6 | 6 | 6 | 5 | 5 | 5 | 6 | 6 | 6 | |
| | | | | | | 6 | 6 | 6 | | | | |

**Wildlife Observations/ General Comments:** This segment has several sections of boulder/cobble beach which is heavily scoured & relatively depauperate. In areas of Rock outcrop & very large boulders there is moderate to dense cover of algae in lower zones (Rhodo, Fucus, Alaria, Laminaria & Agarum). Sparse to moderate B. cariosa & Fucus in middle & upper areas.

**Ecological Considerations:** Harbor seal & sea lion pupping & molting area.

OG Jean Nel samples

SEGMENT ST/ LS-61

SUBDIVISION NONE

DATE Apr. 1/1990

**CHECKLIST**

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

**LEGEND**

1 △ Pit - No Subsurface Oil

2 ▲ Pit Subsurface Oil

CT/C Continuous Distribution

CT/B Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

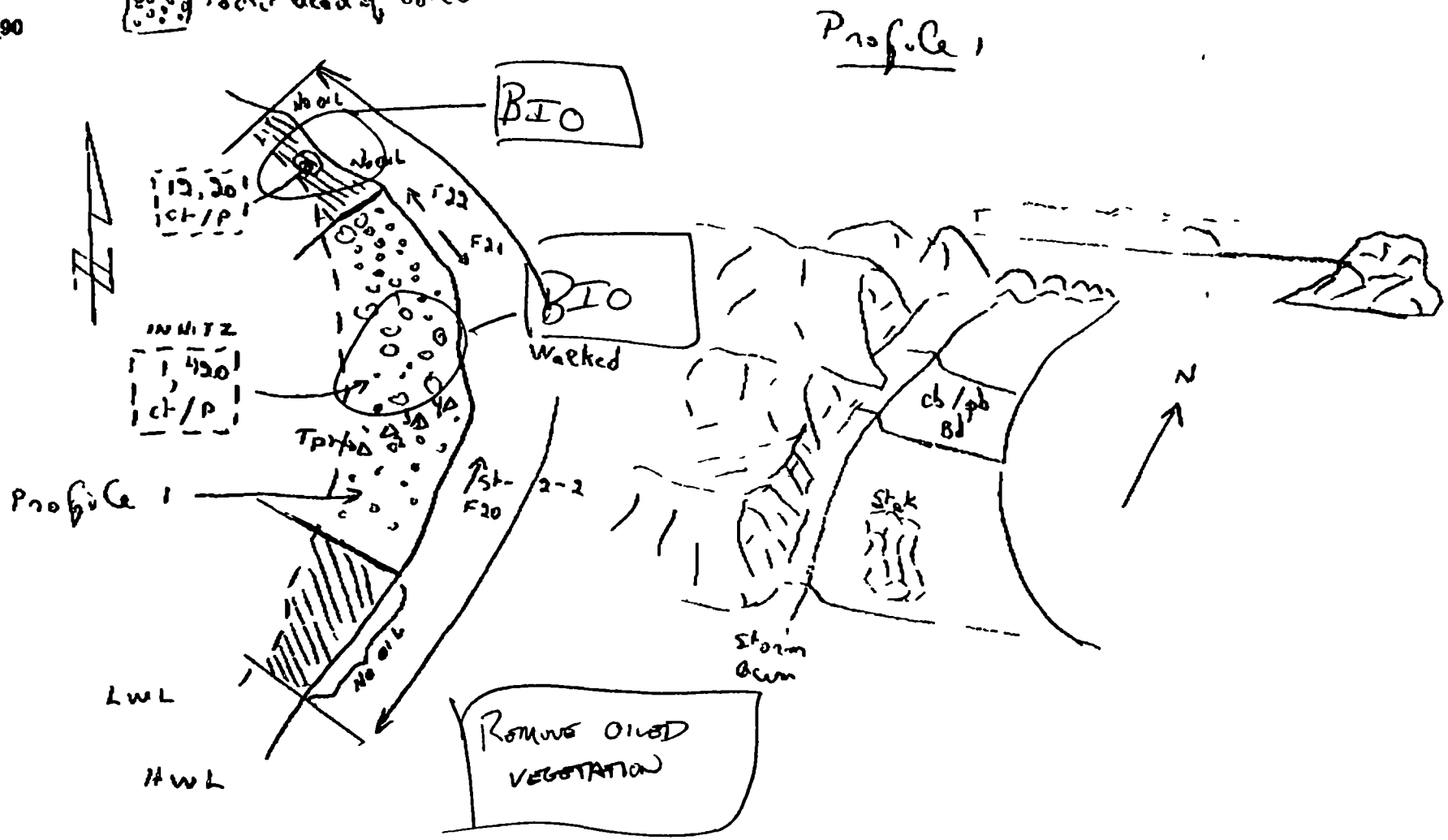
1 ●► Photo location direction, and number

Legend

Bedrock cliffs talus headlands

Pocket beach of Bd/cb

**SKETCH MAP**

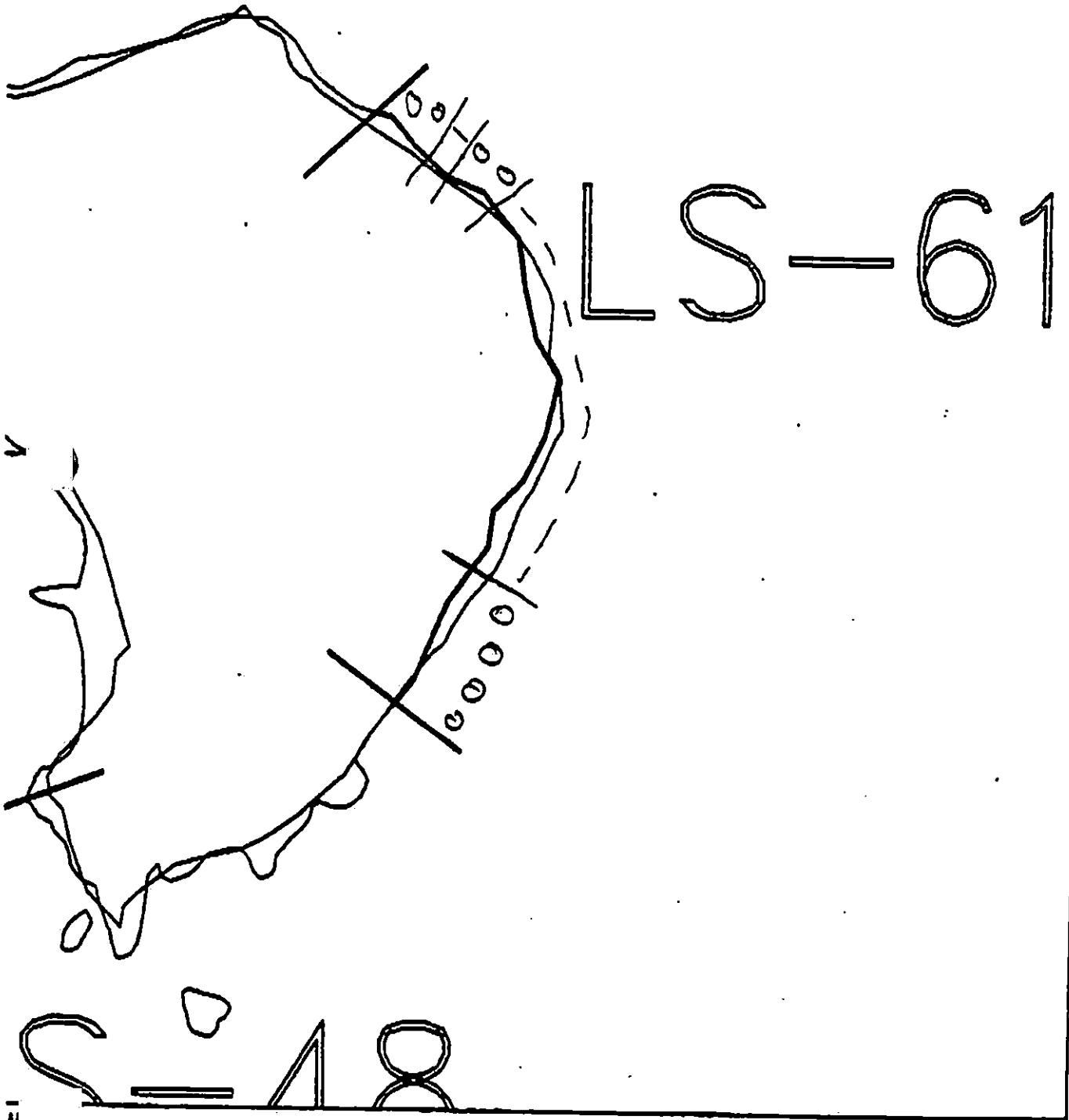



Oil Character Length (m): AP_____ PO_____ CV_____ CT 440 ST_____ MS_____ PT_____ TB_____ FL_____ NO 366

REVISION: 03/24/88

APR-04-1990 23 00 FROM DON BOLLINGER 2152 TO SCAT P 30

S-49




S-48

N e
Medium
Narrow
Very Light

LS-61

ADEC Segment Length: 700m

Map Key: PWS-466
Name: San Juan Seapak
Date: April 1, 1990

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