

OIL SPILL PUBLIC INFO. CENTER



3 6653 00006422 4

EVOS  
GC  
1552  
.P75  
S42  
1991  
v.33

**[Shoreline evaluations, 1991].**

Prince William Sound EL-107 to EN-46

Title supplied by cataloger. This title page is supplied by Alaska Resources Library and Information Services (ARLIS).

**ARLIS**  
Alaska Resources Library & Information Services  
Library Building, Suite 111  
3211 Providence Drive  
Anchorage, AK 99508-4614

REGION: PRINCE WILLIAM SOUND

SEGMENT: EL-107

SUBDIVISIONS: A (1 OF 3)

# SHORELINE EVALUATION

SEGMENT ST/ EL-107 SUBDIVISION A (1 OF 3) DATE 4/1/90

## SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Active bald eagle nests (5T-2) - 3/1 to 6/1; Recreation special use destination (6Y) - 6/1 to 9/15; 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.

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

SHPO SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

## OILING CATEGORIZATION:

Wide 66 m: Medium 9 m: Narrow 233 m: V.Light 338 m: No Oil 0 m  
Subsurface Oil Observed: Yes X No \_\_\_\_\_ Maximum Depth 14cm

## RECOMMENDATIONS:

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

**COMMENTS:** Recommend bioremediation of areas shown on attached sketch maps and manual pickup of debris. Treatment activities should be conducted after 6/1 due to above constraints.

TAG COMMENTS:

TAG APPROVAL DATE: \_\_\_\_\_

ADEC \_\_\_\_\_  
EXXON \_\_\_\_\_  
NOAA \_\_\_\_\_  
USCG \_\_\_\_\_

FOSC: \_\_\_\_\_ DATE: \_\_\_\_\_

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EL-107-A SUBDIVISION: A DATE 4/3/90

ISCG  
NAME DAVID A. SCHNEIDER SIGNATURE David A. Schneider  
F03/USCGR

☐ NO TREATMENT RECOMMENDED  
COMMENTS

☒ TREATMENT SUGGESTED

THE SMALL BEACH @ THE NORTH END OF SUBDIV A SHOULD BE TREATED WITH HOT WATER WASHING ALONG ITS NORTHERN CORNER. MANUAL SCRUBBING AND DEBRIS PICK UP WHERE APPLICABLE. LARGE BOULDER COBBLE BEACH AT SOUTHERN END OF SUBDIV WILL REQUIRE EXTENSIVE MANUAL SCRUBBING, ALONG FRACTURED ROCK AND BOULDERS, BIOREMEDIATION OF BOULDER/COBBLE SURFACE SEDIMENTS, AND DEBRIS PICKUP OF OILED WARE BOOMS IN THE SITE. (SITE SHOULD BE REASSESSED FOR FURTHER DEBRIS THAT MAY BE BURIED BY SAND AT THIS TIME.) THIS BEACH IS OF HIGH RECREATIONAL VALUE.

ADEC  
NAME PETER MONTESANO SIGNATURE Peter Montesano

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS Described as walking from E1106 - ~~50m~~ 50m from E1106, pocket beach (Pit #1) 3 Boulder, Rock, cracks w/ cobs, pebs below. Area is small 4x5m w/ coats under and around larger material and is washable w/ omni. The second beach is in the middle of A. on this 10x3m oiled area, I rec a pit of 0-8 OR/OL/UITZ penetration. Washing not practical, but deserves some hand treatment. Beach #3 at the southern end of A is detailed on the enlarged 2nd map. This was worked extensively by omni's. The 20x30m area with Pit 2 is the area of most concern w/ amoussay penetration. This area is trapped in a bedrock well and does not drain naturally (see DE Photos 90Pamol #7,8,9), but is washable at higher tides w/ high volume, hot water. The oil appears to go approx. 30cm to bedrock through the boulders, cobbles, etc. A combination of w/ hand work / localized Bio is appropriate for all of this 3rd beach. A crew could perform. Pick up, scraping, + wiping for a week, possibly longer. The 3 snare lines trapped in log supra must be removed.

## LAND MANAGER

NAME Janetha Pritchard SIGNATURE Janetha Pritchard

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

## COMMENTS

Beach on north end of subdivision is heavily oiled. Recommended hot water wash. Sawag boom in SW12 needs to be removed. SW12 reassessed after snow is gone. Beach on south end of subdivision has heavy oiling in UITE and SW2. Recommended some manual clean up. Remainder of beach should be hot water washed and bioremediated. Oiled log and debris need to be removed. Area is good for beach camping (on southern end of subdivision A).

OG C. DILLON USCG D. SCHNEIDER SEGMENT ST/ EL-107  
 BIO J. BARRY LAND REP J. PRITCHARD SUBDIVISION A  
 EXXON A. SNOOK ADEC P. MONTESANO TIME 11:30 to 14:45  
 TEAM NO.: 6 TIDE LEVEL: +1 to +3 DATE 04/01/90  
 EST. SUBDIVISION LENGTH: 625 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow  
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock Uplands are very steep and cliffs  
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S  
 SURFACE SEDIMENTS: R 65 % B 25 % C 7 % P 2 % G 1 % S 1 % M 1 % V 1  
 SLOPE: Long 15 % Hang 55 % Vert 30 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High  
 OIL CATEGORY LENGTH: W 130 m M 5 m N 190 m VL 300 m NO -

### SURFACE OIL

| CHARACTER        | DISTRIBUTION       |   |   |   | OIL / FILM COLOR |   |   |   | IMPACTED ZONES |   |   |   |
|------------------|--------------------|---|---|---|------------------|---|---|---|----------------|---|---|---|
|                  | N                  | E | S | W | 1                | 2 | 3 | 4 | SU             | U | M | L |
| ASPHALT PAVEMENT |                    |   |   |   |                  |   |   |   |                |   |   |   |
| POOLED           |                    |   |   |   |                  |   |   |   |                |   |   |   |
| COVER            |                    |   |   |   |                  |   |   |   |                |   |   |   |
| COAT             | ✓                  | X | X |   | ✓                | X |   |   | ✓              | X | ✓ |   |
| STAIN            |                    | X | X |   |                  | X |   |   | X              |   |   |   |
| MOUSSE           |                    |   |   |   |                  |   |   |   |                |   |   |   |
| PATTIES          |                    |   |   |   |                  |   |   |   |                |   |   |   |
| TARBALLS         |                    |   |   |   |                  |   |   |   |                |   |   |   |
| FILM             |                    |   |   |   |                  |   |   |   |                |   |   |   |
| NO OIL           | Snow on beach only |   |   |   |                  |   |   |   | S              |   |   | X |

PAVEMENT: H F S - sq. m by -  
 PATTIES / TARBALLS - BAC  
 NEAR SHORE SHEEN? ☒ NO BR RW SL T

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

DEBRIS COLLECT: ☒ YES ☐ NO  
 TYPE oiled trash  
un-oiled small tr  
 #BAGS 1

Photographs:

Roll No. ST-6-2 ST-6-3  
 Frames 4 36, 32, 31, 29, 28  
24

### SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER |    |    |    |    | OILED INTERVAL (cm) | BELOW |    | OIL / FILM COLOR |   |   |   | PIT ZONE |   |   |   | A N A | SUBSURFACE SEDIMENTS |
|---------|----------------|--------------------------|----|----|----|----|---------------------|-------|----|------------------|---|---|---|----------|---|---|---|-------|----------------------|
|         |                | OP                       | OR | OL | OF | NO |                     | DO    | UC | 1                | 2 | 3 | 4 | SU       | U | M | L |       |                      |
| 1       | 12             |                          | X  |    |    |    | 5-9                 |       | X  |                  |   |   | X | X        |   |   |   |       | P/G                  |
| 2       | 12             | X                        |    |    |    |    | 0-12                | X     |    |                  |   | X |   | X        |   |   |   |       | C/P                  |
| 3       | 16             |                          |    |    |    | X  | 0-10                |       |    |                  |   |   |   |          | X |   |   |       | C/P                  |
| 3       | 16             |                          | X  |    |    |    | 10-14               |       | X  |                  |   | X |   |          | X |   |   |       | P/G                  |
|         |                |                          |    |    |    |    | .                   |       |    |                  |   |   |   |          |   |   |   |       |                      |
|         |                |                          |    |    |    |    | .                   |       |    |                  |   |   |   |          |   |   |   |       |                      |

### COMMENTS

# SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/82/1

Segment ST / EL 107 Subdivision A Date (mo / day / yr) April 1 1990  
 Time (24 hr) 1130-1445 Biologist Jim Barry 625 m

- (A) Substrate type and % of segments:  
 (1) Bedrock 65 (2) Boulder 25 (3) Cobble 7 (4) Pebble 2 (5) Sand 1 (6) Silt
- (B) Overall % cover of biota (% of segment): Dense 60 Moderate 35 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-6-3 ST-6-4  
 23 to 1-4  
 Frames 364

## 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    | 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:

3- Pelagic Cormorants 5 SEALS 5 WHITE WINGED SCOTERS  
 3 SAND EAGLES 2 RED NECKED GRACKLES?  
 2 RAVENS 2 HOARDED GULLS  
 10 CROWS

Ecological Considerations: 6 Y, 7 II, 5 T-2

SEE ATTACHED SHEETS

START 1130 +1 → 0 → +3  
END 1445

## ADDITIONAL COMMENTS

## MAJOR SPECIES

## I BARNACLES

BARNACLES (*Balanus*, *Cythamalus*, *Semibalanus*) ARE ABUNDANT ON CLIFF FACES, BUT LESS SO ON BOULDER & COBBLE. SPAT (MAINLY *Balanus*) IS VERY DENSE, & Cobble beaches ~~were~~ had relatively low abundances

## II MYTILUS

MUSSELS ARE PATCHY, BUT GENERALLY DENSE ON BEDROCK, EXCEPT IN THE LOW ZONE. SPAT & SMALL JUVENILES ARE PRESENT & DENSE ON BEDROCK, INDICATING ACTIVE RECRUITMENT.

COBBLE & BOULDER HABITATS HAVE FEW ADULTS OR JUVENILES, BUT SPARSE SPAT. ~~HIGH~~ WAVE DISTURBANCE PROBABLY CAUSES HIGH MORTALITY IN COBBLE AREAS.

## III GASTROPODS

A. PERIWINKLES - LITTORINE SNAILS WERE DENSE TO MODERATE, AND PATCHY. MUSSEL BEDS HAVE MODERATE TO HIGH DENSITIES. COBBLE AREAS HAVE MODERATE DENSITIES

B. WHELKS - PRIMARILY FOUND WITH MUSSELS / BARNACLES

C. LIMPETS - MOST ABUNDANT IN BARNACLE ZONE, BUT PRESENT IN MODERATE DENSITIES IN LOW COBBLE ZONE

## IV FUCUS

SOME WITHERED FUCUS ADULTS IN UPPER ZONES ON BEDROCK, BUT LITTLE ON COBBLE BEACHES. LOW ZONES DENSE.

## V HABITAT TYPES

## A) BEDROCK CLIFFS / HEADLANDS

1) MUCH OF ELIOT-A IS BEDROCK, OCCASIONALLY EXPOSED TO HIGH WAVES. BIOLOGICAL COMMUNITIES ON THE HABITATS SHOW EVIDENCE OF INTENSIVE RECRUITMENT FOR SEVERAL SPECIES, INCLUDING

MYTILUS (*M. edulis*), BARNACLES (*Balanus* spp., *Semibalanus cariosus*), LIMPETS (*Lottia* spp., *Tectura* spp.), PERIWINKLES (*Littorina* spp.), WHELKS (*Nucella*), CHLONS (*Katharina tunicata*), SEA STARS, SEA ANEMONES, AND SOME CLAM SPP. - THIS INDICATES A RECOVERY FROM THE DISTURBANCE AND MORTALITY CAUSED BY THE OIL SPILL, CLEAN UP ACTIVITIES, AND OTHER FACTORS.

2. Algal cover similarly shows evidence of this trend. Recruitment is strong for Fucus and other species.

## VI SPECIES LIST (cont)

ANIMALS

- A. POLYCHAETE worms  
*Spirorbis* sp. ★ A  
*Serpula* sp. O  
*Crucifera* sp. O
- B. Sea Stars  
*Pycnopodia helianthoides* ★ C  
*Leptasterias* sp. ★ O  
*Pisaster ochraceus* O  
*Orthasterias* spp. O  
*Dermasterias* ★ C
- C. Bryozoans  
 ? sp.
- D. Barnacles  
*Balanus glandula* ★ A  
*Semibalanus cariosus* ★ A  
*Chthamalus dalli* A
- E. Snails  
*Littorina scutulata* ★ A  
*L. sitkana* ★ A  
*Searlesia dira* ★ A  
*Nucella lamellosa* ★ C  
*Tachyrhynchus* spp.? ★ A
- F. Limpets  
*Tectura perisoma* ★ A  
*T. scutum* ★ A  
*Lottia* spp. ★ C
- G. Jingles -  
*Pododesmus cepio* O
- H. CHITONS  
*Istharia tunicata* ★ C  
*Tonicella lineata* O
- I. Mussels - *Mytilus edulis* ★ A
- J. Clams - *Protothaca staminea* ★ R
- K. Anemones  
 ★ *Anthopleura xanthogramma*  
*Tealca crassicornis* O  
 ★ *Epiactis* sp. O
- L. Pulmonates  
 ★ *Siphonaria thersites* C
- M. Crabs -  
*Acantholithodes*  
*Loxechinus* type?  
 ★ *Paguridae* A
- N. Amphipods - *Orchestia* sp.? ★ A  
 O Isopod - unknown. - C
- P. Sarcoglossan spp? - R
- Q Flatworm - unknown sp - R
- R. FISH  
 Pholidae - 2 spp. A  
 Cottidae - 1 spp. O

★ - juveniles present

★ - Abundant

O - Occasional

R - RARE

C - Common

ELIOT - A

TIME 1130 START AT N end

See map

Wild life

2 - Bald Eagle, nest (1)

5 - Herring Gulls (young, 2) Killed out

- Sanderling or Horned Grebe

Western Gull

Unidentified Seabird

Petrelia Cormorant

SECTION 1 ROCK COBBLE

Has dense Barn Spots Moderate

Fucus rare or absent (some dead adults on bedrock)

Hydrobia moderate on " (S, S)

same on (shale (spat)

Gastropods - Littorina scarce on cobbles

NO zone Barnacles some as upper

Fucus - dense adults

Low rocky Moderate juveniles

Low - Moderate Barnacles 0.5

No algae

7 Fucus

Hydrobia

clams

ELIOT - A

SECTION 2 ROCK CLIFF FACE / Boulder

#4 PIT 1

Cliffs

7 Pulmonate top

>>> Barnacles

7 Sponges

Moderate to Scarce Algae

7 Dried Fucus in upper

Seaweed in mid

7 Fucus

Overhang

#3 Beach N of #1 faces rocks

Small offshore rock

- small Katharina

- 7 Fucus

- Hydrobia

Rare Algae

7 Barnacles

Thick black Scum algae

EL107-A

Beach 2

Cobble/Pea

Heavy cover of *Amphipoda*  
128 gms zone

#2 PHOTO - *PARAMEA*  
*AMPHISTOMA*  
COATED ROCK

End of ST-6-2

#3 Headland

*Thalassia* (A)

> *Ulva* (JAS)

~ *Mytilus* sp. - new (S)

> *Fucus*

PHOTO #1 Green/Brown

Slime Algae

Spongiomorpha?

End of Roll ST-6-2

EL107-A

Back to Beach 2

PHOTO 36

On cover in Beach 2

mid-July 35

Bamboo Sclerotium at headland

Headland  
off Beach 2

> *Ulva* too

dense *Ulva* spot

Moderate *Semibalanus* spot in MID zone

Prize *Katharina* juveniles

Mid - *Fucus* ADULTS Dense

*Ulva* moderate

PHOTO 37 *Katharina* juveniles

~2-3 cm

25 in 1 m<sup>2</sup> !! just over rocks

> *Hedophyllum* in low zone

> *Crathogeomys* alga.

Low

Moderate *Pisaster*

1 *Pycnopodia*

*Polysiphonia* like crust w/ "leaves"

Dense - mod *Balanus*.

> *Fucus*

ELIOTA

PHOTO 33 Barnacle (Balanus) Spot  
+ Semibalanus in high zone.

Hf. zone nurse spot (1) moderate  
sparse

Lower zone of beach 2.

> Gastropods & hermit crabs

Zostera bed looks healthy

> Barnacles (1, 2)

Small shrimp

Rock & Boulder - Barnacles & Fucus

Gastropods & limpets

< Littorinis - 7 mm

Can. Mytilus juvenile spot

> Fucus

Anthropoda moderate on vegetation

under arches; FIATWORMS, small

> FISH - some?

> Limpets, few Littorinis

some mytilus

ELIOTA

ROCK CLIFF

> Mytilus juveniles - spot

Dense Barnacle spot 177

77 Littorinis?

22 p. Bots

23 Mixed juvenile & Barnacles

24 Old Coat dull black on wall 5 of beach 3

> Littorinis, Littorinis

Dense moderate

Mytilus? HAIR

Anthopleura xanthogramma

End of ELIOTA

OG L. D. 111 ON

SEGMENT S1, L-107

SUBDIVISION A (Beach at S. end)

DATE 01 APRIL 90

# CHECKLIST

- ☐ H Area
- ☐ Approx. Scale
- ☐ Seg/Sub Body
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HW/LWL
- ☐ SST
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PI Location(s)
- ☐ Photo Location(s)

## LEGEND

1  $\Delta$   
PI - No Subsurface Oil

2  $\Delta$   
PI - Subsurface Oil

$\square$  CT/C  
Continuous Distribution

$\square$  CT/B  
Broken Distribution

$\square$  CT/P  
Patchy Distribution

$\square$  CT/S  
Spashed Distribution

$\square$  CT/S  
Spashed Distribution

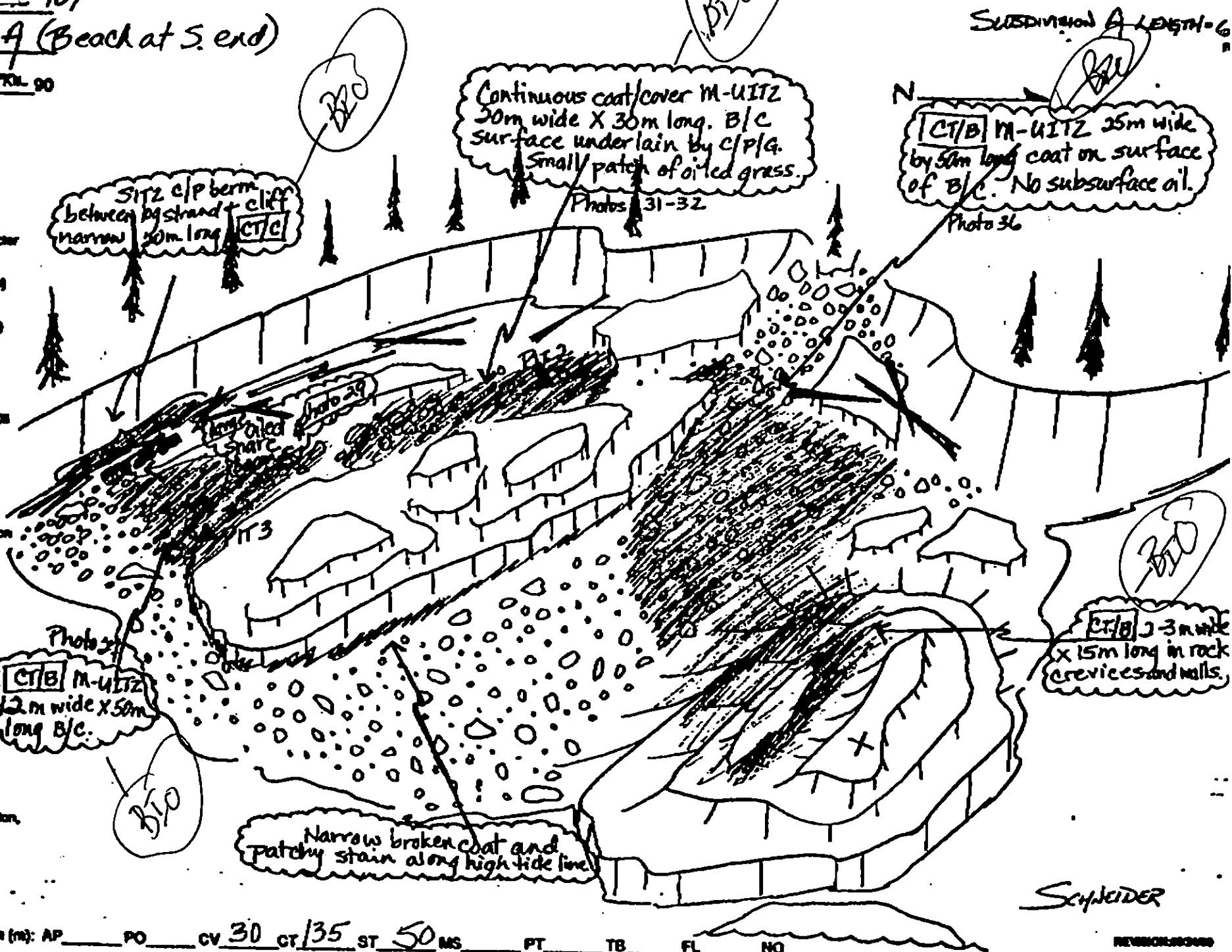
Oil Vegetation

1  $\odot$   
Photo location, direction, and number

TCH MAP

SEGMENT EL-107

SUBDIVISION A LENGTH-6



Oil Character Length (m): AP \_\_\_\_\_ PO \_\_\_\_\_ CV 30 CT/35 ST 50 MS \_\_\_\_\_ PT \_\_\_\_\_ TB \_\_\_\_\_ FL \_\_\_\_\_ NO \_\_\_\_\_

REVISION 000000

OG C.I. LON

SEGMENT ST/ EL-107

SUBDIVISION A

DATE 01 APRIL 90

# CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dis.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. NW/SE
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PR Location(s)
- ☐ Photo Location(s)

## LEGEND

1 Δ  
PR - No Subsurface Oil

2 Δ  
PR - Subsurface Oil

CT/C  
Continuous Distribution

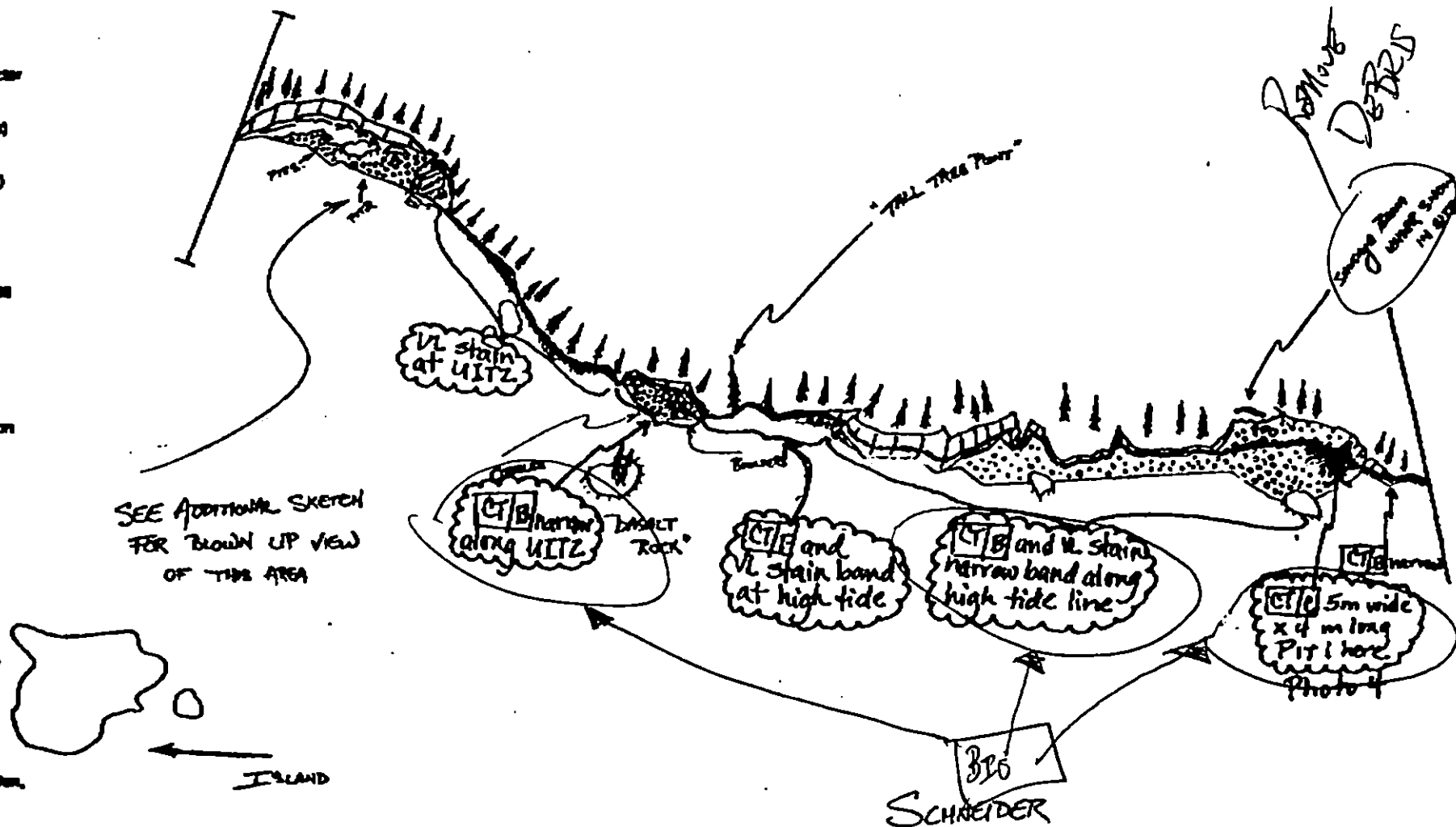
CT/B  
Broken Distribution

CT/P  
Patchy Distribution

CT/S  
Splashed Distribution

Oil Vegetation

Photo location, direction, and number

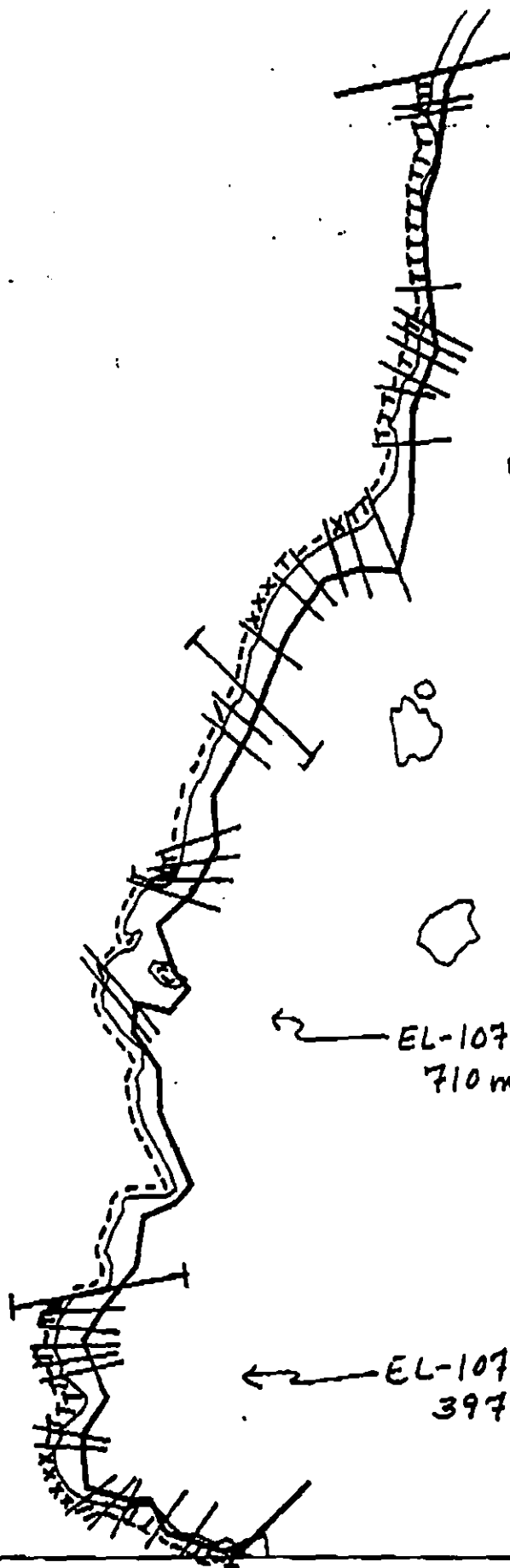


ETCH MAP

SEGME - EL-107  
SUBDIVISION A  
LENGTH = 625 METERS

Oil Character Length (m): AP \_\_\_\_\_ PO \_\_\_\_\_ CV 30 CT 295 ST 300 MS \_\_\_\_\_ PT \_\_\_\_\_ TB \_\_\_\_\_ FL \_\_\_\_\_ NO \_\_\_\_\_

REVISION 03/04/90



← EL-107-A  
625m

← EL-107-B  
710m

← EL-107-C  
397m

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

EL-107

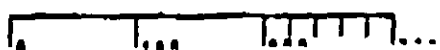
EXXON SEGMENT LENGTH: 1727m

ADEC Segment Length: 1670m

Map Key: PWS-127a

Name: C. DILLON

Date: 4/1/90



REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-107

SUBDIVISIONS: B (2 OF 3)

## SHORELINE EVALUATION

SEGMENT ST/ EL-107 SUBDIVISION B (2 OF 3) DATE 4/1/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**

Active bald eagle nests (5T-2) - 3/1 to 6/1; Recreation special use  
~~designation~~ (6Y) - 6/1 to 9/15. Subsistence area for deer harvesting  
(7II) - 8/15 to 2/28.

destination

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

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

SHPO SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

**OILING CATEGORIZATION:**

Wide 16 m: Medium 34 m: Narrow 554 m: V.Light 39 m: No Oil 0 m  
Subsurface Oil Observed: Yes X No \_\_\_\_\_ Maximum Depth 12 cm

**RECOMMENDATIONS:**

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

**COMMENTS:** Recommend manual pickup of mousse and debris and bioremediation  
of areas shown on attached sketch map. Treatment activities should be  
conducted after 6/1 based on above constraints.

**TAG COMMENTS:**

TAG APPROVAL DATE: \_\_\_\_\_

ADEC \_\_\_\_\_

EXXON \_\_\_\_\_

NOAA \_\_\_\_\_

USCG \_\_\_\_\_

FOSC: \_\_\_\_\_ DATE: \_\_\_\_\_

OG C. DILLON USCG D. SCHNEIDER SEGMENT ST/ EL-107  
 BIO J. BARRY LAND REP. J. PLITCHARD SUBDIVISION B  
 EXXON A. SNOOK ADEC P. MONTESANO TIME 14:45 to 17:00  
 TEAM NO.: 6 TIDE LEVEL: +3 to +6.5 DATE 04/01/90  
 EST. SUBDIVISION LENGTH: 410 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow  
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock Steep Mountain and cliffs  
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S  
 SURFACE SEDIMENTS: R 80 % B 15 % C 4 % P 1 % G 0 % S 0 % M 0 % V  
 SLOPE: Long 5 % Hang 50 % Vert 45 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High  
 OIL CATEGORY LENGTH: W 3 m M 30 m N 520 m VL 170 m NO 0 m

### SURFACE OIL

| CHARACTER        | DISTRIBUTION           |   |   |   | OIL / FILM COLOR |   |   |   | IMPACTED ZONES |   |   |   |
|------------------|------------------------|---|---|---|------------------|---|---|---|----------------|---|---|---|
|                  | N                      | S | E | W | 1                | 2 | 3 | 4 | SU             | U | M | U |
| ASPHALT PAVEMENT |                        |   |   |   |                  |   |   |   |                |   |   |   |
| POOLED           |                        |   |   |   |                  |   |   |   |                |   |   |   |
| COVER            | X                      |   |   |   |                  |   |   | X |                | X | X |   |
| COAT             | ✓                      | X |   |   | ✓                | X |   | ✓ | X              |   |   |   |
| STAIN            |                        | X | X |   |                  |   |   | X |                | X |   |   |
| MOUSSE           |                        |   |   | X |                  |   |   | X | X              |   |   |   |
| PATTIES          |                        |   | X |   |                  |   |   | X |                | X |   |   |
| TARBALLS         |                        |   |   |   |                  |   |   |   |                |   |   |   |
| FILM             |                        |   |   |   |                  |   |   |   |                |   |   |   |
| NO OIL           | Snow on N end of beach |   |   |   |                  |   |   |   | S              |   |   | X |

PAVEMENT: H F S \_\_\_\_\_ sq. m by \_\_\_\_\_ c

PATTIES / TARBALLS \_\_\_\_\_ BAGS

NEAR SHORE SHEEN? NO BR (RW) (SL) TL

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

DEBRIS COLLECTED  
☒ YES ☐ NO  
 TYPE oiled trash  
cleanup debris  
united small trash  
 #BAGS 2

Photographs:

Roll No. ST-6-3

Frames 22

### SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER |    |    |    |    | OILED INTERVAL (cm) | BELOW |    | OIL / FILM COLOR |   |   |   |   | PIT ZONE |   |   |   | A N A | SUBSURFACE SEDIMENTS |
|---------|----------------|--------------------------|----|----|----|----|---------------------|-------|----|------------------|---|---|---|---|----------|---|---|---|-------|----------------------|
|         |                | OP                       | OR | OL | OF | NO |                     | UC    | UC | 1                | 2 | 3 | 4 | 5 | SU       | U | M | U |       |                      |
| 1       | 9              | X                        |    |    |    |    | 0-9                 | X     |    |                  |   |   | X |   | X        |   |   |   |       | C/P                  |
| 2       | 13             | X                        |    |    |    |    | 5-10                |       | X  | X                |   |   | X |   | X        |   |   |   |       | P/G/S                |
| 3       | 12             | X                        |    |    |    |    | 5-12                | X     |    | X                |   |   | X |   |          | X |   |   |       | P/G/S                |
|         |                |                          |    |    |    |    | .                   |       |    |                  |   |   |   |   |          |   |   |   |       |                      |
|         |                |                          |    |    |    |    | .                   |       |    |                  |   |   |   |   |          |   |   |   |       |                      |
|         |                |                          |    |    |    |    | .                   |       |    |                  |   |   |   |   |          |   |   |   |       |                      |

COMMENTS

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EL-107-B SUBDIVISION: B DATE 4/3/90

**ISCG**  
NAME DAVID A. SCHNEIDER SIGNATURE David A. Schneider

☐ NO TREATMENT RECOMMENDED  
COMMENTS

☒ TREATMENT SUGGESTED

783/USCAR

MANUAL REMOVAL OF Mousse AND DEBRIS FROM SMALL BOULDER POCKET BEACHES IN THE CENTER OF THIS SUBDIVISION. RECOVERY OF OILED DEBRIS ALONG BASE OF VERTICAL BLUFF. (P)

**ADEC**  
NAME PETER MONTESANO SIGNATURE Peter Montesano

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS Working South along "B" - The narrow broken band along the LLR + Boulders has a Penetration to 10cm in Sand, Pebbles, and gravel; this area is not Blable or fillable. an omni at the LITZ would be effective. an omni would be ~~effective~~ effective in the vicinity of Pit #2 along with hand work.

The SW corner of "B" is most in need of work for this subdivision. This area has snow at the Supra and a submerged LITZ at the time of inspection. This area has a 5x4m, 3-4cm surface mousse coating of DBR oil; apparently not previously washed. I located a MITZ pit of OP/OU Saturation of 12cm in fine sediments. Oil is thick for Bio, and would be effectively treated by an omni after moving some log at the Supra tidal. Further to the south is oil trapped in cracks along the Rocks faces.

**LAND MANAGER**  
NAME JANETA PRITCHARD SIGNATURE Janeta Pritchard

☐ NO TREATMENT RECOMMENDED  
COMMENTS

☒ TREATMENT SUGGESTED

Manually remove Mousse and Tar from beach on North end of subdivision. Debris (fishnets, rope, etc.) needs to be removed. Small boulder pocket to the South is heavily oiled. Recommend use of omni to wash followed with bioremediation. Down stream in crevice needs to be removed.

## SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/20/02

Segment ST/ EL107 Subdivision B Date (mo / day / yr) April 1 1990Time (24 hr) 1445-1700 Biologist Jim Barry 710 m(A) Substrate type and % of segments:  
(1) Bedrock 20 (2) Boulder 15 (3) Cobble 4 (4) Pebble 1 (5) Sand    (6) Silt   (B) Overall % cover of biota (% of segment): Dense 76 Moderate 14 Low 10

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

Photographs: ST-6-3  
Roll No.   Frames 22-23

## BARNACLES

| Dense        |              |    | Moderate     |              |    | Sparse       |              |              | Rare         |              |              | NOT PRESENT |
|--------------|--------------|----|--------------|--------------|----|--------------|--------------|--------------|--------------|--------------|--------------|-------------|
| 1U           | 1M           | 1L | 1U           | 1M           | 1L | 1U           | 1M           | 1L           | 1U           | 1M           | 1L           |             |
| <del>2</del> | <del>2</del> | 2  | <del>2</del> | <del>2</del> | 2  | <del>2</del> | <del>2</del> | <del>2</del> | 2            | 2            | <del>2</del> |             |
| 3            | 3            | 3  | 3            | 3            | 3  | 3            | 3            | 3            | <del>3</del> | <del>3</del> | <del>3</del> |             |
| 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 |    |              | NOT PRESENT |
|--------------|--------------|----|--------------|----|----|--------------|--------------|--------------|------|----|--------------|-------------|
| 1U           | 1M           | 1L | 1U           | 1M | 1L | 1U           | 1M           | 1L           | 1U   | 1M | 1L           |             |
| <del>2</del> | <del>2</del> | 2  | <del>2</del> | 2  | 2  | <del>2</del> | <del>2</del> | <del>2</del> | 2    | 2  | <del>2</del> |             |
| 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 |    |    | NOT PRESENT |
|--------------|--------------|----|--------------|--------------|----|--------------|--------------|----|------|----|----|-------------|
| 1U           | 1M           | 1L | 1U           | 1M           | 1L | 1U           | 1M           | 1L | 1U   | 1M | 1L |             |
| <del>2</del> | <del>2</del> | 2  | <del>2</del> | <del>2</del> | 2  | <del>2</del> | <del>2</del> | 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  |             |

## FUCUS

| Dense        |              |              | Moderate     |              |    | Sparse       |              |    | Rare         |    |    | NOT PRESENT |
|--------------|--------------|--------------|--------------|--------------|----|--------------|--------------|----|--------------|----|----|-------------|
| 1U           | 1M           | 1L           | 1U           | 1M           | 1L | 1U           | 1M           | 1L | 1U           | 1M | 1L |             |
| <del>2</del> | <del>2</del> | <del>2</del> | <del>2</del> | <del>2</del> | 2  | <del>2</del> | <del>2</del> | 2  | <del>2</del> | 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  |             |

Wildlife Observations/ General Comments:

Ecological Considerations: 64, 711, 952

SEE ATTACHED PAGES

pry EL107-B

7 *Senecio*  
*Mytilus* ...

Rock of ... -  
 Int ...

Turritellidae  
*Tachyrrhynchus erosus*

Pulmonate  
*Siphonaria hesperis*

*Sarcoglossum*?

*Pododesmus cepus* - Jorgensen

END AT 1700

EL107-C 2 AP 90

- START 1105

Boulder field 1

High > Porphyra

> Barn Balanus scith?  
 S, #1, J

Mytilus sparsus - rare S-J  
 Fucus rare A O just

UVA

Littorina med to J

Lingula L-dig? med/scars

#20 Ocean on beach w/ oil

#19 Closer view

18 Still Closer view

Cliffs of Beach?

Gull

Killer whales

Modiolata Minors JS

Lingula MOD - DERS

Littorina - moderate L-scat/sit

2/2

EL107B

TIME 1945

Cliff Continued

Low &gt; Fucus

~~same~~ - HIGH

Dense Mytilus (J, S)

~~Low~~ Lenses / monotypic

Littorina nodosa J, S

Nucella - nodosa

#23 - Mussel Recruitment in crevices  
 Also dense Lenses, Littorina

MID Zone Pool

Corallina

Rhodospira

Ratfia

~~Dense~~ Lenses recruit

Obolus? A

Katharina

Arctidius? Collyria!

Anthopleura

Littorina nodosa

Nucella

J, S

PACUS

Red. A

EU07-B

Boulder Beach 1

7 fucus, 7 Mytilus recruits  
 Sparse Mytilus.

Boulders & don't have the Mytilus like  
 the cliffs -

Same like

NO Nereocystis beds offshore

Animals the same all over

Blue greens cover mud & boulders  
 Feeds like

Pt 2 Dense Mussel recruits

Dense Fucus J.

Fucus in pool mid level

TULIP, none, some, callanthus

Pool - Sprouts

Essentially identical to last shot

3/4

| Wildlife                 | EL107-B |
|--------------------------|---------|
| Ravens                   |         |
| Crows                    |         |
| Eagles                   |         |
| Geese - C. V. B.         |         |
| Flamingos                |         |
| Amphipods                |         |
| batfish?                 |         |
| Pigeons - 4              |         |
| <hr/>                    |         |
| Pt 2                     |         |
| Dense Bivalves           |         |
| Balanus A45              |         |
| Semibalanus A - moderate |         |
| Urgates - moderate A41   |         |
| Littorina                |         |
| Pt 3                     |         |
| Mytilus                  |         |
| Sem. balan               |         |
| Epractis dense           |         |
| Tridacna ? Solid Brown   |         |
| " Red/green/white spots  |         |
| Katharina dense          |         |
| Spot dense               |         |

EL107-B

Semibalanus Spot Moderate  
On the rocks  
All other mammals good H44

Barack B - Cobble / Pebbles

Very little on beach  
on rocks:  
to some Balanus adact  
Moderate " spot  
Balanus dense Littorina  
rare ~~Urgates~~ Urytes  
Rare Highline

---

#22 + dense to cause pool

CLIFF A - By Boat  
445 pm

Normal recruitment slightly  
on spots

pp 4 EL107-B

7 *Semibalanus*  
*Mytilus* ...

*Rock offshoot* -  
Int 2h

*Turritellidae*  
*Tachychincha erosus*

*Pulmonate*  
*Siphonaria hesitans*

*Sarcoglossum?*

*Pododesmus* Capro - Jinglehull

END AT 1700

EL107-B

APRIL 1 1990

1/

ADDITIONAL COMMENTS

TIME 1445 - 1700  
TIDE +3 → +7

- 1) EL107-B IS VERY SIMILAR, WITH REGARD TO HABITAT TYPE, TO EL107-A
  - a) Headland & Cliff faced coastlines have similar appearance, and biotic assemblages between A & B
  - b) Boulder and cobble beaches too, are similar.
- 2) MAJOR SPECIES - See comments for EL107-A
- 3) OTHER SPECIES - MOST OR ALL OTHER SPECIES WERE DISTRIBUTED AS IN EL107-A - SEE COMMENT (EL107) FOR FURTHER INFO. (SPECIES LISTS, ETC.)

WILDLIFE -

LIST IN EL107-A includes those found in EL107-B.

VII WILDLIFE

- 3 Pelagic Cormorant
- 3 BALD EAGLES
- 2 RAVEN
- 10 CROW
- 5 SEALS
- 2 RED NECKED GREBE ?
- 2 HORNED GREBE
- 5 WHITE WINGED SCOTER

VIII GENERAL COMMENTS

- 1) Eel grass (ZOSTERA) is present in patches in the low intertidal. This species is an important spawning substrate for herring. These eel grass beds should not be highly disturbed during clean up operations. ~~the~~ Since they are in the low zone, clean up should cause little or no damage.
- 2) Bald Eagle nesting is active nearby <sup>(~15 km)</sup>. I am not sure that clean up would interfere at all.
- 3) This stretch of beach appears to be recovering <sup>well</sup> from disturbance.

## B. COBBLE BEACHES -

These beaches show evidence of intense disturbance by winter storms. Cobbles are mostly bare, or have a film of filamentous green algae in low zones to mid zones, upper zones are often covered by a thick coat of Porphyra

VI. Species ListPLANTS

## A. Green Algae - CHLOROPHYTA

ULVA spp.

SPONGOMORPHA

ENTROMORPHA spp.

Urospora

## B. RED ALGAE - RHODOPHYTA

Ahnfeltia plicata

Lithothamnion sp.

Porphyra perforata

Rhodomela larix

Rhodymenia palmata

Rhodoglossum affine

Calliarthron sp.

Halosaccion glandiforme

Plocamium sp.

Membranoptera platyphylla

Iridaea sp.

Petrocelis

## C. Brown Algae - Phaeophyta

Alaria pylaii

Fucus distichus

Laminaria spp.

Ralfsia

Scytosiphon.

Odonthalia

Costaria n

## D. HIGHER PLANTS

ZOSTERA

SEGMENT E-107  
 SUBDIVISION B  
 DATE 01 APR 90

# CHECKLIST

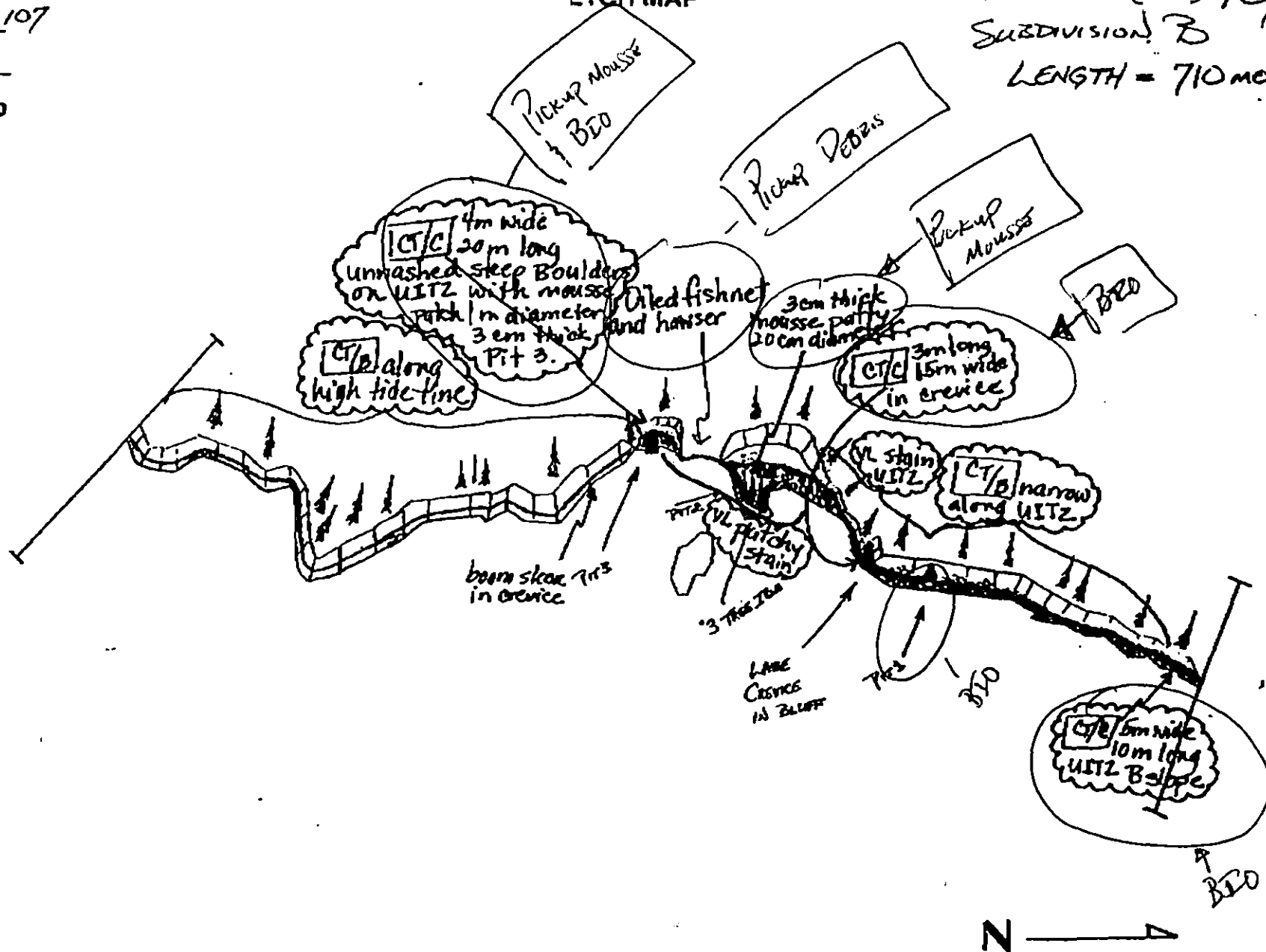
☐ N Arrow  
☐ Approx. Scale  
☐ Seg/Sub Entry  
☐ Oil Dist.  
☐ Width  
☐ Length  
☐ % Cover  
☐ Substrate Character  
☐ Est. HPA/LWR  
☐ SSL  
☐ Profile Location(s)  
☐ Profile(s)  
☐ Pit Location(s)  
☐ Photo Location(s)

## LEGEND

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

## ETCH MAP

SEGMENT C-107  
 SUBDIVISION B  
 LENGTH = 710 METERS

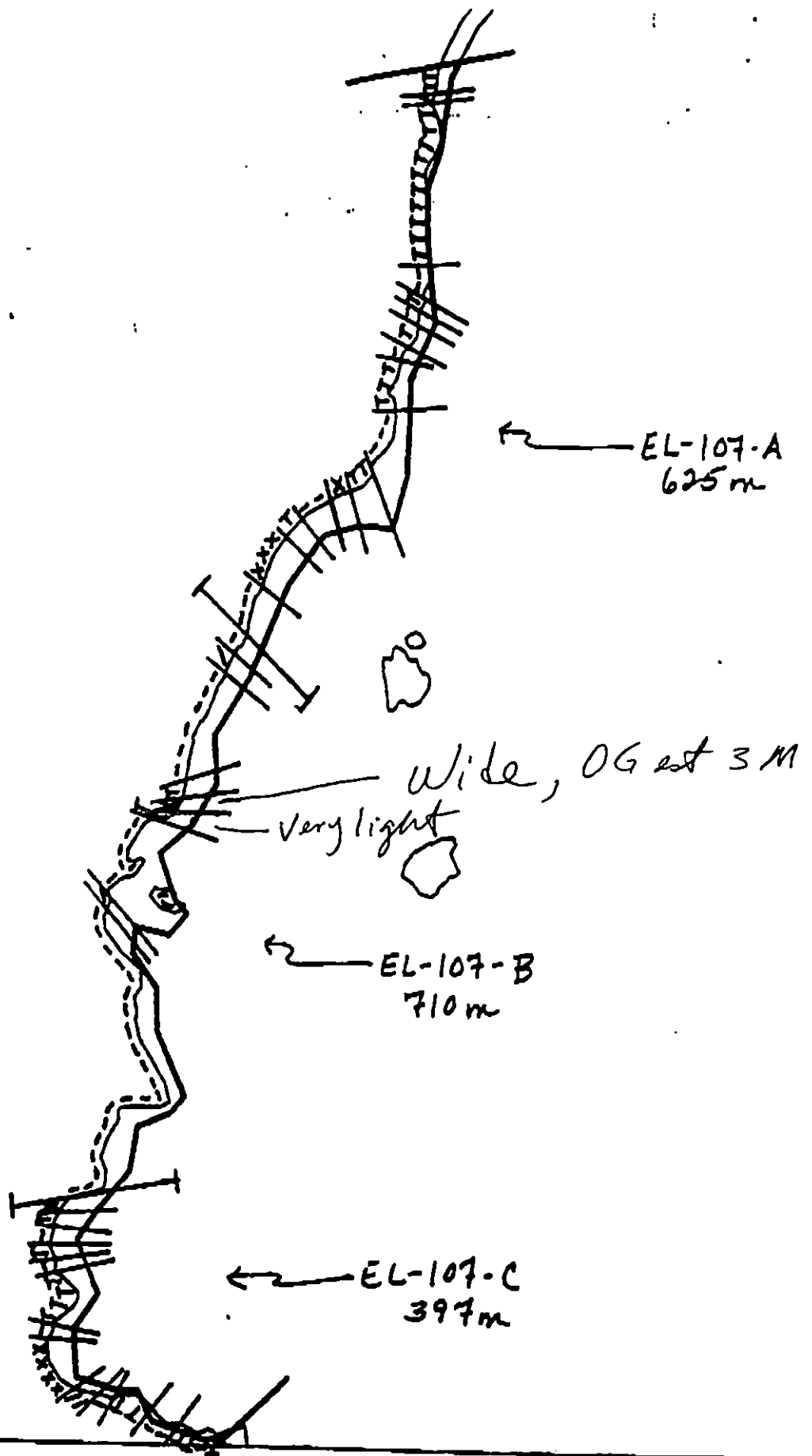


SCHNEIDER



Oil Character Length (m): AP \_\_\_\_\_ FO \_\_\_\_\_ CV 20 CT 520 ST 170 MS 1 PT 20cm TB \_\_\_\_\_ FL \_\_\_\_\_ NO \_\_\_\_\_

REVISION: 200408



REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-107

SUBDIVISIONS: C (3 OF 3)

SHORELINE EVALUATION

SEGMENT ST/ EL-107 SUBDIVISION C (3 OF 3) DATE 4/1/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**

Active bald eagle nests (5T-2) - 3/1 to 6/1; Recreation special use designation (6Y) - 6/1 to 9/15; Subsistence area for deer harvesting (7II) - 8/15 to 2/28.

destination

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

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

SHPO SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

**OILING CATEGORIZATION:**

Wide 65 m: Medium 28 m: Narrow 93 m: V.Light 194 m: No Oil 0 m  
Subsurface Oil Observed: Yes X No \_\_\_\_\_ Maximum Depth 60 cm

**RECOMMENDATIONS:**

|                                                                   |                                                                                             |
|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| <input type="checkbox"/> No Treatment Recommended                 | <input type="checkbox"/> Snare/Absorbent Booms                                              |
| <input checked="" type="checkbox"/> Treatment Recommended         | <input type="checkbox"/> Oil Snares (pom poms)                                              |
| <input checked="" type="checkbox"/> Manual Pickup                 | <input type="checkbox"/> Absorbents (pads, rolls, etc)                                      |
| <input checked="" type="checkbox"/> Bioremediation                | <input checked="" type="checkbox"/> Spot Washing: <input checked="" type="checkbox"/> Wands |
| <input type="checkbox"/> Tarmat: <input type="checkbox"/> Breakup | <input type="checkbox"/> Beach Cleaner                                                      |
| <input type="checkbox"/> Removal                                  | <input type="checkbox"/> Other (see comments)                                               |

**COMMENTS:** Recommend bioremediation of areas shown on attached sketch map and manual pickup of tarballs. Treatment should be conducted after 6/1 based on above constraints.

**TAG COMMENTS:**

**TAG APPROVAL DATE:** \_\_\_\_\_

ADEC \_\_\_\_\_  
EXXON \_\_\_\_\_  
NOAA \_\_\_\_\_  
USCG \_\_\_\_\_

FOSC: \_\_\_\_\_ DATE: \_\_\_\_\_

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST EL-107-C SUBDIVISION: C DATE 4/3/90

USCG

NAME DAVID A. SCHNEIDER SIGNATURE David A. Schneider

☐ NO TREATMENT RECOMMENDED  
COMMENTS

☒ TREATMENT SUGGESTED

783 / USCGR

Two Pocket Beaches in Subdivision C are in need of treatment. The area adjacent to Subdivision B should be manually wiped where feasible, and boulders polished for additional oiled debris. The 2nd & larger pocket beach warrants bioremediation treatment, with tilling recommended to expose deeper oiled sediments to O<sub>2</sub>. Boulders & rock faces to south of this beach should be wiped/scrubbed in areas of concentrated tar/coat. Remaining portion of Subdiv - (steep bluffs with boulder slope) - is highly exposed to wave action. Star band along this portion can be left untreated for future storm action.

ADEC

NAME PETER MONTESANO SIGNATURE Peter Montesano

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS My comments describe 2 beaches working from North to South. These two beaches are in most need of work for Sub 'C'. Beach #1 is the first 75m from 'B' w/ 8-10m wide band at the UITE + Supra. In spots along back Headlands splashes reach up 4m a DBL coating. The oiling is well depicted on map. The oil is not easily hand wiped under and around boulders but that seems to be the most reasonable approach. Washing would be most effective only at narrow tide windows. - Beach #2 and Boulders to east: Boulders to East (Pit #1) UITE, stretch oiling down into finer sediments, hand work, not reachable by omni. Beach #2 is well documented on map. No pits dug among smaller boulders below UITE. Supratidal covered in snow, and supratidal berm buries the oiling deeper below clean cobbles. Beach could be tilled, washed and bioed. SW corner of beach (Pit #5) is a rock lined gully w/ snowy supra and est. Sub. UITE + Supra oiling. Hand work able and washable, trapped by small drainage. Technically, Not a bio area, but could be partially effective. The rest of the beach has some pocket UITE oiling only reachable by hands and is not visible from shift. The last pocket of 'C' is negligible oil, but rich coral, etc. ITC to be avoided.

LAND MANAGER

NAME ANITA FRITCHARD SIGNATURE Anita Fritchard

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

I concur with ADEC comments. Because Beach 2 is ideal for access to the uplands, I believe extra attention should be given to this area. The SWIC needs to be reassessed after the crew is gone. Because the oil has deeply penetrated the substrate, the use of hot water wash, tilling and bioremediation is recommended. A small stream flows on the N. end of this beach.

## SHORELINE OILING SUMMARY

REVISION NO. 02

OG C. DILLON USCG D. SCHNEIDER SEGMENT ST/ EL-107  
 BIO J. BARRY LAND REP J. PRITCHARD SUBDIVISION C  
 EXXON A. SNOOK ADEC P. MONTESANO TIME 11:00 to 13:30  
 TEAM NO.: 6 TIDE LEVEL: +5 to +1 DATE 04/02/90  
 EST. SUBDIVISION LENGTH: 397 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☒ Snow  
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock steep mountain and cliffs  
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S  
 SURFACE SEDIMENTS: R 50 % B 30 % C 15 % P 5 % G 0 % S 0 % M 0 % V  
 SLOPE: Lang 55 % Hang 20 % Vert 25 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High  
 OIL CATEGORY LENGTH: W 172 m M 75 m N 47 m VL 100 m NO 0

## SURFACE OIL

| CHARACTER        | DISTRIBUTION |   |   |   | OIL / FILM COLOR |   |    |    |    |    |    |    | IMPACTED ZONES |   |    |   |
|------------------|--------------|---|---|---|------------------|---|----|----|----|----|----|----|----------------|---|----|---|
|                  | C            | R | P | B | W                | Y | OR | GR | BL | PK | SL | OT | SU             | U | MS | U |
| ASPHALT PAVEMENT |              |   |   |   |                  |   |    |    |    |    |    |    |                |   |    |   |
| POOLED           |              |   |   |   |                  |   |    |    |    |    |    |    |                |   |    |   |
| COVER            |              |   | X |   | X                |   |    |    |    |    |    |    |                | X |    |   |
| COAT             | X            |   |   | ✓ |                  |   |    | X  |    |    |    |    | X              | X |    |   |
| STAIN            |              | X | X |   |                  |   |    | X  |    |    |    |    | X              |   |    |   |
| MOUSSE           |              |   |   |   |                  |   |    |    |    |    |    |    |                |   |    |   |
| PATTIES          |              |   |   |   |                  |   |    |    |    |    |    |    |                |   |    |   |
| TARBALLS         |              |   |   | X | X                |   |    |    |    |    |    |    | X              |   |    |   |
| FILM             |              |   |   |   |                  |   |    |    |    |    |    |    |                |   |    |   |
| NO OIL           |              |   |   |   |                  |   |    |    |    |    |    |    | S              |   |    | X |

PAVEMENT: H F S      sq. m by     PATTIES / TARBALLS 2 BANEAR SHORE SHEEN? ☒ NO BR RW SL T

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

DEBRIS COLLECT ☒ YES ☐ NOTYPE: Small tr#BAGS 1

Photographs:

Roll No. ST-6-3Frames 10, 11, 14, 16, 18-20

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER |    |    |    |    |  | OILED INTERVAL (cm) | BELOW |    | OIL / FILM COLOR |   |    |    |    |    |    |    | PIT ZONE |   |    |   | A<br>N<br>A | SUBSURFACE SEDIMENTS |
|---------|----------------|--------------------------|----|----|----|----|--|---------------------|-------|----|------------------|---|----|----|----|----|----|----|----------|---|----|---|-------------|----------------------|
|         |                | OP                       | OR | OL | OF | MO |  |                     | UC    | UC | W                | Y | OR | GR | BL | PK | SL | OT | SU       | U | MS | U |             |                      |
| 1       | 16             | X                        |    |    |    |    |  | 0-12                | X     | X  |                  |   |    |    |    |    |    |    | X        |   |    |   |             | C/P                  |
| 2       | 26             |                          |    |    |    | X  |  | 0-17                |       |    |                  |   |    |    |    |    |    |    | X        |   |    |   |             | C/P/G                |
| 2       | 26             | X                        |    |    |    |    |  | 17-22               | X     | X  |                  |   |    |    |    |    |    |    | X        |   |    |   |             | P/G                  |
| 3       | 35             | X                        |    |    |    |    |  | 0-35                | X     |    |                  |   | X  |    |    |    |    |    | X        |   |    |   |             | C/P                  |
| 4       | 62             |                          |    |    |    | X  |  | 0-35                |       |    |                  |   |    |    |    |    |    |    |          | X |    |   |             | C/P                  |
| 4       | 62             |                          |    | X  |    |    |  | 35-60               | X     |    |                  | X |    |    |    |    |    |    |          | X |    |   |             | C/P                  |
| 5       | 30             | X                        |    |    |    |    |  | 0-30                | X     | X  |                  |   |    |    |    |    |    |    | X        |   |    |   |             | C                    |

# SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22

Segment ST/ EL107 Subdivision C Date (mo/day/yr) APRIL 2 1996

Time (24 hr) 1106-1330 Biologist Jim Barry Length 397 m

(A) Substrate type and % of segments:  
(1) Bedrock 50 (2) Boulder 30 (3) Cobble 15 (4) Pebble 5 (5) Sand      (6) Silt     

(B) Overall % cover of biota (% of segment): Dense 80 Moderate 15 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: ST-6-3

Roll No.     

Frames 13, 14

## BARNACLES

| Dense        |              |    | Moderate     |              |    | Sparse       |              |              | Rare         |              |    |
|--------------|--------------|----|--------------|--------------|----|--------------|--------------|--------------|--------------|--------------|----|
| 1U           | 1M           | 1L | 1U           | 1M           | 1L | 1U           | 1M           | 1L           | 1U           | 1M           | 1L |
| <del>2</del> | <del>2</del> | 2  | <del>2</del> | <del>2</del> | 2  | <del>2</del> | <del>2</del> | <del>2</del> | <del>2</del> | <del>2</del> | 2  |
| <del>3</del> | <del>3</del> | 3  | <del>3</del> | <del>3</del> | 3  | <del>3</del> | <del>3</del> | <del>3</del> | <del>3</del> | <del>3</del> | 3  |
| <del>4</del> | <del>4</del> | 4  | <del>4</del> | <del>4</del> | 4  | <del>4</del> | <del>4</del> | <del>4</del> | <del>4</del> | <del>4</del> | 4  |
| <del>5</del> | <del>5</del> | 5  | <del>5</del> | <del>5</del> | 5  | <del>5</del> | <del>5</del> | <del>5</del> | <del>5</del> | <del>5</del> | 5  |
| <del>6</del> | <del>6</del> | 6  | <del>6</del> | <del>6</del> | 6  | <del>6</del> | <del>6</del> | <del>6</del> | <del>6</del> | <del>6</del> | 6  |

NOT PRESENT

## MYTILUS

| Dense        |              |    | Moderate     |              |    | Sparse       |              |              | Rare         |              |    |
|--------------|--------------|----|--------------|--------------|----|--------------|--------------|--------------|--------------|--------------|----|
| 1U           | 1M           | 1L | 1U           | 1M           | 1L | 1U           | 1M           | 1L           | 1U           | 1M           | 1L |
| <del>2</del> | <del>2</del> | 2  | <del>2</del> | <del>2</del> | 2  | <del>2</del> | <del>2</del> | <del>2</del> | <del>2</del> | <del>2</del> | 2  |
| <del>3</del> | <del>3</del> | 3  | <del>3</del> | <del>3</del> | 3  | <del>3</del> | <del>3</del> | <del>3</del> | <del>3</del> | <del>3</del> | 3  |
| <del>4</del> | <del>4</del> | 4  | <del>4</del> | <del>4</del> | 4  | <del>4</del> | <del>4</del> | <del>4</del> | <del>4</del> | <del>4</del> | 4  |
| <del>5</del> | <del>5</del> | 5  | <del>5</del> | <del>5</del> | 5  | <del>5</del> | <del>5</del> | <del>5</del> | <del>5</del> | <del>5</del> | 5  |
| <del>6</del> | <del>6</del> | 6  | <del>6</del> | <del>6</del> | 6  | <del>6</del> | <del>6</del> | <del>6</del> | <del>6</del> | <del>6</del> | 6  |

NOT PRESENT

## GASTROPODS

| Dense        |              |    | Moderate     |              |    | Sparse       |              |              | Rare         |              |    |
|--------------|--------------|----|--------------|--------------|----|--------------|--------------|--------------|--------------|--------------|----|
| 1U           | 1M           | 1L | 1U           | 1M           | 1L | 1U           | 1M           | 1L           | 1U           | 1M           | 1L |
| <del>2</del> | <del>2</del> | 2  | <del>2</del> | <del>2</del> | 2  | <del>2</del> | <del>2</del> | <del>2</del> | <del>2</del> | <del>2</del> | 2  |
| <del>3</del> | <del>3</del> | 3  | <del>3</del> | <del>3</del> | 3  | <del>3</del> | <del>3</del> | <del>3</del> | <del>3</del> | <del>3</del> | 3  |
| <del>4</del> | <del>4</del> | 4  | <del>4</del> | <del>4</del> | 4  | <del>4</del> | <del>4</del> | <del>4</del> | <del>4</del> | <del>4</del> | 4  |
| <del>5</del> | <del>5</del> | 5  | <del>5</del> | <del>5</del> | 5  | <del>5</del> | <del>5</del> | <del>5</del> | <del>5</del> | <del>5</del> | 5  |
| <del>6</del> | <del>6</del> | 6  | <del>6</del> | <del>6</del> | 6  | <del>6</del> | <del>6</del> | <del>6</del> | <del>6</del> | <del>6</del> | 6  |

NOT PRESENT

## FUCUS

| Dense        |              |    | Moderate     |              |    | Sparse       |              |              | Rare         |              |    |
|--------------|--------------|----|--------------|--------------|----|--------------|--------------|--------------|--------------|--------------|----|
| 1U           | 1M           | 1L | 1U           | 1M           | 1L | 1U           | 1M           | 1L           | 1U           | 1M           | 1L |
| <del>2</del> | <del>2</del> | 2  | <del>2</del> | <del>2</del> | 2  | <del>2</del> | <del>2</del> | <del>2</del> | <del>2</del> | <del>2</del> | 2  |
| <del>3</del> | <del>3</del> | 3  | <del>3</del> | <del>3</del> | 3  | <del>3</del> | <del>3</del> | <del>3</del> | <del>3</del> | <del>3</del> | 3  |
| <del>4</del> | <del>4</del> | 4  | <del>4</del> | <del>4</del> | 4  | <del>4</del> | <del>4</del> | <del>4</del> | <del>4</del> | <del>4</del> | 4  |
| <del>5</del> | <del>5</del> | 5  | <del>5</del> | <del>5</del> | 5  | <del>5</del> | <del>5</del> | <del>5</del> | <del>5</del> | <del>5</del> | 5  |
| <del>6</del> | <del>6</del> | 6  | <del>6</del> | <del>6</del> | 6  | <del>6</del> | <del>6</del> | <del>6</del> | <del>6</del> | <del>6</del> | 6  |

NOT PRESENT

## Wildlife Observations/ General Comments:

Glaucous gull. Raven  
Seal Crow  
Bald Eagles Pigeon Guillemot

Ecological Considerations: 6 Y, 7 II, 5T-2

- 1) Beach recovery appears to be progressing rapidly
- 2) Unlikely that small clean up crew will interfere with any listed sensitivities

## TIME

START 1105 - 1330

STOP 45 → +1

## ADDITIONAL COMMENTS

I - ELIOT - C INCLUDES A COBBLE / BOULDER BEACH & A SMALL COVE (BOULDER), BOTH OF WHICH ARE PROTECTED FROM LARGE WAVES. UNLIKE MORE WAVE-EXPOSED COBBLE BEACHES IN THIS SEGMENT THAT HAVE RELATIVELY LOW BIOTIC ABUNDANCES, THOSE IN ELIOT - A ~~ARE~~ HAVE DENSE GASTROPOD & ~~AND~~ MYTILUS COVER. THIS IS LIKELY DUE TO THE LOW FREQUENCY OF DISTURBANCE, THUS ALLOWING THESE SPECIES TO SURVIVE AND ACCUMULATE. THE PROTECTED COVE HAD THE HIGHEST DIVERSITY & COVER OF BIOTA YET OBSERVED. ALL SPECIES LISTED IN THE REPORT FOR ELIOT - A ARE PRESENT, PLUS THOSE LISTED BELOW.

## II MAJOR SPECIES

- A. BARNACLES - EXCEPT ~~ON~~ WITHIN CORALS ARE FREQUENTLY ROLLED BY WAVES, BARNACLES ARE ABUNDANT, SPAT ARE GENERALLY DENSE. HIGHEST DENSITIES PRESENT ON CLIFF FACES
- B. MYTILUS - DENSITIES ARE FREQUENTLY HIGH ON BEDROCK AND LARGE BOULDER AND OFTEN ~~OR~~ DENSE IN PATCHES ON <sup>THE</sup> COBBLE BEACH.
- C. GASTROPODS -
1. PERIWINKLES - LITERINES VARIABLY ABUNDANT, BUT VERY DENSE ON THE COBBLE BEACH. IN THE MID ZONE TO LOW ZONE. SPAT & SMALL JUVENILES ARE ABUNDANT IN CREVICES NEAR MUSSEL BEDS & BARNACLES IN THE HIGH TO MID ZONE.
  2. WHITTS - MOST ABUNDANT WITHIN BARNACLES & MUSSELS ARE PRESENT, BUT ALSO IN COBBLE BEACHES
  3. LIMPETS - GREATEST ABUNDANCE OF SPAT, JUVENILES (DENSE TO MODERATE) IN MUSSEL / BARNACLE HABITATS IN THE MID TO HIGH ZONE.
- D. FUCUS - DENSE IN THE MIDDLE ZONE TO LOW ZONE, SPARSE TO MODERATE IN THE ~~AND~~ HIGH ZONE.

### III OTHER SPECIES

— found in core on EL107-B, in addition to those listed in EL107-A

Hydrocoral - *Stylophora porphyra*

Anemones - *Anthopleura artemesia*

Cyrtans - *Tomicella insignis*

Sea Star - *Henricia leviacule*

Brithstars - *Ophiopholis aculeata*?

*Ophiura* sp.?

Coral

*Pugittia gracilis*

*Acantholithodes hispidus*

Hydrozoa

*Sertulariidae*.

SNAILS

*Littorina digitalis*

*Nucella emarginata*

### IV WILDLIFE -

GLAUCOUS GULL

SEAL

FALCONS

RAVEN

CRAN

PIGEON GUILLEROT

### V General Comments

1) This beach section has a heavy recruitment of mussels, barnacles, and gastropods (*Lingula*, *Littorina*)

Algae are abundant (*Fucus* and others) from the middle to low and subtidal zones.

2) Mussel beds (recovering) should not be disturbed during cleaning operations, especially on the cobble beach.

Cliff @ and beach 2 EL107C

7 *Semibalanus* - moderate - *Sema A*  
mussels - moderate

40 *Siphonaria* - dense in patches  
40 / .1 m<sup>2</sup>

Corrected side -

Dense *Mytilus* 3 part  
Moderate Adults

Dense *Balanus* *Semibalanus*

Moderate *Perna* *Siphonaria*

Dense *Littorina*

Moderate - *Littorina*

*Porphyra*

Exposed - Same

7 juvenile *Buccina* 1 part  
4 *Mod* *Mytilus*

Pool ~ 15 m<sup>2</sup> w/

13 *Katharina*

1 *Mytilus*

*Crallina*, *Buccella*, *Callinectes*

7 *Semibalanus*

white bars - 1

*Arctia*?

*Anthopleura*?

*Sipho*

## Inverts List

*Balanus* *clavus*

*Semibalanus* *cariculus*

*Pagurus*

*Littorina* *scutellata*

*L. striata*

*Nucella* *lamellosa*

*Pandora* spp

*Littorina* spp.

*Mytilus* *edulis*

*Spirorbis*

*Serpula*? or *Coneisera* T

*Pycnogonidae*

*Dermasterias*

*Orthasterias*

*Hydroid* *Mopalia* *muvea*

1 *Wulfsbrandia*

## SNAILS

*Nucella* *lamellosa*

*Scapharca* *dicta* - *Buccinidae*

*Tonicella* *lineata*

EL107C

Sandy Beach 2

Photo 17 Boulderhead  
16 pits 1

COBBLE/Boulder/pebble beach 2

Lithomus - dense S/S 1000's/m<sup>2</sup>

14 - Photo of Lithomus

Dense fucus

larger boulders w/ dense Mytilus

Cobble/Boulder - Sparse Lycopodium

Dense Lithomus

mod Sparse S/S Pecten Mytilus

moderate Lithomus/Lycopodium

Dense spot for Pecten

lower Cobble - moderate

Amphipods moderate

C1. F. at N end of Beach 2 -

mod-dense Pecten S/S

> Katharina

Dense Lycopodium (Lycopodium?)

EL107C

Dense Balanus / Semi A

S/S

Hi Mod fucus

Dense MID

Eagle

Den track 1

Abudefduf

Redfish

Anthopleura

13 - Lithothamnion

12 -

Pool Litter

Serpula Katharina

Katharina Spat

Anthopleura

Challinor

Tunicella serrata

Cove @ Beach 2

Hi/dendrobranchia

Ralphia

Scallop

Petrolia

Pholomenia

Microcladia

> P

cah-ata

# SPECIES LIST

Callophyllis ? + Palmaria or Rhodomena

Keys to Callophyllis

Spp A - Rhodoglossum ?

Pisania ?

Gigartina

Ulva - Green tufted stuff or Cladophora

Rhodomena larva

Ulva - sp

Fucus disticus

Sargassum

Gelidium ?

Band 2

Moderate # Adult Red Sculpin

Beach 3

My favorite Beach

Low level zone

Hydrocoloid algae

Hericium

Hydrocoloid stuff

Mylae

Gammarus

Ophiuroidea under rocks

Several ground crabs...

OG C. DILLON

SEGMENT ST/1 -107

SUBDIVISION C

DATE 02 / APRIL 90

# CHECKLIST

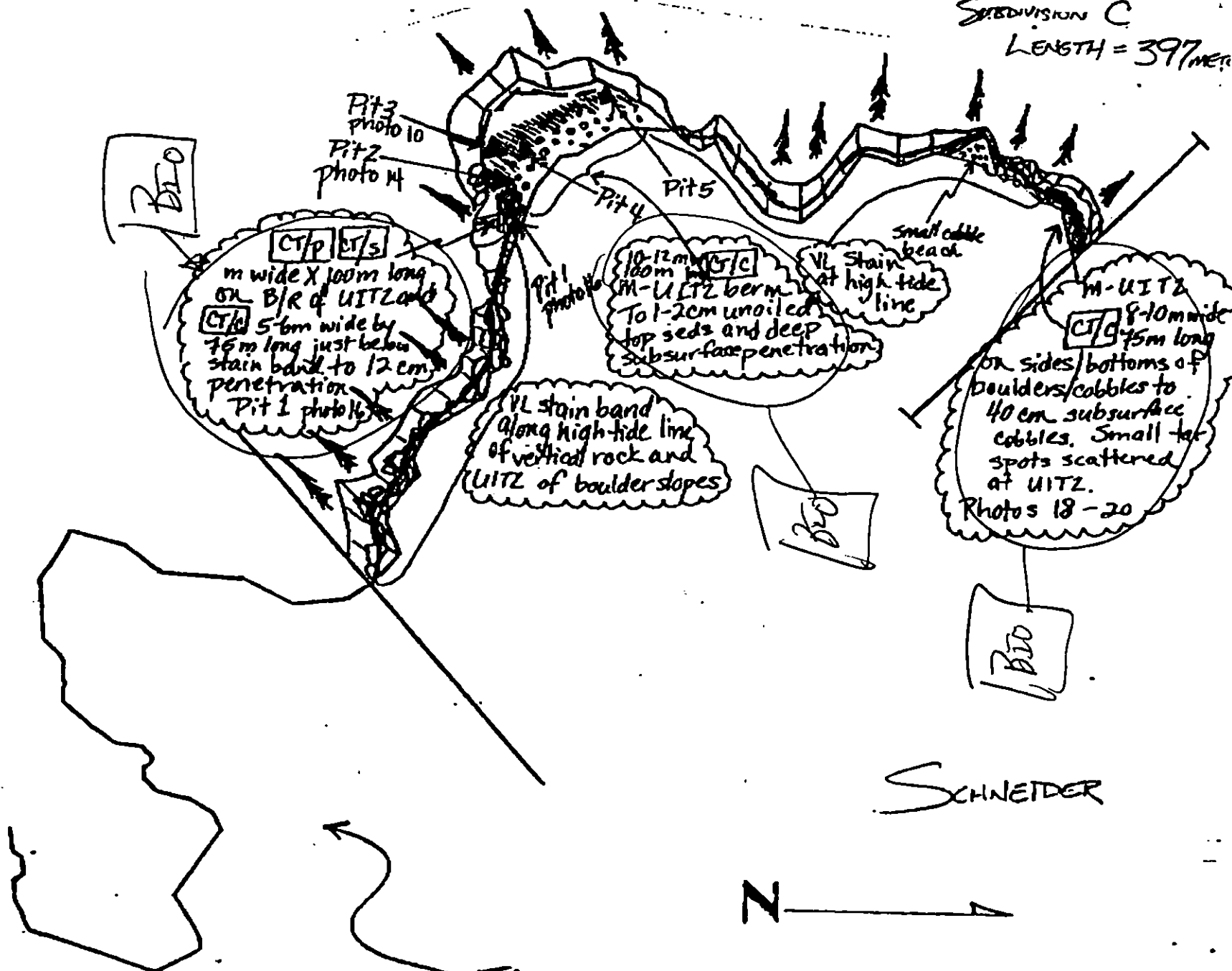
- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Subs Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWR/LWR
- ☐ SBL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

## LEGEND

- 1 Pit - No Subsurface Oil
- 2 Pit - Subsurface Oil
- Continuous Distribution
- Broken Distribution
- Patchy Distribution
- Splashed Distribution
- Oiled Vegetation
- 1 Photo location, direction, and number

SI CH MAP

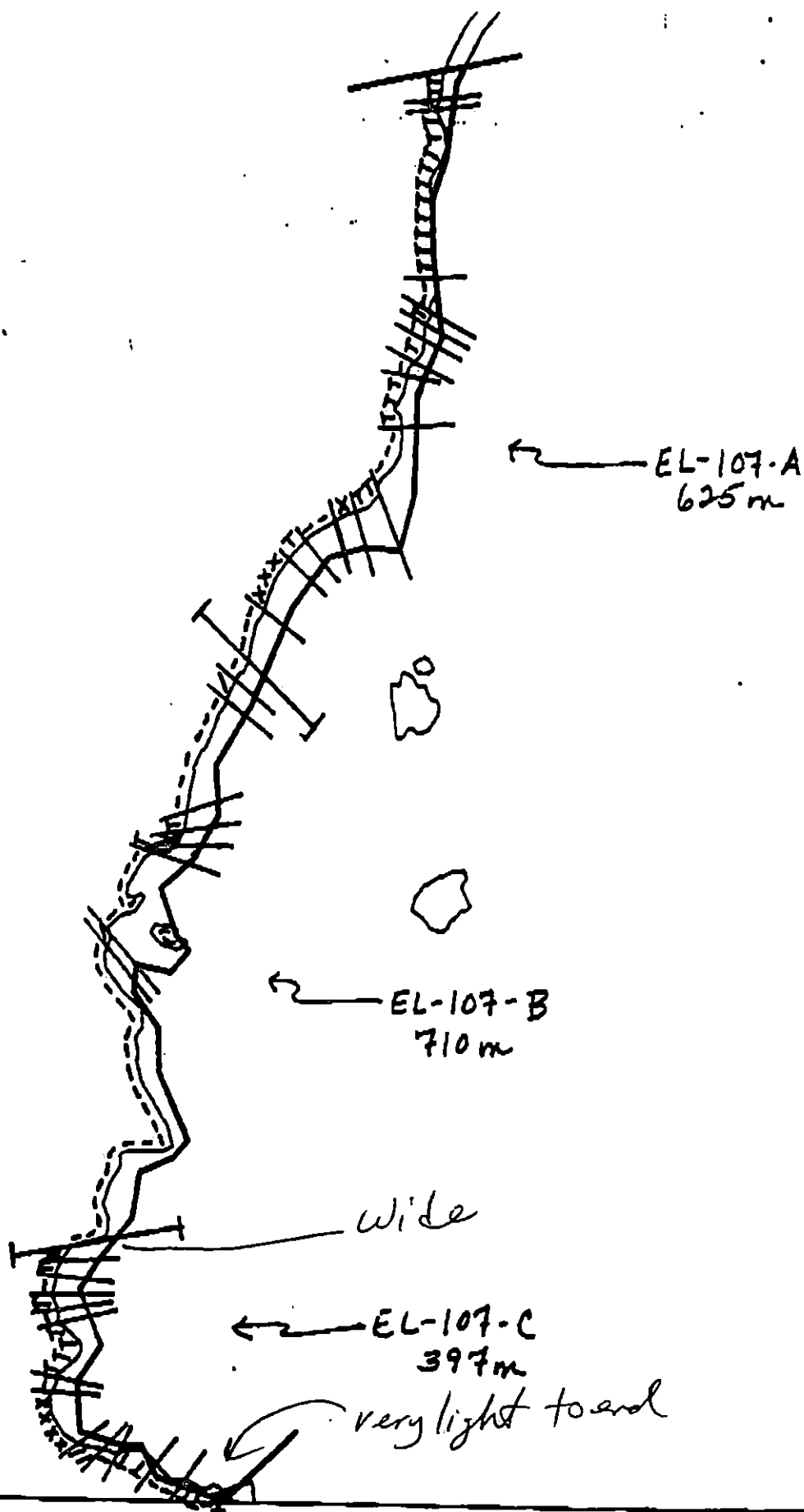
SEGMENT EL-107  
SUBDIVISION C  
LENGTH = 397m



EL-108

Oil Character Length (m): AP 275 PO 225 CV 275 ST 225 MS 275 PT 275 TB 50 FL 275 NO 275

REVISION 000000



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

EL-107  
 Exxon Segment Length: 1727m  
 ADEC Segment Length: 1670m

Map Key: PWS-127a  
 Name: C. DILLON  
 Date: 4/1/90

## ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-107 SUBDIVISION B (2 of 3)

| WORK WINDOW                                                 |                    |
|-------------------------------------------------------------|--------------------|
| Manual Pickup                                               | OPEN               |
| Bioremediation<br>Manual Raking<br>Other Approved Treatment | 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 bald eagle impact assessments conducted on 5/15/90 and 5/27/90 by Mike Lockhart indicate no active nests within 400m of the work area. |
| 7II | Subsistence: Deer Harvesting | No constraint to manual pickup. Closed to bioremediation, manual raking and other approved treatment after 8/15.                                            |

### OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

DATE

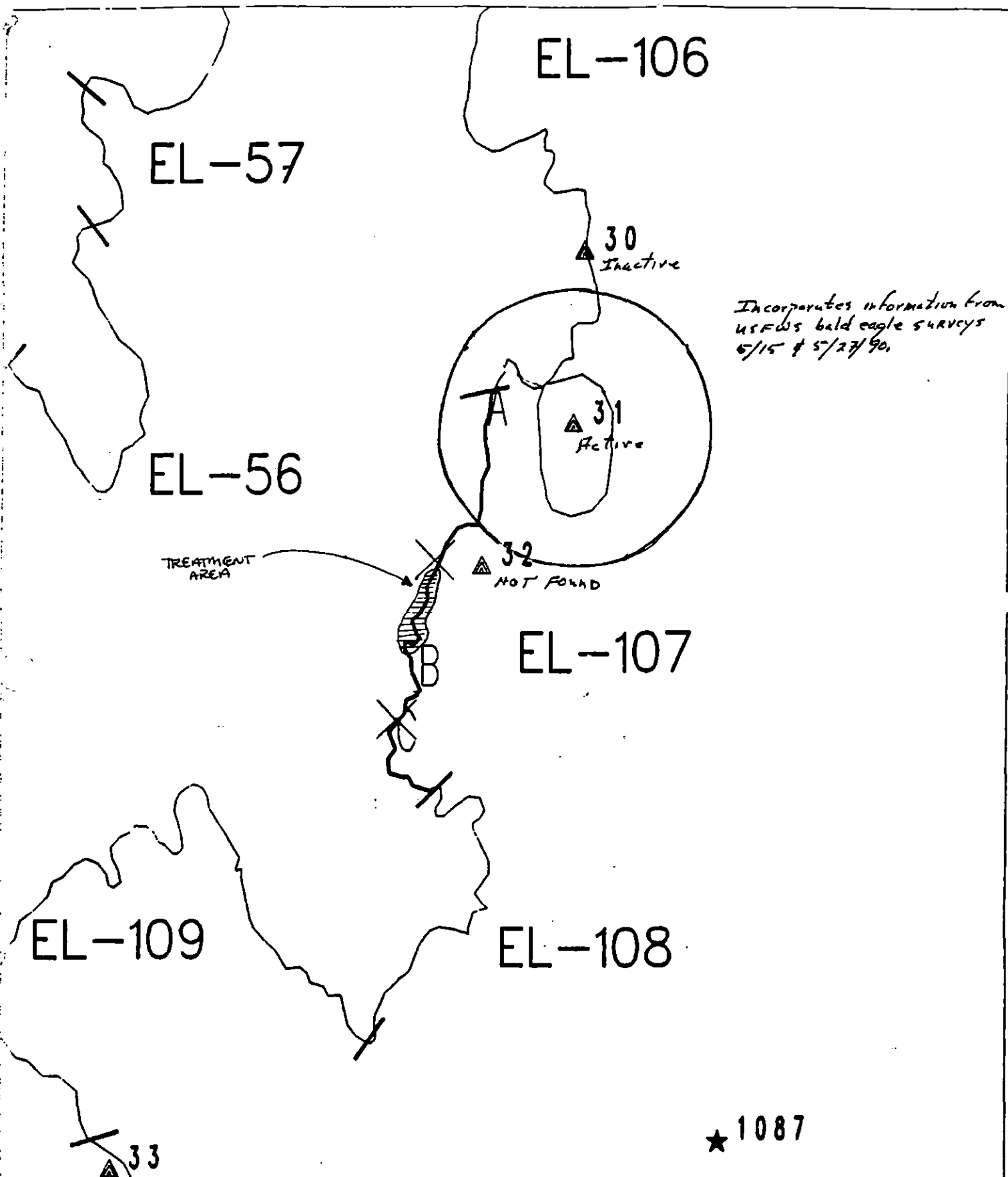
6-10-98

Prepared By:

Andrew Mena VPP

Date

5/21/90 6/8/90

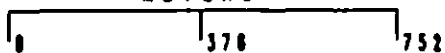


Exxon Company, USA  
Map Key: KNI-EL-107  
May 11, 1990

# ECOLOGY MAP <sup>5/30</sup> SEGMENT EL-107

SUBDIVISION B (3 of 3)

METERS



- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1233 feet

SHORELINE EVALUATION

SEGMENT ST/ EL-107- SUBDIVISION B (2 OF 3) DATE 4/1/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**

Active bald eagle nests (5T-2) - 3/1 to 6/1; Recreation special use designation (6Y) - 6/1 to 9/15. Subsistence area for deer harvesting (7II) - 8/15 to 2/28.  
(destination)

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

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

SHPO SIGNATURE: Chela 3 H. Jones DATE: 4/17/90

**OILING CATEGORIZATION:**

Wide 16 m: Medium 34 m: Narrow 554 m: V. Light 39 m: No Oil 0 m  
Subsurface Oil Observed: Yes X No      Maximum Depth 12 cm

**RECOMMENDATIONS:**

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

COMMENTS: Recommend manual pickup of mousse and debris and bioremediation of areas shown on attached sketch map. Treatment activities should be conducted after 6/1 based on above constraints.

SEE ADDENDUM dated 6/8/90, JR

**TAG COMMENTS:**

IF POSSIBLE WORK WITH THE RISING TIDE + RAKE + OIL SNARE  
AREAS OF HIGH CONCENTRATION OF OIL (TEST PITS 1, 2 + 3)

**TAG APPROVAL DATE:** 9/16/90

ADEC JOHN BAUER John Bauer  
EXXON ANDY TEAL Andy Teal FOSC: W. L. DATE: 4-1-90  
NOAA Burl Weisroft Burl Weisroft  
G G.A. REITER G.A. Reiter

## ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-107 SUBDIVISION A ( 1 of 3 )

| WORK WINDOW                             |                              |
|-----------------------------------------|------------------------------|
| Manual Pickup More Than 400m From Nest  | OPEN                         |
| Manual Pickup Less Than 400m From Nest  | CLOSED                       |
| Spot Washing More Than 400m From Nest   | OPEN                         |
| Spot Washing Less Than 400m From Nest   | CLOSED                       |
| Bioremediation More Than 400m From Nest | WORK PRIOR TO 8/15<br>CLOSED |
| Bioremediation Less Than 400m From Nest |                              |

### ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

### APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T Bald Eagle Nest

USFWS bald eagle assessments conducted on 5/15/90 and 5/20/90 by Mike Lockhart indicate an active nest in the adjacent segment EL-106. Subdivision is closed to manual pickup, spot washing and bioremediation within 400m of the active nest.

7II Subsistence: Deer Harvesting

No constraint to manual pickup and spot washing. Closed to bioremediation and after 8/15.

### OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

Date

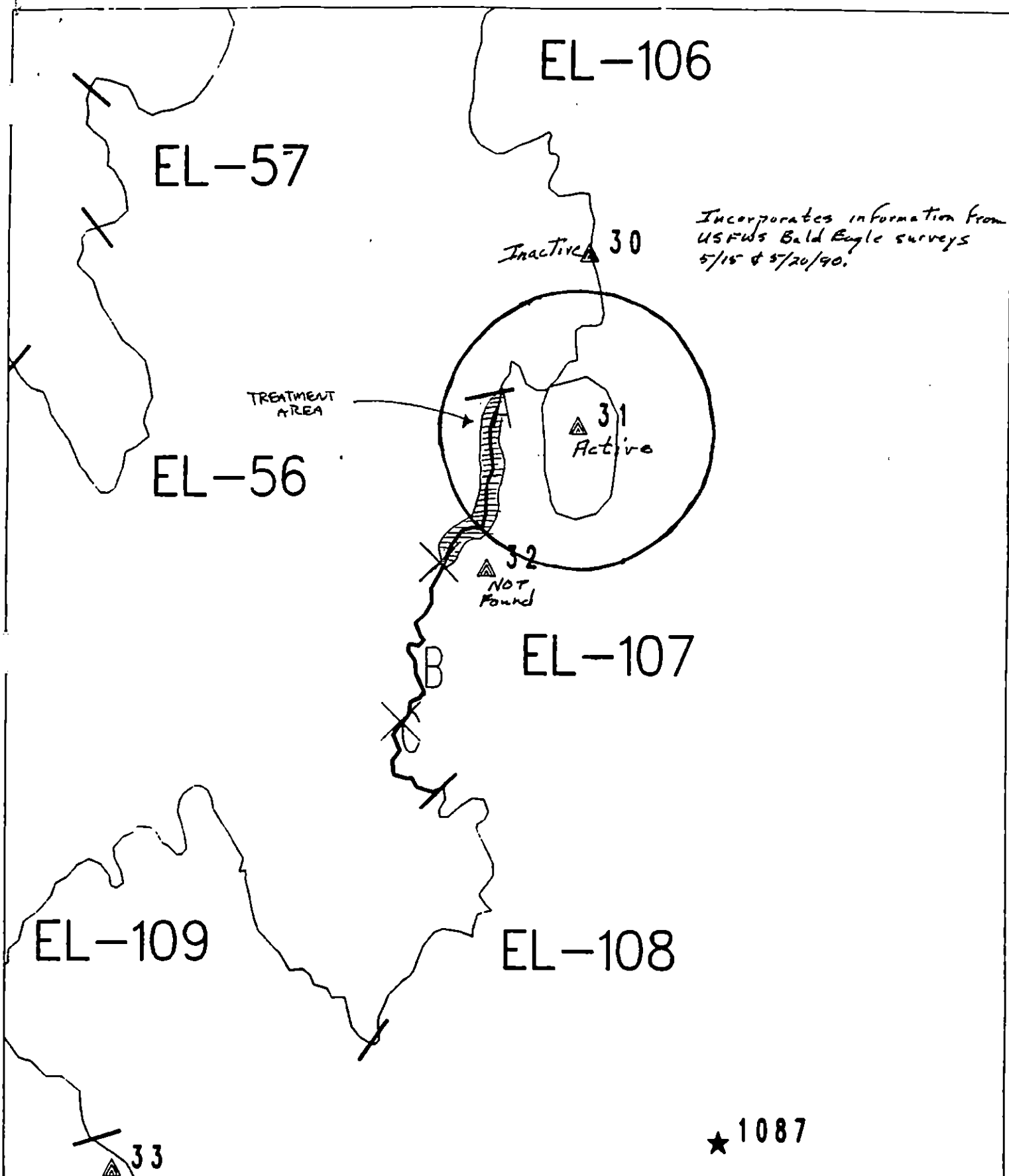
6-10-90

Prepared by

J.P. Phillips

Date

6/8/90



Exxon Company, USA  
Map Key: KNI-EL-107

ECOLOGY MAP 5/30  
SEGMENT EL-107

SUBDIVISION A (1 of 3)

METERS

- |   |                |
|---|----------------|
| ★ | Seabird Colony |
| △ | Eagle Nest     |

# SHORELINE EVALUATION

SEGMENT ST/ EL-107 SUBDIVISION A (1 OF 3) DATE 4/1/90

## SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Active bald eagle nests (5T-2) - 3/1 to 6/1; Recreation special use destination (6Y) - 6/1 to 9/15; 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.

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

SHPO SIGNATURE: Charles E. Jones

DATE: 4/12/90

## OILING CATEGORIZATION:

Wide 66 m: Medium 9 m: Narrow 233 m: V. Light 338 m: No Oil 0 m  
Subsurface Oil Observed: Yes X No      Maximum Depth 14cm

## RECOMMENDATIONS:

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

COMMENTS: Recommend bioremediation of areas shown on attached sketch maps and manual pickup of debris. Treatment activities should be conducted after 6/1 due to above constraints.

PICKUP ANY OILED TRASH THAT MAY REMAIN, SPOT WASH AS REQUIRED  
IN AREA OF PITS 1, 2, 3. INSPECT SUITZ FOR OILED DEBRIS

TAG COMMENTS:

TAG APPROVAL DATE: 4/16/90

ADEC JOHN BAUER

EXXON ANDY TCH

NOAA Burt Weisart

USCG G.A. REITER

FOSC: 1-2 DATE: 4-2-90

## ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-107 SUBDIVISION C (3 of 3)

| WORK WINDOW                                                                 |                    |
|-----------------------------------------------------------------------------|--------------------|
| Manual Pickup                                                               | OPEN               |
| Bioremediation<br>Manual Raking<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

5T-2 Bald Eagle Nest

NO CONSTRAINT. Bald eagle nests are more than 400m from work site.

7II Subsistence: Deer harvesting

No constraint to Manual Pickup; closed to all other treatment activities after 8/15.

### OTHER ECOLOGICAL CONSIDERATIONS

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

TAG ADDENDUM DATE 5/16/90.  
ADEC ART WENGER Art Wenger  
EXXON AMY L. WILSON Amy L. Wilson  
NOAA Joseph Talbot Joe Talbot  
USCG G.A. BEITER G.A. Beiter

FOSC

DATE 5-17-90

Prepared by: Anden Meyer wmx

Date: 5/14/90

SHORELINE EVALUATION

SEGMENT ST/ EL-107 SUBDIVISION C (3 OF 3) DATE 4/1/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**

Active bald eagle nests (5T-2) - 3/1 to 6/1; Recreation special use designation (6Y) - 6/1 to 9/15; Subsistence area for deer harvesting (7II) - 8/15 to 2/28.

destination

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

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

SHPO SIGNATURE: Charles E. Adams DATE: 4/17/90

**OILING CATEGORIZATION:**

Wide 65 m: Medium 28 m: Narrow 93 m: V.Light 194 m: No Oil 0 m  
Subsurface Oil Observed: Yes X No      Maximum Depth 60 cm

**RECOMMENDATIONS:**

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

**COMMENTS:** Recommend bioremediation of areas shown on attached sketch map and manual pickup of tarballs. Treatment should be conducted after (6/1) based on above constraints.

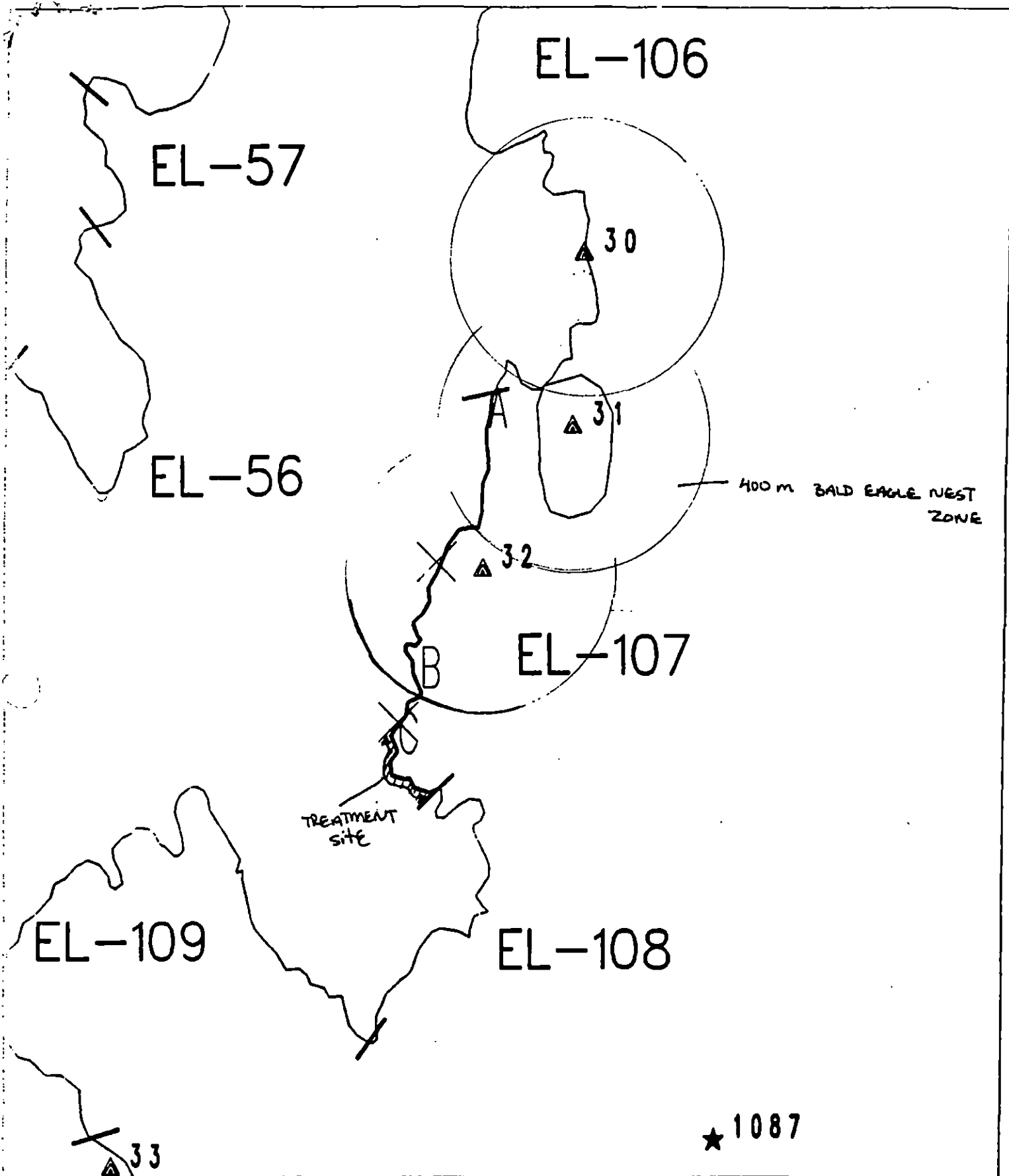
See Addendum dated 5/14/90

**TAG COMMENTS:**

IN AREA OF POCKET BEACH WORK WITH RISING TIDE AGGITATE/  
RAKE + USE OIL SNARE. SPOT WASH AS REQUIRED.

**TAG APPROVAL DATE:** 4/16/90

ADEC JOHN BAUER John Bauer  
EXXON ANDY GAY Andy Gay FOSC:      DATE: 4-10-90  
NOAA Burt Wesely Burt Wesely  
USCG G.A. Reiter G.A. Reiter

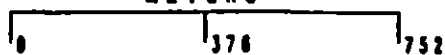


Exxon Company, USA  
Map Key: KNI-EL-107  
May 11, 1990



# ECOLOGY MAP SEGMENT EL-107

SUBDIVISION C (3 of 3)  
METERS



- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1233 feet

SHORELINE EVALUATION

SEGMENT ST/ EL-107 SUBDIVISION A (1 OF 3) DATE 4/1/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**

Active bald eagle nests (5T-2) - 3/1 to 6/1; Recreation special use destination (6Y) - 6/1 to 9/15; 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.

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

SHPO SIGNATURE: Charles E. Jones DATE: 4/17/90

**OILING CATEGORIZATION:**

Wide 66 m: Medium 9 m: Narrow 233 m: V.Light 338 m: No Oil 0 m  
Subsurface Oil Observed: Yes X No      Maximum Depth 14cm

**RECOMMENDATIONS:**

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

COMMENTS: Recommend bioremediation of areas shown on attached sketch maps and manual pickup of debris. Treatment activities should be conducted after 6/1 due to above constraints.

PICKUP ANY OILED TRASH THAT MAY REMAIN, SPOT WASH AS REQUIRED  
IN AREA OF PITS 1, 2, 3. INSPECT SUITZ FOR OILED DEBRIS

TAG COMMENTS:

TAG APPROVAL DATE: 4/16/90

ADEC JOHN BAUER  
EXXON ANDY TEN FOSC: KL DATE: 4-20-90  
NOAA Burt Wescott  
USCG G.A. REITER

OG 1.1 LON

SEGMENT ST/ EL-107

SUBDIVISION A (Beach at S. end)

DATE 01 / APRIL 90

# CHECKLIST

- ☐ H Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. NW/LSW
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ P/L 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  
Speckled Distribution

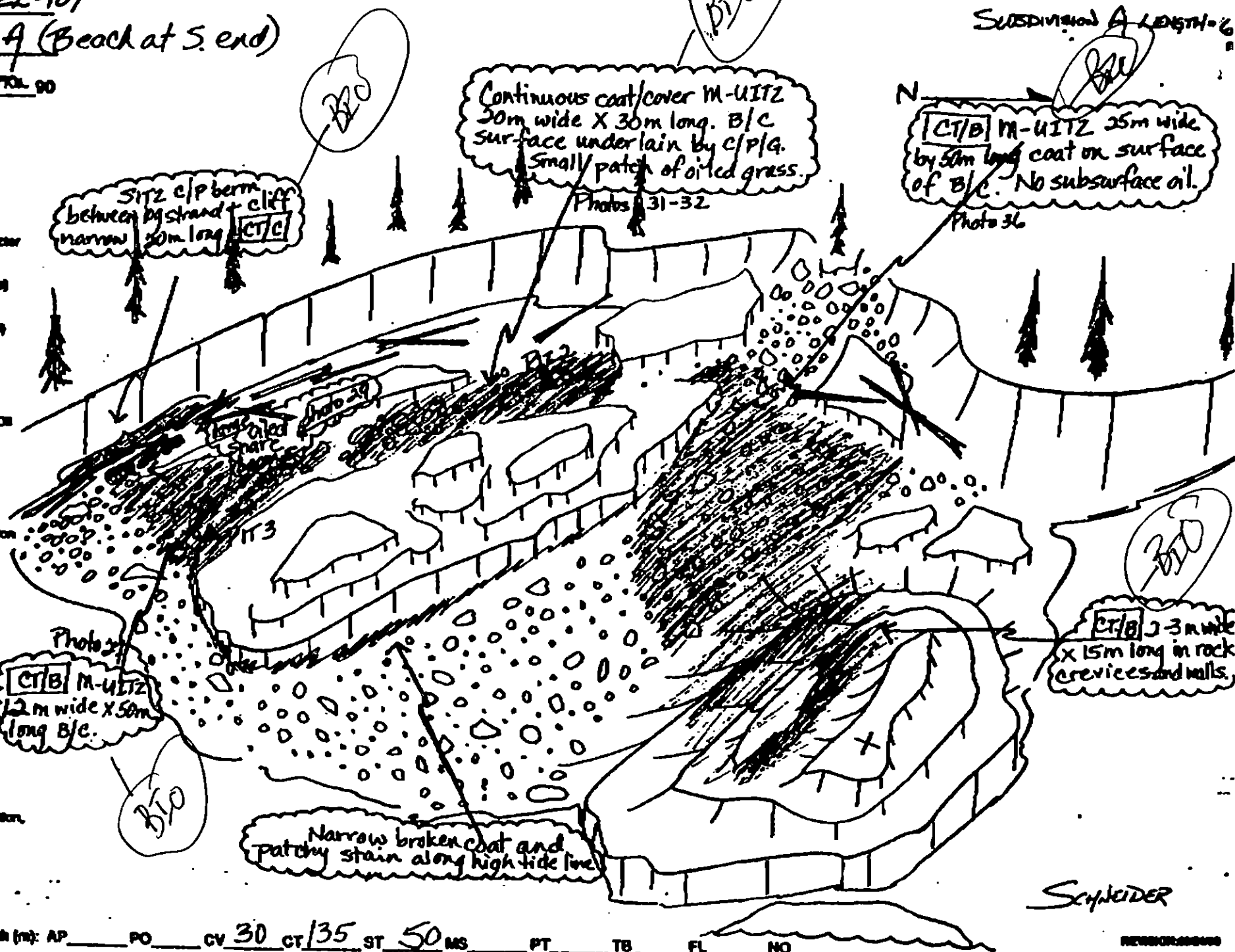
Oiled Vegetation

1 Photo location, direction, and number

## SKETCH MAP

SEGMENT EL-107

SUBDIVISION A LENGTH 6



Oil Character Length (m): AP      PO      CV 30 CT/35 ST 50 MS      PT      TB      FL      NO     

NEWBORN 000000

OG C. DILLON

SEGMENT ST/ EL-107

SUBDIVISION A

DATE 01 APRIL 90

SKETCH MAP

SEGMENT EL-10

SUBDIVISION A

LENGTH = 625 meters

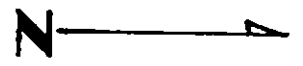
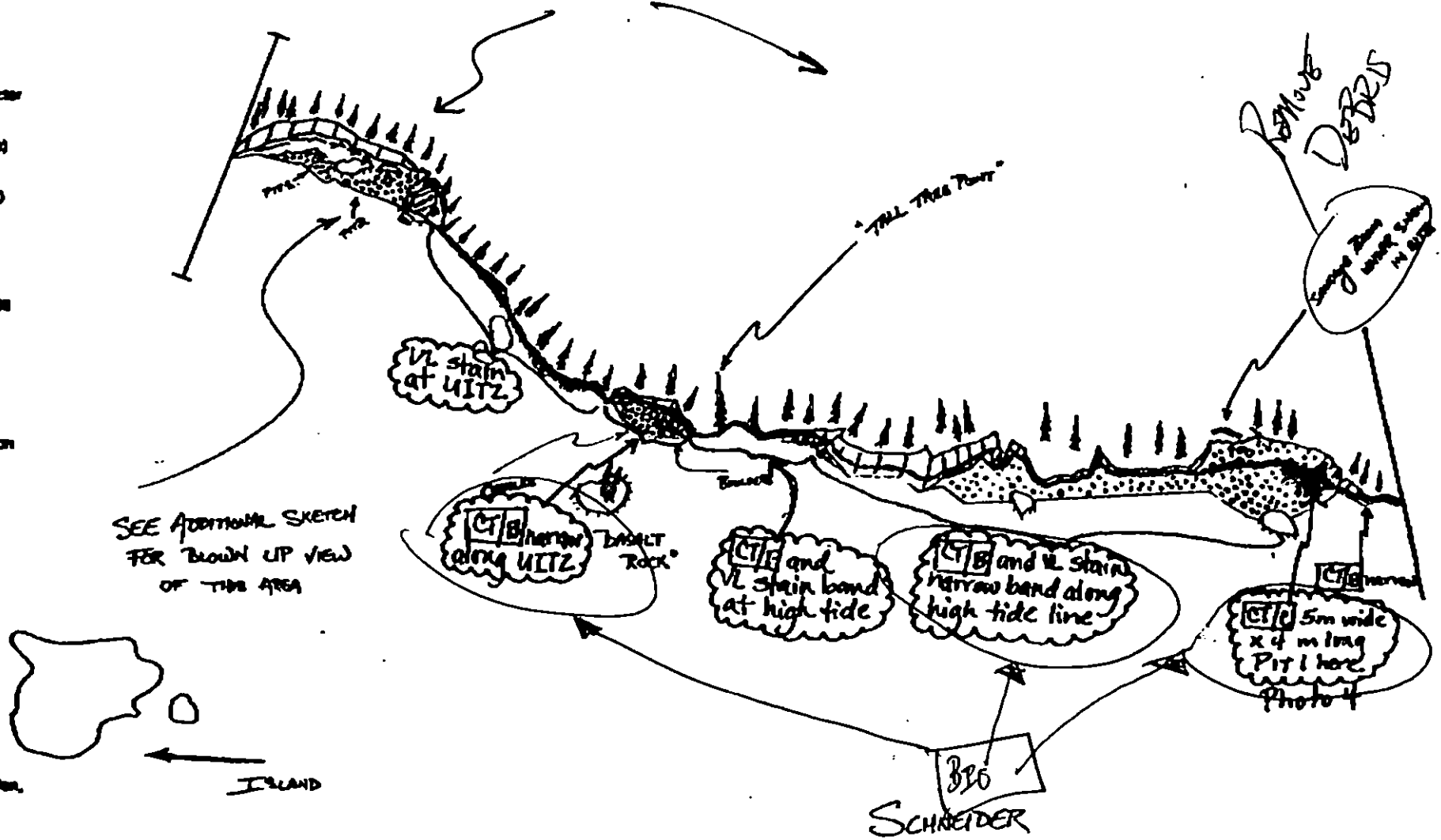
CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HW/LA/WL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

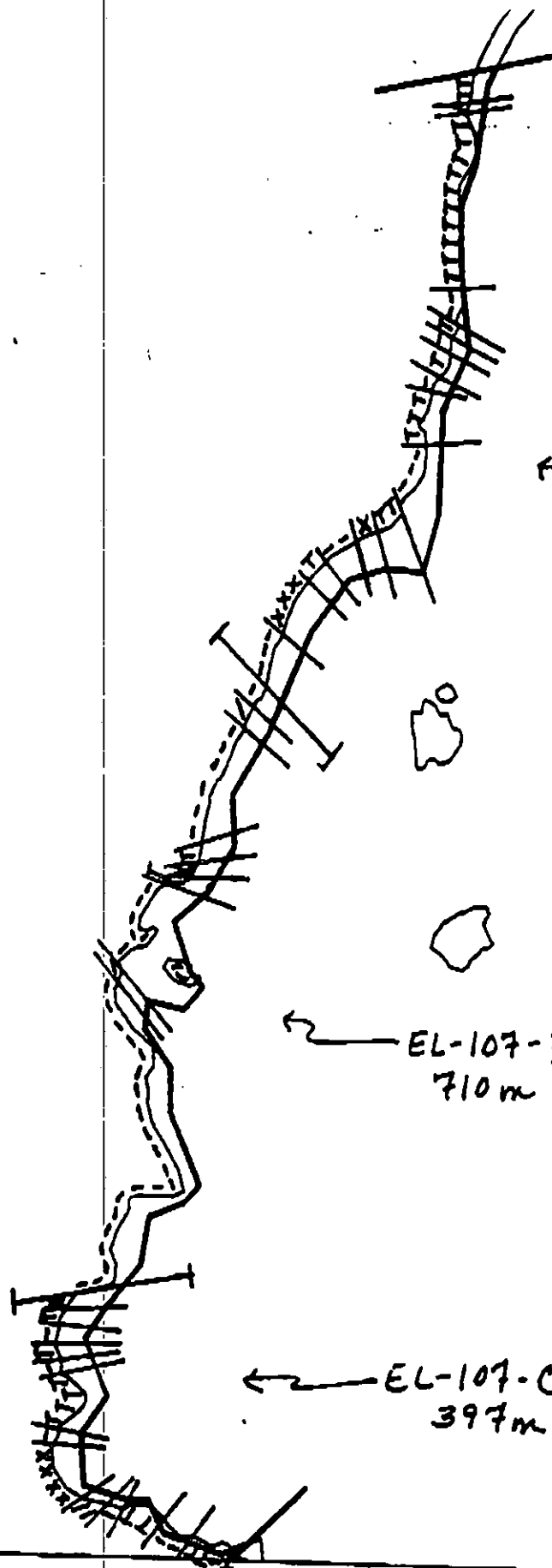
LEGEND

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

SPOT WASH AS REQUIRED  
IN AREA OF PIT 1, 2, + 3.



Oil Character Length (m): AP \_\_\_\_\_ PO \_\_\_\_\_ CV 30 CT 295 ST 300 MS \_\_\_\_\_ PT \_\_\_\_\_ TB \_\_\_\_\_ FL \_\_\_\_\_ NO \_\_\_\_\_



EL-107-A  
625m

EL-107-B  
710m

EL-107-C  
397m

XXXX Wide

//// Medium

--- Narrow

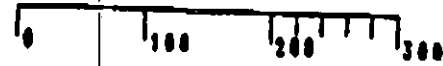
TTTT Very Light

^ ^ ^ ^ " ^ . .

EL-107

Exxon Segment Length: 1727m

ADEC Segment Length: 1670m



Map Key: PWS-127a

Name: C. DILLON

Date: 4/1/90

# SHORELINE EVALUATION

SEGMENT ST/ EL-107 SUBDIVISION B (2 OF 3) DATE 4/1/90

## SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Active bald eagle nests (5T-2) - 3/1 to 6/1; Recreation special use designation (6Y) - 6/1 to 9/15. Subsistence area for deer harvesting (7II) - 8/15 to 2/28.  
destination

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

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

SHPO SIGNATURE: John Z. H. Jones DATE: 4/17/90

## OILING CATEGORIZATION:

Wide 16 m: Medium 34 m: Narrow 554 m: V.Light 39 m: No Oil 0 m  
Subsurface Oil Observed: Yes X No      Maximum Depth 12 cm

## RECOMMENDATIONS:

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

COMMENTS: Recommend manual pickup of mousse and debris and bioremediation of areas shown on attached sketch map. Treatment activities should be conducted after 6/1 based on above constraints.

## TAG COMMENTS:

IF POSSIBLE WORK WITH THE RISING TIDE + RAKE + OIL SNARE  
AREAS OF HIGH CONCENTRATION OF OIL (TEST PITS 1, 2 + 3)

## TAG APPROVAL DATE:

4/16/90  
TAG APPROVAL DATE: 4/16/90  
ADEC JOHN BAUER EXXON ANDY TETZ NOAA Burl Wesscott USCG G.A. REITER FOSC: Wyl DATE: 4-20-90

SEGMENT EL-107

SUBDIVISION B

DATE 01 APR 90

# CHECKLIST

- ☐ M Arrow
- ☐ Apprx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HRA/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PR Location(s)
- ☐ Photo Location(s)

## LEGEND

1  $\Delta$   
PR - No Subsurface Oil

2  $\Delta$   
Pit - Subsurface Oil

CT/C  
Continuous Distribution

CT/B  
Broken Distribution

CT/P  
Patchy Distribution

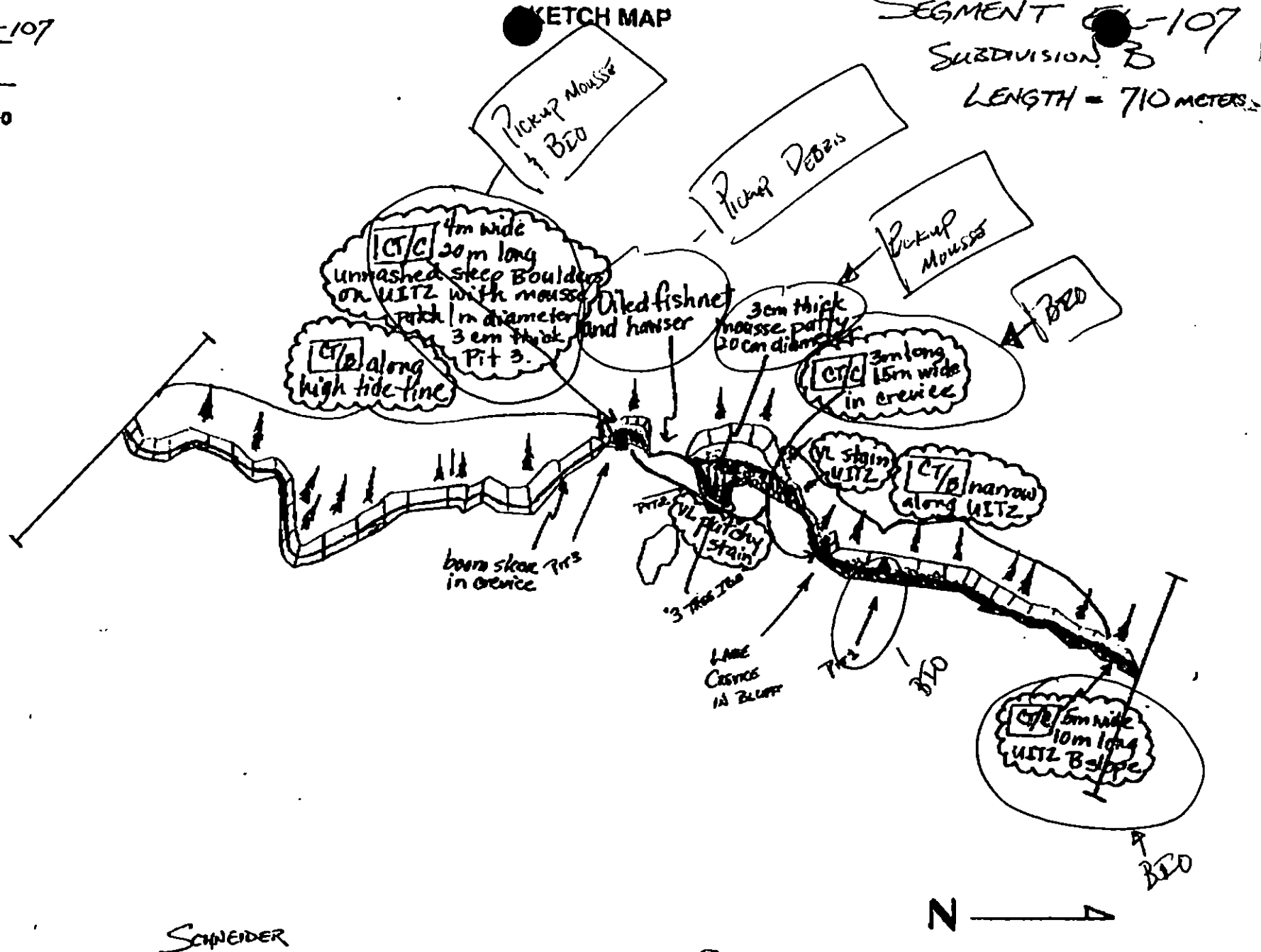
CT/S  
Splashed Distribution

CT/S  
Splashed Distribution

Oiled Vegetation

1  $\Rightarrow$   
Photo location, direction,  
and number

## SKETCH MAP



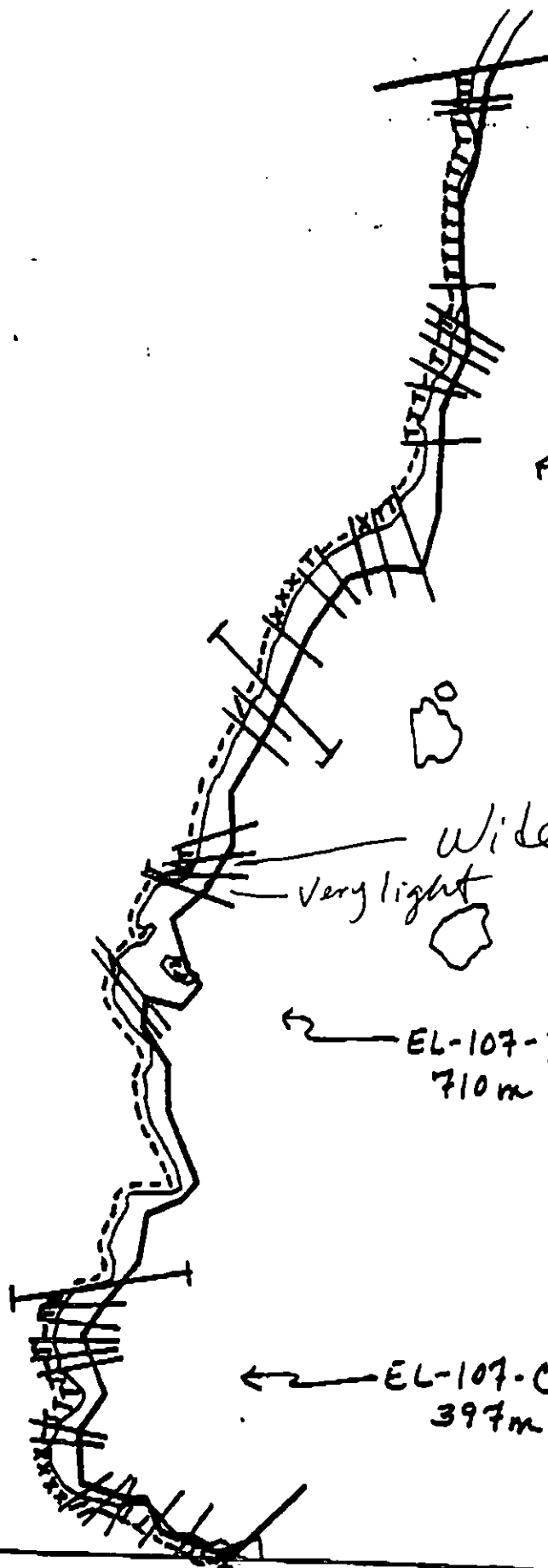
SEGMENT EL-107  
SUBDIVISION B  
LENGTH = 710 METERS

SCHNEIDER



Oil Character Length (m): AP \_\_\_\_\_ PO \_\_\_\_\_ CV 20 CT 520 ST 170 MS 1 PT 20cm TB \_\_\_\_\_ FL \_\_\_\_\_ NO \_\_\_\_\_

REVISION 03/90



EL-107-A  
625m

Wide, OG at 3M  
Very light

EL-107-B  
710m

EL-107-C  
397m

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

EL-107 B  
EXXON SEGMENT LENGTH: 1727m  
ADEC Segment Length: 1670m



Map Key: PWS-127a  
Name: C. DILLON  
Date: 4/1/90

SHORELINE EVALUATION

SEGMENT ST/ EL-107 SUBDIVISION C (3 OF 3) DATE 4/1/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**

Active bald eagle nests (5T-2) - 3/1 to 6/1; Recreation special use designation (6Y) - 6/1 to 9/15; Subsistence area for deer harvesting (7II) - 8/15 to 2/28.

*destination*

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

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

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

**OILING CATEGORIZATION:**

Wide 65 m: Medium 28 m: Narrow 93 m: V.Light 194 m: No Oil 0 m  
Subsurface Oil Observed: Yes X No      Maximum Depth 60 cm

**RECOMMENDATIONS:**

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

**COMMENTS:** Recommend bioremediation of areas shown on attached sketch map and manual pickup of tarballs. Treatment should be conducted after 6/1 based on above constraints.

**TAG COMMENTS:**

*IN AREA OF POCKET BEACH WORK WITH RISING TIDE AGGITATE/  
RAKE + USE OIL SNARE. SPOT WASH AS REQUIRED.*

**TAG APPROVAL DATE:** 4/16/90

ADEC JOHN BAUER John Bauer  
EXXON ANDY TAYLOR Andy Taylor FOSC: [Signature] DATE: 4-20-90  
NOAA Burt Wescott Burt Wescott  
USCG G.A. BEITER G.A. Beiter

SG C. DILLON

SEGMENT ST/EL-107

SUBDIVISION C

DATE 02 / APR 90

# CHECKLIST

- ☐ Name
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ C# Dist
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWA/LWA
- ☐ SBL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

## LEGEND

1 Δ  
Pit - No Subsurface Oil

2 Δ  
Pit - Subsurface Oil

CT/C  
Continuous Distribution

CT/D  
Broken Distribution

CT/P  
Patchy Distribution

CT/S  
Isolated Distribution

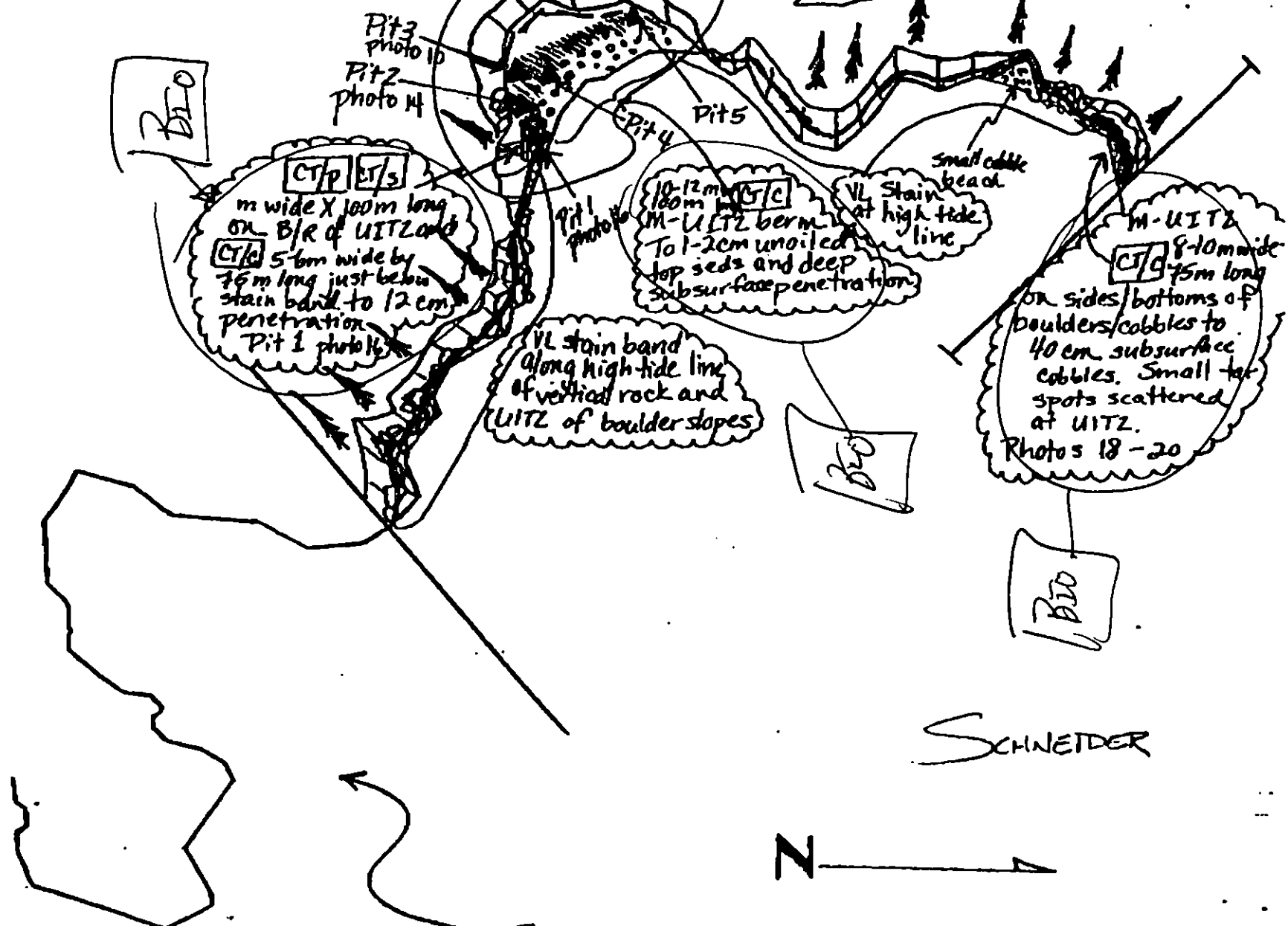
Other Vegetation

1 ●●  
Photo location, direction, and number

SKE I MAP

WORK WITH  
RISING TIDE  
SPOT WASH  
+ AGGITATE

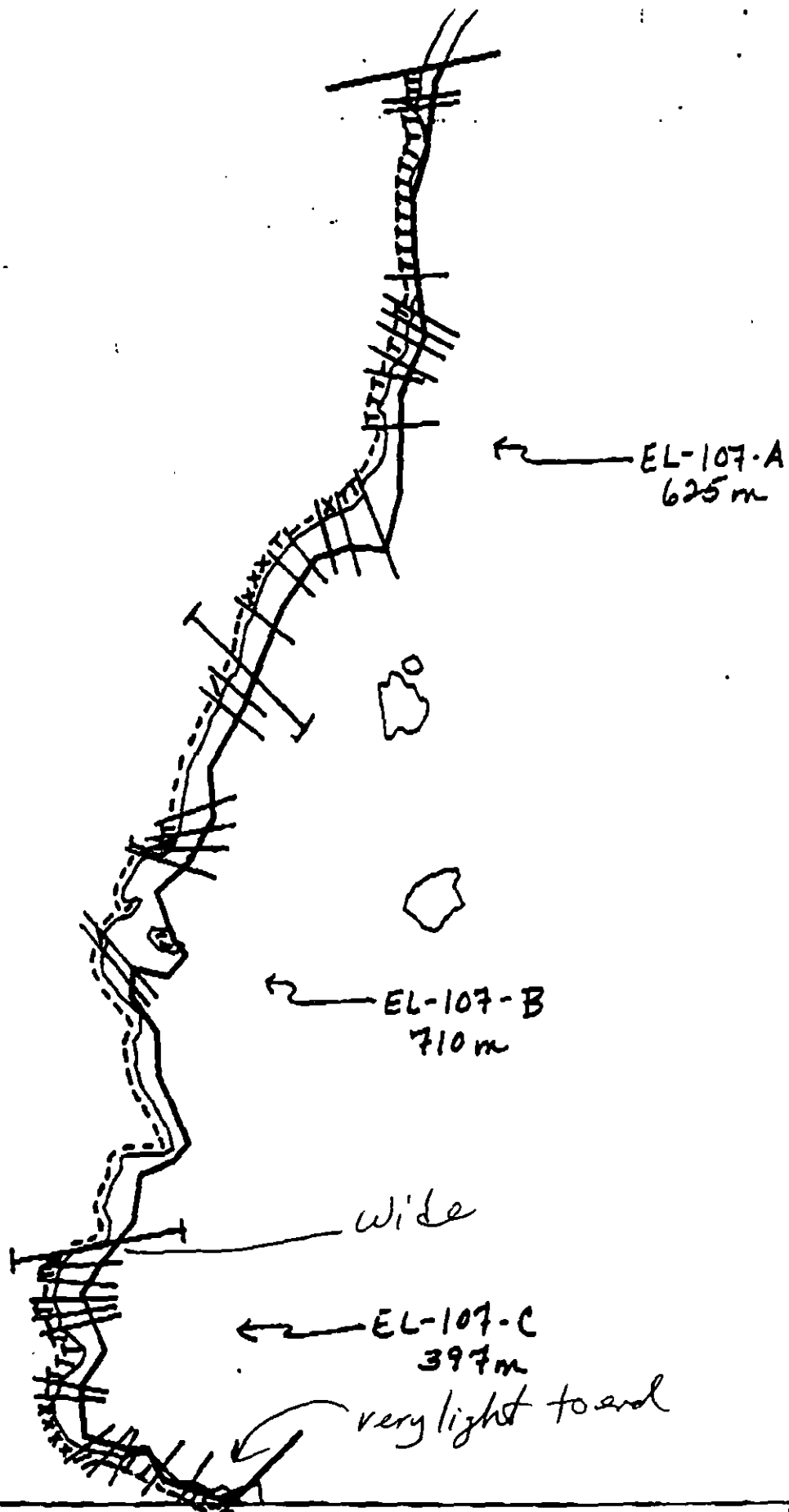
SEGMENT L-107  
SUBDIVISION C  
LENGTH = 397m



EL-108

Character Length (m): AP \_\_\_\_\_ PO \_\_\_\_\_ CV \_\_\_\_\_ CT 275 ST 225 MS \_\_\_\_\_ PT \_\_\_\_\_ TB 50 FL \_\_\_\_\_ NO \_\_\_\_\_

REVISIONS



XXXX Wide

/// Medium

--- Narrow

TTTT Very light

EL-107

EXXON SEGMENT LENGTH: 1727m

ADEC Segment Length: 1670m

Map Key: PWS-127a

Name: C. DILLON

4/1/10

SEGMENT: EL 107 SUB: A REGION: PWS SURVEY DATE: 5/20/91

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

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

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

SHPO Signature: /s/ [Signature] Date: 6/27/91

**FOSC**

    N    



11/11/2016

---

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

INITIAL:

**TAG:**

**FOSC:**

**TAG APPROVAL DATE:** JUNE 7 1991

FOSC APPROVAL DATE: 6/12/91

**ADEC**

**FOSC**

**EXXON**

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

USCG

NOAA

**ECOLOGICAL CONSTRAINTS  
1991 FIELD ACTIVITIES**

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

**Subsistence - Deer Harvesting:** Unlimited treatment prior to 8/15.

# MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL-107 SUBDIVISION A DATE 5/1/91

## ADEC

NAME Peter Montesano

SIGNATURE [Signature]

☐ NTR ☒ TREATMENT RECOMMENDED

Area "F" had an area of Soft AP/SOR (mapped as SOR) which warrants removal. Note that the large area makes up for the small % in justifying removal. The area South of "F" remains heavily oiled w/ gross contamination persisting through the large boulders; The omniboom never should have left. Judging from my '89, SSAT, and MAYSAP VISITS, it appears that gross contamination is likely to persist. Unfortunately, most of this oil is inaccessible w/o major mechanical yet UNSEEN in Prince William Sound. This is a Prime Site for long term monitoring.

## EXXON

NAME FRANK Bax

SIGNATURE [Signature]

☐ NTR I think that no treatment should be necessary on this segment except one small area on the northern tip of the segment that is protected from wave action by an island. There perhaps the sea that is between the boulders could be broken up and bled. (section F)

## LANDMANAGER

NAME DENNIS S. Kennedy OF USFS

SIGNATURE [Signature]

☐ NTR This subdivision is protected by small islands. On the day of survey 10 or more seals were located on and around these islands. Location A had extremely dense litter and packets. Oil found around area A & B would be very difficult to work.

## USCG/NOAA D. SIMONEK - BEATTY NOAA

NAME BMI M. P. ZENONE USCG

SIGNATURE [Signature]

☐ NTR Within sections A, B, C, D, E, surface oil is patchy in the USTR. This was mostly coating on the larger boulders and red rock. Subsurface oil was found between cottus/pillus and larger boulders. This area would be difficult to clean with a hand and bucket due to the huge size of the boulders. On the northern end of section F, the SOR could be manually broken-up but the area and recent coverage is small. D5-B

CG - SOME MANUAL THEN BIOREMEDIATE ON AREA N.W. OF ISLAND THAT WAS BIOREMEDIATED LAST YEAR. OTHERWISE NO TREATMENT RECOMMENDED. 3

PAGE            CF

revised 5.24 9y

SKETCH MAP  
LOCATIONS

SKETCH  
MAP #2

SKETCH  
MAP #1

A

EL107 A

Subdivision Field Map

Map Key: EN1EL107Ab

Name: Reimer

Date: 5/20/91

METERS

0 100 200

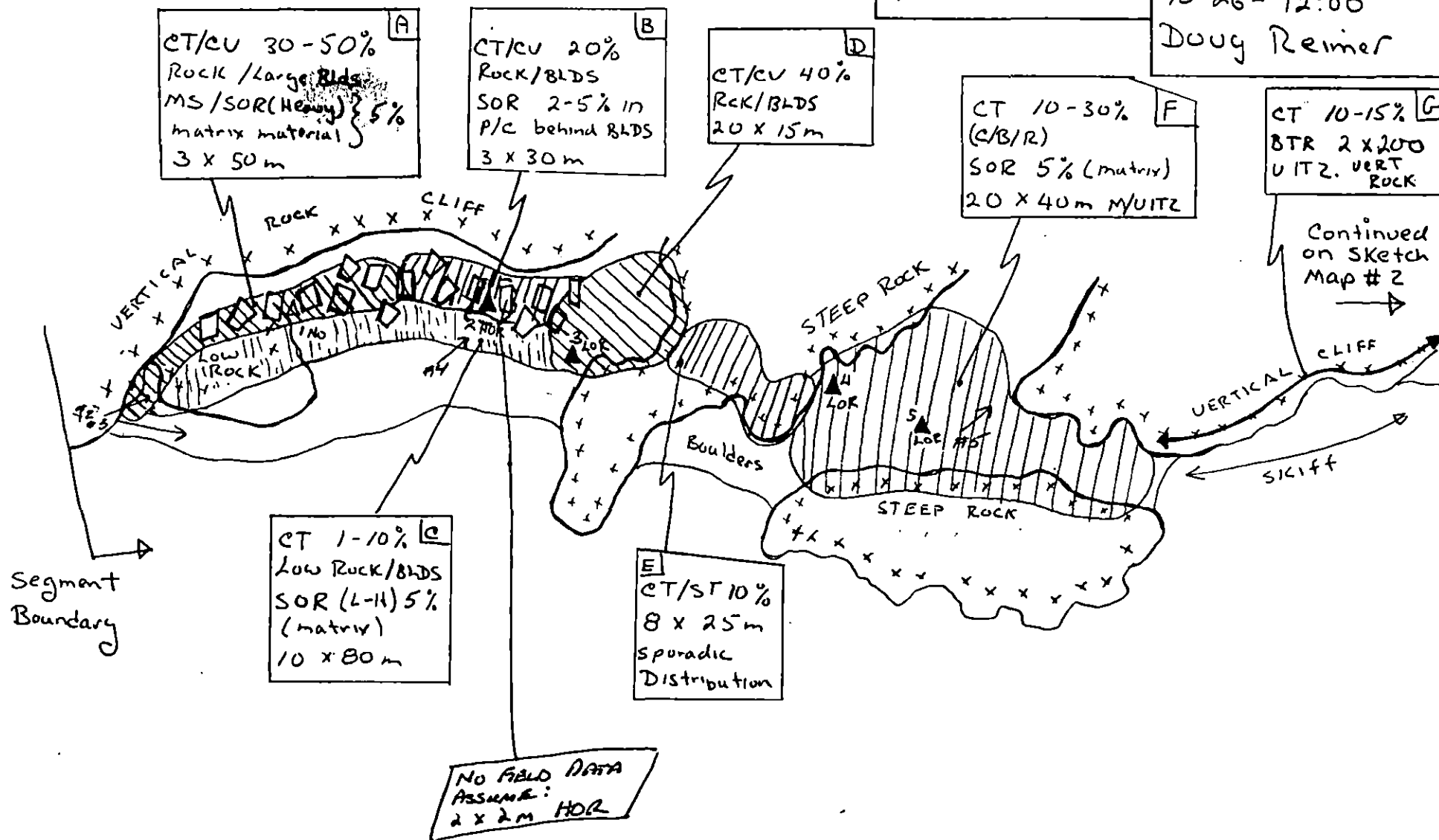
AK State Plane Zone 4  
60110700





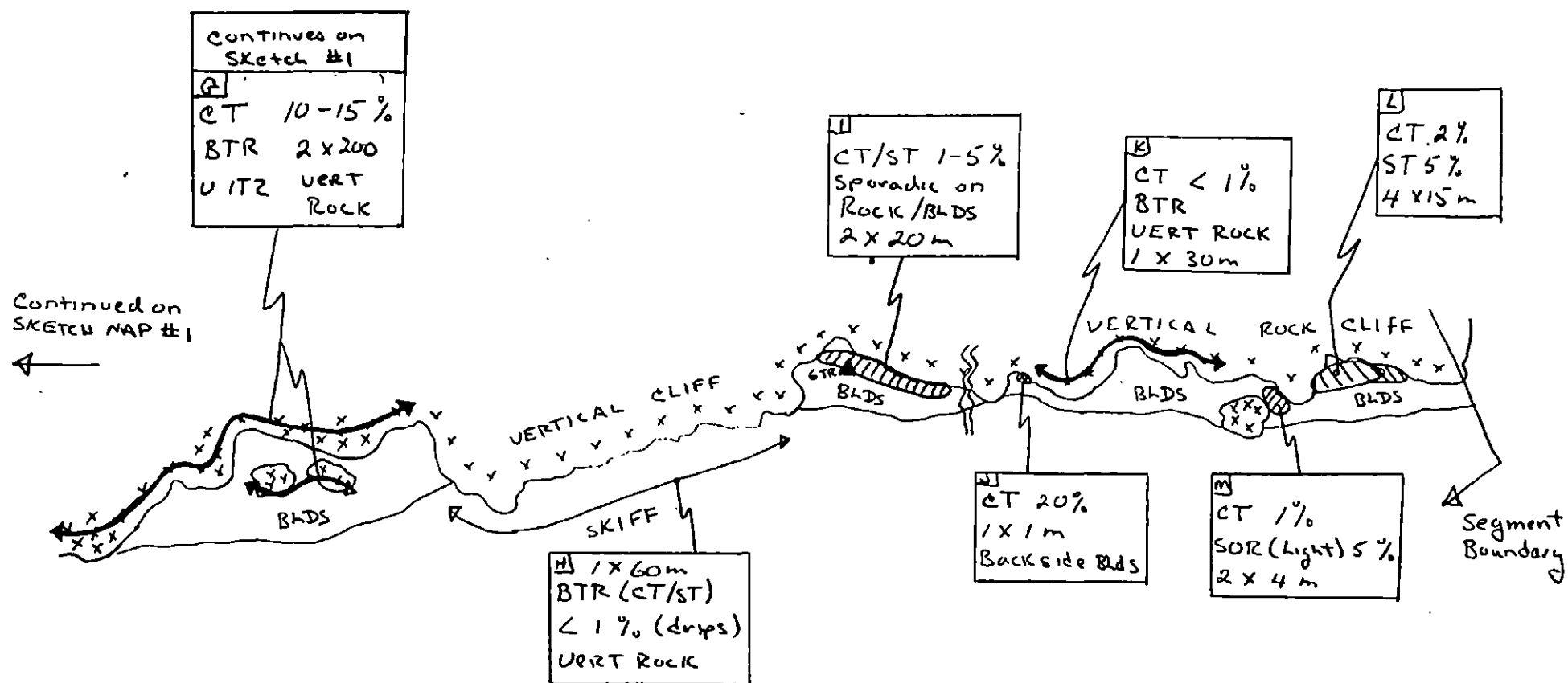
□ □ - Large  
Blocks, Rock  
x x x - Bedrock

OG SKETCH #1  
KN 107 A  
MAY 20, 1991  
10:26 - 12:00  
Doug Reimer



REVISOR: MC 5-26-91  
Reviewed 5-24 98

OG SKETCH #2  
KN 107A  
MAY 20, 1991  
10:26 - 12:00  
Doug Reimer



REVIEWED: MC 5/26/91  
reviewed 5-24-98

# MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 20 May 91  
 SEGMENT # ELK-107A TIDAL HEIGHT (Range) +4 to +1  
 SUBDIVISION A BIOLOGIST SMB  
 SEA STATE Calm WIND SPEED/DIRECTION Calm  
 PHOTOGRAPHS: ROLL #      FRAME #     

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

A+B: CT/CU high in ITZ, No biota or lichen only

C: CT+SOR ranges from green algae zone into the barnacle zone. Sporadic oil near li Horner & Fucus recruits. Numerous tide pools with algae, Pagurus, li Horner & limpets down in low rock area.

D+E: CT/CU high on rock terrace in green algae + lichen zone

F: Pits situated in naturally depauperate pebble areas. Oiled living barnacles & shells observed in lower zones. Un-oiled area near water line supports spst & Fucus.

G H I J K L M: CT/ST/BTR is high in ITZ generally in the lichen/green algae zone. CT reaches to upper edge of barnacle zone. In two areas ("G" & "J") Very large, old barnacles observed near "G" as noted. Small mussels observed in boulder crevices at the last cove ("K L & M")

## WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

| BIRDS            | # OF SPECIES | TOTAL BIRDS | FISH OBSERVED<br>SPECIES PRESENT |
|------------------|--------------|-------------|----------------------------------|
| Eagles           |              | 2 adults    |                                  |
| Seabirds         |              |             |                                  |
| Waterfowl        |              |             |                                  |
| Gulls/Kittiwakes |              |             |                                  |
| Shorebirds       |              |             |                                  |
| Corvids          |              |             |                                  |
| Other Birds      |              |             |                                  |

| MARINE MAMMALS      | # OBSERVED | LAND MAMMALS<br>SPECIES | # OBSERVED |
|---------------------|------------|-------------------------|------------|
| Sea Otters          |            |                         |            |
| Pinnipeds (specify) |            |                         |            |
| Seals               | ± 10       |                         |            |
| Mammals (specify)   |            |                         |            |

Shoreline subdivision map showing important biological features attached.

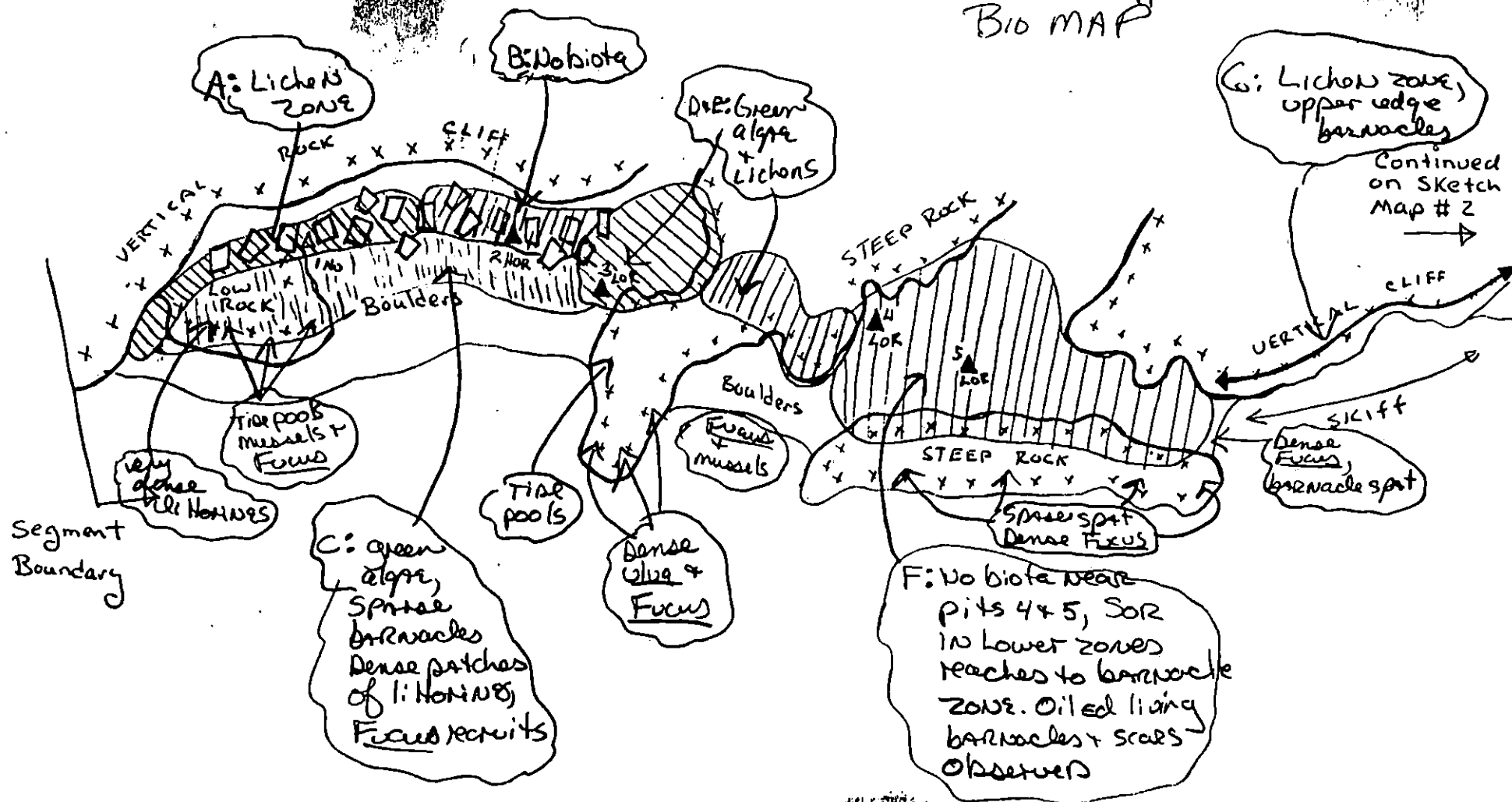
0.1. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10.



□ - Large  
Blocks, Rock  
x x - Bedrock

OG SKETCH #1  
KN 107 A  
MAY 20, 1981  
10:26 - 12:00  
Doug Renner

SMB 20 May  
91  
Bio MAP

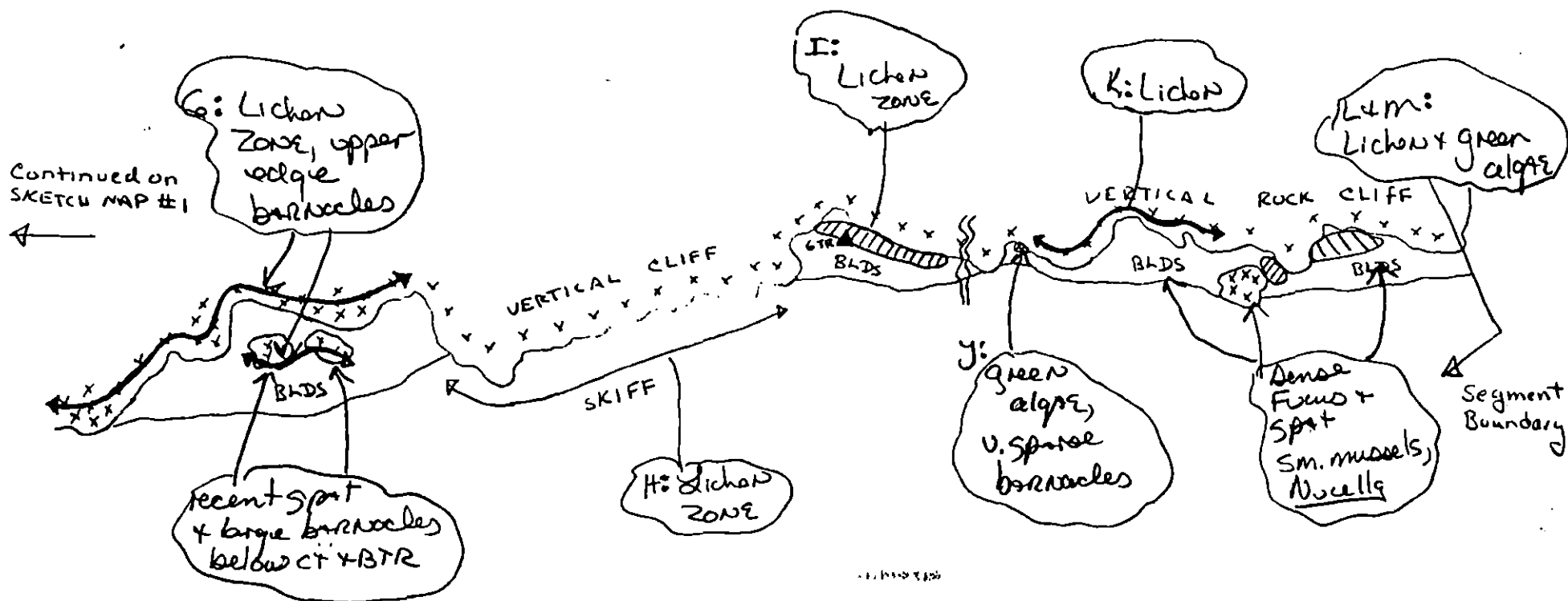


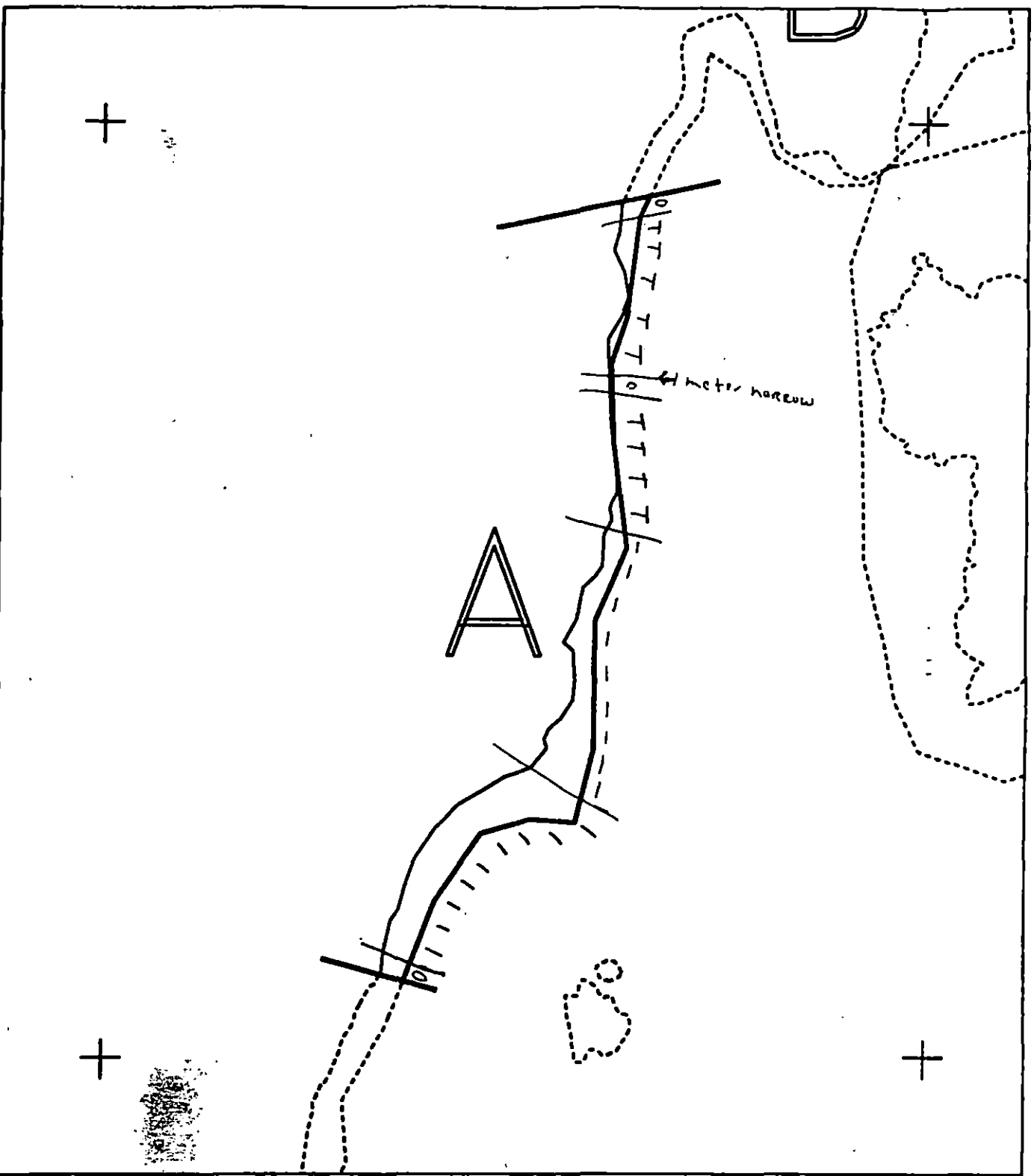
SKETCH #2  
KN 107A  
MAY 20, 1991  
10:26 - 12:00  
Doug Reimer

# BIO MAP



SMB 20 May 91





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

**EL107 A**  
 ADEC Subsegment Length: 640m  
 METERS  
 0 100 200  
 AK State Plane Zone 4  
 601107a



Subdivision Field Map  
 Map Key: KNIEL07A  
 Name: Reimer  
 Date: 5/20/91  
 Date Entered:

Reviewed: MC 5/26/91  
 reviewed 5.24 91

# 1991 MAYSAP EVALUATION

SEGMENT: EL 107 SUB: B REGION: PWS SURVEY DATE: 5/3/91

## ENVIRONMENTAL SENSITIVITIES:

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

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

## ARCHAEOLOGICAL CONSTRAINTS:

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

## RECOMMENDATIONS:

|                               | INITIAL      | TAG          | FOSC         |
|-------------------------------|--------------|--------------|--------------|
| TREATMENT REQUIRED (Y or N)   | <u>N</u>     | <u>Y</u>     | <u>Y</u>     |
| Manual Pickup (Check as Req.) | <u>_____</u> | <u>X</u>     | <u>X</u>     |
| Spot Washing                  | <u>_____</u> | <u>_____</u> | <u>_____</u> |
| Bio-Customblen Only           | <u>_____</u> | <u>_____</u> | <u>_____</u> |
| Bio-Inipol/Customblen         | <u>_____</u> | <u>X</u>     | <u>X</u>     |
| Other                         | <u>_____</u> | <u>_____</u> | <u>_____</u> |
| Other                         | <u>_____</u> | <u>_____</u> | <u>_____</u> |

## COMMENTS:

INITIAL: \_\_\_\_\_

TAG: MANUAL PICKUP OF MS / HSORE IN AREAS A + C.  
FOLLOWED BY BIO.

FOSC: \_\_\_\_\_

TAG APPROVAL DATE: June 4 1991 FOSC APPROVAL DATE: 6/8/91

ADEC *John Bane*

FOSC

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

EXXON *Deal*

USCG *S. M. Murphy*

NOAA *John*

Ecological/Constraints  
Page 2

**ECOLOGICAL CONSTRAINTS  
1991 FIELD ACTIVITIES**

**Subsistence - Deer Harvesting:** Unlimited treatment prior to 8/15.

# MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL 107 SUBDIVISION B DATE 5/3/91

ADEC

NAME Peter Montesano

SIGNATURE Peter Montesano

☐ NTR ☒ TREATMENT RECOMMENDED

Deposits of heavy oil remain on this subdivision and the %'s provided for the heavily oiled areas are completely w/o base. These percentages are systematically undercharacterized. Thus, more removal than depicted will be needed in Areas H+C. The work is standard manual removal on an accessible shoreline.

EXXON

NAME C.M. KATSIMPALIS

SIGNATURE C.M. Katsimpalis

☐ NTR AREAS WITH HEAVIER OILING IN THIS SEGMENT COULD BE IMPROVED WITH MANUAL TREATMENT.

LANDMANAGER

NAME Dennis S. Kennedy OF USFS

SIGNATURE D.S. Kennedy

☐ NTR HOR areas could be removed by manual treatment.

USCG/NOAA

NAME MICHEL (NOAA) Bm ZENONE (CG)

SIGNATURE Michel

Bm ZENONE

☐ NTR Significant amounts of oil remain in two locations: 1) southernmost South Cove which is highly sheltered by beach except to the North. There is a small area where HOR was found 6-11 cm thick in 2 out of 4 pits. This HOR is shallow (< 8 cm below surface) and accessible. 2) Pocket behind a beach outcrop which has shallow but spotty OP/HOR/HOR. All locations are likely to persist.

AGREE W/EVERYONE THIS AREA COULD USE SOME MORE HELP THIS SUMMER. GOOD OG REPORT + DIAGRAMS IN "OG COMMENTS".



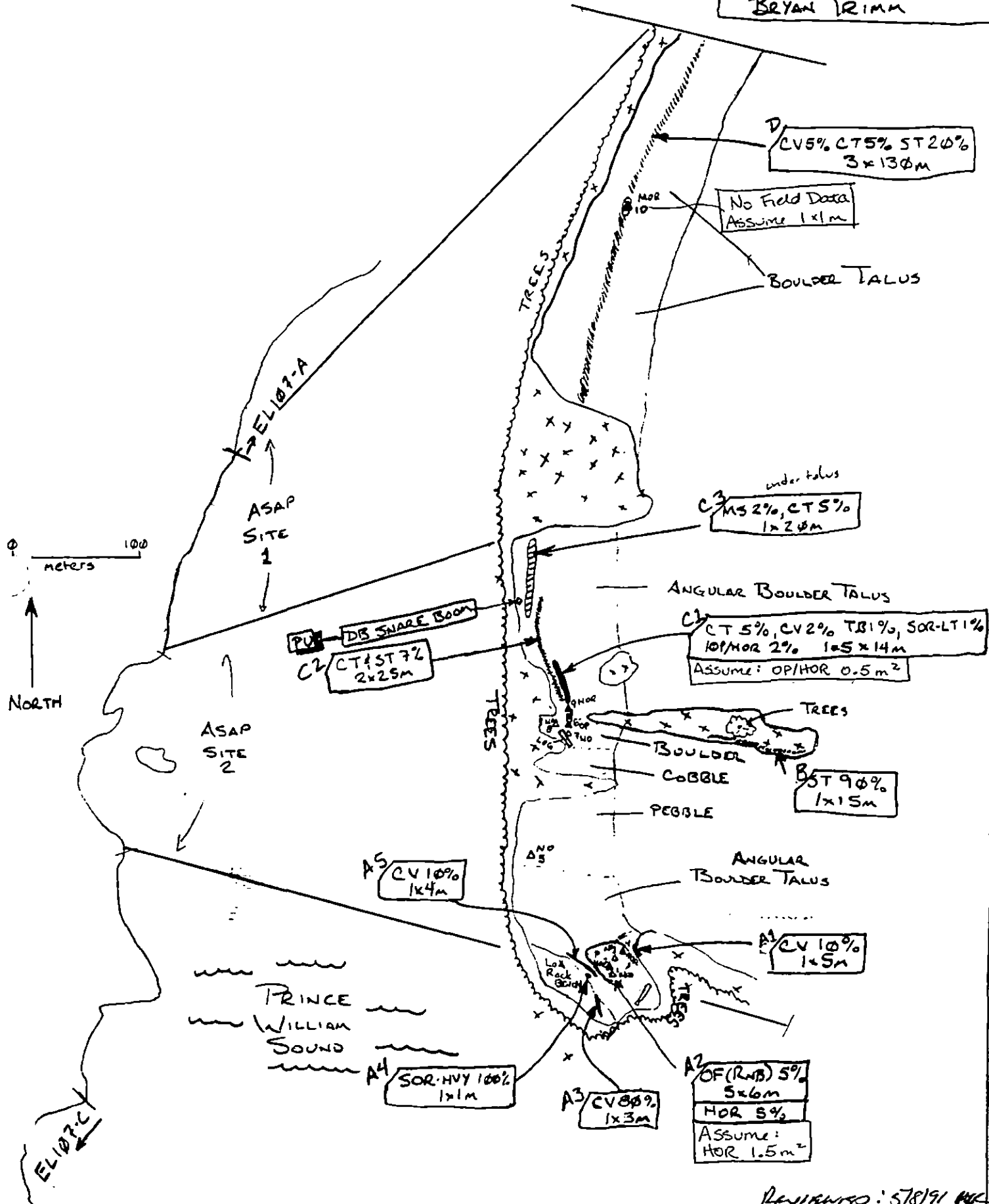
PAGE 2 OF 2

DATE 5 / 3 / 91

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

Reviewed: 5/8/91 MC  
reviewed 5/8/91 KG

OG SKETCH MAP  
EL107-B  
3-MAY-91  
1259-1405  
BRYAN TRIMM



REVIEWED: 5/8/91 MK  
revised 5/8/91 KCG

## MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 3 May '91  
 SEGMENT # EL 107 TIDAL HEIGHT(Range) +3' to +5'  
 SUBDIVISION B BIOLOGIST John Benson  
 SEA STATE 2' WIND SPEED/DIRECTION calm  
 PHOTOGRAPHS: ROLL # — FRAME # —

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

I could not observe the LITZ.

(A)-(AS), Pits #1-4 — The bedrock walls bounding the coves support a dense & moderately diverse biota. The cobble & pebble substrates, and even some boulders, have low biotic % cover. This is caused, at least in part, by the mobility of these smaller substrates in storm waves that impact this SE-facing shore. In location (A), the boulder talus is partially protected from storm swell by the bedrock point just to the south. Fucus & barnacles are dense on the boulders closest to the bedrock, just below the oiled surfaces.

(B) — The bedrock wall here is similar to that delimiting (A). Biotic % cover is high and diversity is moderately high. Dominant species are Fucus, barnacles (both *Balanus glandula* & *Semibalanus cariosus*), & *Littorina*.

(C)-(C3), Pits #6-9 — The biotic % cover in this area is low, both out on the exposed boulder beach & on the LITZ bench protected by the tidal island. These substrates are inhabited by filamentous green alga, *Ulva*, Enteromorpha, barnacles & other "weedy" opportunistic species.

## WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

| BIRDS            | # OF SPECIES | TOTAL BIRDS | FISH OBSERVED<br>SPECIES PRESENT |
|------------------|--------------|-------------|----------------------------------|
| Eagles           | —            | —           | <i>Oligocottus maculosus</i>     |
| Seabirds         | —            | —           | "tidypool sculpin"               |
| Waterfowl        | —            | —           |                                  |
| Gulls/kittiwakes | —            | —           |                                  |
| Shorebirds       | —            | —           |                                  |
| Corvids          | 1            | 1           |                                  |
| Other Birds      | —            | —           |                                  |

| MARINE MAMMALS     | # OBSERVED | LAND MAMMALS<br>SPECIES | # OBSERVED |
|--------------------|------------|-------------------------|------------|
| Sea Otters         | 1          | Sitka black-tailed      | 1          |
| Pinnipeds(specify) | —          | deer                    |            |
| ales(specify)      | —          |                         |            |
|                    |            |                         |            |

Shoreline subdivision map showing important biological features attached.

Subdivision: EL107B

Team: 2

Bio: John Benson

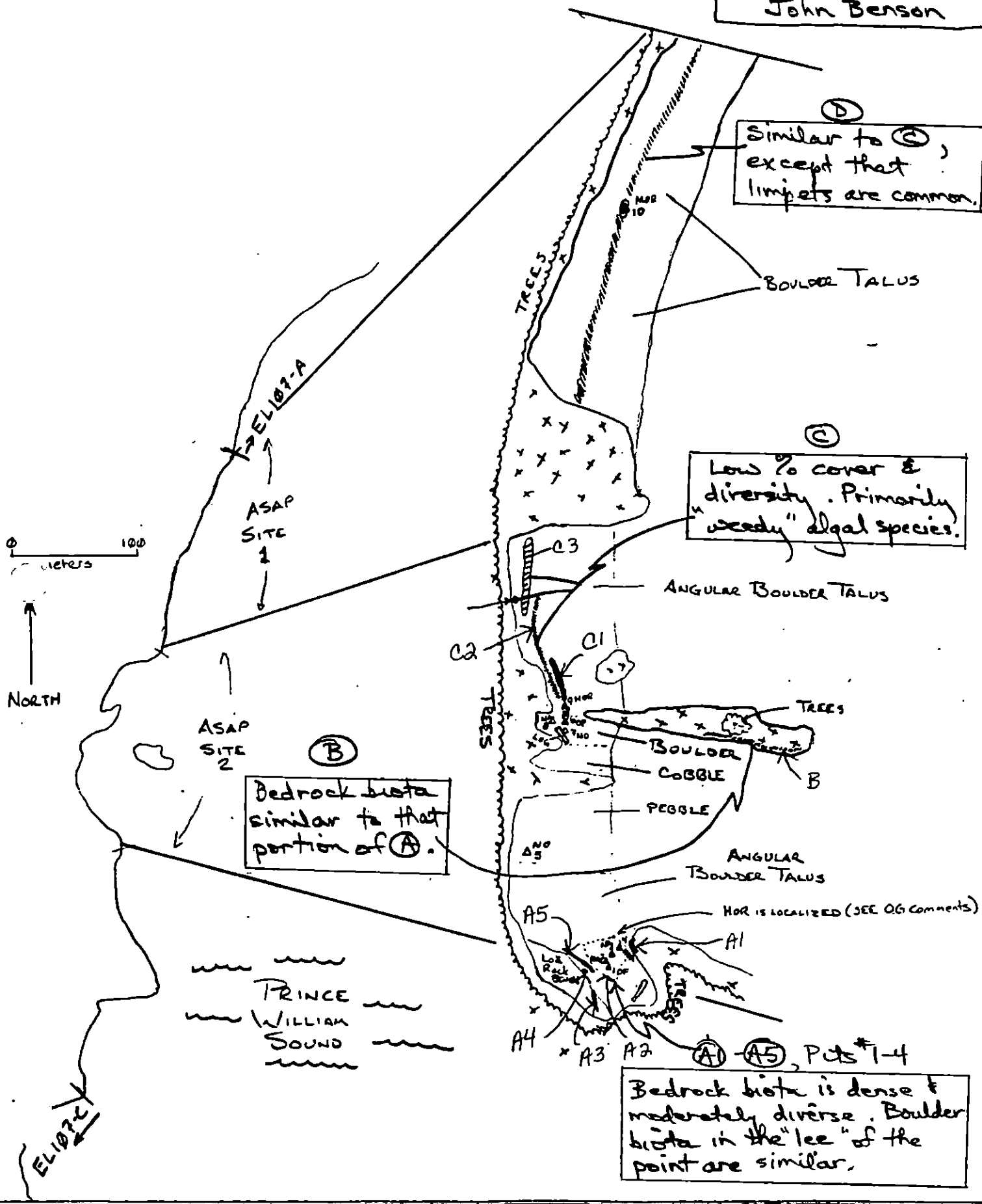
Comments (cont.) -

- ① - Low diversity & % cover, as for core Location ②. Here, the rock surfaces are smoother, and *Notoacmea* seems to have replaced *Littorina* as the dominant small grazer. Barnacle & *Mytilus* recruitment were observed here.

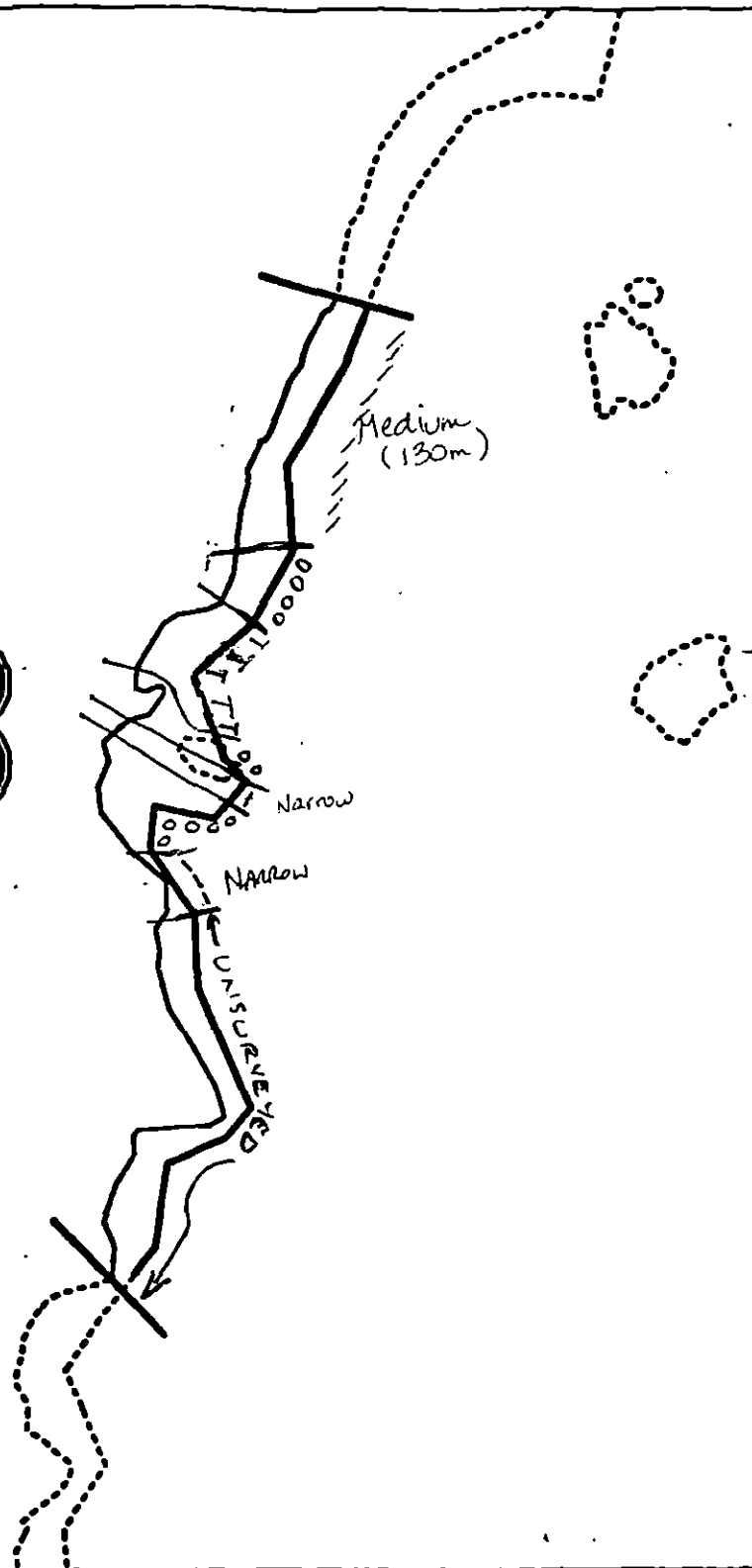
This subdivision is characterized by two major substrate types: bedrock & moveable rock. Bedrock communities are dense and moderately diverse, & moveable rock communities have few species and low % cover. There are no special biological sensitivities here, except possibly the eagle nest mapped on the island just offshore of the north end of this subdivision. I was unable to locate a nest on this island.

This nest surveyed 5/7/91 by USFWS & determined to be "destroyed" - eagle constraint not applicable to the subdivision. D.Mc. 5/8/91

BIO SKETCH MAP  
EL107-B  
3-MAY-91  
1259-1405  
John Benson



B



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

EL107 B  
 ADEC Subsegment Length: 643m  
 METERS  
 0 100 200  
 AK State Plane Zone 4  
 601107b

Subdivision Field Map  
 Map Key: KHI107B  
 Name: TRIMM  
 Date: 3 MAY 1991  
 Date Entered:  
 EXON

• SURFACE OIL CATEGORY MAP- ADEC SHORELINE •

revised 5/8/91 KG  
 REVISOR: MC 5/8/91

**1991 MAYSAP EVALUATION**

SEGMENT: EL 107 SUB: A REGION: PWS SURVEY DATE: 5/20/91

**ENVIRONMENTAL SENSITIVITIES:**

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

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

**ARCHAEOLOGICAL CONSTRAINTS:**

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

SHPO Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**RECOMMENDATIONS:**

**INITIAL**

**TAG**

**FOSC**

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

**COMMENTS:**

INITIAL: \_\_\_\_\_

TAG: \_\_\_\_\_

FOSC: \_\_\_\_\_

TAG APPROVAL DATE: \_\_\_\_\_

FOSC APPROVAL DATE: \_\_\_\_\_

ADEC \_\_\_\_\_

FOSC \_\_\_\_\_

EXXON \_\_\_\_\_

USCG \_\_\_\_\_

NOAA \_\_\_\_\_

**ECOLOGICAL CONSTRAINTS  
1991 FIELD ACTIVITIES**

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

**Subsistence - Deer Harvesting:** Unlimited treatment prior to 8/15.

ADEC

NAME Peter Montecaro

SIGNATURE [Signature]

☐ NTR ☒ TREATMENT RECOMMENDED

Aren "F" had an area of soft AP/SOR (mopped as SOR) which warrants removal. Note that the large area makes up for the small % in justifying removal. The area south of "F" remains heavily oiled w/ gross contamination persisting through the large boulders; The omniboom never should have left. Judging from my '89, SSAT, and MAYSAP visits, it appears that gross contamination is likely to persist. Unfortunately, most of this oil is inaccessible w/o major mechanical yet unseen in Prince William Sound. This is a prime site for long term monitoring.

EXXON

NAME FRANK Bax

SIGNATURE [Signature]

☐ NTR

I think that no treatment should be necessary on this segment except on small area on the northern tip of the segment that is protected from wave action by an island. There perhaps the sea that is between the boulders could be broken up and bled. (section F)

ANDMANAGER

NAME Dennis S Kennedy OF USFS

SIGNATURE [Signature]

☐ NTR

This subdivision is protected by small islands. On the area survey 10 or more seals were located on and around these islands. Location A had extremely dense litter and packets. Oil found around area A & B would be very difficult to work.

USCG/NOAA D. Simon - BERTY NOAA

NAME BMI M. P. ZENONE USCG

SIGNATURE [Signature]

☐ NTR

Within sections A, B, C, D, E, surface oil is patchy in the UST. This was mostly coating on the larger boulders and red rock. Subsurface oil was found between bottles/petrels and larger boulders. This area would be difficult to clean with a hand and bucket due to the huge size of the boulders. On the northern end of section F, the SOR could be manually broken-up but the area and recent coverage is small. D-B

CG - SOME MANUAL THEN BIOREMEDIATE ON AREA N.W. OF ISLAND THAT WAS BIOREMEDIATED LAST YEAR. OTHERWISE NO TREATMENT RECOMMENDED. 3

revised 5.24 98

SKETCH MAP  
LOCATIONS

SKETCH  
MAP #2

SKETCH  
MAP #1

A

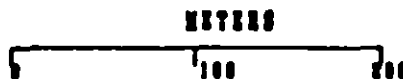
EL107 A

Subdivision Field Map

Map Key: KN18107Ab

Name: Reimer

Date: 5/20/91

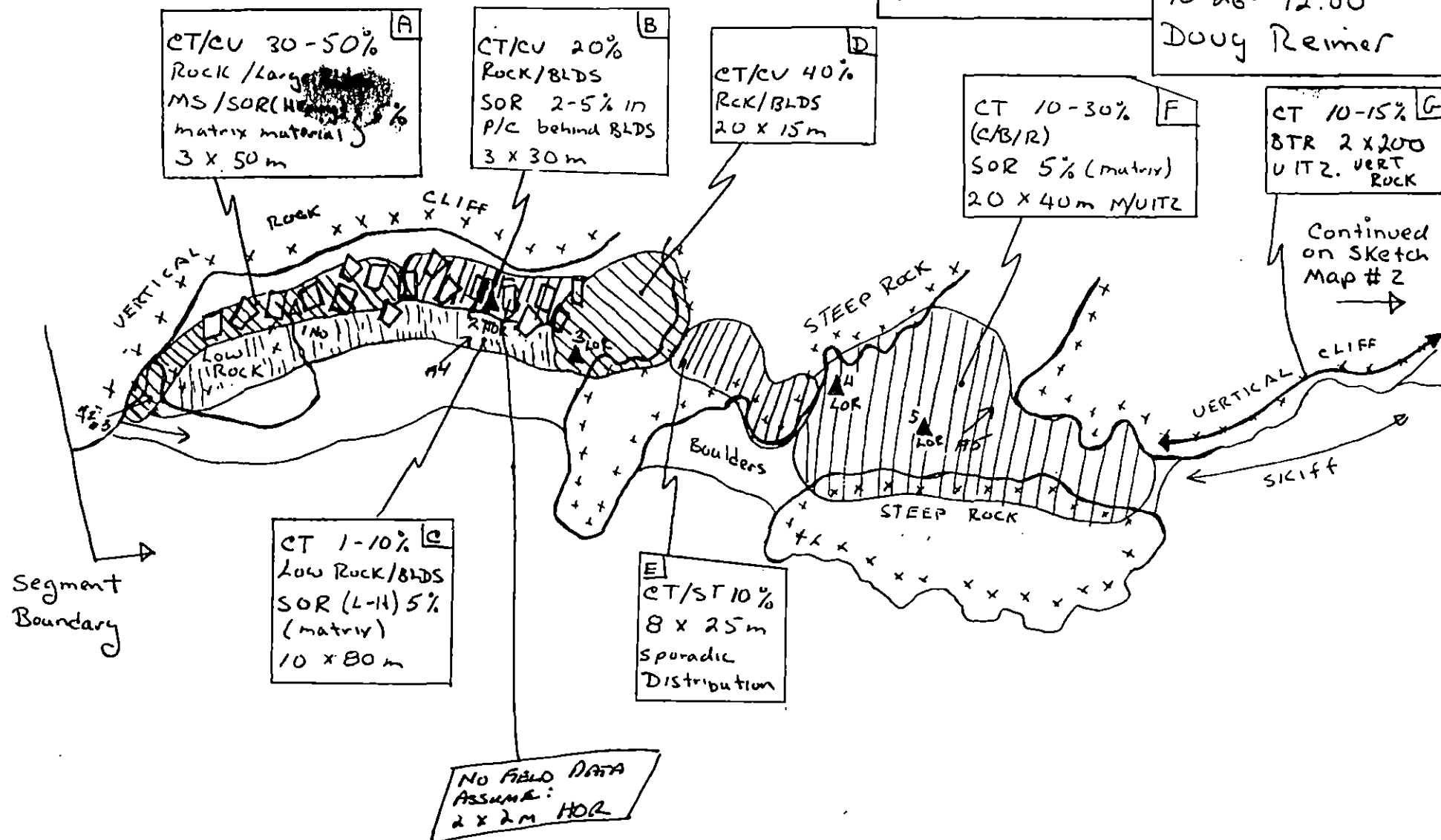


AS State Placed, June 4  
20110705



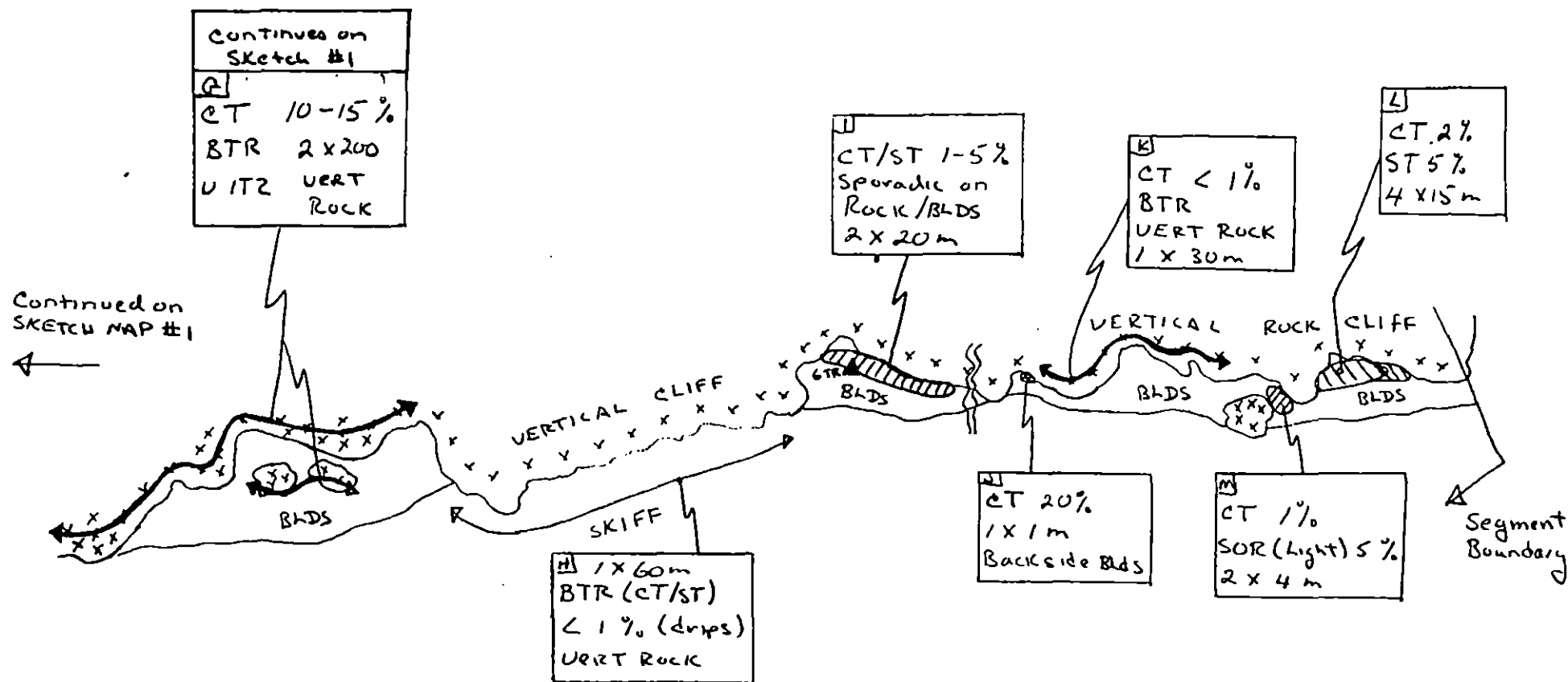
Large  
Blocks, Rock  
Bedrock

OG SKETCH #1  
KN 107 A  
MAY 20, 1981  
10:26 - 12:00  
Doug Reimer



REVISION: MC 5-26-91  
Reviewed 5-24 94

OG SKETCH #2  
KN 107A  
MAY 20, 1991  
10:26 - 12:00  
Doug Reimer



REVIEWED: MC 5/26/91  
reviewed 5-24-91

## MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 20 May 91  
 SEGMENT # ELK-107A TIDAL HEIGHT(Range) +4 to +1  
 SUBDIVISION A BIOLOGIST SMB  
 SEA STATE Calm WIND SPEED/DIRECTION Calm  
 PHOTOGRAPHS: ROLL #    FRAME #   

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

A+B: CT/CU high in ITZ, no biota or lichen only

C: CT+SOR ranges from green alga zone into the barnacle zone. Sporadic oil near L. Horns & Fucus recruits. Numerous tide pools with algae, Agardhs, L. Horns & limpets found in low rock area.

D+E: CT/CU high on rock terrace in green alga & lichen zone

F: Pits situated in naturally depauperate pebbly areas. Oiler living barnacles & shells observed in lower zones. Un-oiled area near water line supports spat & Fucus.

G H I J K L M: CT/ST/BTR is high in ITZ generally in the lichen/green alga zone. CT reaches to upper edge of barnacle zone in two areas ("G" & "J"). Very large, old barnacles observed near "G" as noted. Small mussels observed in boulder crevices at the last cove ("K L & M")

## WILDLIFE OBSERVATIONS

## TO BE COMPLETED IN ALL SUBDIVISIONS

| BIRDS           | # OF SPECIES | TOTAL BIRDS | FISH OBSERVED<br>SPECIES PRESENT |
|-----------------|--------------|-------------|----------------------------------|
| Eagles          |              | 2 adults    |                                  |
| Seabirds        |              |             |                                  |
| Waterfowl       |              |             |                                  |
| Gulls/Kittiwake |              |             |                                  |
| Shorebirds      |              |             |                                  |
| Corvids         |              |             |                                  |
| Other Birds     |              |             |                                  |

| MARINE MAMMALS      | # OBSERVED | LAND MAMMALS<br>SPECIES | # OBSERVED |
|---------------------|------------|-------------------------|------------|
| Sea Otters          |            |                         |            |
| Pinnipeds (specify) |            |                         |            |
| Seals               | ± 10       |                         |            |
| ies (specify)       |            |                         |            |

Shoreline subdivision map showing important biological features attached.

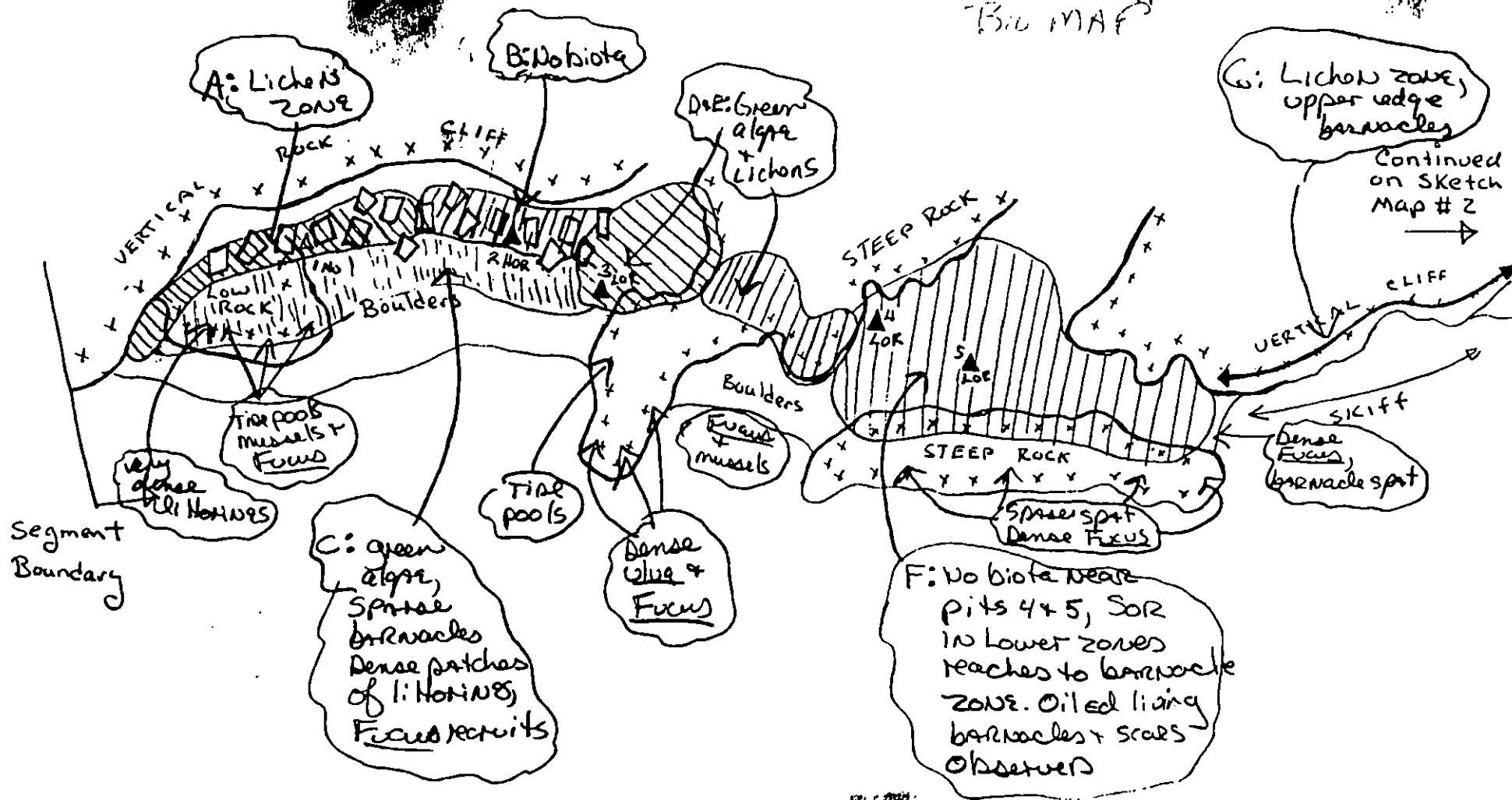
Revised 5/25/91 DM



□ - Large  
Blocks, Rock  
x x x - Bedrock

OG SKETCH #1  
KN 107 A  
MAY 20, 1981  
10:26 - 12:00  
Doug Reimer

SMB 20 May  
91  
Bill MAF

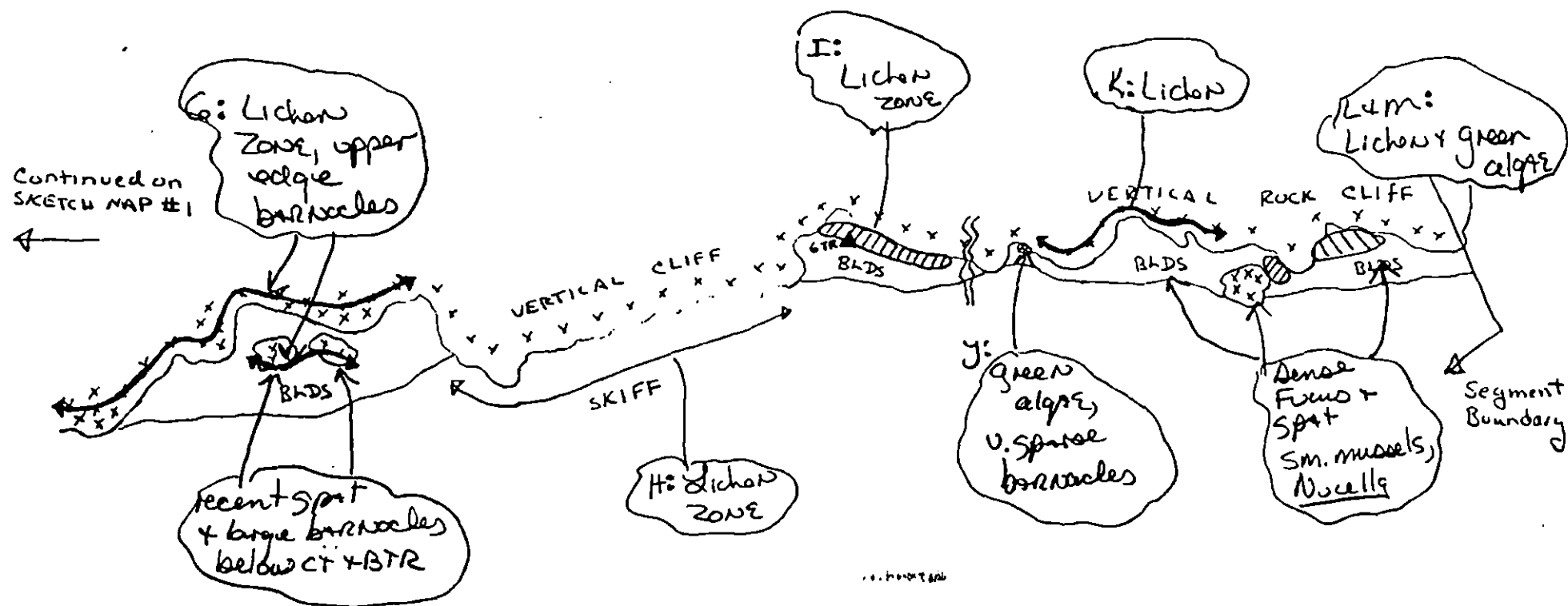


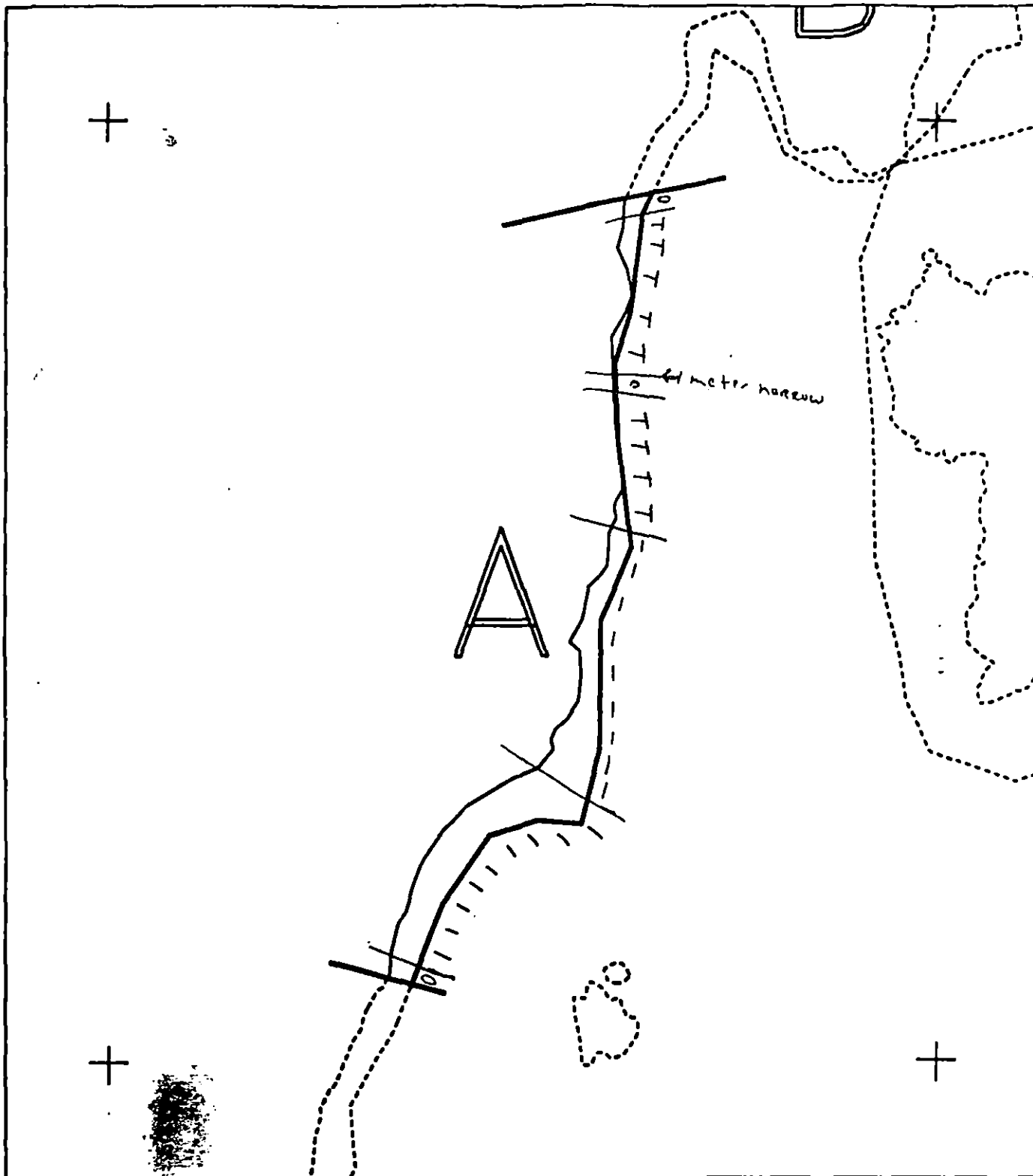
OG SKETCH #2  
KN 107A  
MAY 20, 1991  
10:26 - 12:00  
Doug Reimer

PRO MAP



SMB 20 May 91





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

**EL107 A**  
 ADEC Subsegment Length: 640m  
 METERS  
 0 100 200  
 AK State Plane Zone 4  
 601107a



Subdivision Field Map  
 Map Key: KNI107A  
 Name: Reimer  
 Date: 5/20/91  
 Date Entered:

Reviewed: MC 5/20/91  
 Reviewed 5.24 91

**1991 MAYSAP EVALUATION**

**SEGMENT:** EL 107 **SUB:** C **REGION:** PWS **SURVEY DATE:** 5/3/91

**ENVIRONMENTAL SENSITIVITIES:**

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

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

**ARCHAEOLOGICAL CONSTRAINTS:**

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

**SHPO Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**RECOMMENDATIONS:**

**INITIAL**

**TAG**

**FOSC**

**TREATMENT REQUIRED (Y or N)**

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

**COMMENTS:**

**INITIAL:** \_\_\_\_\_

**TAG:** \_\_\_\_\_

**FOSC:** \_\_\_\_\_

**TAG APPROVAL DATE:** \_\_\_\_\_

**FOSC APPROVAL DATE:** \_\_\_\_\_

**ADEC** \_\_\_\_\_

**FOSC** \_\_\_\_\_

**EXXON** \_\_\_\_\_

**USCG** \_\_\_\_\_

**NOAA** \_\_\_\_\_

**ECOLOGICAL CONSTRAINTS  
1991 FIELD ACTIVITIES**

**Subsistence - Deer Harvesting:** Unlimited treatment prior to 8/15.

**ADEC**

NAME Peter Montesano

SIGNATURE Peter Montesano

☐ NTR ☒ TREATMENT RECOMMENDED

SITE B IS IN NO NEED PRESENTLY FOR FURTHER TREATMENT.

THE STORM BERM RELOCATION SITE WILL REQUIRE A TAG VISIT TO DETERMINE WHAT TO DO WITH THE ARTIFICIAL LOG PILE ABOVE THE BERM. THESE LOGS DID NOT RESORT OVER THE WINTER AND SHOULD NOT BE LEFT ERRANT. THE RELOCATION APPEARED TO BE EXTREMELY SUCCESSFUL SINCE WE WERE UNABLE TO FIND HEAVY OIL BELOW THE BERM AREA.

SITE A1 WILL REQUIRE SIMPLE, STANDARD MANUAL REMOVAL. ITS LOCATION INSURES ITS PERSISTENCE

**EXXON**

NAME C.M. Katsimailis

SIGNATURE C.M. Katsimailis

☐ NTR

LAND MANAGER WAS NOT HAPPY WITH DISPLAY OF LOGS.

**LANDMANAGER**

NAME DENNIS S. KENNEDY OF USFS

SIGNATURE D.S. Kennedy

☐ NTR

The berm relocation looks very bad. Logs should be redistributed or burnt. Treatment of remaining oil is not a priority as this site will weather quickly.

**USCG/NOAA**

NAME MICHEL (NOAA) BENI ZENONE (USCG)

SIGNATURE Michel Beni Zenone

☐ NTR

SITE 1 IS THE TYPICAL LARGE BOULDER FIELDS ON BEDROCK WHICH HAS VERY SCATTERED AND UNACCESSIBLE SOR IN BOULDER CREVICES. SITE 2 WAS A BERM RELOCATION SITE, AND NO SUBSURFACE OIL WAS FOUND, OTHER THAN TRACE IN THE RELOCATION AREA. IN SHELTERED POCKETS, LIGHT TO MODERATE SUBSURFACE WAS FOUND (I.E., PIT #2), BUT THESE SHOULD IMPROVE IN THIS EXPOSED SETTING.

6-

NOAA'S SUMMARY DESCRIBES THIS SITE (S) PERFECTLY. - 3

REVISION: MC 5/8/91  
revised 5/8/91 LG

# MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 3 May '91  
 SEGMENT # EL 107 TIDAL HEIGHT(Range) +1' to +2'  
 SUBDIVISION C BIOLOGIST John Benson  
 SEA STATE 1' WIND SPEED/DIRECTION calm  
 PHOTOGRAPHS: ROLL # — FRAME # —

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

(A1), (A2) - This subdivision is similar to EL108A in that the cobble beaches support a very low diversity and low biomass, while the bedrock & larger boulders support a more diverse & productive biota. Location A is boulder talus partially protected by bedrock outcrop. This supports a diverse community. There are more Littorina & fewer barnacles than in EL108A.

(B1), (B2), (B3) - Location B is similar to (A). The most common species are Verrucaria (UITZ), Fucus (MITZ), barnacles (MITZ) & Mytilus. There are a few tidepools in the bedrock. Recent recruitment of Notoacmaea, barnacles, Mytilus & Fucus were observed.

There are no special biological sensitivities in this subdivision.

## WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

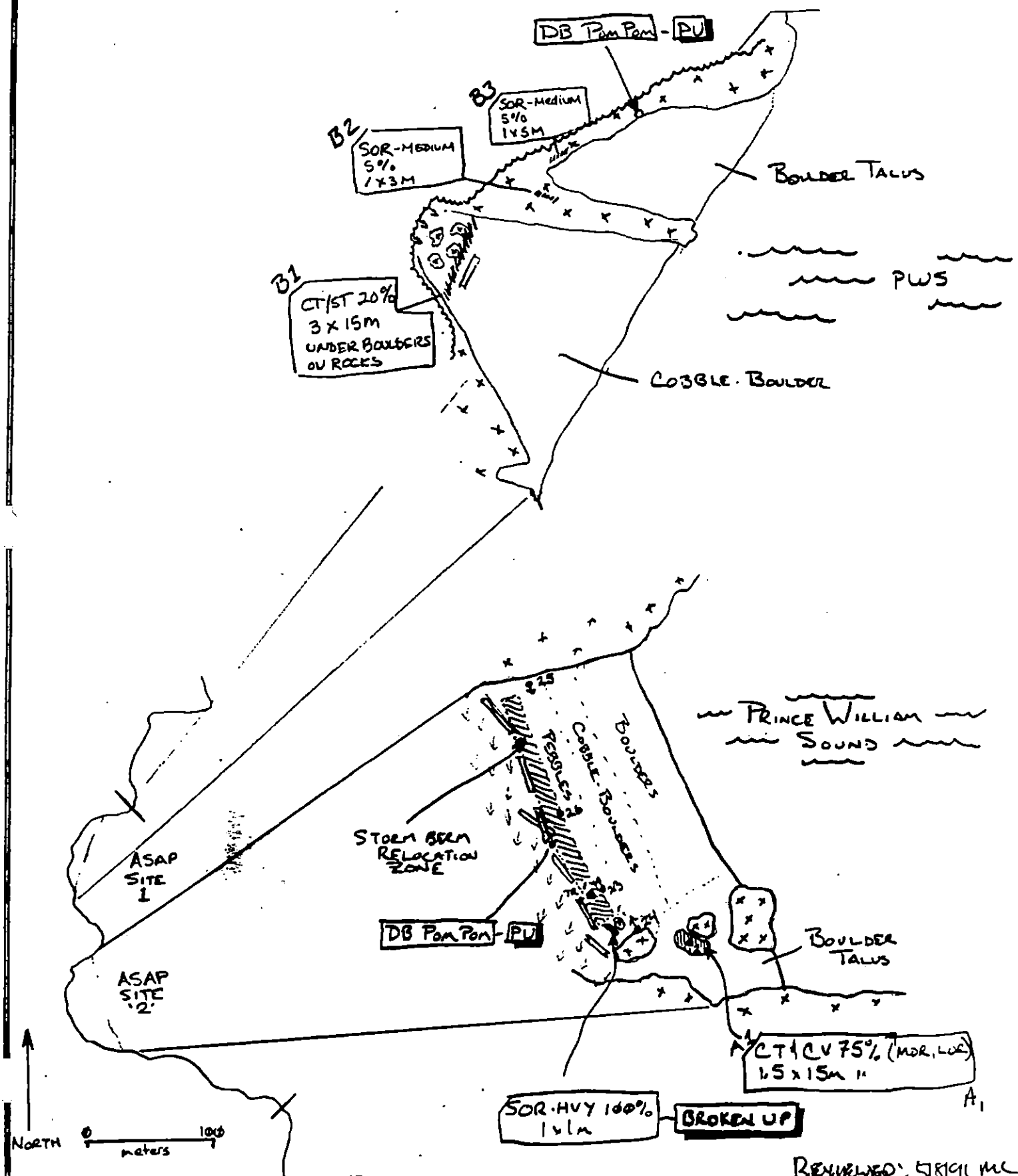
| BIRDS            | # OF SPECIES | TOTAL BIRDS | FISH OBSERVED<br>SPECIES PRESENT |
|------------------|--------------|-------------|----------------------------------|
| Eagles           | 1            | 1           | —                                |
| Seabirds         | —            | —           | —                                |
| Waterfowl        | —            | —           | —                                |
| Gulls/Kittiwakes | —            | —           | —                                |
| Shorebirds       | —            | —           | —                                |
| Corvids          | —            | —           | —                                |
| Other Birds      | —            | —           | —                                |

| MARINE MAMMALS      | # OBSERVED | LAND MAMMALS<br>SPECIES | # OBSERVED |
|---------------------|------------|-------------------------|------------|
| Sea Otters          | —          | —                       | —          |
| Pinnipeds (specify) | —          | —                       | —          |
| —                   | —          | —                       | —          |
| —                   | —          | —                       | —          |

Shoreline subdivision map showing important biological features attached.

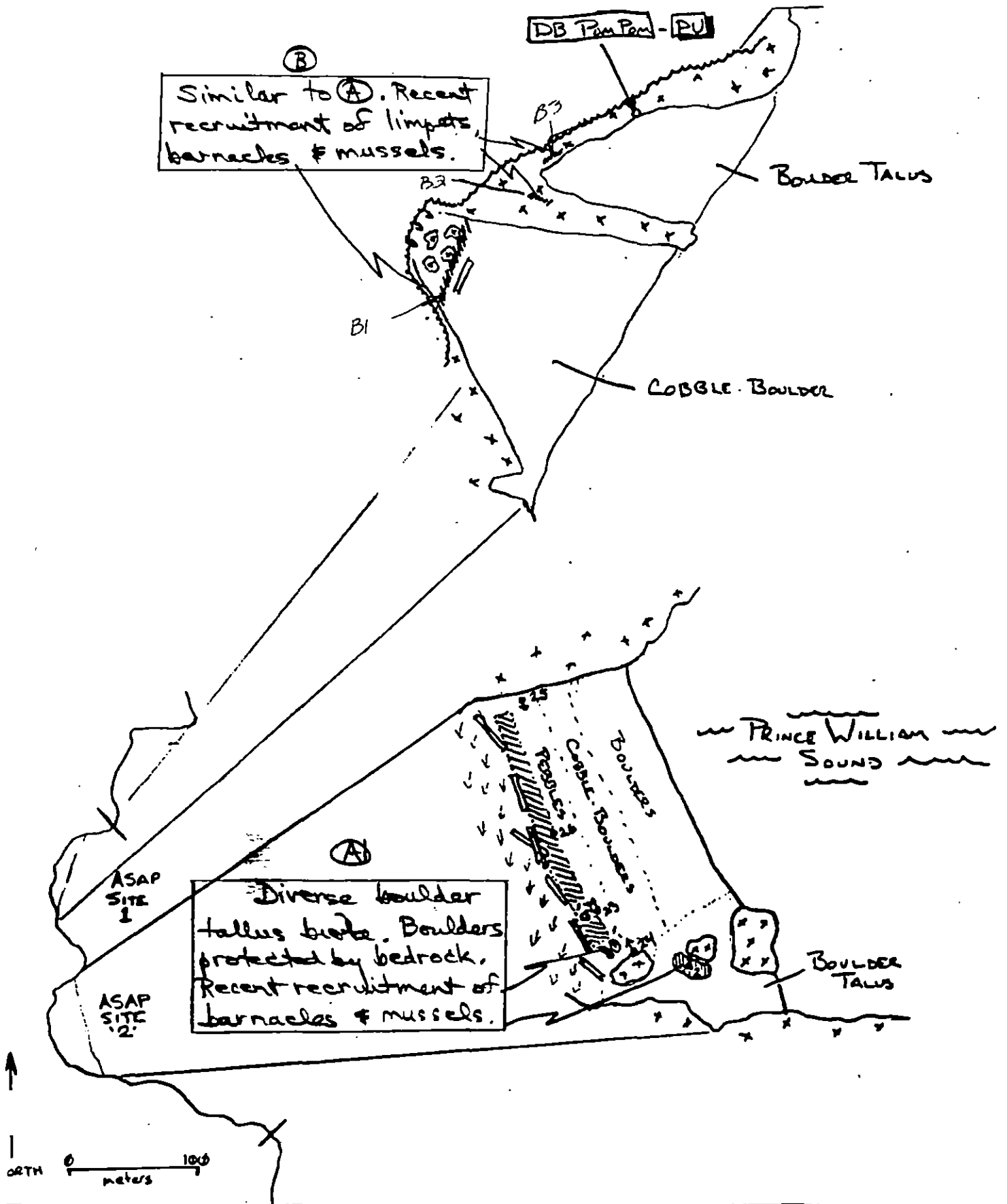
REVIEWED: 5/8/91 MC

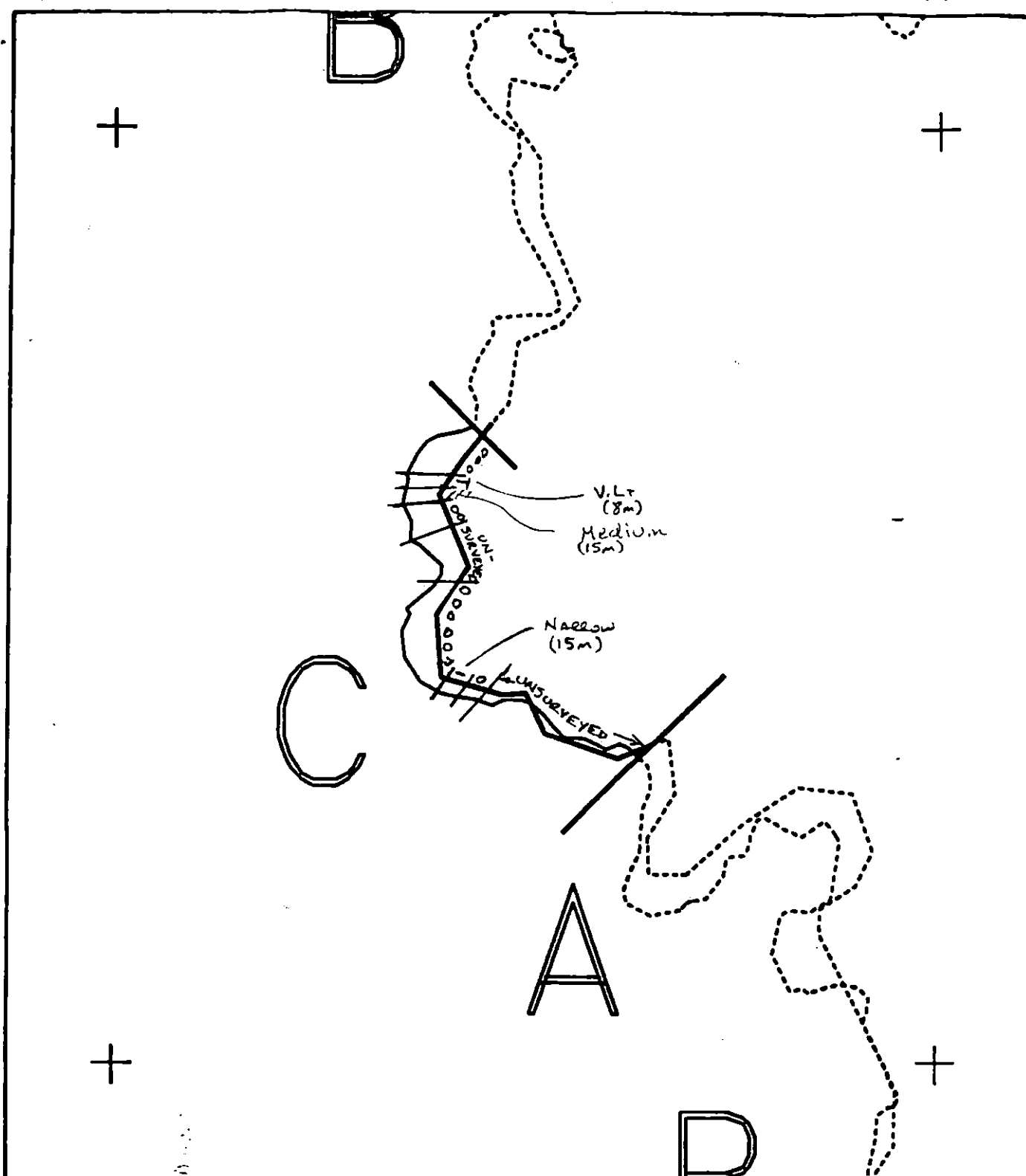
SKETCH MAP  
EL 107-C  
3-MAY-91  
1210-1259



REVIEWED: 5/19/91 MC  
reviewed: 5/19/91 MC

BIO SKETCH MAP  
EL 107-C  
3-MAY-91  
1210-1259  
John Benson





|      |            |                                                                                                           |                                                                                                             |
|------|------------|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| XXXX | Wide       | <b>EL107 C</b><br>ADEC Subsegment Length: 381m<br>METERS<br>0 100 200<br>AK State Plane Zone 4<br>601107a | Subdivision Field Map<br>Map Key: KHI107C<br>Name: <u>TRIMM</u><br>Date: <u>3 MAY 1991</u><br>Date Entered: |
| //// | Medium     |                                                                                                           |                                                                                                             |
| ---- | Narrow     |                                                                                                           |                                                                                                             |
| TTTT | Very Light |                                                                                                           |                                                                                                             |
| 0000 | No Oil     |                                                                                                           |                                                                                                             |

• SURFACE OIL CATEGORY MAP • REVIEWED MC 5/8/91 MC  
 revised 5/8/91 KC

1991 MAYSAP EVALUATION

SEGMENT: EL 107 SUB: B REGION: PWS SURVEY DATE: 5/3/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: \_\_\_\_\_ Date: \_\_\_\_\_

| <u>RECOMMENDATIONS:</u>       | <u>INITIAL</u> | <u>TAG</u> | <u>FOSC</u> |
|-------------------------------|----------------|------------|-------------|
| TREATMENT REQUIRED (Y or N)   | <u>N</u>       | _____      | _____       |
| Manual Pickup (Check as Req.) | _____          | _____      | _____       |
| Spot Washing                  | _____          | _____      | _____       |
| Bio-Customblen Only           | _____          | _____      | _____       |
| Bio-Inipol/Customblen         | _____          | _____      | _____       |
| Other _____                   | _____          | _____      | _____       |
| Other _____                   | _____          | _____      | _____       |

COMMENTS:

INITIAL: \_\_\_\_\_

TAG: \_\_\_\_\_

FOSC: \_\_\_\_\_

TAG APPROVAL DATE: \_\_\_\_\_ FOSC APPROVAL DATE: \_\_\_\_\_

ADEC \_\_\_\_\_ FOSC \_\_\_\_\_

EXXON \_\_\_\_\_

USCG \_\_\_\_\_

NOAA \_\_\_\_\_

**ECOLOGICAL CONSTRAINTS  
1991 FIELD ACTIVITIES**

**Subsistence - Deer Harvesting:** Unlimited treatment prior to 8/15.

TEAM NO. 2 SEGMENT EL 107 SUBDIVISION B DATE 5/3/91

ADEC

NAME Peter Montesano

SIGNATURE Peter Montesano

☐ NTR ☒ TREATMENT RECOMMENDED

Deposits of heavy oil remain on this subdivision and the %'s provided for the heavily oiled areas are completely w/o base. These percentages are systematically undercharacterized. Thus, more removal than depicted will be needed in Areas H+C. The work is standard manual removal on an accessible shoreline.

EXXON

NAME C.M. Katsimpalis

SIGNATURE C.M. Katsimpalis

☐ NTR

AREAS WITH HEAVIER OILING IN THIS SEGMENT COULD BE IMPROVED WITH MANUAL TREATMENT.

LANDMANAGER

NAME Dennis S. Kennedy OF USFS

SIGNATURE D.S. Kennedy

☐ NTR

HOR areas could be removed by manual treatment.

USCG/NOAA

NAME MICHEL (NOAA) Ben Zeman (CG)

SIGNATURE Michel Ben Zeman

☐ NTR

Significant amounts of oil remain in two locations: 1) Southernmost South Cove which is highly sheltered by bedrock except to the North. There is a small area where HOR was found 6-11 cm thick in 2 out of 4 pits. This HOR is shallow (<8cm below surface) and accessible. 2) Pocket behind a bedrock outcrop which has shallow but spotty OP/HOR/HOR. Other locations are likely to persist.

AGREE W/EVERYONE THIS AREA COULD USE SOME MORE HELP THIS SUMMER. GOOD ON REPORT + DIAGRAMS IN "OG COMMENTS".

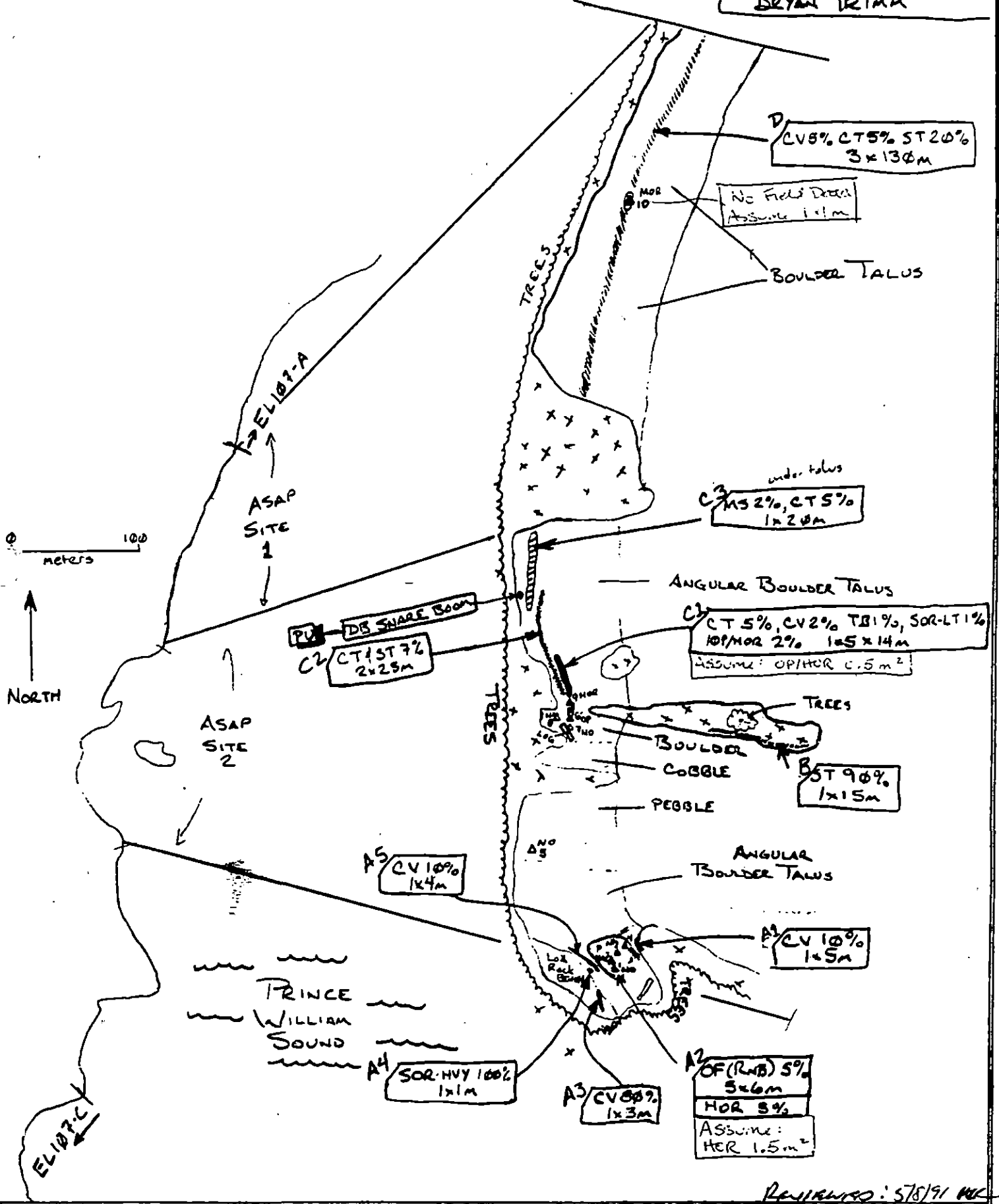
REVISOR: 5/8/91 MC  
revised 5/8/91

DATE 5 / 3 / 91

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

Reviewed: 5/8/91 me  
reviewed 5/8/91 KJ

OG SKETCH MAP  
EL107-B  
3-MAY-91  
1259-1405  
BRYAN TRIMM



REVIEWED: 5/8/91 MK  
revised 5/13/91

# MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 3 May '91  
 SEGMENT # EL 107 TIDAL HEIGHT(Range) +3' to +5'  
 SUBDIVISION B BIOLOGIST John Benson  
 SEA STATE 2' WIND SPEED/DIRECTION calm  
 PHOTOGRAPHS: ROLL # — FRAME # —

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

I could not observe the LITZ.

(A)-(AS), Pits #1-4 — The bedrock walls bounding the coves support a dense & moderately diverse biota. The cobble & pebble substrates, and even some boulders, have low biotic % cover. This is caused, at least in part, by the mobility of these smaller substrates in storm waves that impact this SE-facing shore. In location (A), the boulder talus is partially protected from storm swell by the bedrock point just to the south. Fucus & barnacles are dense on the boulders closest to the bedrock, just below the oiled surfaces.

(B) — The bedrock wall here is similar to that delimiting (A). Biotic % cover is high and diversity is moderately high. Dominant species are Fucus, barnacles (both Balanus glandula & Semibalanus cariosus), & Littorina.

(C1)-(C3), Pits #6-9 — The biotic % cover in this area is low, both out on the exposed boulder beach & on the LITZ bench protected by the tidal island. These substrates are inhabited by filamentous green alga, Ulva, Enteromorpha, barnacles & other "weedy" opportunistic species.

(continued on next page)

## WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

| BIRDS            | # OF SPECIES | TOTAL BIRDS | FISH OBSERVED<br>SPECIES PRESENT |
|------------------|--------------|-------------|----------------------------------|
| Eagles           | —            | —           | Oligocottus maculosus            |
| Seabirds         | —            | —           | "kelpfish sculpin"               |
| Waterfowl        | —            | —           |                                  |
| Gulls/Kittiwakes | —            | —           |                                  |
| Shorebirds       | —            | —           |                                  |
| Corvids          | 1            | 1           |                                  |
| Other Birds      | —            | —           |                                  |

| MARINE MAMMALS      | # OBSERVED | LAND MAMMALS<br>SPECIES | # OBSERVED |
|---------------------|------------|-------------------------|------------|
| Sea Otters          | 1          | Sitka black-tailed      | 1          |
| Pinnipeds(specify)  | —          | deer                    |            |
| Carnivores(specify) | —          |                         |            |
|                     | —          |                         |            |

Shoreline subdivision map showing important biological features attached.

Subdivision: EL107B

Team: 2

Bio: John Benson

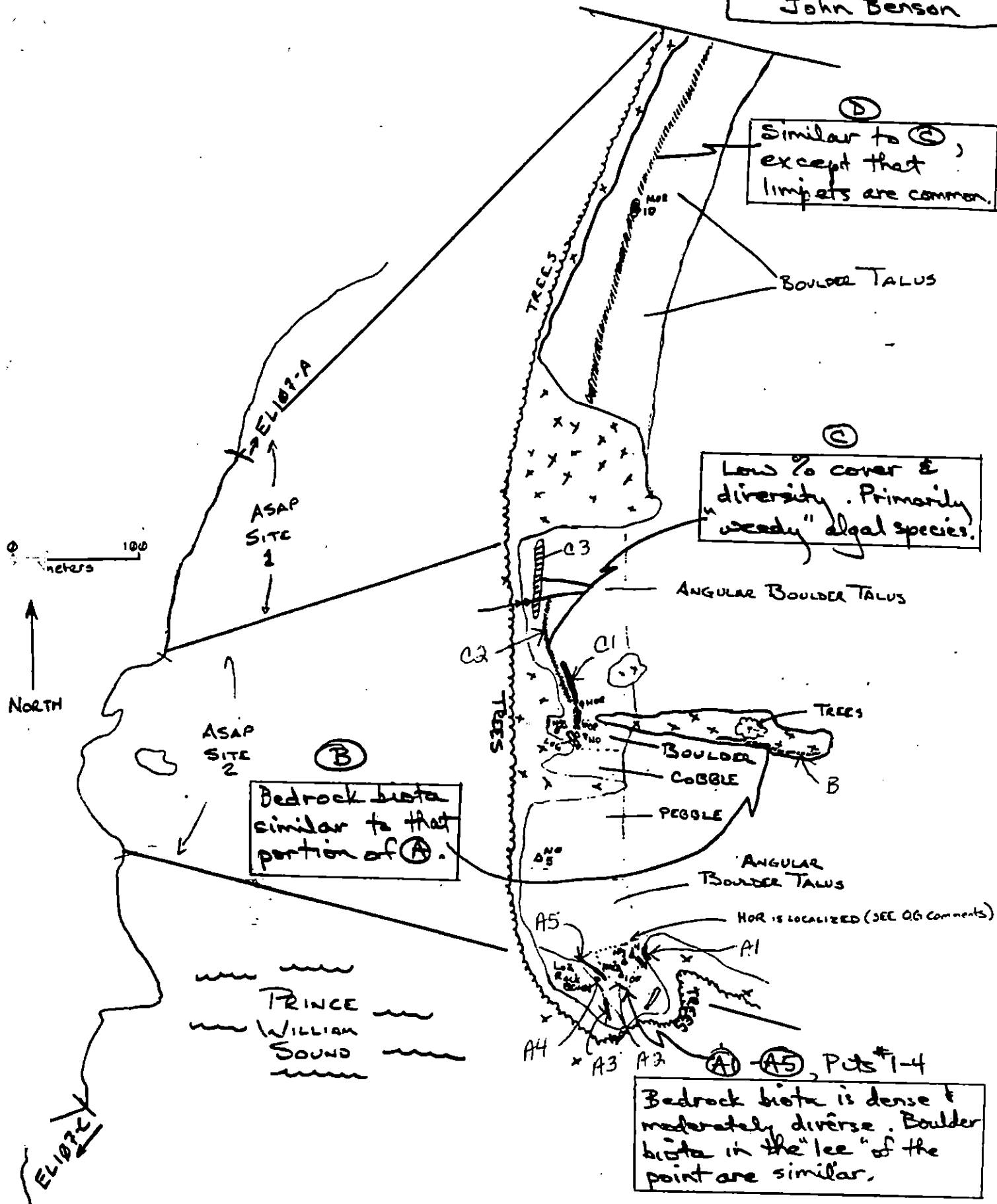
Comments (cont.) -

- ① - low diversity & % cover, as for cave location ②. Here, the rock surfaces are smoother, and *Notoacmea* seems to have replaced *Littorina* as the dominant small grazer. Barnacle & *Mytilus* recruitment were observed here.

This subdivision is characterized by two major substrate types: bedrock & moveable rock. Bedrock communities are dense and moderately diverse, & moveable rock communities have few species and low % cover. There are no special biological sensitivities here, except possibly the eagle nest mapped on the island just offshore of the north end of this subdivision. I was unable to locate a nest on this island.

This nest surveyed 5/7/91 by USFWS & determined to be "destroyed" - eagle constraint not applicable to the subdivision. DMC 5/8/91

BIO SKETCH MAP  
EL107-B  
3-MAY-91  
1259-1405  
John Benson



④  
Similar to ③,  
except that  
limpets are common.

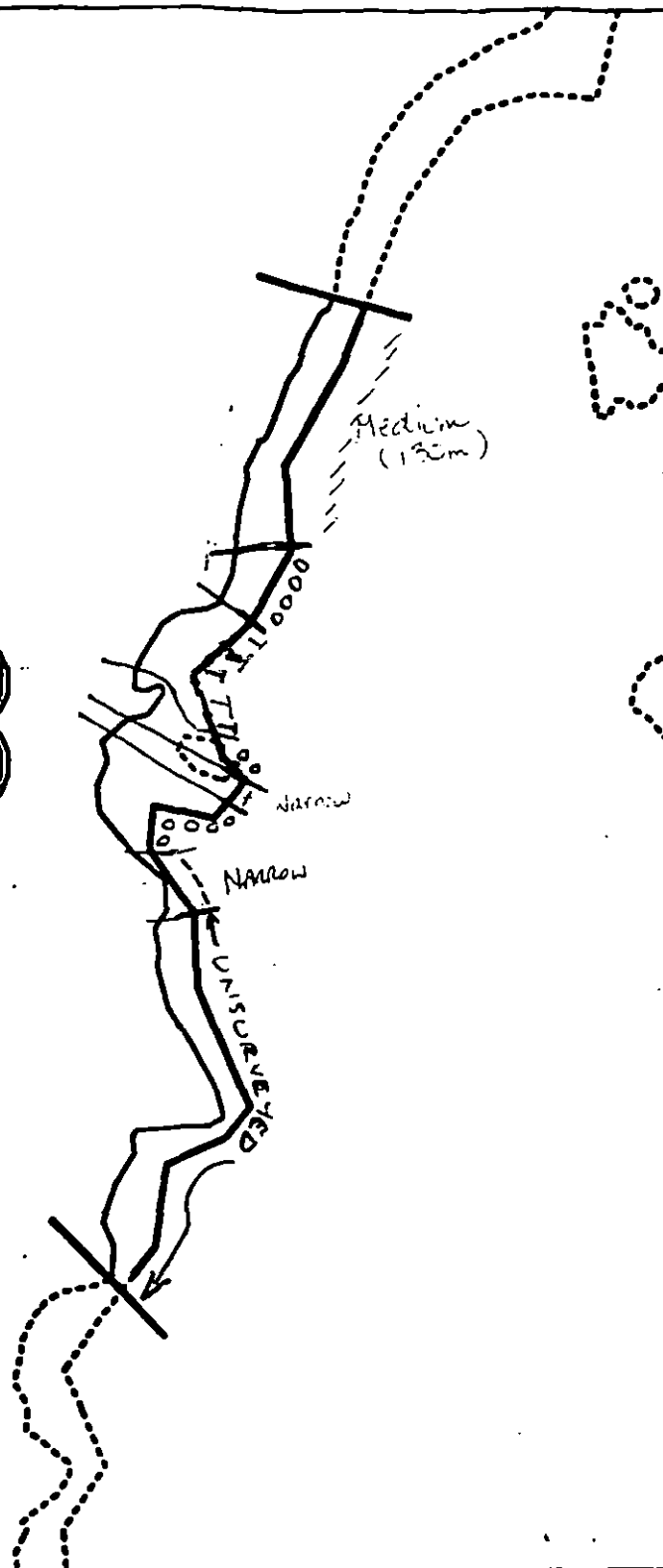
③  
Low % cover &  
diversity. Primarily  
"weedy" algal species.

②  
Bedrock biota  
similar to that  
portion of ①.

①-⑤, Pts 1-4  
Bedrock biota is dense &  
moderately diverse. Boulder  
biota in the "ice" of the  
point are similar.

HOR is localized (SEE OG comments)

B



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

EL107 B  
 ADEC Subsegment Length: 643m  
 METERS  
 0 100 200  
 AK State Plane Zone 4  
 601107b

Subdivision Field Map  
 Map Key: KRIEL107B  
 Name: TRIMM  
 Date: 3 MAY 1991  
 Date Entered:



• SURFACE OIL CATEGORY MAP- ADEL SHORELINE •

revised 5/8/91 KC  
 REVISOR: MC 5/8/91

# 1991 MAYSAP EVALUATION

SEGMENT: EL 107 SUB: C REGION: PWS SURVEY DATE: 5/3/91

## ENVIRONMENTAL SENSITIVITIES:

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

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

## ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Rachel Ann Orr

Date: 5/17/91

## RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

N

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

## COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: MAY 17 1991

FOSC APPROVAL DATE: 25 MAY 1991

ADEC

FOSC

EXXON

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

USCG

NOAA

**ECOLOGICAL CONSTRAINTS  
1991 FIELD ACTIVITIES**

**Subsistence - Deer Harvesting:** Unlimited treatment prior to 8/15.

# MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL 107 SUBDIVISION C DATE 5/3/91

## ADEC

NAME Peter Montesano

SIGNATURE Peter Montesano

☐ NTR ☒ TREATMENT RECOMMENDED

SITE B IS IN NO NEED PRESENTLY FOR FURTHER TREATMENT.

THE STORM BERM RELOCATION SITE WILL REQUIRE A TAG VISIT TO DETERMINE WHAT TO DO WITH THE ARTIFICIAL LOG PILE ABOVE THE BERM. THESE LOGS DID NOT RESORT OVER THE WINTER AND SHOULD NOT BE LEFT ERRANT. THE RELOCATION APPEARED TO BE EXTREMELY SUCCESSFUL SINCE WE WERE UNABLE TO FIND HEAVY OIL BELOW THE BERM AREA.

SITE A1 WILL REQUIRE SIMPLE, STANDARD MANUAL REMOVAL. ITS LOCATION INSURES ITS PERSISTENCE.

## EXXON

NAME C.M. HATSIMPOLIS

SIGNATURE C.M. HATSIMPOLIS

☐ NTR

LAND MANAGER WAS NOT HAPPY WITH DISARRAY OF LOGS.

## LANDMANAGER

NAME DENNIS S. KENNEDY OF USFS

SIGNATURE D.S. Kennedy

☐ NTR

The berm relocation looks very bad. Logs should be redistributed or burnt. Treatment of remaining oil is not a priority as this site will weather quickly.

## USCG/NOAA

NAME MICHEL (NOAA) Bmi ZENONE (CG)

SIGNATURE Michel Bmi ZENONE

☐ NTR

SITE 1 is the typical large boulder talus on bedrock which has very scattered and inaccessible SOR in boulder crevices. Site 2 was a berm relocation site, and no subsurface oil was found, other than trace in the relocation area. In sheltered pockets, light to moderate subsurface was found (i.e., Pit #2), but these should improve in this exposed setting.

CO-

NOAA'S SUMMARY DESCRIBES THIS SITE (S) PERFECTLY. -3

DATE 5 13 / 91

EST. OIL CATEGORY LENGTH: W 6 m M 15 m N 15 m VL 8 m NO 152 m US 218 m

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

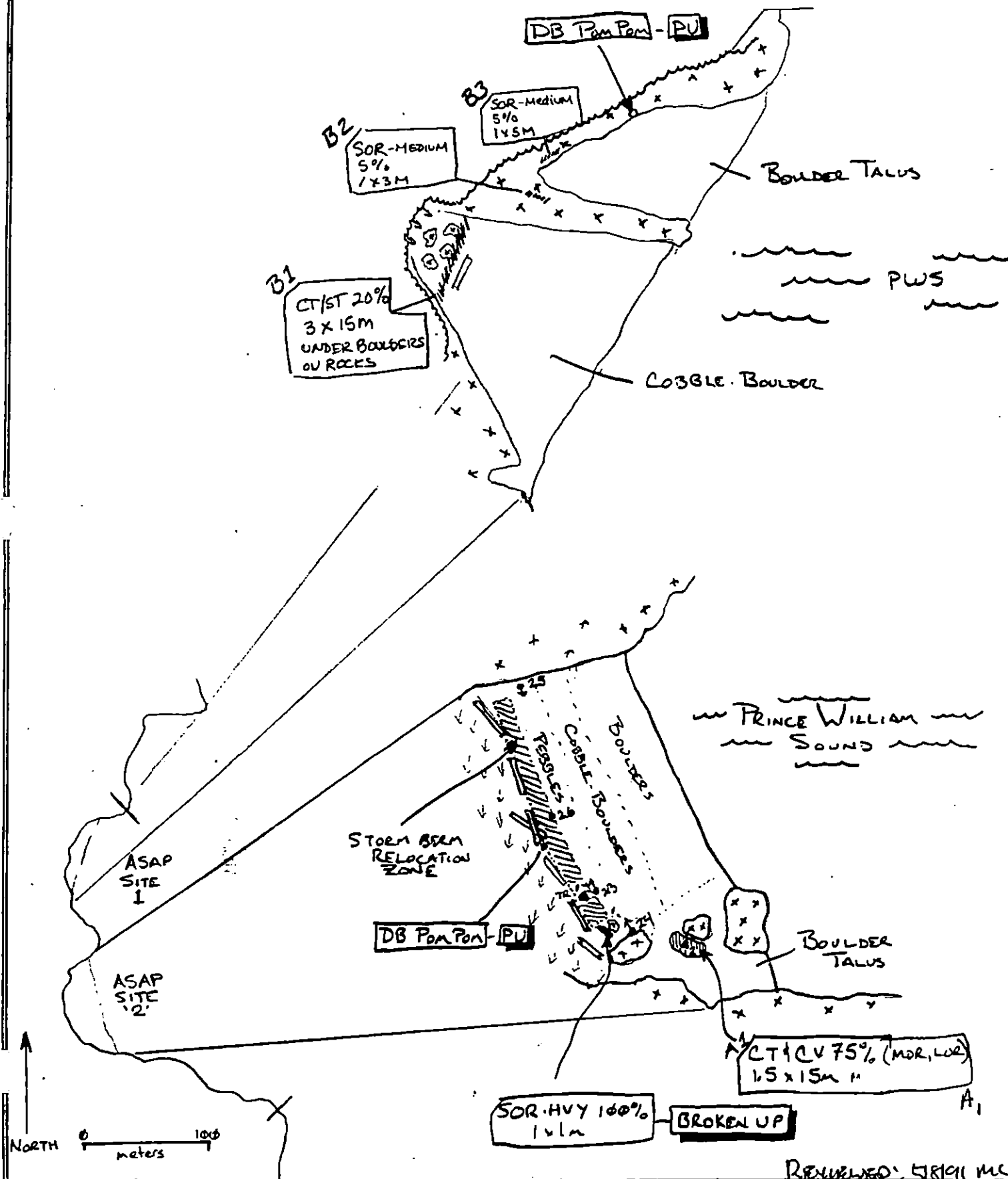
**SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE**

PHOTO ROLL # MAYSAP- 2 - 5 FRAMES 23-24

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

Revised: MC 5/8/91  
revised 5/8/91 KG

SKETCH MAP  
EL 107-C  
3-MAY-91  
1210-1259



REVIEWED: 5/8/91 MC  
reviewed 5/8/91 KG

# MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 3 May '91  
 SEGMENT # EL 107 TIDAL HEIGHT(Range) +1' to +2'  
 SUBDIVISION C BIOLOGIST John Benson  
 SEA STATE 1' WIND SPEED/DIRECTION calm  
 PHOTOGRAPHS: ROLL # — FRAME # —

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

(A1), (A2) - This subdivision is similar to EL10BA in that the cobble beaches support a very low diversity and low biomass, while the bedrock & larger boulders support a more diverse & productive biota. Location A is boulder talus partially protected by bedrock outcrop. This supports a diverse community. There are more Littorina & fewer barnacles than in EL10BA.

(B1), (B2), (B3) - Location B is similar to (A). The most common species are Verrucaria (UITZ), Fucus (MITZ), barnacles (MITZ) & Mytilus. There are a few tidepools in the bedrock. Recent recruitment of Notoacmea, barnacles, Mytilus & Fucus were observed.

There are no special biological sensitivities in this subdivision.

## WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

| BIRDS            | # OF SPECIES | TOTAL BIRDS | FISH OBSERVED<br>SPECIES PRESENT |
|------------------|--------------|-------------|----------------------------------|
| Eagles           | —            | —           | —                                |
| Seabirds         | —            | —           | —                                |
| Waterfowl        | —            | —           | —                                |
| Gulls/Kittiwakes | —            | —           | —                                |
| Shorebirds       | —            | —           | —                                |
| Corvids          | —            | —           | —                                |
| Other Birds      | —            | —           | —                                |

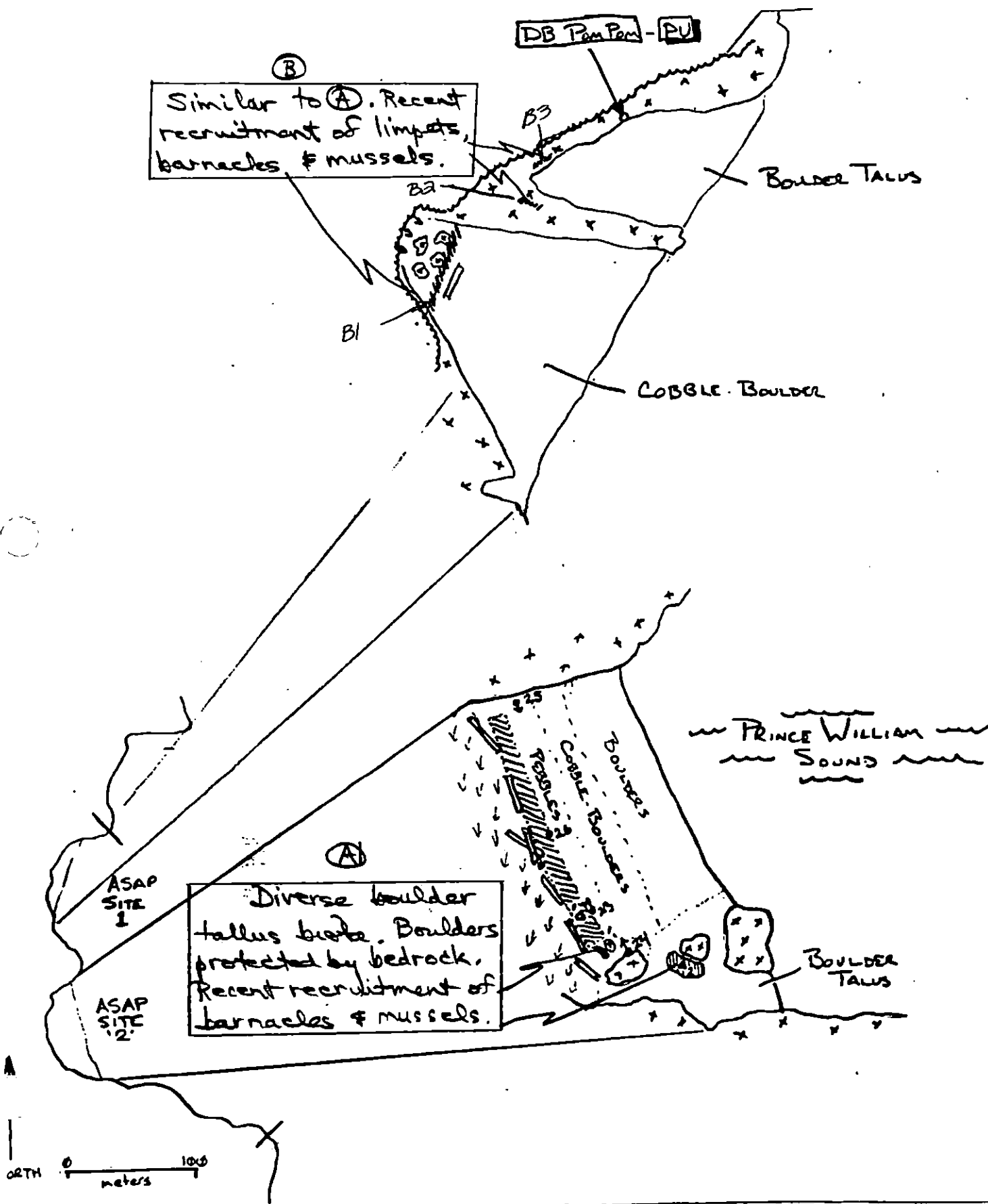
## LAND MAMMALS

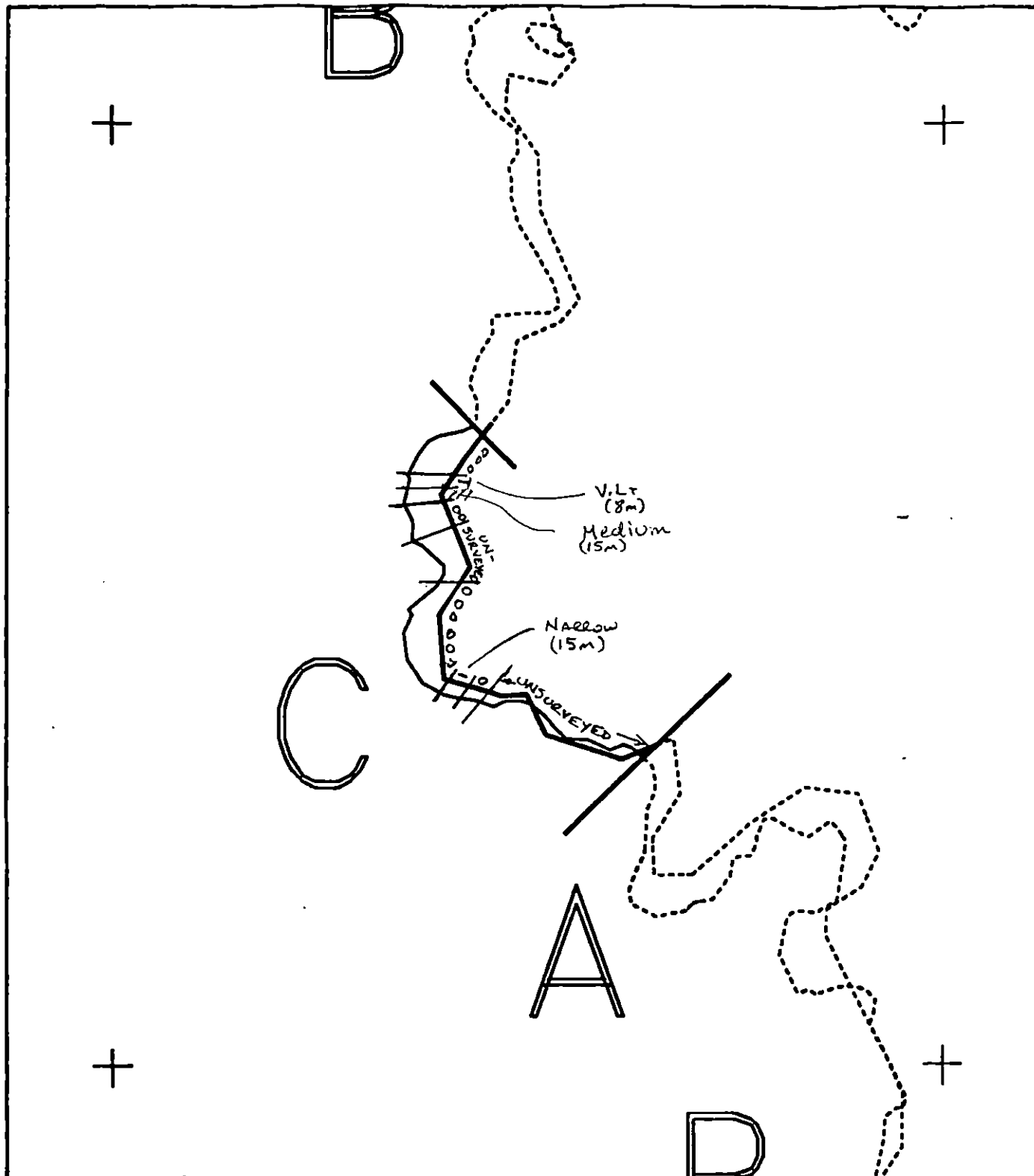
| MARINE MAMMALS     | # OBSERVED | SPECIES | # OBSERVED |
|--------------------|------------|---------|------------|
| Sea Otters         | —          | —       | —          |
| Pinnipeds(specify) | —          | —       | —          |
| ies(specify)       | —          | —       | —          |
|    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

Shoreline subdivision map showing important biological features attached.

REVIEWED: 5/8/91 MC

BIO SKETCH MAP  
EL 107-C  
3-MAY-91  
1210-1259  
John Benson





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

EL107 C  
 ADEC Subsegment Length: 381m  
 METERS  
 0 100 200  
 AK State Plane Zone 4  
 6011070

Subdivision Field Map  
 Map Key: KNIEL107C  
 Name: TRIMM  
 Date: 3 MAY 1991  
 Date Entered:

• SURFACE OIL CATEGORY MAP • REVIEWED MC 5/8/91 MC  
 revised 5/8/91 KG

# ASAP TAG REVIEW SHEET

Segment: EL 107

Subd: A

Site: 1

Date

PRE-Review 14 AUG 90

## Priority For Addressing In 1990

     HIGH

     MEDIUM

     LOW

X NTR

Treatment  
Recommended:

NTR

*As per  
recommendation  
sheet.*

OG SHEET / SKETCH → NTR

Recommendation sheet - asks for  
hot water heater system, agitation  
to remove / move SUBSURFACE OIL.

& TAG VISIT.

## Priority Site For Reassessment In 1991

YES X NO       
CG

YES X NO       
ADEC

YES X NO       
EXXON

YES X NO       
LAND MGR

TAG 15 AUG 90  
Re BIO →  
Already scheduled  
reassess next year

# ASAP TAG REVIEW SHEET

Segment: EL107 Subd: A Site: 2 Date 14 AUG 90  
 PRE-Review

## Priority For Addressing In 1990

       HIGH        MEDIUM        LOW X NTR

Treatment  
Recommended:

NTR

OG/SKETCH — Sporadic AP / COAT — NTR

REC. SHEET — Remove OIL DEBRIS FROM  
LOGS in hard to access  
places.

## Priority Site For Reassessment In 1991

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

TAG 15 AUG 90  
Re BIO

already scheduled  
reassess next year

## ASAP FOLLOWUP RECOMMENDATIONS

Project: AS/ EL-107 Subd.: A Site: 1 Date: 8/11 1990

Conditions Observed: Upon arrival To work site a silver sheen approx. 20x4m was observed in front of beach. Very small runoffs thru out area were filled with silver sheen and mobile oil. Due to the area being observed as a sheen Tag evaluation is recommended per decision tree. A pit was excavated and OP/ORIN was documented 0-15 cm subsurface

Followup Recommendations: Tag evaluation (sheen) per decision tree.  
- Small Hot H<sub>2</sub>O Header system is recommended to migrate oil to water line.  
Agitation is also recommended to loosen oil in the subsurface. Small  
Subsist boom w/ spare boom is recommended to contain and retrieve oil.

Completed by Pickup Crew: ☐ YES ☒ NO

Priority for Addressing in 1990: ☒ High ☐ Mod. ☐ Low

ADEC

Wesley Ghormley  
(name)

Wesley Ghormley  
(signature)

Comments: Due to the problem of sheen coming off this work site, it needs immediate attention. I am strongly against only using Custom blend on site. It needs Hot H<sub>2</sub>O and agitation if oil is to be removed.

Exxon

REY SETTEL  
(name)

Rey Settel  
(signature)

Comments: This site needs TAG evaluation. I don't agree with the recommendation stated above, if any work is done to this site in '90 it should be after TAG review.

USCG

Pgt Lee Bers. Gini  
(name)

NOAA: ART WEINER

Art Weiner  
(signature)

Art Weiner

Comments: RESIDUAL oil is PROTECTED BY HEAVY ARMOR + LOW ENERGY REGIME. IT WILL PROBABLY PERSIST THRU WINTER AND CONTINUE TO SHEEN. IT IS NOT ACCESSIBLE TO MANUAL REMOVAL + PROBABLY TOO CONCENTRATED FOR CUSTOM BLEND TO WORK.

Land Rep.

John E. Hof  
(name)

John E. Hof  
(signature)

Comments: From Observations People comments collected throughout the stream - Cold water high pressure is not an effective tool to remove oil. All people agree hot water high pressure is effective. Site condition is hazardous to wild life and needs immediate treatment.

## ASAP FOLLOWUP RECOMMENDATIONS

Project: AS/EL-107 Subd.: A Site: 2 Date: 8/11 1990

**Conditions Observed:** Very large beach with numerous logs, large boulders and bedrock. Very heavy CT/ST drips on bedrock/boulders thru-out work site. There seems to be a tremendous amount of oil present under boulders, logs etc at the UTE, SUT, sheens are present on water pools. Sub surface OR is present in 15x5m storm berm 45cm+ on Northern end of work site. Oiled debris are present in storm berm in the Center of work site.  
- work was done on site by 3 man veco crew but by no means was work completed -

**Followup Recommendations:** Work was done on site w/landa units in 1990 with some improvement on CT/ST on bedrock/boulders. But there is too much of a concentration of oil present in boulders and under log jam. For this reason Hot H2O High pressure 2" hoses are recommended, a Cold water flood system should also be used to migrate oil. Landa units would only push oil deeper into the substrate. Oiled debris should be removed intermingled with logs.

Completed by Pickup Crew: ☐ YES ☒ NO

Priority for Addressing in 1990: ☒ High ☐ Mod. ☐ Low

ADEC Wesley Ghormley  
 (name)

Wesley Ghormley  
 (signature)

**Comments:** I strongly agree with above recommendations. If landos are the only method approved for this site I wouldn't even try it, oil will just be pushed deeper. USE HWHP 2" hoses and a flood system to migrate oil.

Exxon REV Sitt  
 (name)

Rev Sitt  
 (signature)

**Comments:** I don't agree with the recommendations stated above because hot water flood will probably have the same effects as a lando unit has, this will only push the oil deeper. My recommendation is to re-apply custoblend and assess in '91.

USCG 131 Lt. Bertelma  
 (name) NOAA: ART WENNER

Art Wenner  
 (signature)

**Comments:** ALL ACCESSIBLE OIL WAS MANUALLY REMOVED. CONSIDERABLE AMOUNT OF REMAINING OIL IS RECALITRANT. HWHP WILL REMOVE INTERSTITIAL SOL THAT IS TOO CONCENTRATED FOR CUSTOBLEND TO BE EFFECTIVE.

Land Rep. (name)

(signature)

**Comments:** Agree w/ HWHP 2" hoses with Containment boom and snare boom for recovery. Why weren't the HWHP units deployed on sites such as this initially?

# FIELD SHORELINE COMMENT SHEET

SEGMENT AS/EL 107 SUBDIVISION: A SITE: 1 DATE 8-11-90

USCG/NOAA PSI Leo Bersolona Leo Bersolona

NAME Art Weiner SIGNATURE Art Weiner

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

HEAVY CONCENTRATION OF SUBSURFACE OIL [OIL OR: 0-15cm].  
BEACH OBSERVED TO BLEED RAINBOW SHEEN INTO NEARSHORE  
WATER + TIDEPOOLS

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

This area appears to be bleeding. A fairly large amount  
of sheen was present upon arrival.

- I recommend work be done on this area in 1990.

Flood beach w/ Hot H<sub>2</sub>O to retrieve oil.

- I also highly recommend not allowing this area to go unworked, this  
area will bleed all winter and put oil into the Environment.

LAND MANAGER

NAME John Ebel SIGNATURE John Ebel

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Immediate treatment is required for this site, hazard to wild life.

To Evaluate effectiveness of winter conditions on remaining oil after treatment

EXXON

NAME Ray Sotelo SIGNATURE Ray Sotelo

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

This site should be reassessed in '91 to determine the effects  
of bioremediation and winter storm activity.

## FIELD SHORELINE COMMENT SHEET

SEGMENT AS/EL107 SUBDIVISION: A SITE: 2 DATE 8-11-90

USCG/NOAA PSI Leo Berszonsz Leos Berszonsz

NAME ART WEINER SIGNATURE Art Weiner

☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

ALL ACCESSIBLE OIL REMOVED ON 8-11-90

## ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

There is a tremendous amount of oil on this site that I believe needs further attention. It will take alot of work to make the oil accessible to be cleaned (logs will have to be moved) - But I feel the amount of work will be rewarded by the large amount of oil that will be removed.

- This site will need additional work in 1991. -

## LAND MANAGER

NAME John Ebel SIGNATURE John Ebel

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Presently the oil at this site is unstable and poses a hazard to wildlife. Treatment for '90 is recommended as priority.

To evaluate the effectiveness of treatment after winter conditions.

## EXXON

NAME REY SOTELO SIGNATURE Rey Sotel

☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

All accessible oil was removed by Vero crew on 8-11-90. This site should be assessed as a low priority in '91 to evaluate the effects of contaminated and winter storms.

2433. 22

REVISION NO. 7/27/88

US \_\_\_\_\_

SEGMENT ST. \_\_\_\_\_ -107

SUBDIVISION A

DATE 01 APR 90

ITCH MAP

SEGMENT TEL-1  
SUBDIVISION A  
LENGTH = 625m

SPOT WASH AS REQUIRED  
IN AREA OF PIT 1, 2, +3

ASAP #2

AUGUST 11 1990

FROM SSAT MAP

CHANEY  
MAP 1 of 2

CT/C

CT/C

CT/B

CT/B

CT/P

CT/P

CT/S

CT/S

CT/S

CT/S

Photo location, direction  
and number

**SITE 2**  
SEE ATTACHED SKETCH  
FOR "MOUND UP VIEW"  
OF THIS AREA

SEE  
ATTACHED  
NOTES

CHAIN  
UITZ

CHAIN  
UITZ

CHAIN  
UITZ

CHAIN  
UITZ

CHAIN  
UITZ

CHAIN  
UITZ

Patchy

**SITE 1**

N

OB Character Length (m): AP \_\_\_\_\_ PO \_\_\_\_\_ CV 30 CT 295 ST 300 MS \_\_\_\_\_ PT \_\_\_\_\_ TB \_\_\_\_\_ FL \_\_\_\_\_ NO \_\_\_\_\_

EGMENT ST/4

107 SEE NOIES

USDIVISION 9 (Beach at S. end)

ATE 01 / APR 90

CHECKLIST

- At Area
- Access Route
- Depth Entry
- Oil Dnt
- Width
- Length
- % Cover
- Substrate Character
- Est. HRA/ASA
- S&L
- Profile Location(s)
- Photo(s)
- Photo Location(s)

LEGEND

1 A  
1 - No Subsurface Oil

2 A  
1 - Subsurface Oil

CT/C

CT/B

Water Distribution

CT/P

Wet Distribution

CT/S

Wet Distribution

Red Vegetation

1 00

Notes location, direction, red number

AS TP #2

AUGUST 11 1990

FROM SSAT  
MAP

CHANEY  
MAP 2 of 2

SEGMENT EL-107

SUBDIVISION A LENGTH 6

N

CT/B 1A-UITZ 25m wide  
by 50m long coat on surface  
of B/C. No subsurface oil.

Photo 36

Site 2 c/p berm  
between beach and cliff  
narrow 20m long CT/C

D

C

200

CT/B 2-3m wide  
x 15m long in rock  
crevices and walls.

CT/B 1A-UITZ  
12m wide x 50m  
long B/C.

B/C

Narrow broken coat and  
patchy stain along high tide line

NOT TO SCALE:  
MAP READER  
SHOULD STAND  
HERE TO  
READ MAP

Character Length (ft): AP PO CV 30 CT/35 ST 50 MS FT TB FL NO

# Notes for Sketch map.

EL-107-A

## SITE 1

### "A"

Rainbow sheen near shore. Continuous rainbow film on rocks in the MITZ & LITZ. Thin black drops of oil in pit #1. Oil in the pit was not quite running out under gravity but a great deal of black mobile oil ran into the pit with ground water. No customblen was observed in the area. Although the original SSAT survey indicated CT/B in the area it seems to have weathered to CT/P.

### "B"

Along bedrock wall the oiling condition does not seem to have changed since the SSAT survey. Very little film or sheen noted in this area.

## SITE 2

Time did not allow for a complete reassessment of SITE 2 but a wide variety of oiling conditions were observed. The SSAT survey does not accurately reflect the current degree of oiling at this site. Since the area received extensive manual treatment this summer, it is likely that additional oiling conditions were exposed. It is also possible that heat from the summer sun has brought more oil to the surface than was present on April 1. Considering the difference between conditions recorded in April and the "fresh" appearance of oil near sheltered sites, it is possible that mobile subsurface oil is still present. Due to the complexity of the site it was not possible to complete a thorough reassessment of this site. Major additional findings are listed below.

### "C"

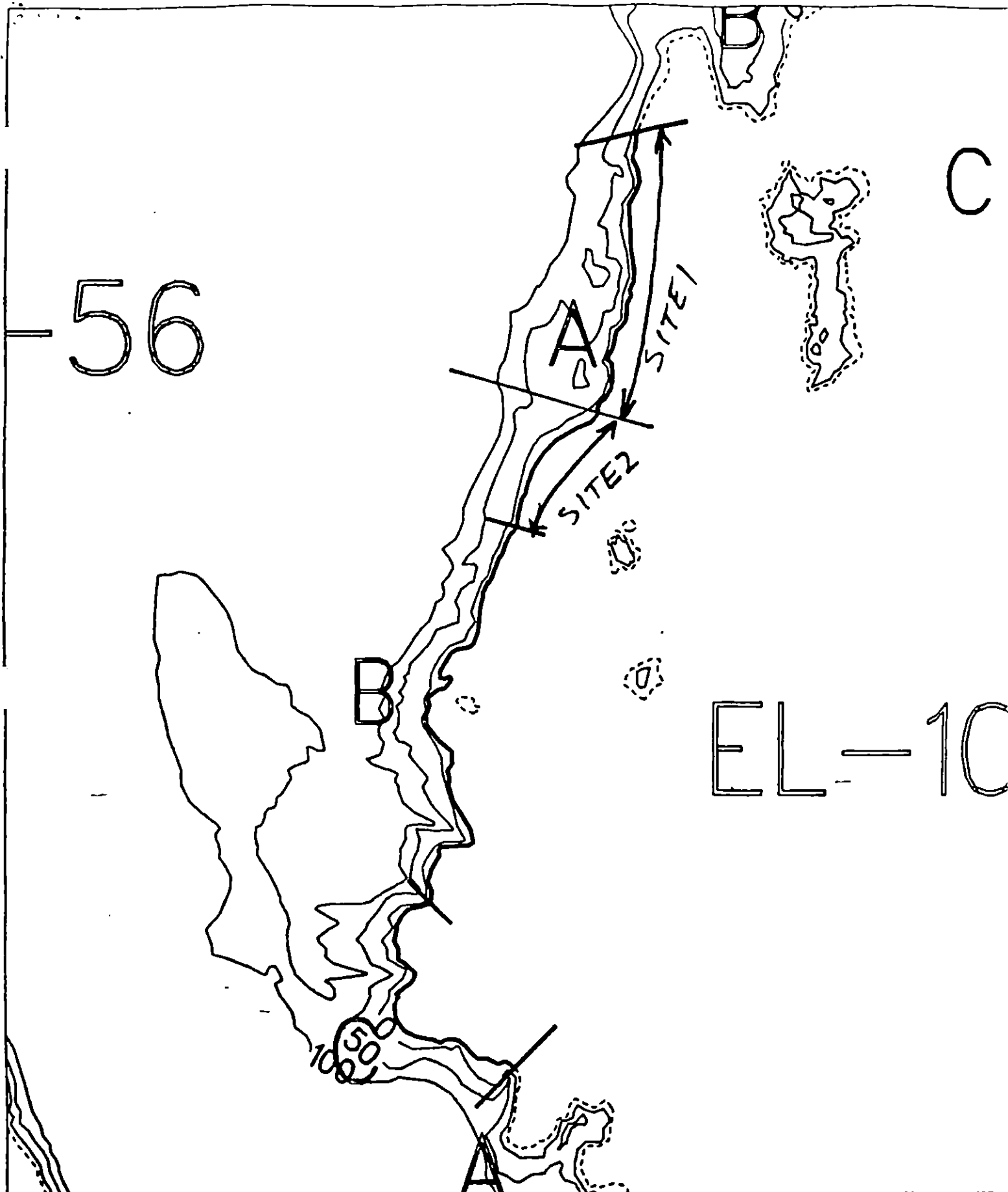
Subsurface oil is present even though it is not indicated on the SSAT sketch map. In the center of the oiled zone an ASAP pit was dug and OR oil was found extending 10 cm. below surficial boulders. Another ASAP pit located in the storm berm revealed OR extending beyond 45 cm. A large percentage of organic material was mixed with oil in the storm berm.

Although this site received extensive treatment, it still retains CT/B in the MITZ & UITZ. Customblen is present on the beach. In addition to oil identified by the SSAT, CT/C/U, CV/P/U, SOR/I and soft AP/I/P should be added. This area is sheltered behind a bedrock outcrop and does not receive direct wave energy.

### "D"

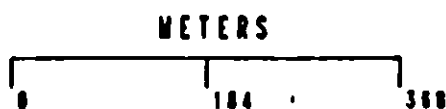
At the base of logs in the storm berm a wide variety of oiling conditions exist. Massive boulders retain classic examples of oil stains. Lower boulders retain patchy coats. Some SOR/H sediments were picked up by our VECO crew, however it is probable that some SOR/H remains on site. Oil on the sediments appeared dark and "fresh." It extends from the UITZ to the MITZ. CV/P and ST/P should be added to this area. Continuous sheens were observed in most tidal pools.





SEGMENT EL-107A

Segment Location Map  
Map Key: KNIEL-107



July 19, 1990  
1:7243

# ASAP TAG REVIEW SHEET

Segment: EL 107 Subd: B Site: 2

Date 14 AUG 90  
PRE-Review

## Priority For Addressing In 1990

HIGH

X MEDIUM LOW NTR

Treatment  
Recommended:

TILL & BIOREMEDIATION

As per  
Recommendation  
Sheet

OG SHEET - BROKEN SPR  
SKETCH does not show SOR > NTR

Recommendation Page - TOTAL REMOVAL  
OF OP SEDIMENT (@ 0-20 cm)

Site 1 - NO REC. SHEET  
NO COMMENT SHEET

## Priority Site For Reassessment In 1991

YES X NO CG  
QDAA

YES X NO ADEC

YES X NO EXXON

YES X NO LAND MGR

TAG 15 AUG 90  
Manual tell, ~~and~~ remove surface  
OP & BIO  
HIGH

## ASAP FOLLOWUP RECOMMENDATIONS

Project: AS/EL 107 Subd.: B Site: 2 Date: 8-11 1990

Conditions Observed: ~100 SQUARE METER AREA OF HEAVY SUBSURFACE OIL [OP]  
WITH PENETRATION DOWN TO 20CM. DENSITY OF OIL-SEDIMENT MATRIX IS SUCH  
THAT CUSTOMBLEND WOULD PROBABLY NOT WORK. AREA IS LOCATED IN THE  
SOUTHERNMOST SECTOR OF THE SITE WHICH ENJOYS PROTECTION FROM  
HIGH WAVE ENERGIES.

Followup Recommendations: THE PREFERRED + OBVIOUSLY MOST EFFECTIVE  
TREATMENT WOULD BE TOTAL REMOVAL OF ALL "OP" SEDIMENTS FOLLOWED BY  
CUSTOMBLEND APPLICATION OVER THE 100 M<sup>2</sup> AREA.

A LESS DESIRABLE ALTERNATIVE WOULD BE MANUAL TILLING FOLLOWED BY  
CUSTOMBLEND APPLICATION IN 1990 WITH REASSESSMENT IN 1991 WHICH WOULD  
UNDoubtedly LEAD TO A SECOND ROUND OF TILLING AND BIOREMEDIATION.

Completed by Pickup Crew: ☐ YES ☒ NO

Priority for Addressing in 1990: ☒ High ☐ Mod. ☐ Low

ADEC

Wesley Ghormley  
 (name)

Wesley Ghormley  
 (signature)

Comments: I agree with total removal of OP followed by custom blend  
IN addition there is also iled debris in the SUE mixed with logs that  
need to be removed.

Exxon

REY SUTEL  
 (name)

REY SUTEL  
 (signature)

Comments: I don't agree with the recommendations stated above, instead the  
area should be tilled and customblend re-applied. Reassessment in '91  
should follow to assess the effects of this and winter storms.

USCG

PSI Leo Bersilona  
 (name)

Leo Bersilona  
 (signature)

Comments: NOAA: ART WEINER  
I AGREE WITH THE RECOMMENDATION

Land Rep.

Toka Ebel  
 (name)

Toka Ebel  
 (signature)

Comments: I concur w ADEC + NOAA existing condition is hazardous  
to wildlife

# FIELD SHORELINE COMMENT SHEET

SEGMENT AS/EL107 SUBDIVISION: B SITE: 2 DATE 8-11-90  
 USCG/NOAA PSI Leo Bersalona Leo Bersalona  
 NAME ART WEINER SIGNATURE Art Weiner

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991  
 REASON:

HEAVILY OILED SUBSURFACE SEDIMENTS IN SOUTHERNMOST SECTOR  
 OF SITE [~100m<sup>2</sup> OP].

ADEC  
 NAME Wesley Ghormley SIGNATURE Wesley Ghormley 

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991  
 REASON:

- Southern most pocket are on this site has oil  
 under clean sediment. oil is very black in some places and has  
 the appearance of murre in other places, the smell is very strong.  
 It needs to be manually removed this year.  
 - oiled debris in storm berm in center of beach needs  
 to be removed also.

LAND MANAGER  
 NAME John Ebel SIGNATURE John Ebel

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991  
 REASON:

Oil on this site has very strong odor smell.  
 Multiple small micro pockets with wave shadow effects  
 To evaluate effects of winter conditions on remaining oil.

EXXON  
 NAME REY SOTELO SIGNATURE Rey Sotelo

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991  
 REASON:

Reassessment will be necessary in '91. This site is located  
 in an area that is very inaccessible.

23. 22

SEGMENT AS: EL 107

SUBDIVISION 8

TOTAL NO. SITES 2

TIDE LEVEL 0.5 10 3.5

**TOTAL EST LENGTH OF SHORELINE SURVEYED: 330 m**

SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WEATHER: ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow

OIL CATEGORY LENGTH: W 15 m M 110 m N 180 m VL 25 m NO 0 m US 313 m

## SURFACE OIL

## SITE 1

## SITE 2

### SITE 3

| CHARACTER        | DISTRIBUTION |    |    |    | OILED ZONES |    |    |    |
|------------------|--------------|----|----|----|-------------|----|----|----|
|                  | /C           | /B | /P | /S | SU          | UI | MI | LI |
| ASPHALT          |              |    |    |    |             |    |    |    |
| S.O.R.           |              |    |    | X  |             | X  |    |    |
| POOLED           |              |    |    |    |             |    |    |    |
| COVER            |              |    |    |    |             |    |    |    |
| COAT             |              | X  |    |    |             | X  |    |    |
| STAIN            |              |    | X  |    |             | X  |    |    |
| MOUSSE           |              |    |    |    |             |    |    |    |
| PATTIES/T.B.     |              |    |    |    |             |    |    |    |
| FILM             |              |    |    | X  |             |    |    | X  |
| NO OIL           |              |    |    |    | X           |    | X  |    |
| EST. SITE LENGTH |              |    |    |    | 180         |    |    |    |

| DISTRIBUTION |    |    |    | OILED ZONES |    |    |    |
|--------------|----|----|----|-------------|----|----|----|
| /C           | /B | /P | /S | SU          | UI | MI | LI |
|              | X  |    |    |             | X  | X  |    |
|              |    |    |    |             |    |    |    |
| X            | X  | X  |    |             | X  |    |    |
|              | X  | X  |    |             | X  |    |    |
|              |    |    |    |             |    |    |    |
|              |    |    |    |             |    |    |    |
|              |    |    |    |             |    |    |    |
|              |    |    |    | X           |    |    | X  |

150

[illegible]

## SUBSURFACE OIL

[illegible]

Photographs: *ASAP #2*

Roll No. R011 #3

Frames 5, 6

located behind 3  
tree island  
COVE "C" CENTER  
S.E. EDGE OF COVE "C"

REVIEWED

8/13/90 Jw

COMMENTS SEE ATTACHED NOTES

SEGMENT S1 L-107

SUBDIVISION D

DATE 01 APR 90

ASAP #2

AUGUST 11 1990

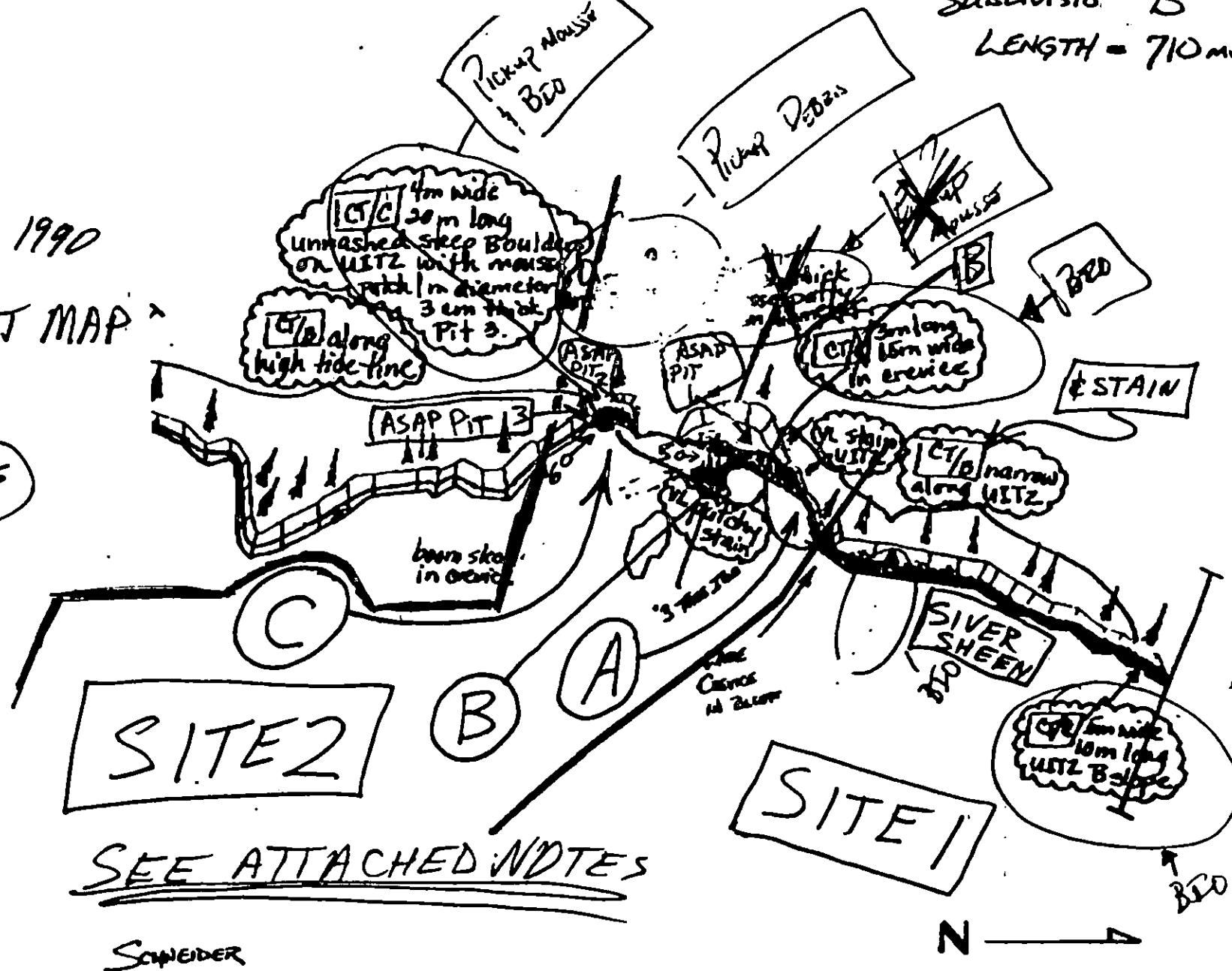
FROM SSAT MAP

CHANEY

(SEE NOTES)

SKETCH MAP

CH-10/  
SUBDIVISION B  
LENGTH = 710 METERS



SEE ATTACHED NOTES

SCHEIDER

On Character Length (m): AP \_\_\_\_\_ PO \_\_\_\_\_ CV 20 CT 520 ST 170 MS 1 PT 20 CM TB \_\_\_\_\_ FL \_\_\_\_\_ NO \_\_\_\_\_

REVISIONS

# ASAP SKETCH MAP NOTES

EL-107-B

## SITE 1

In addition to the SSAT information patches of sheen were and present along the shore and ST/P on bedrock. OP was not observed but SOR/I and traces of customblen were present.

## SITE 2

### "A"

Broken stain and patchy coats in the UITZ. CT/B/U are found on the boulders which dominate the area.

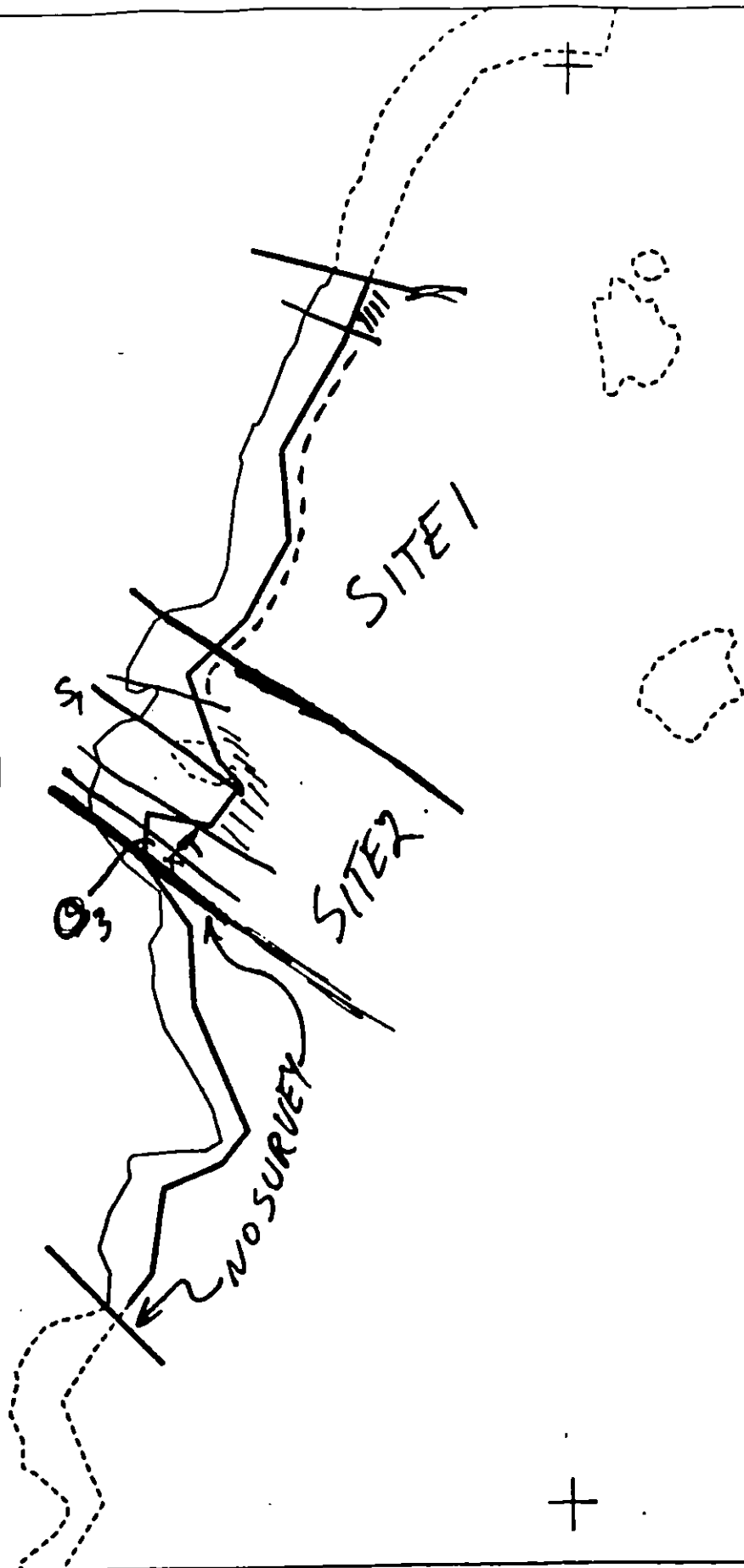
### "B"

Behind a large bedrock outcrop CT/C 1x5 meters is present. Customblen is deposited in many rock crevices. In some locations the customblen concentration exceeded 3 pounds ~~in one~~ crack. It seems that customblen was too concentrated in this area. Bedrock and boulders in the entire area have ST&CT/P. Photo #5.

### "C"

In the small cove south of "3 tree island" another very heavy application of customblen was observed in the HITZ and SUPRA. Some logs had been cut in this area. The center of the beach was clean on the surface and a pit to 50 cm did not locate subsurface oil. On the southern edge of the cove a small pocket beach is located. In this area subsurface OP oil was located to 20 cm+. Some customblen in this location. Rainbow sheen was found in tidal pools. SOR/H/B sediments in a 10X10 meter area. Some mobile oil is still present in this area.

B



EL-107 B

ADEC Subsegment Length: 643m

METERS

0 87 178

Subdivision Field Map

Map Key: KNIEL-107B

Name: CHAIKEY

Date: AUG 11 1990

(XXX Wide  
//// Medium  
---- Narrow  
TTT Very Light

# ASAP TAG REVIEW SHEET

Segment: EL107 Subd: C Site: 2 Date 14 AUG 90  
 PRE-Review

## Priority For Addressing In 1990

HIGH MEDIUM LOW NTR

Treatment  
Recommended:

NTR

As per  
Recommendation  
Sheet

OG / SKETCH - SOR PATCHY  
 - SUBSURFACE - OP

NTR

does not agree with

Recommendation STRESS - indicate H/SOR removal  
- STORM BERM relocation

HIGH ENERGY

## Priority Site For Reassessment In 1991

YES NO YES NO YES NO YES NO  
CG ADDEC EXXON LAND MGR

TAG 15 AUG 90

STORM BERM Relocated

(BIO already sched)

remove surface OR seedling  
 Spot wash

LOW

# ASAP TAG REVIEW SHEET

Segment: EL 107

Subd: C

Site: 1

Date

PRE-Review

14 AUG 90

## Priority For Addressing In 1990

☐ HIGH

☐ MEDIUM

☐ LOW

☒ NTR

Treatment

Recommended:

NTR

CG - SPORADIC SOR  
NO SUBSURFACE OIL

HIGH ENERGY

## Priority Site For Reassessment In 1991

YES

NO

CG

YES

NO

ADEC

YES

NO

EXXON

YES

NO

LAND MGR

## ASAP FOLLOWUP RECOMMENDATIONS

Report: AS/ EL107 Subd.: C Size: 2 Date: 8/11/90 1990

Conditions Observed: Two distinct physical conditions exist on EL107C #2.  
A Southern bed rock outcrop extending from shore into the MITE creates a  
wave barrier effect to the sub angular B C P Beach. Conditions here include SO  
SOR/IT, OP/u. North of the outcrop, the SUTZ is loaded with OP/E  
on surface C.P. to a profile 30-40 cm OP.

Followup Recommendations: Angular B C P Beach - Manual remove heavy SOR  
SOR/IT, OP/u. Well sound C.B. P Beach - Storm boom relocation  
into the MITE, using containment boom to prevent secondary containment, and  
snare boom to recover oil. Hot water, high pressure wash as SUTZ is lifted.  
Following storm boom standard operating procedure guidelines. Oiled logs removed  
from site. Custom bld applied prior to site closure this season

Completed by Pickup Crew: ☐ YES ☒ NO

Priority for Addressing in 1990: ☒ High ☐ Mod. ☐ Low

ADEC

Wesley Ghormley  
 (name)

Wesley Ghormley  
 (signature)

Comments: I agree with recommendations above. There is a tremendous amount  
of subsurface oil present that needs additional work in 1990

Exxon

REY SOTELO  
 (name)

REY SOTELO  
 (signature)

Comments: I don't agree with storm boom relocation on this site. There  
is some oil existing in the boom but re-location would only re-expose  
and waste more of a hazard. I suggest we give him a choice and reason  
in '91.

USCG

BI Leo Bersolone  
 (name) NORD. ART WENGER

Leo Bersolone  
 (signature) Art Wenger

Comments: Agree with STORMBOOM RELOCATION ACCOMPANIED BY HOT WATER  
WASH AND APPROPRIATE CONTAINMENT.

Land Rep.

John Label  
 (name)

John Label  
 (signature)

Comments: B C P Beach has unstable oil posing wildlife hazards.  
Excellent recreation site.

# FIELD SHORELINE COMMENT SHEET

SEGMENT AS / EL107 SUBDIVISION: C SITE: 1 DATE 8-11-90

USCG/NOAA PSI Leo Bersalona Leo Bersalona

NAME ART WEINER SIGNATURE Art Weiner

☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991  
REASON:

NO SIGNIFICANT OIL REMAINING

ADEC  
NAME Wesley Ghormley SIGNATURE Wesley Ghormley

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991  
REASON:

To make a decision whether the problem of Goat/Stain  
that extends thru-out subdivision needs further treatment  
- Area is a high energy environment -

LAND MANAGER  
NAME John Ebel SIGNATURE John Ebel

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991  
REASON:

Consistent w/ ADEC,  
SOK/12 depth 10% causing sheering.

EXXON  
NAME REY SOTELO SIGNATURE Rey Sotelo

☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991  
REASON:

No further assessment will be necessary on this site.

# FIELD SHORELINE COMMENT SHEET

SEGMENT AS/ EL107 SUBDIVISION: C SITE: 2 DATE 8-11-90  
 USCG/NOAA P51 Leo Bersalona Leo Bersalona  
 NAME ART WEINER SIGNATURE Art Weiner

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991  
 REASON:

ASSESS HEAVILY OILED STORMBERM

ADEC  
 NAME Wesley Ghormley SIGNATURE Wesley Ghormley

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991  
 REASON:

This beach is severely contaminated with Exxon Valdez oil.  
 Work is highly recommended for this site in 1990 and  
 possibly additional work should continue here in 1991.  
 - Storm berm relocation w/ Hot H<sub>2</sub>O flood needs to be  
 used in 1990 also oiled logs (large amount) need to be  
 removed or burned in 90.

LAND MANAGER  
 NAME John Ebel SIGNATURE John Ebel

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991  
 REASON:

This site needs immediate treatment to reduce threat to wildlife.  
 Very little intertidal life in MITE through SUTE.  
 To evaluate effectiveness of treatment after winter conditions.

EXXON  
 NAME REY SOTELO SIGNATURE Rey Sotelo

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991  
 REASON:

This site should be reassessed in '91 to evaluate the effectiveness  
 of intertidal and winter storm activity.

11-11-11

SEGMENT ST. -107

SUBDIVISION C

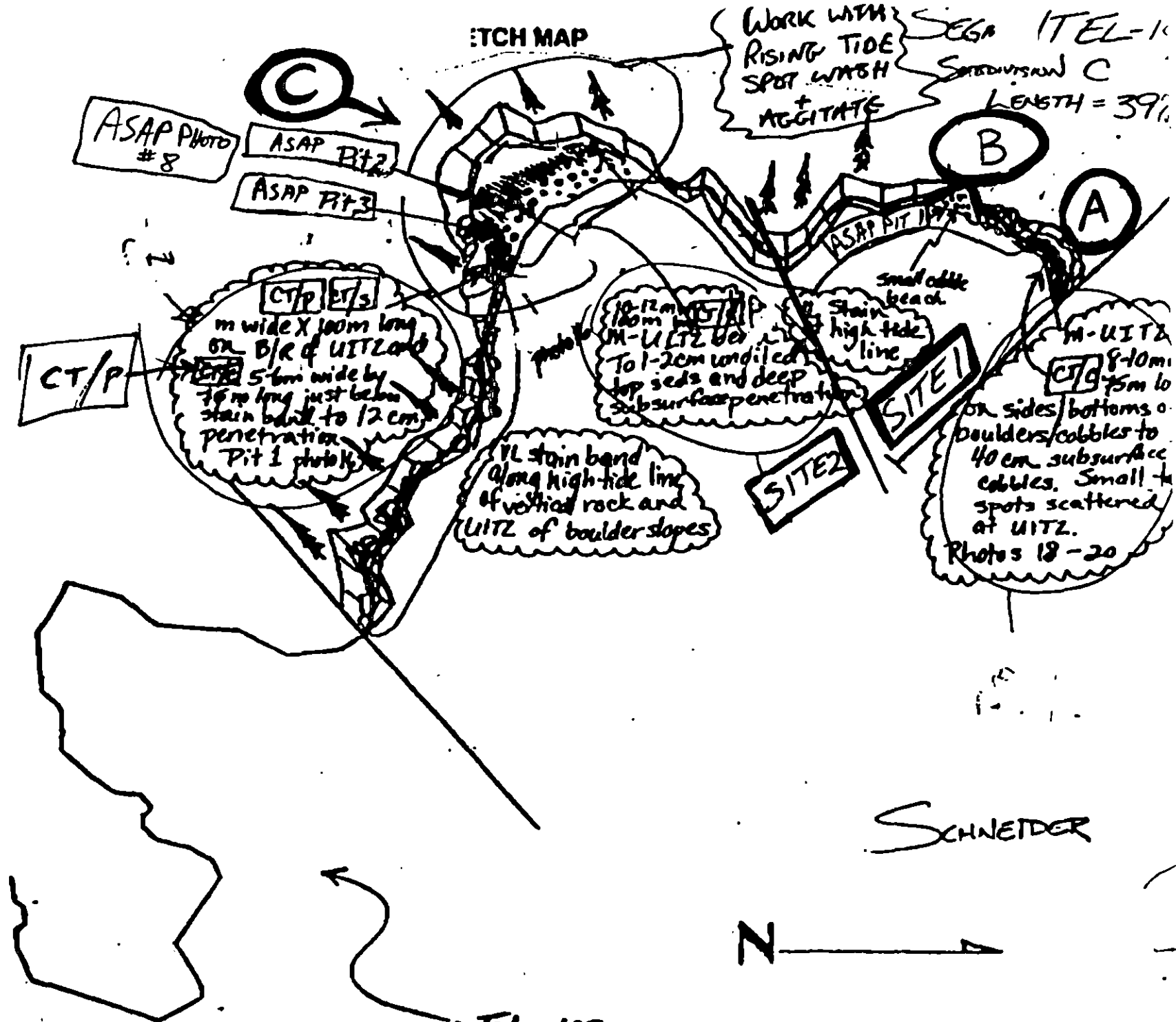
DATE 02 / 1960

CHECKLIST

- ☐ M. Area
- ☐ Approx. Scale
- ☐ Seg/Plot Entry
- ☐ Cl. Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. MUD/SL
- ☐ S.S.
- ☐ Photo Location(s)
- ☐ Profile(s)
- ☐ Pt. Location(s)
- ☐ Photo Location(s)

LEGEND

- 1 Δ
- Pt. - No Subsurface Cl.
- 2 Δ
- Pt. - Subsurface Cl.
- CT/C
- Complete Distribution
- CT/B
- Broken Distribution
- CT/P
- Partial Distribution
- CT/S
- Spotted Distribution
- Other Vegetation
- Photo location, direction, and number



EL-108

EL-107-C

SITE 1

"A"

Boulder area near the northern portion of segment contains several bedrock outcrops which retain ST&CT/B. SOR/I extends under boulders which also have CV/S/U. Sheening in tide pools. No customblen observed.

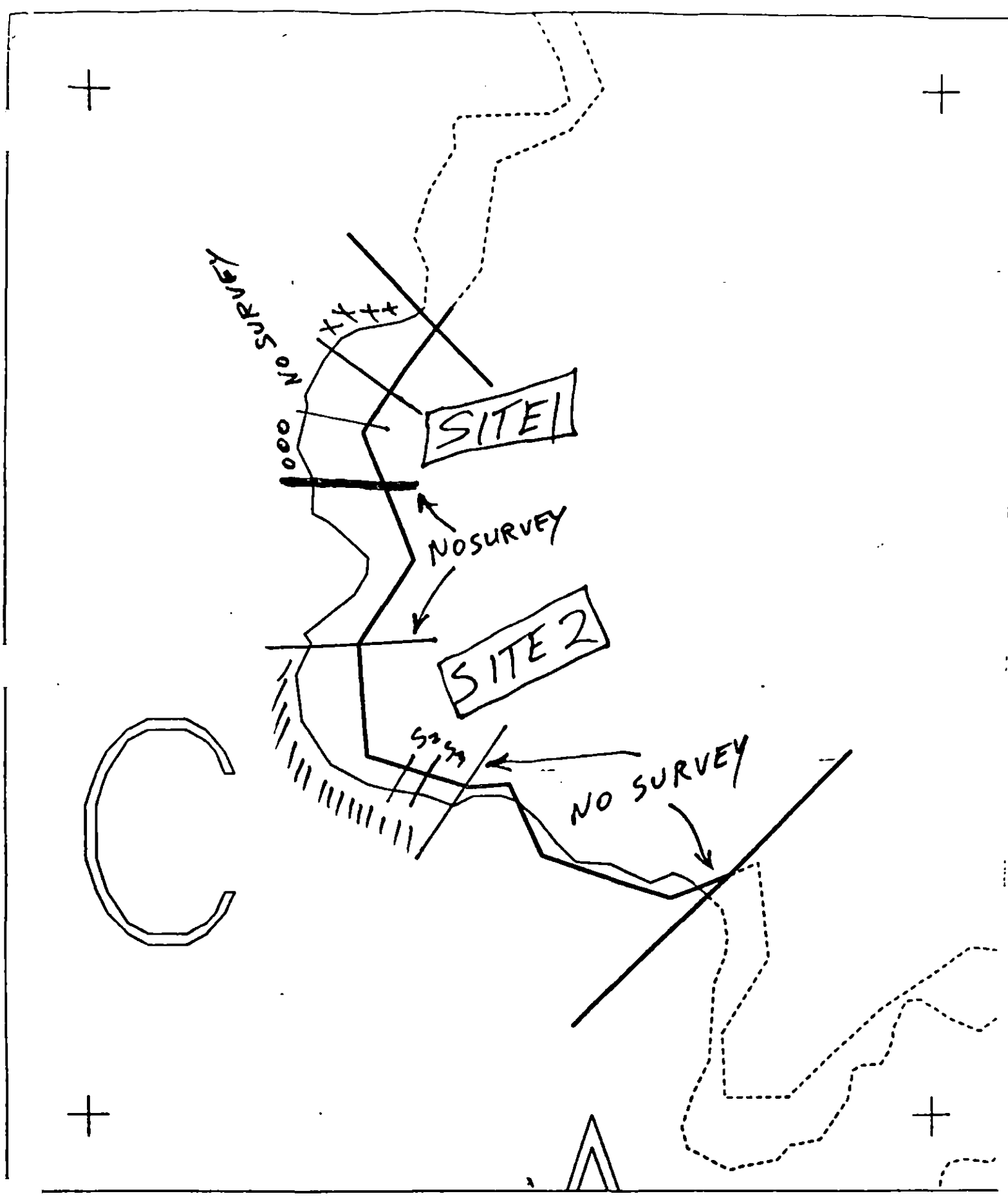
"B"

Small cobble beach. The surface cobbles appear clean. 40 cm pit did not reveal subsurface oil.

SITE 2

"C"

Surface cobbles look mostly clean along this beach however behind large bedrock outcrops and logs in the SITZ there are pockets of SOR/H. Some customblen was observed in these areas. Several old pits were present on the beach and nearly all of these pits have subsurface oil. Along the boulders at the south end of the beach SOR/I/P, CT/P and rainbow sheens were present.



|      |            |                              |                          |
|------|------------|------------------------------|--------------------------|
| XXXX | Wide       | EL-107 C                     | Subdivision Field Map    |
| //// | Medium     | ADEC Subsegment Length: 381m | Map Key: KNIEL-107C      |
| ---- | Narrow     | METERS                       | Name: <u>CHANEY</u>      |
| TTTT | Very Light | 0 53 105                     | Date: <u>AUG 11 1990</u> |

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-108

SUBDIVISIONS: A (1 OF 3)

SHORELINE EVALUATION

SEGMENT ST/ EL-108 SUBDIVISION A (1 OF 3) DATE 4/1/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**

5R Seabird colony (5/1 to 9/1)  
6Y Recreation: Special use destination  
7II Subsistence area: Deer harvesting (8/15 to 2/28)  
See attached Ecological Constraint sheet for specific constraints and contacts.

**SUBDIVISION ECOLOGICAL CONSTRAINTS:**

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

**ARCHAEOLOGICAL CONSTRAINTS:**

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

SHPO SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

**OILING CATEGORIZATION:**

Wide 0 m: Medium 0 m: Narrow 108 m: V.Light 0 m: No Oil 275 m  
Subsurface Oil Observed: Yes X No \_\_\_\_\_ Maximum Depth 15 cm

**RECOMMENDATIONS:**

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

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TAG COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TAG APPROVAL DATE: \_\_\_\_\_

ADEC \_\_\_\_\_  
EXXON \_\_\_\_\_  
NOAA \_\_\_\_\_  
USCG \_\_\_\_\_

FOSC: \_\_\_\_\_ DATE: \_\_\_\_\_

## FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EL 108 SUBDIVISION: A DATE 4/1/90

USCG

NAME \_\_\_\_\_ SIGNATURE \_\_\_\_\_

☒ NO TREATMENT RECOMMENDED  
COMMENTS☐ TREATMENT SUGGESTED

*I recommend no treatment. This is a high energy area. Contains lots of mussels + snails + barnicals on rockfaces and boulders.*

ADEC

NAME Michele Durr SIGNATURE M Durr☐ NO TREATMENT RECOMMENDED  
COMMENTS☒ TREATMENT SUGGESTED

- 1) Manual scrubbing of Bs with a CT on the east side of the beach is one option. Due to the high energy of this area, the wave action may eventually take the coat to a stain if left alone.
- 2) Hand ~~pick~~ pick-up of the patches of asphalt in the 2m x 2m section on the east side of the beach should also be considered.
- 3) 1 M Band along headlands varies from a ST to a CT. This area is very exposed and should be left to natural cleaning methods.

LAND MANAGER

NAME DAN LOGAN SIGNATURE D Logan☐ NO TREATMENT RECOMMENDED  
COMMENTS☒ TREATMENT SUGGESTED

- 1) MANUALLY SCRUB BOULDERS ON EAST SIDE OF BEACH INDICATED ON SKETCH MAP AND
  - 2) PICK UP TAR PATCHES IN 2M X 2M SECTION.
- THE REMAINING STAIN WILL NATURALLY CLEAN

\* U.S.F.W.S. SHOULD BE NOTIFIED OF EAGLES NEST SITE.

## SHORELINE OILING SUMMARY

OG J. Springer USCG R. Vandepels SEGMENT ST/ EL 108  
 BIO P. Clank LAND REP D. Logan SUBDIVISION A (1 OF 3)  
 EXXON T. Tomin ADEC M. Baer TIME 10:50 to 12:00  
 TEAM NO.: 5 TIDE LEVEL: +1 to 0 DATE 04/01/1990  
 EST. SUBDIVISION LENGTH: 225 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow  
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock  
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S  
 SURFACE SEDIMENTS: R 40 % B 10 % C 10 % P 15 % G 15 % S 10 % M 0 % V 0 %  
 SLOPE: Lang 50 % Hang 25 % Vert 25 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High  
 OIL CATEGORY LENGTH: W 0 m M 0 m N 102 m VL 0 m NO 123 m

## SURFACE OIL

| CHARACTER           | DISTRIBUTION |   |   |   | OIL / FILM COLOR |          |          |           |    | IMPACTED ZONES |        |   |   |   |
|---------------------|--------------|---|---|---|------------------|----------|----------|-----------|----|----------------|--------|---|---|---|
|                     | C            | S | P | N | SP<br>BN         | OB<br>FW | GY<br>SL | DRK<br>TL | LR | SU             | U      | M | L |   |
| ASPHALT<br>PAVEMENT |              |   |   |   |                  |          |          |           |    |                |        |   |   |   |
| POOLED              |              |   |   |   |                  |          |          |           |    |                |        |   |   |   |
| COVER               |              |   |   |   |                  |          |          |           |    |                |        |   |   |   |
| COAT                |              | X |   |   |                  |          |          | X         |    |                | X      |   |   |   |
| STAIN               |              | V | X |   |                  |          |          | V<br>X    |    |                | V<br>X |   |   |   |
| MOUSSE              |              |   |   |   |                  |          |          |           |    |                |        |   |   |   |
| PATTIES             |              |   |   |   |                  |          |          |           |    |                |        |   |   |   |
| TARBALLS            |              |   |   |   |                  |          |          |           |    |                |        |   |   |   |
| FILM                |              |   |   |   |                  |          |          |           |    |                |        |   |   |   |
| NO OIL              |              |   |   |   |                  |          |          |           |    |                | S      |   | X | X |

PAVEMENT: H F S 0 sq. m by 0 crPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? ☒ NO BR RW SL TL

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

DEBRIS COLLECTED  
☒ YES ☐ NOTYPE boom, b.#BAGS 0

Photographs:

Roll No. \_\_\_\_\_

Frames \_\_\_\_\_

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER |    |    |    |    | OILED INTERVAL (CM-CM) | BELOW |    | OIL / FILM COLOR |          |          |          |          |    |   |   | PIT ZONE |  |   |  | A<br>N<br>A | SUBSURFACE SEDIMENTS |
|---------|----------------|--------------------------|----|----|----|----|------------------------|-------|----|------------------|----------|----------|----------|----------|----|---|---|----------|--|---|--|-------------|----------------------|
|         |                | OP                       | OR | OL | OF | NO |                        | VO    | UC | SP<br>BP         | OR<br>FW | OL<br>SL | OR<br>TL | OR<br>LS | SU | U | M | L        |  |   |  |             |                      |
| 1       | 45             |                          |    |    |    | X  | -                      |       | X  |                  |          |          |          |          |    |   | X |          |  |   |  |             | B PGS                |
| 2       | 45             |                          |    |    |    | X  | .                      |       | X  |                  |          |          |          |          |    |   |   | X        |  |   |  |             | PGS                  |
| 3       | 30             |                          |    |    | X  |    | 10-15                  |       | X  |                  |          |          | X        |          |    |   |   | X        |  |   |  |             | PG                   |
| 4       | 40             |                          |    |    |    | X  | .                      |       | X  |                  |          |          |          |          |    |   |   |          |  | X |  |             | CPG                  |
| 5       | 30             |                          |    |    |    | X  | .                      |       | X  |                  |          |          |          |          |    |   |   | X        |  |   |  |             | CPG                  |
|         |                |                          |    |    |    |    | .                      |       |    |                  |          |          |          |          |    |   |   |          |  |   |  |             |                      |

COMMENTS

Possible eagle nest in back-beach forest.  
Boom recovered.

OG J. Coringer  
 SEGMENT EL 108  
 SUBDIVISION A  
 DATE 04/01/90

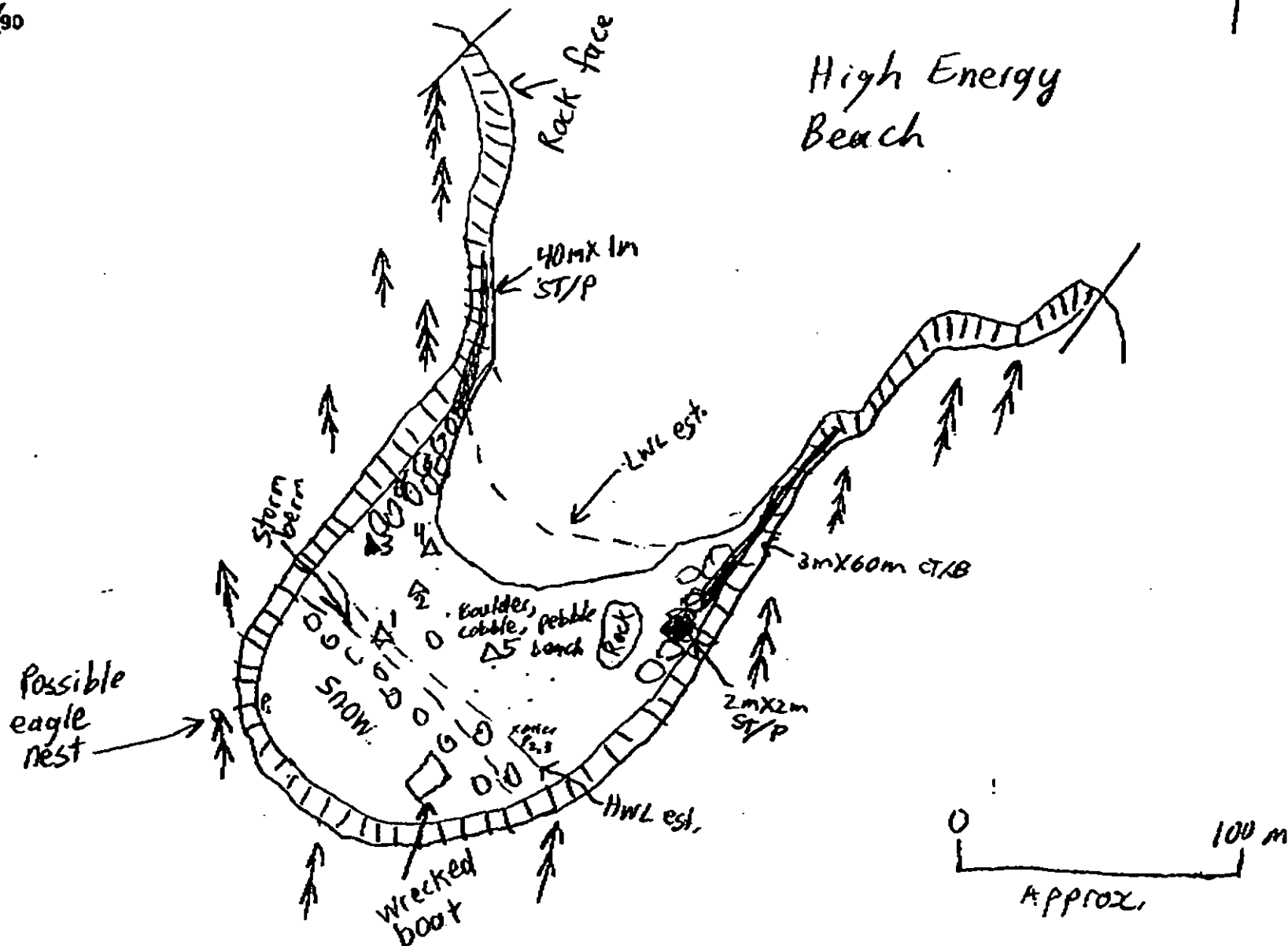
# ETCH MAP

## CHECKLIST

- ☒ M Arrow
- ☒ Approx. Scale
- ☒ Geo/Sub Body
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HWL/LWL
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ PK Location(s)
- ☒ Photo Location(s)

## LEGEND

- 1  $\Delta$   
Pk - No Subsurface Oil
- 2  $\Delta$   
Pk - Subsurface Oil
- CT/C  
Continuous Distribution
- CT/B  
Broken Distribution
- CT/P  
Patchy Distribution
- CT/S  
Splashed Distribution
- Oil Vegetation
- 1  $\bullet \rightarrow$   
Photo location, direction, and number



Page 7 of 19

Oil Character Length (m): AP \_\_\_\_\_ PO \_\_\_\_\_ CV \_\_\_\_\_ CT 60 ST 42 MS \_\_\_\_\_ PT \_\_\_\_\_ TB \_\_\_\_\_ FL \_\_\_\_\_ NO 123

REVISION: 23/7/80

## SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/22/90

Segment ST / 108 Subdivision A Date (mo / day / yr) 4/1/90Time (24 hr) 1050-1210 Biologist Crank Tide Height: 71 → 0  
Length : 225m(A) Substrate type and % of segments:  
(1) Bedrock 40 (2) Boulder 10 (3) Cobble 10 (4) Pebble 15 (5) Sand 25 (6) Silt(B) Overall % cover of biota (% of segment): Dense 20 Moderate 30 Low 50

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

Photographs:  
Roll No. ST-5-2Frames 1, 2, 3

## BARNACLES

| Dense        |              |              | Moderate |              |    | Sparse       |    |    | Rare |    |    |
|--------------|--------------|--------------|----------|--------------|----|--------------|----|----|------|----|----|
| 1U           | 1M           | 1L           | 1U       | 1M           | 1L | 1U           | 1M | 1L | 1U   | 1M | 1L |
| <del>2</del> | <del>2</del> | <del>2</del> | 2        | <del>2</del> | 2  | <del>2</del> | 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

4,5

## MYTILUS

| Dense |    |    | Moderate     |    |    | Sparse       |    |    | Rare |    |    |
|-------|----|----|--------------|----|----|--------------|----|----|------|----|----|
| 1U    | 1M | 1L | 1U           | 1M | 1L | 1U           | 1M | 1L | 1U   | 1M | 1L |
| 2     | 2  | 2  | <del>2</del> | 2  | 2  | <del>2</del> | 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

4,5

## GASTROPODS

| Dense        |              |    | Moderate     |    |    | Sparse |    |    | Rare |    |    |
|--------------|--------------|----|--------------|----|----|--------|----|----|------|----|----|
| 1U           | 1M           | 1L | 1U           | 1M | 1L | 1U     | 1M | 1L | 1U   | 1M | 1L |
| <del>2</del> | <del>2</del> | 2  | <del>2</del> | 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.

4,5

## FUCUS

| Dense |    |    | Moderate     |              |              | Sparse |              |    | Rare |    |    |
|-------|----|----|--------------|--------------|--------------|--------|--------------|----|------|----|----|
| 1U    | 1M | 1L | 1U           | 1M           | 1L           | 1U     | 1M           | 1L | 1U   | 1M | 1L |
| 2     | 2  | 2  | <del>2</del> | <del>2</del> | <del>2</del> | 2      | <del>2</del> | 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

24

3,4,5

## Wildlife Observations/ General Comments:

3 Bald Eagle - Adult  
 1 Harbor Seal - Adult  
 1 Gull

Fresh Dead Sea Otter in SUPRA (eyes gone)  
 Land Otter Tracks  
 Deer tracks  
 Raven tracks

} in SUPRA snow

## Ecological Considerations:

6Y

711

EL 108 A

Crank

Length: 225m

1050 - 1210

70 ft

## Species List:

HITZ

Flora

Endocladia  
Cladophora  
Porphyra  
Green Encrustose (Ulrospera?)

Fauna

Balanus glandula  
Littorina

MITZ

Halosaccion  
Fucus  
Enteromorpha  
Gloiopeltis  
Spongiomorpha  
Porphyra

B. glandula  
B. cariosus  
Mytilus  
Littorina

LITZ

Alaria  
Bosiella  
Lithothamnion  
Small Bladed seas (Rhodomela? tenax?)  
Rhodomela larix  
Odonthalia sp  
Ulva fenestrata  
Calophyllis  
Enteromorpha  
Green filamentous

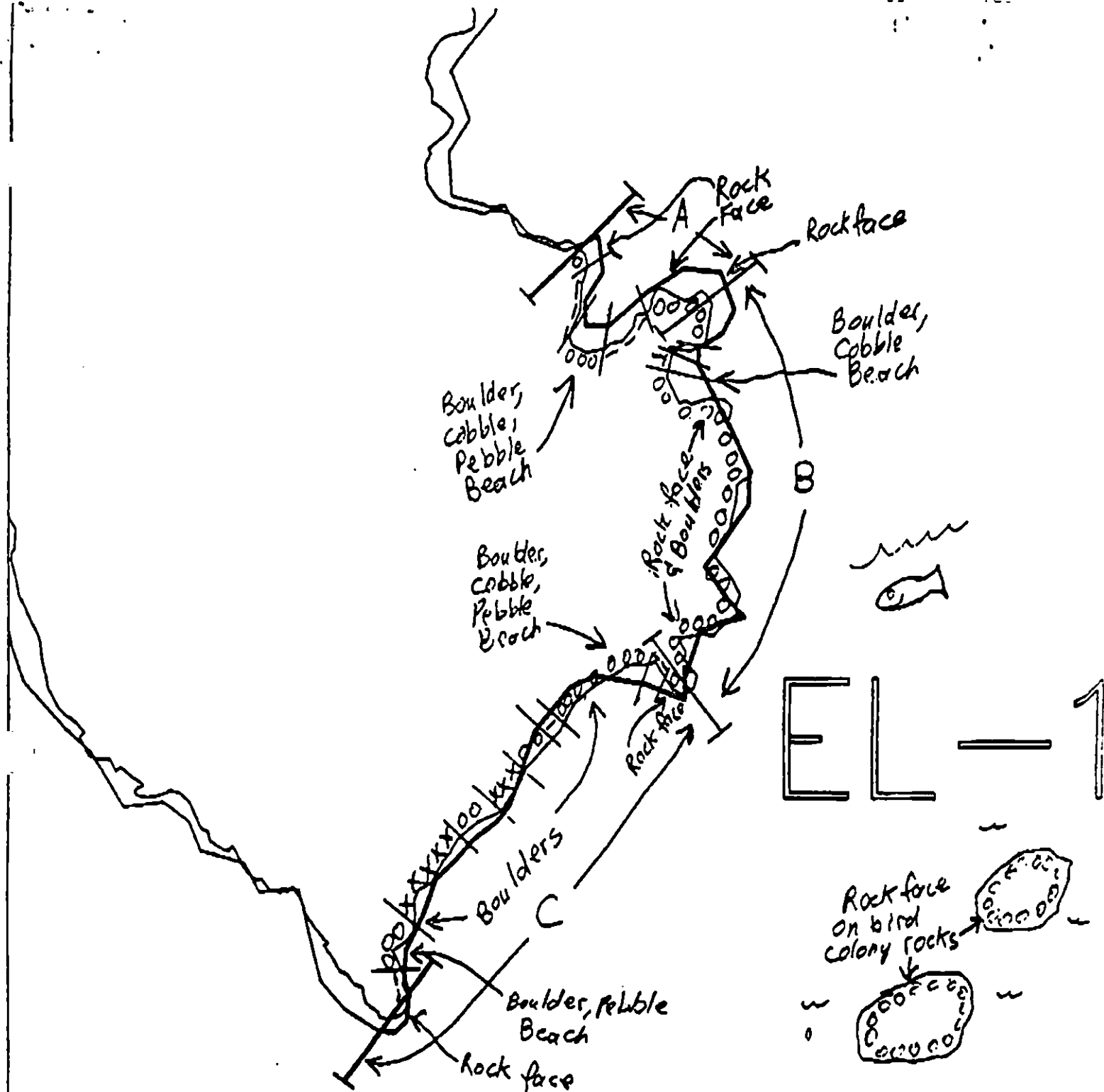
Dermasterius  
Piaster  
Mysids  
Orthasterias kophleri  
Serpulid  
Pynopodia

Comments

- Bald Eagle sitting in tree watch us land stayed ~ 5 minutes then flew off.  
Possible nest could not verify from beach - Not recorded in ADFG
- Fresh dead sea otter in SUPRA, eyes gone, brain intact.  
Possibly why eagle was watching beach.
- Land otter, Deer and Raven tracks in snow in SUPRA
- In oil tar band there is a dense band of Balanus spot, 70% mort. No adults, appears to be last year's spot. Oil tarring may have inhibited sluffing from substrata.
- Small tide pools in LITZ bedrock
- Alaria appears to replace Fucus in LITZ
- Mytilus distribution is patchy. High recruitment. Bed appear healthy ~ 5% mort
- Mollusca shell in pebble
- High energy beach with rounded rubble/pebble/sand = low macrobiota

## 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 designation~~
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
- 7HH Finfish harvesting
- 7I 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.



PAGE 8 OF 19

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EL-108

ADEC Segment Length: 1497m



Map Key: PWS-128

Name: James Springs

Date: 04/04/90

Date Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-108

SUBDIVISIONS: B (2 OF 3)

SHORELINE EVALUATION

SEGMENT ST/ EL-108 SUBDIVISION B (2 OF 3) DATE 4/1/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**

5R Seabird colony (5/1 to 9/1)  
6Y Recreation: Special use destination  
7II Subsistence area: Deer harvesting (8/15 to 2/28)  
See attached Ecological Constraint sheet for specific constraints and contacts.

**SUBDIVISION ECOLOGICAL CONSTRAINTS:**

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

**ARCHAEOLOGICAL CONSTRAINTS:**

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

SHPO SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

**OILING CATEGORIZATION:**

Wide 0 m: Medium 18 m: Narrow 0 m: V.Light 0 m: No Oil 502 m  
Subsurface Oil Observed: Yes X No \_\_\_\_\_ Maximum Depth 27 cm

**RECOMMENDATIONS:**

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

COMMENTS: Recommended treatment includes bioremediation of area shown on attached sketch map. Work should be conducted prior to 5/1 based on seabird colony constraints or with approval from ADF&G and USFWS.

TAG COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TAG APPROVAL DATE: \_\_\_\_\_

ADEC \_\_\_\_\_  
EXXON \_\_\_\_\_  
NOAA \_\_\_\_\_  
USCG \_\_\_\_\_

FOSC: \_\_\_\_\_ DATE: \_\_\_\_\_

## PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)  
 1B Salmon stream mouth - spawning (7/10 to 8/31)  
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage.  
 No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior  
 to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
- 1D Esther Hatchery release (4/15 to 6/1)
- 1E Main Bay Hatchery release (4/20 to 5/10)
- 1F Sawmill Bay Hatchery release (4/15 to 6/1)
- 1G Cannery Creek Hatchery release (4/21 to 6/1)
- 1H Remote release site
- 1I Gill net area (6/7 to 8/31)
- 1J Purse seine area (7/20 to 9/30)
- 1K Purse seine hook-off (7/20 to 9/30)
- 1L Set net sites (6/11 to 7/25)  
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)  
 Restrict boat traffic to essential minimum. Avoid damage to unopened 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 / FL108 SUBDIVISION: B DATE 4/1/90

USCG

NAME

AEC Vandepels SIGNATURE AEC Vandepels☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

I recommend no treatment. This subdivision is high energy area. Lots of mussels, snails, barnicals and seaweeds growing on beaches and on boulders. the entire length of sub.

ADEC

NAME

Michelle Paer SIGNATURE MPaer☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

The southernmost B field has a 3 M coat-to-stain band. The coat can be seen in between the B's 60 cm down. Treatment on this area should be manual scrubbing combined with bioremediation in between the B's or snare booms left for a few days to soak the oil up as the area warms. In addition, removal of oiled logs is necessary. Topography is large B's and is difficult to access. A 6 M band of mussels lies in the LITZ of the B. along the R headland following the beach, manual scrubbing could be used for a 20 M band of CT, that is 1-2 M wide. a 2-3 m band of mussels and barnacles lies along the headland. This area is very exposed & high energy.

LAND MANAGER

NAME

DAN HOGAN SIGNATURE Dan Hogan☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

MANUALLY SCRUB 3M X 20M ROCKS/BOULDERS AREA INDICATED ON SKETCH MAP. IF OILED LOGS ARE BURNED, RUVAN ON ROCK SUBSTRATE TO RECOVER NON-BURNED OIL.

## SHORELINE OILING SUMMARY

OG J. Springer USCG R. Vandepels SEGMENT ST/ EL 108  
 BIO P. Crank LAND REP D. Logan SUBDIVISION B (2 of 3)  
 EXXON T. Tamblin ADEC M. Baer TIME 12:10 to 13:10  
 TEAM NO.: 5 TIDE LEVEL: 0 to 0 DATE 04/01/90  
 EST. SUBDIVISION LENGTH: 524 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow  
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock  
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S  
 SURFACE SEDIMENTS: R 85 % B 8 % C 5 % P 2 % G % S % M % V %  
 SLOPE: Lang 30 % Hang 10 % Vert 60 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High  
 OIL CATEGORY LENGTH: W      m M 20 m N      m VL      m NO 504 m

## SURFACE OIL

| CHARACTER        | DISTRIBUTION |    |    |    | OIL / FILM COLOR |    |    |    |    |    |  | IMPACTED ZONES |    |    |   |
|------------------|--------------|----|----|----|------------------|----|----|----|----|----|--|----------------|----|----|---|
|                  | TC           | TS | TP | TD | SP               | BP | OP | BP | TL | LR |  | SU             | UI | MI | U |
| ASPHALT PAVEMENT |              |    |    |    |                  |    |    |    |    |    |  |                |    |    |   |
| POOLED           |              |    |    |    |                  |    |    |    |    |    |  |                |    |    |   |
| COVER            |              |    |    |    |                  |    |    |    |    |    |  |                |    |    |   |
| COAT             |              | X  | X  |    |                  | X  |    |    |    |    |  | X              |    |    |   |
| STAIN            |              |    |    |    |                  |    |    |    |    |    |  |                |    |    |   |
| MOUSSE           |              |    |    |    |                  |    |    |    |    |    |  |                |    |    |   |
| PATTIES          |              |    |    |    |                  |    |    |    |    |    |  |                |    |    |   |
| TARBALLS         |              |    |    |    |                  |    |    |    |    |    |  |                |    |    |   |
| FILM             |              |    |    |    |                  |    |    |    |    |    |  |                |    |    |   |
| NO OIL           |              |    |    |    |                  |    |    |    |    |    |  | X              | X  | X  |   |

PAVEMENT: H F S      sq. m by      cnPATTIES / TARBALLS      BAGSNEAR SHORE SHEEN? ☒ NO BR RW SL TL

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

DEBRIS COLLECTED

☐ YES ☒ NOTYPE     #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 |    |    |   | A<br>N<br>A | SUBSURFACE SEDIMENTS |       |
|---------|----------------|--------------------------|----|----|----|----|------------------------|-------|----|------------------|-------|-------|-------|-------|-------|-------|----------|----|----|---|-------------|----------------------|-------|
|         |                | OP                       | OR | OL | OF | NO |                        | UD    | UC | 20-29            | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | SU       | UI | MI | U |             |                      |       |
| 1       | 30             |                          | X  |    |    |    | 25-27                  |       | X  |                  |       |       |       | X     |       | X     |          |    |    |   |             |                      | CP    |
| 2       | 30             |                          |    |    |    | X  | -                      |       | X  |                  |       |       |       |       |       |       | X        |    |    |   |             |                      | BCPGS |
|         |                |                          |    |    |    |    | .                      |       |    |                  |       |       |       |       |       |       |          |    |    |   |             |                      |       |
|         |                |                          |    |    |    |    | .                      |       |    |                  |       |       |       |       |       |       |          |    |    |   |             |                      |       |
|         |                |                          |    |    |    |    | .                      |       |    |                  |       |       |       |       |       |       |          |    |    |   |             |                      |       |
|         |                |                          |    |    |    |    | .                      |       |    |                  |       |       |       |       |       |       |          |    |    |   |             |                      |       |
|         |                |                          |    |    |    |    | .                      |       |    |                  |       |       |       |       |       |       |          |    |    |   |             |                      |       |

COMMENTS On northwest-facing cliff, bird nests occupy voids between pillow (lava) structures. 43

3m X 20m area with splashes to coat between boulders and in joints to 60m depth.

## SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/90

Segment ST / EL 106 Subdivision B Date (mo / day / yr) 4 / 1 / 90Time (24 hr) 1210 - 1410 Biologist Crank Tidal Height: 0 → +1  
Length: 524 m

- (A) Substrate type and % of segments:  
(1) Bedrock 85 (2) Boulder 8 (3) Cobble 5 (4) Pebble 2 (5) Sand      (6) Silt
- (B) Overall % cover of biota (% of segment): Dense 50 Moderate 20 Low 30
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (O)

Photographs:  
Roll No. ST 5 2Frames 6, 7, 8

## BARNACLES

| Dense        |              |              | Moderate |              |    | Sparse       |              |              | Rare |    |    | NOT PRESENT |
|--------------|--------------|--------------|----------|--------------|----|--------------|--------------|--------------|------|----|----|-------------|
| 1U           | 1M           | 1L           | 1U       | 1M           | 1L | 1U           | 1M           | 1L           | 1U   | 1M | 1L |             |
| <del>2</del> | <del>2</del> | <del>2</del> | 2        | <del>2</del> | 2  | <del>2</del> | <del>2</del> | <del>2</del> | 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  |             |

## MYTILUS

| Dense        |              |    | Moderate |    |    | Sparse |    |    | Rare |    |    | NOT PRESENT<br>345 |
|--------------|--------------|----|----------|----|----|--------|----|----|------|----|----|--------------------|
| 1U           | 1M           | 1L | 1U       | 1M | 1L | 1U     | 1M | 1L | 1U   | 1M | 1L |                    |
| <del>2</del> | <del>2</del> | 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  |                    |

## GASTROPODS

| Dense        |              |    | Moderate |    |    | Sparse |    |    | Rare |    |    | NOT PRESENT |
|--------------|--------------|----|----------|----|----|--------|----|----|------|----|----|-------------|
| 1U           | 1M           | 1L | 1U       | 1M | 1L | 1U     | 1M | 1L | 1U   | 1M | 1L |             |
| <del>2</del> | <del>2</del> | 2  | 2        | 2  | 2  | 2      | 2  | 2  | 2    | 2  | 2  |             |
| <del>3</del> | <del>3</del> | 3  | 3        | 3  | 3  | 3      | 3  | 3  | 3    | 3  | 3  |             |
| <del>4</del> | <del>4</del> | 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 |    |    | NOT PRESENT<br>345 |
|-------|--------------|--------------|----------|----|----|--------------|----|----|------|----|----|--------------------|
| 1U    | 1M           | 1L           | 1U       | 1M | 1L | 1U           | 1M | 1L | 1U   | 1M | 1L |                    |
| 2     | <del>2</del> | <del>2</del> | 2        | 2  | 2  | <del>2</del> | 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  |                    |

## Wildlife Observations/ General Comments:

4 Gulls: 1 heard, 2 on H<sub>2</sub>O, 1 flying

1 Sea Otter - Adult

Guano on vertical face - Possible nesting site

## Ecological Considerations:

6Y - Special Use Destination

711 - Deer harvesting

EL 108 B

Crank  
Length: 524m

1910 - 1410

U → 11 ftSpecies ListFloraFauna

HITZ

Endocladia

Balanus glandula  
Littorina  
Limpets

MITZ

Lithothamnion  
Bosiella  
Halosaccion  
Ralphsia  
Enteromorpha  
Cladophora  
EndocladiaAmphipods  
Pegurus  
Littorina  
Littorina eggs  
Katharina tunicata  
Tonicella linnata  
Tidepool Sculpin  
Red Nudibranch (small)  
Dermasterias  
Littorina  
Limpets  
Siphonaria  
B. glandula  
B. cariosus

LITZ

Rhodomenia palmata  
Sm. bladed reds  
Cladophora  
Lithothamnion  
Bosiella  
Asteria  
Enteromorpha  
Ralphsia  
Filamentous greenAmphipod  
Littorina  
Littorina eggs  
Orthasterias koehleri  
Piastra  
SepulidComments

- On headland well established banding of Balanus glandula, Mytilus, B. cariosus. Observed from skiff - unable to determine mortality.
- Possible bird nesting site, guano on wall with many cracks and crevices. No daytime activity, possible nocturnal (Storm petrel?)
- Mature Halosaccion in MITZ appears burnt
- Barnacle scarring in LITZ cobble.
- Rock plateau in MITZ ≈ 30m x 30m covered with dense healthy mussel bed. Tidepools (x 2m x 3m) covered with Rhodomenia larix. The R. larix is covered with Littorina scuts. Sensitive area foot traffic should be avoided.
- Angular cobble behind boulders with dense concentrations of Littorina and Limpets.

Page 2 of 14

## SKETCH MAP

J. Spier  
SEGMENT ST/ EL 108

SUBDIVISION B

DATE 04/01/90

## CHECKLIST

- ☒ Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Bdry
- ☒ Oil Det.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HWA/LWA
- ☒ SSI
- ☒ Profile Location(s)
- ☒ Photo Location(s)

## LEGEND

1 Δ

Pl - No Subsurface Oil

2 Δ

Pl - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

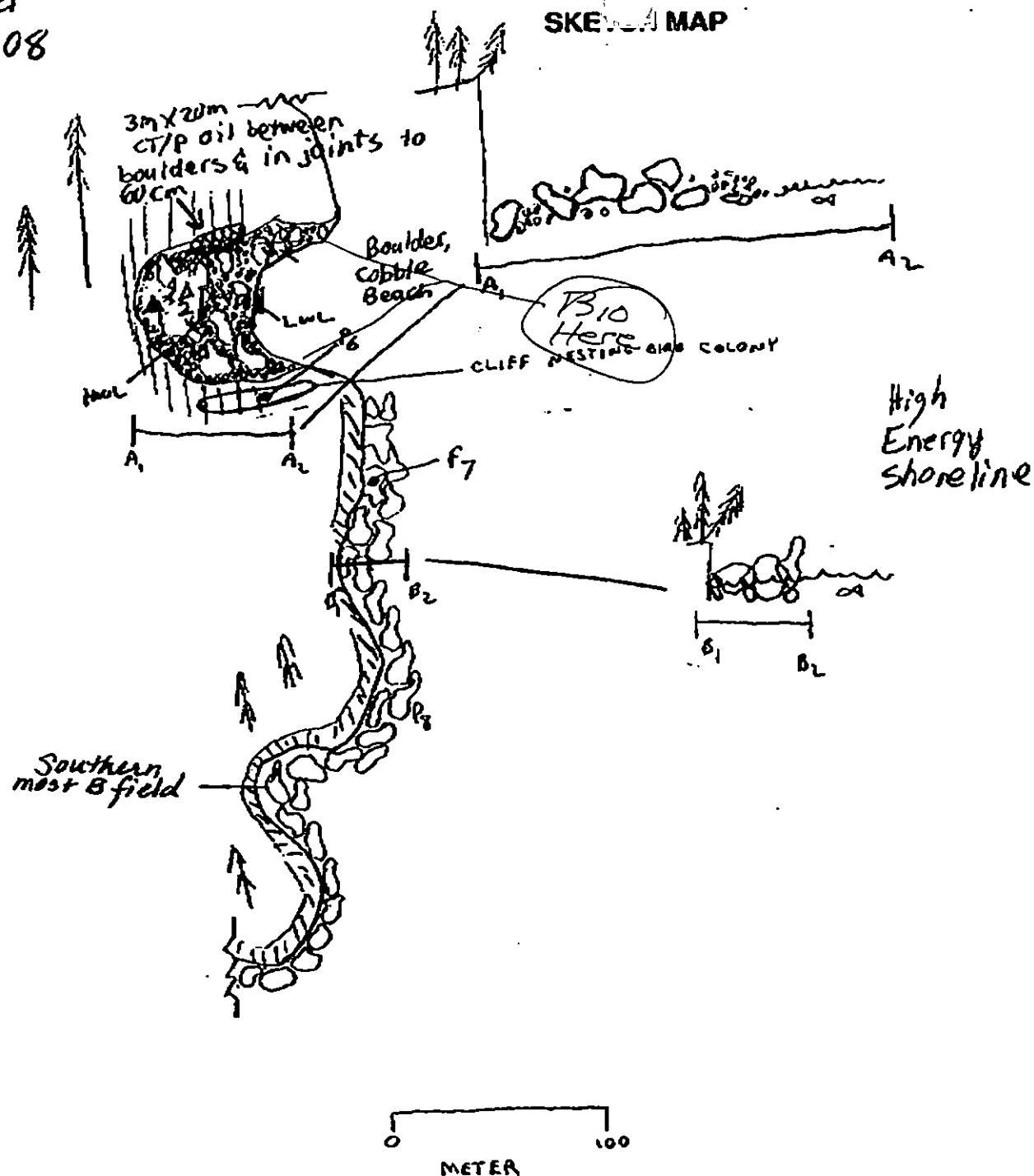
Patchy Distribution

CT/S

Splashed Distribution

Oiled Vegetation

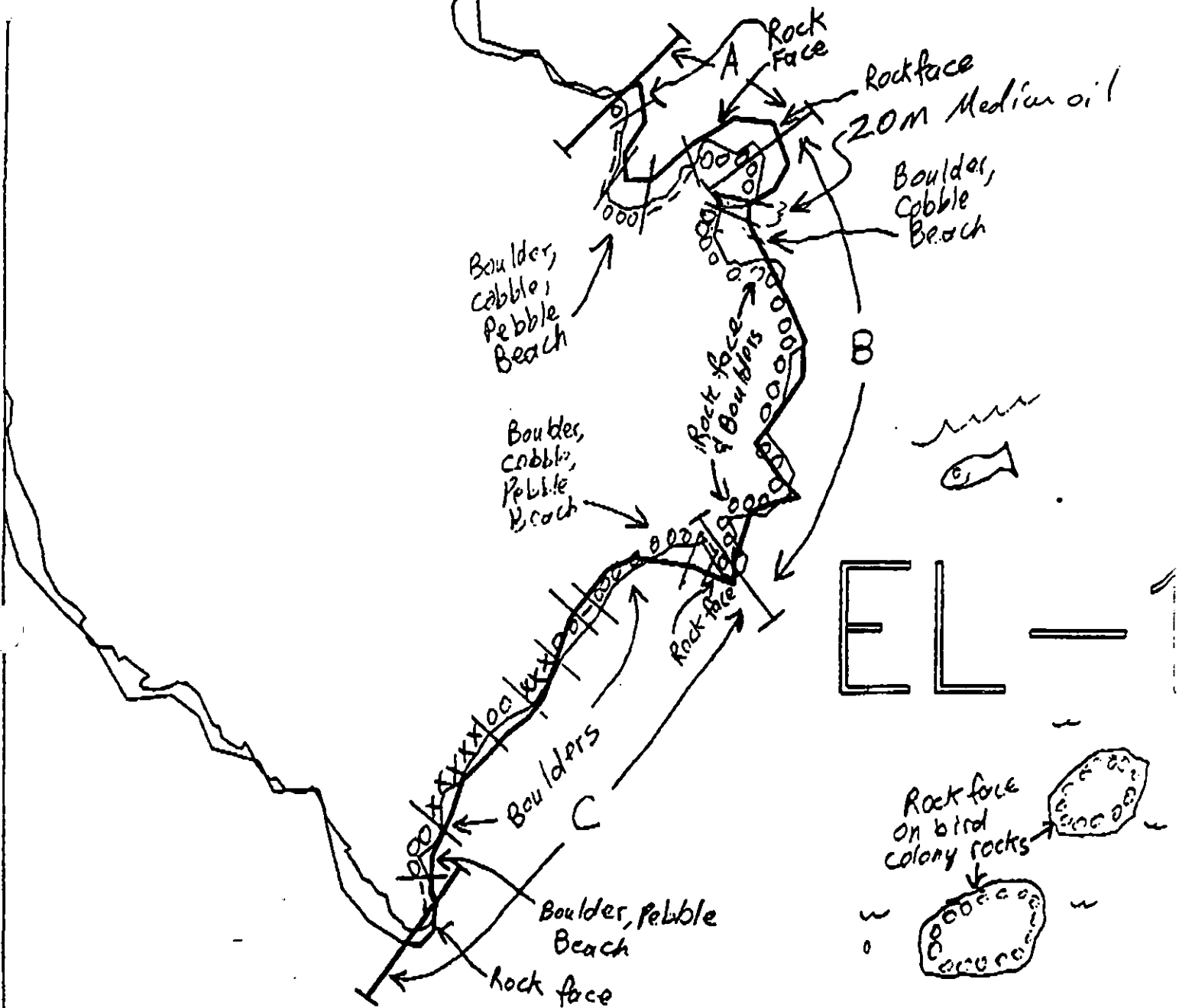
1 →

Photo location, direction,  
and number

Character Length (m): AP \_\_\_\_\_ PO \_\_\_\_\_ CV \_\_\_\_\_ CT 20 ST \_\_\_\_\_ MS \_\_\_\_\_ PT \_\_\_\_\_ TB \_\_\_\_\_ FL \_\_\_\_\_ NO 504

REVISION: 02/24/88

REVISED 7/5/90



42

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EL-108

ADEC Segment Length: 1497



Map Key: PWS-128

Name: James Springer

Date: 06/04/90

Date Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-108

SUBDIVISIONS: C (3 OF 3)

SHORELINE EVALUATION

SEGMENT ST/ EL-108 SUBDIVISION C (3 OF 3) DATE 4/1/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**

5R Seabird colony (5/1 to 9/1)  
5t All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)  
6Y Recreation: Special use destination  
7II Subsistence area: Deer harvesting (8/15 to 2/28)  
See attached Ecological Constraint sheet for specific constraints and contacts.

**SUBDIVISION ECOLOGICAL CONSTRAINTS:**

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

**ARCHAEOLOGICAL CONSTRAINTS:**

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

SHPO SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

**OILING CATEGORIZATION:**

Wide 160 m: Medium 0 m: Narrow 42 m: V.Light 0 m: No Oil 259 m  
Subsurface Oil Observed: Yes X No \_\_\_\_\_ Maximum Depth 10+cm

**RECOMMENDATIONS:**

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

COMMENTS: Recommended treatment includes 1) placement of pom poms/  
snares in cracks between boulders to pick up pooled oil. Work should  
be conducted before 5/1 or after 9/1 based on seabird colony restric-  
tions or with approval of ADF&G and USFWS regarding seabird colony and  
possible eagle nest, not listed by USFWS on 1990 map.

TAG COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TAG APPROVAL DATE: \_\_\_\_\_

ADEC \_\_\_\_\_  
EXXON \_\_\_\_\_  
NOAA \_\_\_\_\_  
USCG \_\_\_\_\_

FOSC: \_\_\_\_\_ DATE: \_\_\_\_\_

## PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)  
 1B Salmon stream mouth - spawning (7/10 to 8/31)  
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)  
 1D Esther Hatchery release (4/15 to 6/1)  
 1E Main Bay Hatchery release (4/20 to 5/10)  
 1F Sawmill Bay Hatchery release (4/15 to 6/1)  
 1G Cannery Creek Hatchery release (4/21 to 6/1)  
 1H Remote release site  
 1I Gill net area (6/7 to 8/31)  
 1J Purse seine area (7/20 to 9/30)  
 1K Purse seine hook-off (7/20 to 9/30)  
 1L Set net sites (6/11 to 7/25)  
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)  
 Restrict boat traffic to essential minimum. Avoid damage to unopened 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  
 7H Deer harvesting (8/15 to 2/28)  
 7JJ Invertebrate harvesting  
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

## FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ EL 108 - C SUBDIVISION: C DATE 4/1/90

USCG

NAME AEC Vandepels SIGNATURE AEC Vandepels☐ NO TREATMENT RECOMMENDED  
COMMENTS☒ TREATMENT SUGGESTED

I suggest placing pompons in among boulders in 15x100 M band and let the warming of the sun and tides/wave action clean area southern most in sub C.

ADEC

NAME Michele Baer SIGNATURE M Baer☐ NO TREATMENT RECOMMENDED  
COMMENTS☒ TREATMENT SUGGESTED

EL108 is a high energy beach with a prolific <sup>mytilus</sup> ~~muscle~~, balanus, and fucus population in the LITZ. 1/2 way through the segment, and continuing to the S. end of the segment, the B, C beaches have several large areas with high o's of CT to CV on the tops of the B's as well as the underlying areas. Two primary methods of treatment are recommended: 1) As the oil warms, pack snake booms in the areas between the B's, replacing them every 3 days to adsorb the oil pockets. In addition, manually wipe the boulders, and hand pick up the AP patches. 2) The second treatment option is washing with hot water wands and using booms to absorb the sheen coming off the beach. The first treatment may take more labor, but the oil will not be forced further into the bottom layer and the impact will be lessened on the rich LITZ organisms lying 10 feet below the impacted area. During either form of treatment, the crew should be kept off the adjoining beaches to maintain the mytilus beds throughout the area.

LAND MANAGER

NAME DAN LOGAN SIGNATURE Dan Logan☐ NO TREATMENT RECOMMENDED  
COMMENTS☒ TREATMENT SUGGESTED

ISOLATED POCKETS ON THE SOUTHERN PORTION OF THIS SEGMENT HAVE HIGH % CT TO CV IN UPPER INTERTIDAL ZONE ABOVE AREAS OF HIGH MUSSEL PRODUCTION. THIS AREA HAS A SOUTHERN EXPOSURE WHICH SHOULD WARM DURING SUMMER. I RECOMMEND PACKING THESE AREAS WITH SNAKE BOOMS TO ADSORB THE OIL AS IT WARMS BECAUSE OF THE LOWER INTERTIDAL MUSSEL BEDS IN THIS AREA I RECOMMEND HOT WATER WASH ONLY AS A LAST RESORT IF OTHER TREATMENTS ARE UNSUCCESSFUL.

15 OF 19

# SHORELINE OILING SUMMARY

REVISION NO. 02/22/90

OG J. Springer USCG R. Vandepels SEGMENT STI EL 108  
 BIO P. Crank LAND REP D. Logan SUBDIVISION C (3043)  
 EXXON T. Tonia ADEC M. Baer TIME 13:10 to 15:30  
 TEAM NO.: 5 TIDE LEVEL: 0 to +4 DATE 04/01/90  
 EST. SUBDIVISION LENGTH: 748 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow  
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock  
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: NE to SW  
 SURFACE SEDIMENTS: R 35 % B 45 % C 15 % P 5 % G — % S — % M — % V — %  
 SLOPE: Lang 60 % Hang 30 % Vert 10 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High  
 OIL CATEGORY LENGTH: W 160 m M — m N 87 m VL — m NO 50 m

## SURFACE OIL

| CHARACTER        | DISTRIBUTION |    |    |    | OIL / FILM COLOR |    |    |    |    |    |    |    | IMPACTED ZONES |   |   |   |
|------------------|--------------|----|----|----|------------------|----|----|----|----|----|----|----|----------------|---|---|---|
|                  | IC           | IS | IP | IR | SB               | SB | SB | SB | SB | SB | SB | SB | SU             | U | M | U |
| ASPHALT PAVEMENT |              |    |    | X  | X                | X  | X  | X  | X  | X  | X  | X  | X              |   |   |   |
| POOLED           |              |    | X  |    | X                | X  | X  | X  | X  | X  | X  | X  | X              |   |   |   |
| COVER            | X            |    |    |    | X                | X  | X  | X  | X  | X  | X  | X  | X              |   |   |   |
| COAT             |              | X  |    |    | X                | X  | X  | X  | X  | X  | X  | X  | X              |   |   |   |
| STAIN            |              | X  |    | X  |                  |    |    |    |    |    |    |    | X              |   |   |   |
| MOUSSE           |              |    |    |    |                  |    |    |    |    |    |    |    |                |   |   |   |
| PATTIES          |              |    |    |    |                  |    |    |    |    |    |    |    |                |   |   |   |
| TARBALLS         |              |    |    |    |                  |    |    |    |    |    |    |    |                |   |   |   |
| FILM             |              |    |    |    |                  |    |    |    |    |    |    |    |                |   |   |   |
| NO OIL           |              |    |    |    |                  |    |    |    |    |    |    |    | X              | X |   |   |

PAVEMENT: H F S 15 sq. m by 3 cr

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 —

#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 | A N A | SUBSURFACE SEDIMENTS |
|---------|----------------|--------------------------|----|----|----|----|------------------------|-------|------------------|----|----|----|----|----|----|----|----------|-------|----------------------|
|         |                | OP                       | OR | OL | OF | NO |                        |       | SB               | SB | SB | SB | SB | SB | SB | SB | SU       | U     |                      |
| 1       | 30             |                          |    |    |    | X  | .                      | X     |                  |    |    |    |    |    |    |    |          |       | BCPGS                |
| 2       | 20             |                          |    |    |    | X  | .                      | X     |                  |    |    |    |    |    |    |    |          |       | CPGS                 |
| 3       | 30             |                          |    |    |    | X  | .                      | X     |                  |    |    |    |    |    |    |    | X        |       | PGS                  |
| 4       | 19             |                          |    |    |    | X  | .                      | X     |                  |    |    |    |    |    |    |    | X        |       | P                    |
| 5       | 35             |                          |    |    |    | X  | .                      | X     |                  |    |    |    |    |    |    |    | X        |       | P                    |
| 6       | 10             |                          |    |    |    | X  | .                      | X     |                  |    |    |    |    |    |    |    | X        |       | CP                   |

COMMENTS Eagle's nest in woods behind second (from NE) pocket beach. Coral collected from joints in rock on NE point.

40

SEGMENT ST/ EL 108 SUBDIVISION C (3 of 3)

**SUBSURFACE OIL (CONTINUED)**

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER |    |    |    |    | OILED INTERVAL (cm) | BELOW |    | OIL / FILM COLOR |              |              |              |              |              | PIT ZONE |   |    |   | A<br>N<br>A | SUBSURFACE SEDIMENTS |
|---------|----------------|--------------------------|----|----|----|----|---------------------|-------|----|------------------|--------------|--------------|--------------|--------------|--------------|----------|---|----|---|-------------|----------------------|
|         |                | CP                       | OR | CL | OP | NO |                     | VO    | UC | <del>1</del>     | <del>2</del> | <del>3</del> | <del>4</del> | <del>5</del> | <del>6</del> | BU       | U | BU | U |             |                      |
| 7       | 30             |                          |    |    |    | X  | .                   |       | X  |                  |              |              |              |              |              | X        |   |    |   |             | CP                   |
| 8       | 30             |                          |    |    |    | X  | .                   |       | X  |                  |              |              |              |              |              |          |   | X  |   |             | CP                   |
| 9       | 10             | X                        |    |    |    |    | 0-10                | X     |    | X                |              |              |              |              |              | X        |   |    |   |             | CPR                  |
|         |                |                          |    |    |    |    | .                   |       |    |                  |              |              |              |              |              |          |   |    |   |             |                      |
|         |                |                          |    |    |    |    | .                   |       |    |                  |              |              |              |              |              |          |   |    |   |             |                      |
|         |                |                          |    |    |    |    | .                   |       |    |                  |              |              |              |              |              |          |   |    |   |             |                      |
|         |                |                          |    |    |    |    | .                   |       |    |                  |              |              |              |              |              |          |   |    |   |             |                      |
|         |                |                          |    |    |    |    | .                   |       |    |                  |              |              |              |              |              |          |   |    |   |             |                      |
|         |                |                          |    |    |    |    | .                   |       |    |                  |              |              |              |              |              |          |   |    |   |             |                      |
|         |                |                          |    |    |    |    | .                   |       |    |                  |              |              |              |              |              |          |   |    |   |             |                      |
|         |                |                          |    |    |    |    | .                   |       |    |                  |              |              |              |              |              |          |   |    |   |             |                      |
|         |                |                          |    |    |    |    | .                   |       |    |                  |              |              |              |              |              |          |   |    |   |             |                      |
|         |                |                          |    |    |    |    | .                   |       |    |                  |              |              |              |              |              |          |   |    |   |             |                      |
|         |                |                          |    |    |    |    | .                   |       |    |                  |              |              |              |              |              |          |   |    |   |             |                      |
|         |                |                          |    |    |    |    | .                   |       |    |                  |              |              |              |              |              |          |   |    |   |             |                      |
|         |                |                          |    |    |    |    | .                   |       |    |                  |              |              |              |              |              |          |   |    |   |             |                      |

COMMENTS

41

OG J. Soeringer

SEGMENT ... EL108

SUBDIVISION C

DATE 04/01/90

# CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Log/Sub Body
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Ext. HML/LWL
- ☒ SST
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Pit Location(s)
- ☒ Photo Location(s)

## LEGEND

1  $\Delta$   
Pit - No Subsurface Oil

2  $\Delta$   
Pit - Subsurface Oil

CT/C  
Continuous Distribution

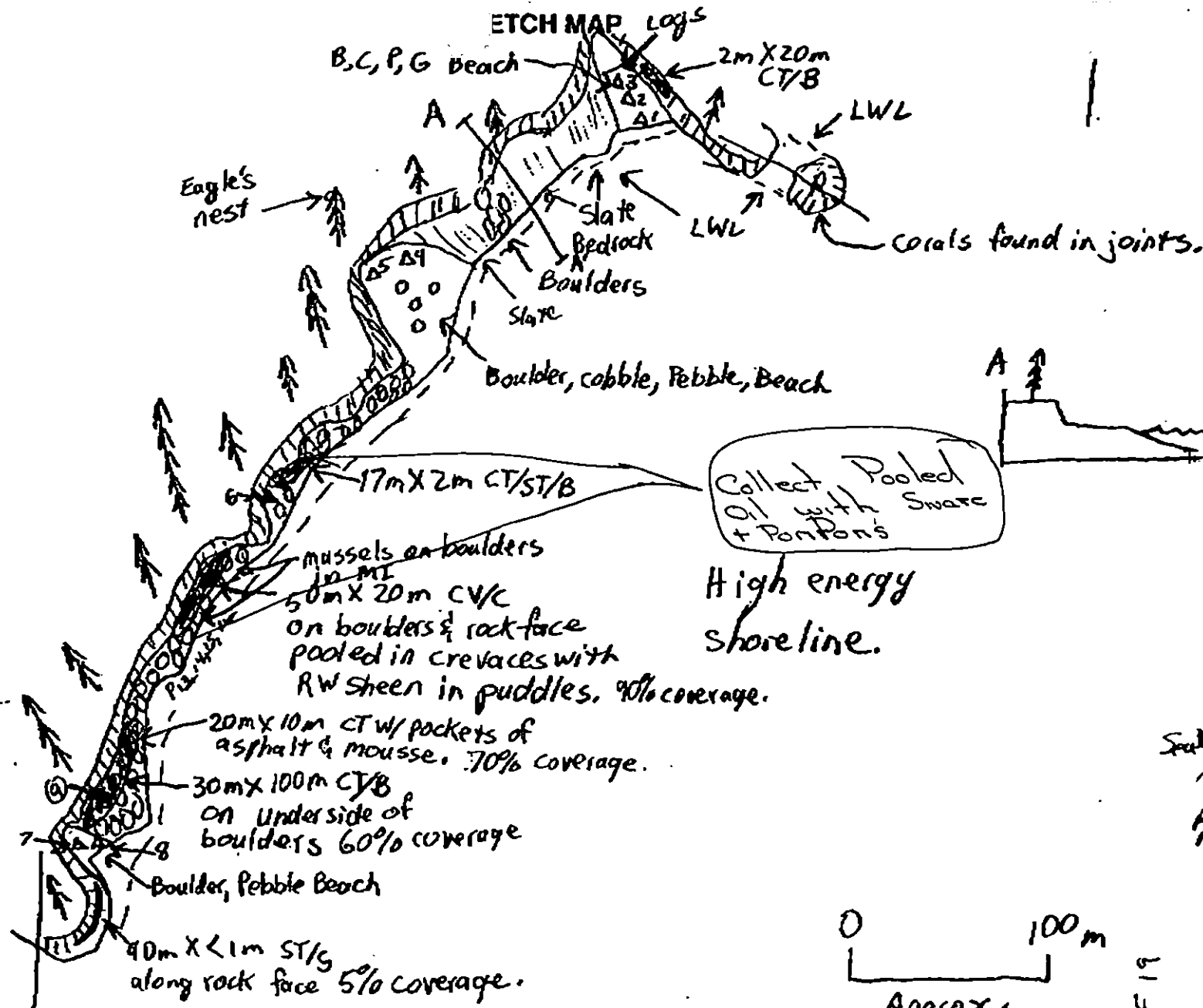
CT/B  
Broken Distribution

CT/P  
Patchy Distribution

CT/S  
Splashed Distribution

Old Vegetation

1  $\rightarrow$   
Photo location, direction, and number



Oil Character Length (m): AP \_\_\_\_\_ PO \_\_\_\_\_ CV 50 CT 140 ST 57 MS \_\_\_\_\_ PT \_\_\_\_\_ TB \_\_\_\_\_ FL \_\_\_\_\_ NO 501

REVISION: 000000

140 F 19

## REGISTRATION: 09/20/99

**Frames** \_\_\_\_\_

NOT PRESENT

NOT PRESENT

## NOT PRESENT

**NOT PRESENT**

Black-footed Kittiwake (300+)  
Glaucous-winged Gull (50+)  
Oystercatcher (1)

16 OF 19

The area is a boulder beach with angular cobble in MITZ, cobble appeared rounded in LITZ observed through H<sub>2</sub>O (tide covered). Cobble in MITZ is protected from wave action by large numerous boulders.

1. In HITZ: there is a moderate discontinuous band of *Balanus glandula* adults, juveniles and spat ; 50% morts.
2. In MITZ: there is a 6m *Mytilus* band with patchy distribution and dense concentrations. *Mytilus* recruitment is high.

Gastropod (*Littorina*: Limpets) concentrations were dense on boulders but sparse in cobble.

*Balanus glandula* is dense <sup>adults and spat</sup> on boulders ; 10% morts.

*Fucus* is in moderate concentrations, 80% appears burnt - fronds reproductive  
20% *Porphyra* cover on boulders.

3. LITZ: was unexposed when this area was surveyed. Observations were taken through H<sub>2</sub>O. Species observed:
  - Fucus* → moderate concentrations.
  - Cladophora* → moderate
  - Rhodomenia palmata* → moderate
  - B. glandula* → dense
  - B. cariosus* → dense
  - Katharina tunicata* → sparse

Unable to turn cobble for observations.

Overall biotic concentrations for this area 25% dense 25% moderate  
50% sparse

108 C  
1410-1640  
+1 → +7 ft

Crank  
Length 748 m

## Species List

FloraFauna

HITZ

Endocladia

Balanus glandula  
Limpets  
Littorina

MITZ

Filamentous greens  
Small bladed red  
Rhodomela larix  
Fucus  
Lithothamnion  
Calliarthon  
Halosaccion  
Gloriopeltis  
Endocladia  
Odontholia  
Syrtosiphon  
Mastocarpus papilata

Mytilus  
Tidepool Sculpin  
Balanus glandula  
B. cariosus  
Small orange sponge  
Anthropleura  
Littorina  
Katharina tunicata  
Coral

LITZ

Odonthalia  
Alaria  
Fucus  
Cladophora  
Bosie lla  
Filamentous red  
Lithothamnion

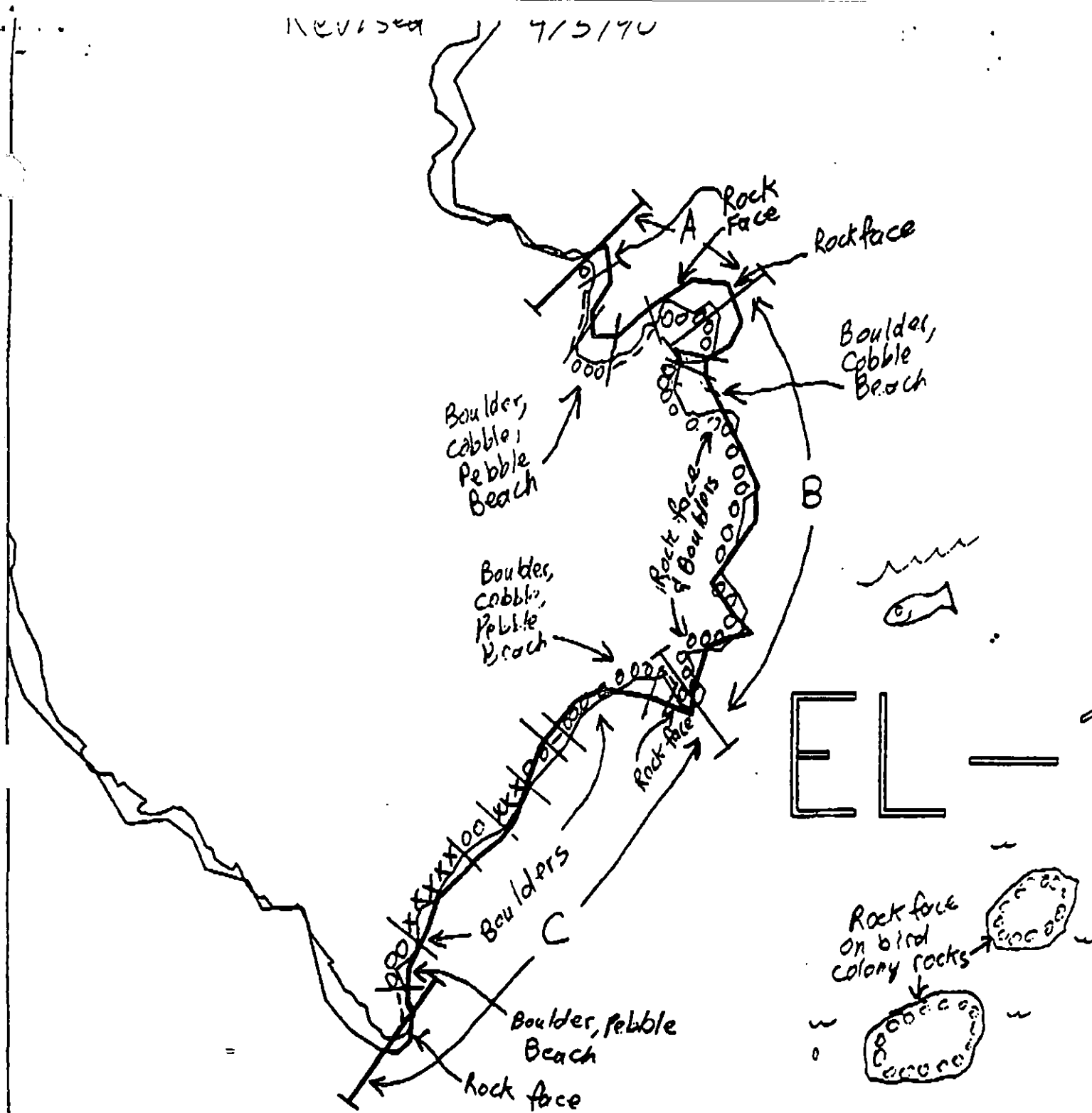
Hydroid  
Anthropleura  
Bryozoan  
Siphonaria  
Piastr

Comments

- Fucus stipes in UITZ appear burnt
  - Mastocarpus papilata → one plant in upper MITZ
  - Textbook zonation on vertical faces B. glandula ↓ Mytilus ↓ B. cariosus
  - Forest area; overhang has high den potential.
  - Seabird Rookery is located on two offshore rocks. Survey made by skiff drive-by  
Counts are quick estimates.
  - Corals found on partially submerged rock
  - There was a 100m x 20m a black cover with some pooling
- The following page<sup>18</sup> of comments refers to this portion of

REVISED

7/5/90



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EL-108

ADEC Segment Length: 1497

0 100 200 300  
METERS

Map Key: PWS-128

Name: James Springle

Date: 04/01/90

Date Entered:

## ADDENDUM: SUBDIVISION CONSTRAINTS

-SEGMENT EL-108 SUBDIVISION C ( 3 of 3 )

| WORK WINDOW                                |                    |
|--------------------------------------------|--------------------|
| Manual Pickup                              | OPEN               |
| Bioremediation<br>Other Approved Treatment | WORK PRIOR TO 8/15 |

### ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

### APPLICABLE ECOLOGICAL TIME CONSTRAINTS

|     |                              |                                                                                                   |
|-----|------------------------------|---------------------------------------------------------------------------------------------------|
| 5R  | Seabird Colony               | NO CONSTRAINT. Work area is over 800m from colony.                                                |
| 5T  | Bald Eagle Nest              | NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision C work site.  |
| 7II | Subsistence: Deer Harvesting | Closed to bioremediation 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 unrolled biota and substrate.

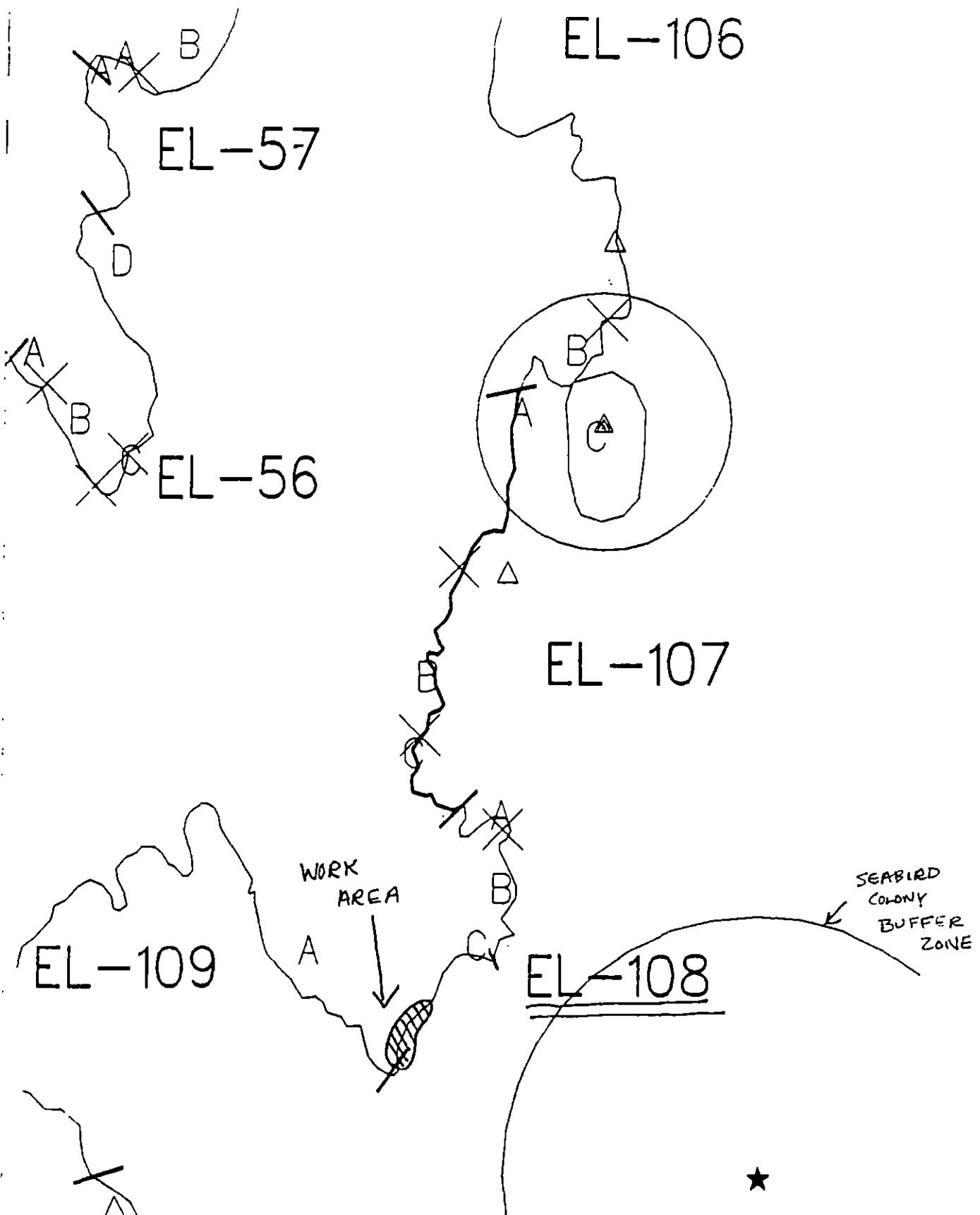
FOSC

*[Signature]*

DATE 6-10-90

Prepared By: *W. Kelley*

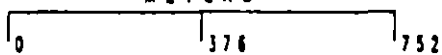
Date 6/9/90



Exxon Company, USA  
 Map Key: PWS-EL-107  
 June 04, 1990



ECOLOGY MAP  
 SEGMENT EL-108  
 SUBDIVISION C (3 of 3)  
 METERS



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

1 inch = 1233 feet

# SHORELINE EVALUATION

SEGMENT ST/ EL-108 SUBDIVISION C (3 OF 3) DATE 4/1/90

## SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5R Seabird colony (5/1 to 9/1)  
5t All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)  
6Y Recreation: Special use destination  
7II Subsistence area: Deer harvesting (8/15 to 2/28)  
See attached Ecological Constraint sheet for specific constraints and contacts.

## SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

## ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: *Charles E. Homan*

DATE: 4/25/90

## OILING CATEGORIZATION:

Wide 160 m: Medium 0 m: Narrow 42 m: V. Light 0 m: No Oil 259 m  
Subsurface Oil Observed: Yes X No      Maximum Depth 10+cm

## RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) placement of pom poms/  
snare in cracks between boulders to pick up pooled oil. Work should  
be conducted before (5/1) or after (9/1) based on seabird colony restric-  
tions or with approval of ADF&G and USFWS regarding seabird colony and  
possible eagle nest, not listed by USFWS on 1990 map.

See Constraint Addendum Dated 6/9/90

TAG COMMENTS:

TREAT AS INDICATED PRIOR TO MAY 1st. FOLLOWING  
CONSULTATION WITH, AND APPROVAL BY, USF&W APPLY BIOREMEDIATION  
IN AREAS INDICATED ON SKETCH

TAG APPROVAL DATE: 4/24/90

ADEC ART WEAVER

EXXON ANDY TORRES

NOAA Joseph K. ...

USCG M. J. HALL

FOSC: *[Signature]*

DATE: 5-3-90

# SHORELINE EVALUATION

SEGMENT ST/ EL-108 SUBDIVISION A (1 OF 3) DATE 4/1/90

## SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5R Seabird colony (5/1 to 9/1)

6Y Recreation: Special use destination

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

See attached Ecological Constraint sheet for specific constraints and contacts.

## SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

## ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Hoffman DATE: 4/25/90

## OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 108 m: V.Light 0 m: No Oil 275 m  
Subsurface Oil Observed: Yes X No      Maximum Depth 15 cm

## RECOMMENDATIONS:

|                                                                   |                                                          |
|-------------------------------------------------------------------|----------------------------------------------------------|
| <input checked="" type="checkbox"/> No Treatment Recommended      | <input type="checkbox"/> Snare/Absorbent Booms           |
| <input type="checkbox"/> Treatment Recommended                    | <input type="checkbox"/> Oil Snares (pom poms)           |
| <input type="checkbox"/> Manual Pickup                            | <input type="checkbox"/> Absorbents (pads, rolls, etc)   |
| <input type="checkbox"/> Bioremediation                           | <input type="checkbox"/> Spot Washing: <u>    </u> Wands |
| <input type="checkbox"/> Tarmat: <input type="checkbox"/> Breakup | <input type="checkbox"/> Beach Cleaner                   |
| <input type="checkbox"/> Removal                                  | <input type="checkbox"/> Other (see comments)            |

COMMENTS:       
      
      
    

TAG COMMENTS: MONITORS TO CHECK FOR PRESENCE OF OIL PATCHES  
ON THE EAST SIDE OF THE POCKET BEACH AND DETERMINE  
THE NEED TO MOBILIZE A CLEANUP TEAM FOR REMOVAL

TAG APPROVAL DATE: 4/24/90

ADEC ART WENGER

EXXON AMY TEA

NOAA JOSEPH TALBUTT

USCG M. J. HALL

FOSC:     

DATE: 5-3-90

OG J. C. Ringer  
 SEGMENT ST/ EL 108  
 SUBDIVISION A  
 DATE 04/01/90

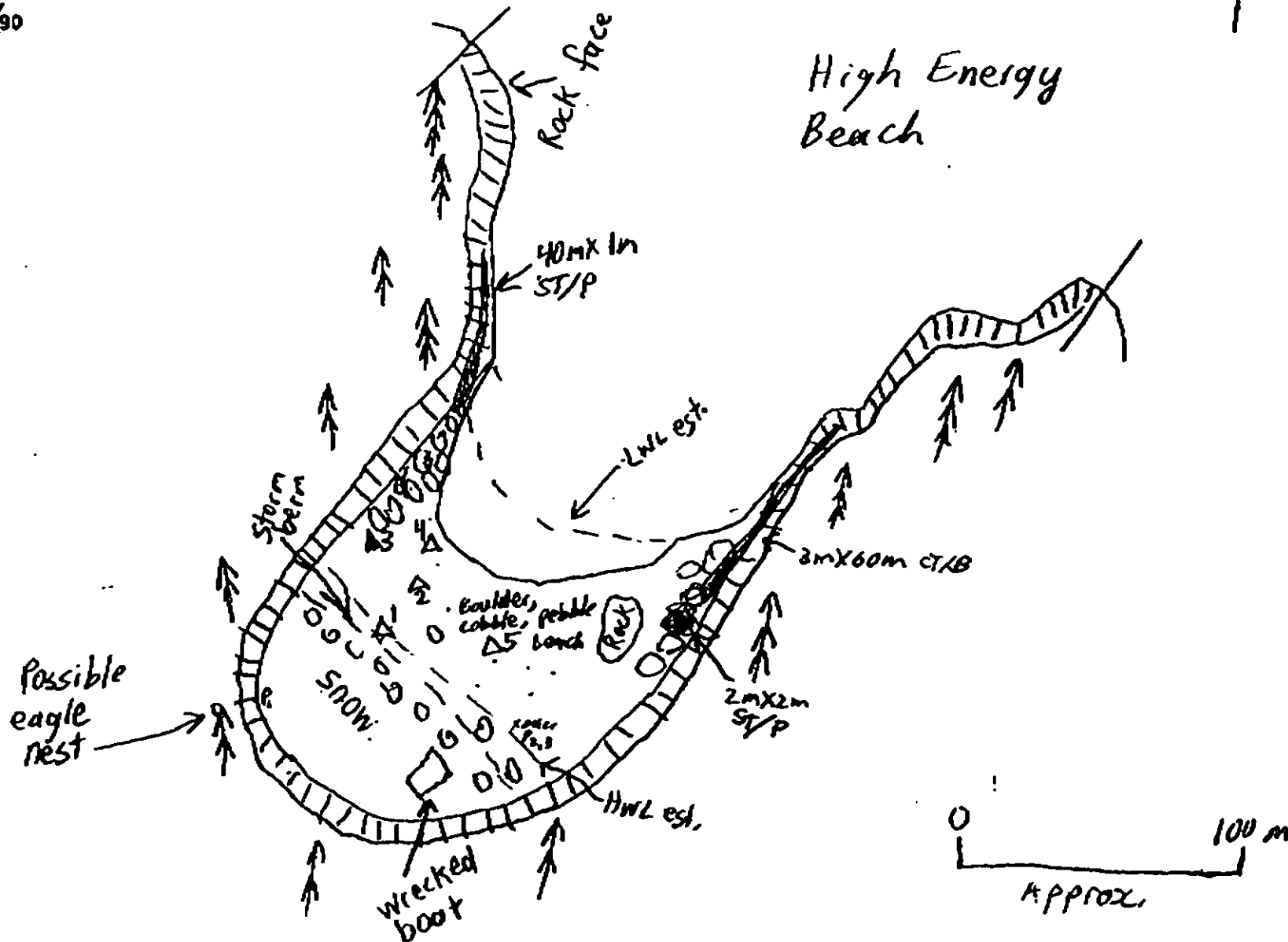
# ETCH MAP

## CHECKLIST

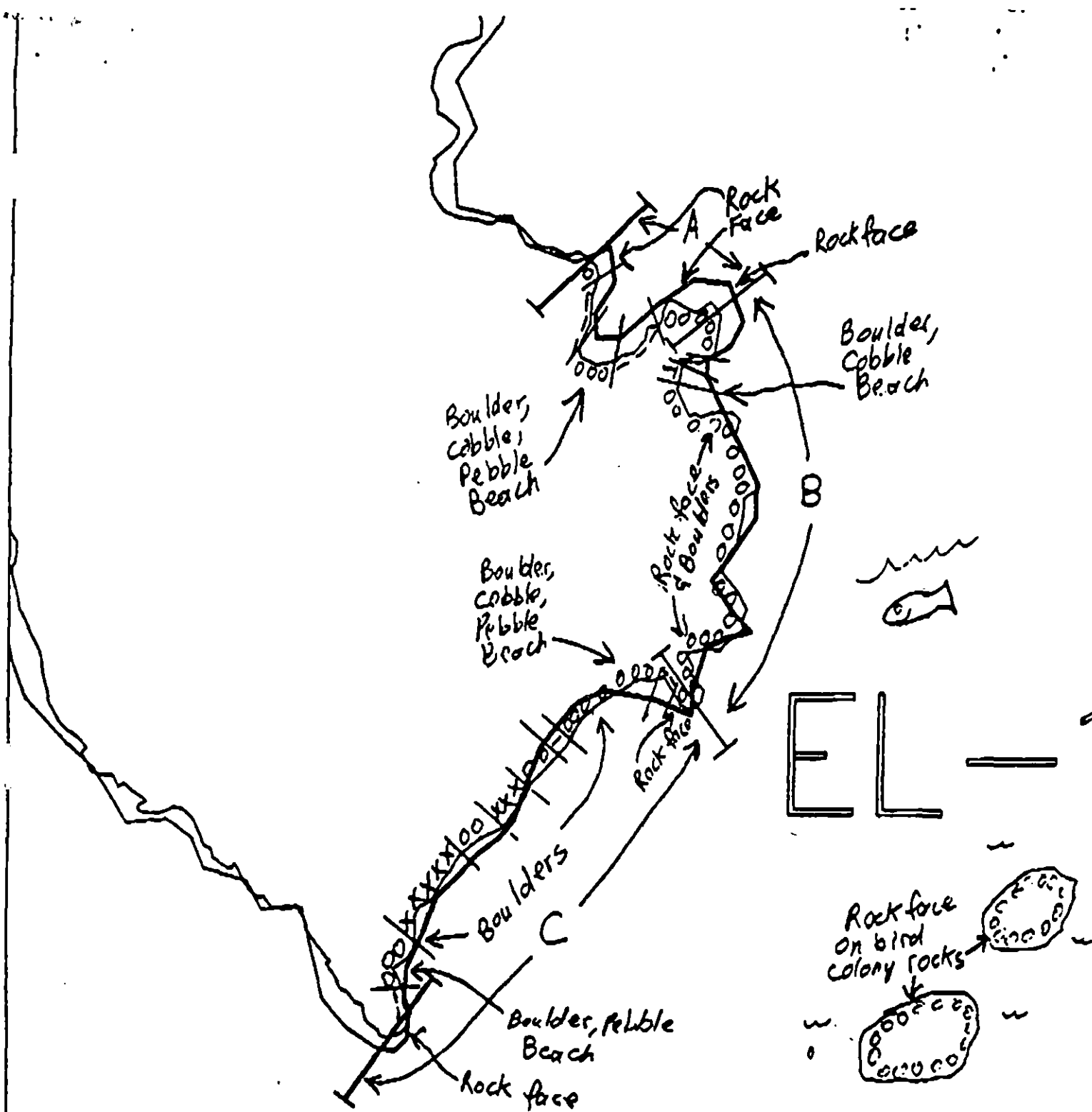
- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Spot/Sub Entry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HML/LWL
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Pit Location(s)
- ☒ Photo Location(s)

## LEGEND

- 1  $\Delta$   
 Pt - No Subsurface Oil
- 2  $\Delta$   
 Pt - Subsurface Oil
- CT/C  
 Continuous Distribution
- CT/B  
 Broken Distribution
- CT/P  
 Patchy Distribution
- CT/S  
 Splashed Distribution
- Oiled Vegetation
- 1  $\Rightarrow$   
 Photo location, direction, and number



Oil Character Length (m): AP \_\_\_\_\_ PO \_\_\_\_\_ CV \_\_\_\_\_ OT 60 ST 42 MS \_\_\_\_\_ PT \_\_\_\_\_ TB \_\_\_\_\_ FL \_\_\_\_\_ NO 123



PAGE 8 OF 19

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EL-108

ADEC Segment Length: 1497



Map Key: PWS-128

Name: James Springs

Date: 04/04/90

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ EL-108 SUBDIVISION B (2 OF 3) DATE 4/1/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**

5R Seabird colony (5/1 to 9/1)

6Y Recreation: Special use destination

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

See attached Ecological Constraint sheet for specific constraints and contacts.

**SUBDIVISION ECOLOGICAL CONSTRAINTS:**

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

**ARCHAEOLOGICAL CONSTRAINTS:**

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

SHPO SIGNATURE: *Charles E. Hume* DATE: 4/25/90

**OILING CATEGORIZATION:**

Wide 0 m: Medium 18 m: Narrow 0 m: V.Light 0 m: No Oil 502 m  
Subsurface Oil Observed: Yes X No      Maximum Depth 27 cm

**RECOMMENDATIONS:**

|                                                              |                                                          |
|--------------------------------------------------------------|----------------------------------------------------------|
| <input checked="" type="checkbox"/> No Treatment Recommended | <input type="checkbox"/> Snare/Absorbent Booms           |
| <input checked="" type="checkbox"/> Treatment Recommended    | <input type="checkbox"/> Oil Snares (pom poms)           |
| <input type="checkbox"/> Manual Pickup                       | <input type="checkbox"/> Absorbents (pads, rolls, etc)   |
| <input checked="" type="checkbox"/> Bioremediation           | <input type="checkbox"/> Spot Washing: <u>    </u> Wands |
| <input type="checkbox"/> Tarmat: <u>    </u> Breakup         | <input type="checkbox"/> Beach Cleaner                   |
| <input type="checkbox"/> Removal                             | <input type="checkbox"/> Other (see comments)            |

COMMENTS: Recommended treatment includes bioremediation of area  
shown on attached sketch map. Work should be conducted prior to 5/1  
based on seabird colony constraints or with approval from ADF&G and  
USFWS.

TAG COMMENTS: DUE TO ENVIRONMENTAL SENSITIVITIES, INACCESSIBILITY OF THE  
REMAINING WEATHERED COAT, AND THE HIGH ENERGY EXPOSURE NTR IS  
WARRANTED

TAG APPROVAL DATE: 4/24/90  
ADEC ART WEINER  
EXXON ANDY TEAL  
NOAA Joseph C. Kilpatrick  
USCG M. J. Hall

FOSC: *W L* DATE: 5-3-90

Page 2 of 14

J. Springer  
SEGMENT ST/ EL 108

SUBDIVISION B

DATE 04/01/90

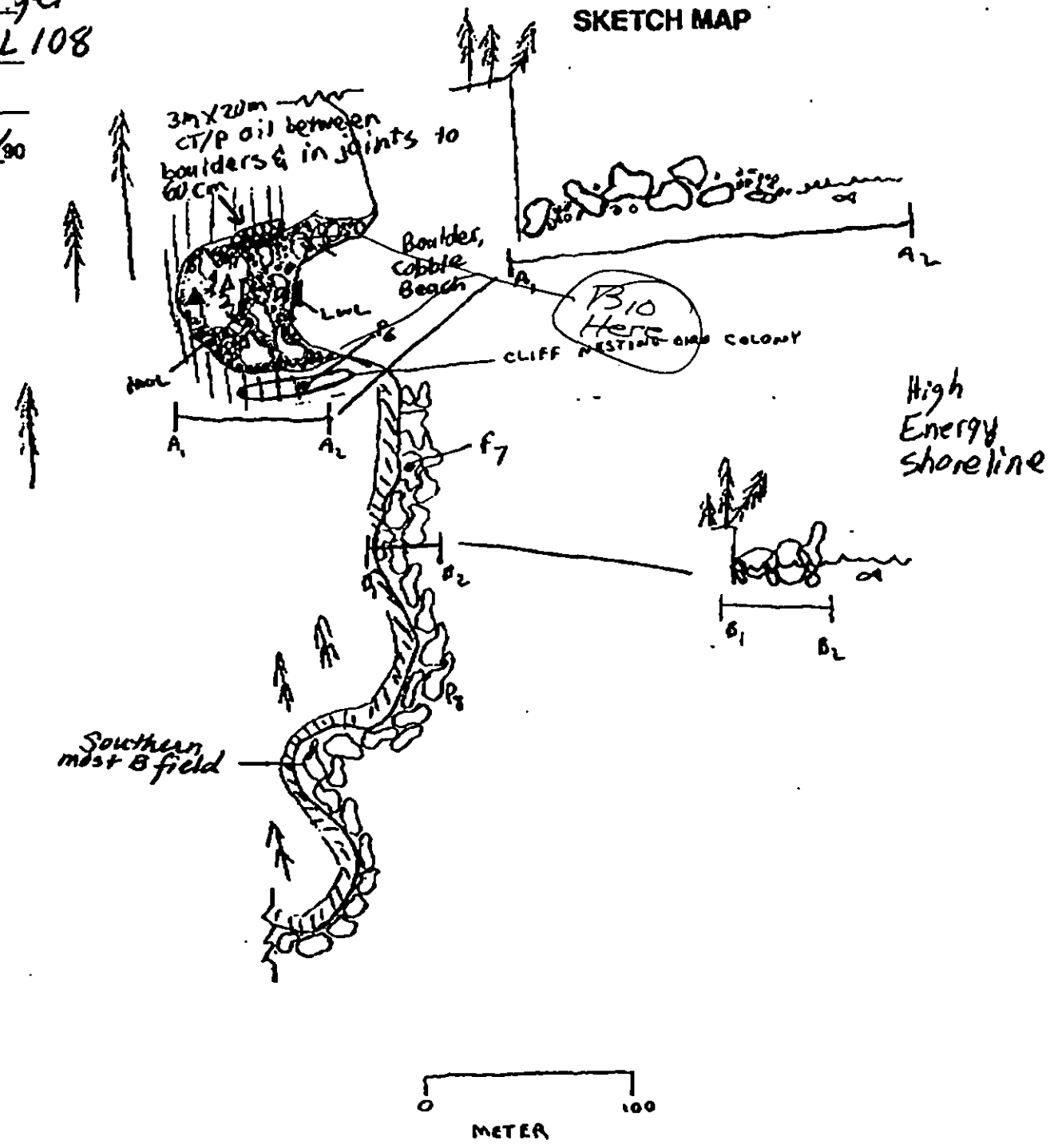
**CHECKLIST**

- ☒ Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Bndry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ Cover
- ☒ Substrate Character
- ☒ Est. HYDRAULIC
- ☒ SS
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Pit Location(s)
- ☒ Photo Location(s)

**LEGEND**

- 1  $\Delta$   
Pk - No Subsurface Oil
- 2  $\Delta$   
Pk - Subsurface Oil
- CT/C  
Continuous Distribution
- CT/B  
Broken Distribution
- CT/P  
Patchy Distribution
- CT/S  
Spotted Distribution
- Oiled Vegetation  
1  $\Rightarrow$   
Photo location, direction, and number

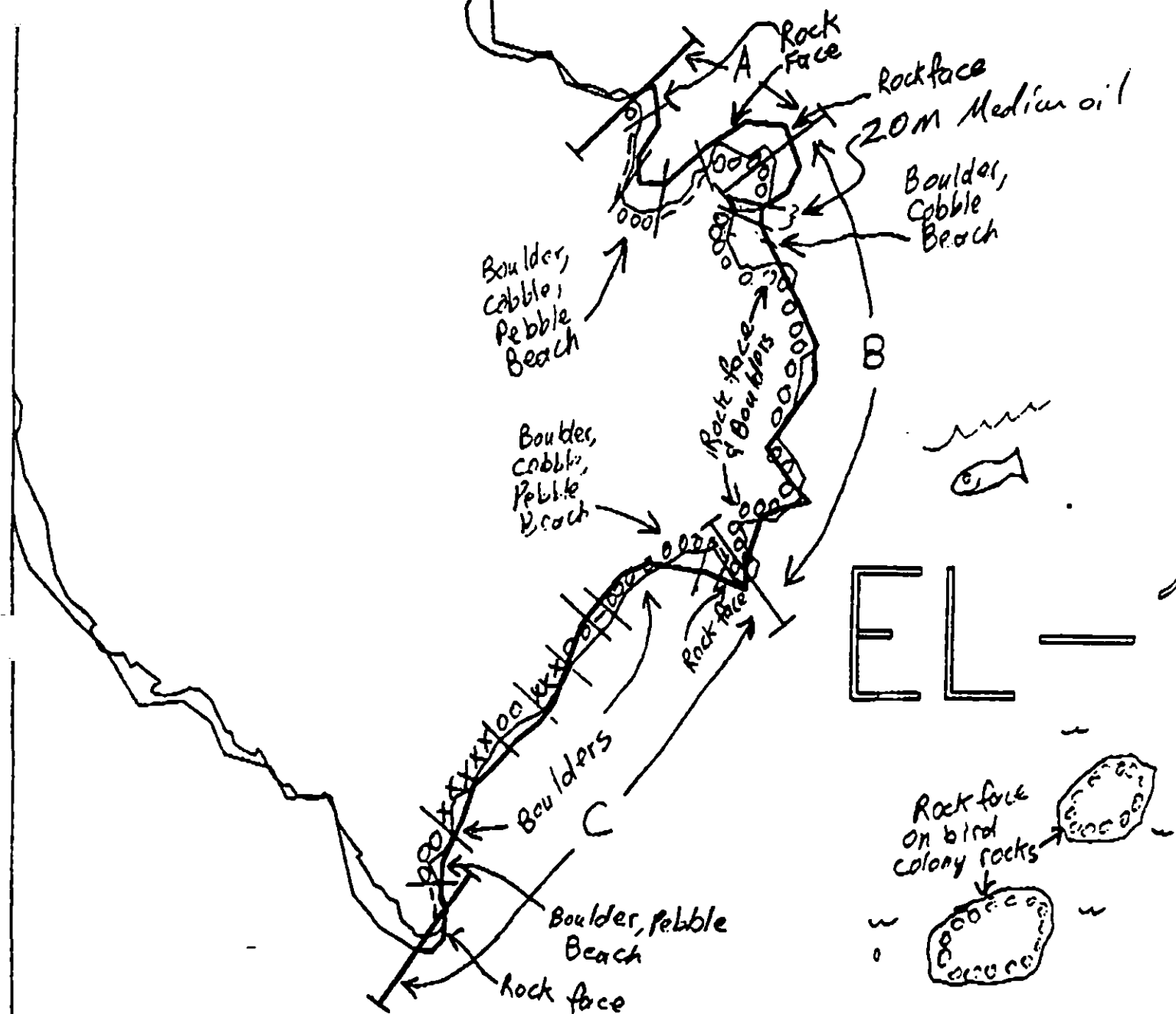
**SKETCH MAP**



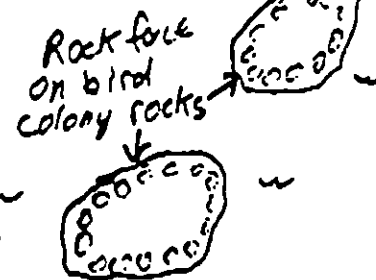
# Character Length (m): AP \_\_\_\_\_ PO \_\_\_\_\_ CV \_\_\_\_\_ CT 20 ST \_\_\_\_\_ MS \_\_\_\_\_ PT \_\_\_\_\_ TB \_\_\_\_\_ FL \_\_\_\_\_ NO 504

NEVISA

7/5/90



EL-108



42

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

EL-108

ADEC Segment Length: 1497



Map Key: PWS-128  
 Name: James Springer  
 Date: 04/04/90  
 Date Entered:

# SHORELINE EVALUATION

SEGMENT ST/ EL-108 SUBDIVISION C (3 OF 3) DATE 4/1/90

## SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5R Seabird colony (5/1 to 9/1)  
5t All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)  
6Y Recreation: Special use destination  
7II Subsistence area: Deer harvesting (8/15 to 2/28)  
See attached Ecological Constraint sheet for specific constraints and contacts.

## SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

## ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Hoffman DATE: 4/25/90

## OILING CATEGORIZATION:

Wide 160 m: Medium 0 m: Narrow 42 m: V.Light 0 m: No Oil 259 m  
Subsurface Oil Observed: Yes X No      Maximum Depth 10+cm

## RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) placement of pom poms/ snares in cracks between boulders to pick up pooled oil. Work should be conducted before 5/1 or after 9/1 based on seabird colony restrictions or with approval of ADF&G and USFWS regarding seabird colony and possible eagle nest, not listed by USFWS on 1990 map.

TAG COMMENTS: TREAT AS INDICATED PRIOR TO MAY 1st. FOLLOWING CONSULTATION WITH, AND APPROVAL BY, USF&W APPLY BIOREMEDIATION IN AREAS INDICATED ON SKETCH.

TAG APPROVAL DATE: 4/24/90

ADEC Art Weimer

EXXON Andy Tate

NOAA Joseph T. Hall

USCG M. J. Hall

FOSC: [Signature]

DATE: 5-3-90

OG J. S. - inger

SEGMENT ST/ EL 108

SUBDIVISION C

DATE 04/01/90

# CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Entry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HWA/LWL
- ☒ PSI
- ☒ Profile Location(s)
- ☒ Photo Location(s)
- ☒ Photo Location(s)

## LEGEND

1 Δ

Ph - No Subsurface Oil

2 Δ

Ph - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

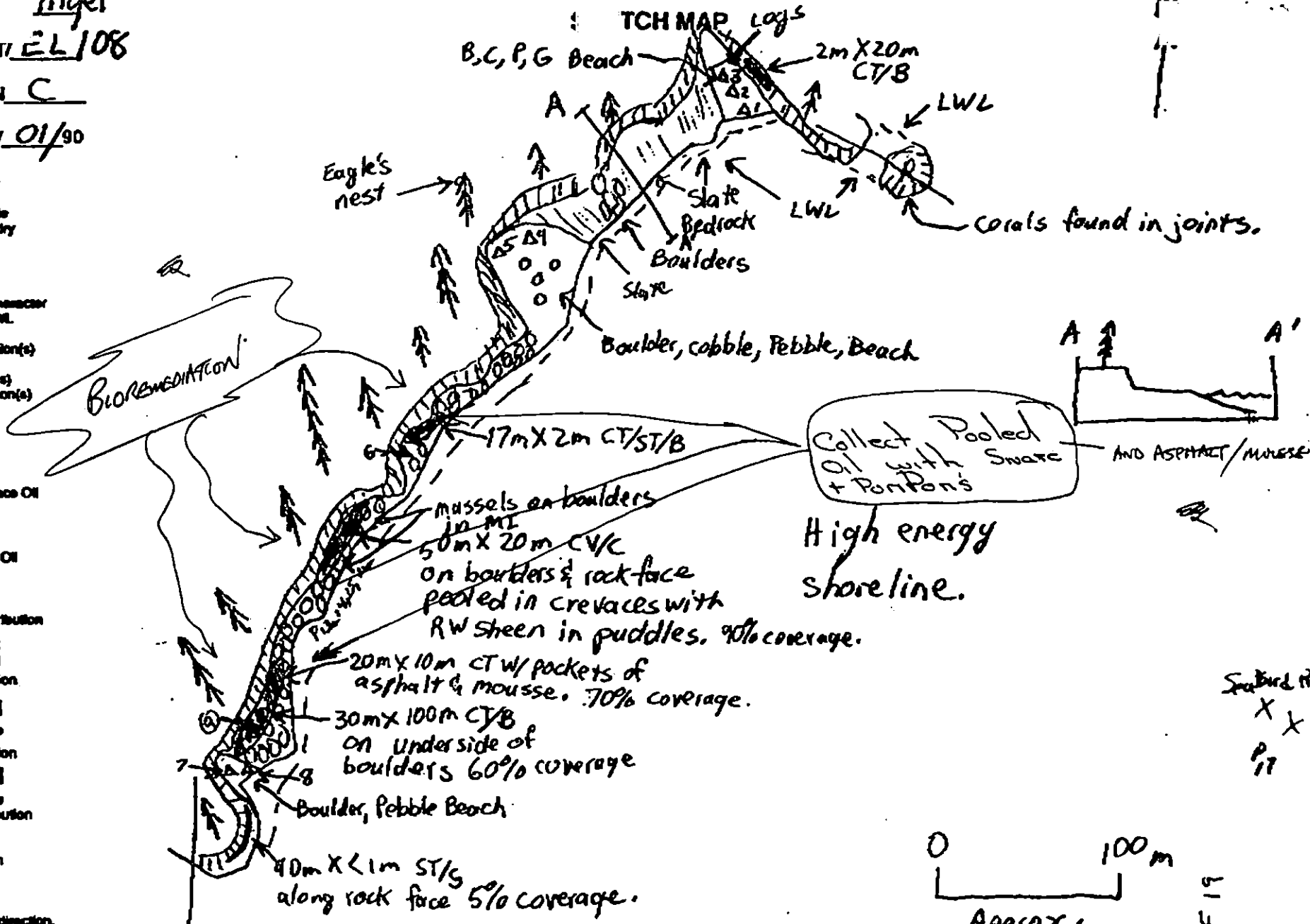
CT/S

Spaced Distribution

Old Vegetation

1 ●

Photo location, direction, and number

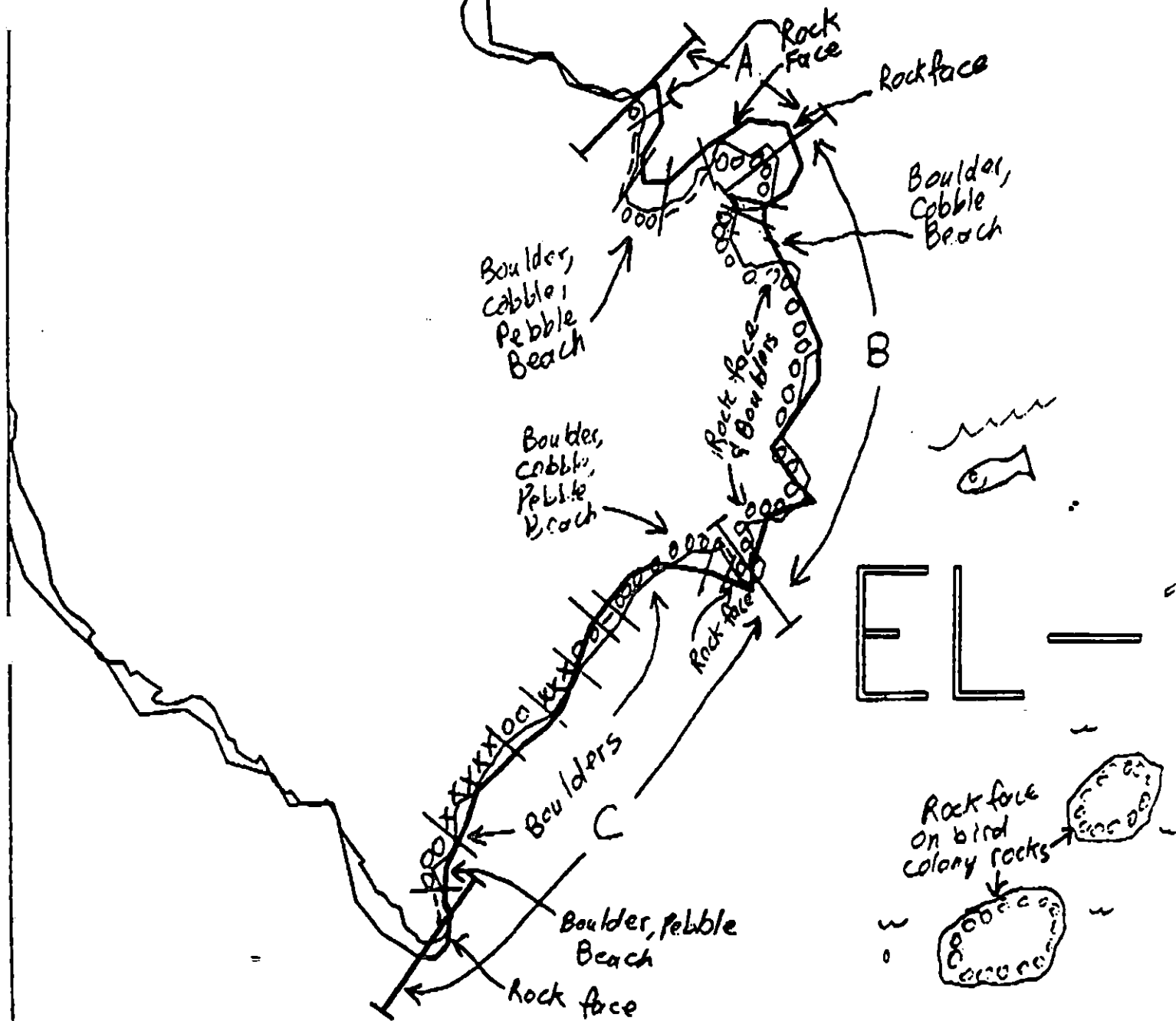


Oil Character Length (m): AP \_\_\_\_\_ PO \_\_\_\_\_ CV 50 CT 140 ST 57 MS \_\_\_\_\_ PT \_\_\_\_\_ TB \_\_\_\_\_ FL \_\_\_\_\_ NO 501

REVISIONS

Revised

7/5/70



42

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EL-108

ADEC Segment Length: 1497



Map Key: PWS-128

Name: James Springer

Date: 06/04/90

Date Entered:

## ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-109 SUBDIVISION A (1 of 1)

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

### ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

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

#### APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T Bald Eagle Nest

NO CONSTRAINT. Nest more than 400m from recommended treatment areas.

7II Subsistence: Deer Harvesting

No constraint to manual pickup and tarmat removal; closed to bioremediation and manual raking after 8/15.

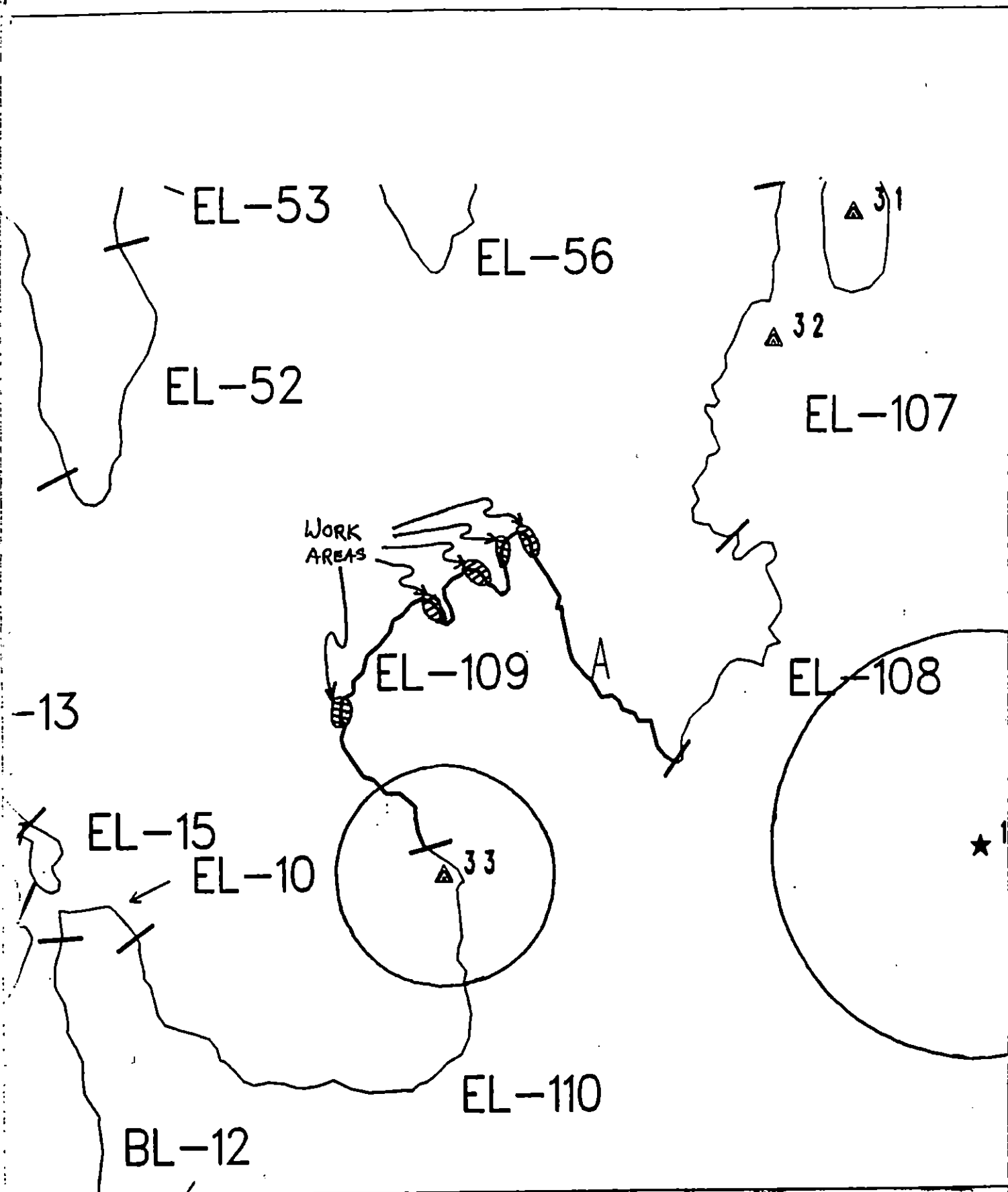
#### OTHER ECOLOGICAL CONSIDERATIONS

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

TAG ADDENDUM DATE 5/21/90  
ADEC Art Weiner D. Weiner  
EXXON Andy Gatz Paul  
NOAA John Valboant J. Key  
USCG M. J. Hall ADD  
FOSC ky L DATE 5-21-90

Prepared by: Andrea May

Date: 5/19/90



Exxon Company, USA  
Map Key: KNI-EL-109



ECOLOGY MAP  
SEGMENT EL-109  
SUBDIVISION A (L.O.I.)  
METERS

- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1614 feet

# SHORELINE EVALUATION

SEGMENT ST/ EL-109 SUBDIVISION A (1 OF 1) DATE 4/23/90

## SEGMENT: ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6Y Recreation: Special use destination

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

See attached Ecological Constraint sheet for specific constraints and contacts.

## SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

## ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: [Signature]

DATE: 5/8/90

## OILING CATEGORIZATION:

Wide 204 m: Medium 225 m: Narrow 883 m: V. Light 1537 m: No Oil 411 m  
Subsurface Oil Observed: Yes X No      Maximum Depth 38 cm

## RECOMMENDATIONS:

     No Treatment Recommended

X Treatment Recommended

X Manual Pickup

X Bioremediation

X Tarmat Removal

     Snare/Absorbent Booms

     Oil Snares (pom poms)

     Absorbents (pads, rolls, etc)

     Spot Washing:      Wands

     Beach Cleaner

     Other (see comments)

COMMENTS: Recommended treatment includes 1) manual pickup of cleanup debris in areas indicated on sketch maps #1 and 2, 2) manual removal of tarmat in area indicated on sketch map #4, 3) manual raking of surface cobble in area indicated on sketch map #2, and 4) bioremediation of areas indicated on sketch maps #1,2,3,4. Work should be conducted after 5/1.

SEE APPENDUM DATED 5/19/90

RELC.

TAG COMMENTS: MONITORS TO ASSESS LOGS AND NEED FOR TREATMENT.

TAG APPROVAL DATE: 5/7/90

ADEC ART WILSON

EXXON ANDY TON

NOAA GARY PETERSON

USCG G.A. REITER

FOSC: [Signature]

DATE: 5-12-90

**1991 MAYSAP EVALUATION**

SEGMENT: EL 108 SUB: B REGION: PWS SURVEY DATE: 5/3/91

**ENVIRONMENTAL SENSITIVITIES:**

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

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

**ARCHAEOLOGICAL CONSTRAINTS:**

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

SHPO Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**RECOMMENDATIONS:**

**INITIAL**

**TAG**

**FOSC**

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

**COMMENTS:**

INITIAL: \_\_\_\_\_

TAG: \_\_\_\_\_

FOSC: \_\_\_\_\_

TAG APPROVAL DATE: \_\_\_\_\_

FOSC APPROVAL DATE: \_\_\_\_\_

ADEC \_\_\_\_\_

FOSC \_\_\_\_\_

EXXON \_\_\_\_\_

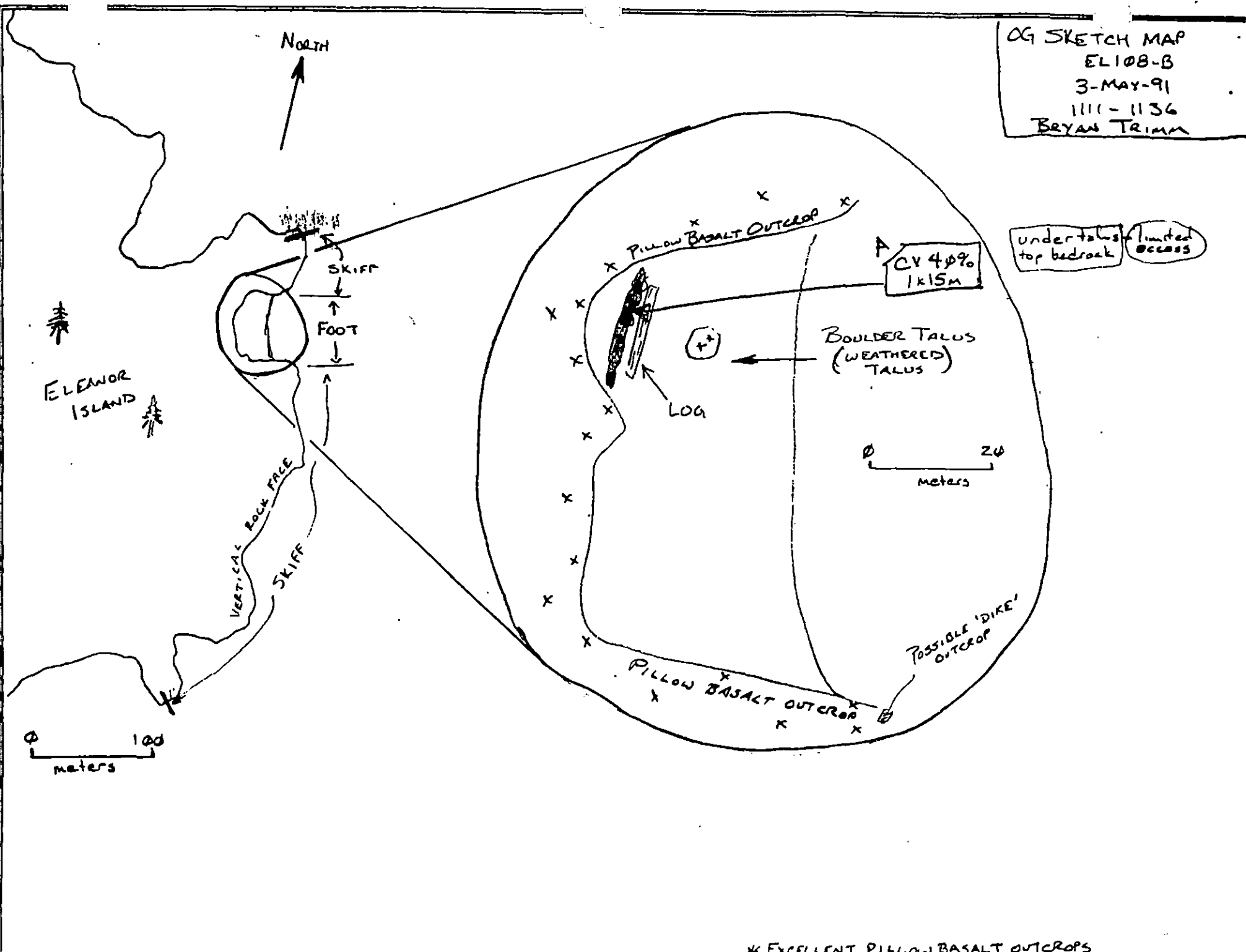
USCG \_\_\_\_\_

NOAA \_\_\_\_\_

**ECOLOGICAL CONSTRAINTS  
1991 FIELD ACTIVITIES**

**Subsistence - Deer Harvesting:** Unlimited treatment prior to 8/15.

OG SKETCH MAP  
 EL108-B  
 3-MAY-91  
 1111-1136  
 BRYAN TRIMM



Reviewed 5/17/91 KG  
 Reviewed: 5/17/91 MC

\* EXCELLENT PILLOW BASALT OUTCROPS

# WAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 3 May '91  
 SEGMENT # EL 10B TIDAL HEIGHT(Range) 0' to +.5'  
 SUBDIVISION B BIOLOGIST John Benson  
 SEA STATE 1' WIND SPEED/DIRECTION calm  
 PHOTOGRAPHS: ROLL # — FRAME # —

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

(A) - Verrucaria & sparse barnacles were found near, but not on, oiled surfaces. The biota is very diverse & seems productive here. The diversity is enhanced by eastern wave exposure, numerous types of "microhabitats" within the boulder talus and tidepools in the bedrock. This subdivision is similar in these respects to EL 10B C. Recent recruitment of barnacles, mussels & littorines was observed.

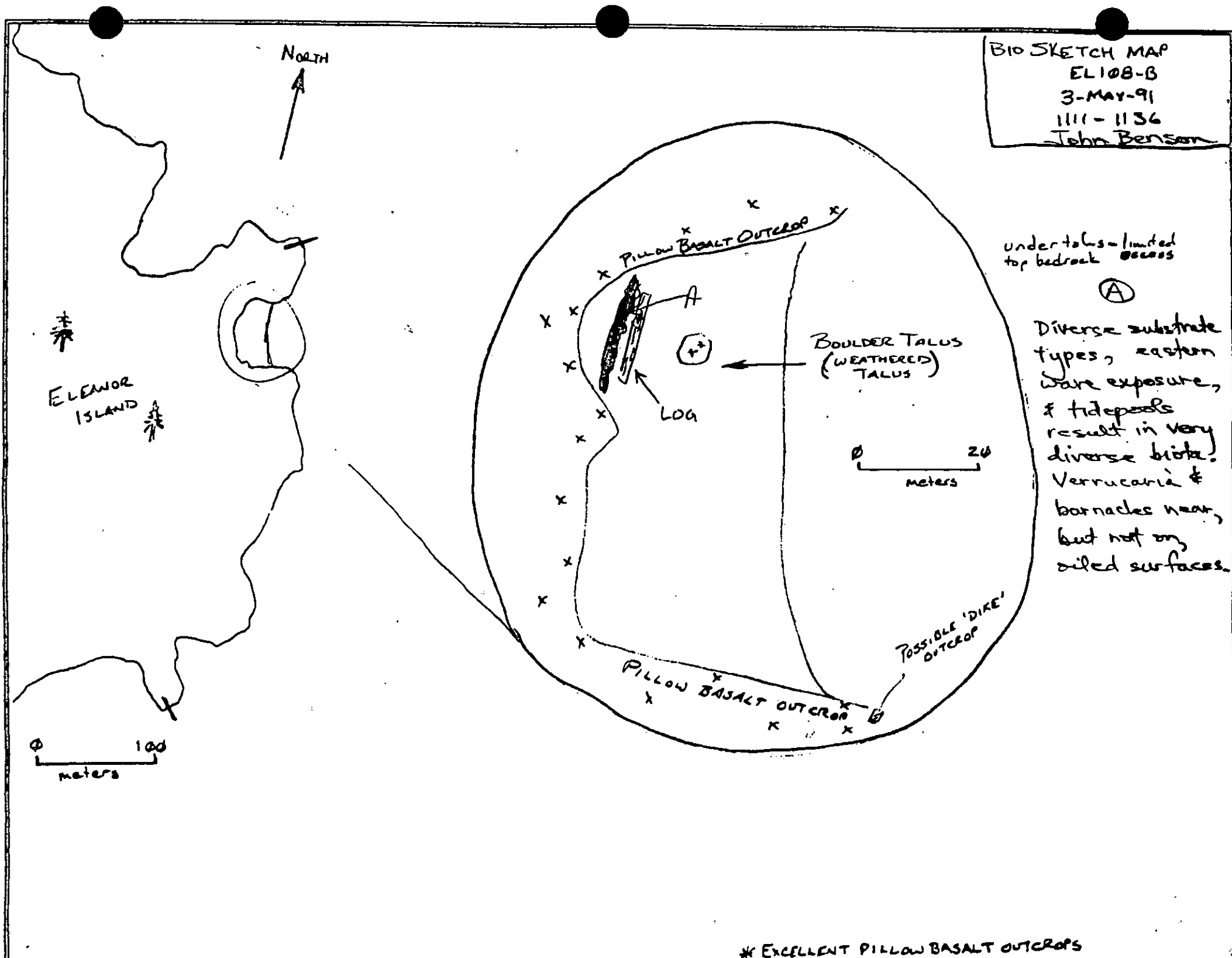
## WILDLIFE OBSERVATIONS

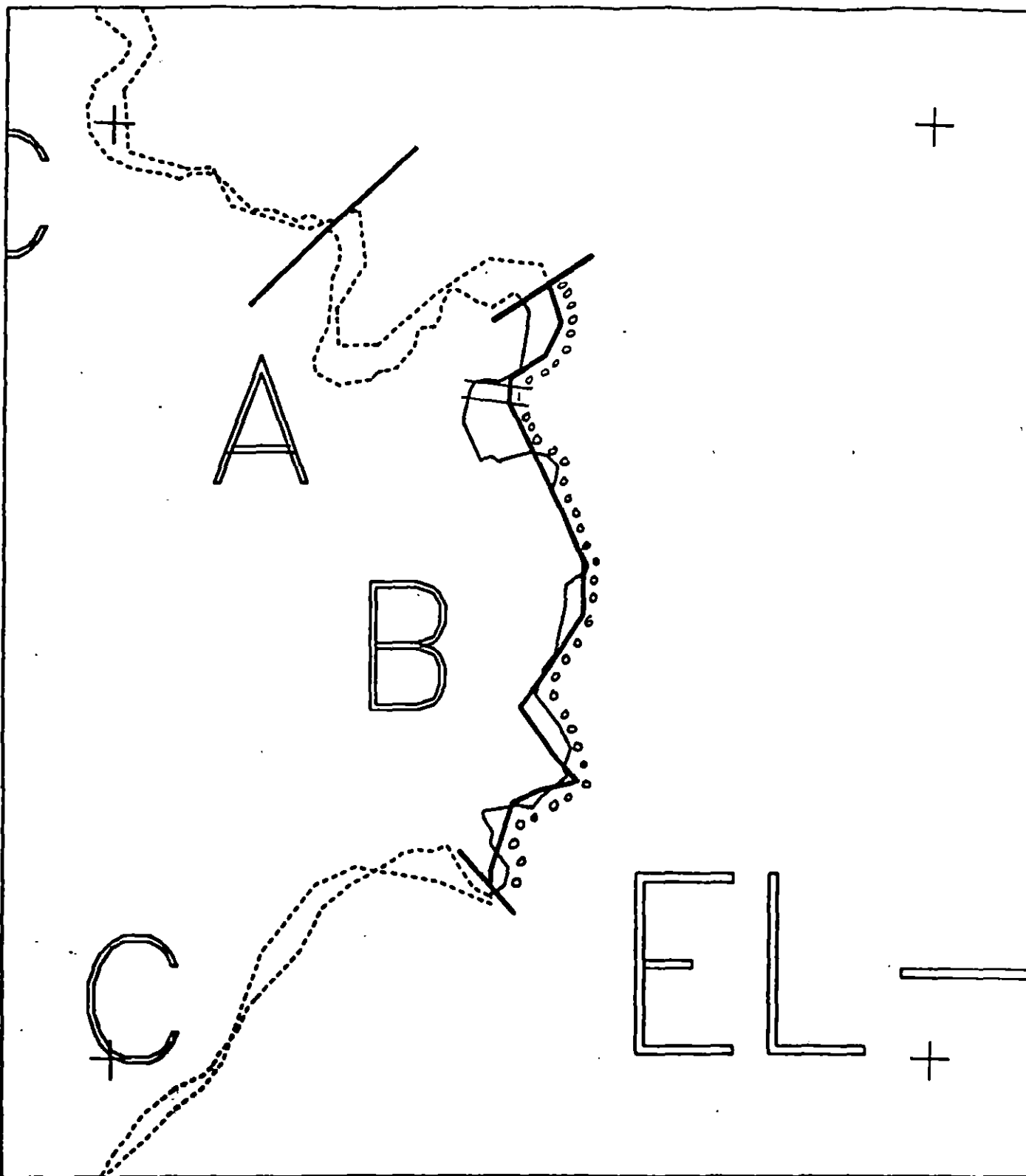
TO BE COMPLETED IN ALL SUBDIVISIONS

| BIRDS            | # OF SPECIES | TOTAL BIRDS | FISH OBSERVED<br>SPECIES PRESENT |
|------------------|--------------|-------------|----------------------------------|
| Eagles           | —            | —           | —                                |
| Seabirds         | —            | —           | —                                |
| Waterfowl        | —            | —           | —                                |
| Gulls/Kittiwakes | 1            | 4           | —                                |
| Shorebirds       | —            | —           | —                                |
| Corvids          | —            | —           | —                                |
| Other Birds      | —            | —           | —                                |

| MARINE MAMMALS     | # OBSERVED | LAND MAMMALS<br>SPECIES | # OBSERVED |
|--------------------|------------|-------------------------|------------|
| Sea Otters         | —          | —                       | —          |
| Pinnipeds(specify) | —          | —                       | —          |
| Ies(specify)       | —          | —                       | —          |
|                    | —          | —                       | —          |

Shoreline subdivision map showing important biological features attached.





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

EL108 B  
 ADEC Subsegment Length: 520m  
 METERS

0 100 200  
 AK State Plane Zone 4  
 6011000



Subdivision Field Map  
 Map Key: KNEEL088  
 Name: Trim  
 Date: 3 May 91  
 Date Entered:

• SURFACE OIL CATEGORY MAP •

Reviewed: MC 5/7/91  
 reviewed 5/7/91 K.C.

# 1991 MAYSAP EVALUATION

SEGMENT: EL 108 SUB: C REGION: PWS SURVEY DATE: 5/3/91

## ENVIRONMENTAL SENSITIVITIES:

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

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

## ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

## COMMENTS:

INITIAL: \_\_\_\_\_

TAG: \_\_\_\_\_

FOSC: \_\_\_\_\_

TAG APPROVAL DATE: \_\_\_\_\_

FOSC APPROVAL DATE: \_\_\_\_\_

ADEC

FOSC

EXXON

USCG

NOAA

**ECOLOGICAL CONSTRAINTS  
1991 FIELD ACTIVITIES**

**Subsistence - Deer Harvesting:** Unlimited treatment prior to 8/15.

# MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL-108 SUBDIVISION C DATE 5/3/91

## ADEC

NAME PETER MONTESANO

SIGNATURE Peter Montesano

☒ NTR ☐ TREATMENT RECOMMENDED

THE PO ON THIS SEGMENT HAS SETTLED INTO AP/SOL AND DEEP INTO THIS ROUGH BOULDER SHORELINE. THERE REMAINS SOME RECOVERABLE OIL, BUT IT IS NOT WORTHY THE AMOUNT OF LABOR OR THE DIFFICULTY LANDING ON THIS AREA.

NOTE: I DISAGREE W/ THE CHARACTERIZATION IN THE OG COMMENTS, BUT THE MATTER IS HARDLY WORTHY OF FURTHER COMMENT.

## EXXON

NAME O.M. TATSIMPALIS

SIGNATURE O.M. Tatsimpalis

☒ NTR GOOD SURVEY. AGREE WITH LAND REPS. COMMENTS.

## LANDMANAGER

NAME DENNIS S. KENNEDY OF USFS

SIGNATURE D.S. Kennedy

☒ NTR

Subdivision contains great mix of micro habitats.  
CULTURAL FEATURE → Two mine shafts most likely looking for copper. one shaft has old timber supports.  
natural cleanup is taking place do to high energy wave action.

## USCG/NOAA

NAME MICHEL (NOAA) BEN ZENONE (CG)

SIGNATURE Michel Ben Zenone

☒ NTR

There has been significant improvement in the degree of oiling since SSAT and ASAP, when CV was as high as 60-70% and pooled, mousse and AP was found. Remaining oil is located in the most sheltered areas which are very inaccessible.

CG-

NO TREATABLE OIL. 3

Reviewed: MC 5/7/91  
revised 5/7/91 KC

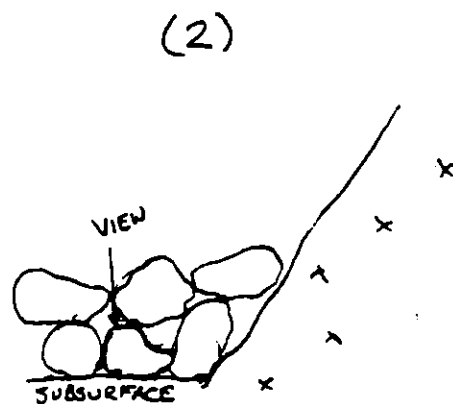
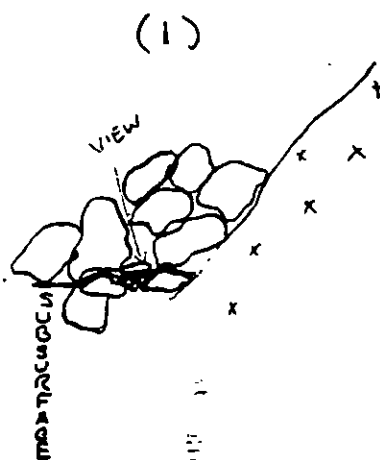
OG COMMENTS: EL108-C

Bryan Trimm: OG

EL108-C is a high angled shoreline with vertical cliffs behind a boulder talus base. High wave energies reach this southeast facing shoreline.

The ADEC representative noted HOR/MOR under boulder talus on the western half of the subdivision, the area seaward of the mine shafts. This oiling is typically CT, CV, ST, and SOR that has settled between and under the large boulder talus. There is limited and possibly no access for retrieval.

The large size of the boulder talus (average size is 1m<sup>3</sup>) makes it difficult to define the top of the subsurface, and the interstices are large. In many cases, one can look between a couple of boulder layers to the finer grained cobble and pebble clasts. The top of the subsurface begins where the interstices are open so that one can peer between the boulder talus and: (1) view the finer grained clasts below, or (2) the base of the last boulder that is visible through the interstices. Below are examples.



SKETCH MAP  
EL108-C  
3-MAY-91  
1044 -1111

NORTH  
PRINCE WILLIAM SOUND

0 75 150  
meters

EL108-B

PEBBLE-Cobble

COBBLE-BORDER

BOULDER TALUS  
&  
BEDROCK  
L20

PEBBLE/  
COBBLE  
BEACH

EL109-A

E/SOR-HVY 2%  
1x15m  
in crevices

D/CT 40%  
7x35m

C/CT 10%  
SOR 1%  
5x20m  
IN CREVICES

B/CT 5%  
5x30m  
undersides  
of boulders  
only

MINE SHAFTS

A/SOR 1%  
CT 20%  
5x30m  
CT on bottom  
half of boulders

REVIEWED: MC 5/17/91  
REVISED 5/17/91 KG

# MAYSAP BIOLOGICAL SUMMARY FORM

|                     |        |                      |             |
|---------------------|--------|----------------------|-------------|
| TEAM #              | 2      | DATE                 | 3 May '91   |
| SEGMENT #           | EL 10B | TIDAL HEIGHT (Range) | 0' to 0'    |
| SUBDIVISION         | C      | BIOLOGIST            | John Benson |
| SEA STATE           | 1'     | WIND SPEED/DIRECTION | calm        |
| PHOTOGRAPHS: ROLL # | —      | FRAME #              | —           |

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

(A, B, C, D, E) - Verrucaria & sparse barnacles were found near, but not on, the oiled surfaces. The biota here is extremely diverse with high % cover except on the cobble-pebble beach. The large boulders provide a multitude of different "microhabitats" especially with regard to the broad range of wave exposures of this east-facing shore. The high biotic diversity is seen in the invertebrates & in the macroalgae. The biota on the bedrock has slightly higher % cover & slightly lower diversity, reflecting the greater homogeneity of this substrate type. There are no special biological sensitivities here (except that it is a naturalist's nirvana).

## WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

| BIRDS            | # OF SPECIES | TOTAL BIRDS | FISH OBSERVED<br>SPECIES PRESENT |
|------------------|--------------|-------------|----------------------------------|
| Eagles           | —            | —           | "blenny eels"                    |
| Seabirds         | —            | —           |                                  |
| Waterfowl        | —            | —           |                                  |
| Gulls/Kittiwakes | 1            | 2           |                                  |
| Shorebirds       | —            | —           |                                  |
| Corvids          | 1            | 1           |                                  |
| Other Birds      | —            | —           |                                  |

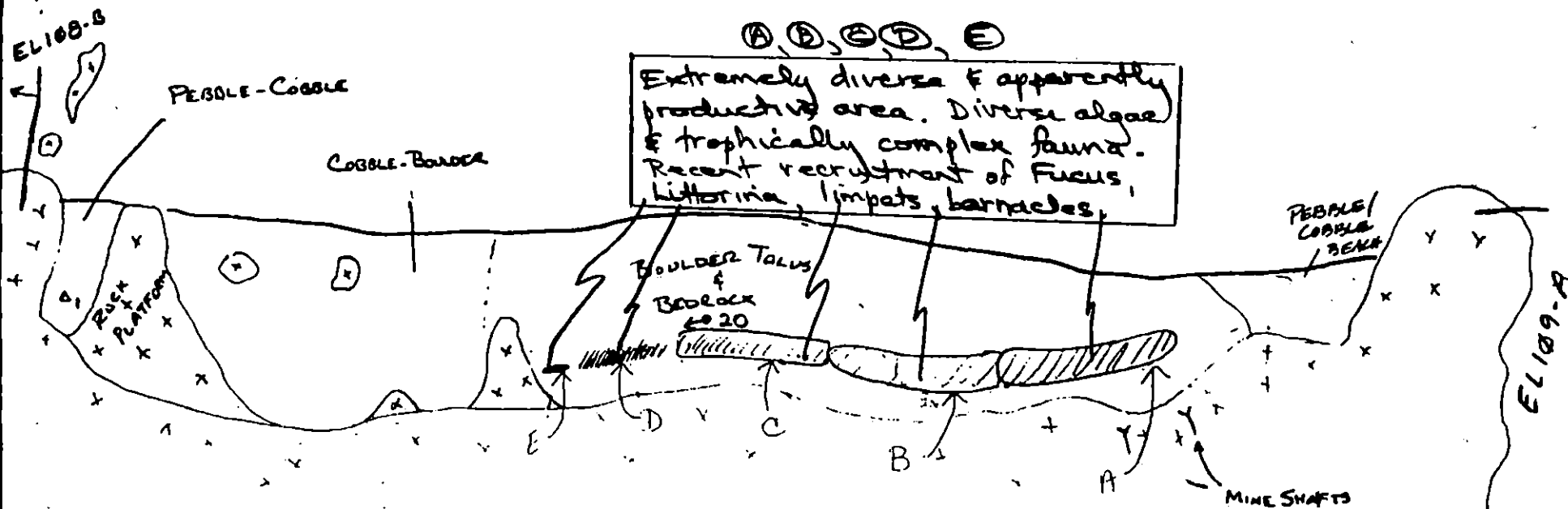
| MARINE MAMMALS      | # OBSERVED | LAND MAMMALS<br>SPECIES | # OBSERVED |
|---------------------|------------|-------------------------|------------|
| Sea Otters          | 1          | —                       | —          |
| Amphipeds (specify) | —          |                         |            |
| Whales (specify)    | —          |                         |            |

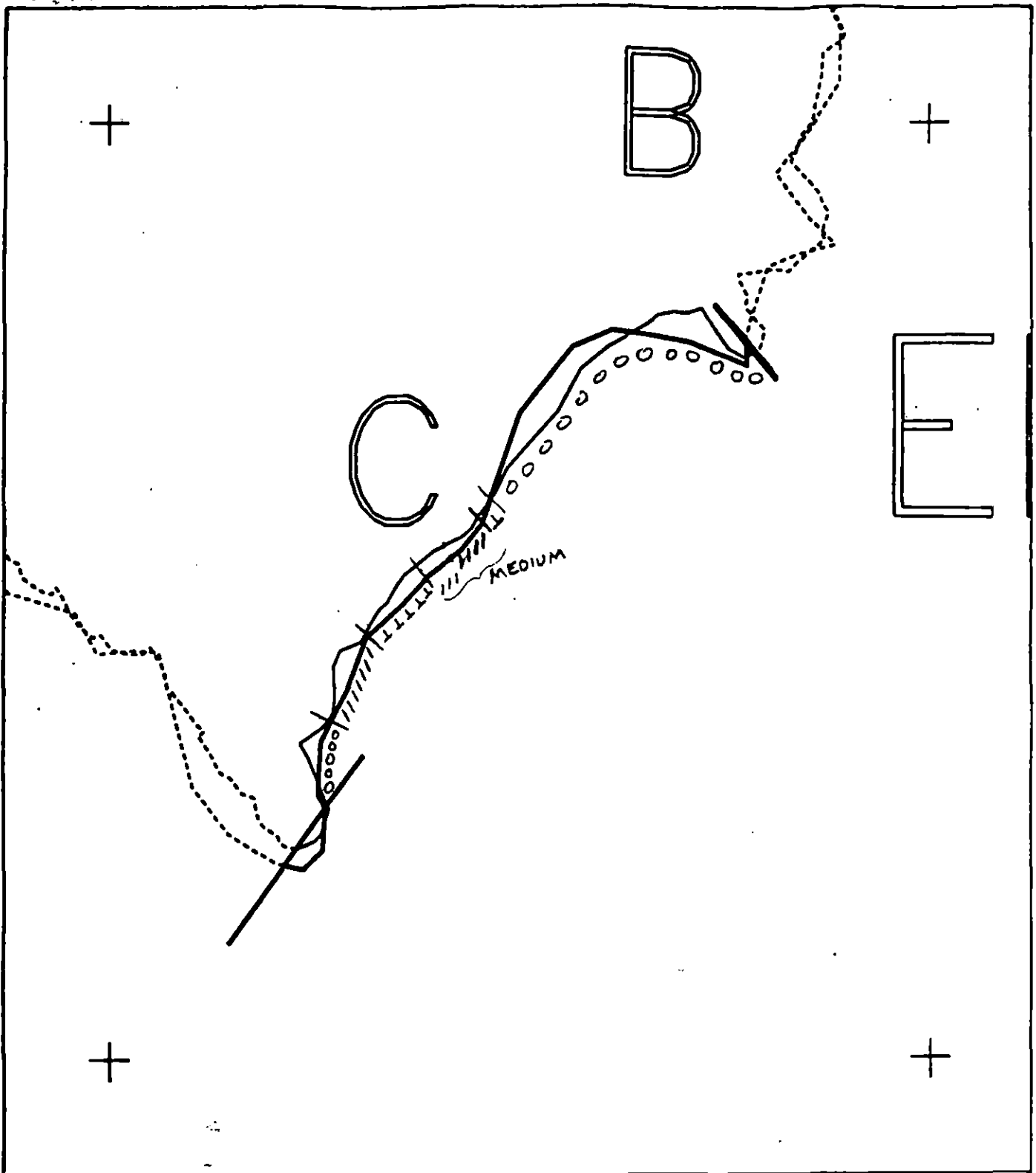
Shoreline subdivision map showing important biological features attached.

BIO SKETCH MAP  
 ELI--C  
 3-MAY-91  
 1044-1111  
 John Benson

NORTH  
 PRINCE WILLIAM SOUND

0 75 150  
 meters





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

EL108 C  
 ADEC Subsegment Length: 600m  
 METERS  
 0 100 200  
 AK State Plane Zone 4  
 6011000

Subdivision Field Map  
 Map Key: KNE108C  
 Name: TRIMM  
 Date: 3 May '91  
 Data Entered:

• SURFACE OIL CATEGORY MAP •

revised 5/7/91 KC  
 Reviewed: 5/7/91 KC

# 1991 MAYSAP EVALUATION

SEGMENT: EL 108 SUB: A REGION: PWS SURVEY DATE: 5/3/91

## ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) NONE

## ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

## COMMENTS:

INITIAL: \_\_\_\_\_

TAG: \_\_\_\_\_

FOSC: \_\_\_\_\_

TAG APPROVAL DATE: \_\_\_\_\_

FOSC APPROVAL DATE: \_\_\_\_\_

ADEC

FOSC

EXXON

USCG

NOAA

# MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL 108 SUBDIVISION A DATE 5/3/91

## ADEC

NAME Peter Montesano SIGNATURE Peter Montesano

☒ NTR ☐ TR

Looks Good. my PITS to 40cm failed to turn up any of that Brown stuff. Concur w/NOAA.

## EXXON

NAME C.M. Katsimpalis SIGNATURE C.M. Katsimpalis

☒ NTR I CONCUR WITH THE OTHER MEMBERS OF THE TEAM.

## LANDMANAGER

NAME DONNIS S. Kennedy OF USFS SIGNATURE D.S. Kennedy

☒ NTR no need for any future action. area in good shape

## USCG/NOAA

NAME MICHEL (NOAA) Bm. ZENOUR (CG) SIGNATURE Michel Bm. ZENOUR

☒ NTR The oil distribution found on this survey was very similar to ASAP, but less (i.e., CT on mid beach rock outcrop went from 1x8m CT/B to 1x15m CT/15%). We broke up the only significant amount of SOR (30 cm<sup>2</sup>). Michel

CG-

AREA IS LOOKING VERY WELL. NO FUTURE TREATMENT SHOULD BE NEEDED HERE. 3

reviewed 5/7/91  
 E5 ~~revised~~ 5/10

OG SKETCH MAP  
 EL108-A  
 3-MAY-91  
 1136-1203  
 BRYAN TRIMM

NORTH



0 25  
 meters

B  
 CV80%  
 1x15m

DB SNARE BOOM

PU

BOULDER

SOR-HVY  
 30cm<sup>2</sup>

BROKEN  
 UP

BOULDER  
 TALUS

PEBBLE

PEBBLE-  
 BOULDER

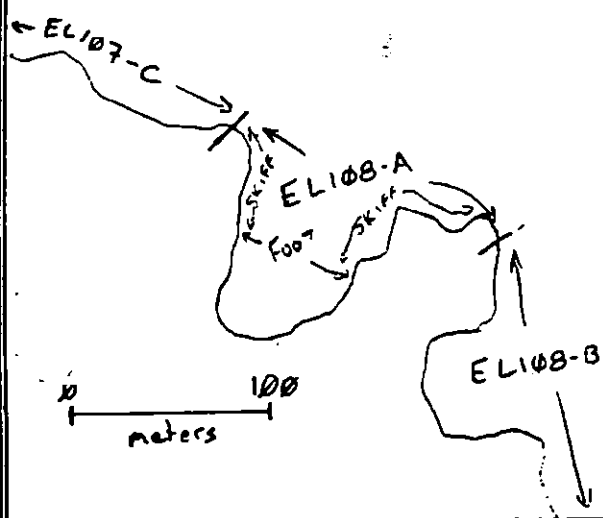
SAND  
 PEBBLE  
 GRAVULE

SWAMP RING

SPRUCE & HEMLOCK

BOAT  
 WRECK

A  
 CT 15% SOR 1%  
 1x3m



reviewed 5/7/91  
 1136-1203

## MAYSAP BIOLOGICAL SUMMARY FORM

|                     |       |                      |             |
|---------------------|-------|----------------------|-------------|
| TEAM #              | 2     | DATE                 | 3 May '91   |
| SEGMENT #           | E 108 | TIDAL HEIGHT(Range)  | 0' to +1'   |
| SUBDIVISION         | A     | BIOLOGIST            | John Benson |
| SEA STATE           | 1'    | WIND SPEED/DIRECTION | calm        |
| PHOTOGRAPHS: ROLL # | —     | FRAME #              | —           |

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

①, ② - Filamentous green algae grew near, but not on, oiled surfaces. Species diversity is moderately high - it would be higher if there were more substrate types. Biotic % cover is low on the cobble in the cove, but cover is nearly 100% on the bedrock on either side of the cove. The bedrock community seems highly productive, and recent recruitment of *Semibalanus cariosus*, *Littorina* & *Mytilus* was observed. There are no special biological sensitivities here.

## WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

| BIRDS            | # OF SPECIES | TOTAL BIRDS | FISH OBSERVED<br>SPECIES PRESENT |
|------------------|--------------|-------------|----------------------------------|
| Eagles           | —            | —           |                                  |
| Seabirds         | —            | —           |                                  |
| Waterfowl        | —            | —           |                                  |
| Gulls/Kittiwakes | 1            | 4           |                                  |
| Shorebirds       | —            | —           |                                  |
| Corvids          | —            | —           |                                  |
| Other Birds      | —            | —           |                                  |

| MARINE MAMMALS   | # OBSERVED | LAND MAMMALS<br>SPECIES | # OBSERVED |
|------------------|------------|-------------------------|------------|
| Sea Otters       | 1          | —                       | —          |
| nnipeds(specify) | —          |                         |            |
| Whales(specify)  | —          |                         |            |
|                  |            |                         |            |

Shoreline subdivision map showing important biological features attached.

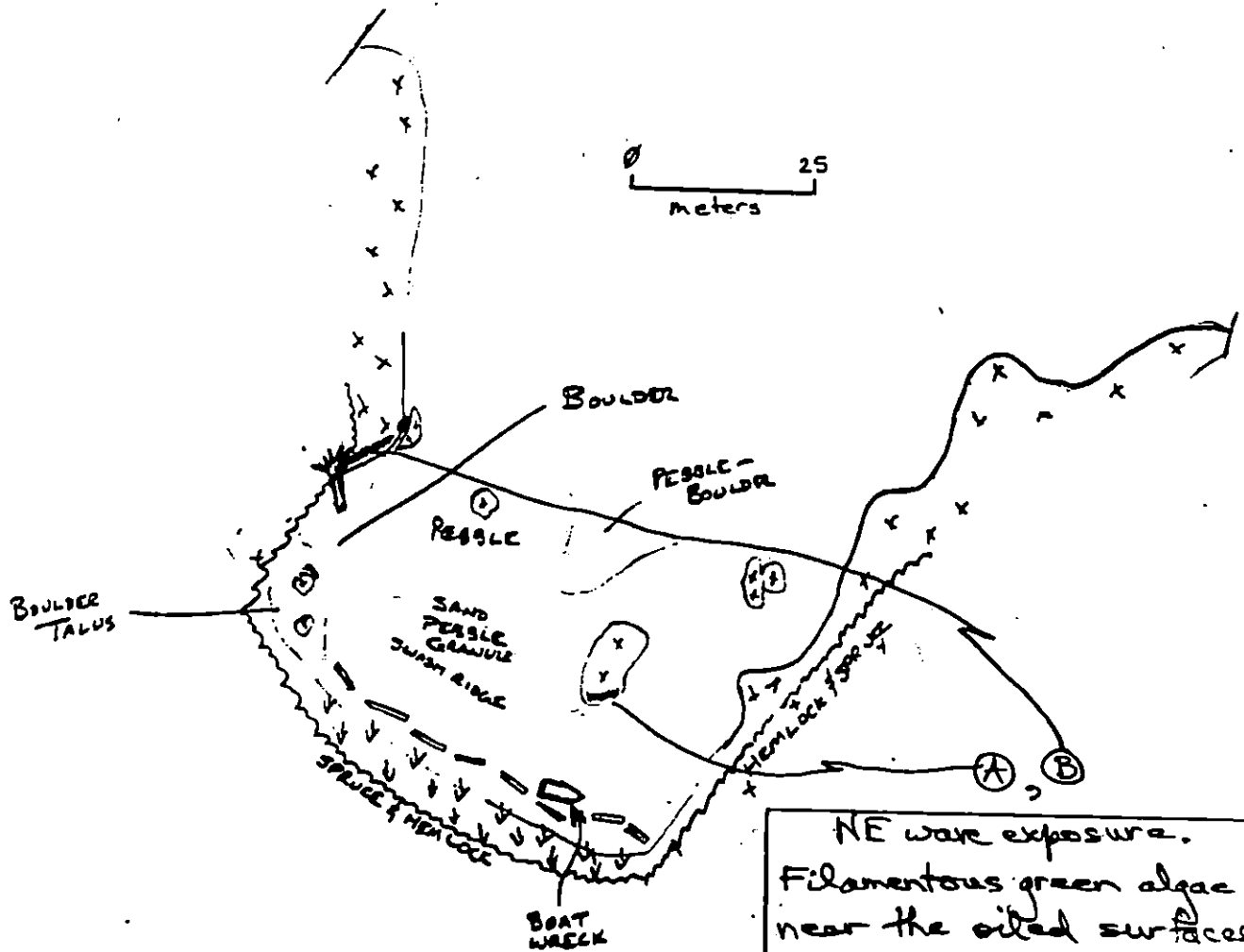
Reviewed by JLB 5/6/91

BIO SKETCH MAP  
 EL108-A  
 3-MAY-91  
 1136-1203  
 John Benson

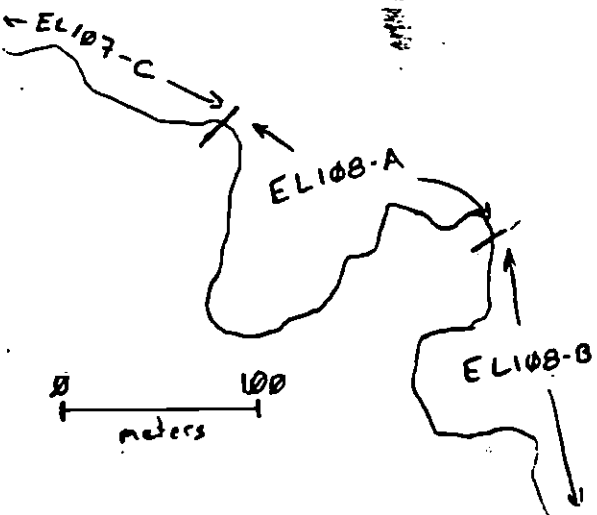
NORTH

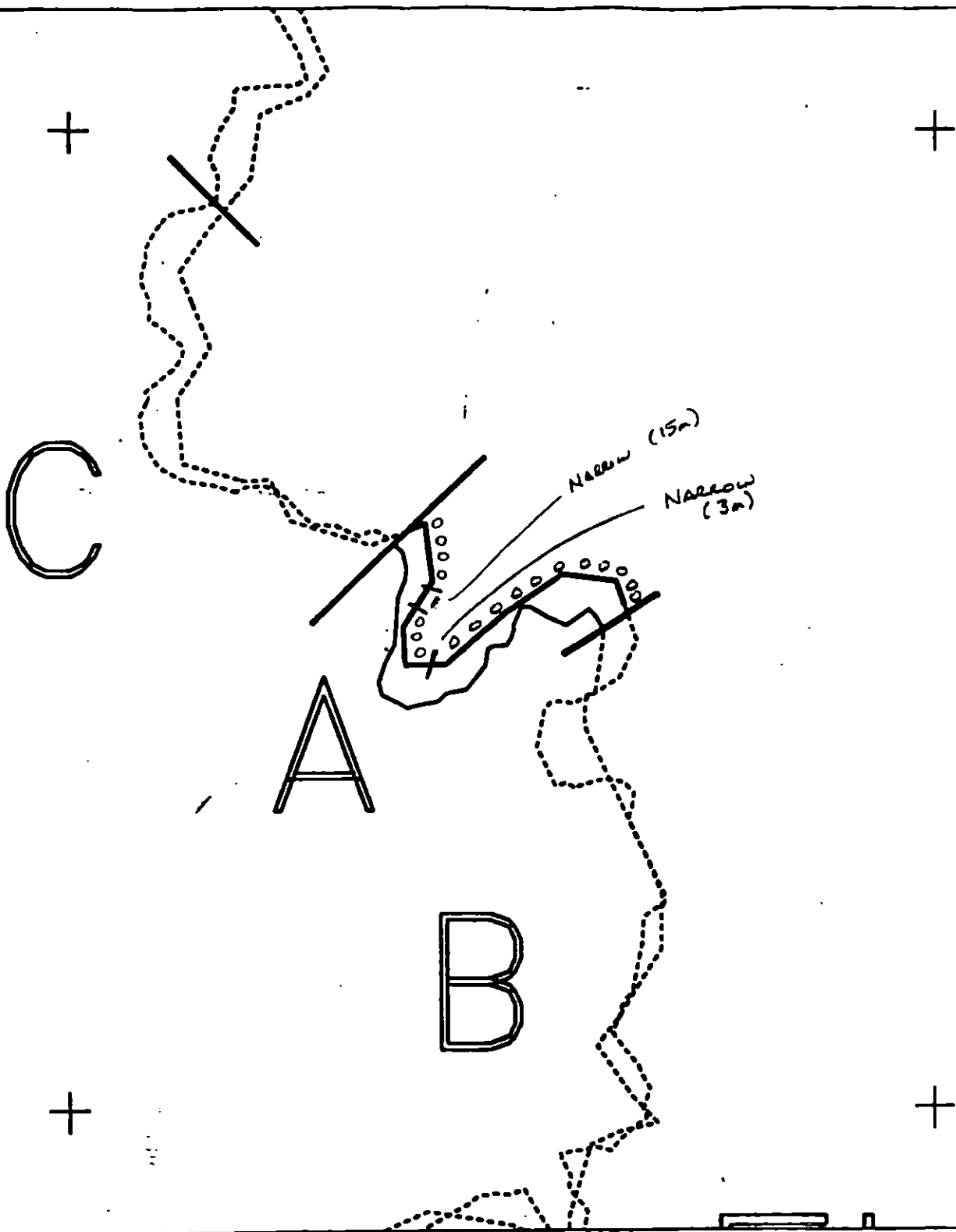


0 25  
 meters



NE wave exposure.  
 Filamentous green algae  
 near the oiled surfaces.  
 Biotic % cover is low on  
 cobbles & high on bedrock.





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

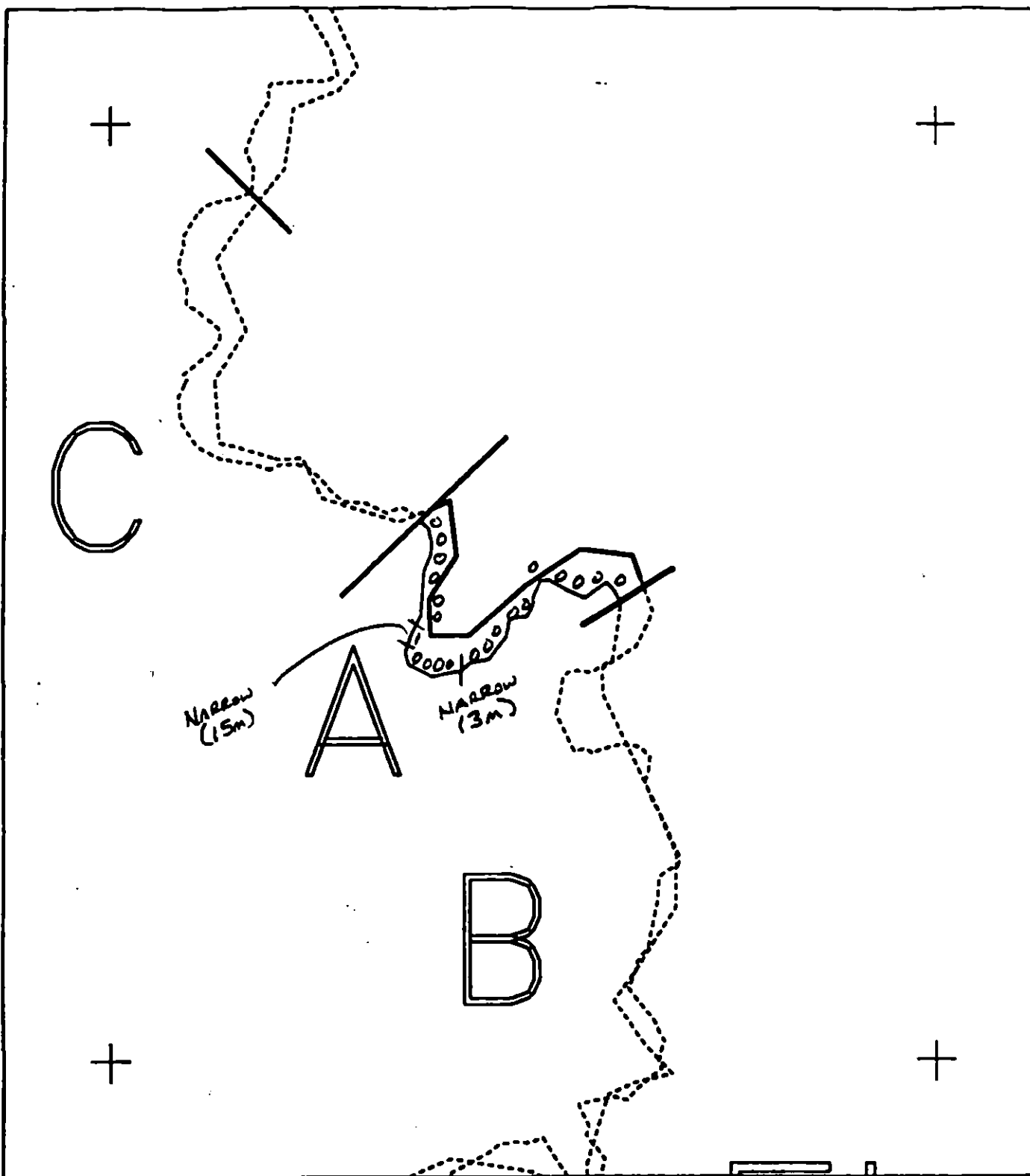
**EL108 A**  
 ADEC Subsegment Length: 300m  
 METERS  
 0 100 200  
 AK State Plane Zone 4  
 601100n

Subdivision Field Map  
 Map Key: KNE108A  
 Memo: TRIMM  
 Date: 3 MAY 1991  
 Date Entered:



- SURFACE OIL CATEGORY MAP - ADEC SHORELINE -

reviewed 5/7/91  
 re-reviewed 5/10



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

EL108 A  
 ADEC Subsegment Length: 300m  
 METERS  
 0 100 200  
 AK State Plane Zone 4  
 601108a



Subdivision Field Map  
 Map Key: KNIEL08A  
 Name: TRIMM  
 Date: 3 MAY 1991  
 Date Entered:

• SURFACE OIL CATEGORY MAP - EXXON SHORELINE •

ES reviewed 5/10

1991 MAYSAP EVALUATION

SEGMENT: EL 108 SUB: A REGION: PWS SURVEY DATE: 5/3/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) NONE

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Rachel Jan Owe

Date: 5/12/91

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

N

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: MAY 17 1991

FOSC APPROVAL DATE: 25 MAY 1991

ADEC

FOSC

EXXON

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

USCG

NOAA

# MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL 108 SUBDIVISION A DATE 5/3/91

## ADEC

NAME Peter Montesano

SIGNATURE Peter Montesano

☒ NTR ☐ TR

Looks Good. my PITS to 40cm failed to turn up any of that Brown stuff. Concur w/NOAA.

## EXXON

NAME C.M. Katsimpalis

SIGNATURE C.M. Katsimpalis

☒ NTR I CONCUR WITH THE OTHER MEMBERS OF THE TEAM.

## LANDMANAGER

NAME Dennis S. Kennedy OF USFS

SIGNATURE D.S. Kennedy

☒ NTR no need for any future action. Area in good shape

## USCG/NOAA

NAME MICHEL (NOAA) BMI ZENONK (CG)

SIGNATURE Michel

BMI Zenonk

☒ NTR The oil distribution found on this survey was very similar to ASAP, but less (i.e., CT on mid beach rock outcrop went from 1x8m CT/B to 1x15m CT/15%). We broke up the only significant amount of SOL (30 cm<sup>2</sup>). Michel

CG-

AREA IS LOOKING VERY WELL. NO FUTURE TREATMENT SHOULD BE NEEDED HERE. Z

SEGMENT EL 108

SUBDIVISION A

DATE 5 / 3 / 91

ENERGY LEVEL: ☒ H ☐ M ☐ L

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

TOTAL LENGTH SHORELINE SURVEYED: 300 m NEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONE

EST. OIL CATEGORY LENGTH: W 0 m M 0 m N 18 m VL 0 m NO 282 m US 0 m

[illegible]

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

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

PHOTO ROLL # MAYSAP-

NONE

## FRAMES

[illegible]

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

**OG COMMENTS:**

- BOAT WRECK ON BEACH
- QUICK SURVEY BY SKIFF OF VERTICAL ROCK FACES OUTSIDE OF COVE REVEALED NO OILING.
- CT, SUR, & CV FOUND ON PROTECTED SIDES OF ROCKS.
- SUR-HVY IN BOULDER TALUS WAS BROKEN UP.
- 1 SNARE BOOM COLLECTED
- NO FITS DUG - ASAP SHOWED NO SUBSURFACE OILING

reviewed 5/7/91 YG  
 E5 ~~reviewed~~ 5/10  
 reviewed

OG SKETCH MAP  
 EL108-A  
 3-MAY-91  
 1136-1203  
 BRYAN TRIMM



0 25  
 meters

B  
 CV80%  
 1x15m

DB SNARE BOOM [PU]

SOR-HVY  
 30cm<sup>2</sup>  
 BROKEN  
 UP

BOULDER  
 TALUS

PEBBLE

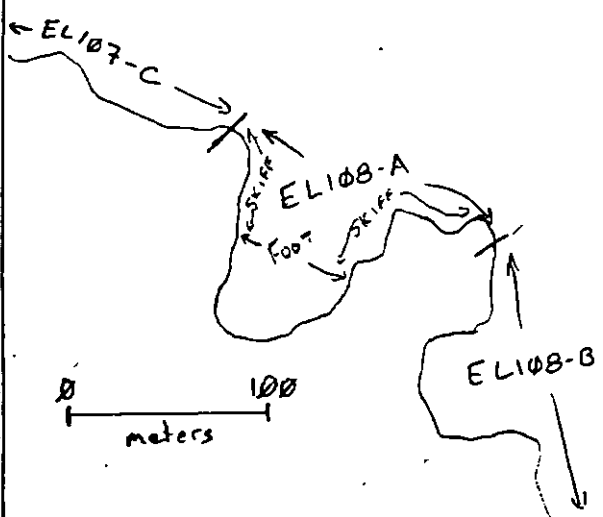
PEBBLE-  
 BOULDER

SAND  
 PEBBLE  
 GRANULE  
 SWASH RIDGE

SPRUCE & HEMLOCK

BOAT  
 WRECK

A  
 CT 15% SOR 1%  
 1x3m



# MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 3 May '91  
 SEGMENT # E 108 TIDAL HEIGHT(Range) 0' to +1'  
 SUBDIVISION A BIOLOGIST John Benson  
 SEA STATE 1' WIND SPEED/DIRECTION calm  
 PHOTOGRAPHS: ROLL # — FRAME # —

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

(A,B) - Filamentous green algae grew near, but not on, oiled surfaces. Species diversity is moderately high - it would be higher if there were more substrate types. Biotic % cover is low on the cobble in the cove, but cover is nearly 100% on the bedrock on either side of the cove. The bedrock community seems highly productive, and recent recruitment of *Semibalanus cariosus*, *Littorina* & *Mytilus* was observed. There are no special biological sensitivities here.

## WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

| BIRDS            | # OF SPECIES | TOTAL BIRDS | FISH OBSERVED<br>SPECIES PRESENT |
|------------------|--------------|-------------|----------------------------------|
| Eagles           | —            | —           |                                  |
| Seabirds         | —            | —           |                                  |
| Waterfowl        | —            | —           |                                  |
| Gulls/kittiwakes | 1            | 4           |                                  |
| Shorebirds       | —            | —           |                                  |
| Corvids          | —            | —           |                                  |
| Other Birds      | —            | —           |                                  |

| MARINE MAMMALS   | # OBSERVED | LAND MAMMALS<br>SPECIES | # OBSERVED |
|------------------|------------|-------------------------|------------|
| Sea Otters       | 1          | —                       | —          |
| nnipeds(specify) | —          |                         |            |
| Whales(specify)  | —          |                         |            |

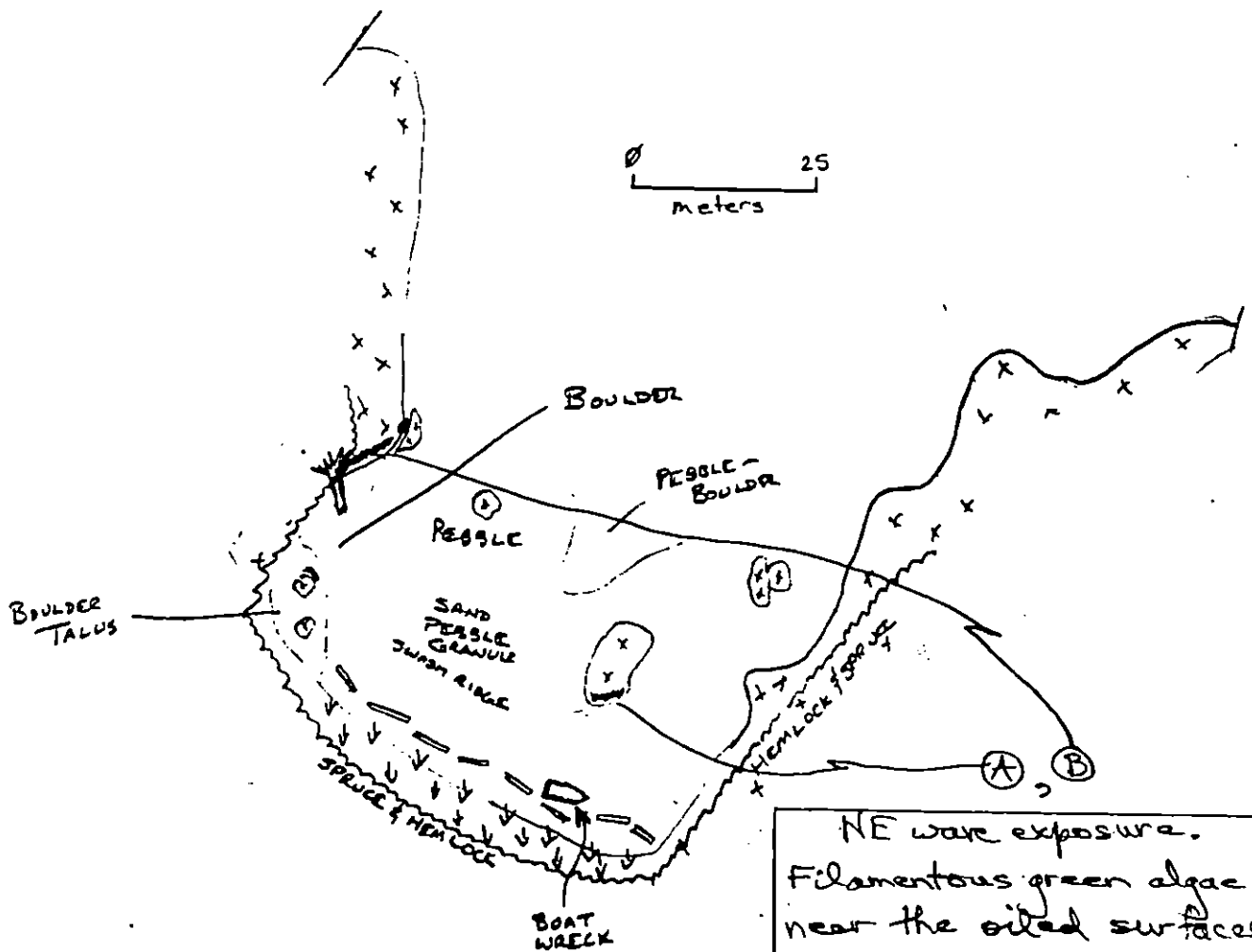
Shoreline subdivision map showing important biological features attached.

BIO SKETCH MAP  
 EL108-A  
 3-MAY-91  
 1136-1203  
 John Benson

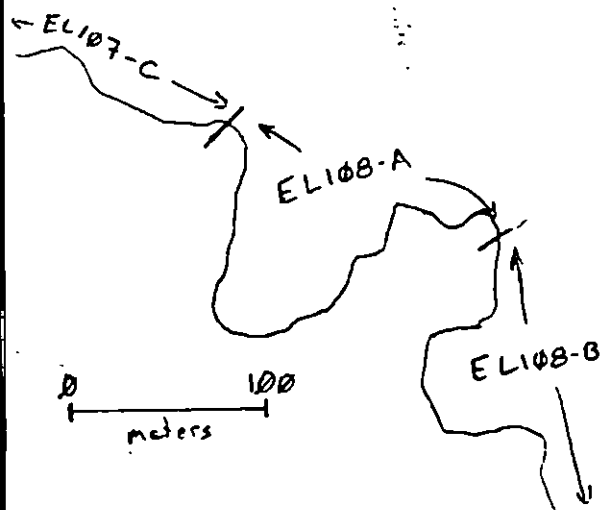
NORTH

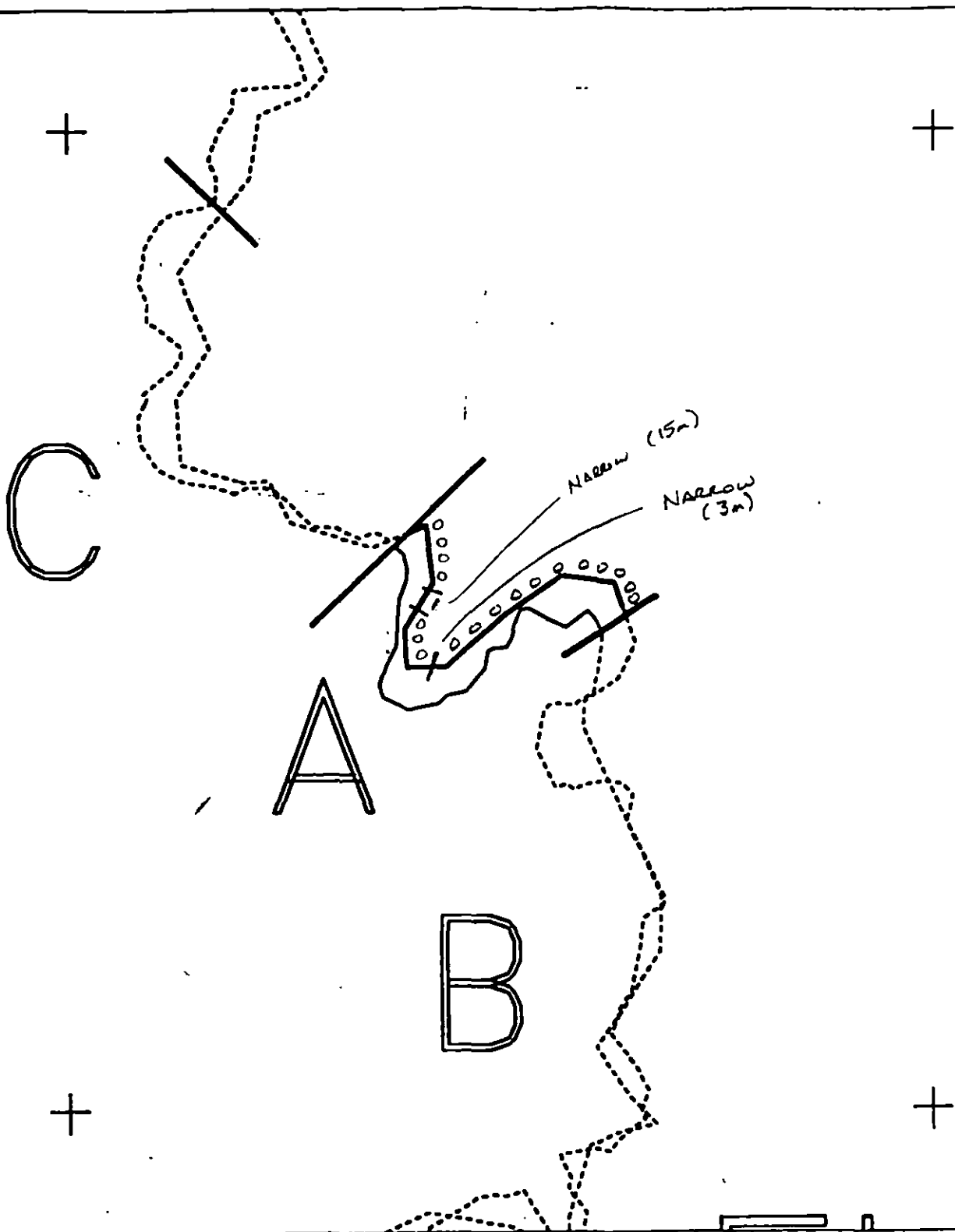


0 25  
 meters



NE wave exposure.  
 Filamentous green algae  
 near the oiled surfaces.  
 Biotic % cover is low on  
 cobbles & high on bedrock.





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

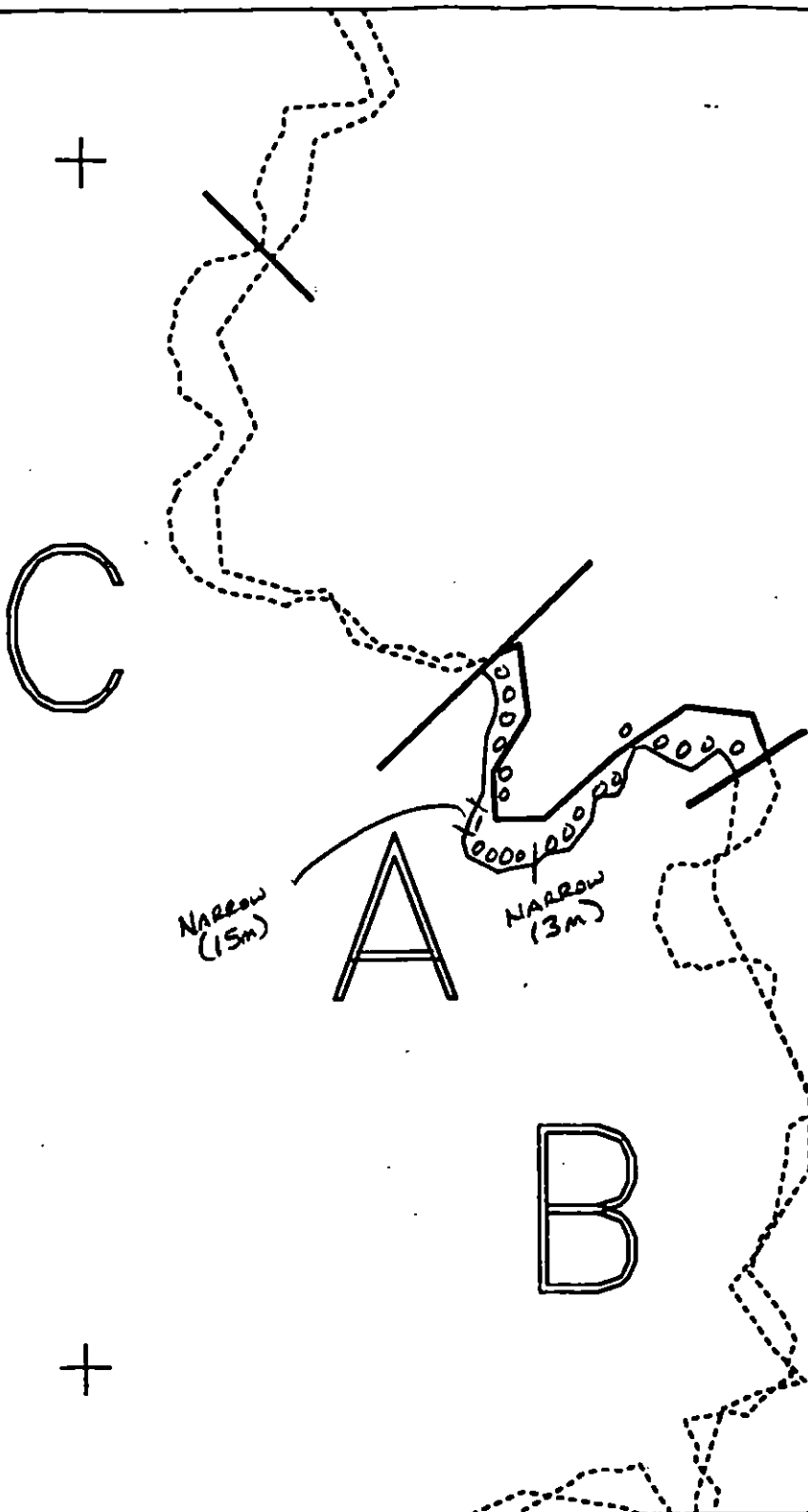
**EL108 A**  
 ADEC Subsegment Length: 300m  
 METERS  
 0 100 200  
 AK State Plane Zone 4  
 601100a



Subdivision Field Map  
 Map Key: KNE108A  
 Name: TRIMM  
 Date: 3 MAY 1991  
 Date Entered:

- SURFACE OIL CATEGORY MAP - ADEC SHORELINE -

reviewed 5/7/91 KG  
 & reviewed 5/10



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

**EL108 A**  
 ADEC Subsegment Length: 300m  
 METERS

0 100 200  
 AK State Plane Zone 4  
 601108a



Subdivision Field Map  
 Map Key: KNIEL108A  
 Name: TRIMM  
 Date: 3 MAY 1991  
 Date Entered:

• SURFACE OIL CATEGORY MAP - EXXON SHORELINE •

**1991 MAYSAP EVALUATION**

SEGMENT: EL 108 SUB: C REGION: PWS SURVEY DATE: 5/3/91

**ENVIRONMENTAL SENSITIVITIES:**

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

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

**ARCHAEOLOGICAL CONSTRAINTS:**

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

SHPO Signature: Rachel Jean Dallen Date: 5/14/91

**RECOMMENDATIONS:**

**INITIAL**

**TAG**

**FOSC**

TREATMENT REQUIRED (Y or N)

N

N

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

**COMMENTS:**

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE:

May 14 1991

FOSC APPROVAL DATE:

5/20/91

ADEC

FOSC

EXXON

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

USCG

NOAA

**ECOLOGICAL CONSTRAINTS  
1991 FIELD ACTIVITIES**

**Subsistence - Deer Harvesting:** Unlimited treatment prior to 8/15.

# MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL-108 SUBDIVISION C DATE 5/3/91

## ADEC

NAME PETER MONTESANO

SIGNATURE Pt. Montesano

☒ NTR ☐ TREATMENT RECOMMENDED

THE PO ON THIS SEGMENT HAS SETTLED INTO AP/SOL AND DEEP INTO THIS ROUGH BOULDER SHORELINE. THERE REMAINS SOME RECOVERABLE OIL, BUT IT IS NOT WORTHY THE AMOUNT OF LABOR OR THE DIFFICULTY OF LANDING ON THIS AREA.

NOTE: I DISAGREE W/ THE CHARACTERIZATION IN THE OG COMMENTS, BUT THE MATTER IS HARDLY WORTHY OF FURTHER COMMENT.

## EXXON

NAME C.M. TOTSUNPALIS

SIGNATURE Cm Totsunpalis

☒ NTR GOOD SURVEY. AGREE WITH LAND REPS. COMMENTS.

## LANDMANAGER

NAME DENNIS S. KENNEDY OF USFS

SIGNATURE D. S. Kennedy

☒ NTR

Subdivision contains great mix of micro habitats.  
CULTURAL FEATURE → Two mine shafts most likely looking for copper. one shaft has old timber supports.  
natural cleanup is taking place do to high energy wave action.

## USCG/NOAA

NAME MICHEL (NOAA) BEN ZENONE (CG)

SIGNATURE Michel

☒ NTR There has been significant improvement in the degree of oiling since SSAT and ASAP, when CV was as high as 60-70% and pooled, mousse and AP was found. Remaining oil is located in the most sheltered areas which are very inaccessible.

CG-

NO TREATABLE OIL. z

PAGE 1 OF 2 PAGES

DATE 5 / 13 / 91

EST. OIL CATEGORY LENGTH: W 0 m M 105 m N - m VL 65 m NO 75 m US 0 m

REMARKS: MC 5/9/91

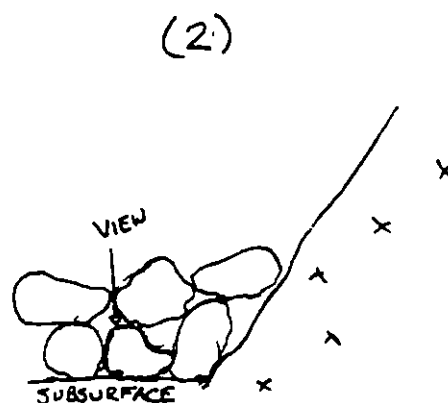
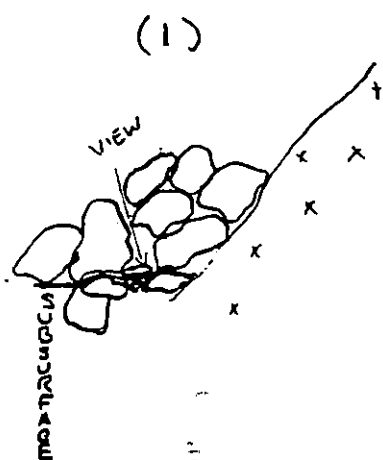
OG COMMENTS: EL108-C

Bryan Trimm: OG

EL108-C is a high angled shoreline with vertical cliffs behind a boulder talus base. High wave energies reach this southeast facing shoreline.

The ADEC representative noted HOR/MOR under boulder talus on the western half of the subdivision, the area seaward of the mine shafts. This oiling is typically CT, CV, ST, and SOR that has settled between and under the large boulder talus. There is limited and possibly no access for retrieval.

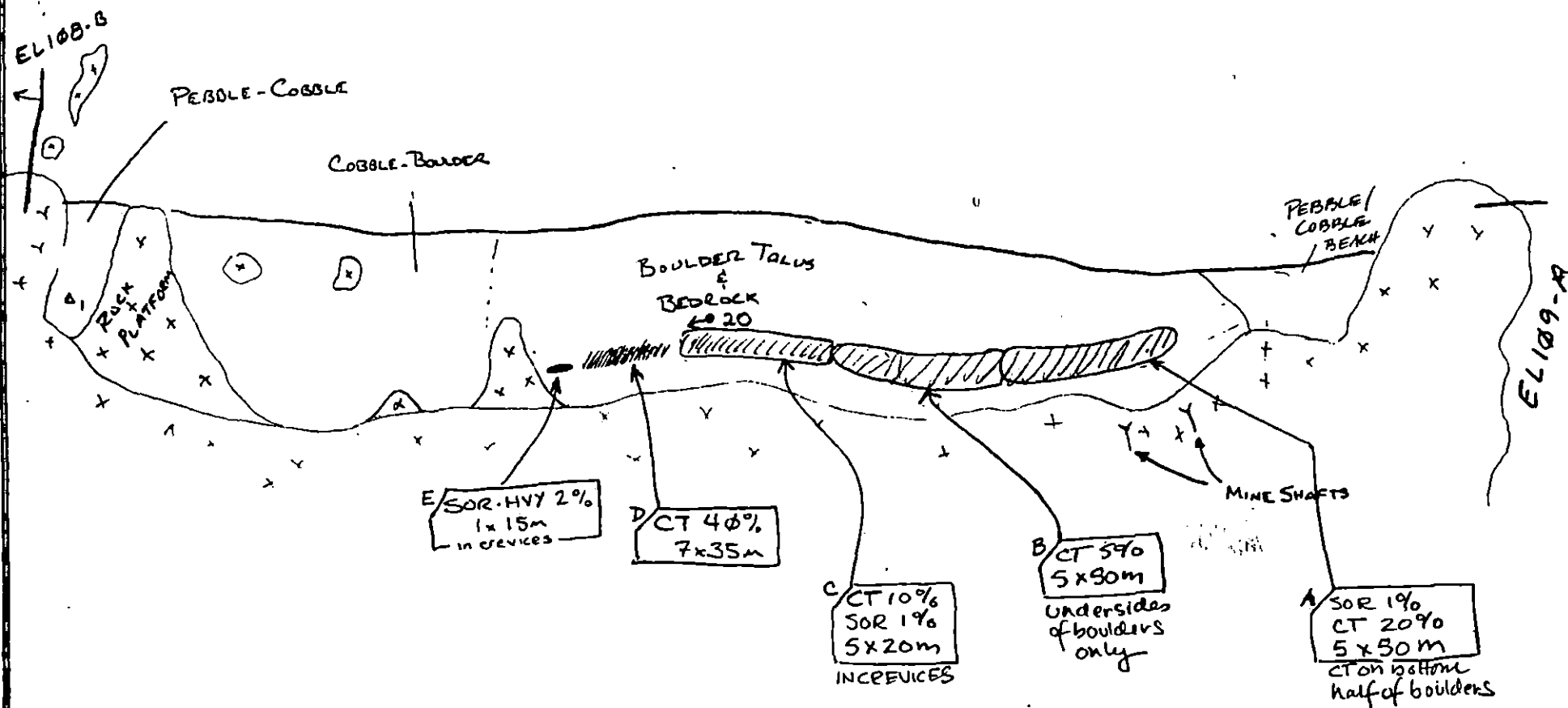
The large size of the boulder talus (average size is 1m<sup>3</sup>) makes it difficult to define the top of the subsurface, and the interstices are large. In many cases, one can look between a couple of boulder layers to the finer grained cobble and pebble clasts. The top of the subsurface begins where the interstices are open so that one can peer between the boulder talus and: (1) view the finer grained clasts below, or (2) the base of the last boulder that is visible through the interstices. Below are examples.



SKETCH MAP  
EL108-C  
3-MAY-91  
1044 -1111

NORTH  
PRINCE WILLIAM SOUND

0 75 150  
meters



REVIEWER: MC 572/91  
REVIEWED 5/7/91 KG

# MAYSAP BIOLOGICAL SUMMARY FORM

|                     |        |                      |             |
|---------------------|--------|----------------------|-------------|
| TEAM #              | 2      | DATE                 | 3 May '91   |
| SEGMENT #           | EL 10B | TIDAL HEIGHT (Range) | 0' to 0'    |
| SUBDIVISION         | C      | BIOLOGIST            | John Benson |
| SEA STATE           | 1'     | WIND SPEED/DIRECTION | calm        |
| PHOTOGRAPHS: ROLL # | —      | FRAME #              | —           |

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

(A, B, C, D, E) - Verrucaria & sparse barnacles were found near, but not on, the oiled surfaces. The biota here is extremely diverse with high % cover, except on the cobble- pebble beach. The large boulders provide a multitude of different "microhabitats," especially with regard to the broad range of wave exposures of this east-facing shore. The high biotic diversity is seen in the invertebrates & in the macroalgae. The biota on the bedrock has slightly higher % cover & slightly lower diversity, reflecting the greater homogeneity of this substrate type. There are no special biological sensitivities here (except that it is a naturalist's nirvana).

## WILDLIFE OBSERVATIONS

**TO BE COMPLETED IN ALL SUBDIVISIONS**

| BIRDS            | # OF SPECIES | TOTAL BIRDS | FISH OBSERVED<br>SPECIES PRESENT |
|------------------|--------------|-------------|----------------------------------|
| Eagles           | —            | —           | "blenny eels"                    |
| Seabirds         | —            | —           |                                  |
| Waterfowl        | —            | —           |                                  |
| Gulls/Kittiwakes | 1            | 2           |                                  |
| Shorebirds       | —            | —           |                                  |
| Corvids          | 1            | 1           |                                  |
| Other Birds      | —            | —           |                                  |

| MARINE MAMMALS      |            | LAND MAMMALS |            |
|---------------------|------------|--------------|------------|
|                     | # OBSERVED | SPECIES      | # OBSERVED |
| Sea Otters          | 1          | —            | —          |
| Pinnipeds (specify) | —          |              |            |
|                     |            |              |            |
| Birds (specify)     | —          |              |            |
|                     |            |              |            |

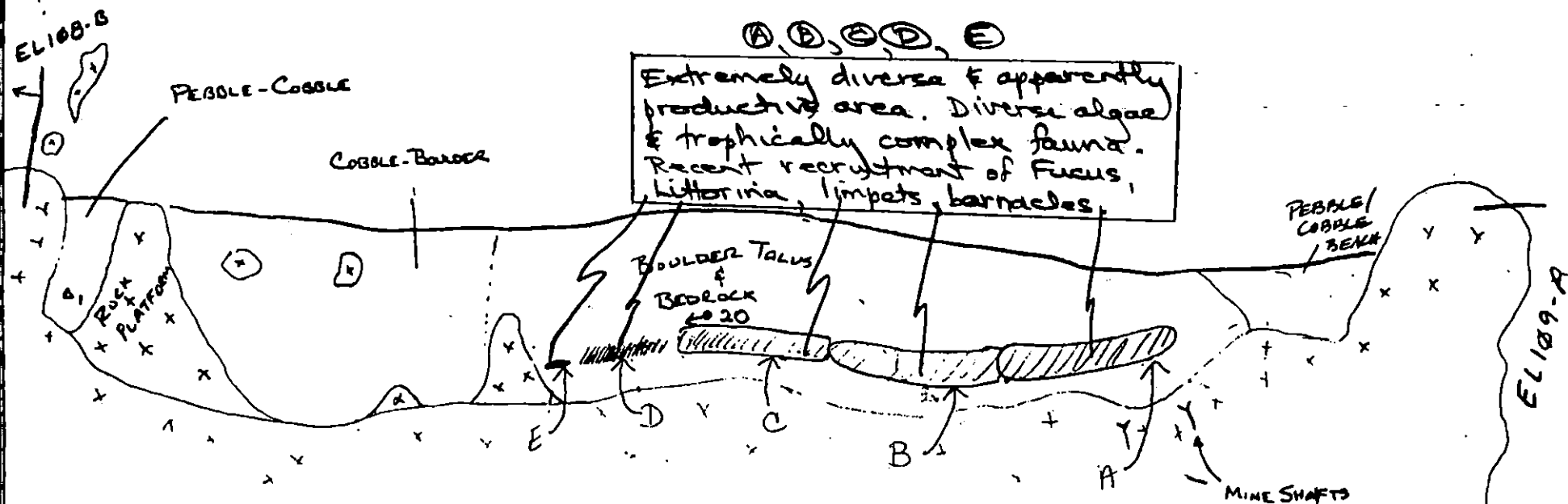
**Shoreline subdivision map showing important biological features attached.**

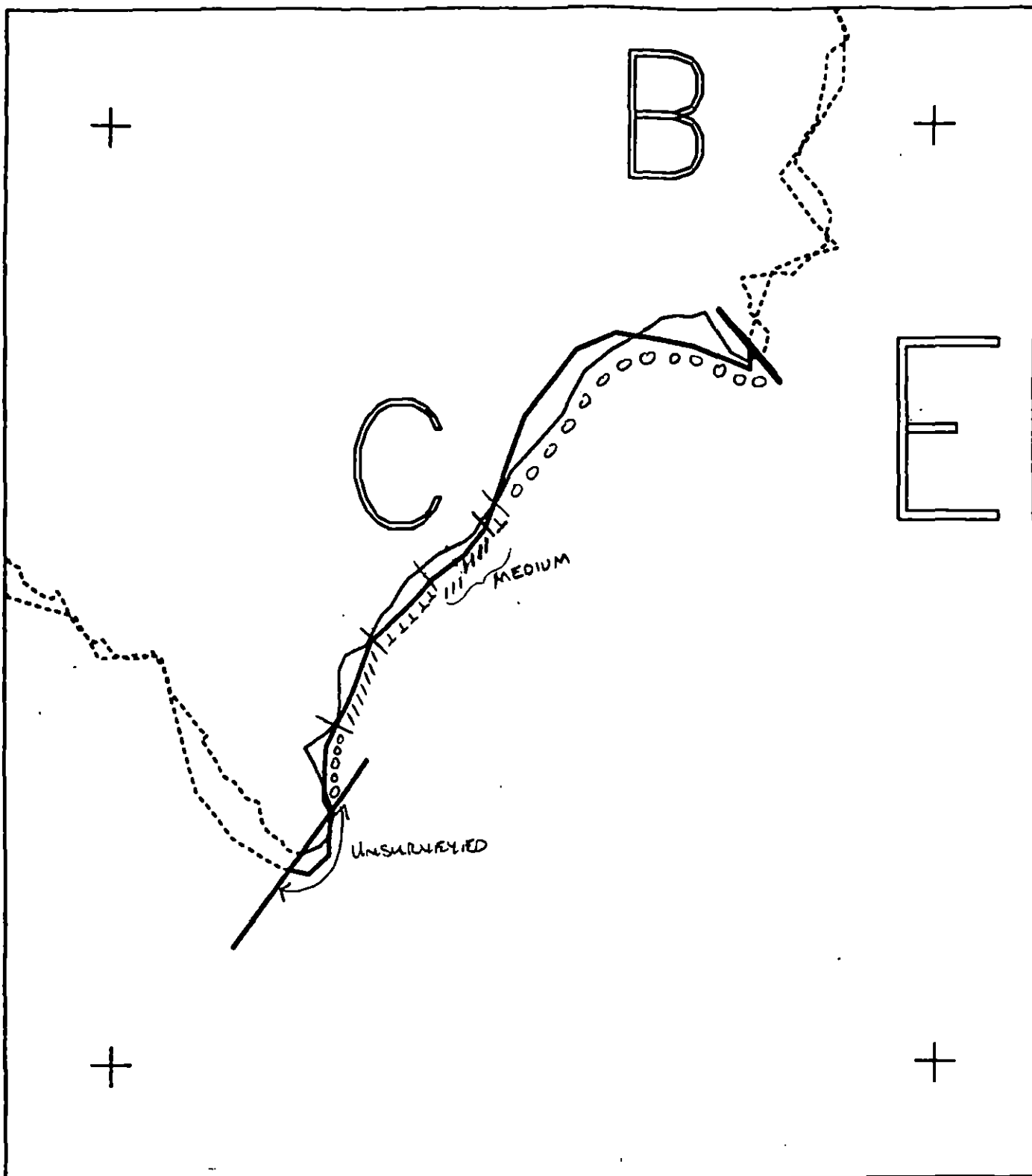
Revised 5/19/98

BIO SKETCH AP  
 EL108-C  
 3-MAY-91  
 1044-1111  
 John Benson

NORTH  
 PRINCE WILLIAM SOUND

0 75 150  
 meters





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

EL108 C  
 ADEC Subsegment Length: 800m  
 METERS  
 0 100 200  
 AZ State Plane Zone 4  
 601100

Subdivision Field Map  
 Map Key: KNIEL108C  
 Name: TRIMM  
 Date: 3 May '91  
 Data Entered:



• SURFACE OIL CATEGORY MAP •

revised: 5/7/91 YG  
 REVISIONS: 5/7/91 MC  
 RAISED: 5/9/91 MC

SEGMENT: EL 108 SUB: B REGION: PWS SURVEY DATE: 5/3/91

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

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

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

SHPO Signature: Rachel Jan Doe Date: 5/14/91

| <u>RECOMMENDATIONS:</u>                 | <u>INITIAL</u>    | <u>TAG</u>        | <u>FOSC</u>       |
|-----------------------------------------|-------------------|-------------------|-------------------|
| TREATMENT REQUIRED (Y or N)             | <u>N</u>          | <u>N</u>          | <u>7</u>          |
| Manual Pickup (Check as Req.)           | <u>          </u> | <u>          </u> | <u>          </u> |
| Spot Washing                            | <u>          </u> | <u>          </u> | <u>          </u> |
| Bio-Customblen Only                     | <u>          </u> | <u>          </u> | <u>          </u> |
| Bio-Inipol/Customblen                   | <u>          </u> | <u>          </u> | <u>          </u> |
| Other <u>                          </u> | <u>          </u> | <u>          </u> | <u>          </u> |
| Other <u>                          </u> | <u>          </u> | <u>          </u> | <u>          </u> |

INITIAL: \_\_\_\_\_

**TAG:** \_\_\_\_\_

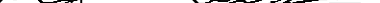
**FOSC:** \_\_\_\_\_

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

ADEC [Signature] FOSC [Signature]

EXXON *Res* E. E. PAGE, CDR, USCG

USCG Lt. J. Murphy, US

NOAA 

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

**ECOLOGICAL CONSTRAINTS  
1991 FIELD ACTIVITIES**

**Subsistence - Deer Harvesting:** Unlimited treatment prior to 8/15.

# MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT CL-108 SUBDIVISION B DATE 5/3/91

## ADEC

NAME

PETER MONTESANO

SIGNATURE

[Signature]



NTR

☐ TREATMENT RECOMMENDED

NO Significant oiling uncovered; Almost no oiling uncovered.

## EXXON

NAME

C.M. HATSIMPALIS

SIGNATURE

[Signature]



NTR

VERY LITTLE OILING <sup>REMAINS</sup> ON THIS SEGMENT.

BIO. REPORT SHOWS HEALTHY COMMUNITY.

## LANDMANAGER

NAME

DENNIS S. JENNEDY OF USFS

SIGNATURE

[Signature]



NTR

Bio. shows very good diverse substrate. Light amount of oil found does not need treatment.

## USCG/NOAA

NAME

MICHEL (NOAA) BML ZENONE (CG)

SIGNATURE

[Signature]



NTR

ONLY OIL COVER REMAINS ON THE MORE PROTECTED UNDERSIDES OF BOULDERS AND ROCK CREVICES ON THIS EXPOSED, ROCK PLATFORM WITH A BOULDER VENEER. [Signature]

CG - CONCUR W/NO TREATMENT NECESSARY. 3

DATE 5 / 3 / 91

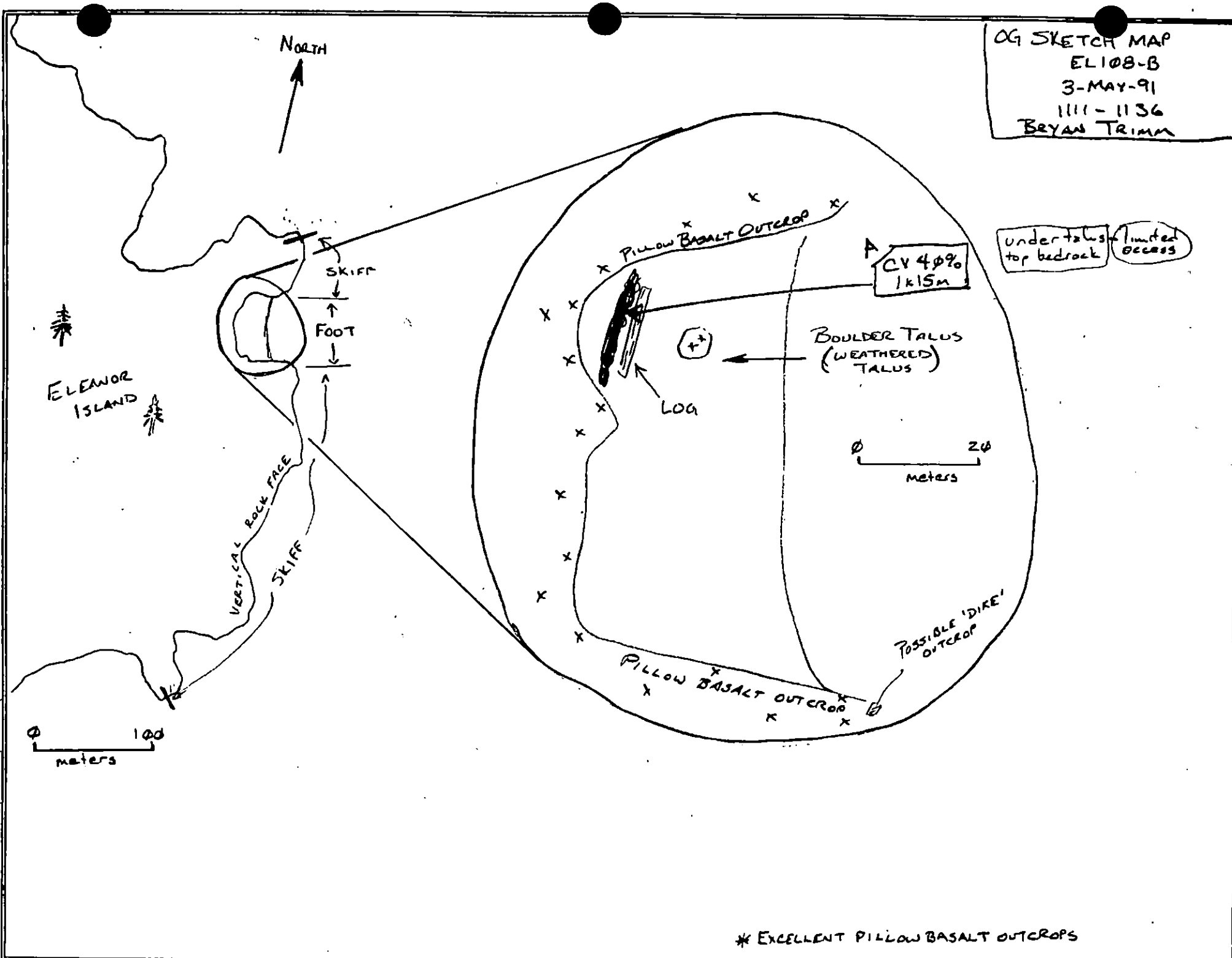
W 0 m M 0 m N 15 m VL 0 m NO 35 m US 40 m

PHOTO ROLL # MAYSAP- 2 - 5 FRAMES 22

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

Revised  
~~Reviewed~~: MC 5/7/91  
reviewed 5/7/91 KG

OG SKETCH MAP  
EL108-B  
3-MAY-91  
1111-1136  
BRYAN TRIMM



REVIEWED 5/17/91 KG  
REWORKED: 5/17/91 MC

# MAYSAP BIOLOGICAL SUMMARY FORM

|                     |        |                      |             |
|---------------------|--------|----------------------|-------------|
| TEAM #              | 2      | DATE                 | 3 May '91   |
| SEGMENT #           | EL 108 | TIDAL HEIGHT (Range) | 0' to +.5'  |
| SUBDIVISION         | B      | BIOLOGIST            | John Benson |
| SEA STATE           | 1'     | WIND SPEED/DIRECTION | calm        |
| PHOTOGRAPHS: ROLL # | —      | FRAME #              | —           |

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

(A) - Verrucaria & sparse barnacles were found near, but not on, oiled surfaces. The biota is very diverse & seems productive here. The diversity is enhanced by eastern wave exposure, numerous types of "microhabitats" within the boulder talus and tidepools in the bedrock. This subdivision is similar in these respects to EL 108 C. Recent recruitment of barnacles, mussels & littorines was observed.

## WILDLIFE OBSERVATIONS

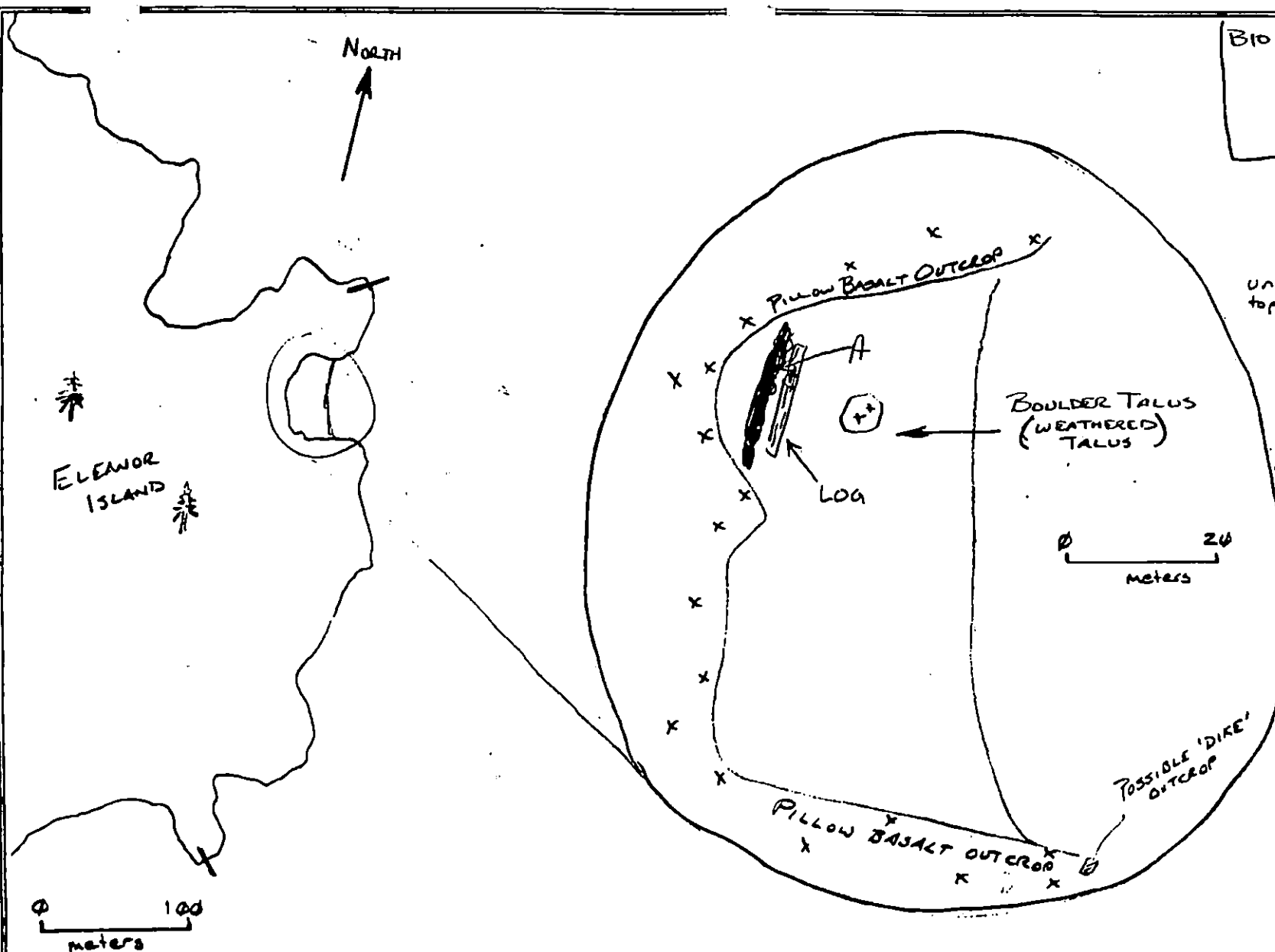
TO BE COMPLETED IN ALL SUBDIVISIONS

| BIRDS            | # OF SPECIES | TOTAL BIRDS | FISH OBSERVED<br>SPECIES PRESENT |
|------------------|--------------|-------------|----------------------------------|
| Eagles           | —            | —           | —                                |
| Seabirds         | —            | —           | —                                |
| Waterfowl        | —            | —           | —                                |
| Gulls/Kittiwakes | 1            | 4           | —                                |
| Shorebirds       | —            | —           | —                                |
| Corvids          | —            | —           | —                                |
| Other Birds      | —            | —           | —                                |

| MARINE MAMMALS      | # OBSERVED | LAND MAMMALS<br>SPECIES | # OBSERVED |
|---------------------|------------|-------------------------|------------|
| Sea Otters          | —          | —                       | —          |
| Pinnipeds (specify) | —          | —                       | —          |
| — (specify)         | —          | —                       | —          |
| — (specify)         | —          | —                       | —          |

Shoreline subdivision map showing important biological features attached.

BIO SKETCH MAP  
 EL108-B  
 3-MAY-91  
 1111-1136  
 John Benson

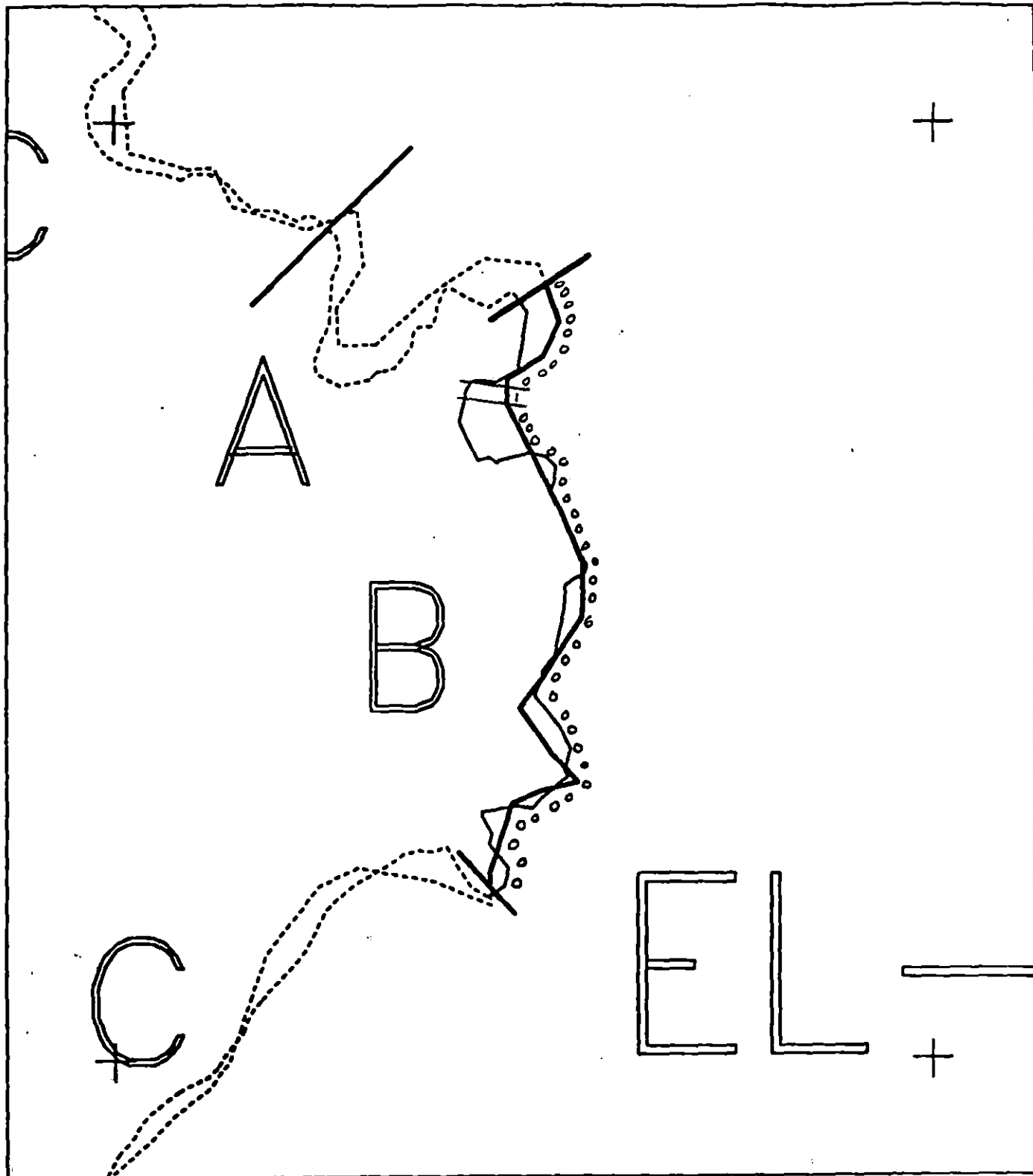


under talus - limited  
 top bedrock access

Ⓐ

Diverse substrate  
 types, eastern  
 wave exposure,  
 & tidepools  
 result in very  
 diverse biota.  
 Verrucaria &  
 barnacles near,  
 but not on,  
 oiled surfaces.

\* EXCELLENT PILLOW BASALT OUTCROPS



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

EL108 B  
 ADEC Subsegment Length: 520m  
 METERS

0 100 200  
 AK State Plane, Zone 4  
 6011000



Subdivision Field Map  
 Map Key: KNE1088  
 Name: Trim  
 Date: 3 May 91  
 Date Entered:

• SURFACE OIL CATEGORY MAP •

Reviewed: MC 5/7/91  
 reviewed 5/7/91 KG

**REGION: PRINCE WILLIAM SOUND**

**SEGMENT: ST/EL-109**

**SUBDIVISIONS: A (1 OF 1)**

SHORELINE EVALUATION

SEGMENT ST/ EL-109 SUBDIVISION A (1 OF 1) DATE 4/23/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**

6Y Recreation: Special use destination

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

See attached Ecological Constraint sheet for specific constraints and contacts.

**SUBDIVISION ECOLOGICAL CONSTRAINTS:**

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

**ARCHAEOLOGICAL CONSTRAINTS:**

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

SHPO SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

**OILING CATEGORIZATION:**

Wide 204 m: Medium 225 m: Narrow 883 m: V.Light 1537 m: No Oil 411 m  
Subsurface Oil Observed: Yes X No \_\_\_\_\_ Maximum Depth 38 cm

**RECOMMENDATIONS:**

|                                                           |                                                        |
|-----------------------------------------------------------|--------------------------------------------------------|
| <input type="checkbox"/> No Treatment Recommended         | <input type="checkbox"/> Snare/Absorbent Booms         |
| <input checked="" type="checkbox"/> Treatment Recommended | <input type="checkbox"/> Oil Snares (pom poms)         |
| <input checked="" type="checkbox"/> Manual Pickup         | <input type="checkbox"/> Absorbents (pads, rolls, etc) |
| <input checked="" type="checkbox"/> Bioremediation        | <input type="checkbox"/> Spot Washing: _____ Wands     |
| <input checked="" type="checkbox"/> Tarmat Removal        | <input type="checkbox"/> Beach Cleaner                 |
|                                                           | <input type="checkbox"/> Other (see comments)          |

COMMENTS: Recommended treatment includes 1) manual pickup of cleanup debris in areas indicated on sketch maps #1 and 2, 2) manual removal of tarmat in area indicated on sketch map #4, 3) manual raking of surface cobble in area indicated on sketch map #2, and 4) bioremediation of areas indicated on sketch maps #1,2,3,4. Work should be conducted after 5/1.

TAG COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TAG APPROVAL DATE: \_\_\_\_\_

ADEC \_\_\_\_\_

EXXON \_\_\_\_\_

NOAA \_\_\_\_\_

USCG \_\_\_\_\_

FOSC: \_\_\_\_\_ DATE: \_\_\_\_\_

# PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)  
1B Salmon stream mouth - spawning (7/10 to 8/31)  
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream 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 Suzumoto 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 (8/11 to 7/25)  
Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or 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 unopened 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
- 30, 3Q Harbor seal and sea lion pupping (5/15 to 7/1)  
Harbor seal and sea lion molting (8/15 to 9/15)  
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. 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 Roth 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 (8/1 to 9/15)  
6V Anchorages (8/1 to 9/15)  
6W Forest Service cabins (8/1 to 9/15)  
6X Lodge (8/1 to 9/15)  
6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)  
7HH Finfish harvesting  
7HJ Deer harvesting (8/15 to 2/28)  
7HJ 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 267-2350

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST EL-109 SUBDIVISION: A DATE 4/23/90

**USCG**

NAME William E. White SIGNATURE William E. White

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED  
COMMENTS

SKETCH #1

1. Pickup of oily snare boom
2. Bioremediate entire area of UI/SU

SKETCH #2

1. Pickup of snare boom
2. Break up surface cobble and bioremediate

SKETCH #3

1. Bioremediate - P.T-14-16

SKETCH #4

1. MANUAL pickup of asphalt pavement
2. Bioremediate

**ADEC**

NAME Peter Montesano SIGNATURE Peter Montesano

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED  
COMMENTS

See Attached

**LAND MANAGER - USOA Forest Service**

NAME Don J. Breitinger SIGNATURE Don J. Breitinger

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED  
COMMENTS

This segment is a recreation special use destination area for the period 6/1 - 9/15, and also a subsistence deer harvesting area for the period 8/15 - 3/1.

1. pickup oily snare boom and bioremediate entire area of UI/SU as noted on sketch map #1.
2. pickup oily snare boom, break up surface and bioremediate area as noted on sketch map #2.
3. Bioremediate area as noted on sketch map #3.
4. Manual pickup of asphalt pavement and bioremediate as shown on sketch map #4.
5. The remainder of the segment should be left to natural weathering. (ie refer to Exxon ops sketch map).

REVISION NO. 03/21/90

ELI09-A ADEC Comments  
Peter Montesano

- Bioremediation

- Pit: #3 (Bedrock Plateau), #4, #11 (remove Tar Splatters First.  
#14 (heavy brown OF oiling), #16 (marginally Appropriate)
- Pit #6: remove patches, splatters, swares, Poms/debris in  
MITZ Boulders, Washable oil but inaccessible to LCV,  
Sheen in water trapped between Boulders, and  
Sheen traces 20' off shore of Beach
- Sketch map #2: Bio west end of Beach and  
remove Sware line illustrated on map.
- Pit #10: Spot wash with Steam and HW hoses  
as flush.
- Sketch map #4: Remove Asphalt layers illustrated  
on map
- Pit #21: Small area w/ Spot washable oil
- Pits #13, 19, and 20: examine OG form to  
determine treatments for thin layer

# SHORELINE OILING SUMMARY

OG C. DILLON USCG PS1 E. WHITE SEGMENT ST/ EL-109  
 BIO J. BARRY LAND REP D. BREITWATER (NES) SUBDIVISION A (1 OF 1)  
 EXXON G. STILES ADEC P. MONTESANO TIME 15:30 to 19:45  
 TEAM NO. 6 TIDE LEVEL +7 to +1 DATE 04/23/90  
 EST. SUBDIVISION LENGTH: 3441 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow  
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock  
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: W to E  
 SURFACE SEDIMENTS: R 40 % B 35 % C 20 % P 5 % G 0 % S 0 % M 0 % V 0 %  
 SLOPE: Lang 35 % Hang 40 % Vert 25 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High  
 OIL CATEGORY LENGTH: W 105 m M 120 m N 1075 m VL 1631 m NO 510 m

## SURFACE OIL

| CHARACTER        | DISTRIBUTION |   |   |   |   | OIL / FILM COLOR |    |    |    |    | IMPACTED ZONES |   |   |   |
|------------------|--------------|---|---|---|---|------------------|----|----|----|----|----------------|---|---|---|
|                  | C            | N | P | S | W | Y                | BL | BR | GR | OR | SU             | U | W | U |
| ASPHALT PAVEMENT |              | X |   |   |   |                  |    |    |    | X  |                | X |   |   |
| POOLED           |              |   |   |   |   |                  |    |    |    |    |                |   |   |   |
| COVER            |              |   |   | X | X |                  |    |    |    |    |                | X |   |   |
| COAT             |              |   |   |   |   |                  |    |    |    |    |                |   |   |   |
| STAIN            | ✓            | X | X | X | ✓ | X                |    |    |    | ✓  | X              | ✓ |   |   |
| MOUSSE           |              |   |   | X |   |                  |    |    |    | X  |                | X |   |   |
| PATTIES          |              |   |   |   |   |                  |    |    |    |    |                |   |   |   |
| TARBALLS         |              |   |   | X | X |                  |    |    |    |    |                | X |   |   |
| FILM             |              |   | X |   | X |                  |    |    |    |    |                | X |   |   |
| NO OIL           |              |   |   |   |   |                  |    |    |    |    |                |   |   | X |

PAVEMENT H F (S) 14 sq. m by 3 cm

PATTIES (TARBALLS) 1 BAGS

NEAR SHORE SHEEN? NO BR RW (SL) TL

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

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐

oiled pom pom  
TYPE united trash

#BAGS 3

Photographs:

Roll No. ST-6-6

Frames 26, 27, 29, 30, 32

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER |    |    |    |    | OILED INTERVAL (cm) | BELOW |    | OIL / FILM COLOR |    |    |    |   | PIT ZONE |   |   |   | A<br>N<br>A | Z<br>E<br>W<br>S | V | SURFACE - SUBSURFACE SEDIMENTS |
|---------|----------------|--------------------------|----|----|----|----|---------------------|-------|----|------------------|----|----|----|---|----------|---|---|---|-------------|------------------|---|--------------------------------|
|         |                | OP                       | OR | OL | OP | NO |                     | UO    | UC | BL               | BR | GR | OR | Y | SU       | U | W | U |             |                  |   |                                |
| 1       | 6              | X                        |    |    |    |    | 0-3                 | X     |    |                  |    | X  |    |   | X        |   |   |   |             | N                | - | B/C-P/G/R                      |
| 2       | 10             |                          |    |    |    | X  | -                   | X     |    |                  |    |    |    |   | X        |   |   |   |             | N                | - | C-P                            |
| 3       | 8              | X                        |    |    |    |    | 0-8                 | X     |    |                  |    | X  |    |   | X        |   |   |   |             | N                | - | C-P/G/R                        |
| 4       | 8              | X                        |    |    |    |    | 0-8                 | X     |    |                  |    | X  |    |   | X        |   |   |   |             | N                | - | B/C-C/G/B                      |
| 5       | 20             |                          |    |    |    | X  | -                   | X     |    |                  |    |    |    |   | X        |   |   |   |             | N                | - | P-P/G                          |
| 6       | 8              | X                        |    |    |    |    | 0-8                 | X     |    |                  |    | X  |    |   | X        |   |   |   |             | N                | - | B/C-P/G/R                      |

COMMENTS

REVIEWED YH

DATE 4-27-90

## SHORELINE OILING SUMMARY (PAGE 2)

SEGMENT ST/ EL-109 SUBDIVISION A (1 OF 1)OG C. DILLON  
TEAM 6

## SUBSURFACE OIL (CONTINUED)

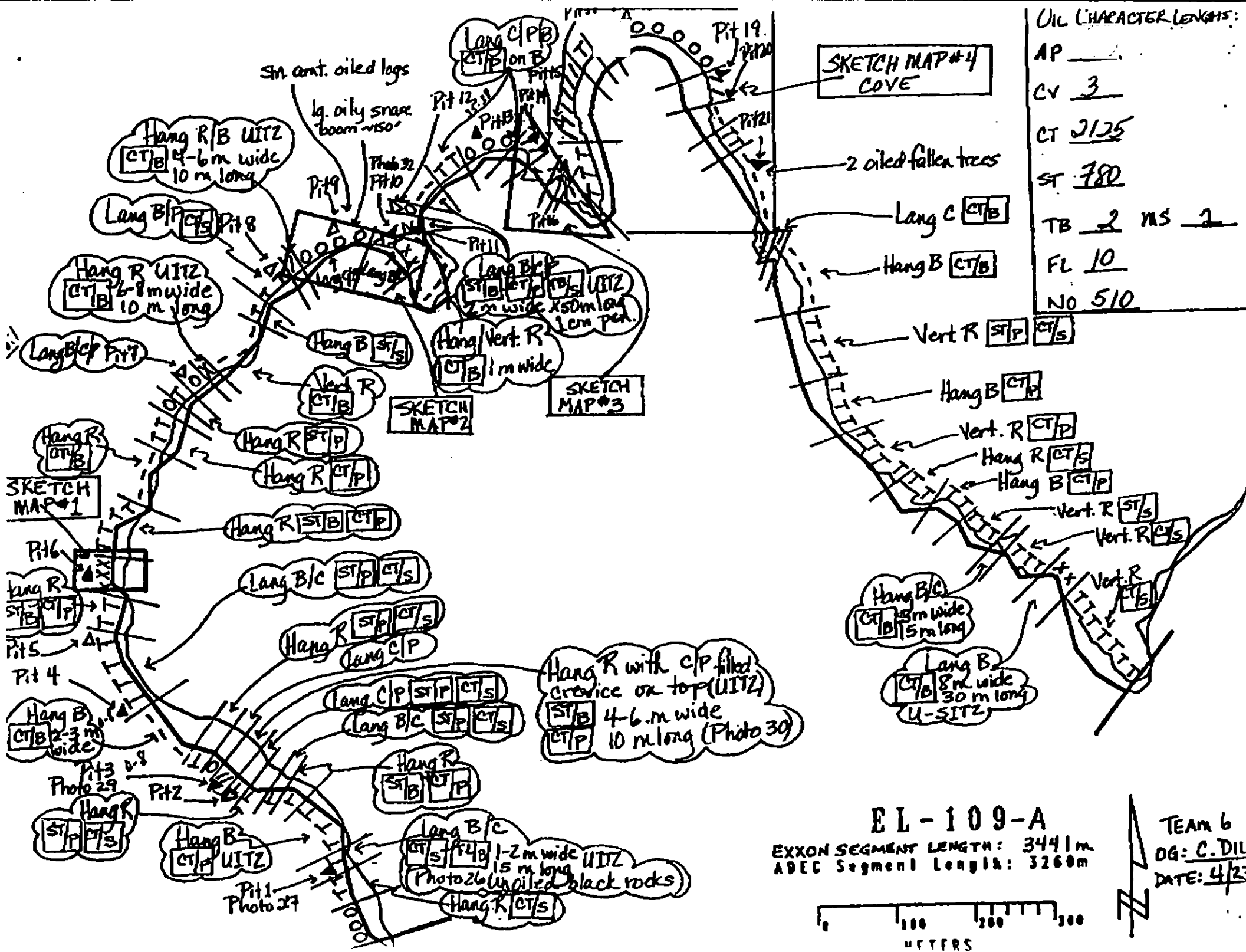
| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER |    |    |    |    | OILED INTERVAL (cm) | BELOW |    | OIL / FILM COLOR |    |    |    |    |    | PIT ZONE |    |    |    | A | N | A  | V | SURFACE SUBSURFACE SEDIMENT |
|---------|----------------|--------------------------|----|----|----|----|---------------------|-------|----|------------------|----|----|----|----|----|----------|----|----|----|---|---|----|---|-----------------------------|
|         |                | OP                       | OR | OL | OF | WO |                     | UO    | UC | SP               | BP | GP | GL | GR | GO | SU       | SM | SB | SL |   |   |    |   |                             |
| 7       | 35             |                          |    |    |    | X  | .                   |       | X  |                  |    |    |    |    |    | X        |    |    |    |   | N | -  |   | C/P-P/K                     |
| 8       | 25             |                          |    |    |    | X  | .                   |       | X  |                  |    |    |    |    |    | X        |    |    |    |   | N | -  |   | B-C/P                       |
| 9       | 35             |                          |    |    |    | X  | .                   |       | X  |                  |    |    |    |    |    | X        |    |    |    |   | N | -  |   | C/P-P/G                     |
| 10      | 15             | X                        |    |    |    |    | 0-8                 |       | X  |                  |    |    |    | X  |    | X        |    |    |    |   | N | -  |   | B/C-P/n                     |
| 11      | 10             |                          | X  |    |    |    | 0-1                 |       | X  |                  |    |    |    | X  |    | X        |    |    |    |   | N | -  |   | C-P/G                       |
| 12      | 30             |                          |    |    |    | X  | .                   |       | X  |                  |    |    |    |    |    | X        |    |    |    |   | N | -  |   | P/G-G/n                     |
| 13      | 4              |                          | X  |    |    |    | 35-38               |       | X  |                  |    |    |    | X  |    | X        |    |    |    |   | N | -  |   | P-P/G/n                     |
| 14      | 12             |                          |    |    | X  |    | 0-5                 |       | X  |                  |    |    |    | X  |    | X        |    |    |    |   | N | -  |   | P-P/G                       |
| 15      | 12             |                          | X  |    |    |    | 0-10                |       | X  |                  |    |    |    | X  |    | X        |    |    |    |   | N | -  |   | C/R-P/G                     |
| 16      | 10             |                          | X  |    |    |    | 0-8                 |       | X  |                  |    |    |    | X  |    | X        |    |    |    |   | N | -  |   | B/C-P/G                     |
| 17      | 6              |                          | X  |    |    |    | 0-1                 |       | X  |                  |    |    |    | X  |    | X        |    |    |    |   | N | -  |   | C-P/G                       |
| 18      | 40             |                          |    |    |    | X  | .                   |       | X  |                  |    |    |    |    |    | X        |    |    |    |   | N | -  |   | P-P/G                       |
| 19      | 15             |                          | X  |    |    |    | 6-9                 |       | X  |                  |    |    |    | X  |    | X        |    |    |    |   | N | 12 |   | C/P-P/K                     |
| 20      | 20             |                          | X  |    |    |    | 15-18               |       | X  | X                |    |    |    |    |    | X        |    |    |    |   | N | -  |   | B/C-P/K                     |
| 21      | 6              |                          | X  |    |    |    | 0-6                 | X     |    |                  |    |    |    | X  |    | X        |    |    |    |   | N | -  |   | B-C/FM                      |

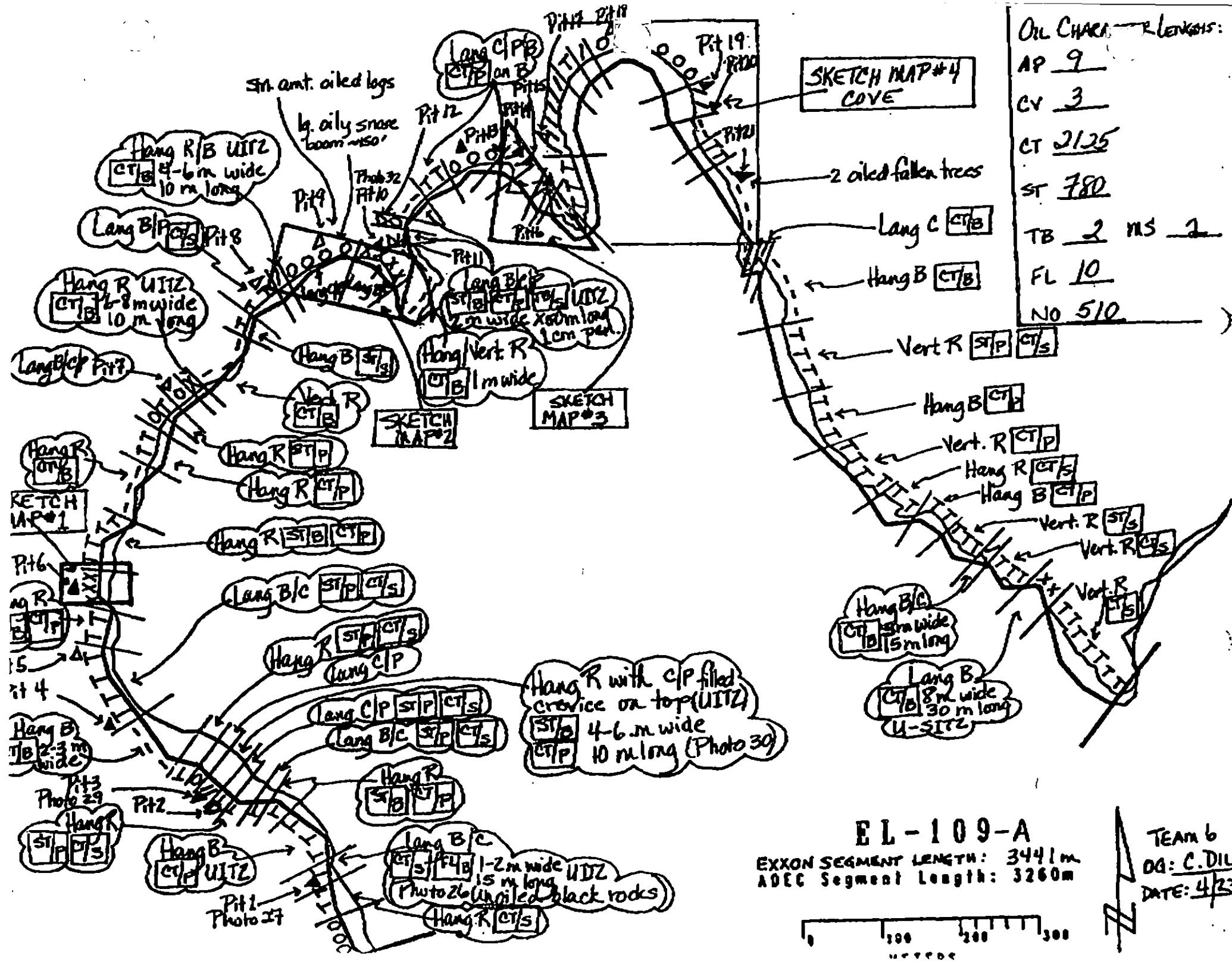
REVIEWED MA

DATE

4-27-10

OIL CHARACTER LENGTHS:  
AP       
CV   3    
CT 2125  
ST 780  
TB   2   MS   2    
FL 10  
NO 510





SEGMENT S

L-709

SKETCH MAP #1

N

SUBDIVISION

A

DATE 04, 23 80

## CHECKLIST

☐ H Area  
☐ Appen. Scale  
☐ Seg/Sub Body  
☐ Oil Dir.  
☐ Width  
☐ Length  
☐ % Cover  
☐ Substrate Character  
☐ Est. NW/SE/NE  
☐ 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

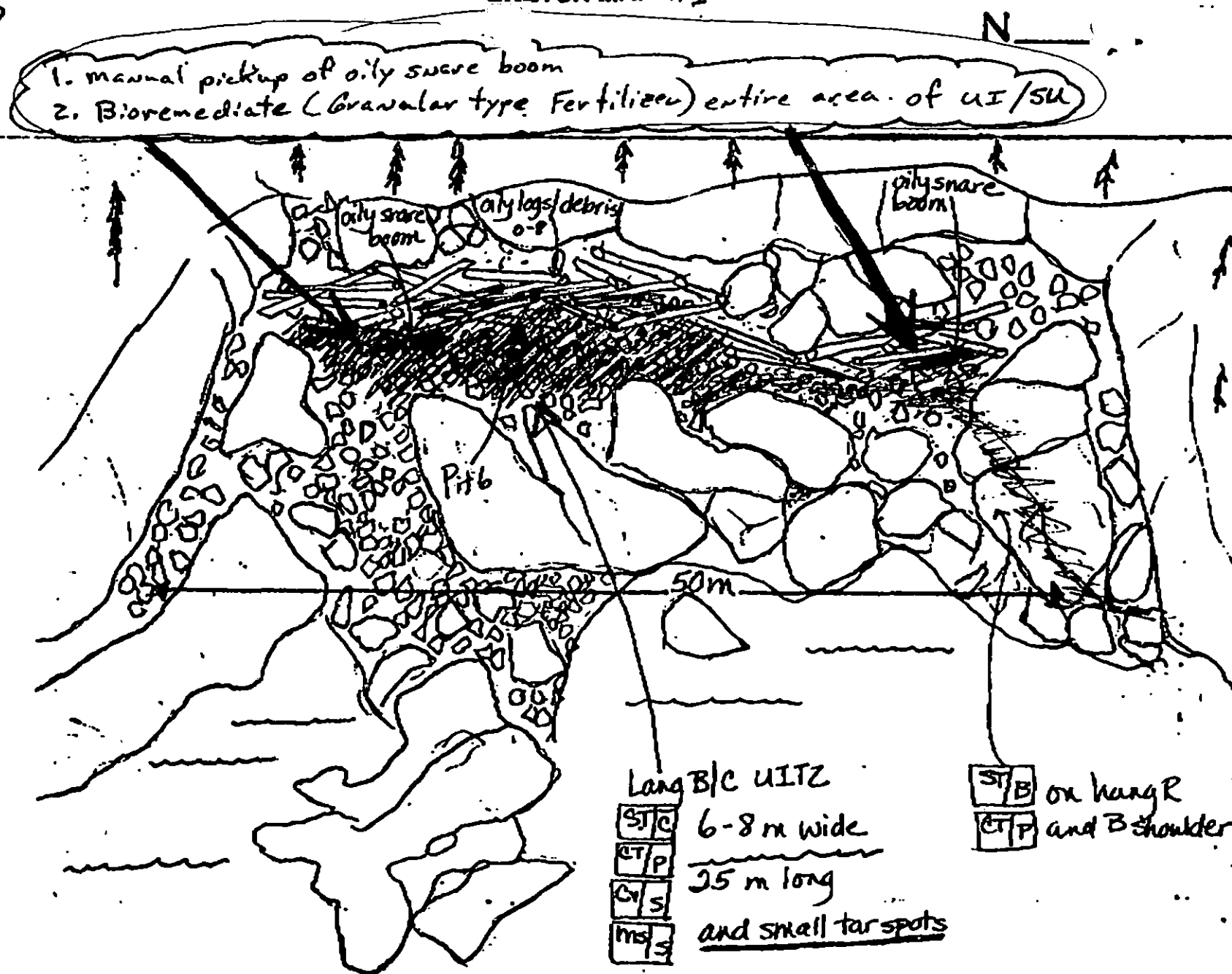
CT/S

Splashed Distribution

eee  
 Oiled Vegetation

1 ●→

Photo location, direction,  
 and number



SEGMENT S L-109SUBDIVISION ADATE 04/23/90

ATCH MAP #2

1. Manual pickup of snare boom.
2. Break up surface cobble and bio remediate.

## CHECKLIST

☐ N Arrow  
☐ Approx. Scale  
☐ Seg/Sub Entry  
☐ Oil Desc.  
☐ Width  
☐ Length  
☐ % Cover  
☐ Substrate Character  
☐ Est. HAZARD  
☐ SSL  
☐ Profile Location(s)  
☐ Photo(s)  
☐ Pk Location(s)  
☐ Photo Location(s)

## LEGEND

1 ▲  
Pit - No Subsurface Oil

2 ▲  
Pit - Subsurface Oil

CT/C  
Continuous Distribution

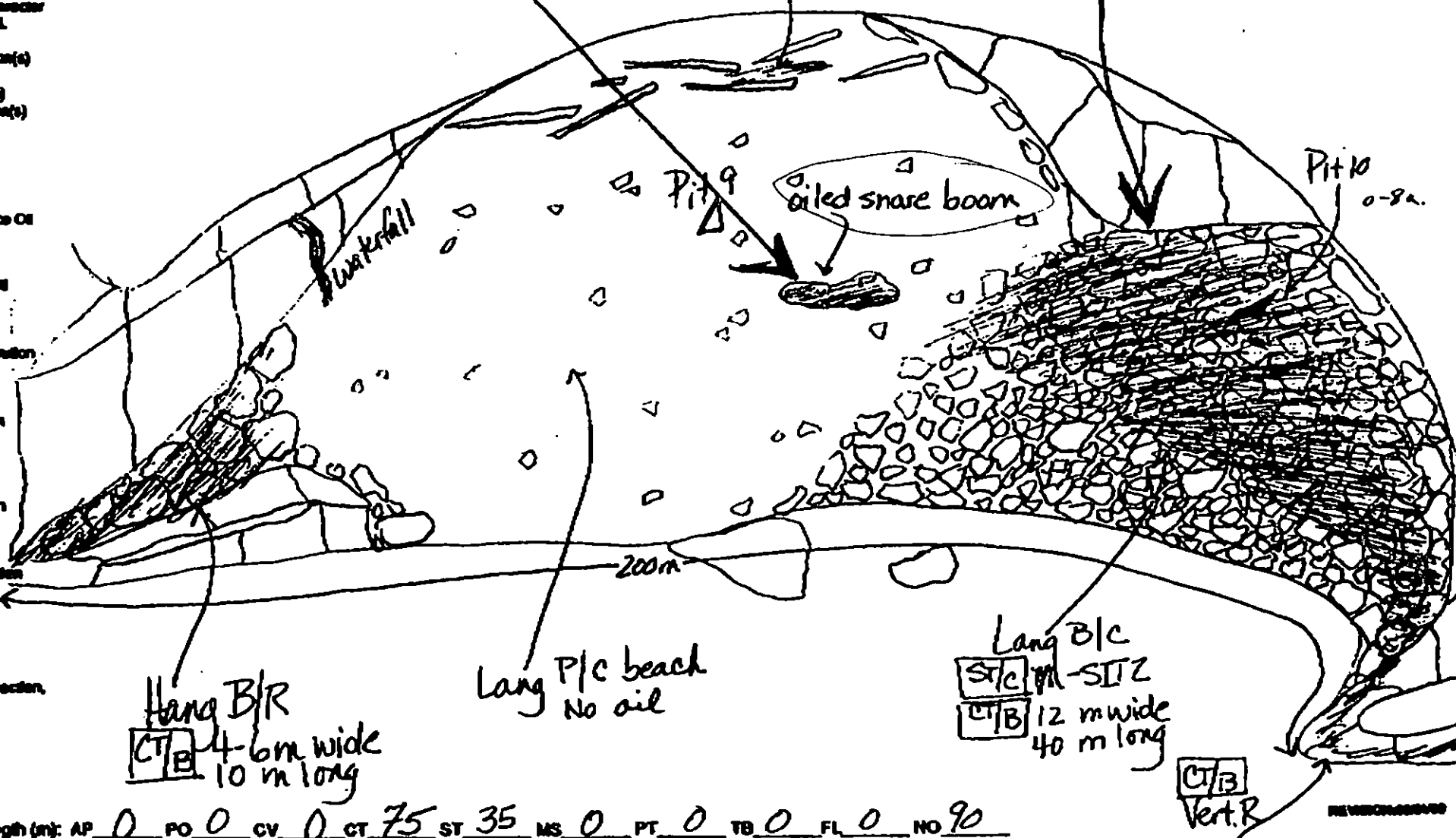
CT/B  
Broken Distribution

CT/P  
Patchy Distribution

CT/S  
Splashed Distribution

eee  
Oiled Vegetation

1 ●●  
Photo location, direction,  
and number



Oil Character Length (m): AP 0 PO 0 CV 0 CT 75 ST 35 MS 0 PT 0 TB 0 FL 0 NO 90

SEGMENT STATION 109

SUBDIVISION A

DATE 04/23/90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Body
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Ext. HML/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Photo Location(s)
- ☐ Photo Location(s)

LEGEND

1  $\Delta$   
PH - No Subsurface Oil

2  $\Delta$   
PH - Subsurface Oil

CT/C  
Continuous Distribution

CT/B  
Broken Distribution

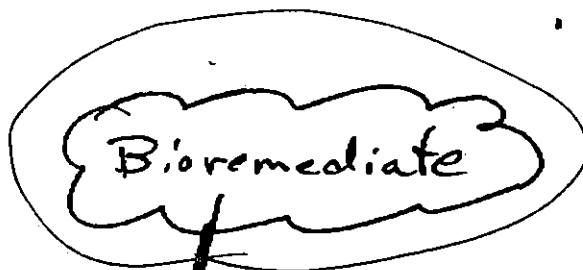
CT/P  
Patchy Distribution

CT/S  
Splashed Distribution

eee  
Oiled Vegetation

1  $\Rightarrow$   
Photo location, direction, and number

SKETCH MAP #3



0-5  
Pit 14

Pit 15  
0-10

Pit 16  
0-8

Vert. R  
CT/B

Hang B  
CT/B 10m long  
3m wide

Vert. R  
CT/C 1-2 m wide

Lang B/C  
ST/C U1TZ  
CT/B 4-6 m wide  
40 m long

Oil Character Length (m): AP 0 PO 0 CV 0 CT 180 ST 20 MS 0 PT 0 TB 0 FL 0 NO 0 TOTAL LENGTH = 200m

OG C. D. ON

SEGMENT ST/ EL-109

SUBDIVISION A

DATE 04/23/90

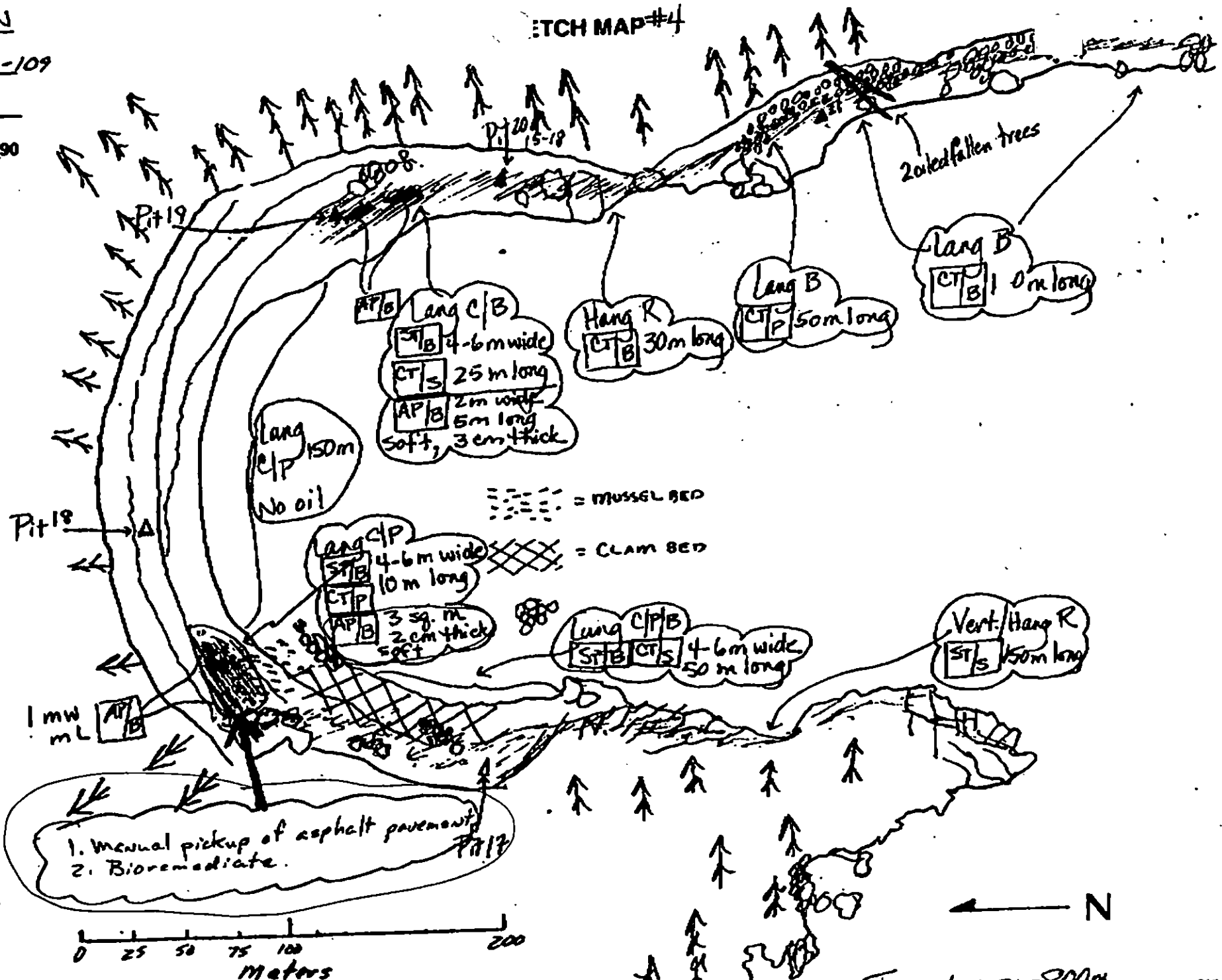
# CHECKLIST

- ☐ N Area
- ☐ Approx. Scale
- ☐ Seg/Sub Body
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. MW/L/V/L
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

## LEGEND

- 1  $\Delta$   
Pit - No Subsurface Oil
- 2  $\Delta$   
Pit - Subsurface Oil
- $\boxed{CT/C}$   
Continuous Distribution
- $\boxed{CT/B}$   
Broken Distribution
- $\boxed{CT/P}$   
Patchy Distribution
- $\boxed{CT/S}$   
Splashed Distribution
- $\lll$   
Old Vegetation
- 1  $\Rightarrow$   
Photo location, direction, and number

ATCH MAP #4



Oil Character Length (m): AP 9 PO 0 CV 0 CT 431 ST 210 MS 0 PT 0 TB 0 FL 0 NO 150 TOTAL LENGTH = 800m

# SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/2/90

Segment ST/ EL109 Subdivision A Date (mo/day/yr) 23 APRIL 1990

Time (24 hr) 1500-1945 Biologist Jim BARRY Length = 3441

- (A) Substrate type and % of segments:  
 (1) Bedrock 40 (2) Boulder 35 (3) Cobble 20 (4) Pebble 5 (5) Sand 0 (6) Silt 0
- (B) Overall % cover of biota (% of segment): Dense 60 Moderate 30 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 (O)

Photographs: ST-6-6  
 Roll No. 28, 31  
 Frames 28, 31

## BARNACLES

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

## MYTILUS

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

## GASTROPODS

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

## Wildlife Observations/ General Comments:

Harbor Seal - 2 Pigeon Guillemot (Adults, chicks) - 5 Seagull - 1  
 Merganser, Common - 6 Pelagic Cormorant - 2 Deer Seal, tracks  
 Raven - 1 Herring Gull - 5  
 Blue-winged Teal - 5 Glaucous-winged Gull - 6

- Ecological Considerations:
- 1) Bald Eagle Nest nearby - SW end of segment - Avoid ... long term visits to this section of the segment.
- 2) Deer Harvesting during August - February - minimal impact from clean up operation except perhaps in the NE corner of the bay.

TIME 1500-1945

TIDE +6 → +1

## I. General Comments

ELIO9 is a long segment comprised by several habitat types that range from highly exposed headland cliffs to protected pebble beaches.

## 1) Vertical Bedrock Cliffs and High Angle Boulder Beaches.

Barnacles (*Semibalanus*, *Cithamalus*, and *Balanus*) are moderately to densely abundant on these substrata, particularly in the more exposed portions of the subdivision. Small juveniles and spat are sparse to moderate. *Mytilus* is mostly sparse, and least abundant on the most exposed sections, with greater density on slightly protected sites. Algae densely cover the lower zones, with sparse to moderate cover of *Fucus* and locally dense cover. Gastropods are moderate, but dense or sparse in patches - *Nicellia* (whelks) are locally dense in the low and middle zones. Kelps are abundant in subtidal areas.

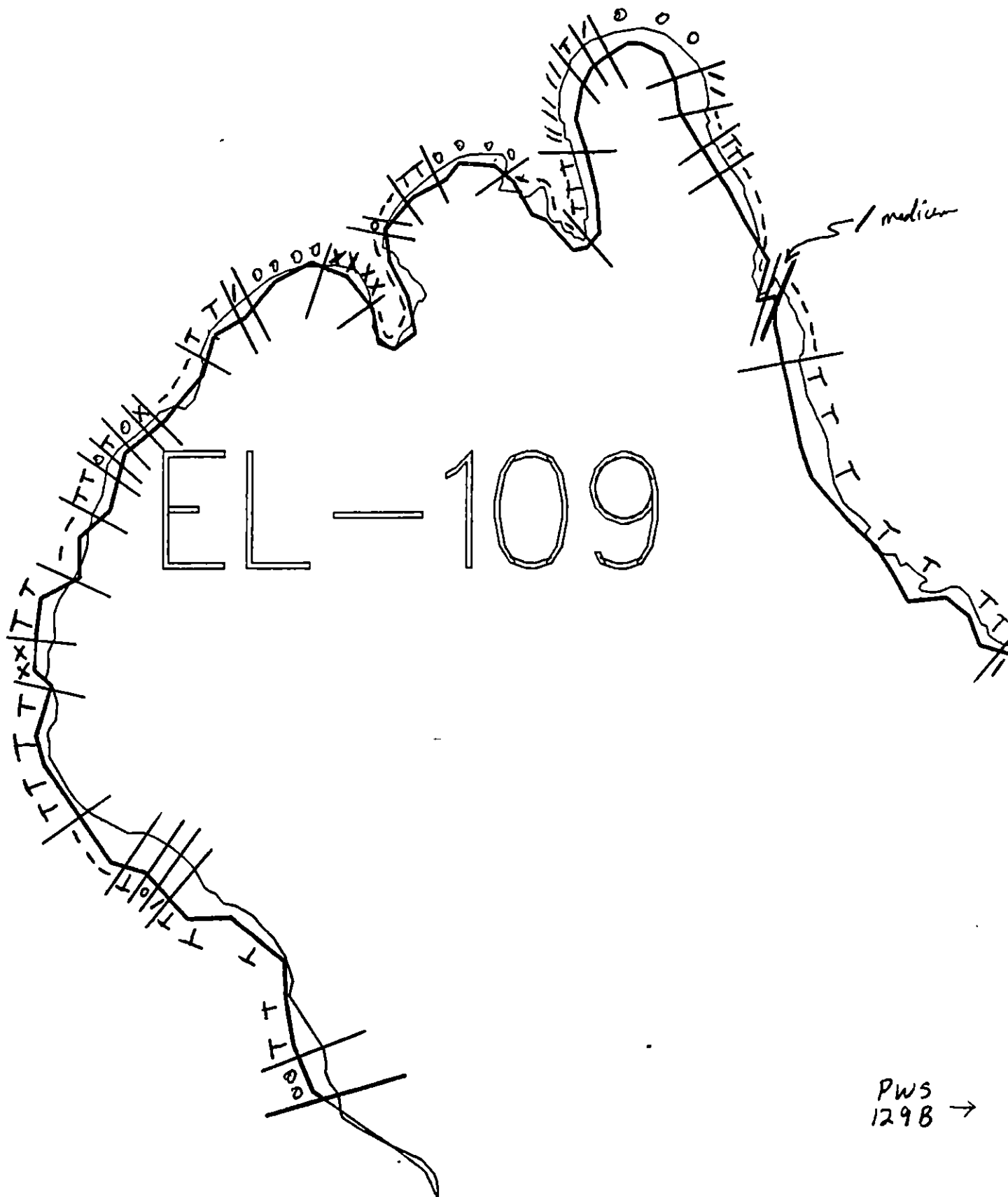
## 2) Cobble and Pebble Beaches.

These beaches also vary in exposure, but are generally low to moderately exposed. More exposed beaches have low densities of all but gastropods, (limpets and littorine snails); Algae are usually low in cover, except in the middle to low zone, where *Ulva* and other filamentous green algae cover many rocks, and in the low zone where *Fucus* and other algae (*Palmanacalmata*, *Ulva*,) are moderate to dense. <sup>Barnacles</sup> and mussels generally are rare, except for patches on adjacent boulders. Low and moderately exposed beaches have higher densities of biota. A mussel bed is present on one beach (see OG map), adjacent

to a sparse clam bed. Fucus is moderate on protected  
cobble beaches. Several intertidal fish are abundant ( $\sim 3/m^2$ )  
beneath cobble under low zone (pricklebacks and sculpins)

### B. Oil Related Comments

- 1) Most of the oil is now restricted to high and supra-intertidal  
zones where it has only minor impacts, if any, as on the intertidal  
biota. The only sensitive site to cleanup operations is the  
mussel bed in the NE corner of the bay. This area should  
not be trampled by cleanup crews.
- 2) This area has an eagle nest nearby, but cleanup will likely not  
disrupt eagle behavior. Deer harvesting (August - February)  
may be affected during cleanup operations in the NE corner.



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EL-109

ADEC Segment Length: 3260m

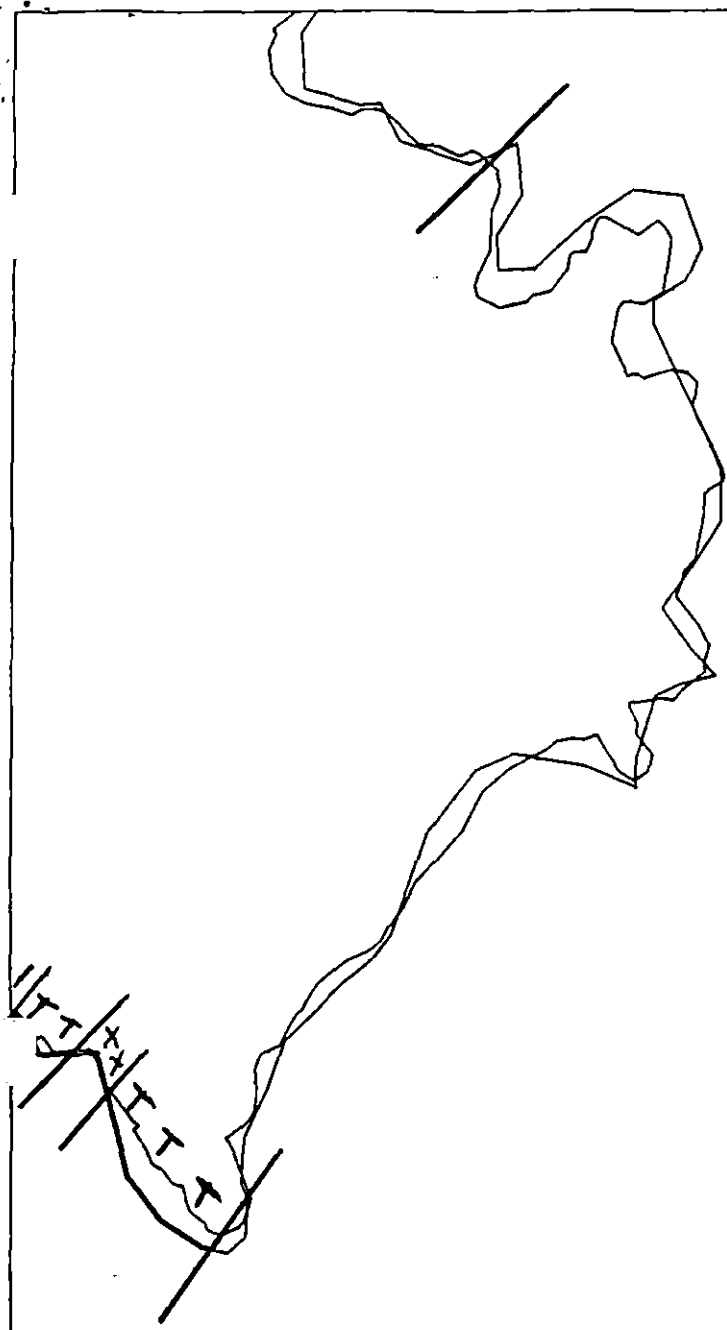


Map Key: PWS-129a

Name: G. Hayman for

Date: 4-27-90

Data Entered:



EL-108

← PWS  
129A

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EL-109

ADEC Segment Length: 3260m



Map Key: PWS-129b

Name: G. Hayman for  
C. D. Hor

Date: 4-27-82

Data Entered:

# SHORELINE EVALUATION

SEGMENT ST/ EL-109 SUBDIVISION A (1 OF 1) DATE 4/23/90

## SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6Y Recreation: Special use destination

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

See attached Ecological Constraint sheet for specific constraints and contacts.

## SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

## ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: [Signature] DATE: 5/8/90

## OILING CATEGORIZATION:

Wide 204 m: Medium 225 m: Narrow 883 m: V.Light 1537 m: No Oil 411 m  
Subsurface Oil Observed: Yes X No      Maximum Depth 38 cm

## RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pickup of cleanup debris in areas indicated on sketch maps #1 and 2, 2) manual removal of tarmat in area indicated on sketch map #4, 3) manual raking of surface cobble in area indicated on sketch map #2, and 4) bioremediation of areas indicated on sketch maps #1,2,3,4. Work should be conducted after 5/1.

TAG COMMENTS: MONITORS TO ASSESS LOGS AND NEED FOR TREATMENT.

TAG APPROVAL DATE: 5/7/90

ADEC Art Weimer

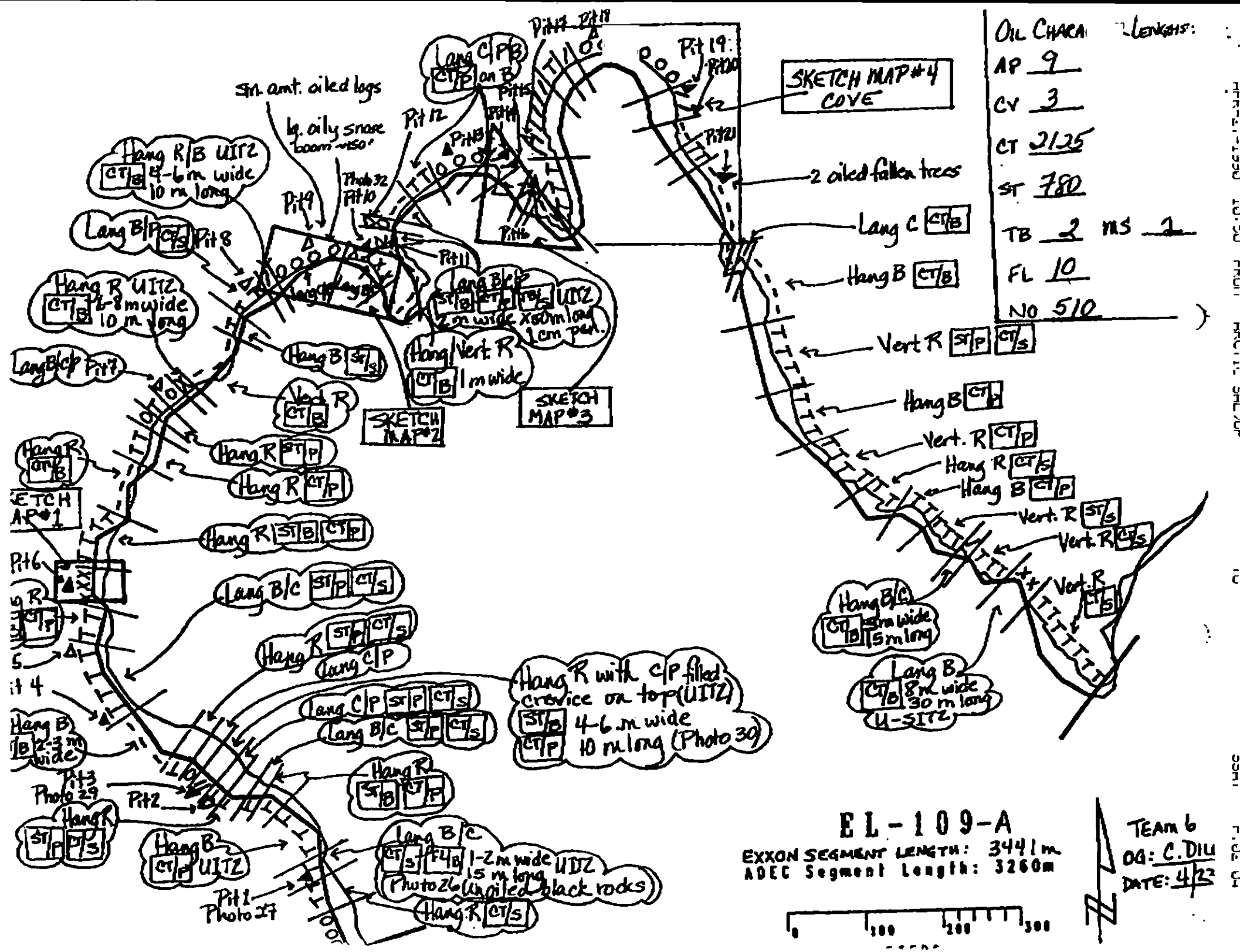
EXXON Andy Tish

NOAA Gary Petrus

USCG G.A. REITER

FOSC: [Signature] DATE: 5-12-90





OIL CHARACT. LENGTHS:  
AP 9  
CV 3  
CT 2125  
ST 780  
TB 2 MS 1  
FL 10  
NO 510

SKETCH MAP #4  
COVE

SKETCH MAP #2

SKETCH MAP #3

EL-109-A

EXXON SEGMENT LENGTH: 3441 m  
ADEC Segment Length: 3260 m

TEAM 6  
OG: C. DIU  
DATE: 4/23



SEGMENT S1 7-L709SUBDIVISION ADATE 04/23 90

SKETCH MAP #1

N

1. manual pickup of oily snare boom

2. Bioremediate (Granular type Fertilizer) entire area of UI/SU

## CHECKLIST

☐ N Area  
☐ Approx. Scale  
☐ Seg/Sub Body  
☐ Oil Dist.  
☐ Width  
☐ Length  
☐ % Cover  
☐ Substrate Character  
☐ Est. HM/L/ML  
☐ 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

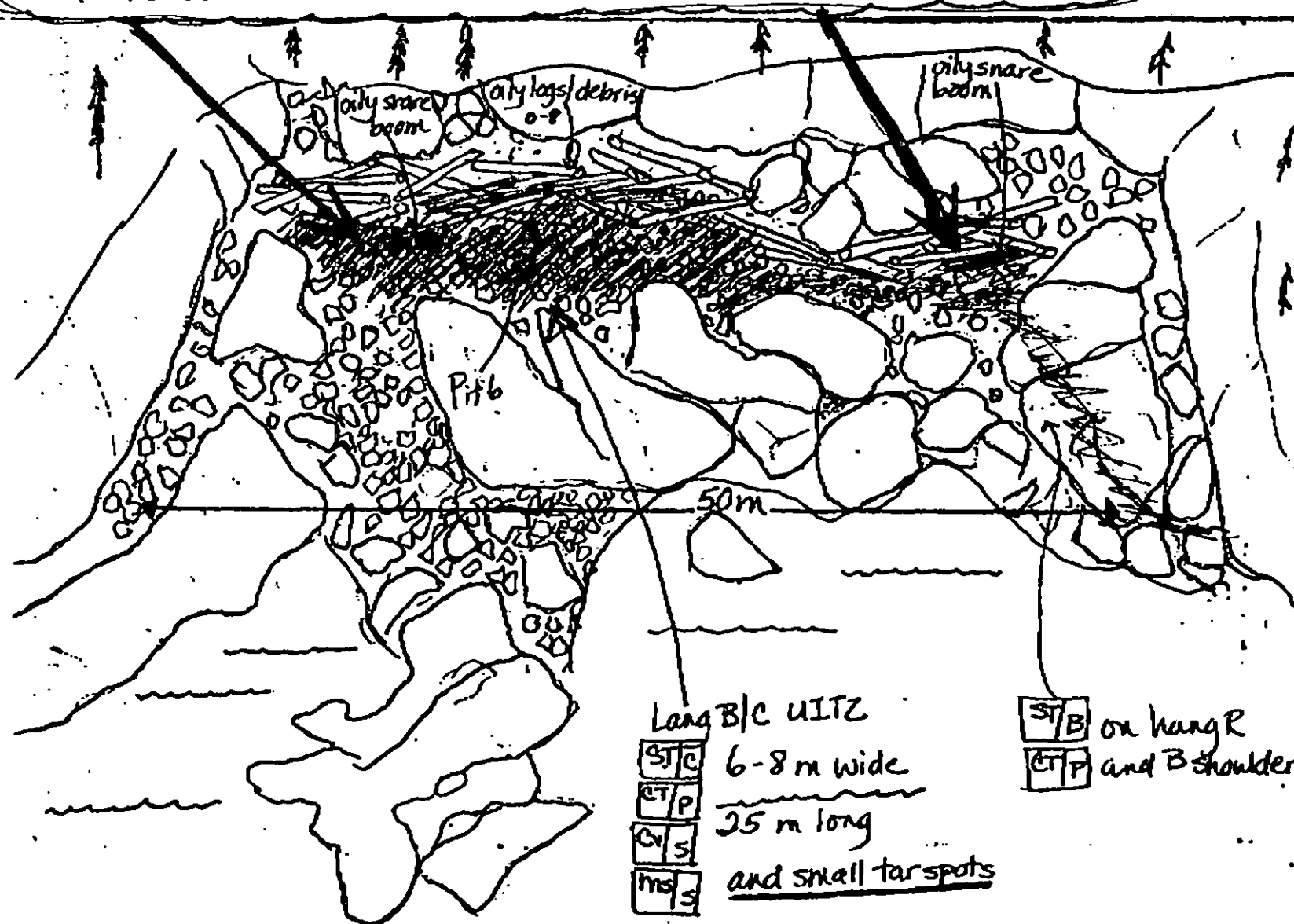
Spatched Distribution

lll

Oiled Vegetation

1 ●→

Photo location, direction, and number

Oil Character Length (m): AP 0 PO 0 CV 3 CT 15 ST 30 MS 2 PT 0 TB 0 FL 0 NO 0

SEGMENT ST -109SUBDIVISION ADATE 04/23/90

## CHECKLIST

☐ N Area  
☐ Approx. Scale  
☐ Seg/Sub Study  
☐ Oil Dist.  
☐ Width  
☐ Length  
☐ % Cover  
☐ Substrate Character  
☐ Est. HRA/LYL  
☐ SSL  
☐ Profile Location(s)  
☐ Profile(s)  
☐ Pit Location(s)  
☐ Photo Location(s)

## LEGEND

1 Δ

Pit - No Subsurface Oil

2 Δ

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

 Oiled Vegetation  
 eee

1 ●●

Photo location, direction, and number

Lang B/R  
 CT/E 4-6 m wide  
 10 m long

Lang P/C beach  
 No oil

Lang B/C  
 ST/C 11-12Z  
 CT/B 12 m wide  
 40 m long

CT/B  
 Vert. R

1. Manual pickup of snare boom
2. Break up surface cobble and bioaccumulate.

Sm. amt. oiled logs

oiled snare boom

Pit 10  
 0-8a

200m

 Oil Character Length (m): AP 0 PO 0 CV 0 CT 75 ST 35 MS 0 PT 0 TB 0 FL 0 NO 90

SEGMENT ST/ 109

SUBDIVISION A

DATE 04/23/00

## CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Side Body
- ☐ Oil Out
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HBL/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PH Location(s)
- ☐ Photo Location(s)

## LEGEND

1 Δ

P1 - No Subsurface Oil

2 Δ

P1 - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Spotted Distribution

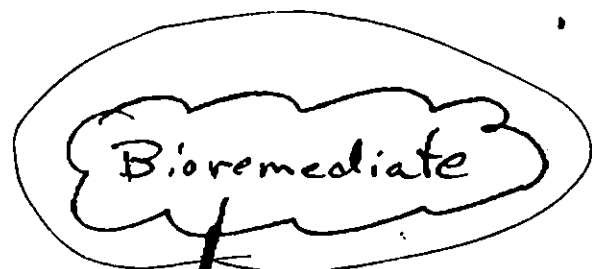
eee

Oiled Vegetation

1 ●→

Photo location, direction, and number

Character Length (m): AP 0 PO 0 CV 0 CT 180 ST 20 MS 0 PT 0 TB 0 FL 0 NO 0 TOTAL LENGTH = 200m

Pit 14  
0-5Pit 15  
0-10Pit 16  
0-1Vert. R  
CT/BLang B  
CT/B 10m long  
3m wideVert. R  
CT/C 1-2 m wideLang B/C  
ST/C U1TZ  
CT/B 4-6 m wide  
40 m long

OG C. DILLON

SEGMENT ST. L-109

SUBDIVISION A

DATE 04/23/90

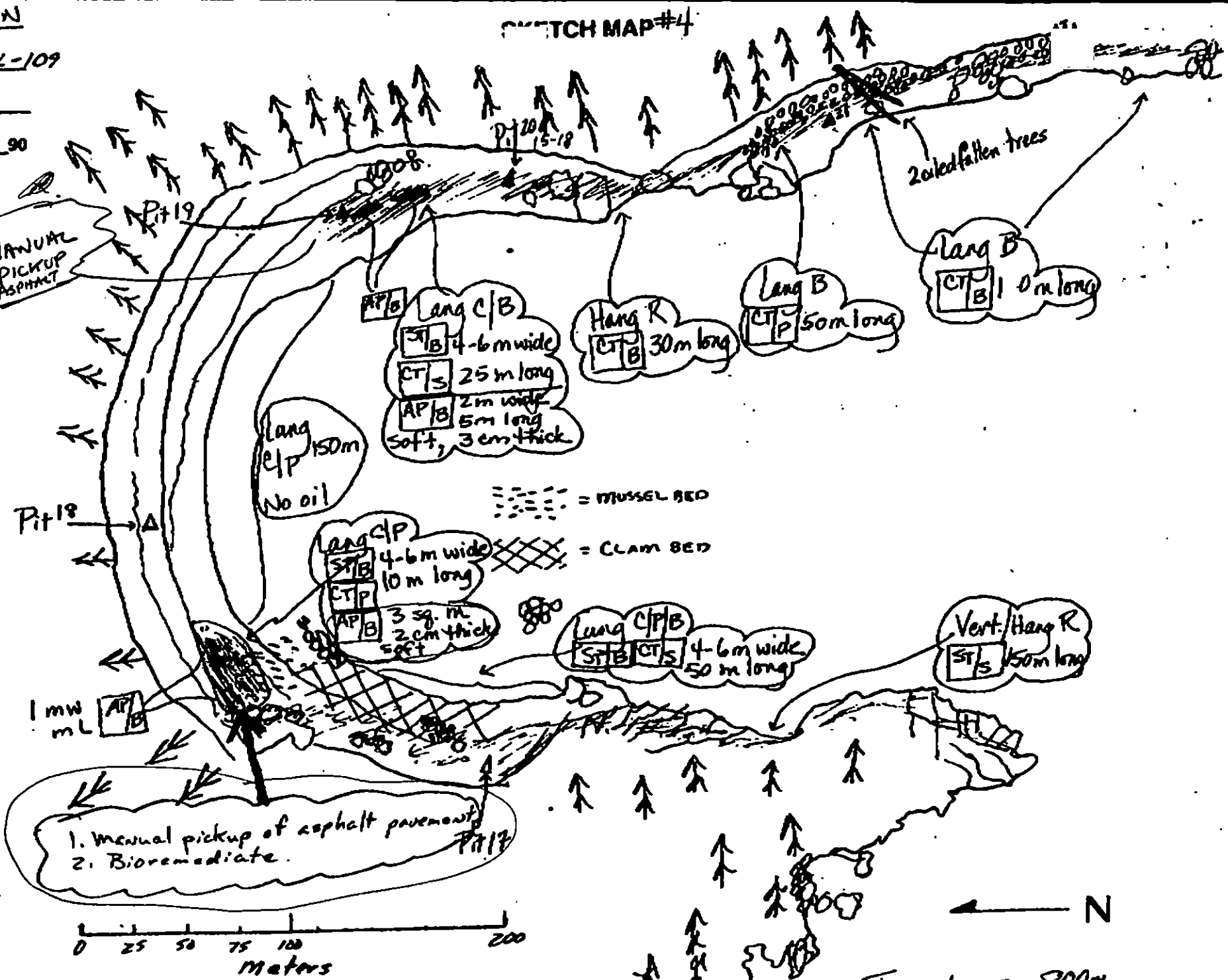
# CHECKLIST

- ☐ N Area
- ☐ Approx. Scale
- ☐ Seg/Sub Backy
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. MW/LVL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Photo(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

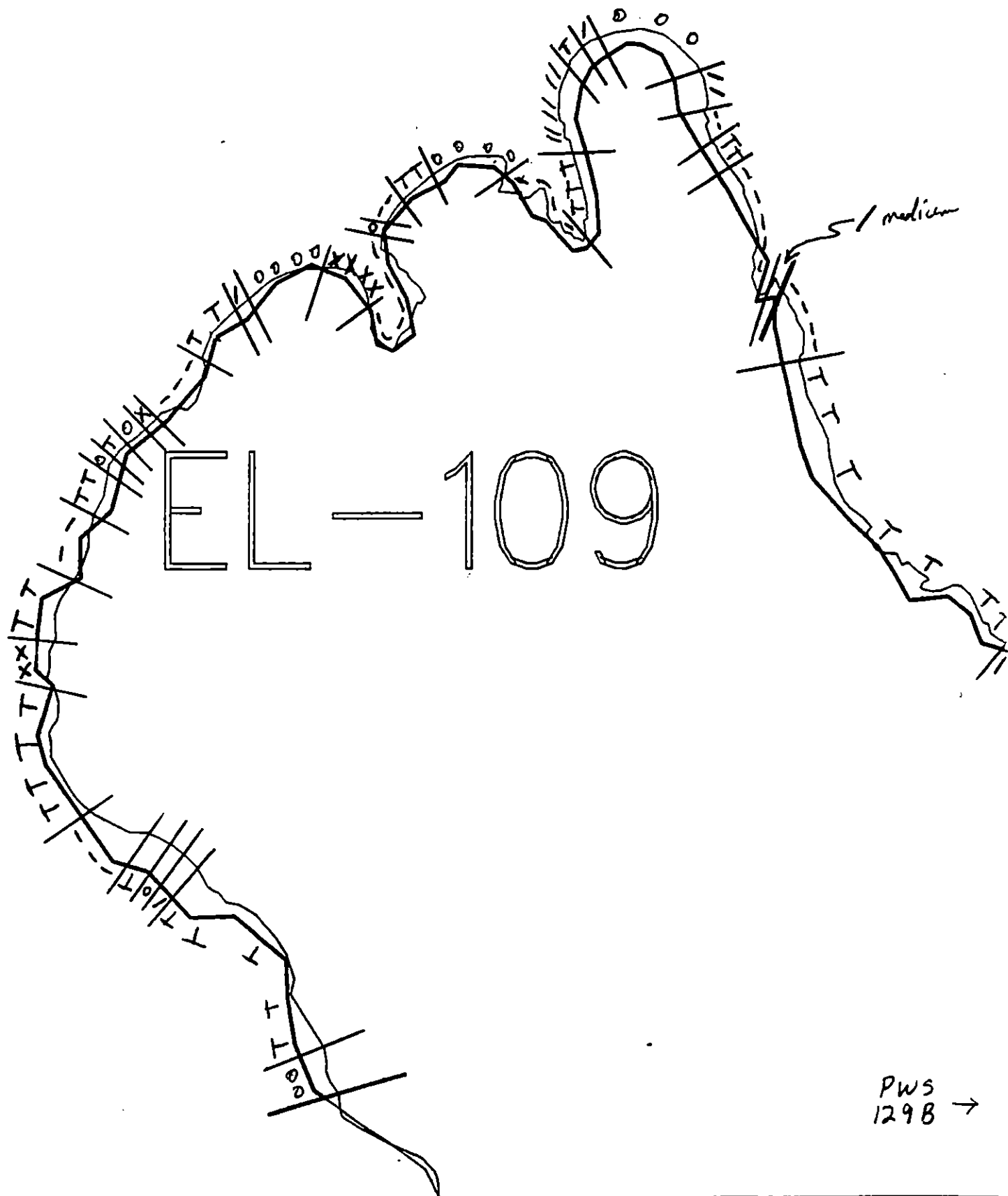
# LEGEND

- 1 Δ Pit - No Subsurface Oil
- 2 Δ Pit - Subsurface Oil
- CT/C Continuous Distribution
- CT/B Broken Distribution
- CT/P Patchy Distribution
- CT/S Splashed Distribution
- eee Old Vegetation
- 1 00 Photo location, direction, and number

# SKETCH MAP #4



Oil Character Length (m): AP 9 PO 0 CV 0 CT 431 ST 210 MS 0 PT 0 TB 0 FL 0 NO 150 TOTAL LENGTH = 800m



PWS  
1298 →

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EL-109

ADEC Segment Length: 3260m



Map Key: PWS-129a

Name: G. Hayman for  
R. Dillon

Date: 4-27-90

Data Entered:

EL-108

← PWS.  
129A

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EL-109

ADEC Segment Length: 3260m

0 100 200 300  
METERS

Map Key: PWS-129b

Name: G. Hayman for  
C. D. Hor

Date: 4-27-80

Data Entered:

# 1991 MAYSAP EVALUATION

SEGMENT: EL 109 SUB: A REGION: PWS SURVEY DATE: 5/3/91

## ENVIRONMENTAL SENSITIVITIES:

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

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

## ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

Y

Manual Pickup (Check as Req.)

X

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other Manually Rake/Till

Other

X

X

## COMMENTS:

INITIAL: Remove easily accessible asphalt at locations A1, B1,

B2, and B3. Where feasible manually rake/till Customblen and

Inipol into sediments at locations A1, A2, and A3. Apply Custom-

blen and Inipol at locations B1, B2, and B3.

TAG: \_\_\_\_\_

FOSC: \_\_\_\_\_

TAG APPROVAL DATE: \_\_\_\_\_

FOSC APPROVAL DATE: \_\_\_\_\_

ADEC \_\_\_\_\_

FOSC \_\_\_\_\_

EXXON \_\_\_\_\_

USCG \_\_\_\_\_

NOAA \_\_\_\_\_

**ECOLOGICAL CONSTRAINTS  
1991 FIELD ACTIVITIES**

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

**Subsistence - Deer Harvesting:** Unlimited treatment prior to 8/15.

# MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL 109 SUBDIVISION A DATE 5/3/91

ADEC

NAME Robt Montesano

SIGNATURE [Signature]

☐ NTR ☒ TREATMENT RECOMMENDED

SITE 4 - NEARLY CONTINUOUS AP/HOR under Small Boulders. Remove THIS easily Accessible Area along w/ a small AP Area ON THE BEACH JUST TO SOUTH - LITE, by logs, very visible - This beach was checked ONLY By me.

SITE 3 - REMOVE READILY ACCESSIBLE HOR + AP SEDS - above GROW ZONE, EASY BEACH ACCESS - 100% Litter Poor Job in 1990.

SITE 2 - Remove well defined AP AT EAST END OF BEACH.

NOTE: AN EAGLE + OTTER - BOTH DEAD - WERE FOUND ON THIS SITE. THE AGJ WAS TOLD NOT TO INCLUDE THESE ON MAPS

SITE 1 - REMOVE AP/SOR AT VARIOUS SITES; CLEAR CUT WORK.

EXXON

NAME C.M. KATSIMPALIS

SIGNATURE [Signature]

☐ NTR

THIS SEGMENT COULD BENEFIT FROM ADDITIONAL MANUAL TREATMENT.

LANDMANAGER

NAME DENNIS S. Kennedy OF USPS

SIGNATURE [Signature]

☐ NTR subdividing gets good high energy wave action.

In site #1 if any work is presented care must be taken along tide pools and mussel bed.  
at site #2 I agree with Bio that we should avoid any work around bedrock. (see Biological summary form)

USCG/NOAA

NAME MICHEL (NOAA) Bm ZENONE (CG)

SIGNATURE [Signature]

☐ NTR

Although obviously a high-energy shoreline, oil has persisted below the coarse boulders and along the rocky/boulder ends of each pocket beach. Site 4 has very large boulders and most of the oil is inaccessible. The other sites have small but occasionally high % coverage of heavy SOR and AP. The subsurface oil was of very limited extent. In all there has been only moderate changes in the surface oil distribution since ASAP. Michel

261-

EL-109 COULD USE SOME MANUAL WORK. THE EXTENT + METHODS SHOULD TAKE CARE IN CONSIDERATION BIO REPORT - OVER WORKING COULD BE INTRUSIVE. 2

TEAM NO. 1OG B. TRIMMBIO J. BensonSEGMENT EL 109ADEC P. MONTESANOLANDMANAGER D. Kennedy for USFSSUBDIVISION AEXXON C. KATSIMPALISBMT ZENONE  
USCG/NOAA JACQUI MICHEL/NAIADATE 5 / 3 / 91TIME 07:46 to 10:10TIDE LEVEL +3.8 ft. to +0.5 ft.ENERGY LEVEL: ☒ H ☐ M ☐ LSURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELOWEATHER: ☐ SUN ☐ CLOUDS ☐ FOG ☒ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 1200 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W        m M 20 m N 140 m VL 75 m NO 9105 m US 2160 m

| L<br>O<br>C | SURFACE OIL CHARACTER |    |    |     |    |    |    |    |    |    | SURFACE<br>SEDIMENT<br>TYPE | SHORE<br>SLOPE<br>V H M L | AREA       |             | ZONE |    |    |    | NOTES |
|-------------|-----------------------|----|----|-----|----|----|----|----|----|----|-----------------------------|---------------------------|------------|-------------|------|----|----|----|-------|
|             | AP                    | MS | TB | SOR | CV | CT | ST | FL | DB | NO |                             |                           | WIDTH<br>m | LENGTH<br>m | S    | UI | MI | LI |       |
| A1          | S                     |    |    |     |    |    |    |    |    |    | B                           | H                         | 1          | 30          |      | X  |    |    |       |
| A2          |                       |    |    | P   |    |    |    |    |    |    | B                           | H                         | 1          | 30          |      | X  |    |    | H/SOR |
| A3          |                       |    |    | P   | S  | S  | S  |    |    |    | B                           | H                         | 1.5        | 30          |      | X  |    |    | L/SOR |
| B1          | S                     |    |    | P   |    |    |    |    |    |    | B                           | H                         | 2          | 40          | X    |    |    |    | H/SOR |
| B2          | B                     |    |    |     |    |    |    |    |    |    | B                           | H                         | 1          | 2           | X    |    |    |    |       |
| B3          | P                     |    |    |     |    |    |    |    |    |    | B                           | H                         | 1          | 13          | X    |    |    |    |       |
| C1          | B                     |    |    |     |    |    |    |    |    |    | B                           | H                         | 1          | 2           |      | X  |    |    |       |
| C2          |                       |    |    |     |    | S  |    |    |    |    | B                           | H                         | 1          | 15          |      | X  |    |    |       |
| C3          |                       |    |    |     |    | S  |    |    |    |    | B                           | H                         | 1          | 35          |      | X  |    |    |       |
| C4          | P                     |    |    |     |    |    |    |    |    |    | BC                          | H                         | 1          | 10          | X    |    |    |    |       |
| C5          |                       |    |    |     |    | S  |    |    |    |    | R                           | V                         | 1.5        | 30          | X    |    |    |    |       |
| D1          |                       |    |    | B   |    |    |    |    |    |    | BPR                         | H                         | 1          | 2           |      | X  |    |    | H/SOR |
| D2          |                       |    |    | B   |    |    |    |    |    |    | BPR                         | M                         | 1          | 2           |      | X  |    |    | H/SOR |
| D3          |                       |    |    |     |    | S  |    |    |    |    | BPR                         | M                         | 1          | 25          |      | X  |    |    |       |
| D4          |                       |    |    | S   | S  |    |    |    |    |    | C                           | M                         | 3          | 20          |      | X  |    |    |       |
| D5          |                       |    |    | P   |    |    |    |    |    |    | C                           | M                         | 2          | 9           |      | X  |    |    | H/SOR |

DISTRIBUTION: C=91-100%; B=51-80%; P=11-50%; S=1-10%; T=&lt;1%

SLOPE: V=VERTICAL; H=HIGH ANGLE; M=MEDIUM ANGLE; L=LOW ANGLE PHOTO ROLL # MAYSAP- 2 - 5 FRAMES 8-18

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER <sup>±</sup> |     |     |     |    |    |    | OILED ZONE cm-cm | CLEAN BELOW Y/N | H2O LEVEL (cm) | SHEEN COLOR B R B N | PIT ZONE |    |    |    | SURFACE-SUBSURFACE SEDIMENTS | NOTES               |
|---------|----------------|---------------------------------------|-----|-----|-----|----|----|----|------------------|-----------------|----------------|---------------------|----------|----|----|----|------------------------------|---------------------|
|         |                | OP                                    | HOR | MOR | LOR | OF | TR | NO |                  |                 |                |                     | S        | UI | MI | LI |                              |                     |
| 1       | 8              |                                       | X   |     |     |    |    |    | 0-8              | Y               | —              | —                   |          | X  |    |    | B-PGB                        | =AP under boulder   |
| 2       | 15             |                                       |     | X   |     |    |    |    | 10-15            | N               | —              | —                   |          | X  |    |    | B-PGB                        | between 2 boulders  |
| 3       | 13             |                                       | X   |     |     |    |    |    | 0-11             | Y               | 10             | B                   | X        | X  |    |    | B-PGB                        | Assoc. w/ AP        |
| 4       | 21             |                                       | X   |     |     |    |    |    | 18-21            | Y               | 20             | B                   | X        |    |    |    | PC-GPCB                      | behind rock/boulder |
| 5       | 15             |                                       |     | X   |     |    |    |    | 5-15             | N               | —              | —                   | X        |    |    |    | B-GPCB                       | SOR on top          |
| 6A      | 22             |                                       | X   |     |     |    |    |    | 10-11            | Y               | —              | —                   | X        |    |    |    | B-PGSM                       | base sl. fl         |
| 6B      |                |                                       |     | X   |     |    |    |    | 11-16            |                 |                |                     |          |    |    |    |                              |                     |
| 6C      |                |                                       |     |     |     |    |    |    | 16-24            |                 |                |                     |          |    |    |    |                              |                     |
| 7       | 17             |                                       |     |     |     |    |    | X  | —                | Y               | 17             | N                   |          | X  |    |    | CB-GPC                       |                     |

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

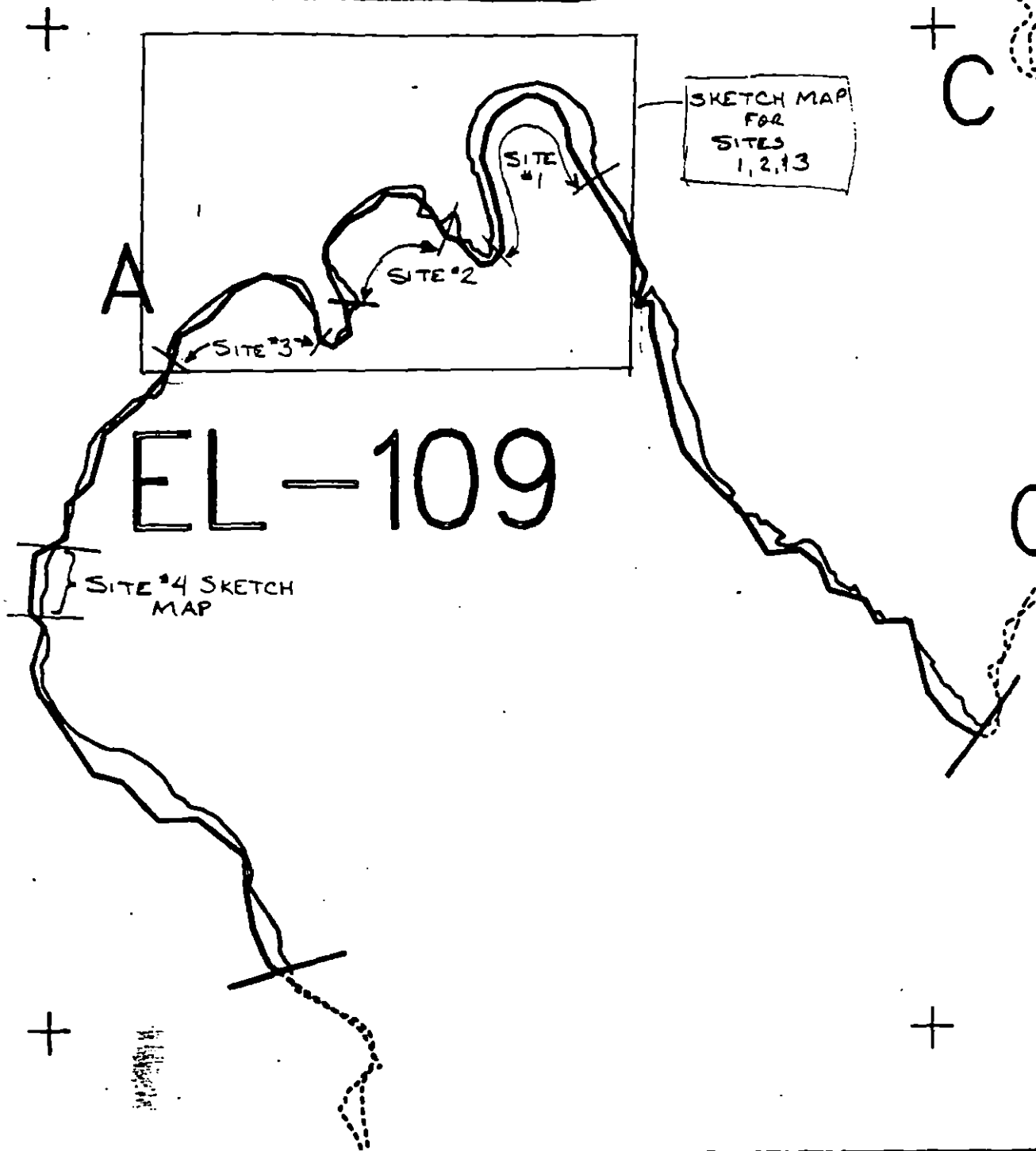
## OG COMMENTS:

- 4 SMALL INDENTED POCKET BEACHES EXPOSED TO HIGH WAVE ENERGIES  
TYPICALLY OIL FOUND ON SIDES OF SOUTH FACES BEACHES, IN BOULDER TALUS
- Pit #1, 4 excavated between 2 boulders 
- After removing a boulder from the top of Pit #11, MOR was found from 0-10 cm on the lee side & NO oil from 0-10 of the exposed side of the pit 

revised 5/7/91 KG.  
SF revised 5/11



# SKETCH LOCATIONS



XXXX  
////  
----  
TTTT  
0000

Wide  
Medium  
Narrow  
Very Light  
No Oil

EL109 A

ADEC Subsegment Length: 3200m

METERS

5 100 200

AK State Plane Zone 4  
Datum: NAD83



Subdivision Field Map

Map Key: KHEL109Aa

Name: BTRIMM

Date: 5/3/91

Date Entered:

North



ELEANOR ISLAND

0 200  
meters

OG SKETCH MAP  
EL109-A  
SITE #4  
3-MAY-91  
0746-1010  
BRYAN TRIMM  
MAP 1 of 2

SITE #4

TREES

ANGULAR  
BOULDER TALUS

0 25  
meters

A1  
AP 5%  
1 x 30m

A2  
SOR-HVY 40%  
1 x 30m

SOR-LT 40%  
CV 5%, CT 5%  
ST 5%  
1.5 x 30m

2 x 30m  
HOR

11

10

HOR

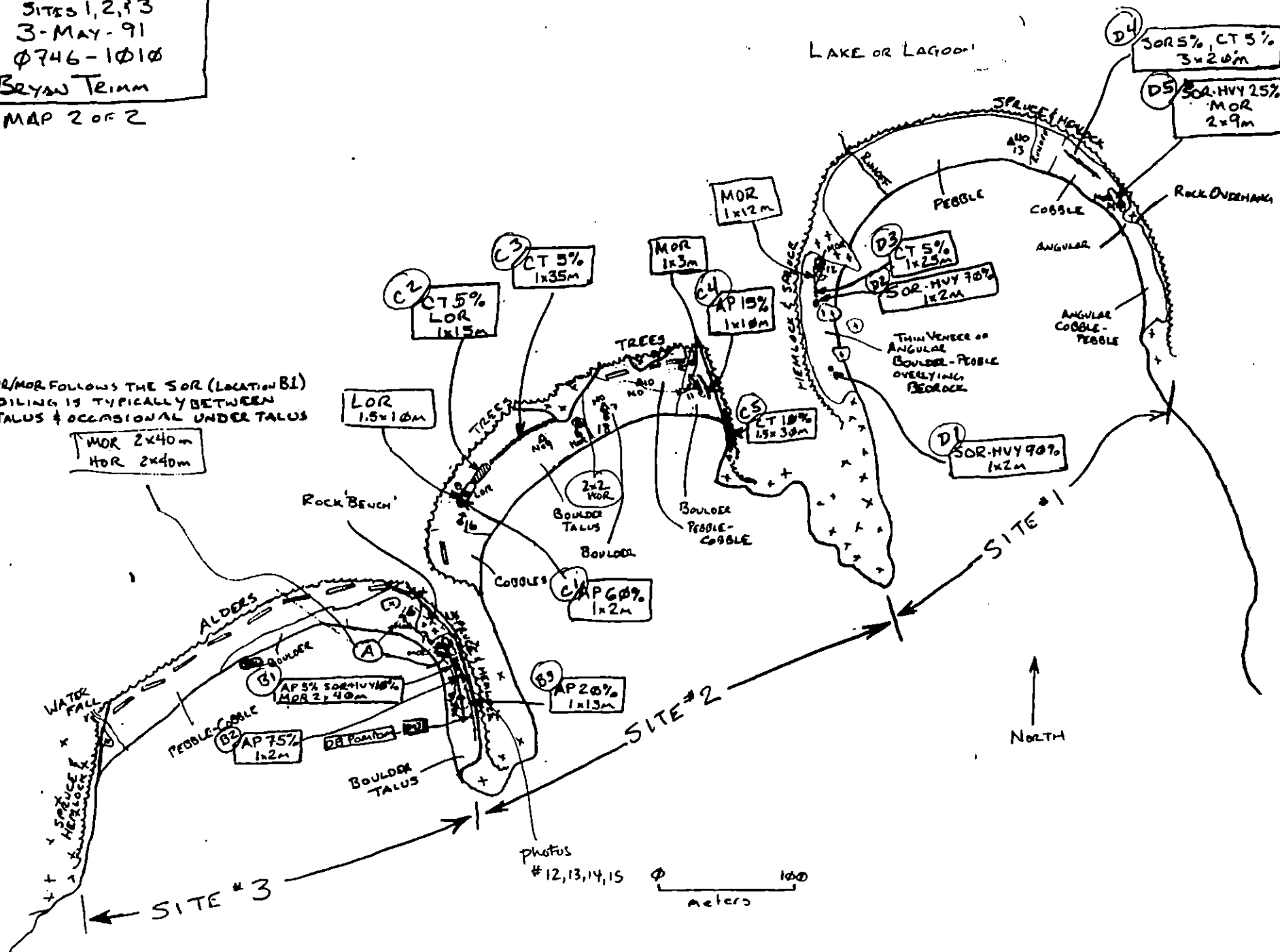
TREES

revised 5/1/91 R.S.  
ET revised 5/11

OGS CH MAP  
EL109-A  
SITES 1, 2, & 3  
3-MAY-91  
Ø746-1Ø1Ø  
Bryan Trim  
MAP 2 of 2

① MOR/MOR FOLLOWS THE SOR (LOCATION B1)  
OILING IS TYPICALLY BETWEEN  
TALUS & OCCASIONAL UNDER TALUS

MOR 2x40m  
HOR 2x40m



revised 5/7/91 KC

Revised May 11

# MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 3 May '91  
 SEGMENT # EL 109 TIDAL HEIGHT (Range) +6' to +1'  
 SUBDIVISION A BIOLOGIST Benson  
 SEA STATE 2' WIND SPEED/DIRECTION calm  
 PHOTOGRAPHS: ROLL # — FRAME # —

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

(A1), (A2), (A3), Pit #1 - Verrucaria grows on the oiled rocks in the UITE. This area has a moderate overall species diversity. Barnacles were dense, and Littorina moderately dense, on the boulders & bedrock. I saw no egg masses, but there is recent recruitment of barnacles, Littorina & Mytilus. Total biotic % cover is: moderately high since filamentous green algae (FGA), though thin, is widespread. There are also small tidepools inshore of the bedrock outcrops at the water line. The biota in these pools includes encrusting coralline algae, Scytosiphon & Mytilus, and was not diverse. There are no special ecological sensitivities here.

(B1), (B2), (B3) & Pit #2-5 - No biota on oiled surfaces. The biotic diversity of this entire cove is low. Barnacles & Littorina are sparse on both the pebble-cobble beach and the boulder talus. Fucus becomes moderately dense only on the bedrock headland to the east. The southeast wave exposure of this subdivision leads to substantial physical disturbance of the non-bedrock substrates. The bedrock populations may release substantial quantities of propagules that could settle on the pebbles, cobbles & boulders, but physical disturbance probably causes post-settlement mortality.

## WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

| BIRDS            | # OF SPECIES | TOTAL BIRDS | FISH OBSERVED<br>SPECIES PRESENT |
|------------------|--------------|-------------|----------------------------------|
| Eagles           | 1            | 1           | Oligocottus maculosus            |
| Seabirds         | —            | —           | "tidepool sculpin"               |
| Waterfowl        | —            | —           |                                  |
| Gulls/Kittiwakes | 2            | 3           | "blenny eels"                    |
| Shorebirds       | —            | —           |                                  |
| Corvids          | 1            | 1           |                                  |
| Other Birds      | —            | —           |                                  |

| MARINE MAMMALS      | # OBSERVED | LAND MAMMALS<br>SPECIES | # OBSERVED |
|---------------------|------------|-------------------------|------------|
| Sea Otters          | —          | —                       |            |
| Pinnipeds (specify) | 6          |                         |            |
| Sea Lions           |            |                         |            |
| Whales (specify)    | —          |                         |            |

Shoreline subdivision map showing important biological features attached.

Submitted March Date on M.R. 5/10/91

Subdivision: EL 109 A

Team: 2

Bio: Benson

Comments (cont.) -

- ①, ②, ③, Pits 6-10 - FGA & rare barnacles grow on oiled surfaces. The cobble, pebble-cobble, & boulder talus substrates in the center of the cove were covered with a low-diversity, low-biomass biota similar to that of ③, ② & ③.
- ④, ⑤, Pit #11 - Verrucaria grows on the rock wall with CT. Macroalgal diversity is higher on the bedrock in the protection of the headland: in the UITZ, a tide-pool harbors Rhodomela & encrusting coralline algae as well as Litterina & Oligocottus; in the MITZ, Fucus, Enteromorpha, Ulva, Halosaccion, Rhodaria; in the LITZ, Palmaria & Odonthalia combine with those species listed in the MITZ. Also, substantial amounts of drift algae (eg. Agardum, Nereocystis & Constantinea) were found among boulders. Thus, in the event of cleanup activities, the bedrock communities should be avoided to whatever extent possible.
- ①, ②, ③, Pit #12 - Oil-covered barnacles occur in the UITZ. In the boulder slope MITZ, a Mytilus bed is found in the cobble veneer between tide levels: ~~at~~ +4' and +6'. Elsewhere in the MITZ, the % cover is low on cobbles. The bedrock outcrops adjacent to the mussel bed contain small tidepools, which enhances local species diversity in this location. The LITZ biota is more diverse than bedrock LITZ biota in the centers of these 4 coves in EL 109 A. In the event of cleanup activities here, the mussel bed will be sensitive to foot traffic and substrate disturbance.
- (continued on next page)

Subdivision: EL109A

Team: 2

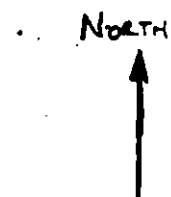
Bio: Benson

Comments (cont.) -

- ①④, ①⑤, Pits #13 & 14 - The diversity & biomass of the biota on the pebble-cobble beach extending around the cove is low.

The SE wave-exposure and small substrates on the beaches here probably tends to reduce the diversity & biomass of this subdivision's biota. This is true especially in the centers of the coves, where there are no obvious ecological sensitivities. The edges of the coves, particularly where rich bedrock-dwelling biota or the vulnerable mussel bed in Site #1 are found, are sensitive areas.

NO SKETCH MAP  
EL109-A  
SITE #4  
3-MAY-91  
0746-1010  
JOHN BENSON



0 200  
meters

ELEANOR ISLAND

SITE #4

TREES

ANGULAR  
BOULDER TALUS

HER

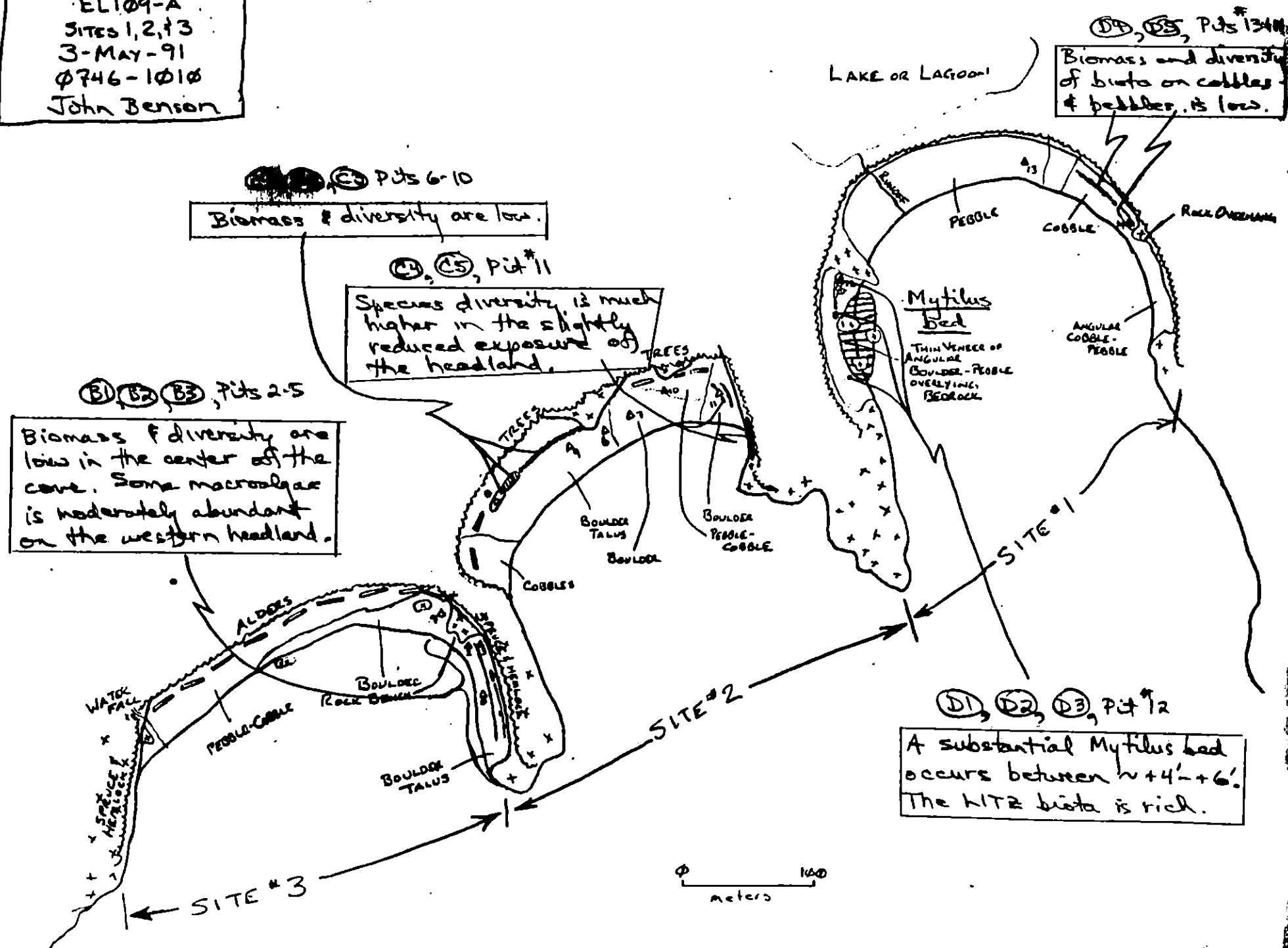
TREES

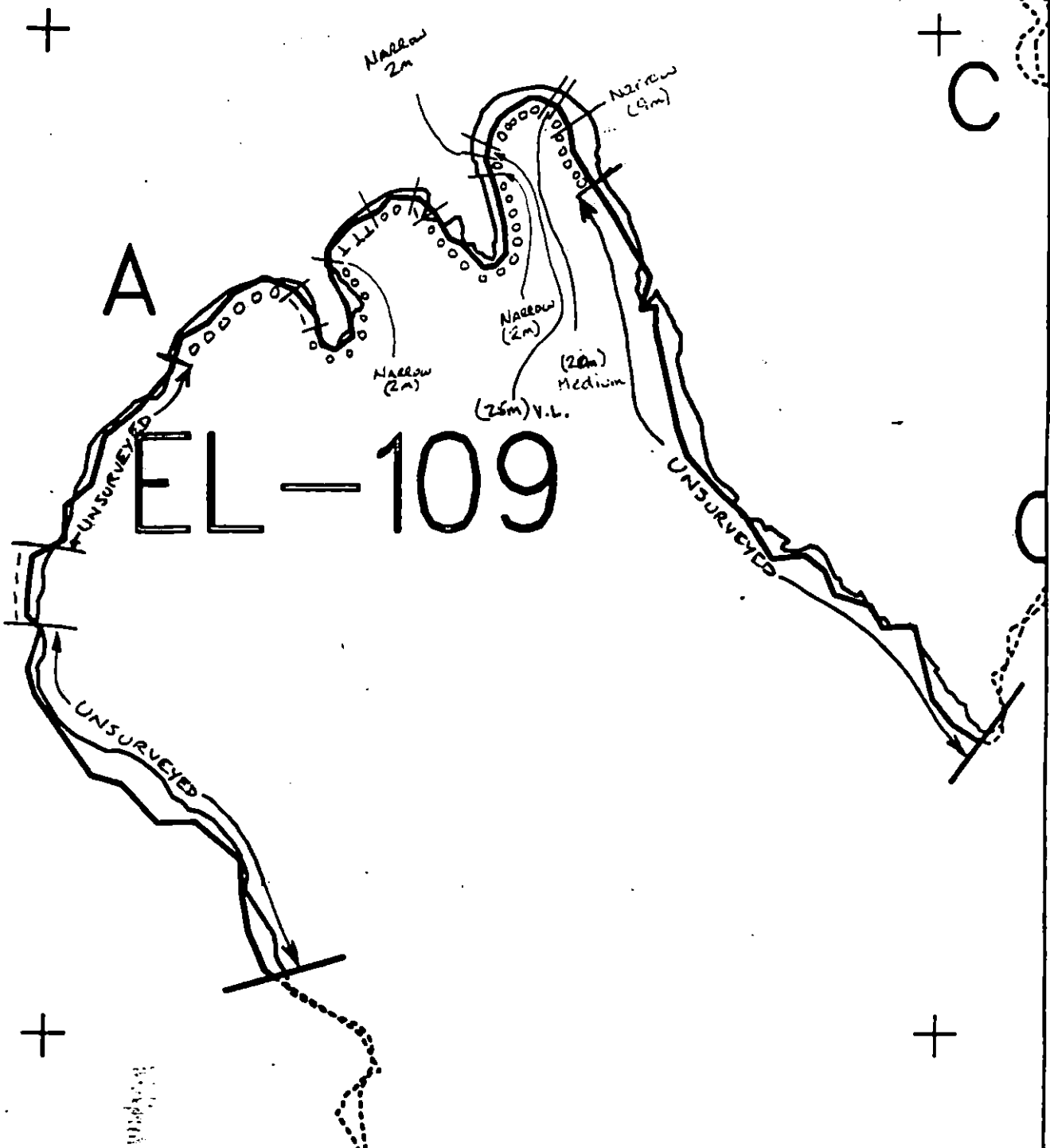
(A1) (A2) (A3)

Verticaria on oiled  
surfaces. Recent recruits  
of barnacles, limpets &  
Mytilus. No egg masses.

0 25  
meters

BIO SKETCH MAP  
EL109-A  
SITES 1, 2, & 3  
3-MAY-91  
0746-1010  
John Benson





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

**EL109 A**  
 ADEC Subsegment Length: 3200m  
 METERS  
 0 200 400  
 AK State Plane Zone 4  
 601100N

Subdivision Field Map  
 Map Key: KHIEL109Aa  
 Name: TRIMM  
 Date: 3 MAY 1991  
 Date Entered:

**SURFACE OIL MAP**

revised 5/7/91 KG  
 ES revised 5/11

# 1991 MAYSAP EVALUATION

SEGMENT: EL 109 SUB: A REGION: PWS SURVEY DATE: 5/3/91

## ENVIRONMENTAL SENSITIVITIES:

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

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

## ARCHAEOLOGICAL CONSTRAINTS:

Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time. PHONE 564-3276; 564-3657; (Anchorage) or 229-1514 (24 hrs.). *for*

## RECOMMENDATIONS:

TREATMENT REQUIRED (Y or N)

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other Manually Rake/Till

Other

INITIAL

TAG

FOSC

Y

Y

Y

X

X

X

X

X

X

X

X

X

## COMMENTS:

INITIAL: Remove easily accessible asphalt at locations A1, B1,  
B2, and B3. Where feasible manually rake/till Customblen and  
Inipol into sediments at locations A1, A2, and A3. Apply Custom-  
blen and Inipol at locations B1, B2, and B3.

TAG:

- ADD MANUAL PICKUP OF AP AT C1 + C4
- ADD MANUAL PICKUP OF EASILY ACCESSIBLE H50R  
AT D1 + D2 + D5

FOSC:

TAG APPROVAL DATE: MAY 21 1991

FOSC APPROVAL DATE: 5/25/91

ADEC

FOSC

EXXON

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

USCG

NOAA

**ECOLOGICAL CONSTRAINTS  
1991 FIELD ACTIVITIES**

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

**Subsistence - Deer Harvesting:** Unlimited treatment prior to 8/15.

# MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL 109 SUBDIVISION A DATE 5/3/91

ADEC

NAME Pete Montesano

SIGNATURE Pete Montesano

☐ NTR ☒ TREATMENT RECOMMENDED

SITE 4 - NEARLY CONTINUOUS AP/HOR under Small Boulders. Remove THIS easily Accessible Area along w/ a small AP Area ON THE Beach JUST TO SOUTH - LITZ, by logs, very visible - This beach was checked only By me.

SITE 3 - REMOVE READILY ACCESSIBLE HOR + AP SEDS - above GREEN ZONE, EASY BEACH ACCESS - LOOKS LIKE POOR JOB IN 1990.

SITE 2 - Remove well defined AP AT EAST END OF BEACH.

SITE 1 - REMOVE AP/SOR AT VARIOUS SITES; CLEAR CUT WORK.

NOTE: AN EAGLE + OTTER - BOTH DEAD - WERE FOUND ON THIS SITE. THE ISEO WAS TOLD NOT TO INCLUDE THESE ON MAPS

EXXON

NAME C.M. KATSIMPALIS

SIGNATURE C.M. Katsimpalis

☐ NTR

THIS SEGMENT COULD BENEFIT FROM ADDITIONAL MANUAL TREATMENT.

LANDMANAGER

NAME DENNIS S. Kennedy OF HSRS

SIGNATURE D.S. Kennedy

☐ NTR subdividing gets good high energy wave action.

In site #1 if any work is presented care must be taken along tide pools and mussel bed.  
at site #2 I agree with Bio that we should avoid any work around bed rock. (see Biological summary form)

USCG/NOAA

NAME MICHEL (NOAA) BmL ZENONE (CG)

SIGNATURE Michel

☐ NTR

Although obviously a high-energy shoreline, oil has persisted below the coarse boulders and along the rocky/boulder ends of each pocket beach. Site 4 has very large boulders and most of the oil is inaccessible. The other sites have small but occasionally high % coverage of heavy sor and AP. The subsurface oil was of very limited extent. In all there has been only moderate changes in the surface oil distribution since ASAP. Michel

CG-

EL-109 COULD USE SOME MANUAL WORK. THE EXTENT + METHODS SHOULD TAKE CARE IN CONSIDERATION BIO REPORT - OVER WORKING COULD BE INTRUSIVE. 2

TEAM NO. 2OG B. TRIMMBIO J. BensonSEGMENT EL 109ADEC P. MONTESANOLANDMANAGER D. Kennedy for USFSSUBDIVISION AEXXON C. KATSIMPALISBMT ZENON  
USCG/NOAA JACQUI MICHEL/NOAADATE 5 / 3 / 91TIME 07:46 to 10:10TIDE LEVEL +3.8 ft. to +0.5 ft.ENERGY LEVEL: ☒ H ☐ M ☐ LSURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELOWEATHER: ☐ SUN ☐ CLOUDS ☐ FOG ☒ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 1200 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W      m M 20 m N 140 m VL 75 m NO 965 m US 2160 m

| L<br>O<br>C | SURFACE OIL CHARACTER |    |    |     |    |    |    |    |    |    | SURFACE<br>SEDIMENT<br>TYPE | SHORE<br>SLOPE<br>VHML | AREA       |             | ZONE |    |    |    | NOTES |
|-------------|-----------------------|----|----|-----|----|----|----|----|----|----|-----------------------------|------------------------|------------|-------------|------|----|----|----|-------|
|             | AP                    | MS | TB | SOR | CV | CT | ST | FL | DB | NO |                             |                        | WIDTH<br>m | LENGTH<br>m | S    | UI | MI | LI |       |
| A1          | S                     |    |    |     |    |    |    |    |    |    | B                           | H                      | 1          | 30          |      | X  |    |    |       |
| A2          |                       |    |    | P   |    |    |    |    |    |    | B                           | H                      | 1          | 30          |      | X  |    |    | H/SOR |
| A3          |                       |    |    | P   | S  | S  | S  |    |    |    | B                           | H                      | 1.5        | 30          |      | X  |    |    | L/SOR |
| B1          | S                     |    |    | P   |    |    |    |    |    |    | B                           | H                      | 2          | 40          | X    |    |    |    | H/SOR |
| B2          | B                     |    |    |     |    |    |    |    |    |    | B                           | H                      | 1          | 2           | X    |    |    |    |       |
| B3          | P                     |    |    |     |    |    |    |    |    |    | B                           | H                      | 1          | 13          | X    |    |    |    |       |
| C1          | B                     |    |    |     |    |    |    |    |    |    | B                           | H                      | 1          | 2           |      | X  |    |    |       |
| C2          |                       |    |    |     |    | S  |    |    |    |    | B                           | H                      | 1          | 15          |      | X  |    |    |       |
| C3          |                       |    |    |     |    | S  |    |    |    |    | B                           | H                      | 1          | 35          |      | X  |    |    |       |
| C4          | P                     |    |    |     |    |    |    |    |    |    | BC                          | H                      | 1          | 10          | X    |    |    |    |       |
| C5          |                       |    |    |     |    | S  |    |    |    |    | R                           | V                      | 1.5        | 30          | X    |    |    |    |       |
| D1          |                       |    |    | B   |    |    |    |    |    |    | BPR                         | M                      | 1          | 2           |      | X  |    |    | H/SOR |
| D2          |                       |    |    | B   |    |    |    |    |    |    | BPR                         | M                      | 1          | 2           |      | X  |    |    | H/SOR |
| D3          |                       |    |    |     |    | S  |    |    |    |    | BPR                         | M                      | 1          | 25          |      | X  |    |    |       |
| D4          |                       |    |    | S   |    | S  |    |    |    |    | C                           | M                      | 3          | 20          |      | X  |    |    |       |
| D5          |                       |    |    | P   |    |    |    |    |    |    | C                           | M                      | 2          | 9           |      | X  |    |    | H/SOR |

DISTRIBUTION: C = 81-100%; B = 51-90%; P = 11-50%; S = 1-10%; T = &lt;1%

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

PHOTO ROLL # MAYSAP- 2 - 5 FRAMES 8-18

| PIT<br>NO. | PIT<br>DEPTH<br>(cm) | SUBSURFACE<br>OIL CHARACTER |     |     |     |    |    |    | OILED<br>ZONE<br>cm-cm | CLEAN<br>BELOW<br>Y/N | H2O<br>LEVEL<br>(cm) | SHEEN<br>COLOR<br>BRSN | PIT<br>ZONE |    |    |    | SURFACE-<br>SUBSURFACE<br>SEDIMENTS | NOTES               |
|------------|----------------------|-----------------------------|-----|-----|-----|----|----|----|------------------------|-----------------------|----------------------|------------------------|-------------|----|----|----|-------------------------------------|---------------------|
|            |                      | OP                          | HOR | MOR | LOR | OF | TR | NO |                        |                       |                      |                        | S           | UI | MI | LI |                                     |                     |
| 1          | 8                    |                             | X   |     |     |    |    |    | 0-8                    | Y                     | -                    | -                      | X           |    |    |    | B-PGB                               | = AP under boulder  |
| 2          | 15                   |                             |     | X   |     |    |    |    | 10-15                  | N                     | -                    | -                      | X           |    |    |    | B-PGB                               | between 2 boulders  |
| 3          | 13                   |                             | X   |     |     |    |    |    | 0-11                   | Y                     | 10                   | B                      | X           | X  |    |    | B-PGB                               | Assoc. w/ AP        |
| 4          | 21                   |                             | X   |     |     |    |    |    | 18-21                  | Y                     | 20                   | B                      | X           |    |    |    | PC-GPCB                             | behind rock/boulder |
| 5          | 15                   |                             |     | X   |     |    |    |    | 5-15                   | N                     | -                    | -                      | X           |    |    |    | B-EPBC                              | SOR on top          |
| 6A         | 22                   |                             | X   |     |     |    |    |    | 10-11                  | Y                     | -                    | -                      | X           |    |    |    | B-PGSM                              | base cliff          |
| 6B         |                      |                             |     | X   |     |    |    |    | 11-16                  |                       |                      |                        |             |    |    |    |                                     |                     |
| 6C         |                      |                             |     |     |     |    |    |    | 16-20                  |                       |                      |                        |             |    |    |    |                                     |                     |
| 7          | 17                   |                             |     |     |     |    |    | X  | -                      | Y                     | 17                   | N                      |             | X  |    |    | CB-GPC                              |                     |

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

## OG COMMENTS:

- 4 SMALL INDENTED POCKET BEACHES EXPOSED TO HIGH WAVE ENERGIES
- TYPICALLY OIL FOUND ON SIDES OF SOUTH FACES BEACHES, IN BOULDER TALLS
- Pit #1, 4 excavated between 2 boulders 
- After removing a boulder from the top of Pit #11, MOR was found from 0-10 cm on the lee side & NO oil from 0-10 of the exposed side of the pit


revised 5/7/91 KG  
revised 5/11

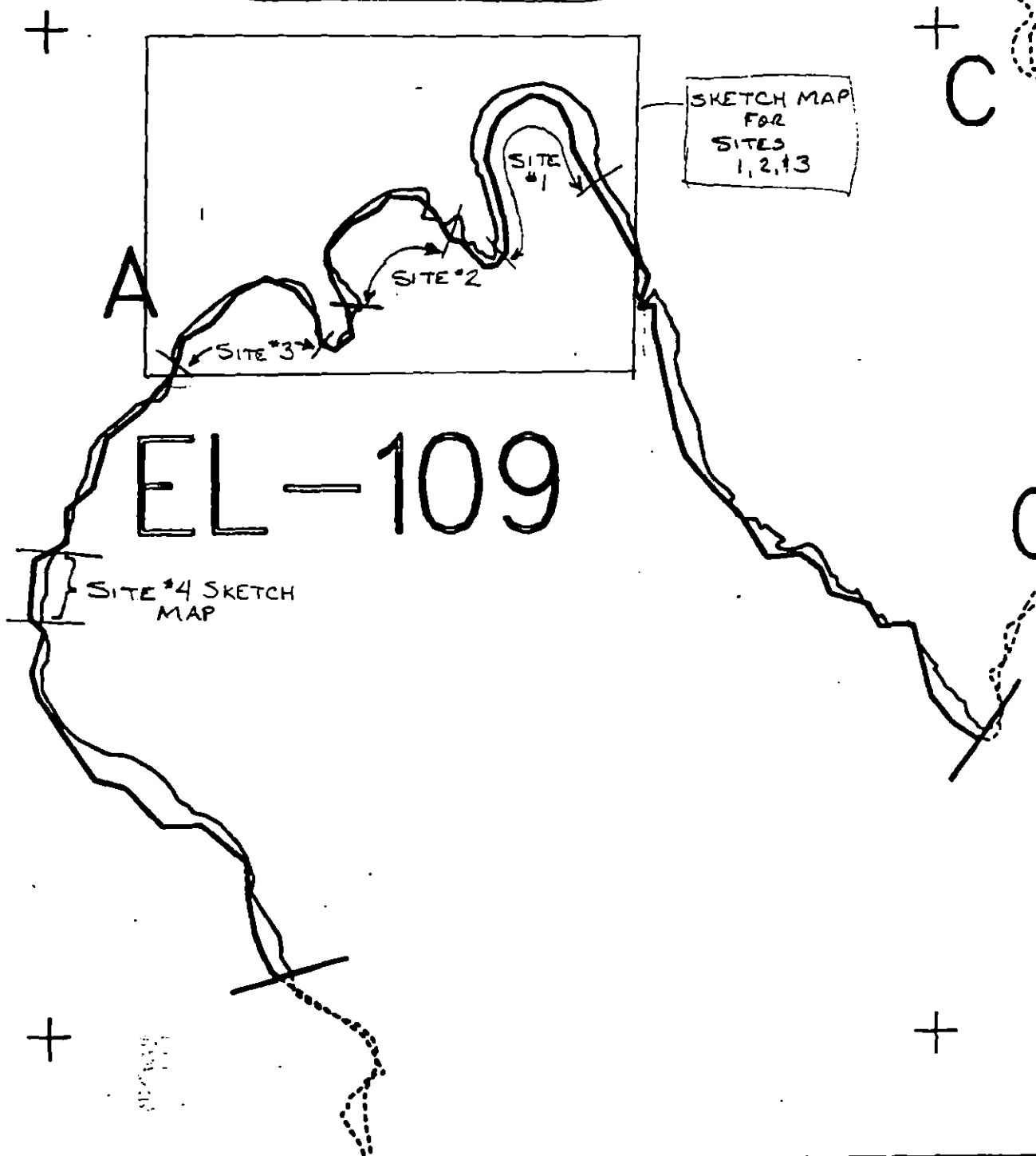
DATE 5 13 191

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

Pits 2, 3, 4, 5, 11, 12, & 14 are in protected areas - either a wave shadow zone, or boulder veneer

reviewed 5/7/91 YG  
ET reviewed 5/11

# SKETCH LOCATIONS



XXXX  
////  
----  
TTTT  
0000

Wide  
Medium  
Narrow  
Very Light  
No Oil

EL109 A

ADEC Subsegment Length: 3200m

METERS

5 200 400  
AK State Plane Zone 4  
60110000



Subdivision Field Map

Map Key: KNIEL109Aa

Name: BTRIMM

Date: 5/3/91

Date Entered:

25 revised May 11

NORTH



0 2000  
meters

ELEANOR ISLAND

CG SKETCH MAP  
EL109-A  
SITE #4  
3-MAY-91  
0746-1010  
BRYAN TRIMM  
MAP 1 of 2

SITE #4

TREES

ANGULAR  
BOULDER TALUS

0 25  
meters

A1  
AP 5%  
1 x 30m

A2  
SOR-HVY 40%  
1 x 30m

A3  
SOR-LT 40%  
CV 5%, CT 5%  
ST 5%  
1.5 x 30m

2 x 30m  
HOR

HOR  
10

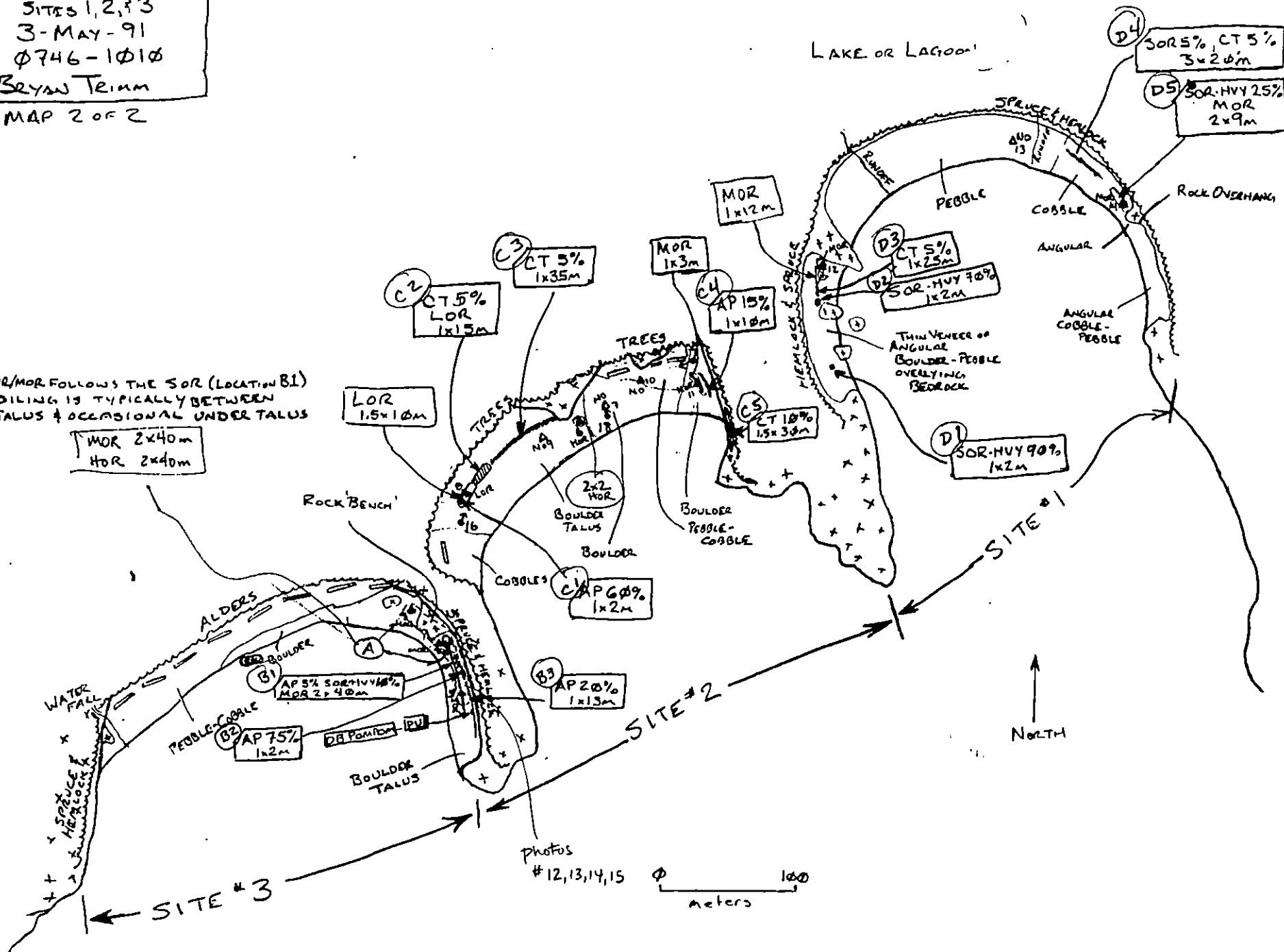
TREES

revised 5/7/91 KLG  
ET revised 5/11

OGS TCH MAP  
EL109-A  
SITES 1, 2, 3  
3-MAY-91  
0746-1010  
Bryan Trim  
MAP 2 OF 2

① MOR/MOR FOLLOWS THE SOR (LOCATION B1)  
OILING IS TYPICALLY BETWEEN  
TALUS & OCCASIONAL UNDER TALUS

MOR 2x40m  
HOR 2x40m



revised 5/7/91 KG

revised May 11

## MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 3 May '91  
 SEGMENT # EL 109 TIDAL HEIGHT (Range) +6' to +1'  
 SUBDIVISION A BIOLOGIST Benson  
 SEA STATE 2' WIND SPEED/DIRECTION calm  
 PHOTOGRAPHS: ROLL # — FRAME # —

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

(A1), (A2), (A3) - Pit #1 - Verrucaria grows on the oiled rocks in the UITE. This area has a moderate overall species diversity. Barnacles were dense, and Littorina moderately dense, on the boulders & bedrock. I saw no egg masses, but there is recent recruitment of barnacles, Littorina & Mytilus. Total biotic % cover is: moderately high since filamentous green algae (FGA), though thin, is widespread. There are also small tidepools inshore of the bedrock outcrops at the water line. The biota in these pools includes encrusting coralline algae, Scytosiphon & Mytilus, and was not diverse. There are no special ecological sensitivities here.

(B1), (B2), (B3) & Pits 2-5 - No biota on oiled surfaces. The biotic diversity of this entire cove is low. Barnacles & Littorina are sparse on both the pebble-cobble beach and the boulder talus. Fucus becomes moderately dense only on the bedrock headland to the east. The southeast wave exposure of this subdivision leads to substantial physical disturbance of the non-bedrock substrates. The bedrock populations may release substantial quantities of propagules that could settle on the pebbles, cobbles & boulders, but physical disturbance probably causes post-settlement mortality.

## WILDLIFE OBSERVATIONS

(continued on next page)

## TO BE COMPLETED IN ALL SUBDIVISIONS

| BIRDS            | # OF SPECIES | TOTAL BIRDS | FISH OBSERVED<br>SPECIES PRESENT |
|------------------|--------------|-------------|----------------------------------|
| Eagles           | 1            | 1           | Oligocottus maculosus            |
| Seabirds         | —            | —           | "tidepool sculpin"               |
| Waterfowl        | —            | —           |                                  |
| Gulls/Kittiwakes | 2            | 3           | "blenny eels"                    |
| Shorebirds       | —            | —           |                                  |
| Corvids          | 1            | 1           |                                  |
| Other Birds      | —            | —           |                                  |

| MARINE MAMMALS      | # OBSERVED | LAND MAMMALS<br>SPECIES | # OBSERVED |
|---------------------|------------|-------------------------|------------|
| Sea Otters          | —          | —                       |            |
| Pinnipeds (specify) | 6          |                         |            |
| Sea lions           |            |                         |            |
| Whales (specify)    | —          |                         |            |

Shoreline subdivision map showing important biological features attached.

Reviewed Mar 11, Reviewer M.B. 5/10/91

Subdivision: EL 109 A

Team: 2

Bio: Benson

Comments (cont.) -

- ①, ②, ③, Pits 6-10 - FGA & rare barnacles grow on oiled surfaces. The cobble, pebble-cobble, & boulder talus substrates in the center of the cove were covered with a low-diversity, low-biomass biota similar to that of ③, ② & ③.
- ④, ⑤, Pit # 11 - Verrucaria grows on the rock wall with CT. Macroalgal diversity is higher on the bedrock in the protection of the headland: in the UITZ, a tide-pool harbors Rhodomela & encrusting coralline algae as well as Littorina & Oligocottus; in the MITZ, Fucus, Enteromorpha, Ulva, Halosaccion, Rhodaria; in the LITZ, Palmaria & Odonthalia combine with those species listed in the MITZ. Also, substantial amounts of drift algae (eg. Agardum, Nereocystis & Constantinea) were found among boulders. Thus, in the event of cleanup activities, the bedrock communities should be avoided to whatever extent possible.
- ①, ②, ③, Pit # 12 - Oil-covered barnacles occur in the UITZ. In the boulder slope MITZ, a Mytilus bed is found in the cobble veneer between tide levels of +4' and +6'. Elsewhere in the MITZ, the % cover is low on cobbles. The bedrock outcrops adjacent to the mussel bed contain small tidepools, which enhances local species diversity in this location. The LITZ biota is more diverse than bedrock LITZ biota in the centers of these 4 coves in EL 109 A. In the event of cleanup activities here, the mussel bed will be sensitive to foot traffic and substrate disturbance.
- (continued on next page)

Subdivision: EL109A

Team: 2

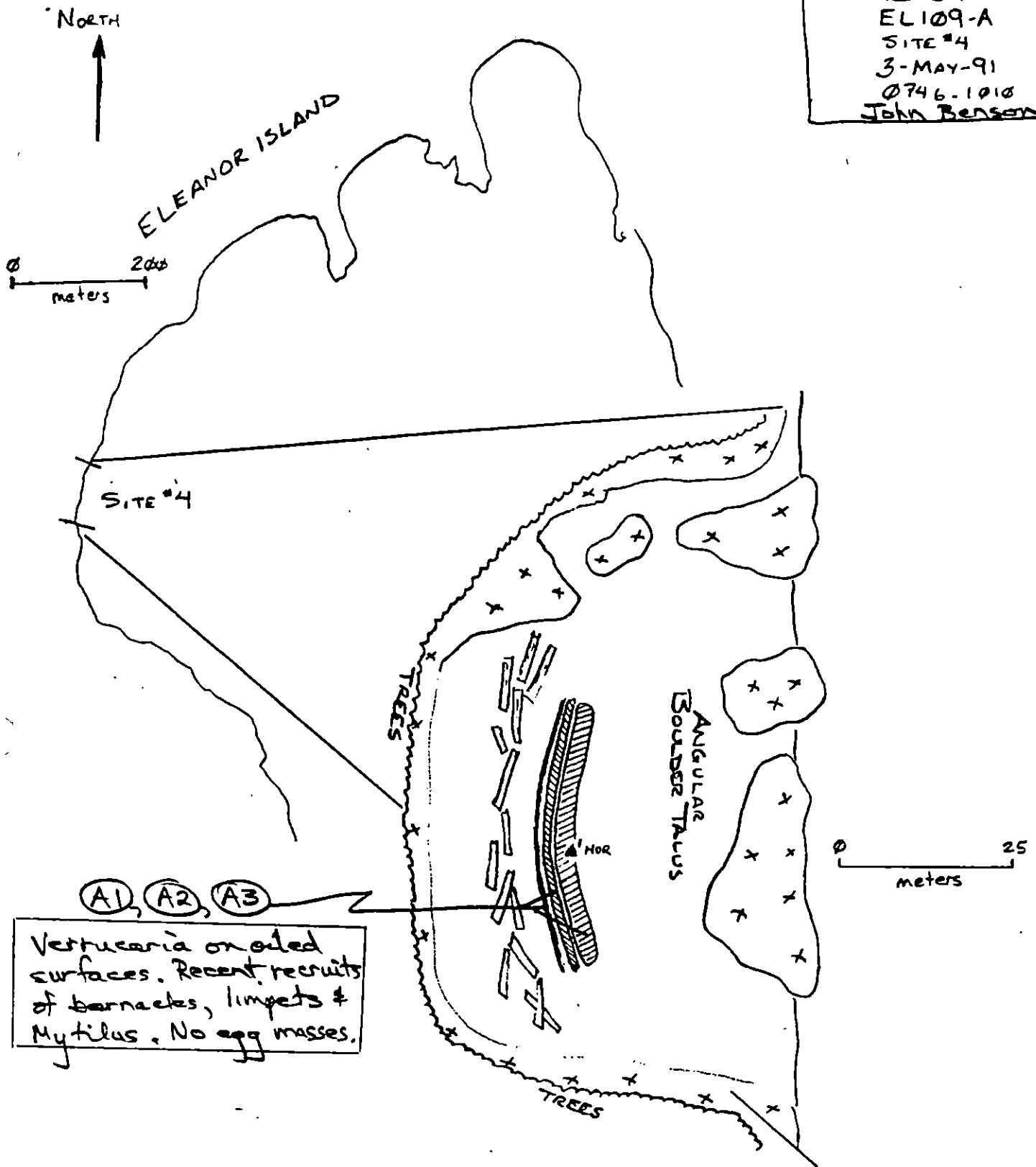
Bio: Benson

Comments (cont.) -

①④, ①⑤, Pits #13 & 14 - The diversity & biomass of the biota on the pebble-cobble beach extending around the cove is low.

The SE wave-exposure and small substrates on the beaches here probably tends to reduce the diversity & biomass of this subdivision's biota. This is true especially in the centers of the coves, where there are no obvious ecological sensitivities. The edges of the coves particularly where rich bedrock-dwelling biota or the vulnerable mussel bed in Site #1 are found, are sensitive areas.

BIO SKETCH MAP  
EL109-A  
SITE #4  
3-MAY-91  
0746-1010  
John Benson



Reviewed M.B. 5/10/91

BIO SKETCH MAP  
 EL109-A  
 SITES 1, 2, & 3  
 3-MAY-91  
 0746-1010  
 John Benson

(D1), (D2), (D3) Pits 6-10

Biomass & diversity are low.

(D4), (D5), Pit #11

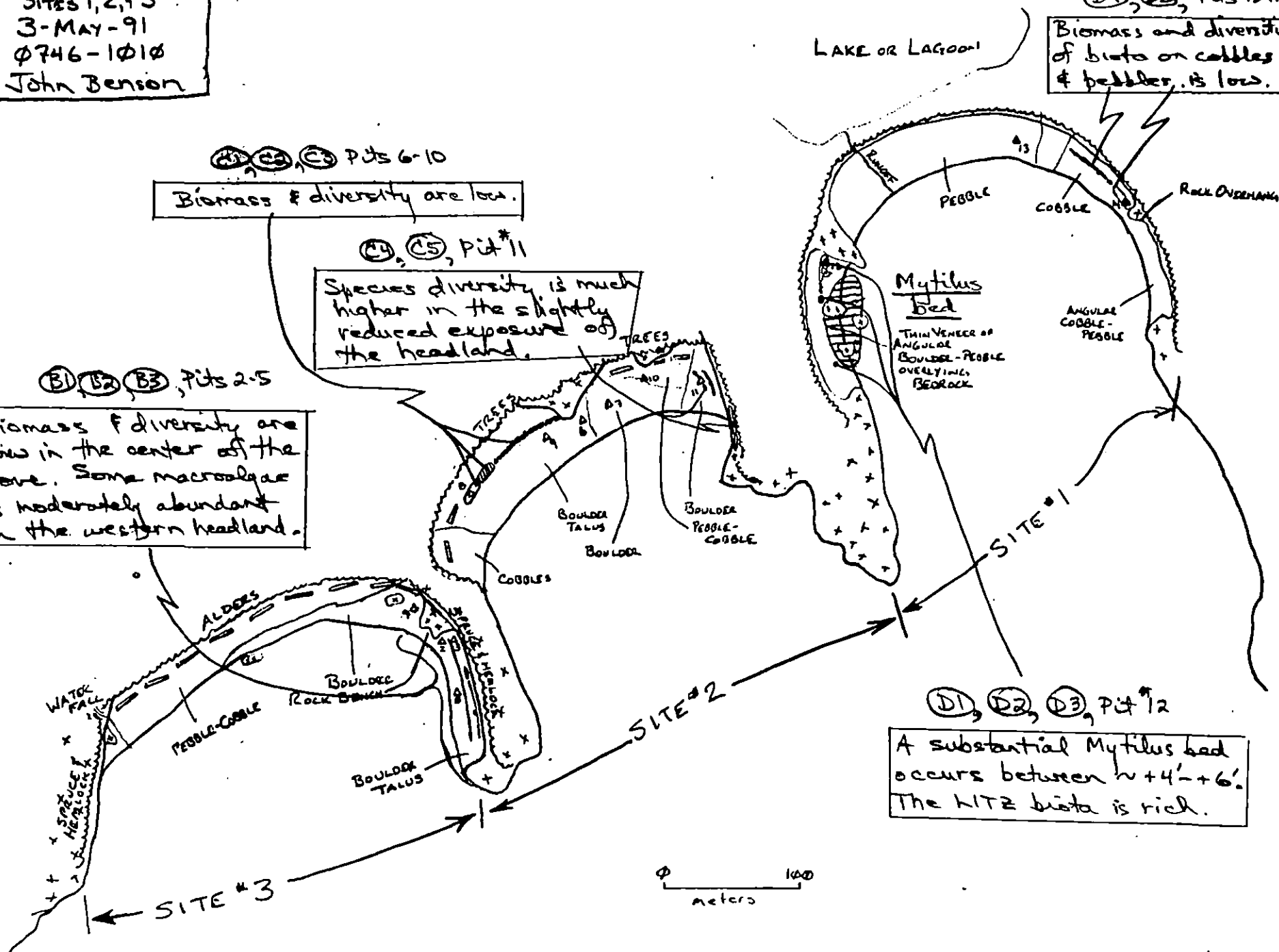
Species diversity is much higher in the slightly reduced exposure of the headland.

(B1), (B2), (B3) Pits 2-5

Biomass & diversity are low in the center of the cove. Some macroalgae is moderately abundant on the western headland.

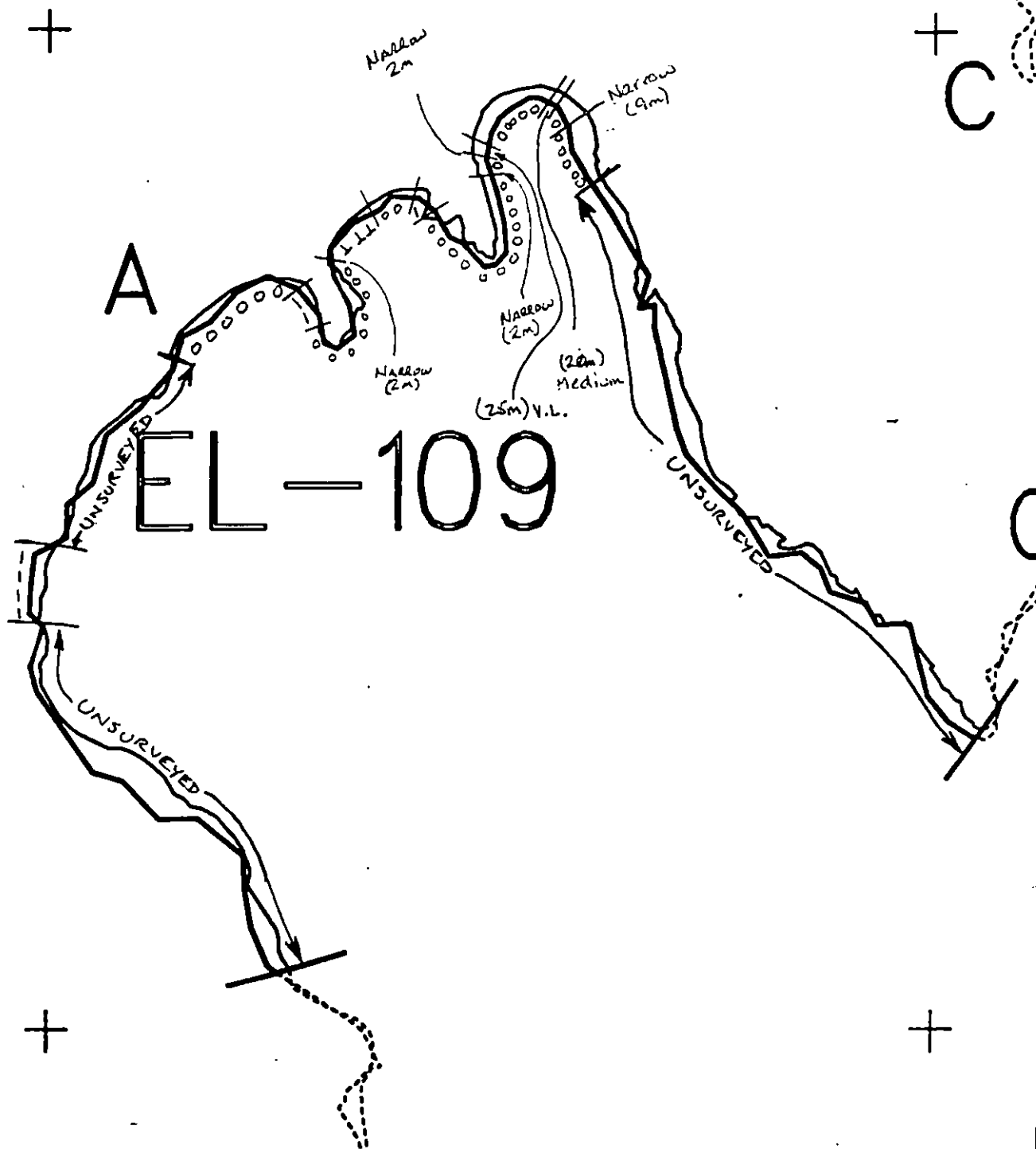
(D4), (D5), Pits 13-14

Biomass and diversity of biota on cobbles & pebbles is low.



(D1), (D2), (D3), Pit #12

A substantial *Mylus* bed occurs between ~+4' to +6'. The LITZ biota is rich.



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

**EL109 A**  
 ADEC Subsegment Length: 3200m  
 METERS  
 0 100 200  
 AK State Plane Zone 4  
 1111000

Subdivision Field Map  
 Map Key: KNIEL109Aa  
 Name: TRIMM  
 Date: 3 MAY 1991  
 Date Entered:



SURFACE ON MAP

revised 5/7/91 KG  
 ES revised 5/11

7/13/90

P.P.

**ADDENDUM: SUBDIVISION CONSTRAINTS**

SEGMENT EL-109 SUBDIVISION A (1 of 1)

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

**ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.**

&gt;&gt;&gt; PHONE 584-3274 (Anchorage) OR 229-1508 (24 hrs.) &lt;&lt;&lt;

**APPLICABLE ECOLOGICAL TIME CONSTRAINTS**

5T Bald Eagle Nest

NO CONSTRAINT. Nest more than 400m from recommended treatment areas.

7II Subsistence: Deer Harvesting

No constraint to manual pickup and tarmat removal; closed to bioremediation and manual raking after 8/15.

5R Seabird Colony

NO CONSTRAINT. Work site is more than 800m from Seabird Colony, as per 7/10/90 letter to Otto Harrison from USFWS.

**OTHER ECOLOGICAL CONSIDERATIONS**

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

TAG ADDENDUM DATE 5/21/90ADEC Art Wanner D. WannerEXXON Andy Gtz PaulNOAA John Tillman J. TillmanUSCG Mr. J. Hall Mr. J. HallFOSC My LDATE 5-21-90Prepared by: Andie MaysDate: 5/19/90

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-110

SUBDIVISIONS: A (1 OF 3)

SHORELINE EVALUATION

SEGMENT ST/ EL-110 SUBDIVISION A (1 OF 3) DATE 4/2/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**

Bald eagle nest (5T) - 3/1 to 6/1; recreation special use destination (6Y); Subsistence area for deer harvesting (7II) - 8/15 to 2/28. See attached Ecological Constraint Sheet for specific constraints and contacts.

**SUBDIVISION ECOLOGICAL CONSTRAINTS:**

Avoid disturbance/damage to unoiled biota and substrate.

**ARCHAEOLOGICAL CONSTRAINTS:**

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

SHPO SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

**OILING CATEGORIZATION:**

Wide 0 m: Medium 412 m: Narrow 44 m: V.Light 0 m: No Oil 162 m  
Subsurface Oil Observed: Yes \_\_\_\_\_ No X Maximum Depth \_\_\_\_\_

**RECOMMENDATIONS:**

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

COMMENTS: The treatment activities are recommended as follows: 1)\* Hand till and bioremediate area shown on attached sketch map, 2) Bioremediate only in other areas shown on map, and 3) Manual removal of tarmat (see map). Work should be conducted after 6/1 and with approval from USFWS based on above eagle constraints.

**TAG COMMENTS:**

TAG APPROVAL DATE: \_\_\_\_\_

ADEC \_\_\_\_\_  
EXXON \_\_\_\_\_  
NOAA \_\_\_\_\_  
USCG \_\_\_\_\_

FOSC: \_\_\_\_\_ DATE: \_\_\_\_\_

## 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 unopened 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 / EL 110 SUBDIVISION: A DATE 04/02/90

**USCG**

NAME AEL Vandepels SIGNATURE AEL Vandepels

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

I suggest no treatment on the western most beach of EL110 sub A. The 3 beaches immediately east need some hand tilling and bio.

**ADEC**

NAME Michelle Barr SIGNATURE M Barr

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

100A is a low energy area of high recreational value. There are 4 primary 5m wide bands varying in length from 20m to 150m of CT/B. Most of the areas also have occasional TE, and AP. In the areas w/Bs, the oil can be seen down to 45cm and is SBL ~~with~~ <sup>below</sup> the top B. In the P, C, S areas, the penetration is 5 cm down of OP then bedrock. The 1st 4m x 20m band requires manual scrubbing of Bs, hand pickup of fist size and larger C w/CT and mousse patches. Pick up the surface layer, then bioremediate. The next 5 x 20m area needs manual scrubbing of the CT on the Bs, then bioremediation of underlying C, P, G, & S layer (Note: a 1-2cm layer of OR sand lies under the layer of C, P, G.) The remaining area should have similar treatment including manual pick-up of TEs.

**LAND MANAGER**

NAME DAN LOGAN SIGNATURE Dan Logan

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

THIS IS A LOW ENERGY SHORELINE WITH A FAIR ANCHORAGE BUT EXPOSED TO THE SOUTH. STARTING AT THE WEST END THE FIRST 4M X 20M BAND SHOULD HAVE ROCKS MANUALLY SCRUBBED THEN HAND TILLED TO AERATE SEDIMENTS AND APPLY FERTILIZER. THE 5M X 20M CT/B BAND IMMEDIATELY TO THE EAST HAS 70% COVER CT/B W/ SMALL BROKEN PATCHES OF TAR, THIS AREA SHOULD HAVE TAR PATCHES SCRAPPED THEN HAND TILL AND FERTILIZE. THE REMAINING 2 OILED BANDS SHOULD HAVE THE SAME TREATMENT AS THE PREVIOUS 5 X 20M BAND.

8 DF 19

## SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG J. Springer USCG R. Vandevels SEGMENT ST/ CL 110  
 BIO P. Cichy LAND REP D. Logan SUBDIVISION A (1 of 3)  
 EXXON T. Tomblin ADEC M. Boer TIME 11:30 to 13:30  
 TEAM NO.: 5 TIDE LEVEL: +4 to +1 DATE 04/02/90  
 EST. SUBDIVISION LENGTH: 600 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow  
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock Pillow lava.  
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: W to E  
 SURFACE SEDIMENTS: R 25 % B 35 % C 20 % P 15 % G 5 % S 0 % M 0 % V 0 %  
 SLOPE: Lang 80 % Hang 15 % Vert 5 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High  
 OIL CATEGORY LENGTH: W 0 m M 280 m N 70 m VL 0 m NO 250 m

## SURFACE OIL

| CHARACTER           | DISTRIBUTION |    |    |    | OIL / FILM COLOR |          |          |           |     |    | IMPACTED ZONES |   |   |  |
|---------------------|--------------|----|----|----|------------------|----------|----------|-----------|-----|----|----------------|---|---|--|
|                     | IC           | IS | IP | IR | SO<br>BH         | DO<br>RW | GY<br>SL | SOB<br>TL | LAB | SU | UI             | M | U |  |
| ASPHALT<br>PAVEMENT |              |    | X  | X  | X                |          |          |           |     |    | X              |   |   |  |
| POOLED              |              |    |    |    |                  |          |          |           |     |    |                |   |   |  |
| COVER               |              |    |    |    |                  |          |          |           |     |    |                |   |   |  |
| COAT                |              | X  | X  | X  | X                |          |          | ✓         |     |    | X              |   |   |  |
| STAIN               |              | X  | ✓  |    |                  | X        |          |           |     |    | X              |   |   |  |
| MOUSSE              |              |    |    |    |                  |          |          |           |     |    |                |   |   |  |
| PATTIES             |              |    |    |    |                  |          |          |           |     |    |                |   |   |  |
| TARBALLS            |              |    |    |    |                  |          |          |           |     |    |                |   |   |  |
| FILM                |              |    |    | X  |                  |          |          | X         |     |    | X              |   |   |  |
| NO OIL              |              |    |    |    |                  |          |          |           |     | S  |                | X | X |  |

PAVEMENT: H ☒ S 10 sq. m by 4 cmPATTIES / TARBALLS 0 BAGSNEAR 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. 1-2Frames 20, 21, 22, 23

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER |    |    |    |    | OILED INTERVAL (CM-CM) | BELOW |    | OIL / FILM COLOR |          |          |          |          |    |    |   | PIT ZONE |   |   |  | A<br>N<br>A        | SUBSURFACE SEDIMENTS |
|---------|----------------|--------------------------|----|----|----|----|------------------------|-------|----|------------------|----------|----------|----------|----------|----|----|---|----------|---|---|--|--------------------|----------------------|
|         |                | OP                       | OR | OL | OF | NO |                        | UO    | UC | BL<br>BR         | BL<br>RW | OL<br>SL | BL<br>TL | BL<br>LR | SU | UI | M | LI       |   |   |  |                    |                      |
| 1       | 20             |                          |    |    |    | X  | -                      |       | X  |                  |          |          |          |          |    |    | X |          |   |   |  | PG + GSM           |                      |
| 2       | 35             |                          |    |    |    | X  | -                      |       | X  |                  |          |          |          |          |    |    | X |          |   |   |  | PGSM               |                      |
| 3       | 30             |                          |    |    |    | X  | -                      |       | X  |                  |          |          |          |          |    |    |   | X        |   |   |  | CPGSM              |                      |
| 4       | 20             |                          |    |    |    | X  | -                      |       | X  |                  |          |          |          |          |    |    |   |          | X |   |  | CPGS + Shell fragm |                      |
| 5       | 30             |                          |    |    |    | X  | -                      |       | X  |                  |          |          |          |          |    |    |   |          |   | X |  | PSM                |                      |
| 6       | 20             |                          |    |    |    | X  | -                      |       | X  |                  |          |          |          |          |    |    |   | X        |   |   |  | PGS                |                      |

COMMENTS

2 OF 19

REVIEWED MFDATE 4-7-90

SEGMENT ST/ EL 110 SUBDIVISION A (1043)

## SUBSURFACE OIL (CONTINUED)

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER |    |    |    |    | OILED INTERVAL (CM-CM) | BELOW |    | OIL / FILM COLOR |    |    |    |    |    |    |    | PIT ZONE |   |   |   | A<br>N<br>A | SUBSURFACE SEDIMENTS |
|---------|----------------|--------------------------|----|----|----|----|------------------------|-------|----|------------------|----|----|----|----|----|----|----|----------|---|---|---|-------------|----------------------|
|         |                | OP                       | OR | OL | OF | NO |                        | UO    | UC | SP               | BR | OR | RY | GY | BL | GR | LT | SU       | U | M | L |             |                      |
| 7       | 15             |                          |    |    |    | X  | .                      |       | X  |                  |    |    |    |    |    |    |    | X        |   |   |   |             | CPGS M               |
|         |                |                          |    |    |    |    | .                      |       |    |                  |    |    |    |    |    |    |    |          |   |   |   |             |                      |
|         |                |                          |    |    |    |    | .                      |       |    |                  |    |    |    |    |    |    |    |          |   |   |   |             |                      |
|         |                |                          |    |    |    |    | .                      |       |    |                  |    |    |    |    |    |    |    |          |   |   |   |             |                      |
|         |                |                          |    |    |    |    | .                      |       |    |                  |    |    |    |    |    |    |    |          |   |   |   |             |                      |
|         |                |                          |    |    |    |    | .                      |       |    |                  |    |    |    |    |    |    |    |          |   |   |   |             |                      |
|         |                |                          |    |    |    |    | .                      |       |    |                  |    |    |    |    |    |    |    |          |   |   |   |             |                      |
|         |                |                          |    |    |    |    | .                      |       |    |                  |    |    |    |    |    |    |    |          |   |   |   |             |                      |
|         |                |                          |    |    |    |    | .                      |       |    |                  |    |    |    |    |    |    |    |          |   |   |   |             |                      |
|         |                |                          |    |    |    |    | .                      |       |    |                  |    |    |    |    |    |    |    |          |   |   |   |             |                      |
|         |                |                          |    |    |    |    | .                      |       |    |                  |    |    |    |    |    |    |    |          |   |   |   |             |                      |
|         |                |                          |    |    |    |    | .                      |       |    |                  |    |    |    |    |    |    |    |          |   |   |   |             |                      |
|         |                |                          |    |    |    |    | .                      |       |    |                  |    |    |    |    |    |    |    |          |   |   |   |             |                      |
|         |                |                          |    |    |    |    | .                      |       |    |                  |    |    |    |    |    |    |    |          |   |   |   |             |                      |
|         |                |                          |    |    |    |    | .                      |       |    |                  |    |    |    |    |    |    |    |          |   |   |   |             |                      |

COMMENTS

# SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST/EL/10 Subdivision A Date (mo/day/yr) 4/2/90  
 Time (24 hr) 1130-1355 Biologist Crant Tide Height: +3 → +1  
 Length: 600m

- (A) Substrate type and % of segments:  
 (1) Bedrock 25 (2) Boulder 35 (3) Cobble 20 (4) Pebble 15 (5) Sand 5 (6) Silt \_\_\_\_\_
- (B) Overall % cover of biota (% of segment): Dense 40 Moderate 20 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-5-2  
 Frames 20, 21, 22, 23

## 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    | 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:

At 0950 spotted 3 Killer Whales: 1 ♂, 2 ♀ off of EL109, they remained in area all day.  
 3 Bald Eagle - 2 mature, 1 immature  
 6 Tuft Puffins - 5 mature, 1 immature  
 4 Raven  
 1 - Fox Sparrow  
 1 - White-wing Scooter

## Ecological Considerations:

6Y: Special Use Destination

7H: Deer Harvesting

ST-2: Eagle Nest - did not find

Boulder / Intercobble / Intergravel Mussel bed = 150m x 10m.

50F14

Seg: EL 110 Subdivision: A Date: 4/2/40  
Time: 1130-1355 Tide Height: +3 → +1

### Comments -

- Heavy *Mytilus* recruitment on boulders
- *Fucus* is reproductive
- High den potential in uplands
- In UITZ oil band Adult *B. glandula* had 20% mortality
- Heavy *Fucus* recruitment in UITZ; LITZ
- Barnacle scarring in UITZ bedrock
- 10% *B. cariosus* mortality with pockets of 90% mortality.  
Predation from *Nucella*?
- 150m x 10 m Intercobble/Intergavel dense mussel bed in MITZ  
with 80% Adults 20% spot Area should be protected. Limit foot  
traffic. Mortality 3-8%.
- NW of mussel bed there is high recruitment in UITZ and LITZ  
and sparse recruitment in MITZ. Adults are rare
- Porpoise vertebrae found in UITZ
- A 1m<sup>2</sup> patch of *Zostera* in a LITZ tidepool
- Found small clump of eggs 3cm<sup>3</sup> in gravel in LITZ - possible Herring.

1 = Boulder  
2 = Boulder  
3 = Cobble  
4 = Pebble

Segment: EL 110 A Time: 1130  
Date: 4/2/90 Tide Height: +3 → 4

Biologist: F

# Species List

| FRAME NUMBER                  | PHOTOGRAPHER | DATE | SITE ID | LOCATION/COMMENTS |                               |
|-------------------------------|--------------|------|---------|-------------------|-------------------------------|
|                               |              | MITZ | MITZ    | LITZ              | Comments                      |
| <i>Balanus glandula</i>       |              | 123  | 123     | 23                |                               |
| <i>Balanus caribaeus</i>      |              |      | 123     | 23                |                               |
| <i>Derasterias</i>            |              |      |         |                   |                               |
| <i>Enteromorpha</i>           |              |      |         | 23                |                               |
| Filamentous green algae       |              |      | 3       |                   |                               |
| Filamentous red algae         |              |      |         |                   |                               |
| <i>Fucus distichus</i>        |              | 12   | 23      | 23                |                               |
| <i>Katharina tunicata</i>     |              |      |         |                   |                               |
| <i>Leptasterias</i> spp       |              |      | 3       |                   |                               |
| <i>Littorina scutellata</i>   |              | 123  | 123     | 23                | Eggs in LITZ 34               |
| <i>Littorina sitkana</i>      |              | 123  | 123     | 23                |                               |
| <i>Macoma</i>                 |              |      |         |                   |                               |
| <i>Mytilus edulis</i>         |              | 123  | 123     |                   |                               |
| <i>Nucella lamellosa</i>      |              | 3    | 2       | 3                 | Eggs in LITZ 3                |
| <i>Orthis kashleri</i>        |              |      |         |                   |                               |
| <i>Panopaea helianthoides</i> |              |      |         |                   |                               |
| <i>Petrolia</i>               |              |      | 32      |                   |                               |
| <i>Pisaster ochraceus</i>     |              |      |         |                   |                               |
| <i>Phascolosoma</i>           |              |      |         |                   |                               |
| Polychaete worm               |              |      |         |                   |                               |
| <i>Rhodospira</i> bryx        |              |      | 2       | 32                |                               |
| <i>Rhodospirillum</i>         |              |      |         | 29                |                               |
| <i>Ruditapes</i>              |              |      | 23      | 23                |                               |
| <i>Scytosiphon</i>            |              | 2    | 2       |                   |                               |
| <i>Siphonaria</i>             |              |      | 32      | 32                | Dense in LITZ 34              |
| <i>Serolis</i> dira           |              |      | 23      | 23                | Dense in LITZ 34              |
| <i>Strongylocentrotus</i> sp  |              |      |         |                   |                               |
| <i>Scapharca</i>              |              |      |         |                   |                               |
| <i>Tenella</i> sp             |              |      |         |                   |                               |
| <i>Ulva</i>                   |              |      |         | 3,2               |                               |
| <i>Zostera</i>                |              |      | 1       |                   | In tide pool 1 m <sup>2</sup> |
| <i>Limoria</i>                |              | 34   | 23      |                   |                               |
| <i>Hiatellina</i>             |              |      | 3       |                   | Last shell                    |
| <i>Glycymeris</i>             |              |      | 32      |                   |                               |
| <i>Endocladia</i>             |              | 2    | 32      | 2                 |                               |
| <i>Bryozoa</i>                |              |      | 3       |                   |                               |
| <i>Littorina</i> sp           |              |      | 3       |                   |                               |
| <i>Saxidomus giganteus</i>    |              |      | 3       |                   | Shells only                   |
| <i>Chamaelea</i>              |              |      | 3       | 3                 |                               |
| <i>Basella</i> /Corallina     |              |      | 2       | 2,3               |                               |
| <i>Cladophora</i>             |              |      |         | 2                 |                               |
| <i>Porphyrion</i>             |              |      | 2       |                   |                               |
| Green Encrusting algae        |              | 2,3  | 2,3     | 2,3               |                               |
| <i>Protodroma</i>             |              |      |         |                   |                               |

6 of 19

OG J. Springer

SKI H MAP

SEGMENT ST/ 110

SUBDIVISION A

DATE 04/02/90

# CHECKLIST

- ☒ Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Bndry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HML/LWL
- ☒ JSSL
- ☒ Profile Location(s)
- ☒ Photo Location(s)

## LEGEND

1  $\Delta$   
Pit - No Subsurface Oil

2  $\Delta$   
Pit - Subsurface Oil

CT/C  
Continuous Distribution

CT/B  
Broken Distribution

CT/P  
Patchy Distribution

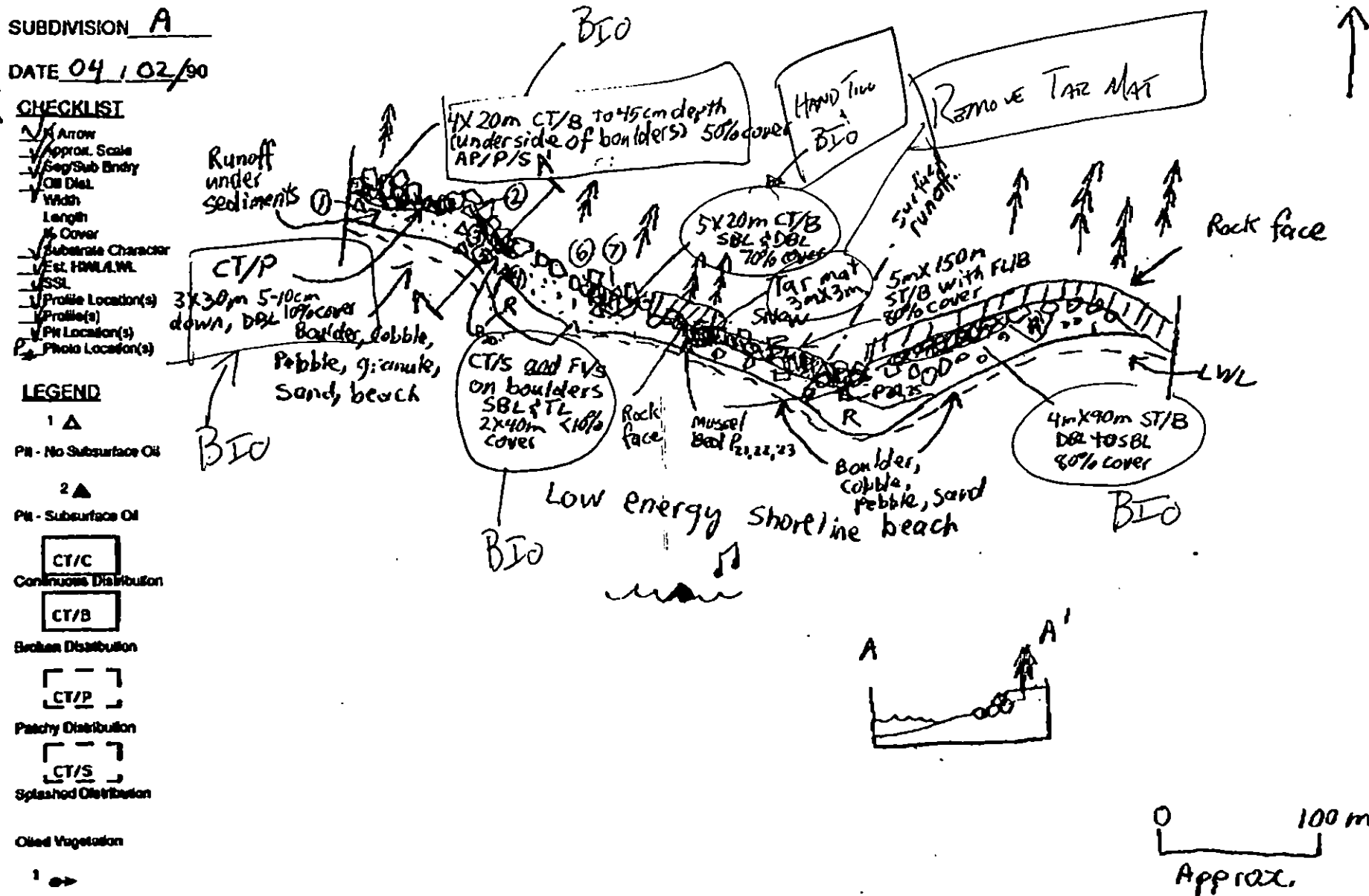
CT/S  
Splashed Distribution

Oil Vegetation

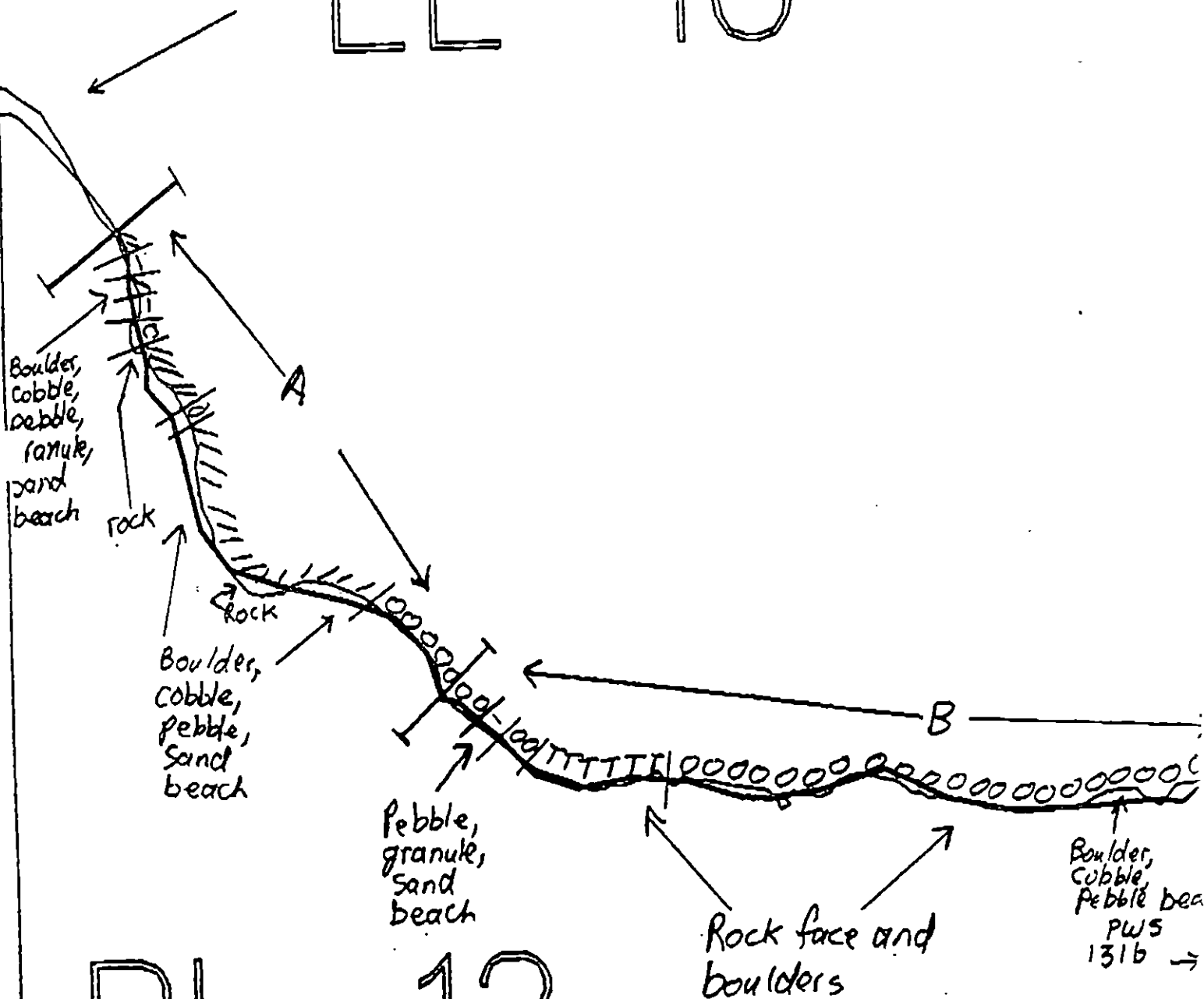
1  $\Rightarrow$   
Photo location, direction, and number

Oil Character Length (m): AP \_\_\_\_\_ PO \_\_\_\_\_ CV \_\_\_\_\_ CT 110 ST 240 MS \_\_\_\_\_ PT \_\_\_\_\_ TB \_\_\_\_\_ FL \_\_\_\_\_ NO 250

REV 001-03/04/90



L-15  
EL-10



RI-12

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO M. D. I

EL-110

ADEC Segment Length: 2620

2620

18 OF 19

18 OF 19

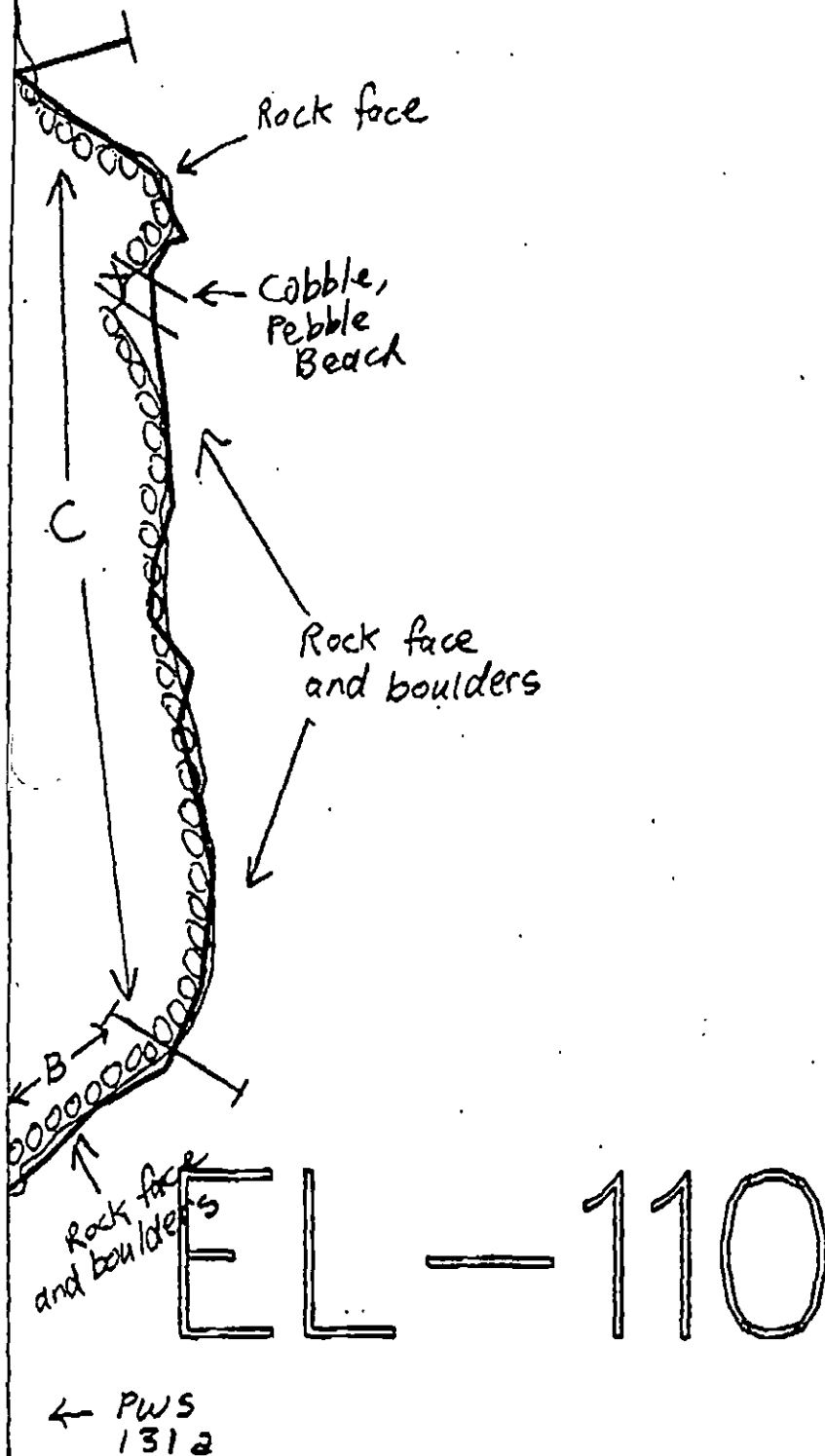


Map Key: PWS-131a

Name: James Spring

Date: 04/02/90

Date Entered:



XXXX Wide

//// Medium

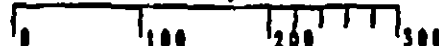
--- Narrow

TTTT Very Light

EL-110

ADEC Segment Length: <sup>2620</sup>~~2507~~m

19 OF 19



Map Key: PWS-131b

Name: James Springer

Date: 04/02/90

Data Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-110

SUBDIVISIONS: B (2 OF 3)

SHORELINE EVALUATION

SEGMENT ST/ EL-110 SUBDIVISION B (2 OF 3) DATE 4/2/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**

Bald eagle nest (5T) - 3/1 to 6/1; recreation special use destination (6Y); Subsistence area for deer harvesting (7II) - 8/15 to 2/28. See attached Ecological Constraint Sheet for specific constraints and contacts.

**SUBDIVISION ECOLOGICAL CONSTRAINTS:**

Avoid disturbance/damage to unoiled biota and substrate.

**ARCHAEOLOGICAL CONSTRAINTS:**

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

SHPO SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

**OILING CATEGORIZATION:**

Wide 0 m: Medium 0 m: Narrow 29 m: V.Light 149 m: No Oil 867 m  
Subsurface Oil Observed: Yes \_\_\_\_\_ No X Maximum Depth \_\_\_\_\_

**RECOMMENDATIONS:**

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

COMMENTS: Recommend bioremediation of areas shown on attached sketch map and \*in-situ log burning. Work should be conducted after 6/1 with approval from ADF&G and USFWS based on above eagle nest constraint.

**TAG COMMENTS:**

TAG APPROVAL DATE: \_\_\_\_\_

ADEC \_\_\_\_\_

EXXON \_\_\_\_\_

NOAA \_\_\_\_\_

USCG \_\_\_\_\_

FOSC: \_\_\_\_\_ DATE: \_\_\_\_\_

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EL1103 SUBDIVISION: B DATE 04/02/90

USCG

NAME

AEC Vandepels

SIGNATURE

AEC Vandepels

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Western most beach of EL110 Sub B has 1x3M and 3x20M areas that may or may not need hand cleaning. Logs on beach need to be removed or burned on site.

ADEC

NAME

Michele Baer

SIGNATURE

MBaer

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

There are patches in the first 1/2 of the segment varying from 1/2 to 5M wide of CT/B and averaging 5M long. The terrain is primarily P beaches and P fields. Treatment should include manual scrubbing of the coated areas and removal or burning of the oiled logs. The burning of the logs should be done on the bedrock shelf so the tar that remains can be contained to a small area and easily removed. The remaining 1/2 of the segment is a high energy zone with occasional bands of ST/B that are very light.

LAND MANAGER

NAME

DAN LOGAN (NR) AP

SIGNATURE

Dan Logan

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

- 1) MANUALLY SCRUB ROCKS IN COATED AREAS INDICATED ON SKETCH MAP.
- 2) BURN OILED LOGS ON SITE AND ON SOLID ROCK, THEN SPR MANUALLY SCRUB BURN SITE.

12 OF 19

# SHORELINE OILING SUMMARY

REVISION NO. 06/02/90

OG J. Springer USCG R. Vandepels SEGMENT ST/ EL 110  
 BIO P. Crank LAND REP D. Logan SUBDIVISION B (2 of 3)  
 EXXON T. Tamblin ADEC M. Baer TIME 13:50 to 15:05  
 TEAM NO.: 5 TIDE LEVEL: +1 to +2 DATE 04/02/90  
 EST. SUBDIVISION LENGTH: 1140 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow  
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock Gneiss, migmatite, pillow lava  
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: W to E  
 SURFACE SEDIMENTS: R 25 % B 35 % C 15 % P 15 % G 10 % S % M % V %  
 SLOPE: Long 30 % Hang 50 % Vert 20 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High  
 OIL CATEGORY LENGTH: W — m M — m N 5 m VL 150 m NO 985 m

## SURFACE OIL

| CHARACTER        | DISTRIBUTION |    |    |    | OIL / FILM COLOR |    |    |    |    | IMPACTED ZONES |   |   |   |
|------------------|--------------|----|----|----|------------------|----|----|----|----|----------------|---|---|---|
|                  | IC           | IS | IP | IR | BR               | OR | OL | OC | OT | SU             | U | M | L |
| 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

| OILED DEBRIS | AMOUNT |    |    |
|--------------|--------|----|----|
|              | SM     | MD | LG |
| Logs         | X      |    |    |
| 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) | BELOW |    | OIL / FILM COLOR |    |    |    |    | PIT ZONE |   |   |   | A N A | SUBSURFACE SEDIMENTS |
|---------|----------------|--------------------------|----|----|----|----|---------------------|-------|----|------------------|----|----|----|----|----------|---|---|---|-------|----------------------|
|         |                | OP                       | OR | OL | OF | NO |                     | UO    | UC | BR               | OR | OL | OC | OT | SU       | U | M | L |       |                      |
| 1       | 30             |                          |    |    |    | X  | -                   |       | X  |                  |    |    |    |    |          |   |   | X |       | PGS                  |
| 2       | 45             |                          |    |    |    | X  | .                   |       | X  |                  |    |    |    |    |          | X |   |   |       | PGS                  |
|         |                |                          |    |    |    |    | .                   |       |    |                  |    |    |    |    |          |   |   |   |       |                      |
|         |                |                          |    |    |    |    | .                   |       |    |                  |    |    |    |    |          |   |   |   |       |                      |
|         |                |                          |    |    |    |    | .                   |       |    |                  |    |    |    |    |          |   |   |   |       |                      |
|         |                |                          |    |    |    |    | .                   |       |    |                  |    |    |    |    |          |   |   |   |       |                      |

COMMENTS

9 OF 19

# SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/22/90

Segment ST/EL 110 Subdivision B Date (mo/day/yr) 4/2/90  
 Time (24 hr) 1355-1510 Biologist Crank Tide Height: +1 → +2.5  
 Length: 1140

- (A) Substrate type and % of segments:  
 (1) Bedrock 25 (2) Boulder 35 (3) Cobble 15 (4) Pebble 15 (5) Sand 10 (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: No photos  
 Roll No \_\_\_\_\_  
 Frames \_\_\_\_\_

## BARNACLES

| Dense        |              |    | Moderate |    |    | Sparse |    |    | Rare |    |    |
|--------------|--------------|----|----------|----|----|--------|----|----|------|----|----|
| 1U           | 1M           | 1L | 1U       | 1M | 1L | 1U     | 1M | 1L | 1U   | 1M | 1L |
| <del>2</del> | <del>2</del> | 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     | <del>2</del> | 2  | <del>2</del> | 2  | 2  | <del>2</del> | 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 |
| <del>2</del> | <del>2</del> | 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     | <del>2</del> | <del>2</del> | 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:

- 1 Bald Eagle flying  
 2 Cormorants on cliff face  
 8 Crows on boulder  
 1 Sea otter

## Ecological Considerations:

- 6Y - Special Use Destination  
 711 - Deer Harvesting  
 ST-2 - Eagle Nest . did not find

11 OF 19

Segment: CL 1100  
Date: 4/12/90

Time: 1330  
Tide Height: +1 → +2.5

Biologist: IC  
pg 2 of 2

# Species List

| FRAME NUMBER | PHOTO GRAPHED | DATE | SITE ID | LOCATION/COMMENTS |
|--------------|---------------|------|---------|-------------------|
|--------------|---------------|------|---------|-------------------|

UITZ MITZ LITZ Comments

|       |                         |     |    |    |                         |  |  |  |
|-------|-------------------------|-----|----|----|-------------------------|--|--|--|
|       | Balanus glandula        | 12  | 12 |    |                         |  |  |  |
| Semi  | Balanus earhus          |     | 2  |    |                         |  |  |  |
|       | Dermasterias            |     | 2  |    | 2 animals               |  |  |  |
|       | Enteromorpha            |     |    |    |                         |  |  |  |
| +     | Filamentous green algae | 1,2 | 23 | 23 |                         |  |  |  |
|       | Filamentous red algae   |     |    | 23 |                         |  |  |  |
|       | Fucus distichus         |     | 12 |    |                         |  |  |  |
|       | Katharina tunicata      |     | 2  |    | 1 animal                |  |  |  |
| 10000 | Leptasterias spp        |     |    | 3  |                         |  |  |  |
|       | Littorina scutellata    | 12  | 12 |    |                         |  |  |  |
|       | Littorina sitkana       |     |    |    |                         |  |  |  |
|       | Megalia mucosa          |     |    |    |                         |  |  |  |
|       | Mytilus edulis          | 1   | 12 |    |                         |  |  |  |
|       | Nikella lamellosa       |     | 12 |    |                         |  |  |  |
|       | Orchasteria koehleri    |     |    |    |                         |  |  |  |
|       | Pyrosoma helianthoides  |     |    |    |                         |  |  |  |
|       | Pelucella               |     |    |    |                         |  |  |  |
|       | Pisaster ochraceus      |     |    |    |                         |  |  |  |
| 10000 | Phascolosoma            |     |    |    |                         |  |  |  |
|       | Polychaete worm         |     |    |    |                         |  |  |  |
|       | Rhodonele larva         |     |    |    |                         |  |  |  |
|       | Rhodonele palmeta       |     | 2  | 2  |                         |  |  |  |
|       | Rufia/Hildenbrandia     |     |    |    |                         |  |  |  |
|       | Scytosiphon             |     |    |    |                         |  |  |  |
|       | Siphonaria              |     |    |    |                         |  |  |  |
|       | Scarlissa dira          |     |    |    |                         |  |  |  |
|       | Strongylocentrotus sp   |     |    |    |                         |  |  |  |
|       | Serpula                 |     |    |    |                         |  |  |  |
|       | Tanaisia - sp Limpets   | 12  | 12 |    |                         |  |  |  |
|       | Uva                     |     |    |    |                         |  |  |  |
|       | Zostera Endocladia      | 12  | 12 |    |                         |  |  |  |
|       | Anthopleur artemesia    |     | 1  |    | 1 Tidepool              |  |  |  |
|       | Limpets                 |     | 12 |    |                         |  |  |  |
|       | Malasagion              |     | 2  |    |                         |  |  |  |
|       | Amphipod                | 34  | 34 |    |                         |  |  |  |
|       | Ribbon worm             |     | 3  |    |                         |  |  |  |
|       | Crustacean              | 1   |    |    |                         |  |  |  |
|       | Tealia carassius        |     | 1  |    | 13 animals in Tidepools |  |  |  |

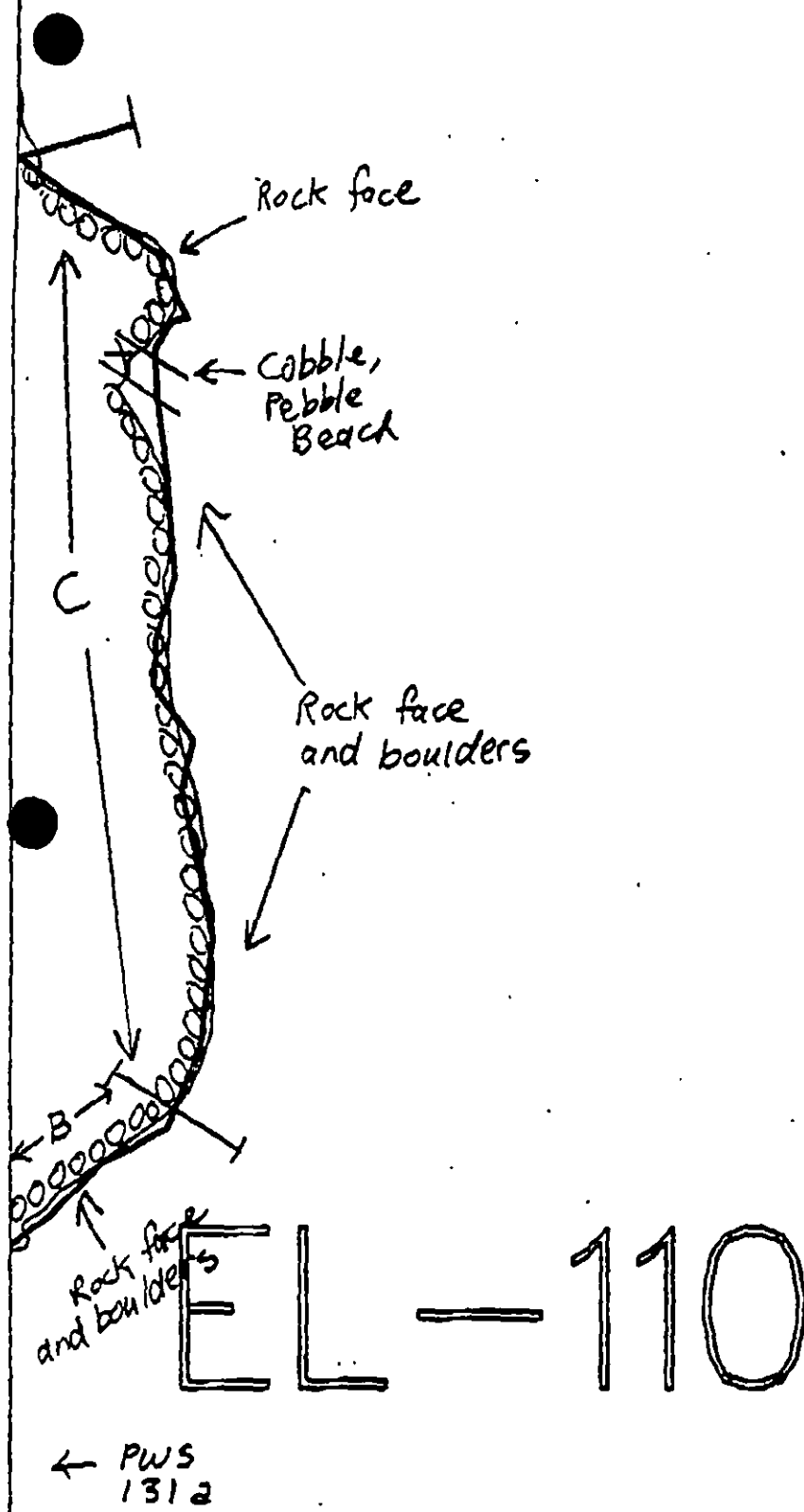
Poryl 110

## Comments

- Weather picked-up and assessment made at rapid pace; minimum cobbles were turned.
- Segment consists of Rocky headlands, steep by boulder shoalers and pocket Boulder/cobbles beach. beach cobble is round (core beach), other beaches have angular cobble.
- Fucus concentrations are moderate in LITZ on rounded cobble beach but dense on angular c.
- Freshwater runoff, small stream on beach.
- Oyster shell in drift line.
- In oil band Balanus 20% mort.

## 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 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 (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.

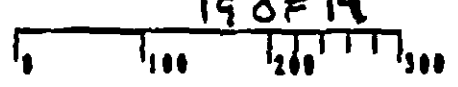


XXXX Wide  
//// Medium  
--- Narrow  
TTTT Very Light

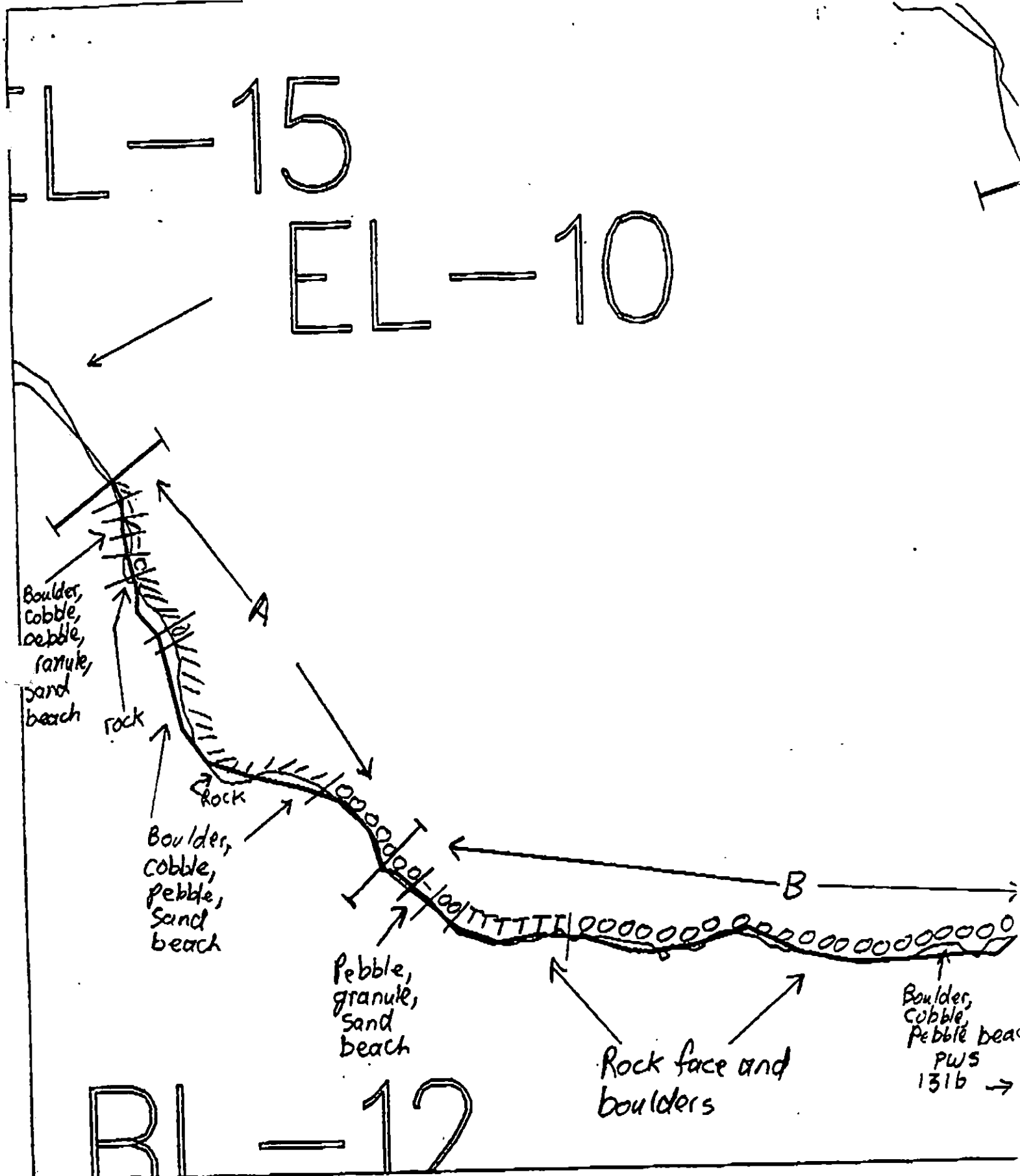
EL-110

ADEC Segment Length: <sup>2620</sup>~~2507m~~

19 OF 19



Map Key: PWS-131b  
Name: James Springer  
Date: 04/02/90  
Data Entered:



RI-12

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

EL-110

ADEC Segment Length: 2620  
 18 OF 19



Map Key: PWS-131a  
 Name: James Springe  
 Date: 04/02/90  
 Data Entered:

OG J. SPRI A

SEGMENT ST/110

SUBDIVISION B

DATE 04 102/90

10 OF 19

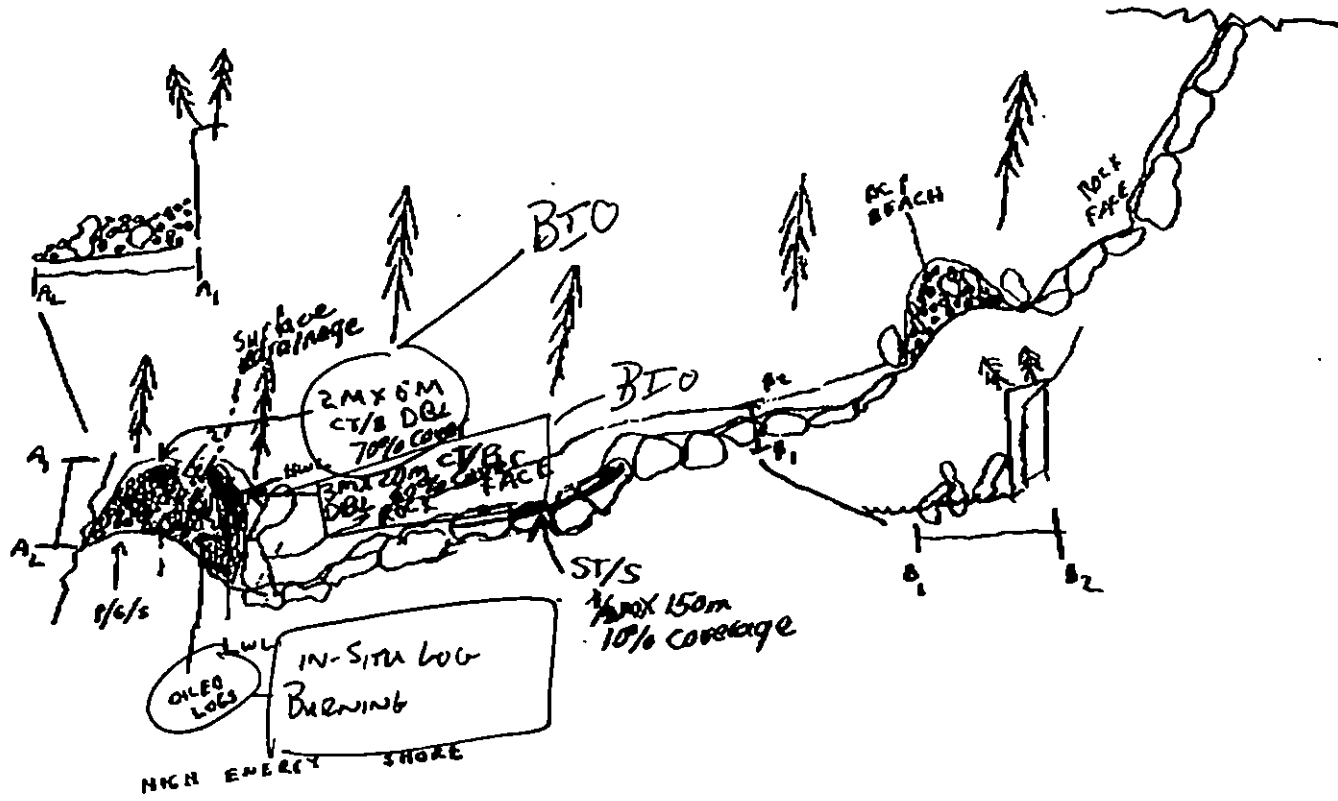
SKETCH MAP

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Bndry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HAZ/ALR
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Pit Location(s)
- ☒ Photo Location(s)
- ☒ No Photos

LEGEND

- 1 Δ
- PII - No Subsurface Oil
- 2 Δ
- PII - 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 5 ST 150 MS \_\_\_\_\_ PT \_\_\_\_\_ TB \_\_\_\_\_ FL \_\_\_\_\_ NO 985

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-110

SUBDIVISIONS: C (3 OF 3)

SHORELINE EVALUATION

SEGMENT ST/ EL-110 SUBDIVISION C (3 OF 3) DATE 4/2/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**

Bald eagle nest (5T) - 3/1 to 6/1; recreation special use destination (6Y); Subsistence area for deer harvesting (7II) - 8/15 to 2/28.

**SUBDIVISION ECOLOGICAL CONSTRAINTS:**

(5T) Restrict air traffic to essential minimum. Air approach and takeoff to seaward only. Contact USFWS prior to treatment for confirmation dates and avoidance minimums. Avoid disturbance/damage to unoiled biota and substrate.

**ARCHAEOLOGICAL CONSTRAINTS:**

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

SHPO SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

**OILING CATEGORIZATION:**

Wide 30 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 815 m  
Subsurface Oil Observed: Yes \_\_\_\_\_ No X Maximum Depth \_\_\_\_\_

**RECOMMENDATIONS:**

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

**COMMENTS:**

**TAG COMMENTS:**

TAG APPROVAL DATE: \_\_\_\_\_

ADEC \_\_\_\_\_

EXXON \_\_\_\_\_

NOAA \_\_\_\_\_

USCG \_\_\_\_\_

FOSC: \_\_\_\_\_ DATE: \_\_\_\_\_

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EC 110 SUBDIVISION: C DATE 04/02/90

USCG NAME AEC Vandepels SIGNATURE AEC Vandepels

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

*I concur with statement of Land Manager.*

ADEC NAME Michelle Bass SIGNATURE MBass

☒ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

*The headland in the beginning of the segment has a healthy band of lichen. The area is very high energy and difficult to access. Most of the stain is no longer detectable except for a patch 20 M x 20 M of CT/B on the R,B,C,P beach. Since this area is of very high energy, I recommend monitoring the area in fall, and until then leaving the clearing to the high wave energy of the area. If this patch is still detectable in fall, manual scrubbing of the patch is recommended.*

LAND MANAGER

NAME DAN LOGAN SIGNATURE Dan Logan

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

*THIS IS A HIGH ENERGY, VERY EXPOSED SUBDIVISION. NO OIL OBSERVED ON ROCK FACE. THE ROCKY BEACH IS VERY EXPOSED AND WILL NOT RECEIVE HIGH RECREATION USE. THERE IS A 20M X 20M CT/B ON BOULDERS OVER BEDROCK ON THE WESTERN EDGE. HOT WATER TREATMENT WILL NOT WORK HERE AS THE OIL WILL FLOW OVER BED ROCK AND NOT BE RECOVERED. I RECOMMEND RE-EVALUATING THE BEACH IN SEPT. IF THE 20 X 20M SECTION IS NOT NATURALLY CLEANED BY SEPT. THEN MANUALLY CLEAN ROCKS. 17 OF 19*

## SHORELINE OILING SUMMARY

REVISION NO. 02/22/90

OG J. Springer USCG R. Vandepels SEGMENT ST/ EL110  
 BIO P. Crank LAND REP D. Logan SUBDIVISION C (3 of 3)  
 EXXON T. Tamblin ADEC M. Baer TIME 15:05 to 16:00  
 TEAM NO.: \_\_\_\_\_ TIDE LEVEL: +2 to +3 DATE 04/02/90  
 EST. SUBDIVISION LENGTH: 880 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow  
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock Metaconglomerate and pillow lava.  
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: SE to NW  
 SURFACE SEDIMENTS: R 35 % B 55 % C 8 % P 2 % G \_\_\_\_\_ % S \_\_\_\_\_ % M \_\_\_\_\_ % V \_\_\_\_\_ %  
 SLOPE: Long 10 % Hang 70 % Vert 20 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High  
 OIL CATEGORY LENGTH: W 20 m M 0 m N 0 m VL 0 m NO 860 m

## SURFACE OIL

| CHARACTER        | DISTRIBUTION |   |   |   | OIL / FILM COLOR |               |               |               |               | IMPACTED ZONES |   |    |   |
|------------------|--------------|---|---|---|------------------|---------------|---------------|---------------|---------------|----------------|---|----|---|
|                  | C            | B | P | B | <del>10</del>    | <del>20</del> | <del>30</del> | <del>40</del> | <del>50</del> | SU             | U | M  | U |
| ASPHALT PAVEMENT |              |   |   |   |                  |               |               |               |               |                |   |    |   |
| POOLED           |              |   |   |   |                  |               |               |               |               |                |   |    |   |
| COVER            |              |   |   |   |                  |               |               |               |               |                |   |    |   |
| COAT             |              | X |   |   |                  | X             |               |               |               |                | X |    |   |
| STAIN            |              |   |   |   |                  |               |               |               |               |                |   |    |   |
| MOUSSE           |              |   |   |   |                  |               |               |               |               |                |   |    |   |
| PATTIES          |              |   |   |   |                  |               |               |               |               |                |   |    |   |
| TARBALLS         |              |   |   |   |                  |               |               |               |               |                |   |    |   |
| FILM             |              |   |   |   |                  |               |               |               |               |                |   |    |   |
| NO OIL           |              |   |   |   |                  |               |               |               |               | X              |   | XX | X |

PAVEMENT: H F S 0 sq. m by 0 cmPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

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

DEBRIS COLLECTED  
☒ YES ☐ NOTYPE Pom Poms#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 |   |   |   | A<br>N<br>A | SUBSURFACE SEDIMENTS |
|---------|----------------|--------------------------|----|----|----|----|------------------------|-------|----|------------------|---|---|---|---|----------|---|---|---|-------------|----------------------|
|         |                | OP                       | OR | OL | OF | NO |                        | UO    | UC | 1                | 2 | 3 | 4 | 5 | SU       | U | M | U |             |                      |
| 1       | 60             |                          |    |    |    | X  | -                      | X     |    |                  |   |   |   |   | X        |   |   |   |             | CPV                  |
| 2       | 30             |                          |    |    |    | X  | -                      | X     |    |                  |   |   |   |   |          | X |   |   |             | CPGS                 |
|         |                |                          |    |    |    |    | .                      |       |    |                  |   |   |   |   |          |   |   |   |             |                      |
|         |                |                          |    |    |    |    | .                      |       |    |                  |   |   |   |   |          |   |   |   |             |                      |
|         |                |                          |    |    |    |    | .                      |       |    |                  |   |   |   |   |          |   |   |   |             |                      |
|         |                |                          |    |    |    |    | .                      |       |    |                  |   |   |   |   |          |   |   |   |             |                      |

COMMENTS "JD" Carved into oil stain - apparently by hot water wand.

13 OF 19

06 J. Springer

SEGMENT ST/ EL 110

SUBDIVISION C

DATE 04/02/90

CHECKLIST

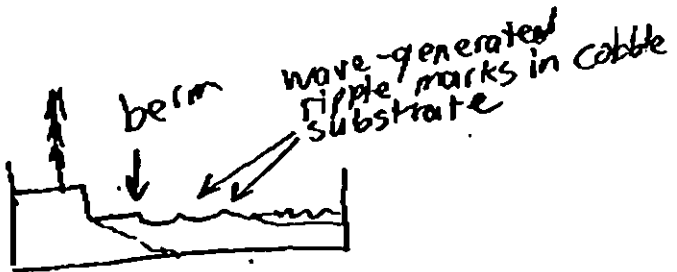
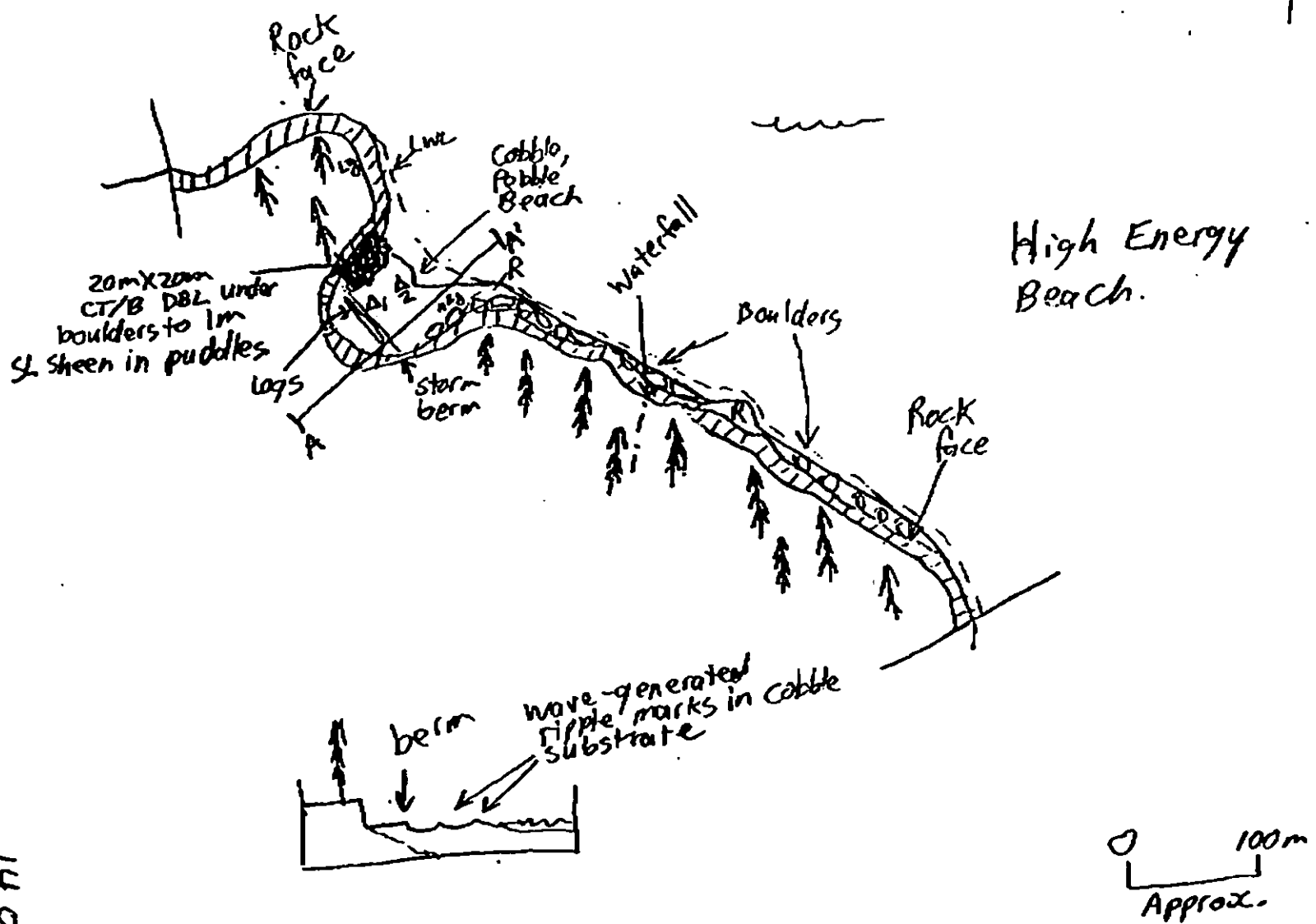
- ☒ Vt Acor
- ☒ Vt Approx. Scale
- ☒ Vt Seg/Sub Entry
- ☒ Vt Oil Dist.
- ☒ Vt Width
- ☒ Vt Length
- ☒ Vt % Cover
- ☒ Vt Substrate Character
- ☒ Vt Est. HWA/LVA/L
- ☒ Vt SCL
- ☒ Vt Site Location(s)
- ☒ Vt Photo(s)
- ☒ Vt Photo Location(s)

LEGEND

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

14 of 19

SKETCH MAP



# SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/22/90

Segment ST1EL110 Subdivision C Date (mo/day/yr) 4/2/90  
 Time (24 hr) 1510-1615 Biologist Crank Tide Height: +2.5 → +4  
 Length: 880 m

- (A) Substrate type and % of segments:  
 (1) Bedrock \_\_\_\_\_ (2) Boulder \_\_\_\_\_ (3) Cobble \_\_\_\_\_ (4) Pebble \_\_\_\_\_ (5) Sand \_\_\_\_\_ (6) Silt \_\_\_\_\_
- (B) Overall % cover of biota (% of segment): Dense 20 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. ST-5-2  
 Frames 26, 27

## BARNACLES

| Dense        |              |    | Moderate |    |    | Sparse |    |    | Rare |    |    |             |
|--------------|--------------|----|----------|----|----|--------|----|----|------|----|----|-------------|
| 1U           | 1M           | 1L | 1U       | 1M | 1L | 1U     | 1M | 1L | 1U   | 1M | 1L |             |
| <del>2</del> | <del>2</del> | 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 |             |
| <del>2</del> | <del>2</del> | 2  | <del>2</del> | 2  | 2  | 2      | 2  | <del>2</del> | 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 |             |
| <del>2</del> | <del>2</del> | 2  | <del>2</del> | 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 |             |
| <del>2</del> | <del>2</del> | 2  | 2        | 2  | 2  | <del>2</del> | 2  | <del>2</del> | 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:

3 Bald Eagles - Adults (2 Flying 45 pair)  
 1 Common Merganser

## Ecological Considerations:

6Y - Special Use Destination

711 - Deer Harvesting

5T-2 - Eagle Nest - did not locate

15 OF 19

Segment: EL 110 C  
Date: 4/2/90

Time: 1510:1615 Biologists: 10  
Tide Height: +2.5 → +4

# Species List

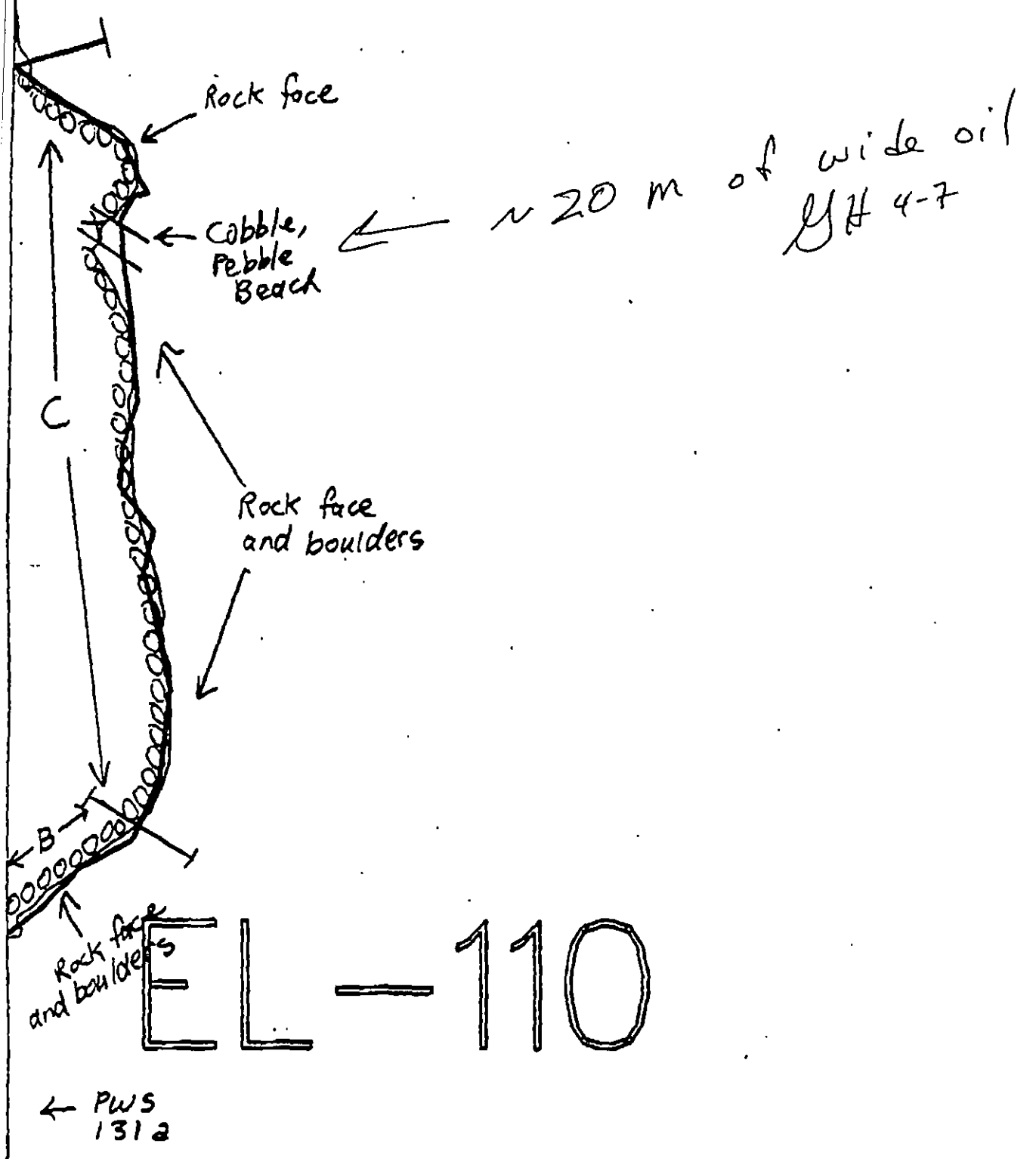
pg 2 of 2

| FRAME NUMBER | PHOTOGRAPHER                     | DATE | SITE ID | LOCATION/COMMENTS     |
|--------------|----------------------------------|------|---------|-----------------------|
|              |                                  | UITZ | MITZ    | LITZ Comments         |
| Semi         | <i>Palanus glandula</i>          | 12   | 12      |                       |
|              | <i>Palanus carinus</i>           |      | 2       | 2                     |
|              | <i>Dermasterias</i>              |      | 1       |                       |
|              | <i>Enteromorpha</i>              |      | 12      | 2                     |
|              | Filamentous green algae          | 12.3 | 12      | 2                     |
|              | Filamentous red algae            |      |         |                       |
|              | <i>Fucus distichus</i>           | 1    | 12      | 2                     |
|              | <i>Katharina tunicata</i>        |      | 1       |                       |
|              | <i>Leptasterias</i> spp          |      |         |                       |
|              | <i>Littorina scutellata</i>      | 12   | 12      |                       |
|              | <i>Littorina sitkana</i>         | 12   | 12      |                       |
|              | <i>Mealia myosa</i>              |      |         |                       |
|              | <i>Mytilus edulis</i>            | 12   | 12      |                       |
|              | <i>Nikella lamellosa</i>         | 12   | 12      |                       |
|              | <i>Orthasterias kochleri</i>     |      |         |                       |
|              | <i>Pyrosomella helianthoides</i> |      |         |                       |
|              | <i>Petracelis</i>                |      |         |                       |
|              | <i>Pisaster ochraceus</i>        |      |         |                       |
|              | <i>Phaeosporangium</i>           |      |         |                       |
|              | <i>Polychaete worm</i>           |      |         |                       |
|              | <i>Rhodomele larva</i>           |      |         |                       |
|              | <i>Rhodomele palmeta</i>         |      |         | 2                     |
|              | <i>Rulfoia/Hildebrandtia</i>     |      |         |                       |
|              | <i>Scytosiphon</i>               | 1    | 1       |                       |
|              | <i>Siphonaria</i>                |      | 1       |                       |
|              | <i>Searlesia dira</i>            |      |         |                       |
|              | <i>Strongylocentrotus</i> sp     |      |         |                       |
|              | <i>Serpula</i>                   |      | 1       |                       |
|              | <i>Tenidotea</i> - sp Limpets    | 12   | 12      |                       |
|              | <i>Ulva</i>                      |      |         |                       |
|              | <i>Zostera</i>                   |      |         |                       |
|              | <i>Stictocarpus</i>              | 2    |         |                       |
|              | <i>Alaria</i>                    |      |         | 12                    |
|              | <i>Enteromorpha</i>              |      |         | 12                    |
|              | <i>Holozarcea</i>                |      | 2       | 2                     |
|              | <i>Tenidotea</i>                 | 1    |         | Tidepool              |
|              | <i>...</i>                       | 1    |         | Tidepool              |
|              | <i>Paralichthys</i>              |      | 1       | 2 animals in Tidepool |
|              | <i>...</i>                       |      |         | Tidepool              |
|              | <i>...</i>                       |      |         | Tidepool              |
|              | <i>Endocladia</i>                | 12   | 12      | 12                    |

Comments:

- Discolored Mussels on boulder on west side of cobble beach
- Tannic acids leaching from rocks.
- Beach is rounded cobble = low trierac-biota
- Dense biota in bedrock behind boulders.
- LIT? covered by Tide

16 OF 19



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

EL-110

ADEC Segment Length: <sup>2620</sup>~~2507~~m

190 F 19

0 100 200 300



Map Key: PWS-131b  
Name: James Springer  
Date: 04/02/90  
Data Entered:

## ADDENDUM: SUBDIVISION CONSTRAINTS

**SEGMENT EL-110 SUBDIVISION A ( 1 of 3 )**

| WORK WINDOW                                   |                    |
|-----------------------------------------------|--------------------|
| Tarmat Removal                                | OPEN               |
| Bioremediation<br>Other Recommended Treatment | 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.** Bald eagle nest is in Subdivision C of Segment EL-110, and more than 400m from work site.

**711 Subsistence: Deer harvesting**

**711 Subsistence: Deer harvesting** No constraint to Tarmat Removal; closed to all other treatment activities after 8/15.

## OTHER ECOLOGICAL CONSIDERATIONS

**Avoid disturbance/damage to unrolled blots and substrate.**

TAG ADDENDUM DATE

**ADEC**

**EXXON**

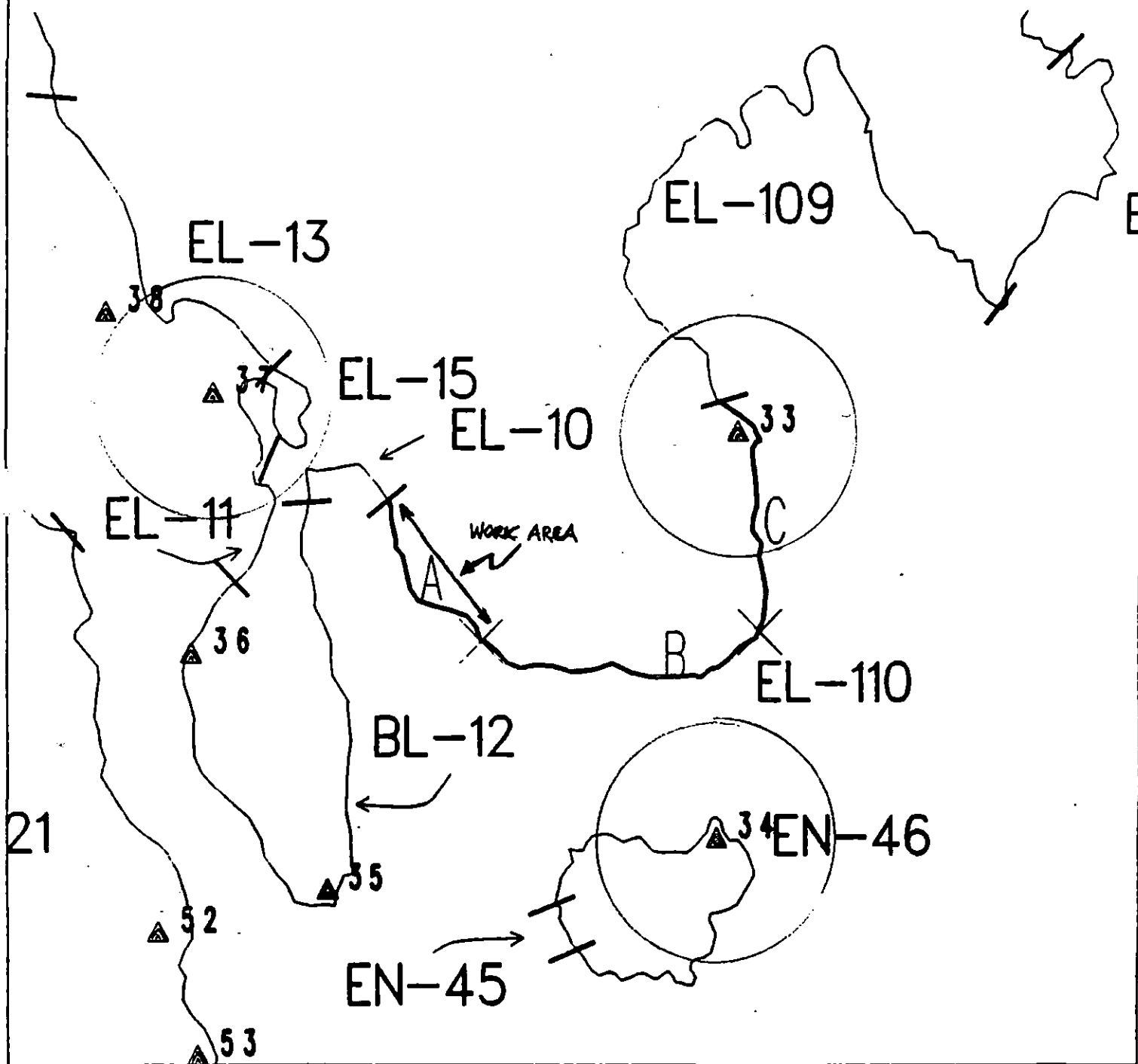
**NOAA**

USCG

TAG ADDENDUM DATE 5/16/90  
 ADEC Art Weigandt  
 EXXON Andy Esk FOSC L DATE 5-17-90  
 NOAA Joseph Talbot  
 USCG G.A. Deiter

Prepared by: \_\_\_\_\_ WJK

Date: 5/14/90



Exxon Company, USA  
Map Key: KNI-EL-110  
May 11, 1990



**ECOLOGY MAP**  
SEGMENT EL-110  
SUBDIVISION --- (--- of ---)  
METERS  
0 402 903

★ Seabird Colony  
▲ Eagle Nest

1 inch = 1613 feet

SHORELINE EVALUATION

SEGMENT ST/ EL-110 SUBDIVISION A (1 OF 3) DATE 4/2/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**

Bald eagle nest (5T) - 3/1 to 6/1; recreation special use destination (6Y); Subsistence area for deer harvesting (7II) - 8/15 to 2/28. See attached Ecological Constraint Sheet for specific constraints and contacts.

**SUBDIVISION ECOLOGICAL CONSTRAINTS:**

Avoid disturbance/damage to unoiled biota and substrate.

**ARCHAEOLOGICAL CONSTRAINTS:**

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

SHPO SIGNATURE: Charles 34 Apr

DATE: 4/17/90

**OILING CATEGORIZATION:**

Wide 0 m: Medium 412 m: Narrow 44 m: V.Light 0 m: No Oil 162 m  
Subsurface Oil Observed: Yes      No X Maximum Depth     

**RECOMMENDATIONS:**

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

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

COMMENTS: The treatment activities are recommended as follows: 1)\* Hand till and bioremediate area shown on attached sketch map, 2) Bioremediate only in other areas shown on map, and 3) Manual removal of tarmat (see map). Work should be conducted after 6/1 and with approval from USFWS based on above eagle constraints.

**TAG COMMENTS:**

TAG APPROVAL DATE: 4/17/90

ADEC

JOHN BAUER

EXXON

ANDY TATE

NOAA

Bill Warratt

USCG

James W. [unclear]

FOSC:     

DATE: 4-22-90

See Addendum dated 5/14/90 wx

## ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-110 SUBDIVISION B ( 2 of 3 )

| WORK WINDOW    |                    |
|----------------|--------------------|
| Bioremediation | 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. Bald eagle nest is in Subdivision C of Segment EL-110, and more than 400m from work site.
- 7II     Subsistence: Deer harvesting     Subdivision closed to bioremediation after 8/15.

### OTHER ECOLOGICAL CONSIDERATIONS

Avoid disturbance/damage to unrolled biota and substrate.

TAG ADDENDUM DATE 5/16/90  
ADEC Art Weimer Art Weimer  
EXXON Andy Lee Andy Lee  
NOAA Joseph Tallant Joseph Tallant  
USCG G.A. Deiter G.A. Deiter

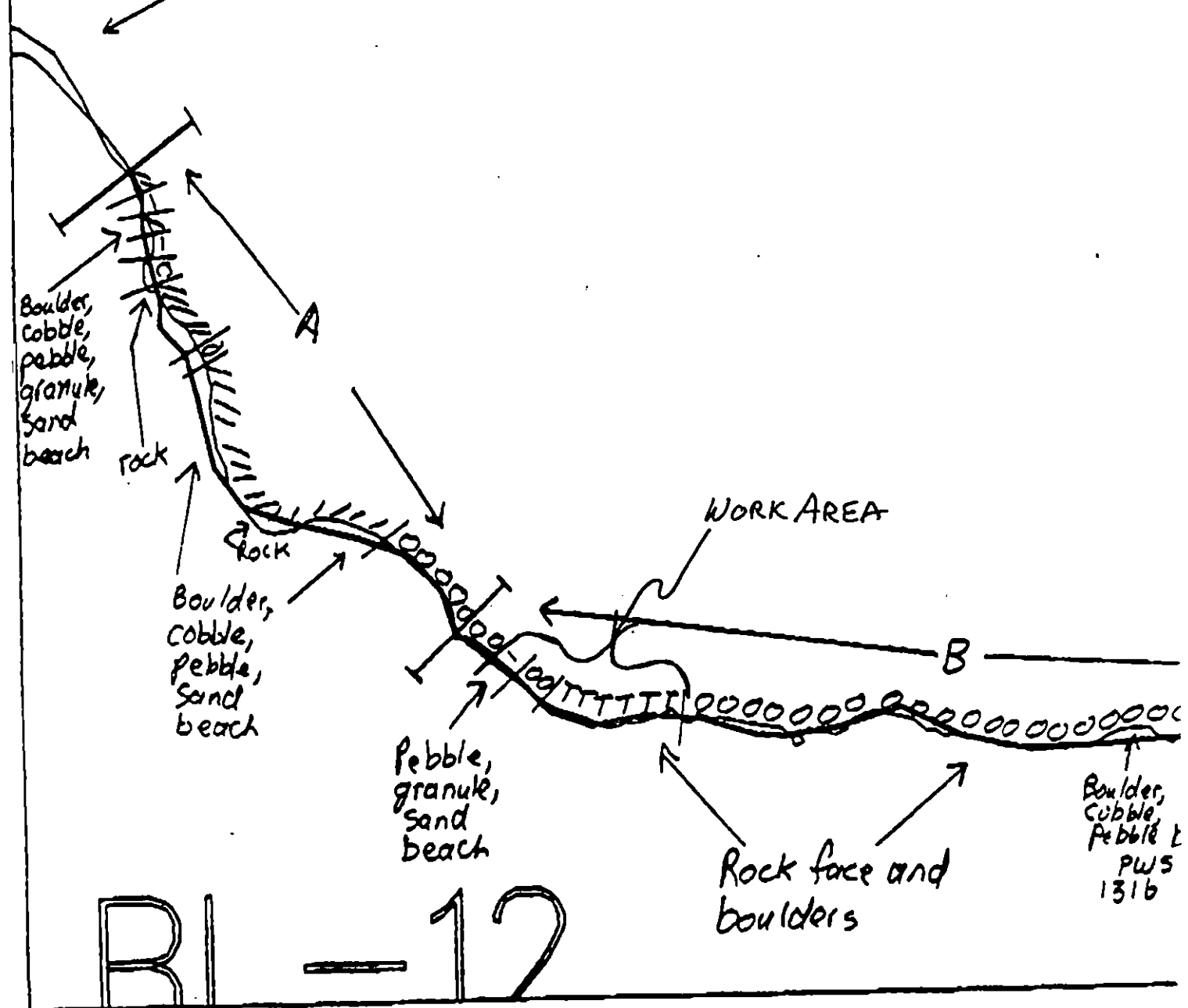
FOSC

DATE 5-17-90

Prepared by: WIK

Date: 5/14/90

L-15  
EL-10

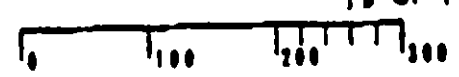


RI-12

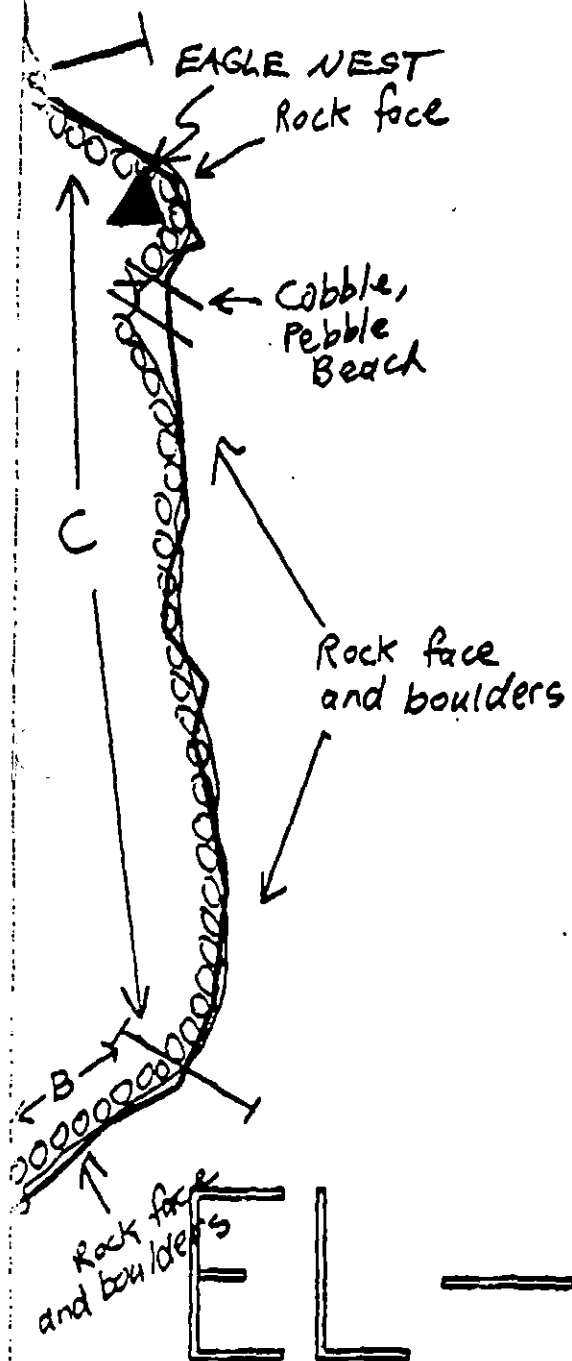
XXXX Wide  
 /// Medium  
 --- Narrow  
 TTTT Very Light

EL-110

ADEC Segment Length: 2620  
 18 OF A



Map Key: PWS-131a  
 Name: James Sprir  
 Date: 04/02/90  
 Note colored:



EL-110

← PWS  
1312

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

EL-110  
ADEC Segment Length: 2620  
190 ± 19

0 100 200 300

Map Key: PWS-1315  
Name: James Springe  
Date: 04/02/90  
Data Entered:

# SHORELINE EVALUATION

SEGMENT ST/ EL-110 SUBDIVISION B (2 OF 3) DATE 4/2/90

## SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Bald eagle nest (5T) - 3/1 to 6/1; recreation special use destination (6Y); Subsistence area for deer harvesting (7II) - 8/15 to 2/28. See attached Ecological Constraint Sheet for specific constraints and contacts.

## SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid disturbance/damage to unoiled biota and substrate.

## ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Hodner DATE: 4/17/90

## OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 29 m: V.Light 149 m: No Oil 867 m  
Subsurface Oil Observed: Yes      No X Maximum Depth     

## RECOMMENDATIONS:

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

COMMENTS: Recommend bioremediation of areas shown on attached sketch map. ~~and in situ log burning~~. Work should be conducted after 6/1 with approval from ADF&G and USFWS based on above eagle nest constraint.

LEAVE LOGS IN PLACE

## TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90  
ADEC JOHN BAUER  
EXXON ANDY TATE  
NOAA Bud Wescott  
USCG Kenneth R. Hunt

FOSC: ML DATE: 4-22-90

See Attached Addendum Sheet Dated 5/14/90

SHORELINE EVALUATION

SEGMENT ST/ EL-110 SUBDIVISION A (1 OF 3) DATE 4/2/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**

Bald eagle nest (5T) - 3/1 to 6/1; recreation special use destination (6Y); Subsistence area for deer harvesting (7II) - 8/15 to 2/28. See attached Ecological Constraint Sheet for specific constraints and contacts.

**SUBDIVISION ECOLOGICAL CONSTRAINTS:**

Avoid disturbance/damage to unoiled biota and substrate.

**ARCHAEOLOGICAL CONSTRAINTS:**

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

SHPO SIGNATURE: Charles J. Adams DATE: 4/17/90

**OILING CATEGORIZATION:**

Wide 0 m: Medium 412 m: Narrow 44 m: V.Light 0 m: No Oil 162 m  
Subsurface Oil Observed: Yes      No X Maximum Depth           

**RECOMMENDATIONS:**

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

COMMENTS: The treatment activities are recommended as follows: 1)\* Hand till and bioremediate area shown on attached sketch map, 2) Bioremediate only in other areas shown on map, and 3) Manual removal of tarmat (see map). Work should be conducted after 6/1 and with approval from USFWS based on above eagle constraints.

**TAG COMMENTS:**

TAG APPROVAL DATE: 4/17/90  
ADEC JOHN BAUER  
EXXON ANDY TATE  
NOAA Burt Wiggatt  
USCG                       
FOSC:                      DATE: 4-22-90

OG J. Spr - 7er

SEGMENT ST/EL 110

SUBDIVISION A

DATE 04/02/90

# CHECKLIST

- ☒ Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Entry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ Cover
- ☒ Substrate Character
- ☒ Est. HML/LWL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Photo Location(s)
- ☒ Photo Location(s)

## LEGEND

1 ▲  
PIL - No Subsurface Oil

2 ▲  
PIL - Subsurface Oil

CT/C  
Continuous Distribution

CT/B  
Broken Distribution

CT/P  
Patched Distribution

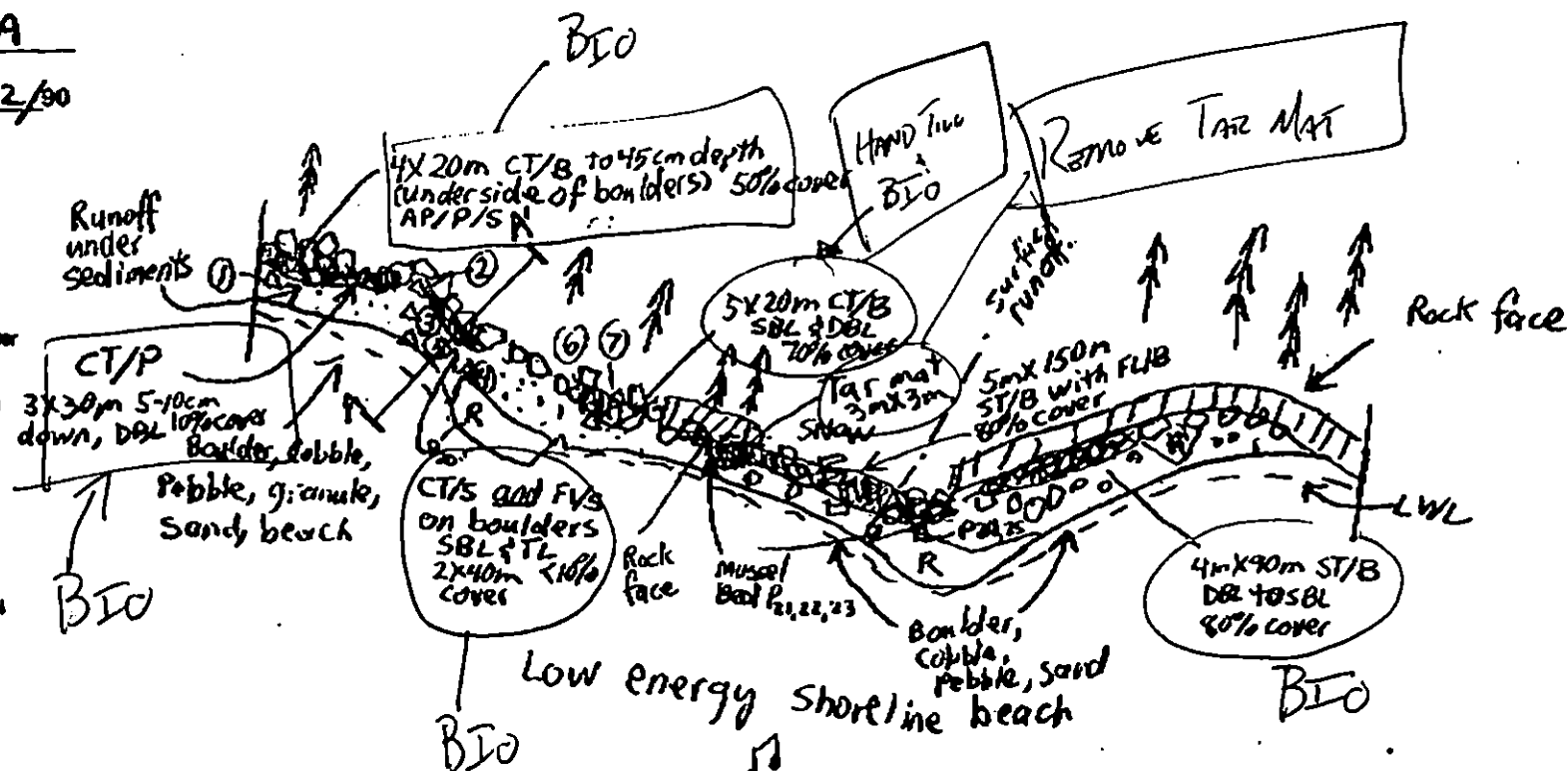
CT/S  
Splashed Distribution

Oil Vegetation

1 ➔  
Photo location, direction, and number

SK H MAP

N  
↑

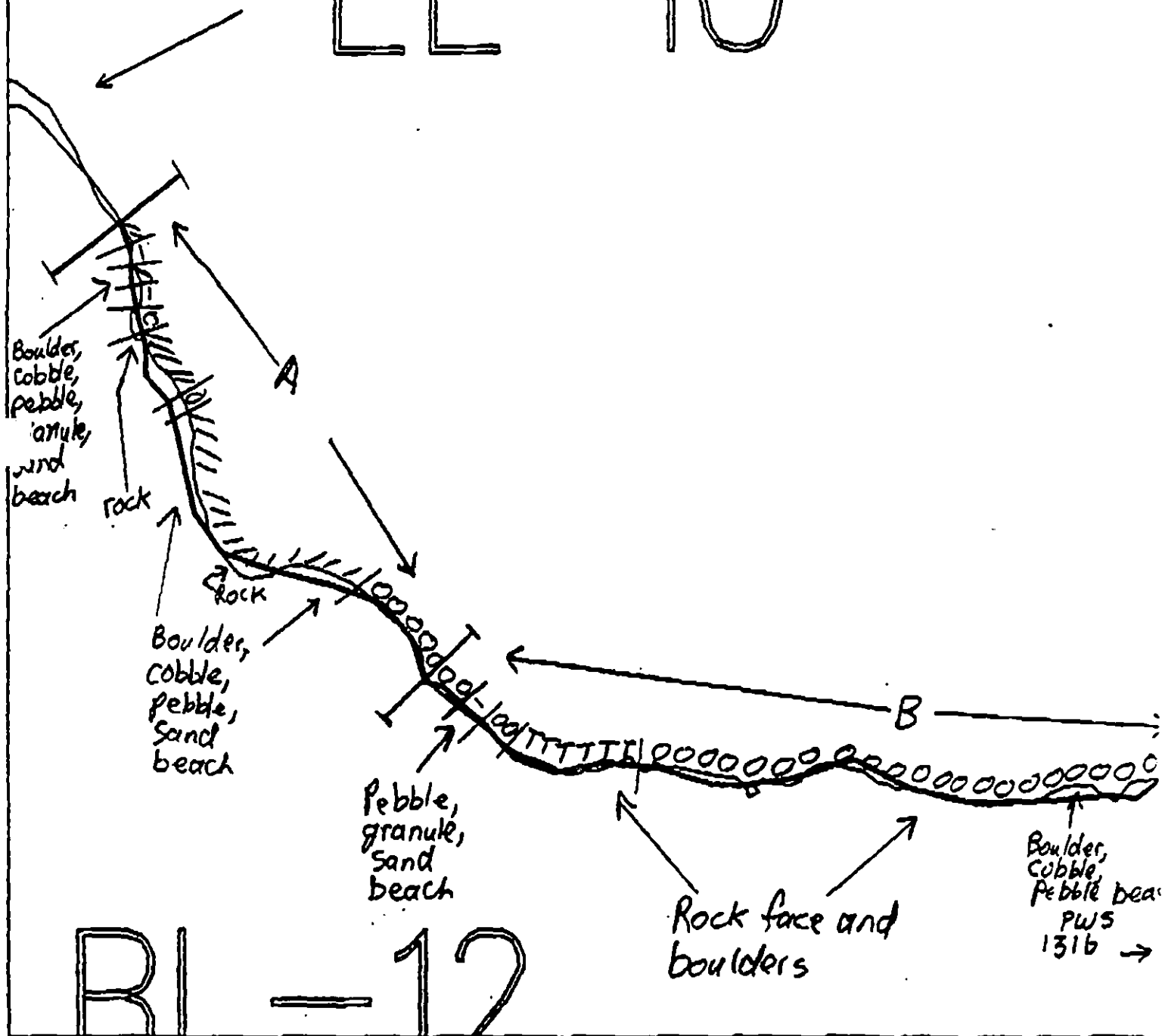


Oil Character Length (m): AP \_\_\_\_\_ PO \_\_\_\_\_ CV \_\_\_\_\_ CT 110 ST 240 MS \_\_\_\_\_ PT \_\_\_\_\_ TB \_\_\_\_\_ FL \_\_\_\_\_ NO 250

REVISION 00/04/00

L-15

EL-10



XXXX Wide

//// Medium

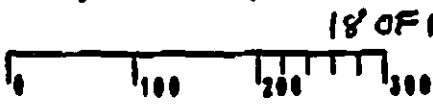
--- Narrow

TTTT Very Light

OOOO

EL-110

ADEC Segment Length: 2620  
18 OF A

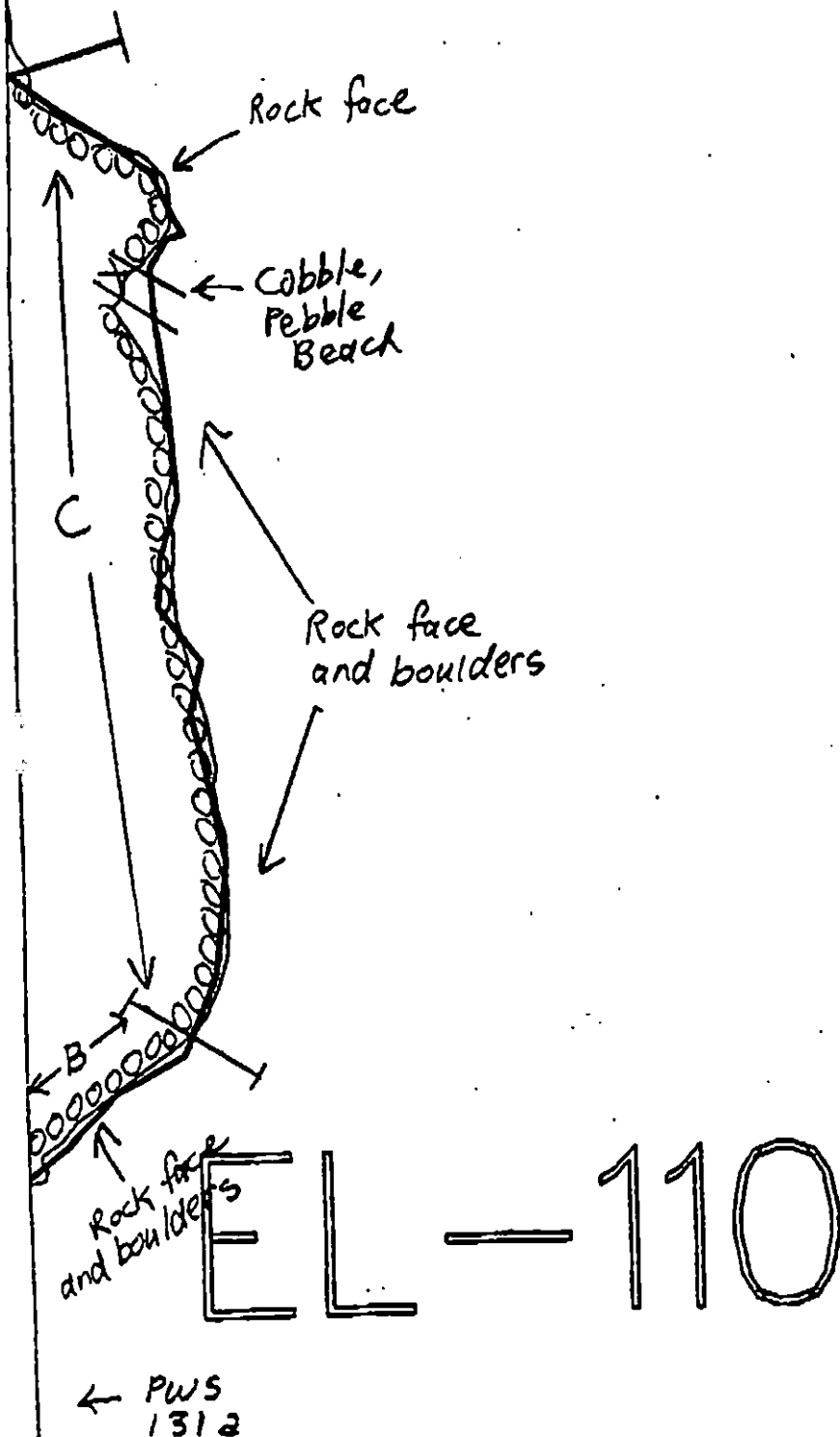


Map Key: PWS-131a

Name: James Springe

Date: 04/02/90

Date Entered:



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

## EL-110

ADEC Segment Length: <sup>2620</sup>~~2507~~m

19 OF 19



Map Key: PWS-131b

Name: James Springer

Date: 04/02/90

Data Entered:

# SHORELINE EVALUATION

SEGMENT ST/ EL-110 SUBDIVISION B (2 OF 3) DATE 4/2/90

## SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Bald eagle nest (5T) - 3/1 to 6/1; recreation special use destination (6Y); Subsistence area for deer harvesting (7II) - 8/15 to 2/28. See attached Ecological Constraint Sheet for specific constraints and contacts.

## SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid disturbance/damage to unoiled biota and substrate.

## ARCHAEOLOGICAL CONSTRAINTS:

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

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

## OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 29 m: V.Light 149 m: No Oil 867 m  
Subsurface Oil Observed: Yes      No X Maximum Depth     

## RECOMMENDATIONS:

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

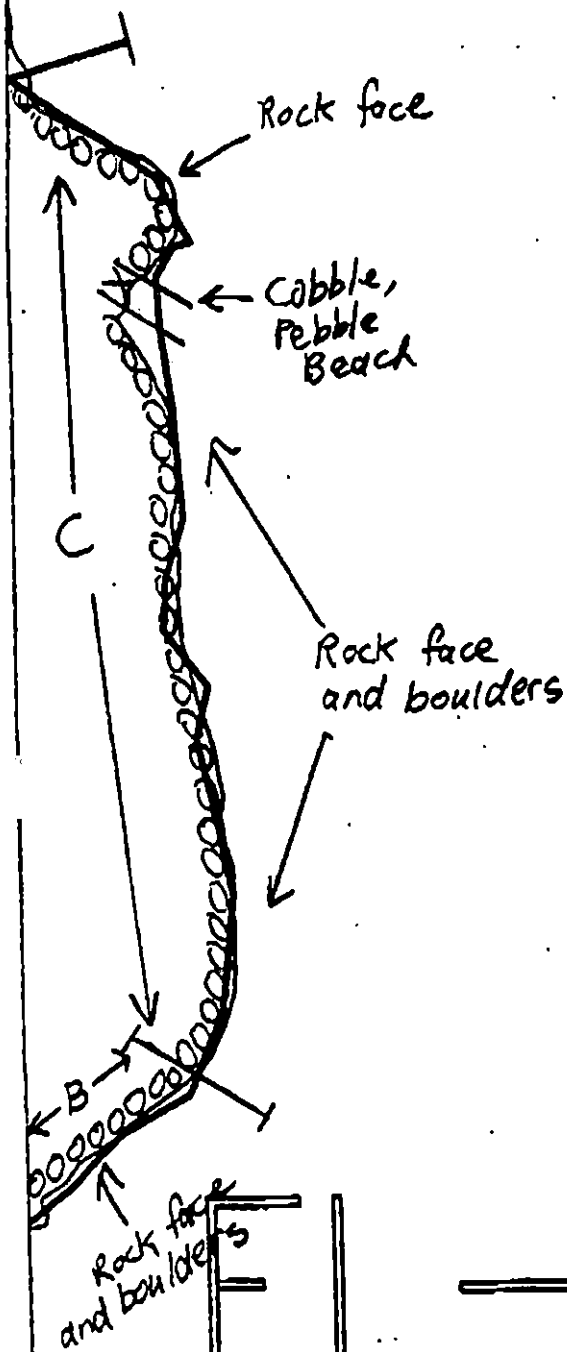
COMMENTS: Recommend bioremediation of areas shown on attached sketch map, and ~~in situ log burning~~. Work should be conducted after 6/1 with approval from ADF&G and USFWS based on above eagle nest constraint.

LEAVE LOGS IN PLACE

## TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90  
ADEC JOHN BAUER  
EXXON ANDY TATE  
NOAA Burl Westcott  
USCG Arnold W. Hines

FOSC: ML DATE: 4-22-90



EL-110

← PWS  
1312

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

EL-110

ADEC Segment Length: 2620  
~~2507m~~

19 OF 19

0 100 200 300

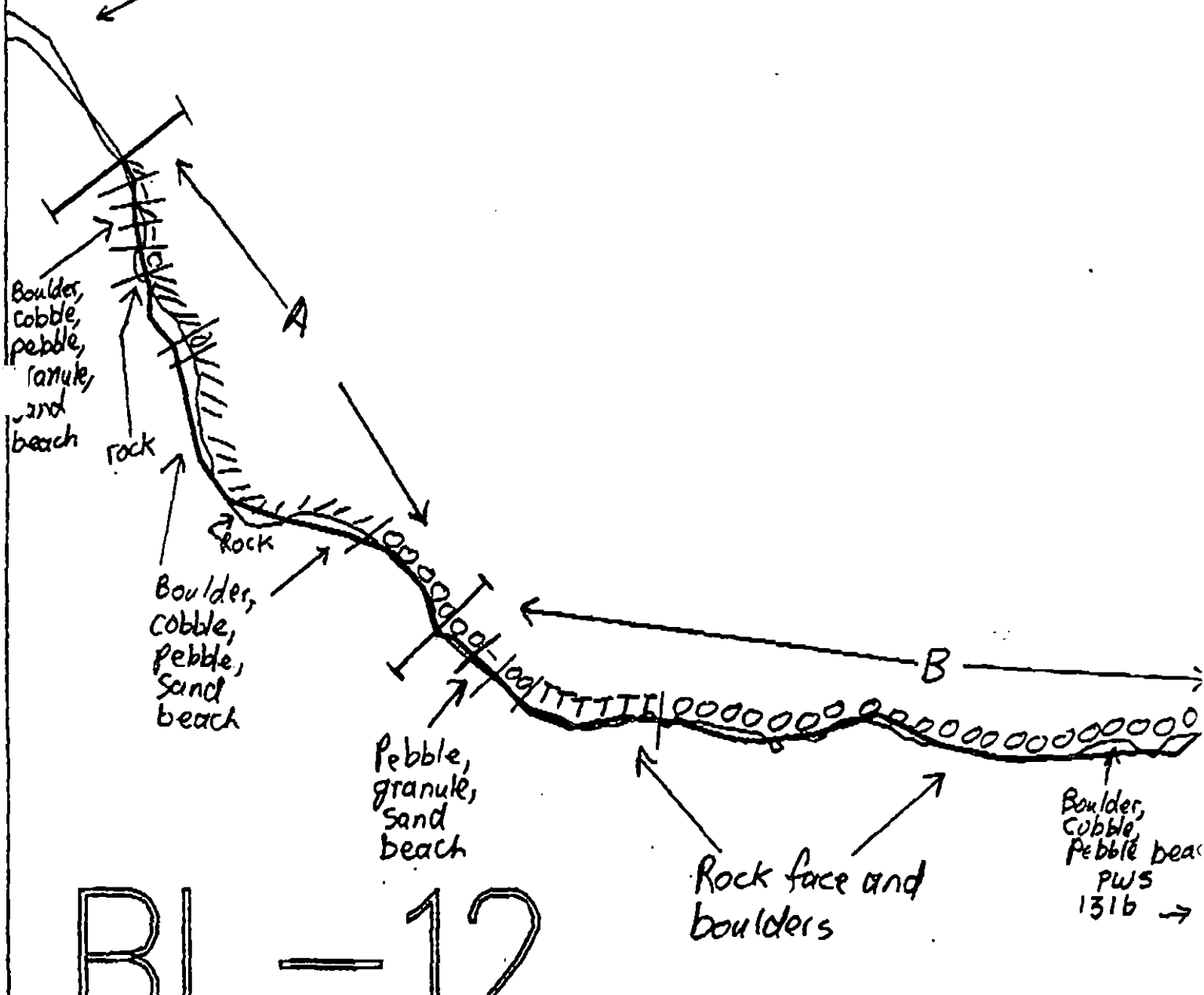
Map Key: PWS-131b

Name: James Springer

Date: 04/02/90

Date Entered:

L-15  
EL-10



RI-12

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

EL-110

ADEC Segment Length: 2620  
 18 OF R

Map Key: PWS-131a  
 Name: James Springe  
 Date: 04/02/90  
 Data Entered:

OG J. SPRINGER

SKETCH MAP

SEGMENT ST/111

SUBDIVISION B

DATE 04 102/90

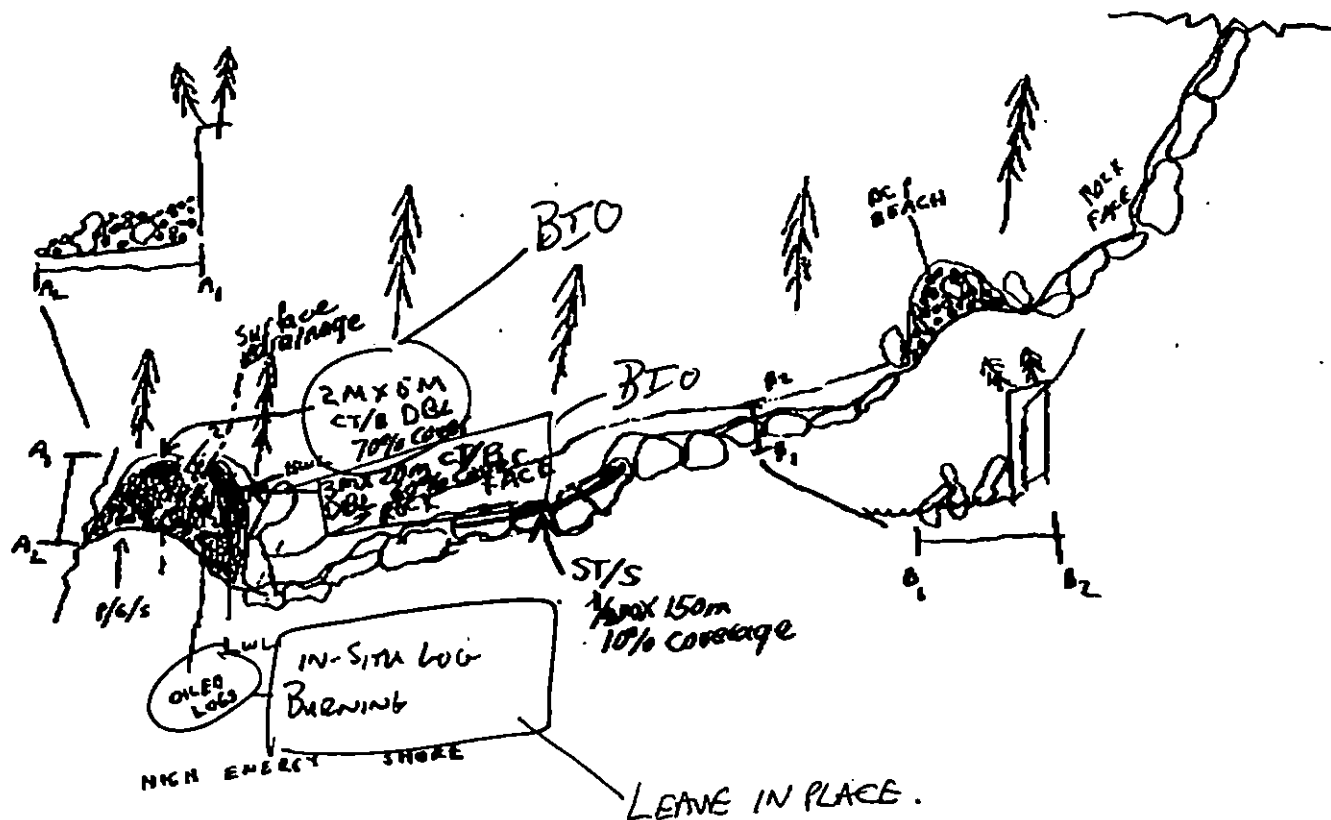
10 OF 19

# CHECKLIST

- ☒ M Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HAIL/ML
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)
- ☐ No Photos

## LEGEND

- 1 Δ
- PI - No Subsurface Oil
- 2 Δ
- PI - Subsurface Oil
- CT/C
- Continuous Distribution
- CT/B
- Scattered 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 5 ST 150 MS \_\_\_\_\_ PT \_\_\_\_\_ TB \_\_\_\_\_ FL \_\_\_\_\_ NO 985

REVISION 02/90

SHORELINE EVALUATION

SEGMENT ST/ EL-110 SUBDIVISION C (3 OF 3) DATE 4/2/90

**SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:**

Bald eagle nest (5T) - 3/1 to 6/1; recreation special use destination (6Y); Subsistence area for deer harvesting (7II) - 8/15 to 2/28.

**SUBDIVISION ECOLOGICAL CONSTRAINTS:**

(5T) Restrict air traffic to essential minimum. Air approach and takeoff to seaward only. Contact USFWS prior to treatment for confirmation dates and avoidance minimums. Avoid disturbance/damage to uncoiled biota and substrate.

**ARCHAEOLOGICAL CONSTRAINTS:**

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

SHPO SIGNATURE: Charles E. H. Dumas DATE: 4/17/90

**OILING CATEGORIZATION:**

Wide 30 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 815 m  
Subsurface Oil Observed: Yes        No X Maximum Depth       

**RECOMMENDATIONS:**

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

**COMMENTS:**

**TAG COMMENTS:**

TAG APPROVAL DATE: 4/17/90.  
ADEC Art Weiner Art Weiner  
EXXON ANDY TSL Andy TSL FOSC:        DATE: 4-22-90  
NOAA Burt Westcott Burt Westcott  
USCG James D. Hyman

06 J. Springer

SEGMENT ST/ EL 110

SUBDIVISION C

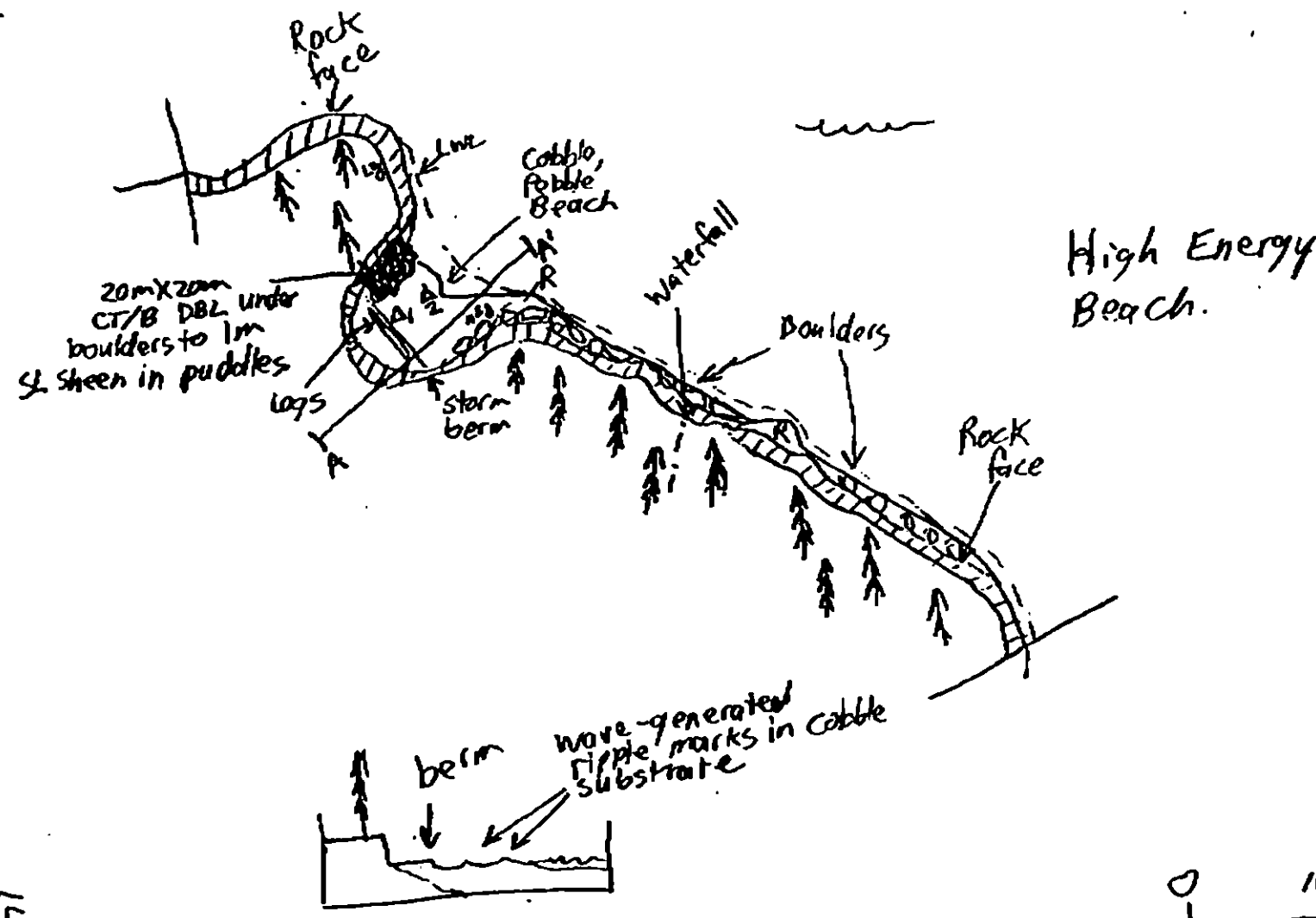
DATE 04/02/90

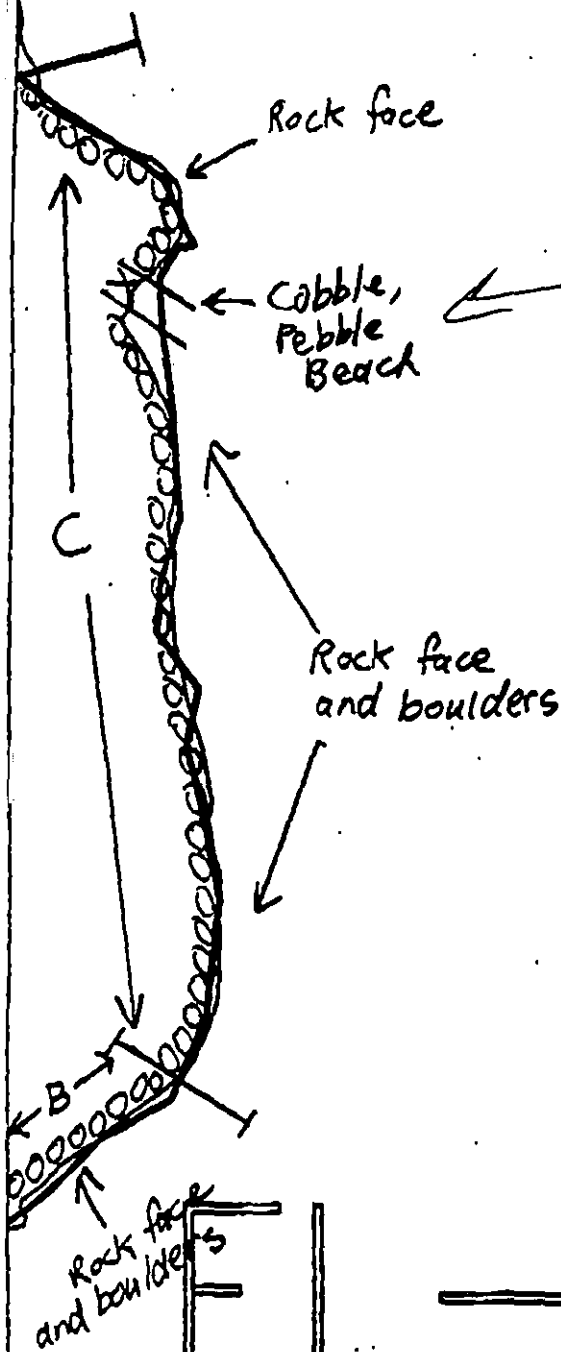
- CHECKLIST
- ☒ N Arrow
  - ☒ Approx. Scale
  - ☒ Log/Sub Entry
  - ☒ Oil Dist.
  - ☒ Width
  - ☒ Length
  - ☒ % Cover
  - ☒ Substrate Character
  - ☒ Est. HWA/LA/VL
  - ☒ SCL
  - ☒ Photo Location(s)
  - ☒ Photo Location(s)
  - ☒ Photo Location(s)

- LEGEND
- 1  $\Delta$   
Pt - No Subsurface Oil
  - 2  $\Delta$   
Pt - Subsurface Oil
  - CT/C  
Continuous Distribution
  - CT/B  
Broken Distribution
  - CT/D  
Patchy Distribution
  - CT/S  
Splashed Distribution
  - Oiled Vegetation
  - 1  $\Rightarrow$   
Photo location, direction, and number

140719

SKETCH MAP





~ 20 m of wide oil  
YH 4-7

EL-110

← PWS  
1312

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

EL-110

ADEC Segment Length: 2620  
~~2507m~~

19 OF 19

0 100 200 300



Map Key: PWS-131b

Name: James Springer

Date: 04/02/90

Date Entered:

**REGION: PRINCE WILLIAM SOUND**

**SEGMENT: ST/EL-999**

**SUBDIVISIONS: A (1 OF 1)**

SHORELINE EVALUATION

SEGMENT ST/ EL-999 SUBDIVISION A (1 OF 1) DATE 4/24/90

**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.

**ARCHAEOLOGICAL CONSTRAINTS:**

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

SHPO SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

**OILING CATEGORIZATION:**

Wide 0 m: Medium 14 m: Narrow 97 m: V.Light 0 m: No Oil 467 m  
Subsurface Oil Observed: Yes \_\_\_\_\_ No X Maximum Depth \_\_\_\_\_

**RECOMMENDATIONS:**

|                                                              |                                     |
|--------------------------------------------------------------|-------------------------------------|
| <input checked="" type="checkbox"/> No Treatment Recommended | _____ Snare/Absorbent Booms         |
| _____ Treatment Recommended                                  | _____ Oil Snares (pom poms)         |
| _____ Manual Pickup                                          | _____ Absorbents (pads, rolls, etc) |
| _____ Bioremediation                                         | _____ Spot Washing: _____ Wands     |
| _____ Tarmat Removal                                         | _____ Beach Cleaner                 |
|                                                              | _____ Other (see comments)          |

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TAG COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TAG APPROVAL DATE: \_\_\_\_\_

ADEC \_\_\_\_\_  
EXXON \_\_\_\_\_  
NOAA \_\_\_\_\_  
USCG \_\_\_\_\_

FOSC: \_\_\_\_\_ DATE: \_\_\_\_\_

# PWS, SEWARD, STEWART AND HOMER OILFIELD 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 Suzumoto 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 unopened 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, 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 Roth 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  
**7J** 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 EL-999 SUBDIVISION: A DATE \_\_\_\_\_

**USCG**

NAME AEC Vandepels SIGNATURE AEC Vandepels

☒ NO TREATMENT RECOMMENDED  
COMMENTS

☐ TREATMENT SUGGESTED

**ADEC**

NAME Michelle Baer SIGNATURE MBaer

☒ NO TREATMENT RECOMMENDED  
COMMENTS

☐ TREATMENT SUGGESTED

Mousse spots are rare. It is on tops of B's and pebbles only. Natural cleansing by wave energy recommended.

Dead otter found by team #6 1/4 mile of shore.

**LAND MANAGER**

NAME Carol S Huber SIGNATURE Carol S Huber

☐ NO TREATMENT RECOMMENDED  
COMMENTS

☐ TREATMENT SUGGESTED

Recommend continued natural cleansing. Most oil in this segment is <sup>coated in and under</sup> ~~coated in and under~~ large boulders and bedrock outcrops. No sheering noted, oil appears stable.  
Resource sensitivity - deer harvesting.

OG J. Springer USCG R. Vandepels SEGMENT STI EL-999  
 BIO P. Crank LAND REP C. Huber SUBDIVISION A (1 OF 7)  
 EXXON T. Tumbler ADEC M. Bae TIME 07:30 to 08:30  
 TEAM NO. 5 TIDE LEVEL -2 TO -1 DATE 04/24/90  
 EST. SUBDIVISION LENGTH: 588 m ☐ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow  
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock  
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S  
 SURFACE SEDIMENTS: R 15 % B 65 % C 15 % P 12 % G 3 % S 0 % M 0 % V 0  
 SLOPE: Long 20 % Hang 70 % Vert 10 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High  
 OIL CATEGORY LENGTH: W 0 m M 85 m N 10 m VL 0 m NO 493  
10 85

### SURFACE OIL

| CHARACTER        | DISTRIBUTION |   |   |   | OIL / FILM COLOR |   |   |   |   |   |   |   | IMPACTED ZONES |   |   |   |
|------------------|--------------|---|---|---|------------------|---|---|---|---|---|---|---|----------------|---|---|---|
|                  | C            | R | P | S | 1                | 2 | 3 | 4 | 5 | 6 | 7 | 8 | SU             | U | M | V |
| ASPHALT PAVEMENT |              |   |   |   |                  |   |   |   |   |   |   |   |                |   |   |   |
| POOLED           |              |   |   |   |                  |   |   |   |   |   |   |   |                |   |   |   |
| COVER            |              |   |   |   |                  |   |   |   |   |   |   |   |                |   |   |   |
| COAT             |              | X | ✓ |   |                  | X | ✓ |   |   |   |   |   | X              | ✓ |   |   |
| STAIN            |              |   |   | X |                  | X |   |   |   |   |   |   | X              |   |   |   |
| MOUSSE           |              |   |   | X |                  |   |   | X |   |   |   |   | X              |   |   |   |
| PATTIES          |              |   |   |   |                  |   |   |   |   |   |   |   |                |   |   |   |
| TARBALLS         |              |   |   |   |                  |   |   |   |   |   |   |   |                |   |   |   |
| FILM             |              |   |   |   |                  |   |   |   |   |   |   |   |                |   |   |   |
| NO OIL           |              |   |   |   |                  |   |   |   |   |   |   |   | X              |   | X | X |

PAVEMENT H F S 0 sq m by 0

PATTIES / TARBALLS 0 BA

NEAR SHORE SHEEN? ☒ NO BR RW SL T

| OILED DEBRIS | AMOUNT |    |    | DID YOU COLLECT DEBRIS?                                             |
|--------------|--------|----|----|---------------------------------------------------------------------|
|              | SM     | MD | LG |                                                                     |
| Logs         |        |    |    | YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> |
| Vegetation   |        |    |    |                                                                     |
| Trash        |        |    |    | TYPE <u>0</u>                                                       |
| Debris       |        |    |    | #BAGS <u>0</u>                                                      |

Photographs:

Roll No. ST-5-7

Frames 15

### SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER |    |    |    |    | OILED INTERVAL | BELOW |    | OIL / FILM COLOR |   |   |   |   |   |   |   | PIT ZONE |   |   |   | A N A | SHEEN (Y/N) | ↓ | SURF. SUBSURF SEDIME |
|---------|----------------|--------------------------|----|----|----|----|----------------|-------|----|------------------|---|---|---|---|---|---|---|----------|---|---|---|-------|-------------|---|----------------------|
|         |                | OP                       | OR | OL | OF | NO |                | NO    | UC | 1                | 2 | 3 | 4 | 5 | 6 | 7 | 8 | SU       | U | M | V |       |             |   |                      |
| 1       | 30             |                          |    |    |    | X  | .              | X     |    |                  |   |   |   |   |   |   |   | X        |   |   |   | N     | 2           |   | P/P/C                |
| 2       | 40             |                          |    |    |    | X  | .              | X     |    |                  |   |   |   |   |   |   |   | X        |   |   |   |       |             |   | P/P                  |
| 3       | 30             |                          |    |    |    | X  | .              | X     |    |                  |   |   |   |   |   |   |   |          |   | X |   | N     | 15          |   | P/G/L                |
| 4       | 20             |                          |    |    |    | X  | .              | X     |    |                  |   |   |   |   |   |   |   | X        |   |   |   |       |             |   | P/P                  |
| 5       | 30             |                          |    |    |    | X  | .              | X     |    |                  |   |   |   |   |   |   |   |          |   | X |   |       |             |   | P/F                  |
|         |                |                          |    |    |    |    | .              |       |    |                  |   |   |   |   |   |   |   |          |   |   |   |       |             |   |                      |

COMMENTS

REVIEWED FW

DATE 4/25/90

00 J. Springer  
SEGMENT STI EL-999

SUBDIVISION A

DATE 04/24/80

### CHECKLIST

- ☐ N Area
- ☐ Approx. Scale
- ☐ Seg/Sub Body
- ☐ Oil Out
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HAWLAWL
- ☐ SBL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PH Location(s)
- ☐ Photo Location(s)

### LEGEND

1 Δ  
PH - No Subsurface Oil

2 Δ  
PH - Subsurface Oil

CT/C  
Continuous Distribution

CT/B  
Broken Distribution

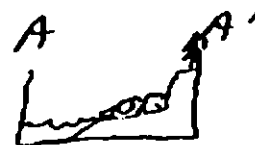
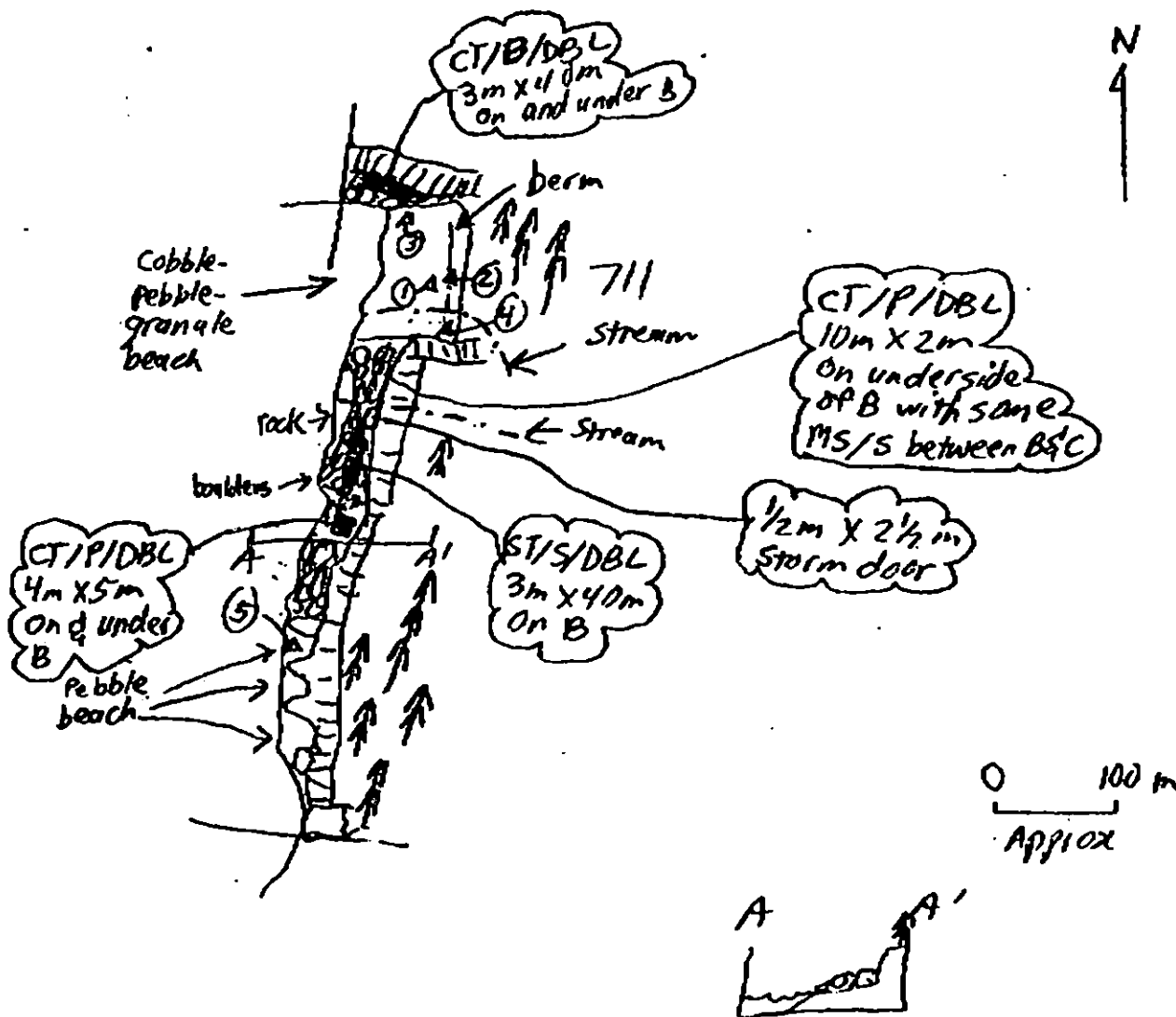
CT/P  
Patchy Distribution

CT/S  
Spatched Distribution

eee  
Oiled Vegetation

1 ●  
Photo location, direction,  
and number

### SKETCH MAP



# SHORELINE ECOLOGICAL SUMMARY

Revised 10/87

Segment ST / EL 999 Subdivision A Date (mo / day / yr) 4/24/90

Time (24 hr) 0730-0830 Biologist Crant pg 1 of 3

(A) Substrate type and % of segments:  
(1) Bedrock 5 (2) Boulder 65 (3) Cobble 15 (4) Pebble 12 (5) Sand 3 (6) Sil

(B) Overall % cover of biota (% of segment): Dense 10 Moderate 20 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 (S)

Photographs: Roll No. ST-5-7

Frames 15

## BARNACLES

| Dense |    |    | Moderate |    |    | Sparse       |              |    | Rare         |    |    |
|-------|----|----|----------|----|----|--------------|--------------|----|--------------|----|----|
| 1U    | 1M | 1L | 1U       | 1M | 1L | 1U           | 1M           | 1L | 1U           | 1M | 1L |
| 2     | 2  | 2  | 2        | 2  | 2  | <del>2</del> | <del>2</del> | 2  | 2            | 2  | 2  |
| 3     | 3  | 3  | 3        | 3  | 3  | 3            | 3            | 3  | <del>3</del> | 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    | <del>2</del> | 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  | <del>2</del> | <del>2</del> | <del>2</del> | 2      | 2            | 2            | 2    | 2  | 2  |
| 3     | 3  | 3  | 3            | 3            | 3            | 3      | <del>3</del> | <del>3</del> | 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    | <del>2</del> | 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:

- Exxon Rep Spotted Beluga in front of Segment 0630 traveling N  
- Heard terrestrial Birds in uplands.

1 - Immature Bald Eagle

## Ecological Considerations:

711 - Deer Harvesting

Segment: ST/EL999A Length: 588m

Biol: Crank

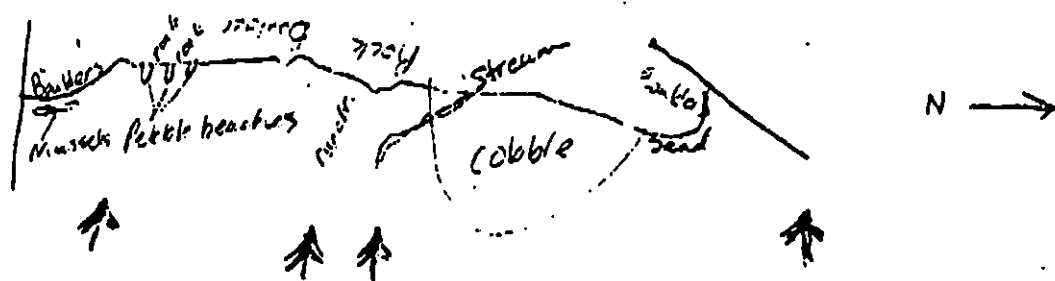
pg 3 of 3

Time: 0730-0830

Date: 4/24/90

Tide Height: -2 to -1 ft

## PWS



## Comments

- Lower Intertidal Biotas appear to be all there.
- Sand area has dense ulvum population.
- Middle Intertidal zone appears to be recovering.
- Cobble is covered with filamentous green algae.
- On the northern boulders adult barnacles are present. Scarring and 70% mortality but report is dense - just scattered (plates were still soft). In rest of boulder barnacles sparse.
- Near runoff Littorina were moderate.
- Mytilus band on Southern Rock 30m x 42m, dense conc.
- Fucus is sparse with rare sporlings. 30% of population is stripes.
- Upper Intertidal zone has low biota.
- Rare barnacle population and an occasional Littorina in cobble. Rare barnacles on boulders and moderate Littorina. Sparse mature and moderate barnack.
- Low Biota on Pebble beaches. Beaches covered at mid-tide level.

L-999

EL-999

EL-14 A

EL-14 B

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

EL-999

ABEC Segment Length: <sup>588</sup>~~470~~m

100 200 300

Map Key: PWS-142

Name: James Spring

Date: 4/24/90

NOT RECORDED

## SHORELINE EVALUATION

SEGMENT ST/ EL-999 SUBDIVISION A (1 OF 1) DATE 4/24/90

**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 uncoiled biota and substrate.

### ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Hines DATE: 5/2/90

**OILING CATEGORIZATION:**

Wide\_0\_m: Medium\_14\_m: Narrow\_97\_m: V.Light\_0\_m: No Oil\_467\_m  
Subsurface Oil Observed: Yes\_\_\_\_\_No X\_\_\_\_\_Maximum Depth\_\_\_\_\_

**RECOMMENDATIONS:**

|                                                              |                                                      |
|--------------------------------------------------------------|------------------------------------------------------|
| <input checked="" type="checkbox"/> No Treatment Recommended | <input type="checkbox"/> Snare/Absorbent Booms       |
| <input type="checkbox"/> Treatment Recommended               | <input type="checkbox"/> Oil Snares (pom poms)       |
| <input type="checkbox"/> Manual Pickup                       | <input type="checkbox"/> Absorbents (pads,rolls,etc) |
| <input type="checkbox"/> Bioremediation                      | <input type="checkbox"/> Spot Washing:_____Wands     |
| <input type="checkbox"/> Tarmat Removal                      | <input type="checkbox"/> Beach Cleaner               |
|                                                              | <input type="checkbox"/> Other (see comments)        |

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**TAG COMMENTS:** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

TAG APPROVAL DATE: 5/2/90.  
ADEC Art Wenger Art Wenger  
EXXON Andy Carl Andy Carl  
NOAA Gary Peterson Gary Peterson  
USCG Kenneth Kanne Kenneth Kanne

FOSC: W L DATE: 5-8-90

00 J.S. 1985  
 SEGMENT STI EL-999

SUBDIVISION A

DATE 04/24/90

# CHECKLIST

- ☐ 11 Areas
- ☐ Approx. Scale
- ☐ Seg/Dist Study
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWA/LWL
- ☐ S&L
- ☐ Profile Location(s)
- ☐ Photo Location(s)
- ☐ Photo Location(s)

## LEGEND

1 Δ

PH - No Subsurface Oil

2 Δ

PH - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Spashed Distribution

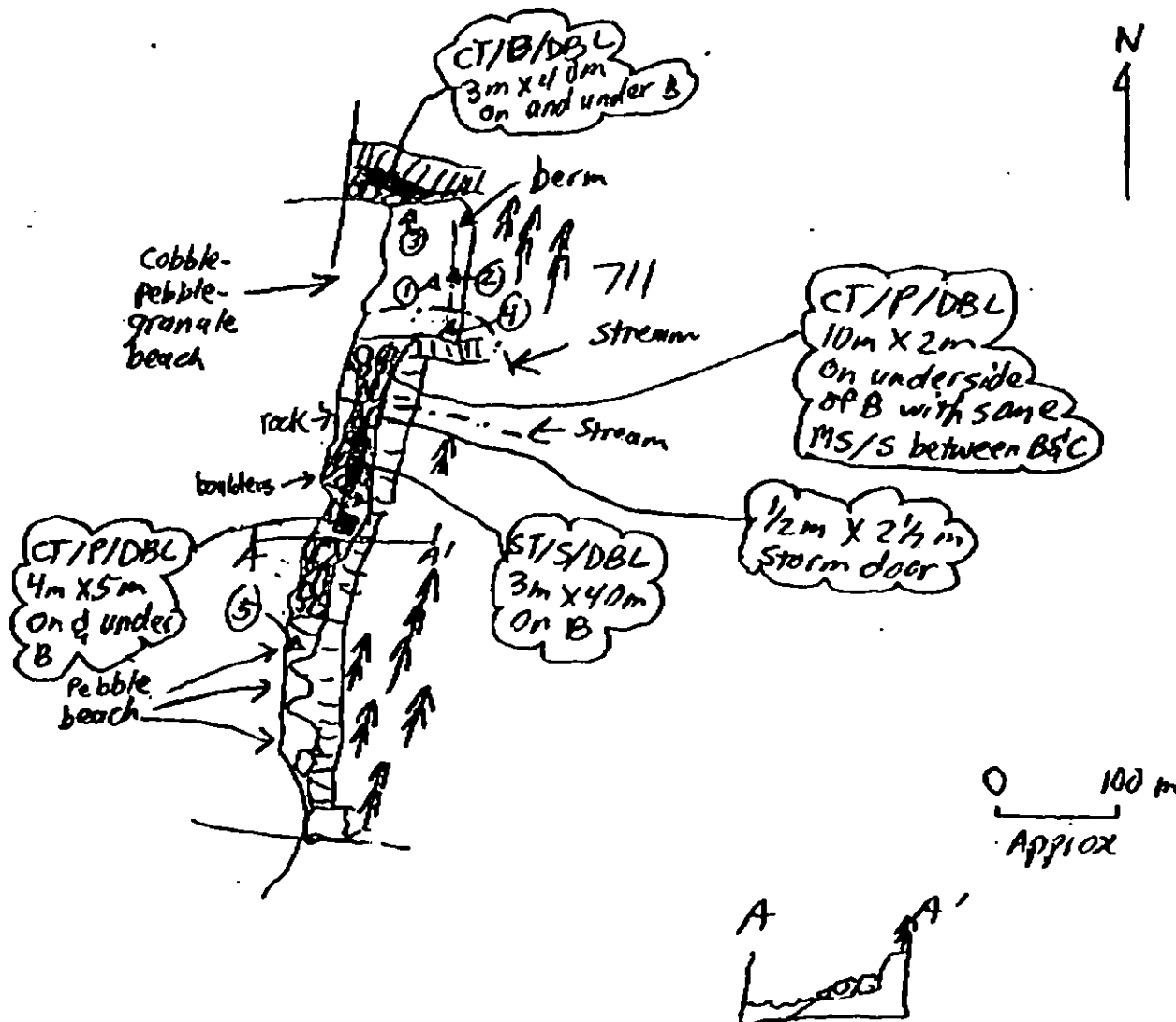
lll

Oil Vegetation

1 ●

Photo location, direction, and number

## SKETCH MAP



Segment: ST/EL999A Length: 588m

Biol: Crank

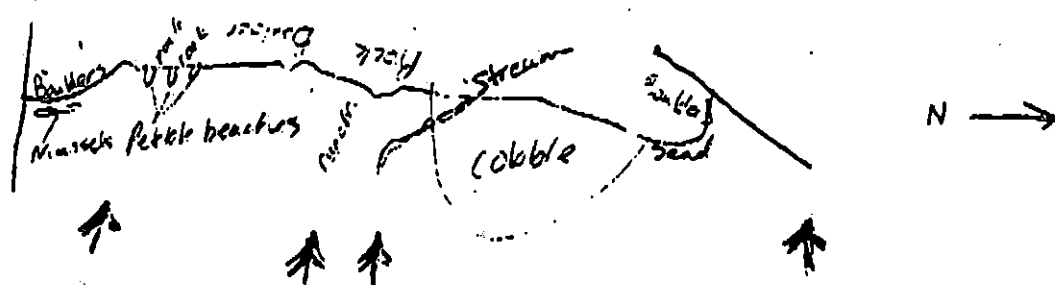
pg 3 of 3

Time: 0730-0830

Date: 4/24/90

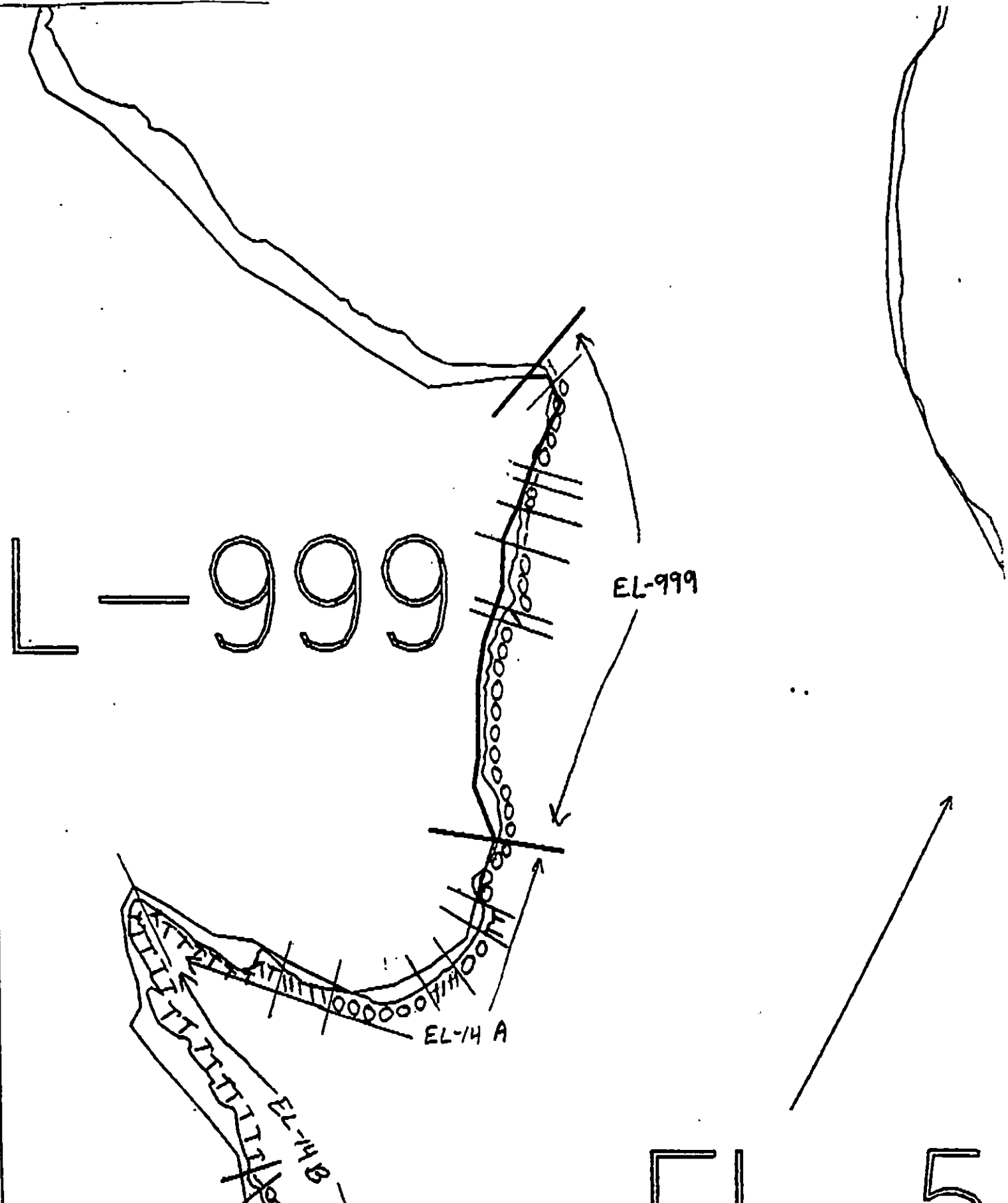
Tide Height: -2 to -1 ft

## PWS



## Comments

- Lower Intertidal zone appears healthy.
- Sand area has dense worm population.
- Middle Intertidal zone appears to be recovering.
- Cobble is covered with filamentous green algae.
- On the northern boulders adult barnacles are present - Scarring p and 70% mortality but most is dense - just settled (plates were still soft). In rest of boulders barnacles sparse.
- Near runoff Littorina were moderate
- Mytilus band on Southern Rock 30m x 42m, dense core.
- Fucus is sparse with rare sporlings. 30% of population is stripes.
- Upper Intertidal zone has low biota.
- Rare barnacle population and occasional Littorina in cobble. Rare barnacles on boulders and moderate Littorina. Sparse mature and moderate barnacles.
- Low Biota on Pebble beaches Beaches covered at mid-tide level.



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

EL-999

DEC Segment Length: 588

100 200 300

Map Key: PWS-142  
Name: James Springs  
Date: 4/24/90  
Data Entered:

**REGION: PRINCE WILLIAM SOUND**

**SEGMENT: ST/EN-45**

**SUBDIVISIONS: A (1 OF 1)**

SHORELINE EVALUATION

SEGMENT ST/ EN-45 SUBDIVISION A (1 OF 1) DATE 4/6/90

**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.

**ARCHAEOLOGICAL CONSTRAINTS:**

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

SHPO SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

**OILING CATEGORIZATION:**

Wide 0 m: Medium 20 m: Narrow 8 m: V.Light 0 m: No Oil 147 m  
Subsurface Oil Observed: Yes X No \_\_\_\_\_ Maximum Depth 15 cm

**RECOMMENDATIONS:**

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

COMMENTS: Bioremediate cover, coat and subsurface oil. Work should be  
conducted after 6/1 with approval of ADF&G and USFWS based on eagle  
nest constraint.

TAG COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TAG APPROVAL DATE: \_\_\_\_\_

ADEC \_\_\_\_\_  
EXXON \_\_\_\_\_  
NOAA \_\_\_\_\_  
USCG \_\_\_\_\_

FOSC: \_\_\_\_\_ DATE: \_\_\_\_\_

## PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (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 unopened 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 / EN 45 SUBDIVISION: A DATE 4-06-90

**USCG**

NAME \_\_\_\_\_ SIGNATURE \_\_\_\_\_

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

*I recommend no treatment for this subdivision. Labor intensive for what would be gained. Also all tide zones seem to be doing well.*

**ADEC**

NAME Michele Baer SIGNATURE M Baer

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

*On B field, I recommend manual wiping of the broken CT and removing the B's to pick at the underlying 5 cm of DR C, P, and S surface. There lies a crevice to the NW of the B field with a 2 x 20M CV/c. Scrubbing of the walls would help reduce the CV, but visqueen should be placed over the oil-free tidepools lying at the base of the crevice during the cleanup process. The adjoining B, C and P beach required no treatment. No surface oil was present and pits dug in the U12 and M12 revealed NO.*

**LAND MANAGER**

NAME DAN HOGAN SIGNATURE Dan Hogan

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

*I RECOMMEND MANUALLY WIPING THE BROKEN CT. THE 2X20 CV/C AND 2M X 15M CT/B SHOULD BE HAND WIPED.*

# SHORELINE OILING SUMMARY

REVISION NO. 06/23/90

OG J. Springer USCG R. Vandepels SEGMENT STI EN45  
 BIO P. Crank LAND REP D. Logan SUBDIVISION A (1081)  
 EXXON T. Tomblin ADEC M. Baer TIME 15:10 to 15:57  
 TEAM NO.: 5 TIDE LEVEL: +6 to +4 DATE 04/06/90  
 EST. SUBDIVISION LENGTH: 207m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow  
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock  
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: W to E  
 SURFACE SEDIMENTS: R 10 % B 5 % C 50 % P 20 % G 0 % S 15 % M 0 % V 0 %  
 SLOPE: Long 95 % Hang 5 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High  
 OIL CATEGORY LENGTH: W 0 m M 15 m N 45 m VL 0 m NO 147 m

## SURFACE OIL

| CHARACTER        | DISTRIBUTION |   |   |   | OIL / FILM COLOR |    |    |    |    |    |   |   | IMPACTED ZONES |  |  |  |
|------------------|--------------|---|---|---|------------------|----|----|----|----|----|---|---|----------------|--|--|--|
|                  | C            | S | P | B | SP               | OR | OL | OP | NO | SU | U | M | U              |  |  |  |
| ASPHALT PAVEMENT |              |   |   |   |                  |    |    |    |    |    |   |   |                |  |  |  |
| POOLED           |              |   |   |   |                  |    |    |    |    |    |   |   |                |  |  |  |
| COVER            | X            |   |   |   |                  | X  |    |    |    |    | X |   |                |  |  |  |
| COAT             |              | ✓ | 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       |        |    |    |

DEBRIS COLLECTED ☒ YES ☐ NO

TYPE Anchor

#BAGS 0

Photographs:

Roll No. ST-5-4

Frames 1-3

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER |    |    |    |    | OILED INTERVAL (CM-DM) | BELOW |    | OIL / FILM COLOR |    |    |    |    |    |   |   | PIT ZONE | A N A | SUBSURFACE SEDIMENTS |
|---------|----------------|--------------------------|----|----|----|----|------------------------|-------|----|------------------|----|----|----|----|----|---|---|----------|-------|----------------------|
|         |                | OP                       | OR | OL | OF | NO |                        | UO    | UC | SP               | OR | OL | OP | NO | SU | U | M | U        |       |                      |
| 1       | 50             |                          |    |    |    | X  | .                      | X     |    |                  |    |    |    |    | X  |   |   |          |       | PV                   |
| 2       | 45             |                          |    |    |    | X  | .                      | X     |    |                  |    |    |    |    |    | X |   |          |       | PS                   |
| 3       | 20             | X                        |    |    |    |    | 10-15                  | X     |    |                  | X  |    |    |    | X  |   |   |          |       | CP                   |
|         |                |                          |    |    |    |    | .                      |       |    |                  |    |    |    |    |    |   |   |          |       |                      |
|         |                |                          |    |    |    |    | .                      |       |    |                  |    |    |    |    |    |   |   |          |       |                      |
|         |                |                          |    |    |    |    | .                      |       |    |                  |    |    |    |    |    |   |   |          |       |                      |

COMMENTS

20

OG J 3 16R

SEGMENT ST/EN 45

SUBDIVISION A

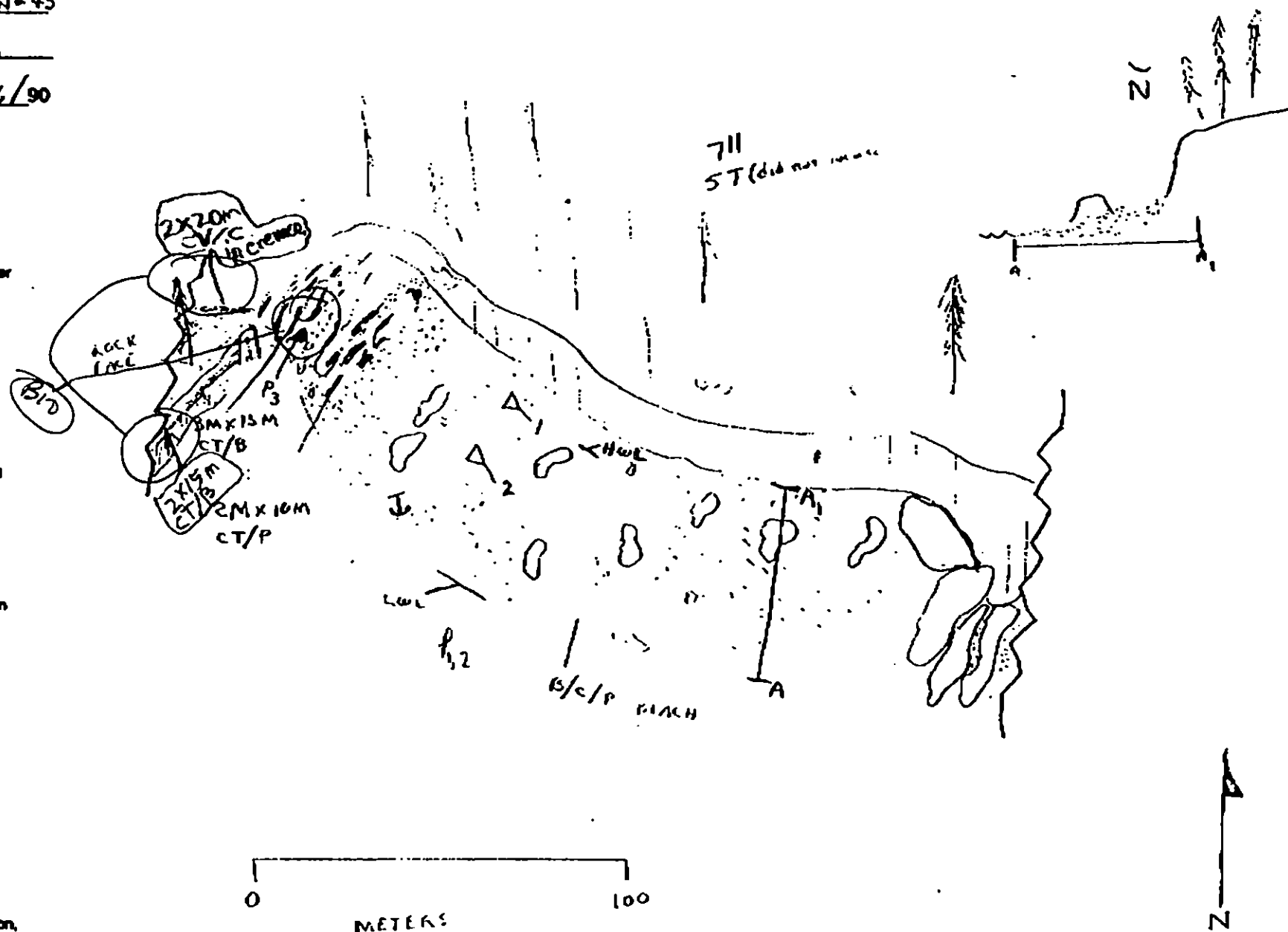
DATE 04 106/90

# CHECKLIST

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

## LEGEND

- 1  $\Delta$   
PH - No Subsurface Oil
- 2  $\Delta$   
PH - Subsurface Oil
- CT/C  
Continuous Distribution
- CT/B  
Broken Distribution
- CT/P  
Patchy Distribution
- CT/S  
Splashed Distribution
- Oiled Vegetation  
1  $\rightarrow$   
Photo location, direction, and number



Oil Character Length (m): AP 20 PO 20 CV 20 CT 40 ST 40 MS 40 PT 40 TB 40 FL 40 NO 47

REVISION: 00/2400

## SHORELINE ECOLOGICAL SUMMARY

REVISION: 05/22/90

Segment ST/EN 45 Subdivision A Date (mo / day / yr) 4/6/90Time (24 hr) 1510-1530 Biologist Crank Length 207m  
Tide Height +6 → +4(A) Substrate type and % of segments:  
(1) Bedrock 10 (2) Boulder 5 (3) Cobble 50 (4) Pebble 20 (5) Sand        (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. ST-5-4Frames 3

## BARNACLES

| Dense |          |    | <del>Moderate</del> |          |    | Sparse |          |    | Rare |    |    | NOT PRESENT |
|-------|----------|----|---------------------|----------|----|--------|----------|----|------|----|----|-------------|
| 1U    | 1M       | 1L | 1U                  | 1M       | 1L | 1U     | 1M       | 1L | 1U   | 1M | 1L |             |
| 2     | <u>2</u> | 2  | 2                   | <u>2</u> | 2  | 2      | <u>2</u> | 2  | 2    | 2  | 2  |             |
| 3     | 3        | 3  | 3                   | 3        | 3  | 3      | <u>3</u> | 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 |    |    | <del>Moderate</del> |          |    | Sparse |    |    | Rare |    |    | NOT PRESENT |
|-------|----|----|---------------------|----------|----|--------|----|----|------|----|----|-------------|
| 1U    | 1M | 1L | 1U                  | 1M       | 1L | 1U     | 1M | 1L | 1U   | 1M | 1L |             |
| 2     | 2  | 2  | 2                   | <u>2</u> | 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  |             |

## GASTROPODS

| Dense |    |    | <del>Moderate</del> |          |    | Sparse |          |    | Rare |    |    | NOT PRESENT |
|-------|----|----|---------------------|----------|----|--------|----------|----|------|----|----|-------------|
| 1U    | 1M | 1L | 1U                  | 1M       | 1L | 1U     | 1M       | 1L | 1U   | 1M | 1L |             |
| 2     | 2  | 2  | 2                   | <u>2</u> | 2  | 2      | 2        | 2  | 2    | 2  | 2  |             |
| 3     | 3  | 3  | 3                   | 3        | 3  | 3      | <u>3</u> | 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 |          |    | <del>Moderate</del> |    |    | Sparse |          |    | Rare |    |    | NOT PRESENT |
|-------|----------|----|---------------------|----|----|--------|----------|----|------|----|----|-------------|
| 1U    | 1M       | 1L | 1U                  | 1M | 1L | 1U     | 1M       | 1L | 1U   | 1M | 1L |             |
| 2     | <u>2</u> | 2  | 2                   | 2  | 2  | 2      | <u>2</u> | 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  |             |

## Wildlife Observations/ General Comments:

- 1 Bald Eagle - Adult
- 2 Bald Eagles over Entrance Is - 1 adult, 1 immature
- 1 Raven, 1 Pigeon Guillemot
- 3 Delagic Cormorants - 2 Breeding Plumage, 1 not

## Ecological Considerations:

- ST - Active Bald Eagle Nesting
- 711 - Deer Harvesting

- Heavy Barnacle Scarring on Bedrock
- East Headland B. glandula are dense 10% most.
- Terraced Bedrock has 6 tidepools 0.5m<sup>2</sup>, dense Littorina in tidepools.
- Drift algae included F. minoraria spp, Monostocarpus pupillata and Rhodomela palmata.
- LITZ unrefracted
- Rounded cobble beach = low biota
- Recruitment moderate on boulders and talus not apparent in cobble.

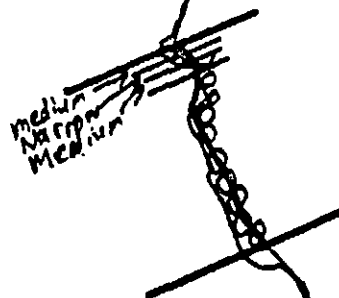
SEGMENT: ST/EN 45 SUBDIVISION A LENGTH 207m BIOLOGIST Crank

DATE 4/6/90 TIME 1510-1550 TIDE HEIGHT +6 → +4

1 - BEDROCK 2 - BOULDER 3 - COBBLE 4 - PEBBLE 5 - SAND 6 - SILT

|        | SPECIES                          | UTZ | MITZ | LITZ | COMMENTS            |
|--------|----------------------------------|-----|------|------|---------------------|
| FLORA: | BOSSIELLA/CORALLINA              |     |      |      |                     |
|        | CALLIARTHRON/CORALLINA           |     |      |      |                     |
|        | CLADOPHORA SPP                   |     |      |      |                     |
|        | COSTARIA SPP                     |     |      |      |                     |
|        | ENDOCLADIA MURICATA              |     |      |      |                     |
|        | FILAMENTOUS GREENS               |     | 12   |      |                     |
|        | FILAMENTOUS REDS                 |     |      |      |                     |
|        | GLOIOPELTIS FURCATA              |     |      |      |                     |
|        | HALOSACCION GLANDIFORME          |     |      |      |                     |
|        | LAMINARIA SPP                    |     |      |      |                     |
|        | LITHOTHAMNION                    |     |      |      |                     |
|        | NEREOCYSTIS SPP                  |     |      |      |                     |
|        | PORPHYRA SPP                     |     |      |      |                     |
|        | RALPHSIA/HILOENBRANDIA           |     |      |      |                     |
|        | RHODOMELA LAMIX                  |     |      |      |                     |
|        | RHODOMENIA PALMATA               |     |      |      |                     |
|        | SCYTOSIPHON SPP                  |     | 1    |      | Tide pool           |
|        | ULVA SPP                         |     | 1    |      | Tide pool           |
|        | ZOSTERA MARINA                   |     |      |      |                     |
| FAUNA: | ANTHOPELURA SPP                  |     |      |      |                     |
|        | (SEM) BALUNUS CARIOSUS           |     | 12   |      |                     |
|        | B. GLANDULA                      |     |      |      |                     |
|        | BRYOZOANS                        |     |      |      |                     |
|        | CHITONS (OTHER THAN K. TUNICATU) |     |      |      |                     |
|        | CLAMS                            |     |      |      |                     |
|        | CRABS                            |     |      |      |                     |
|        | DERMASTERIAS IMBRICATA           |     |      |      |                     |
|        | KATHARINA TUNICATA               |     |      |      |                     |
|        | LEPTASTERIAS HEXACTIS            |     |      |      |                     |
|        | LIMPETS                          |     |      |      |                     |
|        | LITTORINA SPP                    |     | 12   |      | dense in tide pools |
|        | NUCELLA SPP                      |     |      |      |                     |
|        | PAGURUS SPP                      |     |      |      |                     |
|        | PISASTER OCHRACEUS               |     |      |      |                     |
|        | POLYCHAETES                      |     |      |      |                     |
|        | PTYCHOPODIA HELIANTHOIDES        |     |      |      |                     |
|        | SEARLESIA DIFA                   |     |      |      |                     |
|        | SERPULIDS                        |     |      |      |                     |
|        | SIPHONARIA THERSITES             |     |      |      |                     |
|        | TEALIA                           |     |      |      |                     |
|        |                                  |     |      |      |                     |
|        |                                  |     |      |      |                     |
|        |                                  |     |      |      |                     |
|        |                                  |     |      |      |                     |
|        |                                  |     |      |      |                     |
|        |                                  |     |      |      |                     |
|        |                                  |     |      |      |                     |
|        |                                  |     |      |      |                     |

BL-12



25

XXXX Wide

//// Medium

--- Narrow

\*T Very Light

No Oil

EN-45

ADEC Segment Length: <sup>207</sup>~~175~~m

0 100 200 300  
METERS



Map Key: PWS-143

Name: J. Springer

Date: 4/7/90

Date Entered:

## ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EN-45 SUBDIVISION A (1 of 1)

| WORK WINDOW    |                    |
|----------------|--------------------|
| Bioremediation | 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. Nest in Segment EN-46 is more than 400m from recommended treatment area.

7II Subsistence: Deer Harvesting

Closed to bioremediation after 8/15.

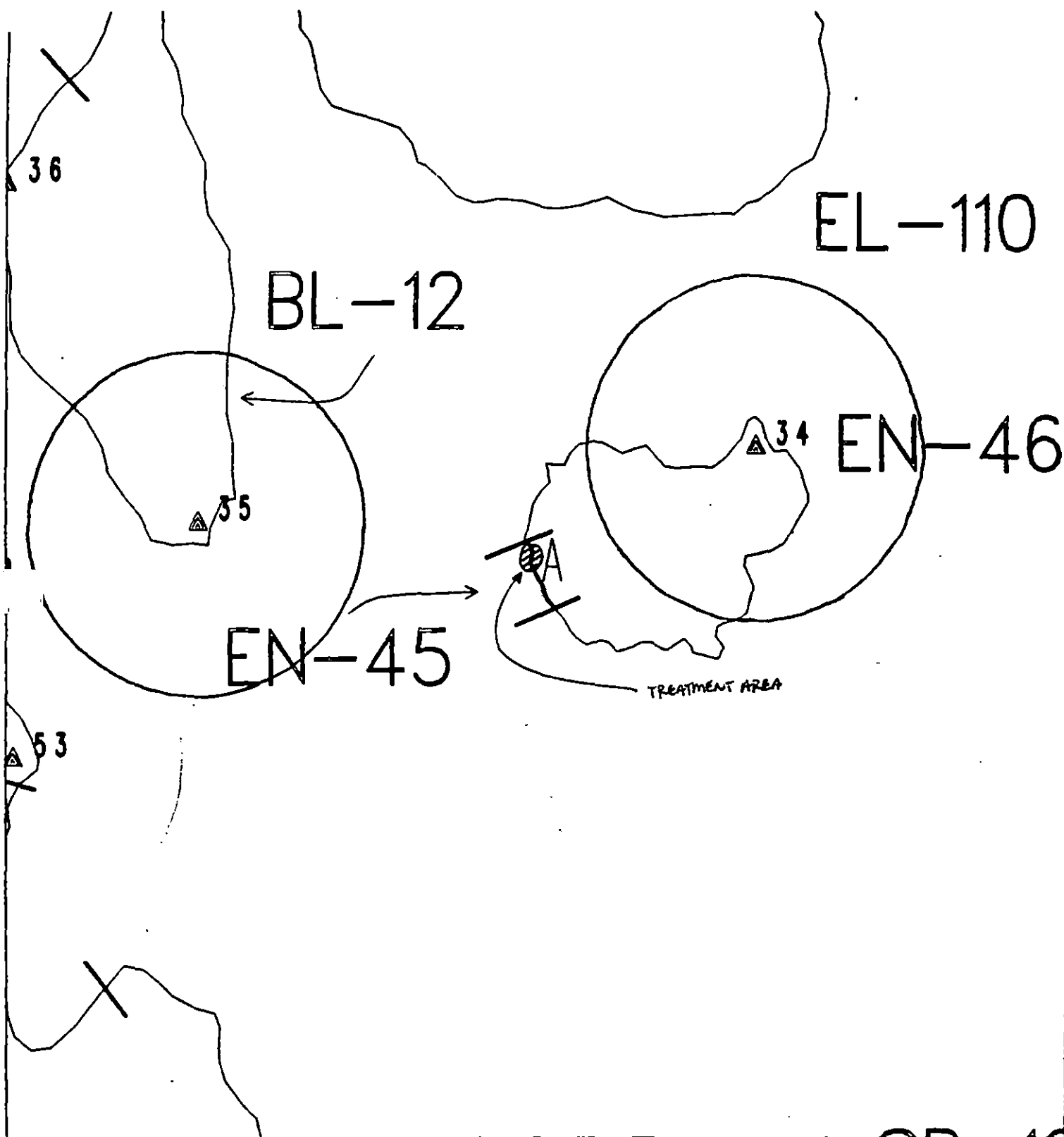
### OTHER ECOLOGICAL CONSIDERATIONS

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

TAG ADDENDUM DATE 5/21/90  
ADEC ART WEINER  
EXXON ANDY TEE  
NOAA Joseph Talbott  
USCG M. J. Hall  
FOSC [Signature] DATE 5-21-90

Prepared by: Andrew Meyer

Date: 5/19/90



Exxon Company, USA

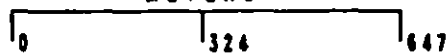
Map Keys KNI-EN-45

May 11, 1990



ECOLOGY MAP  
SEGMENT EN-45  
SUBDIVISION A (1 of 1)

METERS



Seabird Colony



Eagle Nest

1 inch = 1062 feet

## SHORELINE EVALUATION

SEG/MEN/ ST/ EN-45 SUBDIVISION A (1 OF 1) DATE 4/6/90

## SE/3MENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)  
711 Subsistence area: Deer harvesting (8/15 to 2/28)  
See attached Ecological Constraint sheet for specific constraints and  
contacts.

**SUBDIVISION ECOLOGICAL CONSTRAINTS:**

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

### ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Steven J. Homan DATE: 7/23/90

**OILING CATEGORIZATION:**

Wide\_0\_m: Medium\_20\_m: Narrow\_8\_m: V.Light\_0\_m: No Oil\_147\_m  
Subsurface Oil Observed: Yes\_X No\_\_\_\_\_ Maximum Depth\_15\_cm

**RECOMMENDATIONS:**

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

COMMENTS: Bioremediate cover, coat and subsurface oil. Work should be conducted after 6/1 with approval of ADF&G and USFWS based on eagle nest constraint.

SEE ADDENDUM DATED 5/19/90  
REX C.

**TAG COMMENTS:** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

TAG APPROVAL DATE: 4/28/80

|       |               |               |
|-------|---------------|---------------|
| ADEC  | Art Weiner    | Art Weiner    |
| EXXON | ROY TEAL      | ROY           |
| NOAA  | Burl Westcott | Burl Westcott |
| USCG  | Kenneth       | Kenneth       |

**FOSC:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

SHORELINE EVALUATION

SEGMENT ST/ EN-45 SUBDIVISION A (1 OF 1) DATE 4/6/90

**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.

**ARCHAEOLOGICAL CONSTRAINTS:**

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

SHPO SIGNATURE: Charles E. Hume DATE: 4/23/90

**OILING CATEGORIZATION:**

Wide 0 m: Medium 20 m: Narrow 8 m: V.Light 0 m: No Oil 147 m  
Subsurface Oil Observed: Yes X No      Maximum Depth 15 cm

**RECOMMENDATIONS:**

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

COMMENTS: Bioremediate cover, coat and subsurface oil. Work should be  
conducted after 6/1 with approval of ADF&G and USFWS based on eagle  
nest constraint.

TAG COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TAG APPROVAL DATE: 4/28/90  
ADEC Art Weiner Art Weiner  
EXXON Andy Teal Andy Teal  
NOAA Burl Wescott Burl Wescott  
USCG Kenneth Hume Kenneth Hume

FOSC: W L DATE: 4-27-90

OG J NGER

SEGMENT ST/ EN-45

SUBDIVISION A

DATE 04 106/90

### CHECKLIST

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

### LEGEND

1  $\Delta$

PH - No Subsurface Oil

2  $\Delta$

PH - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

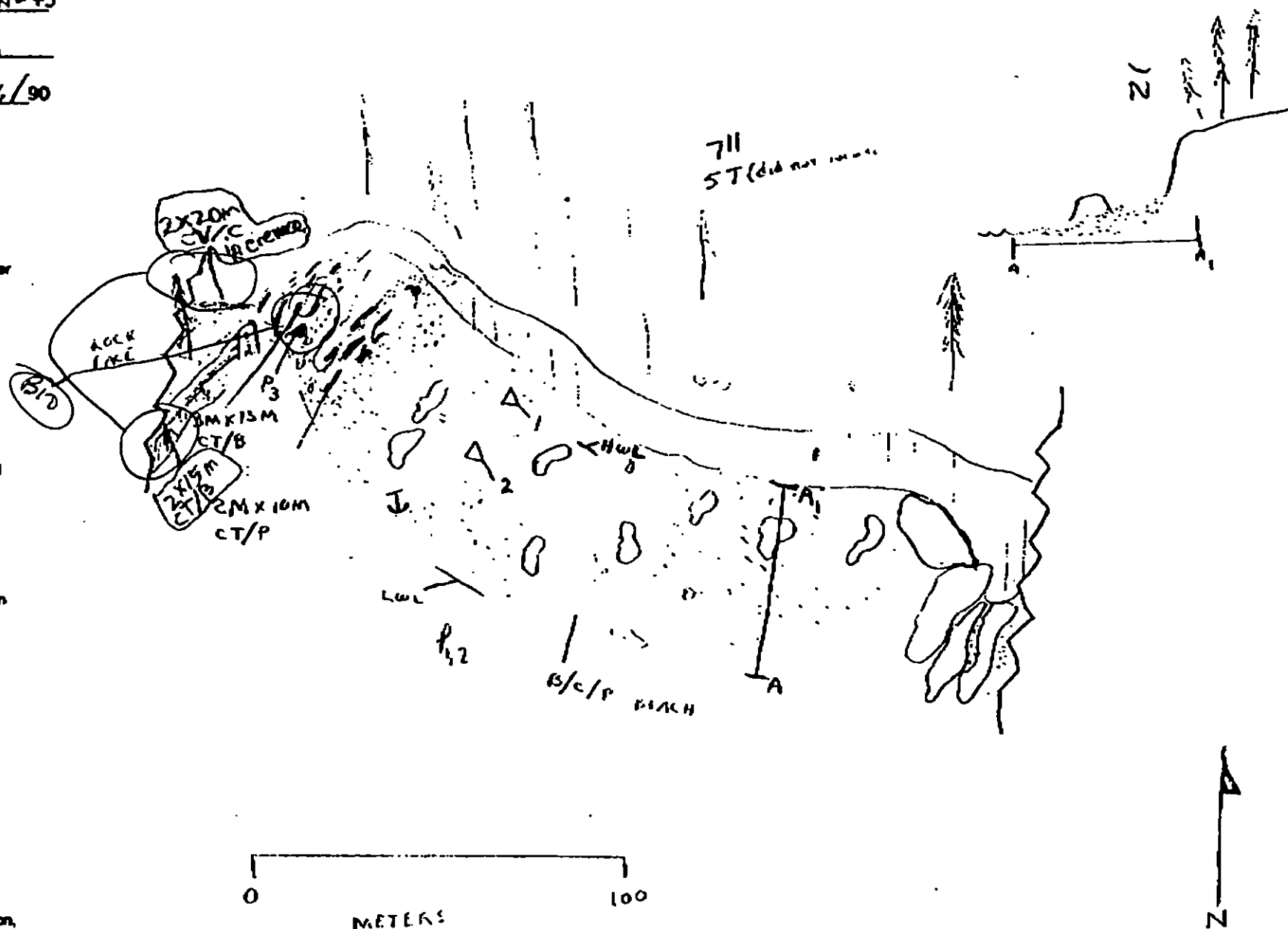
Splashed Distribution

Old Vegetation

1  $\Rightarrow$

Photo location, direction,  
and number

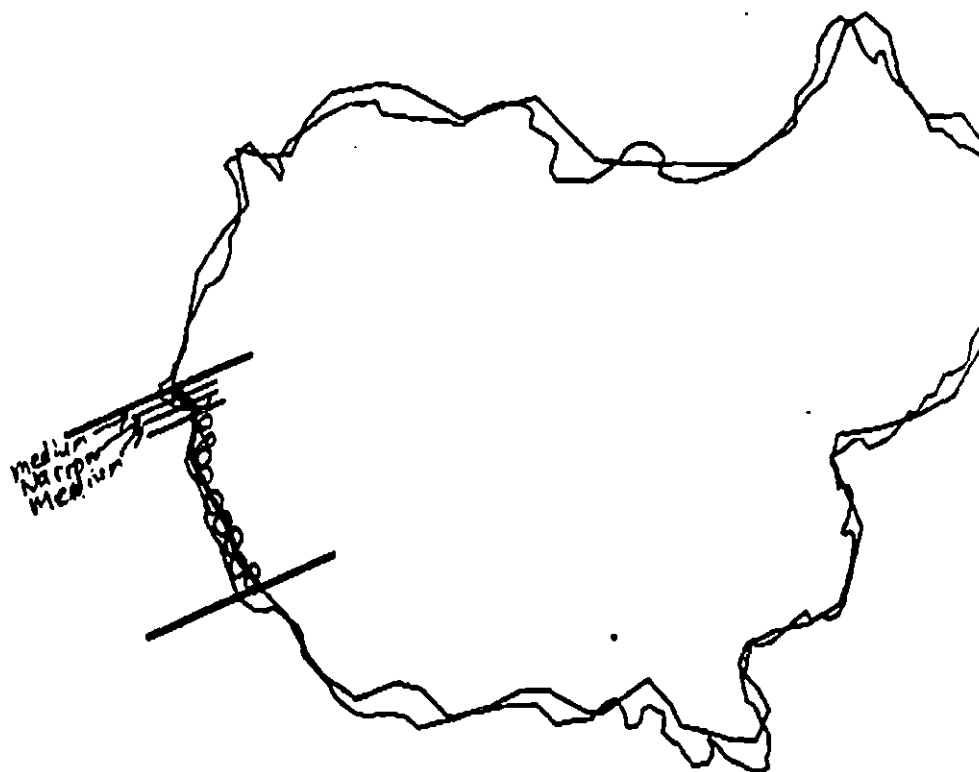
### ETCH MAP



Oil Character Length (m): AP 20 PO 20 CV 20 CT 40 ST 40 MS 40 PT 40 TB 40 FL 40 NO 47

REVISION 0070400

BL-12



25

XXXX Wide

//// Medium

--- Narrow

^T Very Light

No Oil

EN-45

ADEC Segment Length: 207  
115m



Map Key: PWS-143

Name: J. Springer

Date: 4/7/90

Date Entered:

1991 MAYSAP EVALUATION

SEGMENT: EN 045 SUB: A REGION: PWS SURVEY DATE: 5/12/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) RESTRICTED 8/15 - 9/15

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: \_\_\_\_\_ Date: \_\_\_\_\_

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: \_\_\_\_\_

TAG: \_\_\_\_\_

FOSC: \_\_\_\_\_

TAG APPROVAL DATE: \_\_\_\_\_

FOSC APPROVAL DATE: \_\_\_\_\_

ADEC

FOSC

EXXON

USCG

NOAA

**ECOLOGICAL CONSTRAINTS  
1991 FIELD ACTIVITIES**

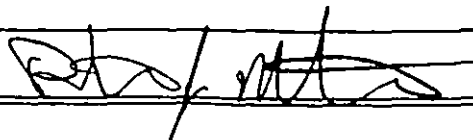
**Subsistence - Deer Harvesting:** Unlimited treatment prior to 8/15.

TEAM NO. 2 SEGMENT EN 45 SUBDIVISION A DATE 5/12/91

ADEC

NAME Peter Montesano

SIGNATURE



☒ NTR

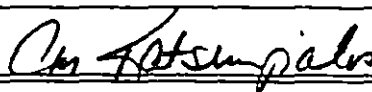
☐ TREATMENT RECOMMENDED

Some GT Found under cobbles, boulders and on the landside of Rock - minor amounts. Several pits to Peat revealed no oil where previously documented by SSAT; no ASAP on file.

EXXON

NAME C.M. KATSIMPALIS

SIGNATURE



☒ NTR

SEGMENT LOOKS GOOD!

LANDMANAGER

NAME DENNIS S. KENNEDY OF USFS

SIGNATURE



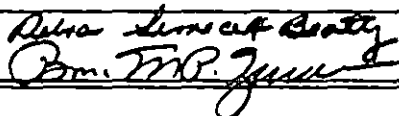
☒ NTR

Survey was well done. small subdivision no future action needed

USCG/NOAA ~~DEBRA SINGER~~ - BEATTY

NAME Bm ZENON USCG

SIGNATURE



☒ NTR

As only small amounts of oil stained on the surface and with depth, no treatment is recommended.

CG - CONCUR ON NO TREATMENT REQUIRED - 3

reviewed 5.18 dy  
REVIEWED CO 18/11/14

UG SKETCH MAP  
ENØ45-A  
12-MAY-91  
2Ø33-2Ø54  
BRYAN TRIMM

NORTH

0 25 50  
meters

SUBDIVISION  
BOUNDARY

SUBDIVISION  
BOUNDARY

LOW ANGLE  
BEDROCK

SKIFF

FOOT

TREES

TREES

BOULDER TALUS LOW ANGLE  
BEDROCK WITH THIN PEBBLE  
COBBLE VENEER

TREE

PEBBLE

SEA STACK  
ARCH

A ST < 1%  
1 x 80m

USUALLY UNDER-  
NEATH BOULDERS

Loc  
PIT #1  
PEBBLE

COBBLES

35m

reviewed 5.18.94

# WAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 12/May 91  
 SEGMENT # EA-45 TIDAL HEIGHT(Range) 3.5 ft  
 SUBDIVISION A BIOLOGIST S. B. W.  
 SEA STATE glassy WIND SPEED/DIRECTION Calm  
 PHOTOGRAPHS: ROLL # — FRAME # —

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

No surface or subsurface biota in area of pits

A: Lower intertidal zone - Barnacle - Fucus Assemblage  
Small (Recent) barnacle spat, very small mussels  
large + small limpets. Very small recently hatched  
littorinios on barnacles in lower ITZ. Ribbon worms under rocks

Tidal pools - dense Anthopleura, Agardhi large + small limpets  
Recent and older (col of '90) spat

Lower intertidal and mid-intertidal zones show recruitment  
of littorinios, limpets, mussels and Fucus.

Large, sensitive, tide pools in upper and mid intertidal zones  
should not be disturbed

## WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

| BIRDS            | # OF SPECIES | TOTAL BIRDS | FISH OBSERVED<br>SPECIES PRESENT |
|------------------|--------------|-------------|----------------------------------|
| Eagles           |              |             | /                                |
| Seabirds         |              |             |                                  |
| Waterfowl        |              |             |                                  |
| Gulls/Kittiwakes | 1 (gull)     | ± 5         |                                  |
| Shorebirds       |              |             |                                  |
| Corvids          |              |             |                                  |
| Other Birds      |              |             |                                  |

| MARINE MAMMALS     | # OBSERVED | LAND MAMMALS<br>SPECIES | # OBSERVED |
|--------------------|------------|-------------------------|------------|
| Sea Otters         |            |                         |            |
| Pinnipeds(specify) |            |                         |            |
| Whales(specify)    |            |                         |            |

Shoreline subdivision map showing important biological features attached.

Reviewed M.S. 5/18/91

SKETCH MAP  
EN045-A  
12-MAY-91  
2033-2054

NORTH

0 25 50  
meters

SUBDIVISION  
BOUNDARY

SKIFF

LOW ANGLE  
BEDROCK

Fucus-Balanus band  
Recently-settled  
barnacle spat.  
Juvenile Littorines +  
limpets. Small mussels.  
Nemertines under rocks

SUBDIVISION  
BOUNDARY

FOOT

TREES

BOULDER TALLS LOW ANGLE  
BEDROCK WITH THIN PEBBLE  
COBBLE VENEER

Large + Small  
TIDAL Pools w/ dense  
Anthopleura, Agurids  
Rhodymela + Filamentous  
green algae

TREES

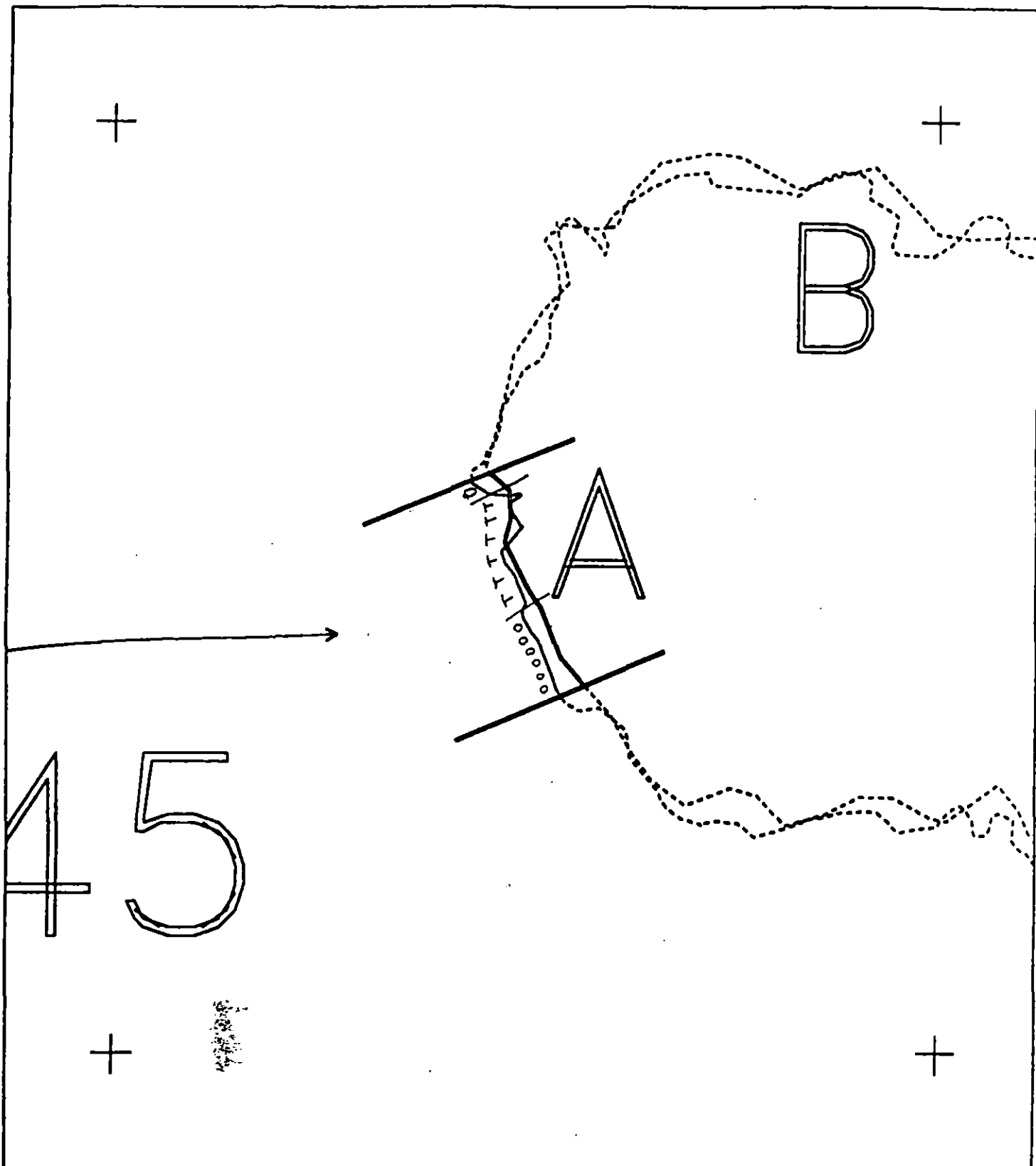
NO  
Surface  
biota

PEBBLE

SEA STACK  
+  
ARCH

Reviews M.B. 5/11

EN 045-A 12 MAY 91



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

EN045 A

ADEC Subsegment Length: 175m  
 METERS

0 100 200  
 AK State Plane Zone 4  
 pos045a



Subdivision Field Map

Map Key: PWSEN045A

Name: Trimn

Date: 12-MAY-91

Date Entered:

SURFACE OIL CATEGORY MAP

Reviewed 5.18.94  
 REVIEWED CA 18 MAY

SEGMENT: EN 045 SUB: A REGION: PWS SURVEY DATE: 5/12/91

**Work Window(s)** **RESTRICTED 8/15 - 9/15**

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

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

SHPO Signature: Mark E. Himes Date: 5/30/91

**FOSC**

2

---

---

---

---

---

**INITIAL:**

**TAG:**

**FOSC:**

**TAG APPROVAL DATE:** MAY 29 1994

**FOSC APPROVAL DATE:** 6/5/91

**ADEC**

**FOSC**

EXXON

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

**USCG**

**NOAA**

**ECOLOGICAL CONSTRAINTS  
1991 FIELD ACTIVITIES**

**Subsistence - Deer Harvesting:** Unlimited treatment prior to 8/15.

# MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EN 45 SUBDIVISION A DATE 5/12/91

ADEC

NAME Peter Montesano

SIGNATURE

*[Signature]*

☒ NTR

☐ TREATMENT RECOMMENDED

Some GT Found under cobbles, boulders and on the landside of Rocks - minor amounts. Several pits to Peat revealed no oil where previously documented by SSAT; no ASAP on file.

EXXON

NAME C.M. Katsimpalis

SIGNATURE

*[Signature]*

☒ NTR

SEGMENT LOOKS GOOD!

LANDMANAGER

NAME DENNIS S. KENNEDY OF USFS

SIGNATURE

*[Signature]*

☒ NTR

Survey was well done. small subdivision no future action needed

USCG/NOAA NOAA DEBRA SIMONEZ-BEATTY

NAME Bruce ZENONE USCG

SIGNATURE

*[Signature]*

☒ NTR

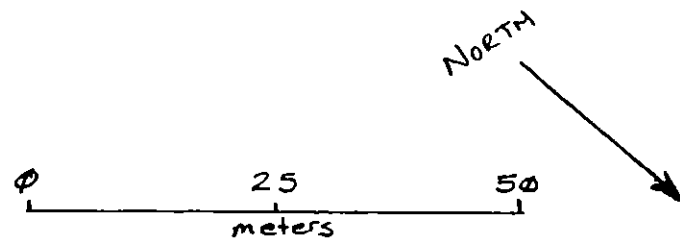
As only small amounts of oil observed on the surface and with depth, no treatment is recommended.

CG - CONCUR ON NO TREATMENT REQUIRED - 3

PAGE 1 OF 1

reviewed 5.18 09  
REVIEWED 05.18 MAY

OG SKETCH MAP  
ENØ45-A  
12-MAY-91  
2Ø33-2Ø54  
BRYAN TRIMM



SUBDIVISION  
BOUNDARY

SUBDIVISION  
BOUNDARY

SKIFF

LOW ANGLE  
BEDROCK

FOOT

TREES

TREES

BOULDER TALUS LOW ANGLE  
BEDROCK WITH THIN PEBBLE  
COBBLE VENEER

TREES

PEBBLE

SEA STACK  
ARCH

A ST < 1%  
1 x 80m  
USUALLY UNDER-  
NEATH BOULDERS

Loc  
P11-1  
PEBBLE

COBBLES

35m

A

A'

reviewed 5.18.94  
REVIEWED CA 18 MAY

# MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 12 May 91  
 SEGMENT # EU-45 TIDAL HEIGHT (Range) 3.5 ft  
 SUBDIVISION A BIOLOGIST S. B. N.  
 SEA STATE glassy WIND SPEED/DIRECTION Calm  
 PHOTOGRAPHS: ROLL # — FRAME # —

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

No surface or subsurface biota in area of pits

A: Lower intertidal zone - Barnacle - Fucus assemblage  
 small (recent) barnacle spat, very small mussels  
 large + small limpets. Very small recently hatched  
 Littorinids on barnacles in lower ITZ. Ribbon worms under rocks

Tidal pools - dense Anthopleura, Agardhi large + small limpets  
 Recent and older (fall of '90) spat

Lower intertidal and mid-intertidal zones show recruitment of Littorinids, limpets, mussels and Fucus.

Large, sensitive, tide pools in upper and mid intertidal zones should not be disturbed

## WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

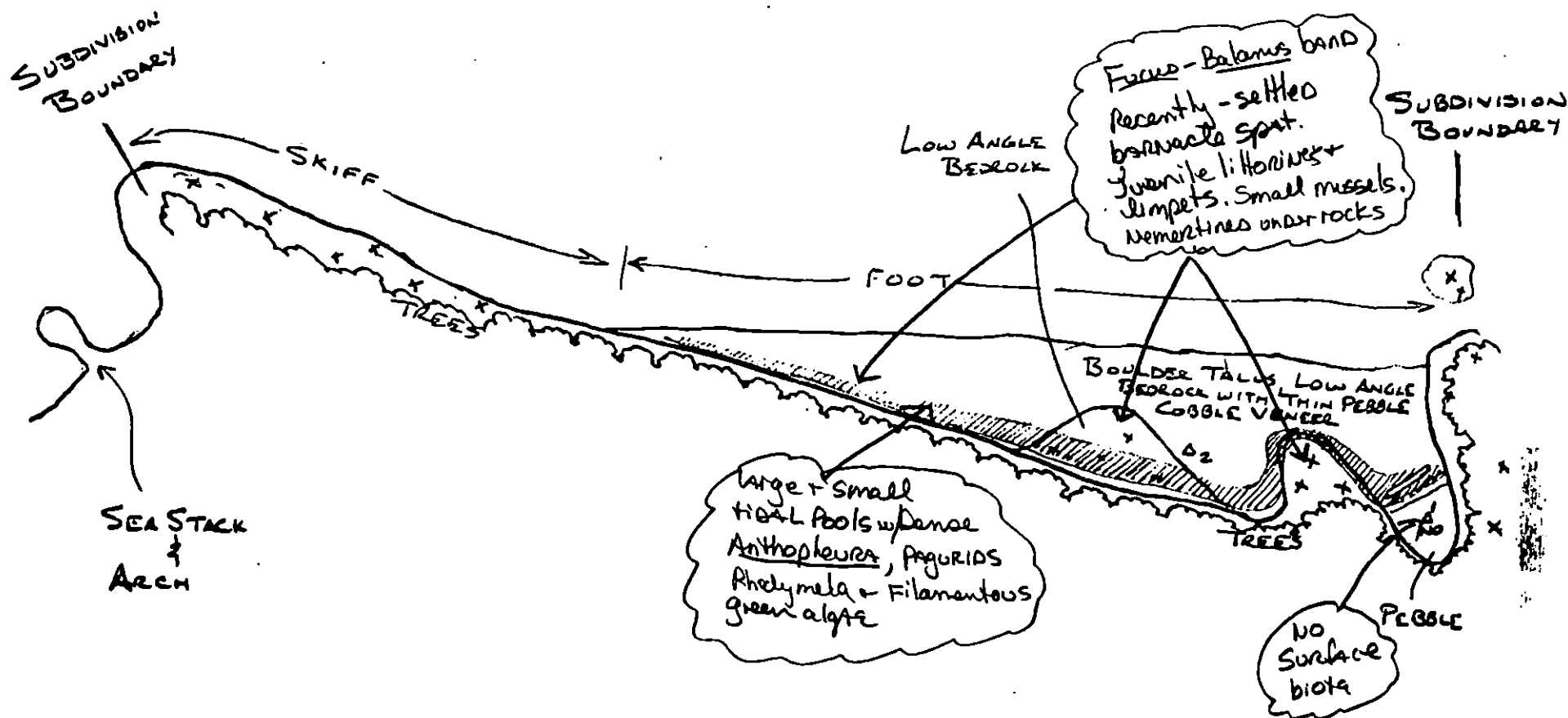
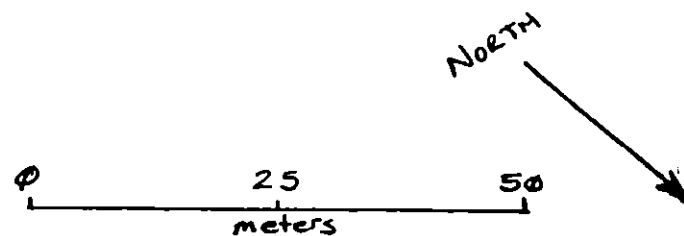
| BIRDS            | # OF SPECIES | TOTAL BIRDS | FISH OBSERVED<br>SPECIES PRESENT |
|------------------|--------------|-------------|----------------------------------|
| Eagles           |              |             | /                                |
| Seabirds         |              |             |                                  |
| Waterfowl        |              |             |                                  |
| Gulls/Kittiwakes | 1 (gull)     | ± 5         |                                  |
| Shorebirds       |              |             |                                  |
| Corvids          |              |             |                                  |
| Other Birds      |              |             |                                  |

| MARINE MAMMALS      | # OBSERVED | LAND MAMMALS<br>SPECIES | # OBSERVED |
|---------------------|------------|-------------------------|------------|
| Sea Otters          |            |                         |            |
| Pinnipeds (specify) |            |                         |            |
| Cetaceans (specify) |            |                         |            |
|                     |            |                         |            |

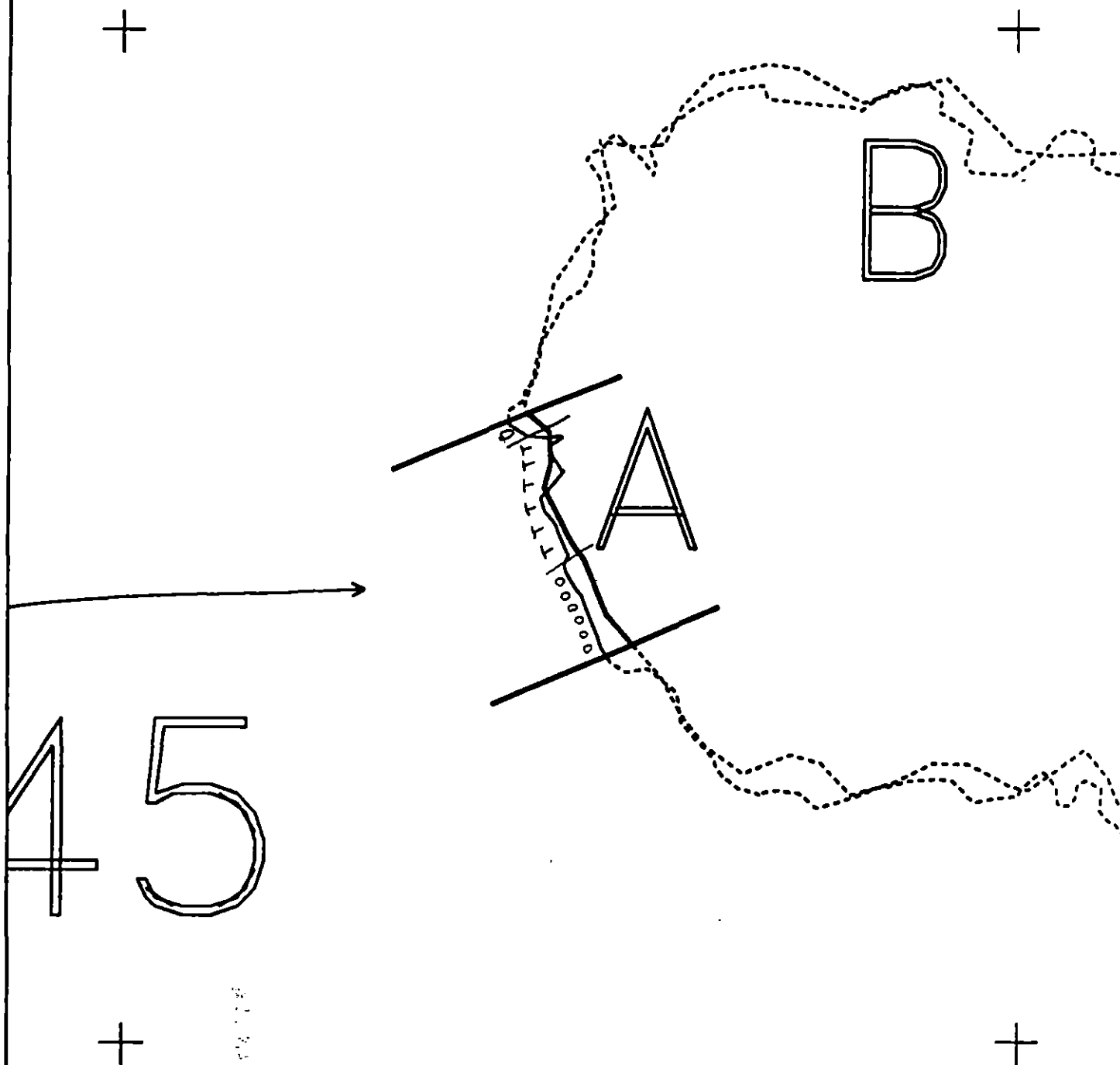
Shoreline subdivision map showing important biological features attached.

Reviewed M.B. 5/18/91

SKETCH MAP  
EN045-A  
12-MAY-91  
2033-2054



EMB 12 May 91



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

**EN045 A**  
 ADEC Subsegment Length: 175m  
 METERS  
 0 100 200  
 AK State Plane Zone 4  
 psn045a



Subdivision Field Map  
 Map Key: PWSEN045A  
 Name: Trimm  
 Date: 12-MAY-91  
 Date Entered:

SURFACE OIL CATEGORY MAP

reviewed 5.18.94

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EN-46

SUBDIVISIONS: A (1 OF 2)

SHORELINE EVALUATION

SEGMENT ST/ EN-46 SUBDIVISION A (1 OF 2) DATE 4/6/90

**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.

**ARCHAEOLOGICAL CONSTRAINTS:**

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

SHPO SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

**OILING CATEGORIZATION:**

Wide 0 m: Medium 51 m: Narrow 62 m: V.Light 0 m: No Oil 587 m  
Subsurface Oil Observed: Yes X No \_\_\_\_\_ Maximum Depth 30+ cm

**RECOMMENDATIONS:**

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

COMMENTS: Recommend 1) manual pick up of trash, 2) bioremediation of oil-coated beach (see sketch map), and 3) burning of logs with greater than 10% oil cover.

\_\_\_\_\_

\_\_\_\_\_

TAG COMMENTS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

TAG APPROVAL DATE: \_\_\_\_\_

ADEC \_\_\_\_\_

EXXON \_\_\_\_\_

NOAA \_\_\_\_\_

USCG \_\_\_\_\_

FOSC: \_\_\_\_\_ DATE: \_\_\_\_\_

# PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)  
 1B Salmon stream mouth - spawning (7/10 to 8/31)  
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)  
 1D Esther Hatchery release (4/15 to 6/1)  
 1E Main Bay Hatchery release (4/20 to 5/10)  
 1F Sawmill Bay Hatchery release (4/15 to 6/1)  
 1G Cannery Creek Hatchery release (4/21 to 6/1)  
 1H Remote release site  
 1I Gill net area (6/7 to 8/31)  
 1J Purse seine area (7/20 to 9/30)  
 1K Purse seine hook-off (7/20 to 9/30)  
 1L Set net sites (6/11 to 7/25)  
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)  
 Restrict boat traffic to essential minimum. Avoid damage to unopened 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 / EN46 SUBDIVISION: 2 DATE 04-06-96

**USCG**

NAME AEC Vandepels SIGNATURE AEC Vandepels

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

*Suggest the two beaches in sub. A on SE+E side of Entrance Island need bio.*

**ADEC**

NAME Michelle Baer SIGNATURE M Baer

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

*On the B,C beach (picture 4+5), I recommend hand tilling in the problem areas behind the B's and behind the headland. After the tilling, apply fertilizer to the area with oiling in the layer under the B's. A 20M x 10M CT with CV under the B's requires bioremediation on the B,C beach. Manual wiping of the 30 x 2M CT/C is also necessary. Hot W wash would be difficult and unrealistic for this area due to the difficult access ~~to~~ the large B's in the entry area. Mussel beds are throughout the B fields LITZ.*

**LAND MANAGER**

NAME DAN LOGAN SIGNATURE Dan Logan

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

*I recommend hand tilling the 20M x 10M then applying fertilizer. The 4M x 60M CT/P should be hand cleaned. The 30M x 2M CT/C should be hand cleaned.*

64

## SHORELINE OILING SUMMARY

REVISION NO. 02/20/90

OG J. Springer USCG R. Vandepels SEGMENT ST/ EN 46  
 BIO P. Crank LAND REP D. Logan SUBDIVISION A (1 of 2)  
 EXXON T. Tomblin ADEC M. Bder TIME 15:30 to 17:30  
 TEAM NO.: 5 TIDE LEVEL: +3 to +1 DATE 04/06/90  
 EST. SUBDIVISION LENGTH: 1290m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow  
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock Pillow lava  
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: to  
 SURFACE SEDIMENTS: R 50% B 30% C 10% P 5% G 3% S 2% M 0% V 0%  
 SLOPE: Lang 20% Hang 40% Vert 40% WAVE EXPOSURE: ☐ Low ☒ Med ☐ High  
 OIL CATEGORY LENGTH: W 0 m M 60 m N 100 m VL 0 m NO 110 m

## SURFACE OIL

| CHARACTER        | DISTRIBUTION |   |   |    | OIL / FILM COLOR |   |   |   |   | IMPACTED ZONES |   |   |   |
|------------------|--------------|---|---|----|------------------|---|---|---|---|----------------|---|---|---|
|                  | W            | M | N | VL | 1                | 2 | 3 | 4 | 5 | SU             | U | M | U |
| ASPHALT PAVEMENT |              |   |   |    |                  |   |   |   |   |                |   |   |   |
| POOLED           |              |   |   |    |                  |   |   |   |   |                |   |   |   |
| COVER            |              |   |   |    |                  |   |   |   |   |                |   |   |   |
| COAT             |              |   |   |    |                  |   |   |   |   |                |   |   |   |
| STAIN            |              |   |   |    |                  |   |   |   |   |                |   |   |   |
| MOUSSE           |              |   |   |    |                  |   |   |   |   |                |   |   |   |
| PATTIES          |              |   |   |    |                  |   |   |   |   |                |   |   |   |
| TARBALLS         |              |   |   |    |                  |   |   |   |   |                |   |   |   |
| FILM             |              |   |   |    |                  |   |   |   |   |                |   |   |   |
| NO OIL           |              |   |   |    |                  |   |   |   |   |                |   |   |   |

PAVEMENT: H F S 0 sq. m by 0 cmPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

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

DEBRIS COLLECTED

☐ YES ☒ NOTYPE 0#BAGS 0

Photographs:

Roll No. ST-5-4Frames 4-11

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER |    |    |    |    | OILED INTERVAL (CM-DM) | BELOW |    | OIL / FILM COLOR |   |   |   |   | PIT ZONE |   |   |   | A N A | SUBSURFACE SEDIMENTS |
|---------|----------------|--------------------------|----|----|----|----|------------------------|-------|----|------------------|---|---|---|---|----------|---|---|---|-------|----------------------|
|         |                | OP                       | OR | OL | OF | NO |                        | UO    | UC | 1                | 2 | 3 | 4 | 5 | SU       | U | M | U |       |                      |
| 1       | 20             |                          | X  |    |    |    | 5-20                   | X     |    |                  |   |   | X |   | X        |   |   |   |       | PG                   |
| 2       | 30             |                          |    |    |    | X  | .                      |       | X  |                  |   |   |   |   | X        |   |   |   |       | PG                   |
| 3       | 30             |                          | X  |    |    |    | 0-30                   | X     |    |                  |   |   | X |   | X        |   |   |   |       | BCP                  |
| 4       | 30             |                          | X  |    |    |    | 0-10                   |       | X  |                  |   |   | X |   | X        |   |   |   |       | CPGS                 |
| 5       | 30             |                          |    |    |    | X  | .                      |       | X  |                  |   |   |   |   | X        |   |   |   |       | CP                   |
| 6       | 20             |                          |    |    |    | X  | .                      |       | X  |                  |   |   |   |   | X        |   |   |   |       | CP                   |

## COMMENTS

Large pain-porn lodged between boulders.

59

OG J. Springer

SEGMENT ST/ EN 46

SUBDIVISION A

DATE 4/6/90

# CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Body
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HWA/LWL
- ☒ SS
- ☒ Profile Location(s)
- ☒ Photo Location(s)
- ☒ Photo Location(s)

## LEGEND

1  $\Delta$   
Pr - No Subsurface Oil

2  $\Delta$   
Pr - Subsurface Oil

CT/C  
Continuous Distribution

CT/B  
Broken Distribution

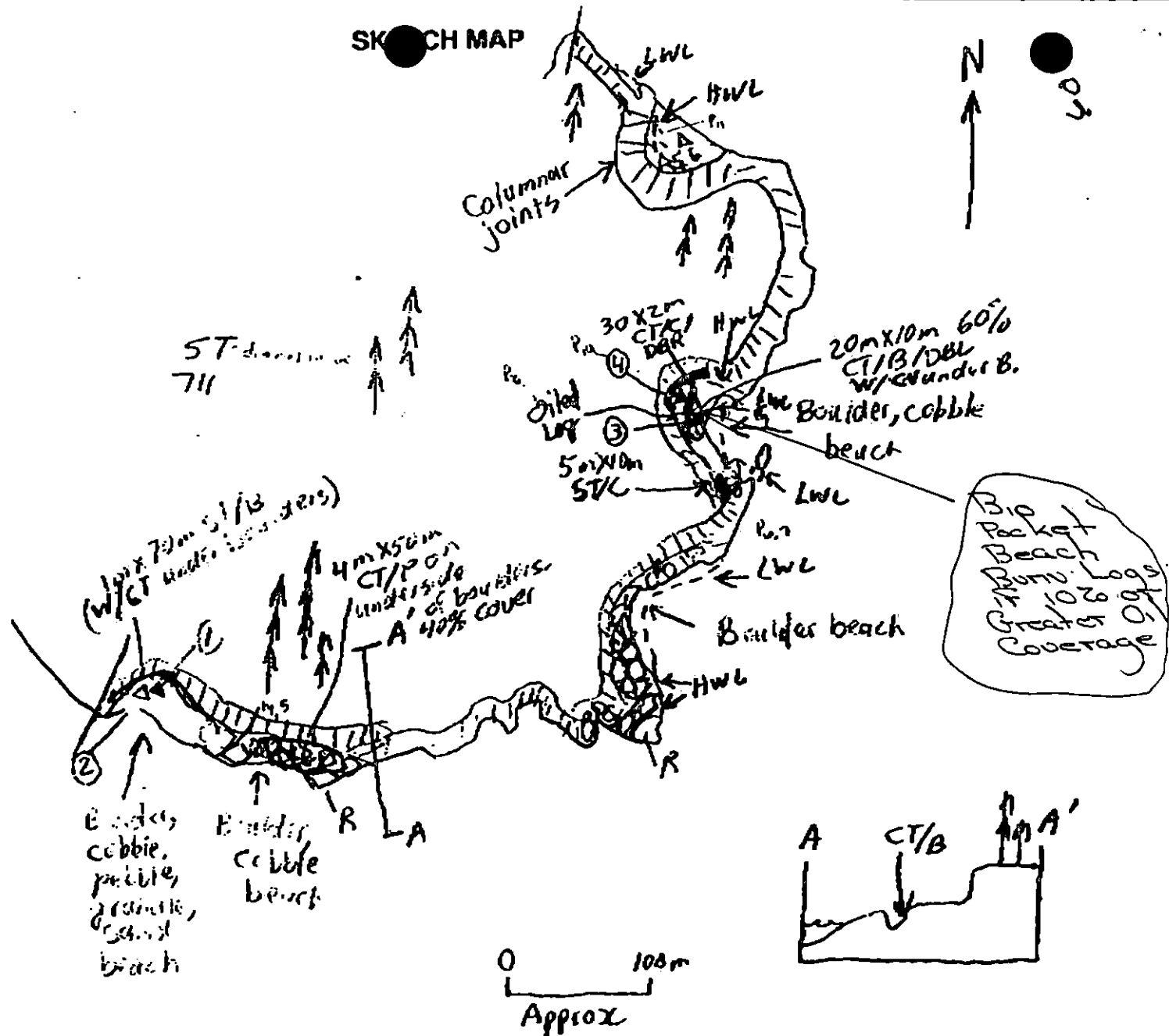
CT/P  
Patched Distribution

CT/S  
Splashed Distribution

Oil Vegetation

1  $\Rightarrow$   
Photo location, direction, and number

## SKETCH MAP



Oil Character Length (m): AP \_\_\_\_\_ PO \_\_\_\_\_ CV \_\_\_\_\_ CT 100 ST 80 MS \_\_\_\_\_ PT \_\_\_\_\_ TB \_\_\_\_\_ FL \_\_\_\_\_ NO 1110

REVISION 02/2000

# SHORELINE ECOLOGICAL SUMMARY

pg 1 of 3  
revision: c

Segment ST / EN46 Subdivision A Date (mo / day / yr) 4 / 6 / 90

Time (24 hr) 1550 - 1740 Biologist Crank Length 1290m

(A) Substrate type and % of segments:  
(1) Bedrock 50 (2) Boulder 30 (3) Cobble 10 (4) Pebble 5 (5) Sand 5 (6) Silt

Tide Height: 3.5 → +1 ft

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

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

Photographs:  
Roll No. ST-5-4

Frames 4, 6, 7, 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    | 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 PRESE

## 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 PRESE

## 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 PRESE

## 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 PRESE

Wildlife Observations/ General Comments:  
Chickadees

## Ecological Considerations:

T11 - Deer Harvesting  
ST - Active Bald Eagle Nest - not located

SEGMENT: ST/ EN 46 SUBDIVISION A LENGTH 1290 m BIOLOGIST Crank pg 2 of 3

DATE 4/6/90 TIME 1550-1740 TIDE HEIGHT 13.5 → +1 ft

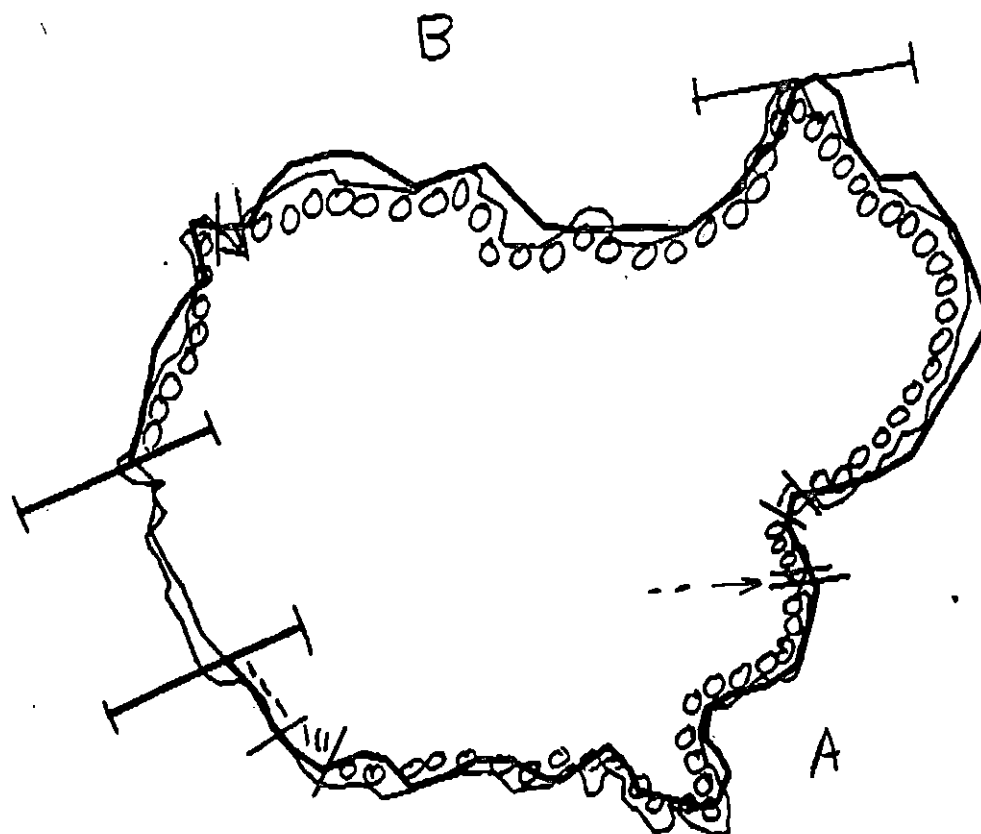
1 - BEDROCK 2 - BOULDER 3 - COBBLE 4 - PEBBLE 5 - SAND 6 - SILT

**FLORA:**

[illegible]

**FAUNA:**

23



EN

55

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EN-46

ADEC Segment Length: <sup>2292</sup>~~2074~~m

0 100 200 300  
METERS

Map Key: PWS-144

Name: James Spring

Date: 4/6/90

Date Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EN-46

SUBDIVISIONS: B (2 OF 2)

SHORELINE EVALUATION

SEGMENT ST/ EN-46 SUBDIVISION B (2 OF 2) DATE 4/6/90

**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. Do not trample or otherwise damage fucus and mussel beds.

**ARCHAEOLOGICAL CONSTRAINTS:**

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

SHPO SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

**OILING CATEGORIZATION:**

Wide 0 m: Medium 21 m: Narrow 45 m: V.Light 0 m: No Oil 1269 m  
Subsurface Oil Observed: Yes \_\_\_\_\_ No X Maximum Depth \_\_\_\_\_

**RECOMMENDATIONS:**

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

COMMENTS: Recommend removal of tarmat. Work should be conducted before 8/15 due to deer harvesting constraint.

TAG COMMENTS: \_\_\_\_\_

TAG APPROVAL DATE: \_\_\_\_\_

ADEC \_\_\_\_\_

EXXON \_\_\_\_\_

NOAA \_\_\_\_\_

USCG \_\_\_\_\_

FOSC: \_\_\_\_\_ DATE: \_\_\_\_\_

## PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

# FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 EN46 SUBDIVISION: B DATE 4/06/90

**USCG**

NAME AEC Vandepels SIGNATURE AEC Vandepels

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

*I recommend no treatment for sub. B.*

**ADEC**

NAME Michele Baer SIGNATURE MBaer

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

*Sub-segment B is a moderate energy area. Treatment is required in the 1st R.B.C. beach on the SW wall only. Manual scrubbing is required for a 3 x 25M band of CT to ST/B. Mussel beds are located on both sides of the beach.*

**LAND MANAGER**

NAME DAN LOGAN SIGNATURE Dan Logan

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

*I RECOMMEND MANUAL SCRUBBING OF ROCKS AND BOULDERS ON THE 3X25M BAND OF CT.*

58

## SHORELINE OILING SUMMARY

REVISION NO. 03/22/88

OG J. Springer USCG R. Vandepels SEGMENT ST/ EN46  
 BIO P. Crank LAND REP D. Logan SUBDIVISION B (20P2)  
 EXXON T. Tomblin ADEC M. Baer TIME 17:45 to 18:30  
 TEAM NO.: 5 TIDE LEVEL: +1 to +1 DATE 04/06/90  
 EST. SUBDIVISION LENGTH: 1002 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow  
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock Pillow Lava  
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W  
 SURFACE SEDIMENTS: R 50% B 25% C 15% P 10% G 0% S 0% M 0% V 0%  
 SLOPE: Long 50% Hang 30% Ven 20% WAVE EXPOSURE: ☐ Low ☒ Med ☐ High  
 OIL CATEGORY LENGTH: W 0 m M 25 m N 42 m VL 0 m NO 975 m

## SURFACE OIL

| CHARACTER        | DISTRIBUTION |   |   |   | OIL / FILM COLOR |   |   |   |   |   |   |   | IMPACTED ZONES |   |   |   |
|------------------|--------------|---|---|---|------------------|---|---|---|---|---|---|---|----------------|---|---|---|
|                  | C            | B | P | S | 1                | 2 | 3 | 4 | 5 | 6 | 7 | 8 | SU             | U | M | L |
| ASPHALT PAVEMENT | X            |   |   |   |                  |   |   |   |   |   |   |   | X              | X |   |   |
| POOLED           |              |   |   |   |                  |   |   |   |   |   |   |   |                |   |   |   |
| COVER            |              |   |   |   |                  |   |   |   |   |   |   |   |                |   |   |   |
| COAT             |              |   | X |   |                  | X |   |   |   |   |   |   |                | X |   |   |
| STAIN            |              |   |   |   |                  |   |   |   |   |   |   |   |                |   |   |   |
| MOUSSE           |              |   |   |   |                  |   |   |   |   |   |   |   |                |   |   |   |
| PATTIES          |              |   |   |   |                  |   |   |   |   |   |   |   |                |   |   |   |
| TARBALLS         |              |   |   |   |                  |   |   |   |   |   |   |   |                |   |   |   |
| FILM             |              |   |   |   |                  |   |   |   |   |   |   |   |                |   |   |   |
| NO OIL           |              |   |   |   |                  |   |   |   |   |   |   |   |                | X | X |   |

PAVEMENT: H F (S) 2 sq. m by 2 cmPATTIES / TARBALLS 7 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

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

DEBRIS COLLECTED

☒ YES ☐ NOTYPE Bouy

#BAGS \_\_\_\_\_

Photographs:

Roll No. ST-5-4Frames 12-14

## SUBSURFACE OIL

| PIT NO. | PIT DEPTH (cm) | SUBSURFACE OIL CHARACTER |    |    |    |    | OILED INTERVAL (CM-CM) | BELOW |    | OIL / FILM COLOR |   |   |   |   |   |   |   | PIT ZONE |   |   |   | A<br>N<br>A | SUBSURFACE SEDIMENTS |
|---------|----------------|--------------------------|----|----|----|----|------------------------|-------|----|------------------|---|---|---|---|---|---|---|----------|---|---|---|-------------|----------------------|
|         |                | OP                       | OR | OL | OF | NO |                        | UO    | UC | 1                | 2 | 3 | 4 | 5 | 6 | 7 | 8 | SU       | U | M | L |             |                      |
| 1       | 35             |                          |    |    |    | X  | .                      |       | X  |                  |   |   |   |   |   |   |   |          |   | X |   |             | PGS                  |
| 2       | 30             |                          |    |    |    | X  | .                      |       | X  |                  |   |   |   |   |   |   |   | X        |   |   |   |             | PSM                  |
|         |                |                          |    |    |    |    | .                      |       |    |                  |   |   |   |   |   |   |   |          |   |   |   |             |                      |
|         |                |                          |    |    |    |    | .                      |       |    |                  |   |   |   |   |   |   |   |          |   |   |   |             |                      |
|         |                |                          |    |    |    |    | .                      |       |    |                  |   |   |   |   |   |   |   |          |   |   |   |             |                      |
|         |                |                          |    |    |    |    | .                      |       |    |                  |   |   |   |   |   |   |   |          |   |   |   |             |                      |

COMMENTS

OG J. SPRINGER

SEGMENT ST/EN-46

SUBDIVISION B

DATE 04/06/90

### CHECKLIST

- ☒ Name
- ☒ Approx. Scale
- ☒ Seg/Sub Entry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HW/LWL
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ PH Location(s)
- ☒ Photo Location(s)

### LEGEND

1  $\Delta$   
PH - No Subsurface Oil

2  $\Delta$   
PH - Subsurface Oil

$\boxed{\text{CT/C}}$   
Continuous Distribution

$\boxed{\text{CT/B}}$   
Broken Distribution

$\boxed{\text{CT/P}}$   
Patchy Distribution

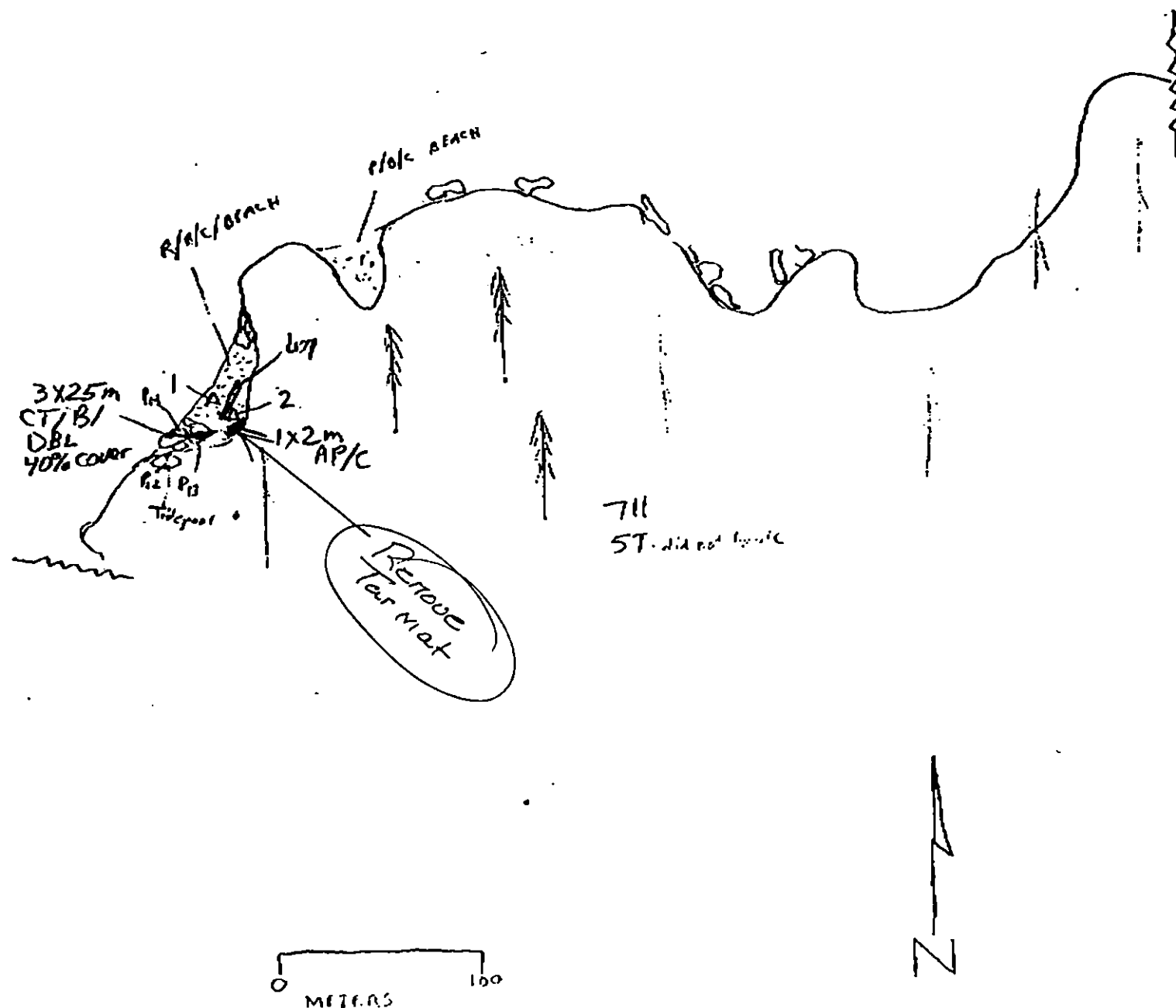
$\boxed{\text{CT/S}}$   
Splashed Distribution

Oil on Vegetation

1  $\Rightarrow$   
Photo location, direction,  
and number

### SKETCH MAP

WATER



2 PD CV CT 25 ST MS PT TB FL NO 975

## SHORELINE ECOLOGICAL SUMMARY

Pg 1 of 2

REVISED: 1972

Segment ST / EN40 Subdivision B Date (mo/day/yr) 4/6/90  
 Time (24 hr) 1740-1840 Biologist Crank Tide Height +1.7 D.54  
 Length 1002 m

- (A) Substrate type and % of segments:  
 (1) Bedrock 50 (2) Boulder 25 (3) Cobble 15 (4) Pebble 10 (5) Sand      (6) Sil
- (B) Overall % cover of biota (% of segment): Dense 40 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 (3)

Photographs:

Roll No. ST-5-4Frames 12, 14

## 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    | 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:

1-Bald Eagle - Adult

5-Glaucous-wing Gulls

- Dense sea urchin concentrations in lower LITZ throughout segment
- Heavy barnacle scarring in LITZ
- Behind oiled rock (located on OG Map) there is a 3m x 7m tidepool surrounded by a dense Fucus and Mytilus bed. This area should have limited access to lessen disturbance on these well-established beds.

## Ecological Considerations:

711- Deer Harvesting

ST - Active Bald Eagle Nest (not located)

56

SEGMENT: ST/EN 46 SUBDIVISION B LENGTH 1002m BIOLOGIST Crank

DATE 4/6/90 TIME 1740-1840

TIDE HEIGHT +1 → +0.5 ft

pg 2 of 2

1 = BEDROCK 2 = BOULDER 3 = COBBLE 4 = PEBBLE 5 = SAND 6 = SILT

FLORA:

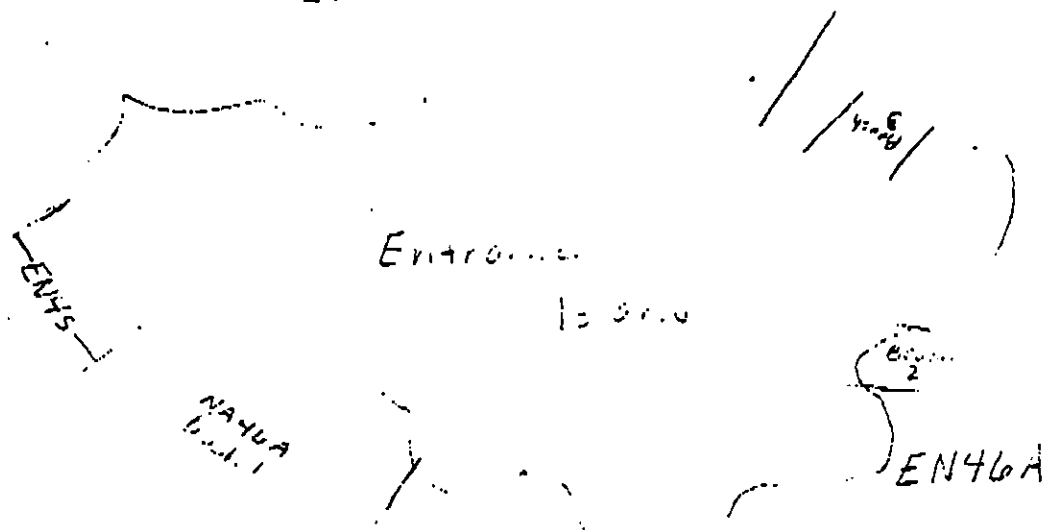
| SPECIES                 | UNT | MIT | LIT | COMMENTS |
|-------------------------|-----|-----|-----|----------|
| BOSSIELLA/CORALLINA     |     |     |     |          |
| CALLIARTHRON/CORALLINA  |     | 1   |     | Tidepool |
| CLADOPHORA SPP          |     | 2   |     |          |
| COSTARIA SPP            |     |     |     |          |
| ENDOCLADIA MURICATA     |     | 2   |     |          |
| FILAMENTOUS GREENS      |     | 12  | 2   | Spine    |
| FILAMENTOUS REDS        |     |     |     |          |
| GLOIOPELTIS FURCATA     |     |     |     |          |
| HALOSACCION GLANDIFORME |     |     |     |          |
| LAMINARIA SPP           |     |     |     |          |
| LITHOTHAMNION           |     | 1   |     | Tidepool |
| NEREOCYSTIS SPP         |     |     |     |          |
| PORPHYRA SPP            |     | 2   | 2   |          |
| RALPHSIA/HILDENBRANDIA  |     |     |     |          |
| RHODOMELA LARIX         |     |     |     |          |
| RHODOMENIA PALMATA      |     | 12  | 12  |          |
| SCYTOSIPHON SPP         |     |     |     |          |
| ULVA SPP                |     |     |     |          |
| ZOSTERA MARINA          |     |     |     |          |
| Enteromorpha            |     | 1   |     | Tidepool |

FAUNA:

|                                  |     |     |     |                           |
|----------------------------------|-----|-----|-----|---------------------------|
| ANTHOPELURA SPP                  |     | 1   |     | Tidepool                  |
| (SEMI) BALUNUS CARIOSUS          |     | 12  | 12  |                           |
| B. GLANDULA                      | 12  | 123 |     | Heavy scarring            |
| BRYOZOANS                        |     |     |     |                           |
| CHITONS (OTHER THAN K. TUNICATU) |     |     |     |                           |
| CLAMS                            |     |     |     |                           |
| CRABS                            |     |     |     |                           |
| DERMASTERIAS IMBRICATA           |     |     |     |                           |
| KATHARINA TUNICATA               |     | 1   |     | Tidepool                  |
| LEPTASTERIAS HEXACTIS            |     |     |     |                           |
| LIMPETS                          | 123 | 123 | 123 | Dense Texture in Tidepool |
| LITTONINA SPP                    | 123 | 123 | 123 |                           |
| NUCELLA SPP                      |     | 1   |     | Tidepool                  |
| PAGURUS SPP                      |     |     |     |                           |
| PISASTER OCHRACEUS               |     |     |     |                           |
| POLYCHAETES                      |     |     |     |                           |
| PYZNOPODIA HELIANTHOIDES         |     |     |     |                           |
| SEARLESIA DIRA                   |     |     |     |                           |
| SERPULIDS                        |     |     |     |                           |
| SIPHONARIA THERSITES             |     | 12  | 12  | Dense                     |
| TEALIA                           |     |     |     |                           |
| Epinektis                        |     | 1   |     | Tidepool                  |

Crank

EN46B

Comments:

- Most of submergence is steep, rocky, and covered in algae. Each area was surveyed for 10 minutes.

Beach 1:

- Faunal concentration is relatively low. Concentrations increase NW of 19 rock outcrops.
- Fauna is dense and well-established right on beach and boulders, moderate on rocky shore.
- Mytilus is sparse and well-established. On large rock outcrop there is a dense patch of MITZ.

Beach 2:

- Small pocket boulder/kobble beach. The LITZ is rich in filamentous green algae, Rhodospirillum rubrum, and cyanobacteria.
- Gastropods are abundant on MITZ (limpets, Littorina saxatilis) on rock and boulder, sparse on cobble.
- In LITZ, barnacles & Littorina are moderate, mod sparse on cobble. There are occasional patches of purple algae on the boulder.
- Rye Grass is sprouting on the SUTRA.

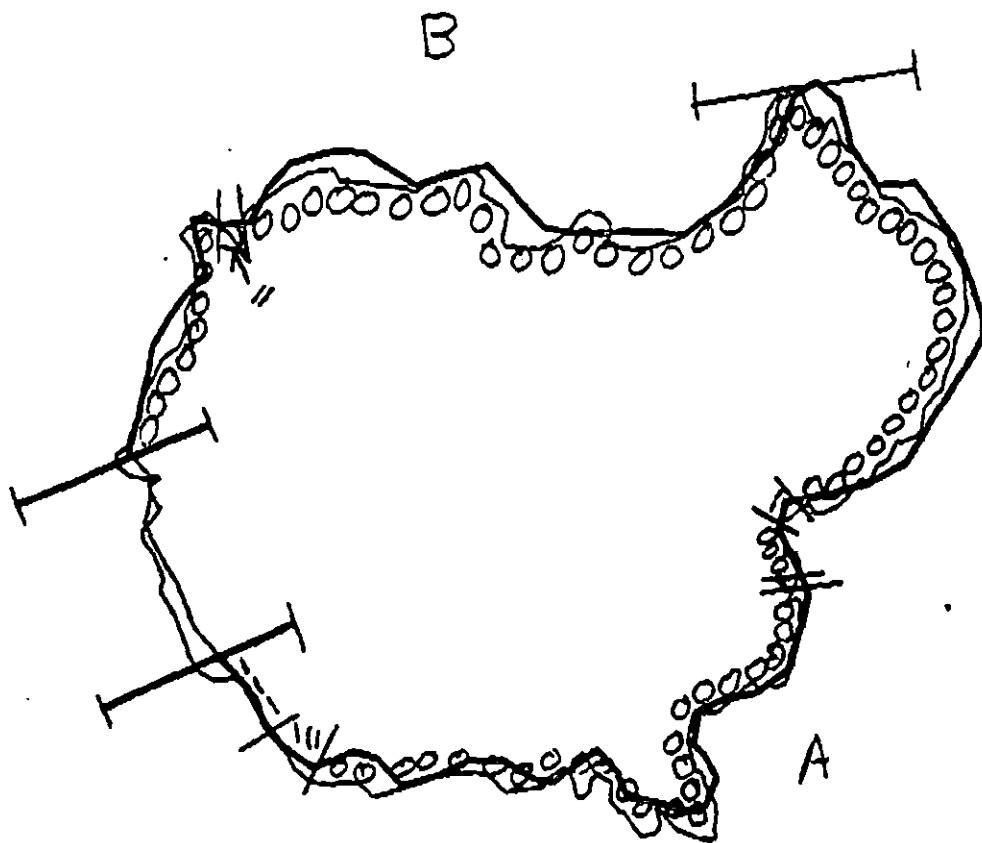
Beach 3:

- Dense, well-established moderate and
- Rhodospirillum and limpets dense on rock & cobble, moderate on cobble.

63

Handwritten:

- Dense vegetation with clear to greenish in LITZ. Scavenging is present.
- Mytilus is in dense clumps. Some patches of Mytilus in MITZ.
- Fauna is dense in low MITZ and upper LITZ, replaced by seaweed in lower LITZ.



EN

55

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

EN-46

ADEC Segment Length: <sup>2292</sup>~~200~~m



Map Key: PWS-144  
 Name: James Springs  
 Date: 4/6/90  
 Date Entered:

## ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EN-46 SUBDIVISION B (2 of 2)

| WORK WINDOW                     |      |
|---------------------------------|------|
| Manual Pickup<br>Tarmat Removal | OPEN |

### ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

### APPLICABLE ECOLOGICAL TIME CONSTRAINTS

|     |                              |                                                       |
|-----|------------------------------|-------------------------------------------------------|
| 5T  | Bald Eagle Nest              | NO CONSTRAINT. Work area is more than 400m from nest. |
| 7II | 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 unrolled biota and substrate. Do not trample or otherwise damage *Fucus*, mussel beds or sea stars.

TAG APPROVAL DATE 5/29/90.  
ADEC Art Weimer  
EXXON ANDY GALT  
NOAA B. L. Scott  
USCG G. A. Dwyer

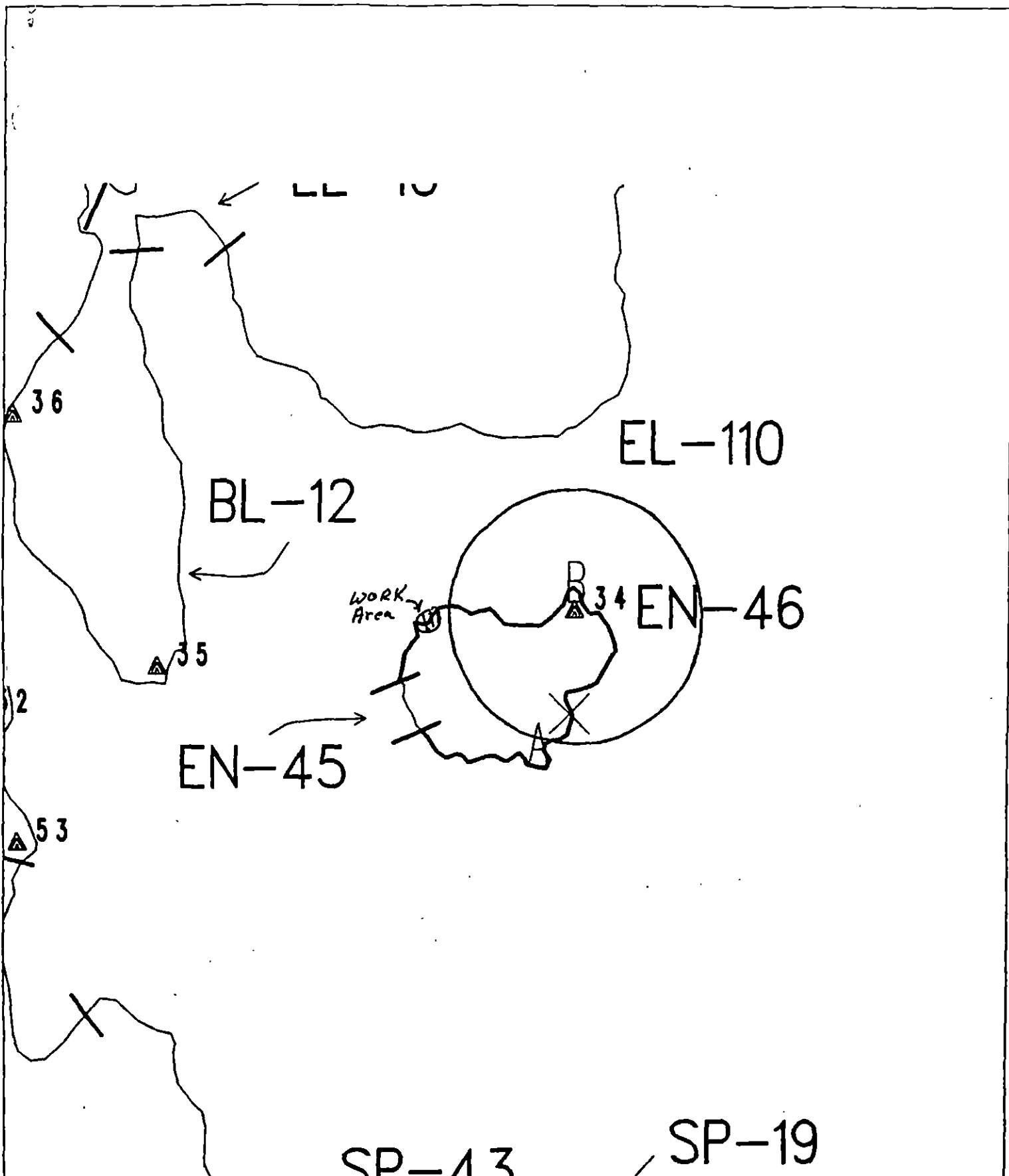
FOSC [Signature]

DATE

MAY 29 1990

Prepared By: Anders Meyer WK

Date 5/27/90



Exxon Company, USA

Map Key: KNI-EN-46

May 11, 1990

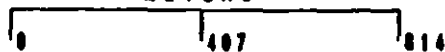


# ECOLOGY MAP

SEGMENT EN-46

SUBDIVISION B (2 of 2)

METERS



Seabird Colony



Eagle Nest

1 inch = 1336 feet

SHORELINE EVALUATION

SEGMENT ST/ EN-46 SUBDIVISION B (2 OF 2) DATE 4/6/90

**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. Do not trample or otherwise damage fucus and mussel beds.

**ARCHAEOLOGICAL CONSTRAINT:** If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

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

**OILING CATEGORIZATION:**

Wide 0 m: Medium 21 m: Narrow 45 m: V.Light 0 m: No Oil 1269 m  
Subsurface Oil Observed: Yes        No X Maximum Depth       

**RECOMMENDATIONS:**

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

COMMENTS: Recommend removal of tarmat. Work should be conducted before (8/15) due to deer harvesting constraint.

See Addendum 5/18/90 wjk

TAG COMMENTS:         
        
        
      

TAG APPROVAL DATE: 4/23/90

ADEC ART WENGER

EXXON JOHN TATE

NOAA Joseph Talbot

USCG KENNETH KOTANE

FOSC:        DATE: 5-12-90

# SHORELINE EVALUATION

SEGMENT ST/ EN-46 SUBDIVISION B (2 OF 2) DATE 4/6/90

## 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 uniled biota and substrate. Do not trample or otherwise damage fucus and mussel beds.

ARCHAEOLOGICAL CONSTRAINT: If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

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

## OILING CATEGORIZATION:

Wide 0 m: Medium 21 m: Narrow 45 m: V.Light 0 m: No Oil 1269 m  
Subsurface Oil Observed: Yes      No X Maximum Depth     

## RECOMMENDATIONS:

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

COMMENTS: Recommend removal of tarmat. Work should be conducted before 8/15 due to deer harvesting constraint.

TAG COMMENTS:     

TAG APPROVAL DATE: 4/23/90

ADEC ART WENGER D. Williams

EXXON Amy Tate Alcal

NOAA Joseph Talbot J. C. Lane

USCG KENNETH KEANE     

FOSC:      DATE: 5-12-90

OG J. SPRINGER

SEGMENT ST/EN - 46

SUBDIVISION B

DATE 04/06/90

### CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Entry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HMLAWL
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ P/L Location(s)
- ☒ Photo Location(s)

### LEGEND

1  $\Delta$   
PH - No Subsurface Oil

2  $\Delta$   
PH - Subsurface Oil

CT/C  
Continuous Distribution

CT/B  
Broken Distribution

CT/P  
Patchy Distribution

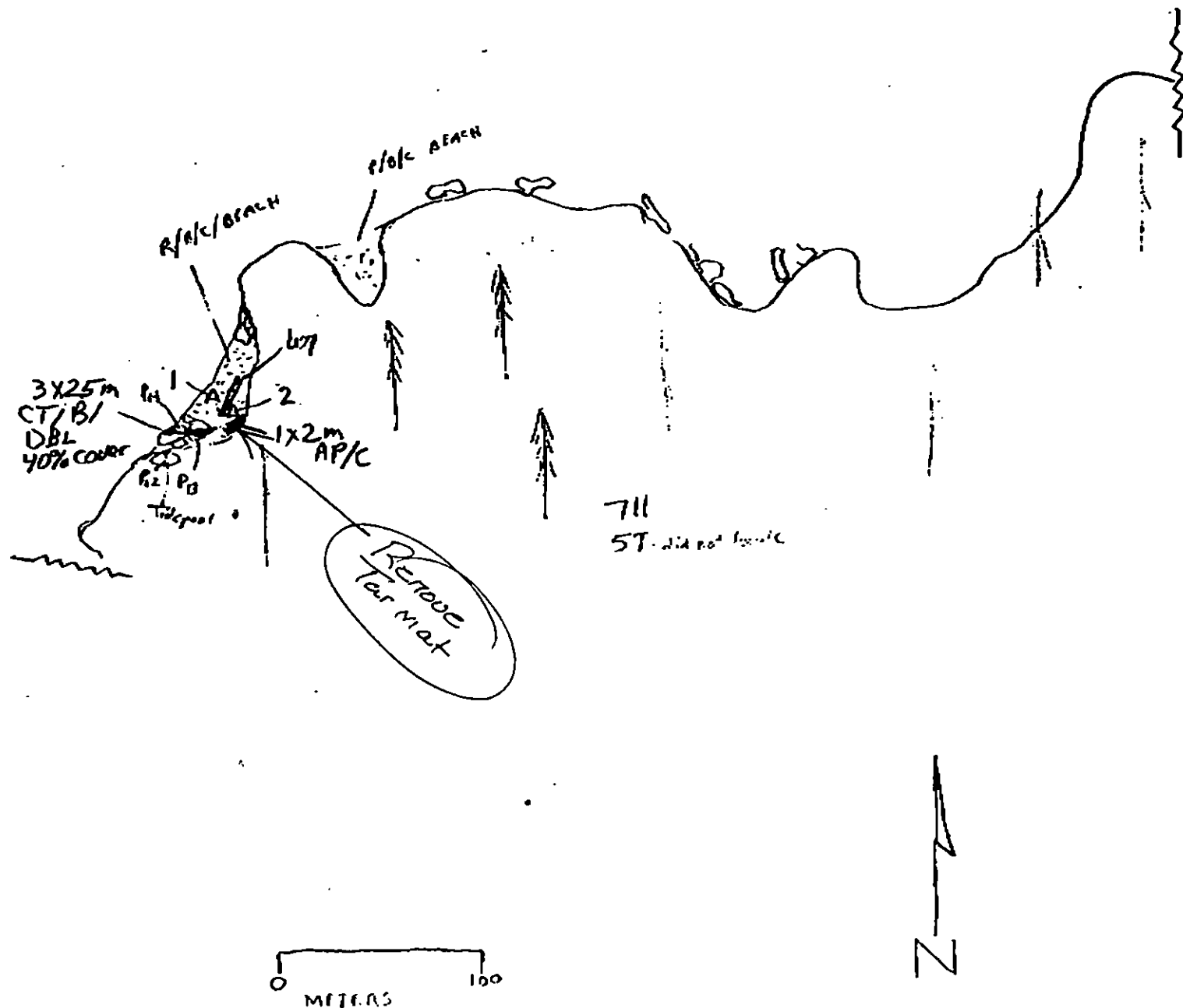
CT/S  
Splashed Distribution

Oil Vegetation

1  $\Rightarrow$   
Photo location, direction,  
and number

### SKETCH MAP

WATER



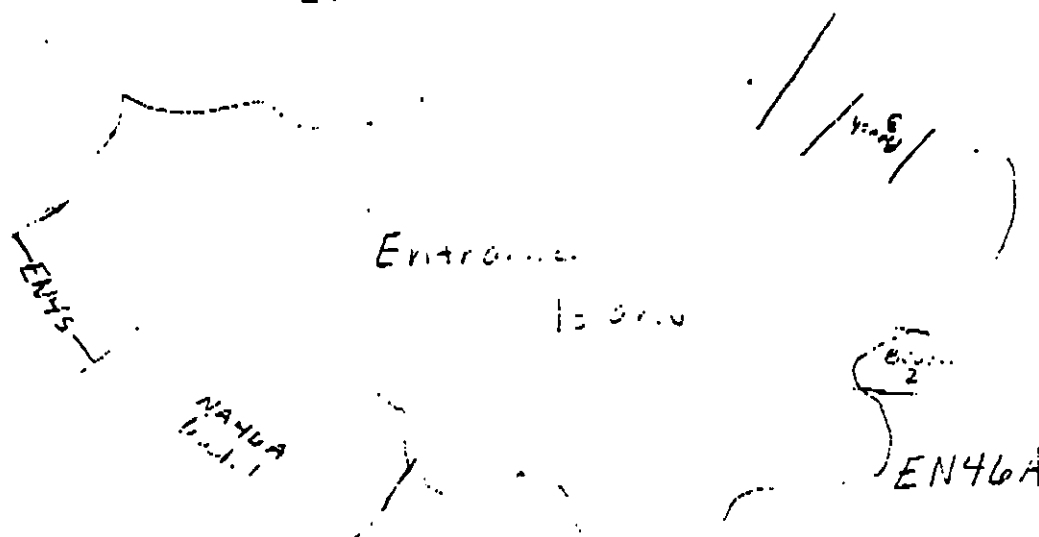
Oil Character Length (m): AP 2 PO CV CT 25 ST MS PT TB FL NO 975

REVISION 01/2000

4/4/90

Crank

EN46B

Comments:

- Most of subduction is steep ...
- Each area ...

## Beach 1:

- From ... NW of 14 rock outcrops.
- ... on boulders, ...
- Mytilus is sparse and ... In large rock outcrop there is a denser patch at MITZ.

## Beach 2:

- Small pocket boulder/kettle beach. The LITZ is ...
- Gastropods are abundant in MITZ & Limpets, ... on rock and boulder, sparse on ...
- In LITZ, barnacles & ... moderate, ... on cobbles. There are occasional patches of ... on the boulder ...
- Rye Grass is sprouting in the SLIPK

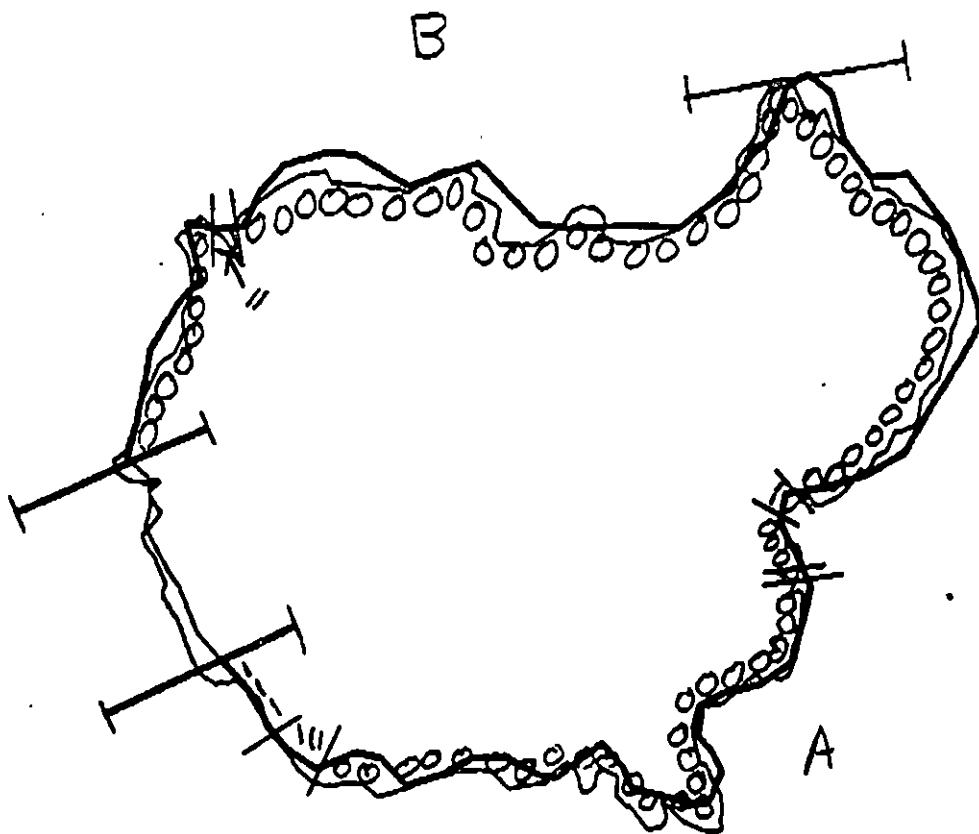
## Beach 3:

- Dense, well-established ...
- ... and ... moderate on cobbles.

63

## Near-boulder:

- Dense vegetation with ... in LITZ. Scarcely in ...
- ... in dense ... MITZ
- From ... MITZ and ... LITZ, replaced by ...



EN

55

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EN-46

ADEC Segment Length: <sup>2292</sup>~~2234~~m



Map Key: PWS-144

Name: James Springs

Date: 4/6/90

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ EN-46 SUBDIVISION A (1 OF 2) DATE 4/6/90

**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.

**ARCHAEOLOGICAL CONSTRAINT:** If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24 hrs.)).

SHPO SIGNATURE: Rachel Dan Oum DATE: 5/25/90

**OILING CATEGORIZATION:**

Wide 0 m: Medium 51 m: Narrow 62 m: V.Light 0 m: No Oil 587 m  
Subsurface Oil Observed: Yes X No      Maximum Depth 30+ cm

**RECOMMENDATIONS:**

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

COMMENTS: Recommend 1) manual pick up of trash, 2) bioremediation of oil-coated beach (see sketch map), and 3) burning of logs with greater than 10% oil cover.

TAG COMMENTS:     

TAG APPROVAL DATE: 4/23/90.  
ADEC ART WEINER  
EXXON ANDY TGA  
NOAA Joseph Talbott  
USCG KENNETH KEANE

FOSC: [Signature] DATE: 6/4/90

OG J. Sp. 1981

SEGMENT ST/ EN 46

SUBDIVISION A

DATE 4/6/90

# CHECKLIST

- ☒ 1/4 Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Body
- ☒ Dist
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HWL/LWL
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Pit Location(s)
- ☒ Photo Location(s)

## LEGEND

1  $\Delta$   
Pr - No Subsurface Oil

2  $\Delta$   
Pr - Subsurface Oil

$\boxed{CT/C}$   
Continuous Distribution

$\boxed{CT/B}$   
Broken Distribution

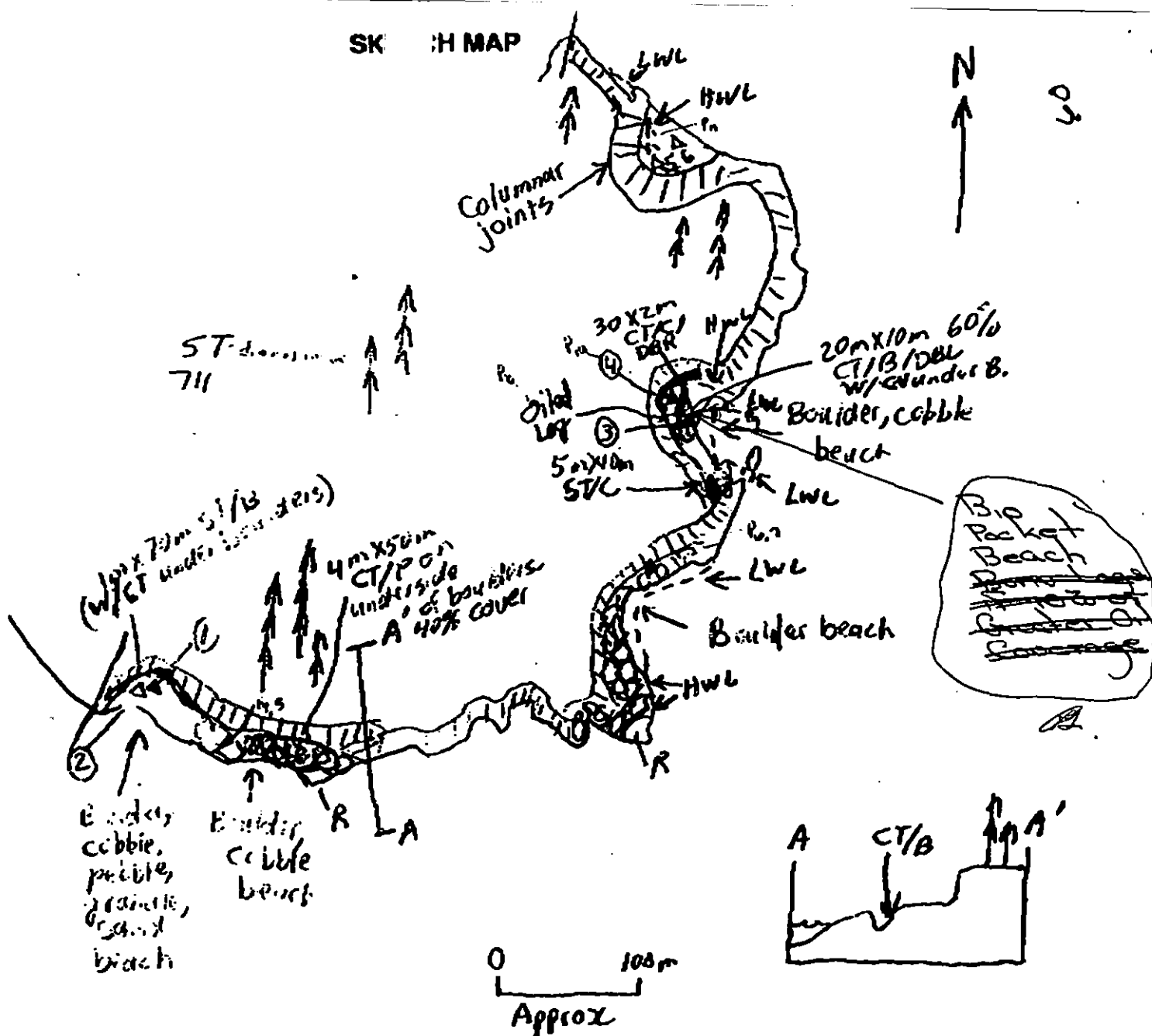
$\boxed{CT/P}$   
Patched Distribution

$\boxed{CT/S}$   
Splashed Distribution

$\bullet$   
Oil Vegetation

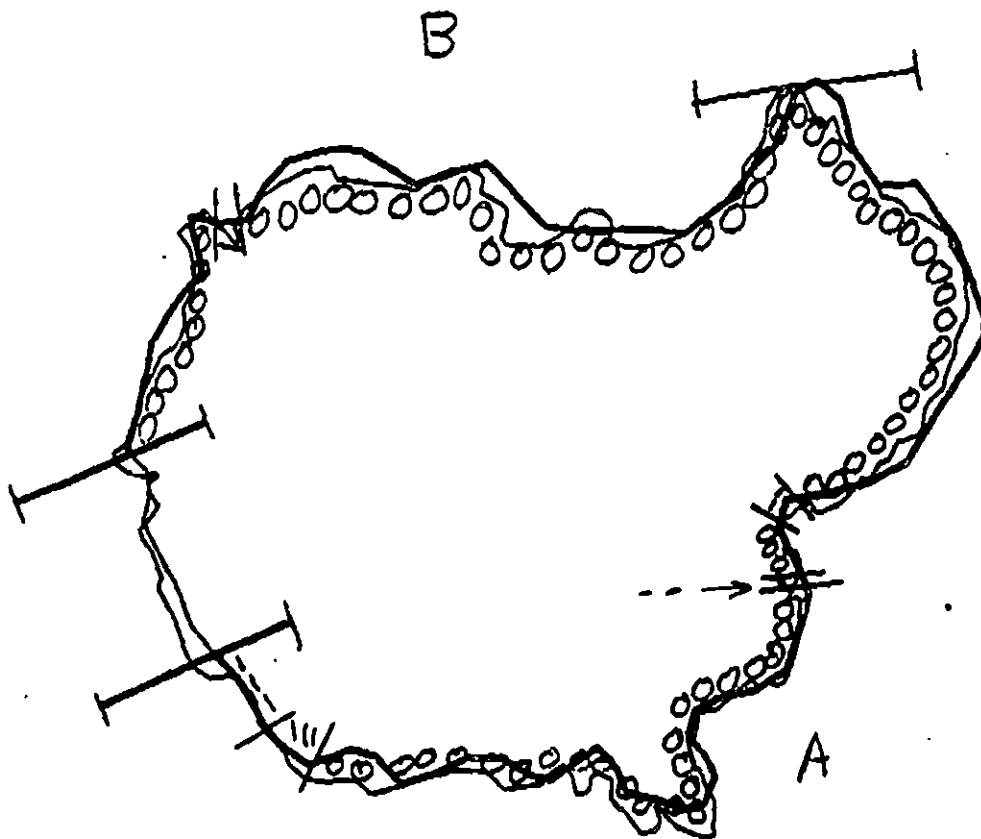
$\bullet$   
Photo location, direction, and number

## SKETCH MAP



Oil Character Length (m): AP      PO      CV      CT 100 ST 80 MS      PT      TB      FL      NO 11/0

REPRODUCED



EN

55

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

EN-46

ADEC Segment Length: <sup>2292</sup>~~2034~~m



Map Key: PWS-144  
 Name: James Springs  
 Date: 4/6/90  
 Date Entered:

**ARLIS**  
Alaska Resources  
Library & Information Services  
Anchorage, AK