

OIL SPILL PUBLIC INFO. CENTER



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EVOS
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1990
v.7

[Shoreline evaluations, 1990].

EL-105 – ER-29

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SHORELINE EVALUATION

SEGMENT ST/ EL-105 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

See attached Ecological Constraint Sheet for specific constraints and contacts.

6Y Special use destination

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: [Signature]

DATE: 4/17/90

OILING CATEGORIZATION:

Wide 10 m: Medium 80 m: Narrow 0 m: V.Light 9 m: No Oil 525 m
Subsurface Oil Observed: Yes X No Maximum Depth 50+ cm

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

 Manual Pickup

X Bioremediation

 Tarmat: Breakup

 Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

X Other (see comments)

COMMENTS: Recommend bioremediation of coat and ~~subsurface oil~~ areas as shown on attached sketch map. ~~Also rake top 6-8 inches of 10m x 10m area delineated on sketch map prior to bioremediation.~~ Work should be conducted before 8/15 based on above deer harvesting constraint.

TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90

ADEC Art Weiler [Signature]

EXXON Andy TGA [Signature]

NOAA Bruce West [Signature]

USCG Kenneth Keme [Signature]

FOSC: [Signature]

DATE: 4-22-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EL 105 SUBDIVISION: A DATE 04/04/90

JSCG

NAME AEC Vandepels SIGNATURE AEC Vandepels

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Entered in error
~~I recommend no treatment. This is a med. to high energy beach with lots of small mussels, snails, barnacles & algae.~~

I concur with land manager.

ADEC

NAME Michelle Boer SIGNATURE MBoer

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

In the first 5x4 B.C. beach, a 5x4 M long OF patch exists on the surface layer only. On the main beach, to the left of the freshwater terr. off (facing the beach), lies an oily film layer beginning 4 cm down for 2 cm. This area is approximately 6 M wide x by 6 m long. The area is B.C. with bedrock underneath. This area is a high energy beach and the oil is primarily surface. I would recommend these patches be to the high wave energy of the area. In the U12, behind the R headland lies a 10 x 10 M section. A pit #5 in this area revealed OR beginning at 45 cm and continuing to 80 cm with KO and the water obstructing further vi. In the R.C. area following the C.P.Q. 4.9 beach lies a 6 x 3 m wide ET W/O R in 4 layer. This is under a large B and difficult to access. On the remaining B area, there is a 3 x 60 M area under the B's. In the 3 areas mentioned above, an application of fertilizer to these patches would assist the areas under the B's. Combined with manual scrubbing of underside of B's that can be reached.

LAND MANAGER

NAME DAN LOBAN SIGNATURE Dan Loban

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

I RECOMMEND A FERTILIZER APPLICATION TO THE 4M x 5M, 6M x 4M, 5X3M, AND 3X60M PATCHES INDICATED ON SKETCH MAP. THIS WILL ASSIST IN OIL DEGRADATION OF THIS HIGH ENERGY BEACH

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SHORELINE OILING SUMMARY

REVISION NO. 03/92

OG J. Springer USCG R. Vandepels SEGMENT ST/ EL. 105
 BIO P. Crenk LAND REP D. Logan (FS) SUBDIVISION A 0011
 EXXON T. Templin ADEC M. Baer TIME 13:30 to 15:00
 TEAM NO.: 5 TIDE LEVEL: +5 to +2 DATE 04/04/90
 EST. SUBDIVISION LENGTH: 751 m ☐ Sun ☐ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock Pillow Lava, Schist
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 30 % B 45 % C 10 % P 10 % G 3 % S 2 % M 0 % V 0 %
 SLOPE: Long 50 % Hang 45 % Vert 5 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 10 m M 8 m N 8 m VL 5 m NO 665 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	R	B	P	S	SP	BP	GL	SL	TL	BL	BR	TR	SU	U	M	L
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT		X						X					X			
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM		X						X					X			
NO OIL													SU	X	X	

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

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris	X		

DEBRIS COLLECTED
☒ YES ☐ NO

TYPE Pompe

#BAGS 1

Photographs:

Roll No. ST-5-3

Frames 1-8

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			SP	BP	GL	SL	TL	BL	BR	TR	SU	U	
1	30					X	-	X									X		BCPGS
2	30					X	-	X									X		PGS
3	35				X		4-6	X				X					X		BCPGS
4	30					X	-	X										X	BPG
5	50	X					45-50	X				X					X		PGSV
6	30					X	-	X									X		PSV

COMMENTS Pompe picked up by Prince William Sound Conservation Alliance personnel.

SEGMENT ST/ EL105 SUBDIVISION A

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR	PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		LO	UC		SV	UR	ML	U		
7	30					X	.	X						X		PGS
8	30					X	.	X						X		CPG
9	45					X	.	X				X				PG
10	40					X	.	X				X				PG
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							.									

COMMENTS

3

REVIEWED 7W DATE 4/10/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/22/90

Segment ST/EL 105 Subdivision A Date (mo/day/yr) 4/4/90
 Time (24 hr) 1310 - 1510 Biologist Crank Tide Height to +2.5 pg 1 of 1
 Length 751m

- (A) Substrate type and % of segments:
 (1) Bedrock 30 (2) Boulder 45 (3) Cobble 10 (4) Pebble 10 (5) Sand 5 (6) Silt
- (B) Overall % cover of biota (% of segment): Dense 10 Moderate 50 Low 40
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (O)
- Photographs: Roll No. ST-5-3
 Frames 8

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments: ~ Dozen porpoise? left NW Bay in AM as fishing fleet were entering bay. (Reported by Coastguard)

2 Ravens

1 Cormorant

4 Bald Eagle - Adult in tree, 3 flying (2 Adults, 1 immature)

Eagle heard

Deer tracks in snow

LITZ unexposed for most of segment.

Ecological Considerations:

6Y - Special Use Destination

711 - Deer Harvesting

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SEGMENT: ST/ EL 105 SUBDIVISION A LENGTH 751 m BIOLOGIST Crank

pg 2 of

DATE 4/4/90 TIME 1300-1510

TIDE HEIGHT +6 → +2.5

1 - BEDROCK 2 - BOULDER 3 - COBBLE 4 - PEBBLE 5 - SAND 6 - SILT

[illegible]

Drift included *Laminaria* spp. and pieces of *Zostera*.

22

OG J. Springer

SEGMENT EL105

SUBDIVISION A

DATE 04/04/90

CHECKLIST

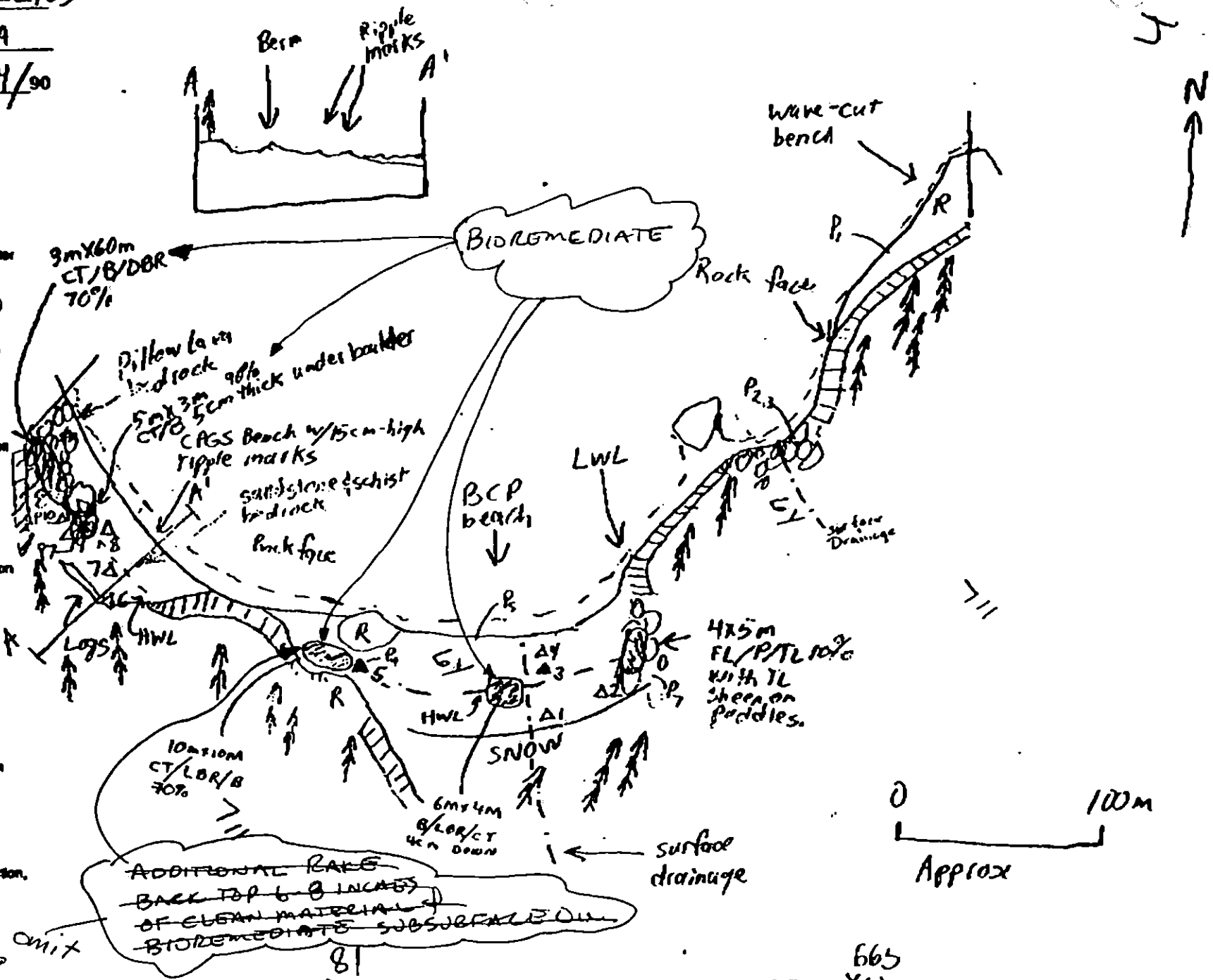
- ☒ Approx. Scale
- ☒ Seg/Sub Entry
- ☒ Oil Dist.
- ☒ Wash
- ☒ Length
- ☒ Cover
- ☒ Substrate Character
- ☒ Vol. HWA/LWL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Ph Location(s)
- ☒ Photo Location(s)

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
Splashed Distribution
- Oiled Vegetation
- Photo location, direction, and number

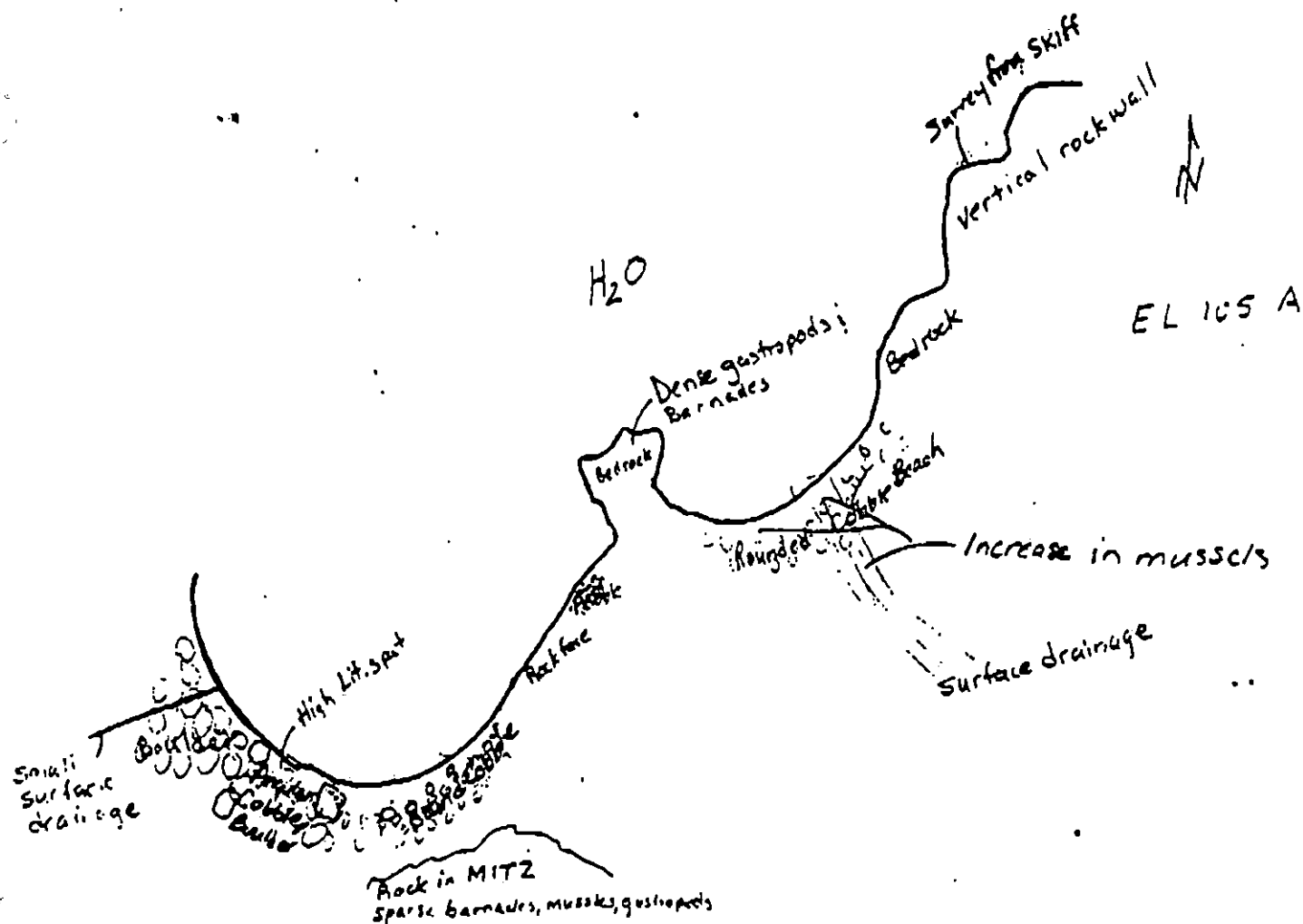
SKETCH MAP

Revised 4/7/90



Oil Character Length (m): AP 0 PO 0 CV 0 CT 65 ST 0 MS 0 PT 0 TB 0 FL 5 NO 81

REVISIONS



Comments

- Mussel concentrations increase near and in fresh H_2O drainage
- Vertical rock wall surveyed by boat, Fucus sporting observations may be low and unable to obs. gastropods
- Recruitment for segment mod $\rightarrow$ low with an occasional high Barnacle recruited boulder.
- In the angular cobble recruitment is high for Littorinas. Barnacle recruitment higher but still moderate.
- Porphyra and Filamentous greens are dense on boulders and cobble.

EL-10

Revised
4/7/90



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EL-105

ADEC Segment Length: 751



Map Key: PWS-125

Name: James Spring

Date: 4/7/90

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-105 SUBDIVISION A (1 of 1)

WORK WINDOW	
Bioremediation	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5R	Seabird Colony	Closed to all activities; work site is less than 800m from seabird colony.
7II	Subsistence: Deer Harvesting	Closed to bioremediation after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

If seabird colony constraint is removed, other ecological considerations will apply.

FOSC

J. Fausch

Date

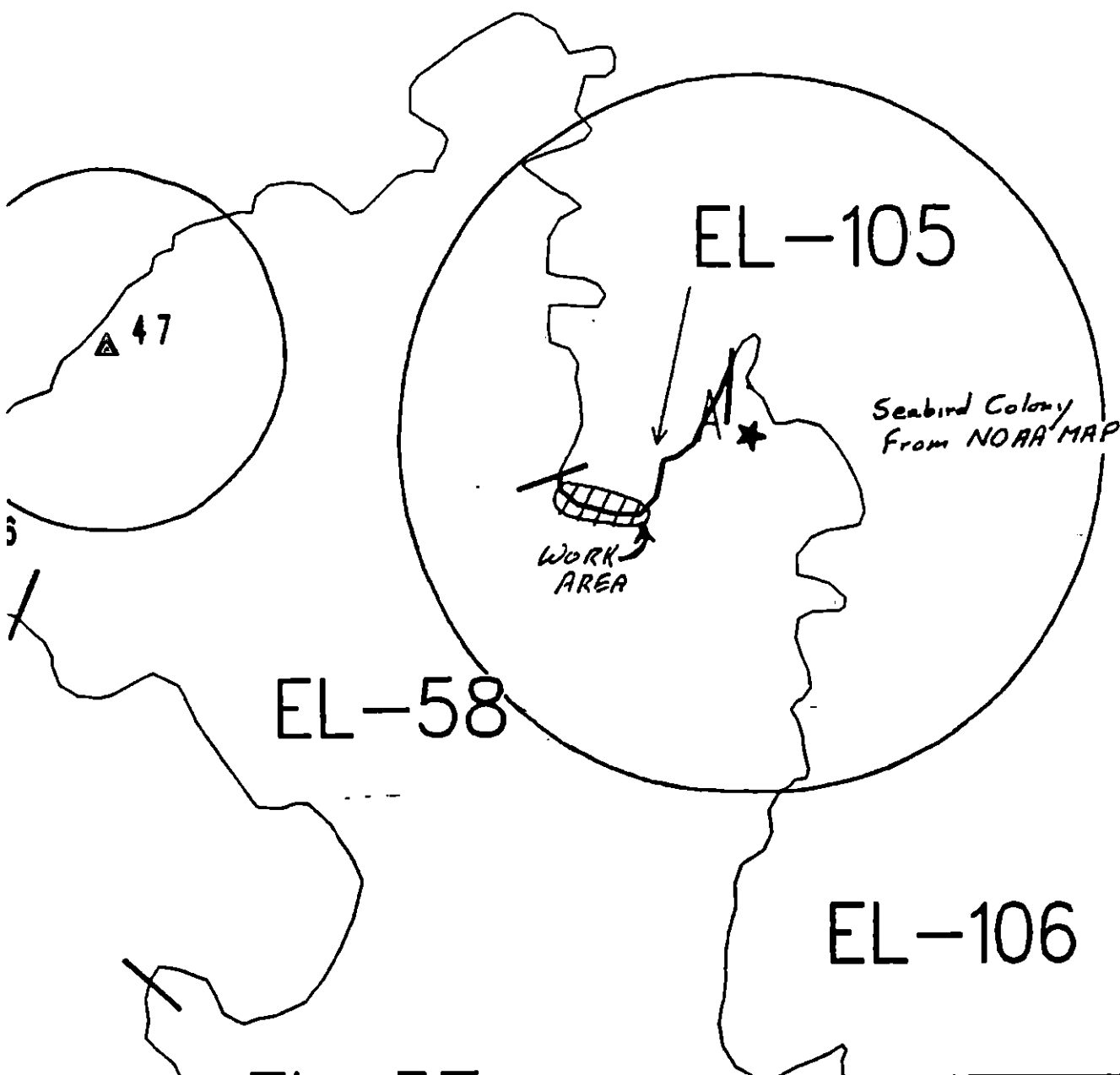
6/18/90

Prepared by

J. Phillips

Date

6/14/90



Exxon Company, USA

Map Key: KNI-EL-105

May 11, 1990



ECOLOGY MAP
SEGMENT EL-105
SUBDIVISION A (L of L)
METERS

0 367 735

★	Seabird Colony
△	Eagle Nest

1 inch = 1205 feet

REVISION 1
7/13/90
P.P.

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-105 SUBDIVISION A (1 of 1)

WORK WINDOW	
Bioremediation	WORK PRIOR TO 8/15 ~~CLOSED~~

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5R Seabird Colony

NO CONSTRAINT
~~Closed to all activities~~; work site is ^{more} ~~less~~ than 800m
from seabird colony.

7II Subsistence: Deer Harvesting

Closed to bioremediation after 8/15.

✓
7-1 f

OTHER ECOLOGICAL CONSIDERATIONS

If seabird colony constraint is removed, other ecological considerations will apply.

FOSC

[Signature]

Date

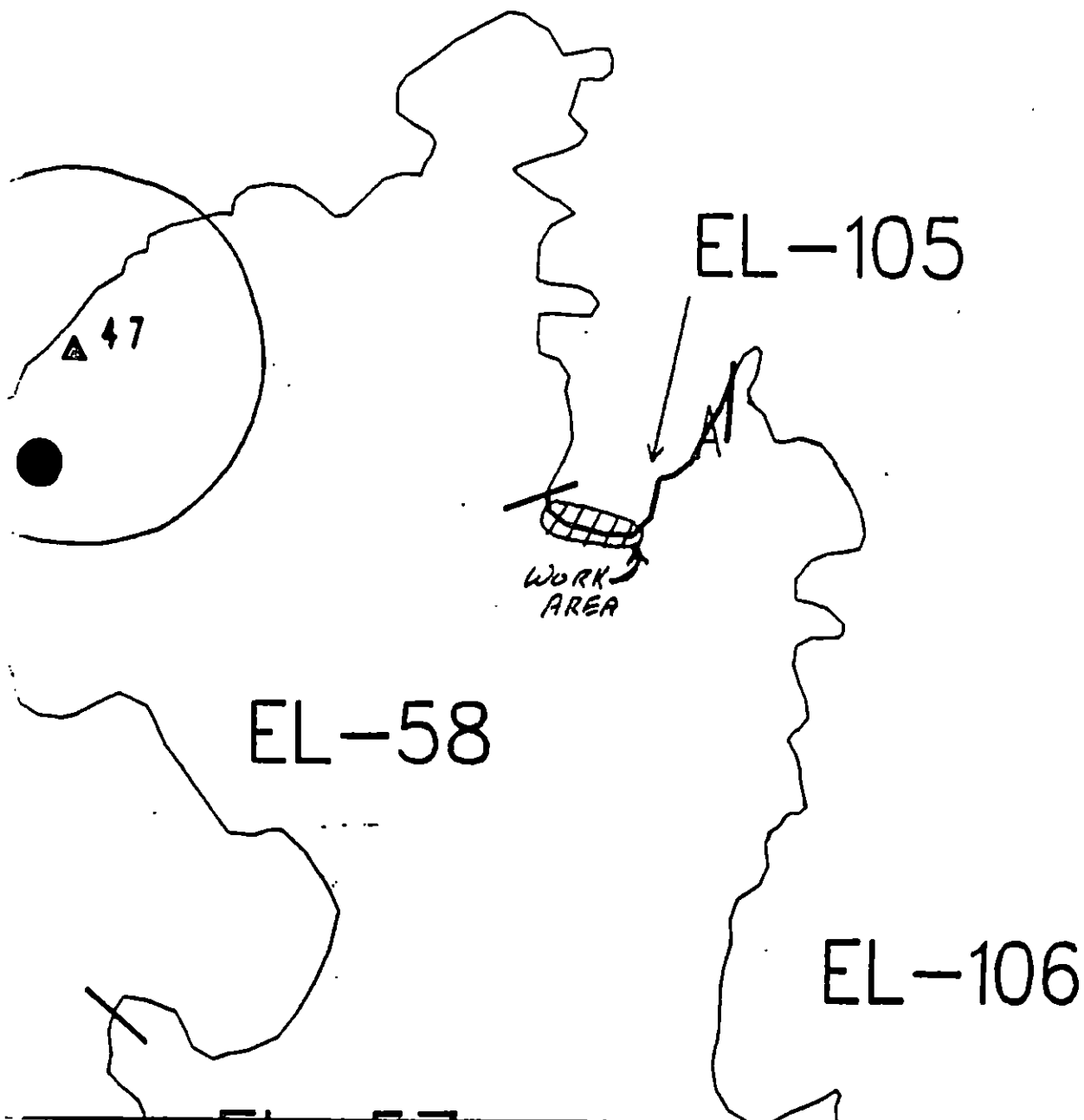
6/18/90

Prepared by

[Signature]

Date

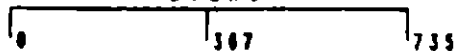
6/14/90



on Company, USA
 Key: KNI-EL-105
 May 11, 1990



ECOLOGY MAP
 SEGMENT EL-105
 SUBDIVISION *A* (L-o-L)
 METERS



- ★ Seabird Colony
- △ Eagle Nest

1 inch = 1205 feet

SHORELINE EVALUATION

SEGMENT ST/ EL-106 SUBDIVISION A (1 OF 3) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
5T All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles Z. [Signature] DATE: 4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 40 m: V.Light 380 m: No Oil 6731 m
Subsurface Oil Observed: Yes X No Maximum Depth 35+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommend bioremediation of area shown on attached sketch
map. [(c/p) pocket beach] Work should be conducted before 5/15 or
between 7/1 and 8/15 due to eagle nesting constraints, contact USFWS
before conducting treatment.

Seal Erection

TAG COMMENTS: MONITORS TO CHECK SUITZ - SNOW COVERED
DURING SURVEY.

TAG APPROVAL DATE: 4/24/90

ADEC ART WEINER Art Weiner
EXXON ANDY TGA Andy TGA FOSC: [Signature] DATE: 5-3-90
NOAA Joseph Talbot Joseph Talbot
USCG M. J. HALL M. J. HALL

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 (8/11 to 7/25)
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
 Restrict boat traffic to essential minimum. Avoid damage to 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.
- 6T 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
 7J Deer harvesting (8/15 to 2/25)
 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-106-A SUBDIVISION: A DATE 4/6/90

USCG

NAME DAVID A. SCHNEIDER SIGNATURE David A. Schneider

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

PSS/USCG

I recommend no immediate treatment along this subdivision. Majority of discernable impact consists of a very light to light patchy stain along the UITE and high tide line. SITE of extensive cobble/pebble beach should be reassessed after the snow melts. This entire subdiv is exposed to high energy wave action. for debris

ADEC

NAME Peter Montesano SIGNATURE Peter Montesano

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS This is mostly an area of vertical cliffs not requiring treatment. However, the beach (Pit 1) was severely oiled last summer and little was uncovered during our assessment. The Supr tidal was under snow and requires reassessment. IF any oiling is uncovered below the snow, other, deep, pits should be dug at the UITE + MITZ. > N/A

LAND MANAGER

NAME JANETTA PRITCHARD SIGNATURE Janetta Pritchard

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

I concur with the ADEC comments. This beach has a high recreational value, easy access to the water with access to a fresh water lake. However, this would not be necessarily be a good anchorage in a storm. Beach appears to be high energy. Recommend reassessment of SUPRA when snow melts.

OG C. DILLON USCG D. SCHNEIDER SEGMENT ST/ EL-106
 BIO J. BARRY LAND REP. J. FRITCHARD (OWR) SUBDIVISION A 4043
 EXXON A. SNOOK ADEC P. MONTESANO TIME 14:30 to 16:45
 TEAM NO.: 6 TIDE LEVEL: +1 to +4 DATE 04/02/90
 EST. SUBDIVISION LENGTH: 3900 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock cliffs and steep mountainside
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 96 % B 2 % C 2 % P 0 % G 0 % S 0 % M 0 % V 0
 SLOPE: Long 2 % Hang 100 % Vert 38 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 25 m VL 75 m NO 3900

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	C	N	S	E	1	2	3	4	5	BU	UM	MS	U
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT			X		X					X			
STAIN		X	✓			X	✓			X	✓		
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL	Snow on beach only									S			X

PAVEMENT: H F S 0 sq. m by 0

PATTIES / TARBALLS 0 BAG

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTE
☐ YES ☐ NO

TYPE 0

#BAGS 0

Photographs:

Roll No. ST-6-3

Frames 5-7

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		NO	NO	1	2	3	4	5	BU	UM	MS	U		
1	35				X		0-35	X		X	X				X					C/P
							.													
							.													
							.													
							.													
							.													

COMMENTS SUBDIVISION CONSISTS OF ALL HANG AND VERT ROCK WITH ONE LONG, LANG COBBLE/PEBBLE BEACH. LITZ C/P BERM SHOWS EVIDENCE OF A SMALL, LOCALIZED PATCH OF OIL PENETRATION TO AN UNDETERMINED DEPTH (>35 CM). THE SITZ IS COVERED WITH SNOW OVER A STORM BERM. IT IS POSSIBLE THIS AREA MAY BE OILED. THIS ENTIRE SUBDIVISION HAS HIGH ENERGY WAVE EXP.

Page 1 of 1 NO SKETCH MAP. OIL DESCRIPTIONS REVIEWED 7/0 DATE 4/10/90
 SHOWN ON COMPUTER MAP.

Segment ST/ EL106 Subdivision A Date (mo/day/yr) Apr 12 1990
 Time (24 hr) 1430 1645 Biologist Jim BARRY Length 3900

- (A) Substrate type and % of segments:
 (1) Bedrock 96 (2) Boulder 2 (3) Cobble 2 (4) Pebble (5) Sand (6) Silt
- (B) Overall % cover of biota (% of segment): Dense 90 Moderate 6 Low 4
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (3)
 Photographs:
 Roll No. None
 Frames

BARNACLES

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

NOT PRESENT

MYTILUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	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:

Glauco-winged gulls - 3
 Bald eagle - 25
 Seals - 8
 Eagle nest in another subdivision.
 Ecological Considerations: 6Y, 711 5T

1) Intertidal recovering rapidly from disturbance by oil pollution, cleaning activities.

- 1) Eagle nests observed in another subdivision of the segment - No apparent risk to nest from cleaning operations.
- 2) Caution advised for boating activities near seal haul-out areas. Avoid these sites if possible.

START TOTAL WINDOW
END 1700

I General Comments

The majority of this subdivision is high angle cliffs with an open exposure to large waves. Recruitment of species in all the major categories (Barnacles) is high on these cliffs. Thus, the ~~system~~ intertidal community shows to strong evidence of recovery from both the mortality associated w/ oil contaminants and that produced by cleaning procedures. Two factors may contribute to this pattern. First, highly exposed sites are cleaned more rapidly by high waves & water motion. Second, exposed sites often show high recruitment rates of for these ~~same~~ dominant intertidal species. Because most of the survey was performed by boat, only 2 or 3 sites along the ~~subdivision~~ ^{section} were used to infer the distribution of gastropods along the section.

II Major Species

A. BARNACLES

3 species (*Balanus glandula*, *Semibalanus cariosus*, *Chthamalus dallii*) are most abundant on cliff faces & boulder beaches. All 3 species have spat in moderate to high abundance.

B. MYTILUS

Mussels are particularly dense on boulders & cliff faces in the middle to high intertidal where recruitment of spat & small juveniles is presently heavy. Cobble beaches have low densities of mussels (but some spat) due to the negative effects of wave disturbance.

C. GASTROPODS

Littorinids (*Panopeus*) are highly variable, but often dense in some areas. Moderate densities occurred in the cobble beaches.

D. EUCYS. Generally dense. Few withered adults observed.

E. A LIST OF MAJOR & MINOR SPECIES FOLLOWS

MAJOR SPECIES

I MARINE PLANTS

A. DIATOMS / BLUE GREEN ALGAE D123.

B. GREEN ALGAE - CHLOROPHYTA

Sporangomorpha / Acrosiphonia D12*

Ulva m12

Ulva spora D23

C. Red Algae - Rhodophyta

Petrocelis m12

Porphyra D123

Rhodomela larix m123

Rhodomenia palmata m12*

D. Brown Algae

Alaria pylaii m12

Fucus distichus D123*

Laminaria spp. m12

Hildenbrandia spp. D12*

Ralfsia spp. m1

* Juveniles present

D = Dense / Abundant

M = Moderate / Common

S = Sparse / Occasional

R = Rare

1 = Bedrock

2 = Boulder

3 = Cobble

4 = Pebble

5 = Sand

II Animals

A. BARNACLES

Chthamalus dalli D12*

Balanus glandula D12*

Semibalanus cariosus D1*

B. Hermit Crabs - Paguridae D23

C. Amphipods - Orchestia spp.? m23

D. Mussels - Mytilus edulis D123*

E. Snails

Littorina scutulata D123*

L. sitkana D123*

Nucella lamellosa m123*

N. emarginata m123*

F. Limpets

Lottia digitalis D12*

Tectura scutum m23*

G. Sea Stars - Pycnopodia m123*

Pisaster S12

II MINOR SPECIES

B. Animals

1. WORMS -

Fluxus (Annelum spp) R3

Polychaeta

Spirorbis sp D 23 *

Serpula sp S 12.

Crucigera sp S 12

2. Molluscs

a) Snails / Limpets

Tachyrhynchus spp m 23 *

Littorina personata S 12 *

Tectura personata S 12 *

b) Chitons

Katherina limicata D 12 *

Tonicella lineata S 12.

Mopalia spp R 12

3. Sea Stars

Dermasterias m 12 *

Henricia R 1

Leptasterias m 23 *

Orthasterias S 12

4. Scallops

Pododesmus cepus S 12

5. Mussels

Modiolus modiolus R 1

6. Anemones

Anthopleura xanthogrammica S 12 *

Tealia crassicornis m 12

Epiactis sp. m 12 *

7. Pulmonate Snails - Siphonaria sp. D 1 *

8. Crabs

Acantholithodes ? S 123

Pagetta productus S 123 *

9.

9. Bryozoans

Schizoporella sp. m 23 *

10. Beach Hoppers

Isopoda S 23

11. Fish

Pholidae D 23 *

Cottidae S 1

12. Hydroceral

Stylandura porphyra S 123

13. Hydroids

Sertulariidae S 23

* Juveniles present

D Dense / Abundant

m Moderate / Common

S Sparse / Occasional

R Rare

1 Bedrock

2 Boulder

3 Cobble

4 Pebble

5 Sand

II MINOR SPECIES

A. MARINE PLANTS

1. GREEN ALGAE - CHLOROPHYTA

Cladophora S12

Enteromorpha M12 &

2. Red Algae - Rhodophyta

Amifeltia plicata S12

Bassiella spp. M1

Callianthron spp. M1

Corallina spp. M1

Endocladia muricata S1

Halosaccion glandiforme M12 &

Iridaea spp. M1

Lithothamnion 71. M12 &

Membranoptera platyphylla? O12 &

Microcladia / Pterocladia ? S12

Odanthalia M12 &

Plocamium O12

MASTOCARPUS O12 &

3. Brown Algae

Costaria M12

Scytosiphon M123

F General Comments.

Oil effects on this subdivision are less evident than on some other sites. Cobble beaches show little evidence of oil, and cliffs appear relatively clean (lightly oiled.)

6. WILDLIFE

1) Seals - 8-10 seals in 2 haul out sites - Seal were skittish, 6/8 jumped from the haul out site when skiff was within 100 m or more.

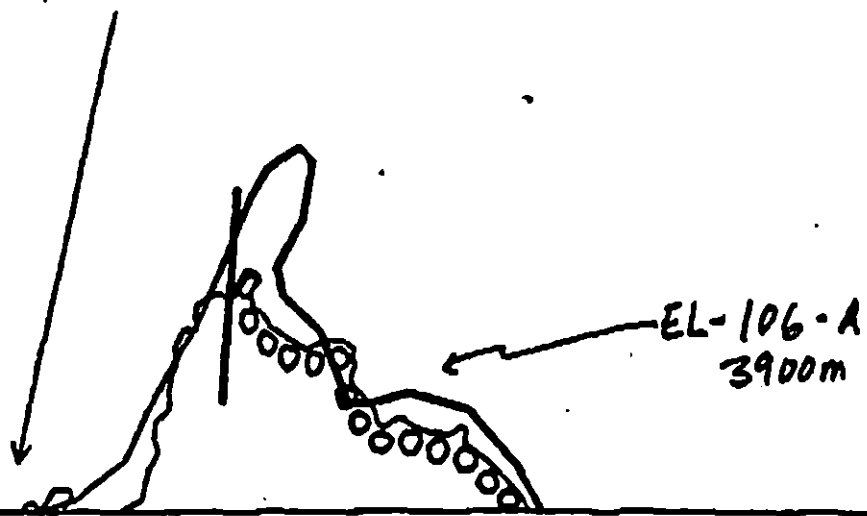
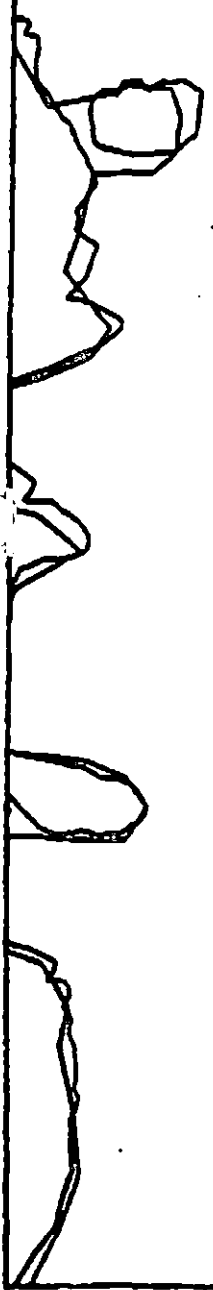
2. Bald eagles - common

3. Clamorous veeryed gull

4. Ravens

5. Osprey

EL-105

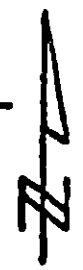


↓ PWS
126A

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

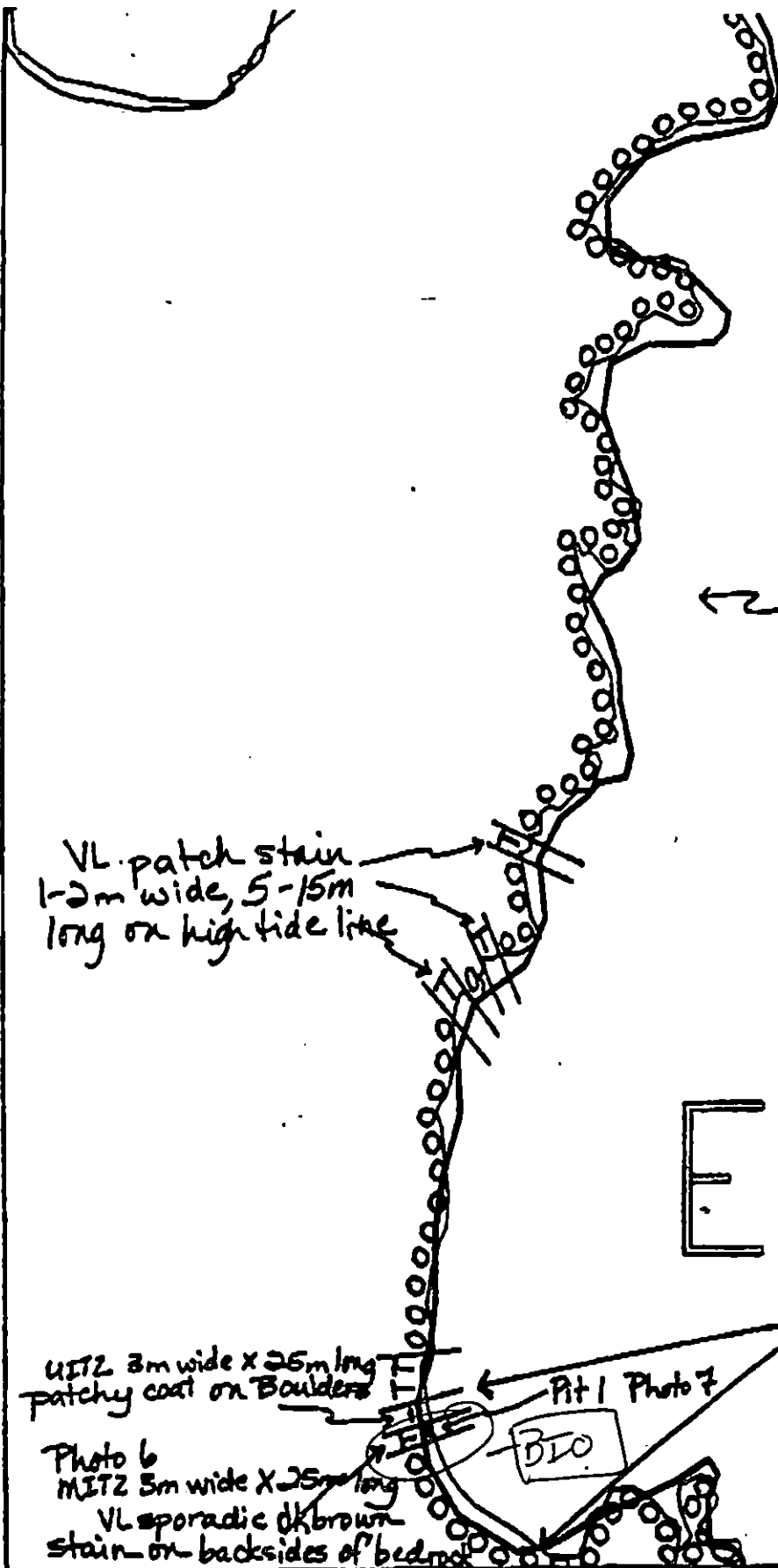
EL-106

EXXON SEGMENT LENGTH: 5524m
ADEC Segment Length: 5078m



Map Key: PWS-126c
Name: C. Dillon
Date: 4/2/90
Date Entered:

PWS
126C
~~Page 2 of 4~~



← EL-106-A
3900 m

EL-106

Photo 5
Large LANG cobble/pebble beach
All Surface sediments un-oiled.

Pit 1 shows what appears to be a
localized subsurface oiled berm
area about 2m x 2m on UITZ.
Snow covered BITZ may be oiled
PWS
126A

UITZ 3m wide x 25m long
patchy coat on Boulders

Photo 6
MITZ 3m wide x 25m long
VL sporadic dk brown
stain on backside of bedrock

EL-106

Exxon Segment Length: 6524m
ADEC Segment Length: 9078m

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

0 100 200 300
METERS

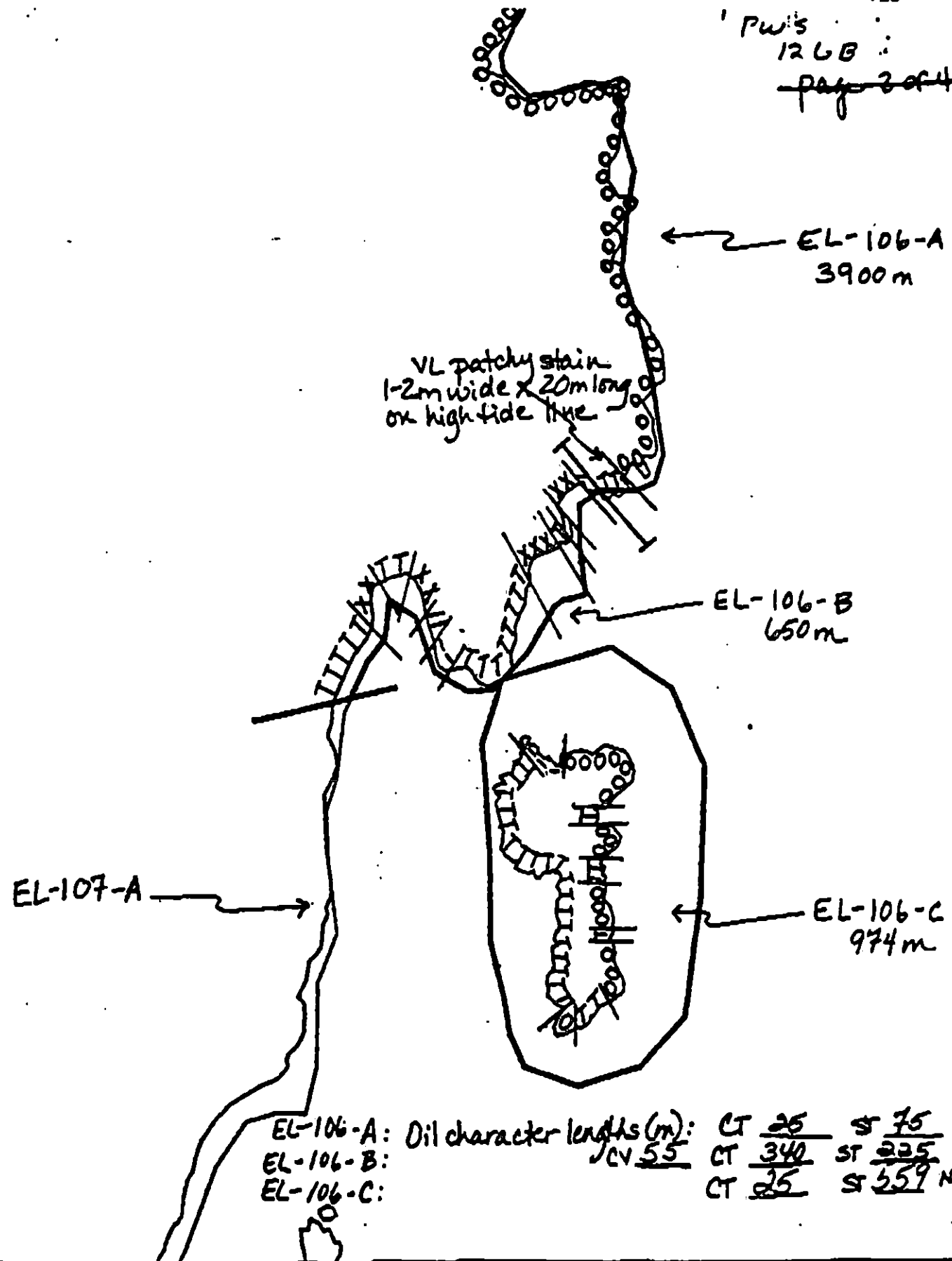
Map Key: PWS-126B

Name: C. Dillon

Date: 4/2/90

Date Entered:

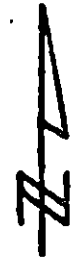
PW's
12 LB
~~page 3 of 4~~



EL-106-A: Oil character lengths (m): CT 25 ST 75 NO
CV 55 CT 340 ST 225
EL-106-B: CT 25 ST 559 NO
EL-106-C:

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

EL-106
Exxon Segment Length: 5524 m
ADEC Segment Length: 5078 m



Map Key: PWS-126a
Name: C. Dillon
Date: 4/2/90
Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ EL-106 SUBDIVISION B (2 OF 3) DATE 4/5/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
30,3Q Harbor seal and sea lion molting (8/15 to 9/15)
5T All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Avoid disturbing unlisted seal haulouts on north end of EL-106 (A).

SHPO SIGNATURE: Charles E. H. Jones DATE: 4/25/90

OILING CATEGORIZATION:

Wide 408 m: Medium 69 m: Narrow 159 m: V.Light 604 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 30+ cm

RECOMMENDATIONS:

<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: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> <u>X</u> Removal	<u>X*</u> Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of tarmats
2) manual pick up of oiled debris and logs, 3) bioremediation of areas
shown on attached sketch map, 4) *manual tilling of areas shown on
attached sketch map. Work should be conducted between 7/1 and 8/15 due
to pinneped constraints after approval by ADF&G and USFWS regarding
eagle nest.

TAG COMMENTS: MONITORS TO CHECK LOGS TO DETERMINE DEGREE OF
OILING

TAG APPROVAL DATE: 4/24/90

ADEC JOHN BAUER John Bauer

EXXON ANDY GALT Andy Galt

NOAA Joseph Tallon Joseph Tallon

USCG M. J. HALL M. J. Hall

FOSC: W L DATE: 5-3-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
1D Esther Hatchery release (4/15 to 6/1)
1E Main Bay Hatchery release (4/20 to 5/10)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1).
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 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
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.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST EL-106-B SUBDIVISION: B DATE 4/8/90

USCG NAME DAVID A. SCHNEIDER SIGNATURE David A. Schneider

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

SUBDIVISION B CONSISTS OF THREE LARGE AND ONE SMALL BOULDER/CORAL/PEBBLE BEACHES. EXTENSIVE MANUAL CLEAN UP WILL BE NEEDED HERE TO IMPROVE AESTHETICS OF THESE SITES. AREAS OF ASPHALTING SHOULD BE BROKEN UP AND REMOVED (MANUAL) AND EXTENSIVE DEBRIS SHOULD BE COLLECTED AND REMOVED. IT IS DOUBTFUL THAT BIOREMEDIATION TECHNIQUES WILL BE VERY EFFECTIVE ON THE LARGER BOULDER FIELDS, HOWEVER I FEEL THAT SOME ATTEMPT SHOULD BE MADE TO TREAT SMALL SEDIMENT POCKETS ON THESE BEACHES BY UTILIZING TILLING AND BIOREMEDIATION APPLICATION OF BIO R AGENTS ON BOULDERS MAY HAVE SOME POSITIVE EFFECT ON COATING AND AGAINST NATURAL CLEANSING PROCESS

ADEC NAME Peter Montesano SIGNATURE Peter Montesano

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS The small Cobble pocket by Pit #2 has oiling to be bled. The upper tide oiled area should be pulled down to expose + thin oil layer before bio. The surface is too clean to apply a Fertilizer now.

Area by Pit 1 is situated up on top of some bedrock and can be steam cleaned. Below that (Pit 4) there is oil of considerable significance below large cobbles and small boulders. This area should have high volume, hot water washed (Hw Flash with Hw hoses or Omni). Surface Sediments will have to be flipped to best reach oil. On the next beach (Pit #5), the oiling is identical, but this is only caused by LCV because of Rocky shore line.

The last beach (top of map) was washed extensively last summer. The soft asphalt on E side should be removed. Both have a DBL dry surface with DBR below. The E side is bled and the W side is underlaid by shallow bed rock and is borderline for bio. Both have penetrations of 9cm after the Hump, c/w Hump wash → The complete effectiveness of continued washing is in question, the "dredge and wash" scenario may be the last effective method.

LAND MANAGER NAME JANETTA PRITCHARD SIGNATURE Janetta Pritchard

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

The beach on the N end of this subdivision is P/C and provides easy access to the uplands but is not necessarily a good recreational site. The U172 should be pulled down + bled. The upper end of the beach where pit 5 is located are mainly boulders. These areas are by a wash of hot water. I recommend hot water wash. Stone + absorbent cotton + pom poms must be picked up. Beach adjacent to EL107 is really a sloping C/P beach which would provide excellent recreational use + access to the uplands. B/C areas on each side has coal + tar balls. These should be picked up prior to hot water washing. Hot water wash should be utilized to loosen oil and then bioremediation of the two areas are recommended.

OG C. DILLON USCG D. SCHNEIDER SEGMENT ST/ EL-106
 BIO ST. BARRY LAND REP J. PITCHARD (DA) SUBDIVISION B3 (2043)
 EXXON A. SNOOK ADEC P. MONTESANO TIME 15:00 to 17:15
 TEAM NO.: 6 TIDE LEVEL: +6 to +1 DATE 04/05/90
 EST. SUBDIVISION LENGTH: 650 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: NE to SW
 SURFACE SEDIMENTS: R 45 % B 40 % C 10 % P 3 % G 0 % S 1 % M 0 % V 1
 SLOPE: Long 25 % Hang 60 % Ver 15 % WAVE EXPOSURE: ☒ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 270 m M 25 m N 30 m VL 325 m NO 0

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	R	B	P	S	W	Y	G	BR	SW	M	U	U
ASPHALT PAVEMENT			X					X		X		
POOLED												
COVER		X			X				X	X		
COAT	X	✓			X				X	X		
STAIN	X				X				X	X		
MOUSSE												
PATTIES												
TARBALLS												
FILM												
NO OIL	Snow on last beach								S			X

PAVEMENT: H F (S) 20 sq. m by 2

PATTIES / TARBALLS 0 BAG

NEAR SHORE SHEEN? NO BR (RW) SL TL

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

DEBRIS COLLECTE
☐ YES ☒ NO

TYPE 0

#BAGS 0

Photographs:

Roll No. ST-6-3 and ST-6-4

Frames 2-4 Frame 19, 21-24

26-28

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			W	Y	G	BR	SW	M	U				
1	20	X					0 - 15		X	X			X		X				C/P/G
2	35		X				0 - 30		X				X		X				C/P
3	38					X	.		X						X				C/P
4	15		X				0 - 15	X					X		X				C/P/G
5	18	X					0 - 18	X		X					X				B/C/Veg
6	25				X		15 - 25	X					X				X		P/G
7	40					X	0 - 15								X				P/C/G
7	40				X		15 - 30		X				X		X				P/G

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/78

Segment ST / E L 106 Subdivision B Date (mo / day / yr) April 6 1990

Time (24 hr) 1300 - 1830 Biologist JIM BAREY Length 650 1/6

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

(B) Overall % cover of biota (% of segment): Dense 30 Moderate 55 Low 15

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

Photographs: ST-6-4
Roll No. 18-28

Frames 18-28

BARNACLES

Dense			Moderate			Sparse			Rare			NOT PRESENT
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	

MYTILUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
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	

GASTROPODS

Dense			Moderate			Sparse			Rare			NOT PRESENT
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	

FUCUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
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	

Wildlife Observations/ General Comments:

Crow - 5 SEA OTTERS - 2
PILGRIM CORMORANT ~20 SEALS - 3
Common Loon - 3
PILLOW GUILLOTIN KILLER WHALE - 1

Ecological Considerations:

- 1) Eagles nest area on island should not be disturbed
- 2) Herring spawning area on eel grass beds should not be disturbed
- 3) Sandy beach should not be disturbed due to active recovery of clam / mussel bed.

I General Comments

A. MAJOR HABITAT TYPES

1) COBBLE BEACHES - EXPOSED

These beaches are found at several sites in subdivision A. All have moderate to high cover of *Fucus* in the mid to low zone. Oiled sites in the low to mid zone appear to be clean on the surface, but have some oil coating on the undersides with the sediments. This oil is eroding rapidly here in the intertidal, but is more persistent in the upper zone where flushing and biological activity is lower.

2) Sandy/pebble beaches. One beach of this type is present near a small stream (marked on map). A small mussel bed is developing on the pebble beach where it may have existed before the cleaning activities began. Eel grass is abundant in shallower waters just offshore, as well as along the shore at other locations with a sediment bottom. Hard bottom areas have kelp on the rocks.

3) Cobble boulder ~~the~~ shores have moderate cover of *Fucus* and *Mytilus* and similar characteristics to cobble beaches, but are less exposed and reworked by waves. Biota is generally more dense on these sites. Clam beds were present and are recovering.

4) High angle cliff faces often have a fairly dense band of mussel beds in the middle to high zone, especially on exposed shores. Protected shores have lower mussel cover. Evidence of oil is rare on these shores.

B) Sensitive Areas

1) The Sand flat beach should be as little disturbed as possible, due to the presence of a sparse, but recovering mussel bed and clam bed.

2) Areas where eel grass beds occur should not be heavily disturbed, especially during herring spawning periods.

April 7 1990

3/1

b) Sensitive Areas (cont)

- 3) A bald eagle's nest is on the small island & also should not be disturbed.

II MAJOR SPECIES

A BARNACLES - COMPOSED OF Balanus GLABRUS, WITH lesser cover of Semibalanus Caricinus (middle intertidal zone) and CHTHAMALUS dentatus and Balanus present.

B. Mollusks - see above

C. Gastropods - mainly Littorines, but some moderate densities of limpets.

D. Eucor. Species of dead adults present in the high zone of some sites, apparently due to cleaning operations

III Other Species

A species list is found below. Noteworthy comment can be made on a couple of species.

1) Clams - Several species of clams are present as empty shells on most beaches. Live individuals of some species are found, but these generally are spat or young juveniles. The source of the dead, empty shells is unknown, but do not appear related to predation mortality. Oil contamination and cleanup operations may be the cause.

2) Sea urchins - One juvenile individual of a green urchin was found

DATE 07 APR 80

CHECKLIST

N Arrow
 Approx. Scale
 Seg/Sub Endry
 OS Diet
 Width
 Length
 % Cover
 Substrate Character
 Est. HWT/LWL
 SSL
 Profile Location(s)
 Profile(s)
 FR Location(s)
 Photo Location(s)

LEGEND

1 ▲
Fit - No Subsurface Oil

2 ▲
Fit - Subsurface Oil

CT/C
Control Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Selected Distribution

Cold Vegetables

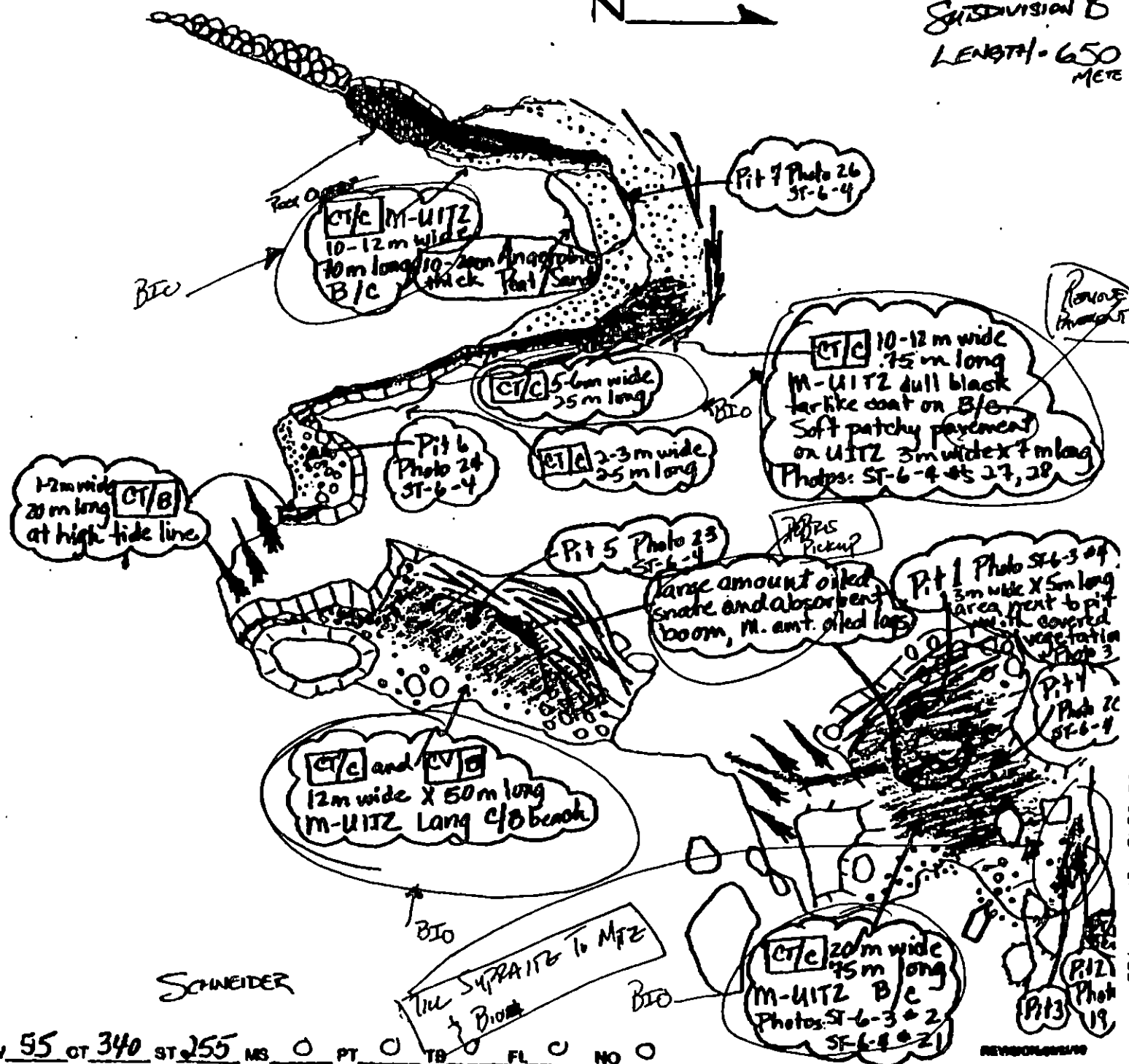
Photo location, direction,
and number

Oil Character Length (m): AP 7 PO 0 CV 55 OT 340 ST 255 MS 0 PT 0 TB 30 FL 0 NO 0

SKETCH MAP

N_____

SEGA ITEL-10
SUBDIVISION B
LENGTH - 650
METS

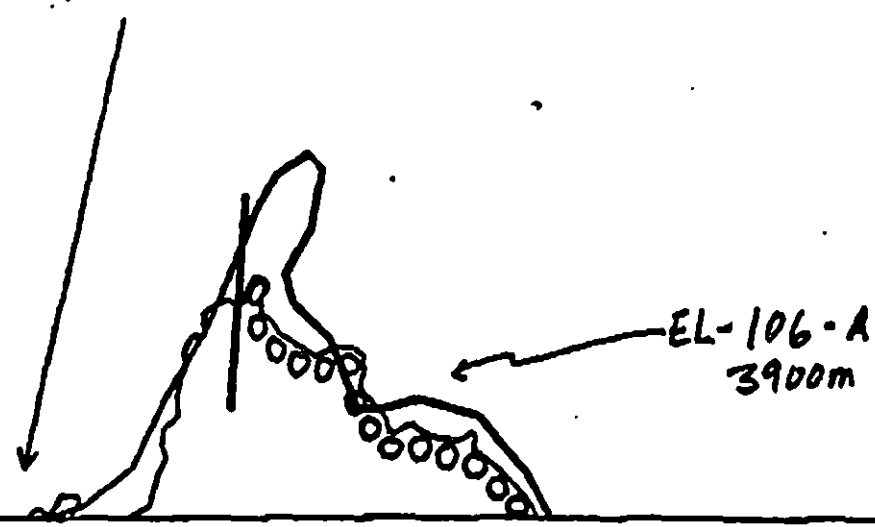
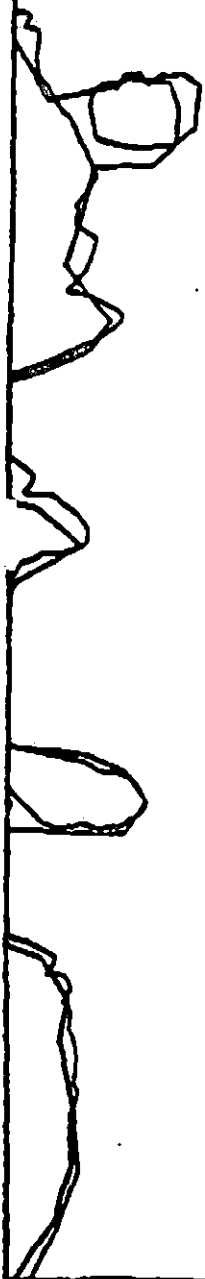


SCHEIDER

~~THE SUPRA 112 TO MFE~~

References

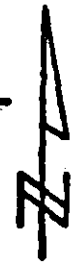
EL-105



↓ PWS
126A

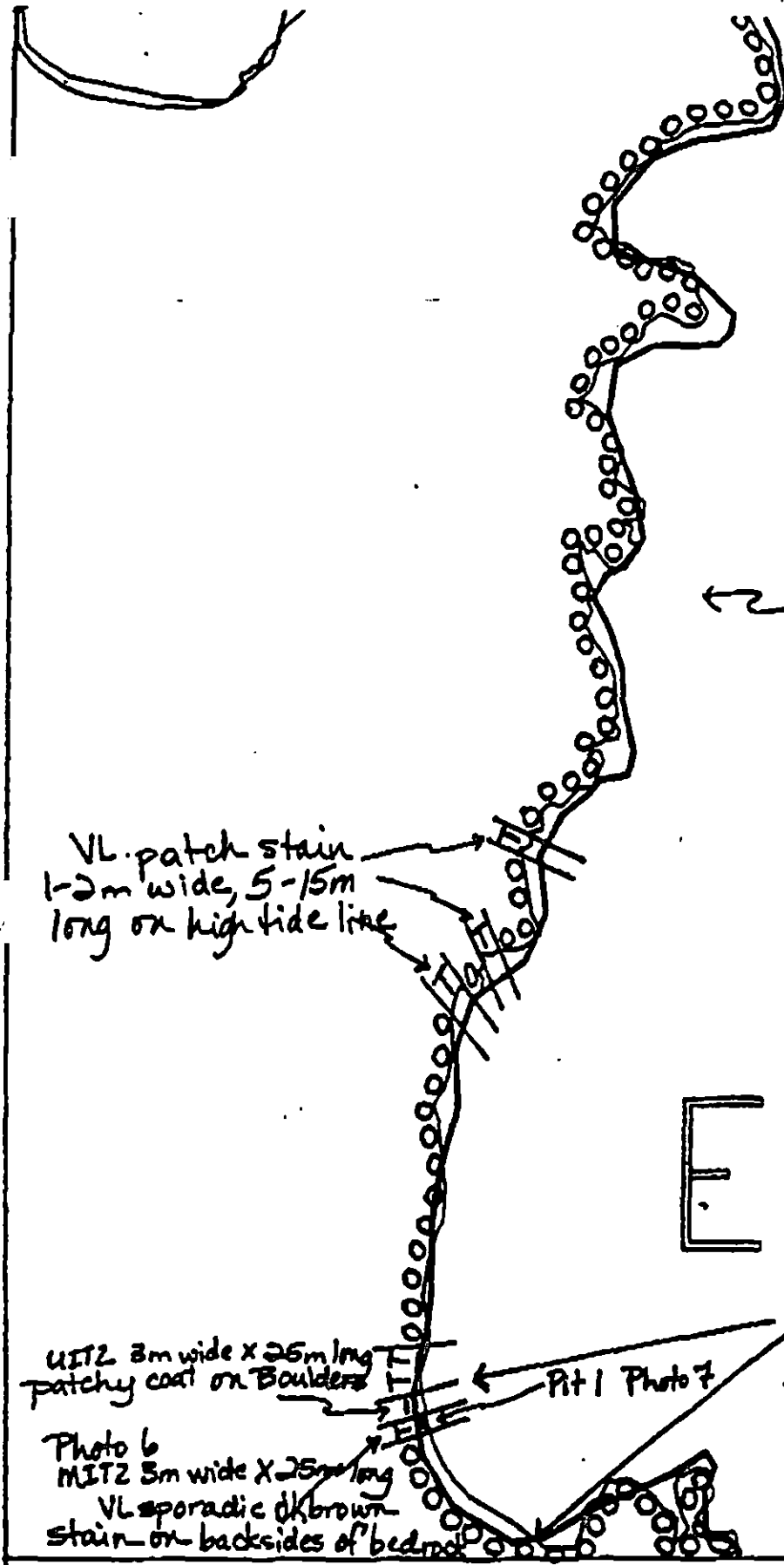
XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
0000 No Oil

EL-106
Exxon Segment Length: 5524m
ADEC Segment Length: 5078m



Map Key: PWS-126c
Name: C. Dillon
Date: 4/2/90
Date Entered:

PWS
126C
~~Page 2 of 4~~



← EL-106-A
3900 m

EL-10

UITZ 3m wide x 25m long
patchy coat on Boulders

Photo 6
MITZ 3m wide x 25m long
VL sporadic dk brown
stain on backsides of bedrock

Photo 5
Large LANG cobbles/pebble beach
All Surface sediments unoiled.
Pit 1 shows what appears to be a
localized subsurface oiled berm
area about 2m x 2m on UITZ.
Snow covered SITZ may be oiled
PWS
↓ 126A

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

EL-106
Exxon Segment Length: 5524m
ADEC Segment Length: 5078m



Map Key: PWS-126b.
Name: C. Dillon
Date: 4/2/90
Data Entered:

1 PW 5/12/60 7/6

Small
Handwritten
note

EL-106

Mo9 647: PW5-126c

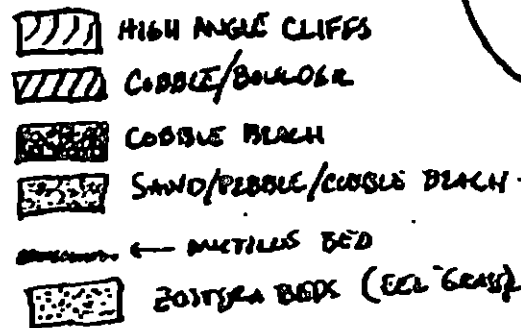
FILE SERIAL LONG: 3078

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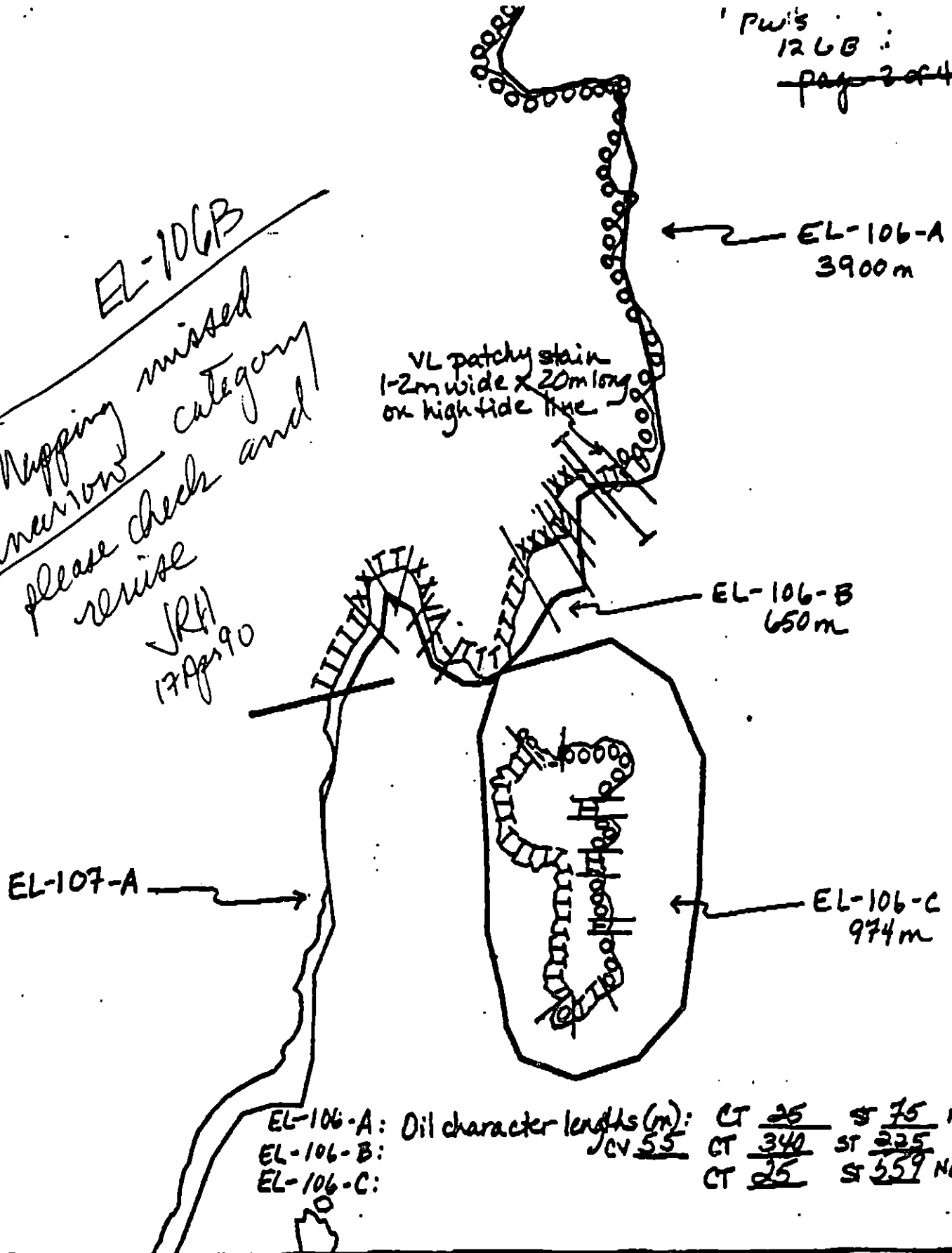
○

100

090318Z



EL-106B
Mapping missed
narrow category
please check and
revise
VRH
17 Apr 90



EL-106-A: Oil character lengths (m): CT 25 ST 75 NO 3
 EL-106-B: CV 55 CT 340 ST 225
 EL-106-C: CT 25 ST 559 NO 3

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

EL-106
 Exxon Segment Length: 5524m
 ADEC Segment Length: 5078m



Map Key: PWS-126c
 Name: C. DILLON
 Date: 11/2/90
 Drawn by: _____

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-106 SUBDIVISION B (2 of 3)

WORK WINDOW	
Manual Pickup Tarmat Removal	CLOSED
Bioremediation Manual Tilling	CLOSED

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

3N,O,P,Q	Harbor Seal & Sea Lion Pupping and Molting	NO TIME CONSTRAINT. Authorized per memorandum dated 5/14/90 from Kathryn Frost/ADF&G to Mark Kuwada/ADF&G.
5T	Bald Eagle Nests	USFWS bald eagle impact assessments conducted on 5/15/90 and 5/20/90 by Mike Lockhart indicate an active nest within 400m of the work area. Closed to manual pickup, tarmat removal, bioremediation and manual tilling.
5R	Seabird Colony	NO CONSTRAINT. Work area is over 800m from nearest seabird colony.
7II	Subsistence: Deer Harvesting	No constraint to manual pickup or tarmat removal. Closed to bioremediation and manual tilling after 8/15.

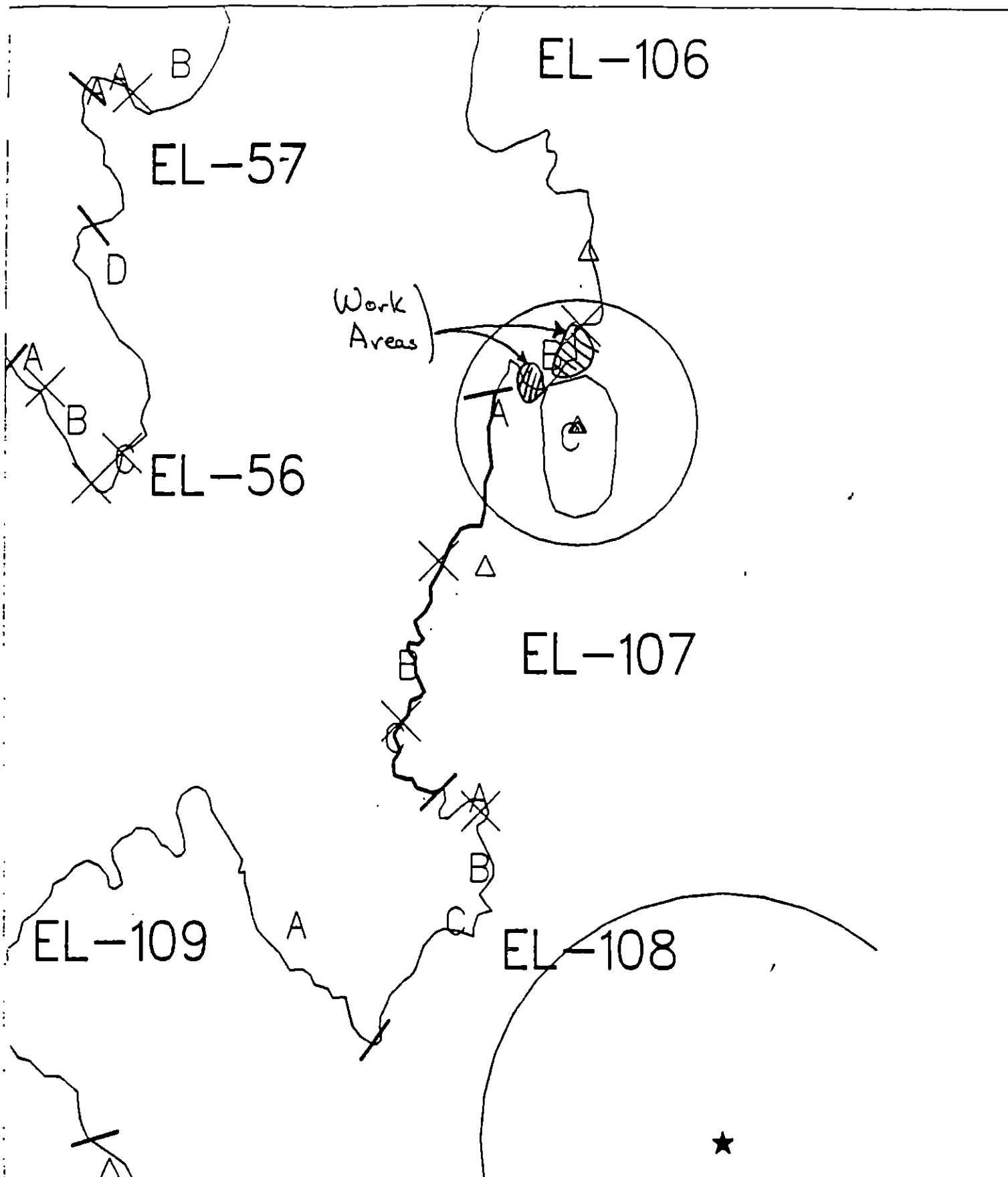
OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic and beach disturbance to essential minimum after 8/15. Do not apply bioremediation to specific areas where seals are observed to haulout. Do not chase or harass seals or sea lions, and do not approach pups under any circumstances. When working on or near haulouts, complete the job as quickly as possible with minimum personnel, equipment, noise and disturbance. Keep boats and personnel as far from actual haulouts as is practical to do the work specified. Minimize air traffic near haulouts, maintain elevation as is practical, and avoid repeated overflights of the same haulout areas. Avoid any unnecessary disturbance or damage to unrolled biota and substrate

FOSC

Date

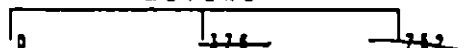
6.10.90



ECOLOGY MAP SEGMENT EL-106

SUBDIVISION B (2 of 3)

METERS



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

1 inch = 1253 feet

ALF FOLLOWUP - C JIMMIE D. HON

Project: AS/EL106 Subj: B Site: 1 Date: 8/8 1990

Conditions Observed: THERE ARE TWO(2) OILED STORMBERMS ON THIS SITE.
BERM ON SOUTHEAST SIDE OF DOCK CONTAINS "OR" DOWN 40 CM IN A HIGHLY DEEPS SUBSTRATE.
BERM ON SOUTHWEST SIDE IS OVERLAIN BY A MASSIVE LOG JAM OF LARGE DRIFT LOGS. EXTENT
AND DEGREE OF OILING WAS NOT DETERMINED. AN EXAMINEE DID REVEAL A MIXTURE OF
"OR" & ORGANIC DETRITUS.

Followup Recommendations: ① RELOCATE STORMBERM ON SOUTHEAST SIDE TO MITZ.
② OPEN UP LOG JAM ON SOUTHWEST BERM TO DETERMINE EXTENT + NATURE OF IMPACT.
③ REMOVE + BURN OILED LOGS
④ REMOVE OILED DEBRIS.
⑤ TREAT AEROR + SUBSURFACE SEDIMENTS BENEATH LOG JAM APPROPRIATE TO THE
NATURE OF THE REVEALED IMPACT

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

ADEC: Wesley Ghermley Wesley Ghermley
 (Signature) (Signature)

Comments: I highly agree with relocation of storm berms. In addition
I recommend Hot Hb Flooding thru entire area. This is the only thing
that will migrate oil. There is a tremendous amount of oil present.
Log Berm needs to be burned and moved to expose oiled sediment.
 Extra: Ray Sato Ray Sato
 (Signature) (Signature)

Comments: THIS SITE NEEDS TAG REVIEW! I don't agree with
the recommendations stated above.

USCG: PS/Lee Bernalon Lee Bernalon
 NOAA: Art Weiner Art Weiner
 Comments: AGREE W RECOMMENDATIONS

Land Rep: Loku Ebel Loku Ebel
 (Signature) (Signature)

Comments: I concur w recommendation of relocation of storm berms
and to remove all oiled logs and oiled debris

ASAP TAG REVIEW SHEET

Segment: FL 106 Subd: B 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

SKETCH - shows Heavy SOR
OG SHEET - " Heavy SOR

Rec. SHEET asks for STORM BERM
Relocation and remove logs.
and TAG VISIT

If work is done on this segment
i.e. storm berm removal/relocation
.... it will require machinery to
move logs. Rec. TAG VISIT

Priority Site For Reassessment In 1991

YES NO
X CG

YES NO
X ADEC

YES NO
X EXXON

YES NO
X LAND MGR

TAG 15 AUG 90

BIO

already scheduled
reassess 91

FIELD SHORELINE COMMENT SHEET

SEGMENT AS/ 106 SUBDIVISION: B SITE: 1 DATE 8-8-90

SCG/NOAA PSI Leo Bersalona Leo Bersalona

NAME ART WEINER SIGNATURE Art Weiner

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

TO EVALUATE TREATMENT ON THE TWO OILED STORMBERYS.

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

THIS site is severely impacted with Exxon Valdez oil. Due to the extent of oiling, I foresee additional treatment to site in 1991.

- Mechanical Treatment a must -

LAND MANAGER

NAME John Edel SIGNATURE John Edel

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

To evaluate effectiveness of '90 treatment. This site was recommended for a storm berm relocation and oiling removal. High priority '90 treatment. Multiple resources (land & water) affected by impact at this site. 3M, O, P, Q; 5, T, R; 6, Y, Z. Concern w/ ADEC

EXXON

NAME Ray Sotelo SIGNATURE Ray Sotelo

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

This site should be reassessed in '91 to decide what work, if any should be done - more than good scenario.

ASAP FOLLOWUP RECOMMENDATIONS

Event: AS/EL106 Subd.: B Site: 2 Date: 8/8 1994

Conditions Observed: OILED AREA BENEATH DRIFT LOG JAM IN SUTZ. A 2x4 METER AREA WAS EXPOSED TO PEWAL COVERS ON BOULDER ARMOR AND A SUBSURFACE PENETRATION OF "OR" (M) TO 5 CM. THE EXTENT OF OILING BENEATH THE REMAINDER OF THE LOG JAM WAS NOT DETERMINED. ASPHALT PAVEMENT AND CV/S WAS FOUND IN THE UTEZ + MITEZ.

Followup Recommendations: DETERMINE EXTENT OF OILING IN SUTZ. REMOVE + DISPOSE OF OILED LOGS + DEBRIS. APPLY JUIPOL TO ALL ACCESSIBLE SURFACES OF BOULDER + COBBLE ARMOR. REMOVE ALL TERNAT. REAPPLY CUSTOM-BLENDED TO AREAS OF SUBSURFACE OIL AND BETWEEN INTERSTICES OF OILED ARMOR

Completed by Pickup ☐ YES ☒ NO

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

ADEC Wesley Ghormley Wesley Ghormley

Comments: This beach is severely oiled. A extensive clean up operation should be conducted due to environmental sensitive areas.

Exon REY SUTZ REY SUTZ

Comments: My recommendation on this site is to apply customblend and remove in '91. If any work should be done in '90, then I recommend TAC review before work is initiated.

USCG PSI Leo Bersalona Leo Bersalona
NOAA ACT WEINER Act Weiner

Comments: AGREE TO RECOMMENDATIONS

and Rep. John Ebel John Ebel

Comments: I concur w/ recommendation & priority for treatment. ~~But that recommendation of treatment is not to be done until the beach is cleaned up.~~

ASAP TAG REVIEW SHEET

Segment: EL106 Subd: B Site: 2

Date 14 AUG 90
PRE-Review

Priority For Addressing In 1990

 HIGH

 MEDIUM

 LOW

X NTR

Treatment
Recommended:

*As per
Recommendation
Sheet*

NTR

OG sheet - NTR

Rec. sheet asks for storm
BREM Relocation and
log removals like SITE 1.

TAG VISIT

Rec TAG VISIT

Priority Site For Reassessment In 1991

YES NO
 CG

YES NO
 ADEC

YES NO
 EXXON

YES NO
 LAND MGR

TAG 15 AUG 90

BIO

already sched
reassess 91

FIELD SHORELINE COMMENT SHEET

SEGMENT AS/ EL106 SUBDIVISION: B SITE: 2 DATE 8-8-90

USCG/NOAA PSI Leo Bersalona Leo Bersalona

NAME Art Weiner SIGNATURE Art Weiner

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

EVALUATE EFFECTIVENESS of INITOL + CUSTOMBLEND

TO INSPECT AREA UNDER + ADJACENT TO LOG TRAIL IN SITE.

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley 

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

THIS site is severely impacted with Exxon Valdez oil.

Due to the extent of oiling I foresee additional treatment to site in 1991

LAND MANAGER

NAME John Ebel SIGNATURE John Ebel

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Shoreline and surface oil present hazards to marine intertidal life forms and all animals using area.

The effects of storm berm relocation is high priority for reassessment.

EXXON

NAME Ray Satch SIGNATURE Ray Satch

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

We should reassess this site to determine the extent of oiling after customblend and winter storms have worked the area.

ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/ EL-106 Subd.: B Site: 3 Date: 8-8 1990

Conditions Observed: Tar mats are observed in between boulders on N.E. side of cove. Sub surface oil present in center of cove to 20-40 N.W. side of cove has a huge area (50x10m) of HEAVY OR sedim. The OG Survey (SSAT) did not do this area justice it is much worse.

Followup Recommendations: - Mechanical excavation of areas with sub surface oil. Expose saturated sediments and remove OP and OR/H from beach. Spread custom blend thru wet area in complete possible flush system to migrate oil to water line. A contain bo. will be needed to contain oil in cove.

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

ADEC Wesley Gherailey Wesley Gherailey
(name) (signature)

Comments: This area is a hazard to the environment due to the amount of oil present. Seals molt and haul out in area and are in a considerable amount of danger due to the situation of this beach. This area is also a archeological area.
Extra REV SITE REV SITE
(name) (signature)

Comments: I don't agree with the recommendations as stated above. This job should be completed and it should be done in '91 instead.

USCO PSI LEO BERSALONA
(name) (signature)

NORA ART WEINER
Comments: (name)

MANUALLY RAKE CUSTOMBLEND INTO IMPACTED AREA.

Land Rep. JOHN EBEL
(name) (signature)

Comments: I CONCUR W/ RECOMMENDATION BUT ADVISE TREATMENT ON ASPHALT PAVEMENT. STICKY COATS IN AREA WILL CAUSE SEALS & SEALIONS PROBLEMS. ACTION MUST BE TAKEN TO PREVENT FURTHER DAMAGE TO MARINE MAMMALS.

ASAP TAG REVIEW SHEET

Segment: EL106 Subd: B Site: 3 Date
PRE-Review 19 AUG 90

Priority For Addressing In 1990

 HIGH X MEDIUM LOW NTR

Treatment
Recommended:

Manual Pickup AP and HSDR
& BIO

LOW - MEDIUM ENERGY

Priority Site For Reassessment In 1991

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

TAG 15 AUG 90

BIO (already sel)
Reassess
(AP patch then +
crust)

FIELD SHORELINE COMMENT SHEET

SEGMENT AS/EL 106B SUBDIVISION: B SITE: 3 DATE 8-8-90

USCG / NOOA PSI Leo Bersalona Les Bersalona

NAME Art Weiner SIGNATURE Art Weiner

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

① SIGNIFICANT AMOUNT OF OIL REMAINING.

② EVALUATE CUSTOMERED EFFECTIVENESS.

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

- Mechanical Treatment is a must at this location -
I foresee additional treatment (follow up) a very
likely suspect in 1991.

LAND MANAGER

NAME John Ebel SIGNATURE John Ebel

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Presently this site will damage wildlife, especially mammals, which
perambulate through the impact zone.
To evaluate effects of 90 treatment.

EXXON

NAME Ray Sitts SIGNATURE Ray Sitts

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

This site should be reassessed to determine the effectiveness of
customered and impact of winter storms to the area.

ASAP SHORELINE OILING SUMMARY

PAGE 1 OF 2

TEAM NO. A-1-2 EXXON 2 SEGMENT AS. 2/10
 OG CHERRY USCG WATER/BERCLONH SUBDIVISION B
 ADEC GHOLI MLEY LAND REP JOHN EKE TOTAL NO. SITES 3
 DATE AUG 8 1990 TIME 12:20 to 13:50 TIDE LEVEL 5.5 to 9.5
 TOTAL EST LENGTH OF SHORELINE SURVEYED: 2.75 m
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WEATHER: ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 OIL CATEGORY LENGTH: W 229 m M 16 m N 30 m VL — m NO — m US 274 m

SURFACE OIL

SITE 1

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT								
S.O.R.								
POOLED								
COVER								
COAT								
STAIN								
MOUSSE								
PATTIES/T.B.								
FILM								
NO OIL								
EST. SITE LENGTH					65			

SITE 2

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT								
S.O.R.								
POOLED								
COVER								
COAT								
STAIN								
MOUSSE								
PATTIES/T.B.								
FILM								
NO OIL								
EST. SITE LENGTH					45			

SITE 3

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT								
S.O.R.								
POOLED								
COVER								
COAT								
STAIN								
MOUSSE								
PATTIES/T.B.								
FILM								
NO OIL								
EST. SITE LENGTH					165			

UBSURFACE OIL NOT OBSERVED

NOT OBSERVED

NOT OBSERVED

SITE NO.	PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER				CLEAN BELOW (Y/N)	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS
			OP	OR	OF	NO		SU	UI	MI	LI	
1	1	45		X			Y		X			CP-CPG
1	2	10		X			N	X				B-B
2	3	15		X			Y	X				C-C
3	4	50		X			N		X			GSP-GSP
3	5	35			X		Y		X			GP-PG

Photographs:

Roll No. NONE

Frames —

REVIEWED

8/13/90 5/10

COMMENTS

This subdivision has retained a large amount of oil relative to other beaches in Prince William Sound. This survey was too brief and the tide was too high.

OILING IS VERY SIMILAR TO WITH 1-1000
 ON THIS MAP THE PAVEMENT IS THINNER DUE
 SKETCH MAP

SEC. ENTEL-10
 Subdivision B
 LENGTH - 650
 MEN

OG C.I. ON
 SEGMENT STIEL-106 TO MANUAL
 SUBDIVISION B REMOVAL.

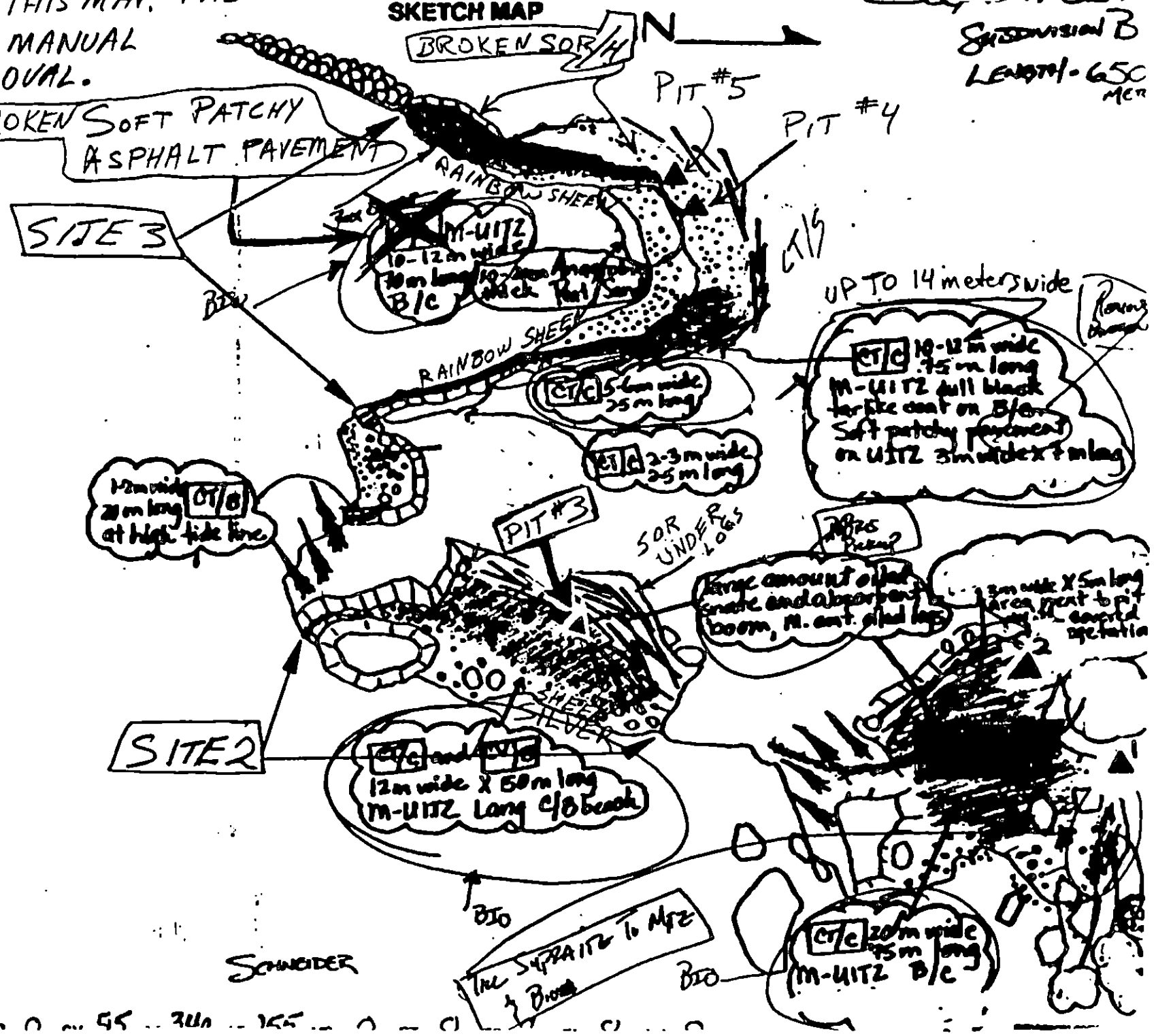
DATE 07 APR 90
 CHECKLIST

ASAP #2
 AUG 8 1990
 MAP FROM SSAT
 CHANEY

Photo Location(s)

LEGEND

- 1 Δ
- PH - No Subsurface Oil
- 2 Δ
- PH - Subsurface Oil
- CT/C
- Contaminated Distribution
- CT/D
- Broken Distribution
- CT/P
- Patchy Distribution
- CT/S
- Splashed Distribution
- Old Vegetation
- Photo location, direction, and number



SEGMENT S... 2 106 STICKY OIL SMELL
AROUND LOGS. ITCH MAP

SUBDIVISION B OILED NEEDLES ETC.

DATE Aug 8 90 UNDER LOGS

SITE 1

CHECKLIST OILING EXTENDS

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/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 Δ
 Pit - No Subsurface Oil

2 Δ
 Pit - Subsurface Oil

$\square$ CT/C
 Continuous Distribution

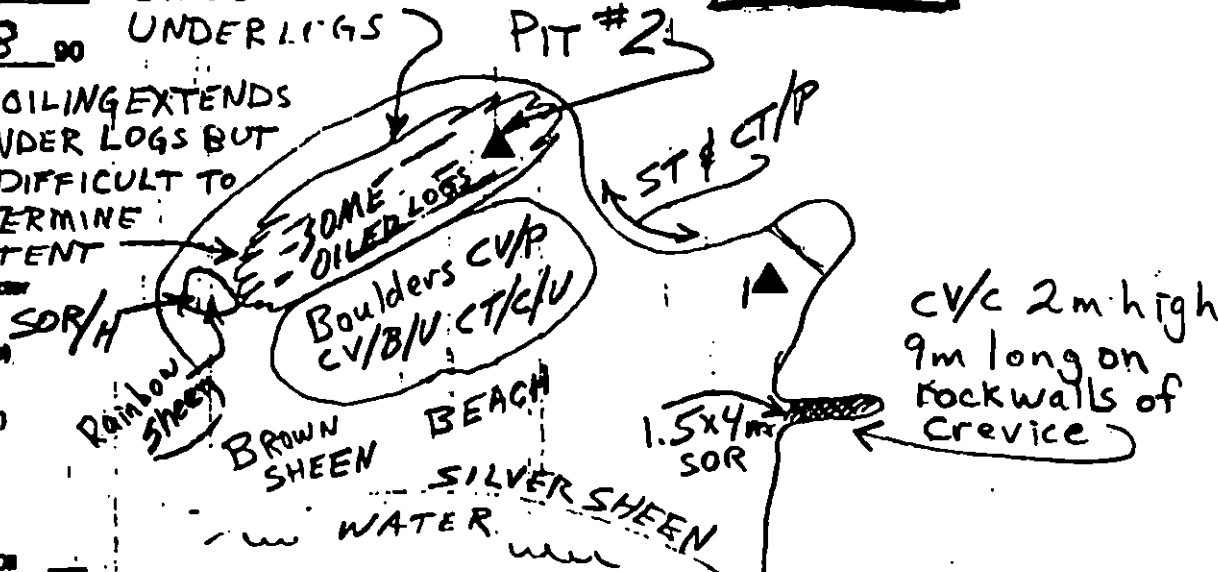
$\square$ CT/B
 Broken Distribution

$\square$ CT/P
 Patchy Distribution

$\square$ CT/S
 Splashed Distribution

$\lll$
 Oiled Vegetation

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



SITE 2 OIL SMELL



SITE 3

THIS SURVEY WAS CONDUCTED AT A HIGH STAND OF TIDE. THE OIL EXTEND DOWN TO THE TIDE WATER. BOULDERS COMPRIMISE ~45% OF SURFACE. CT & CV/B ON BOULDERS. BETWEEN BOULDERS SOR & AP - BOTH GRADE INTO ONE ANOTHER. AREA HAS DEFINITELY SEEN MAJOR EFFORT HOWEVER A THIN PATCHY PAVEMENT HAS FORMED ALONG WITH SOR SEDIMENTS BETWEEN

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

REVISIONS



B

S3

S3 S4

SITE 1

SITE 3

SITE 2

X Wide
/// Medium
--- Narrow
TTT Very Light

EL-106 B

ADEC Subsegment Length: 549m
METERS

0 16 33 47 138

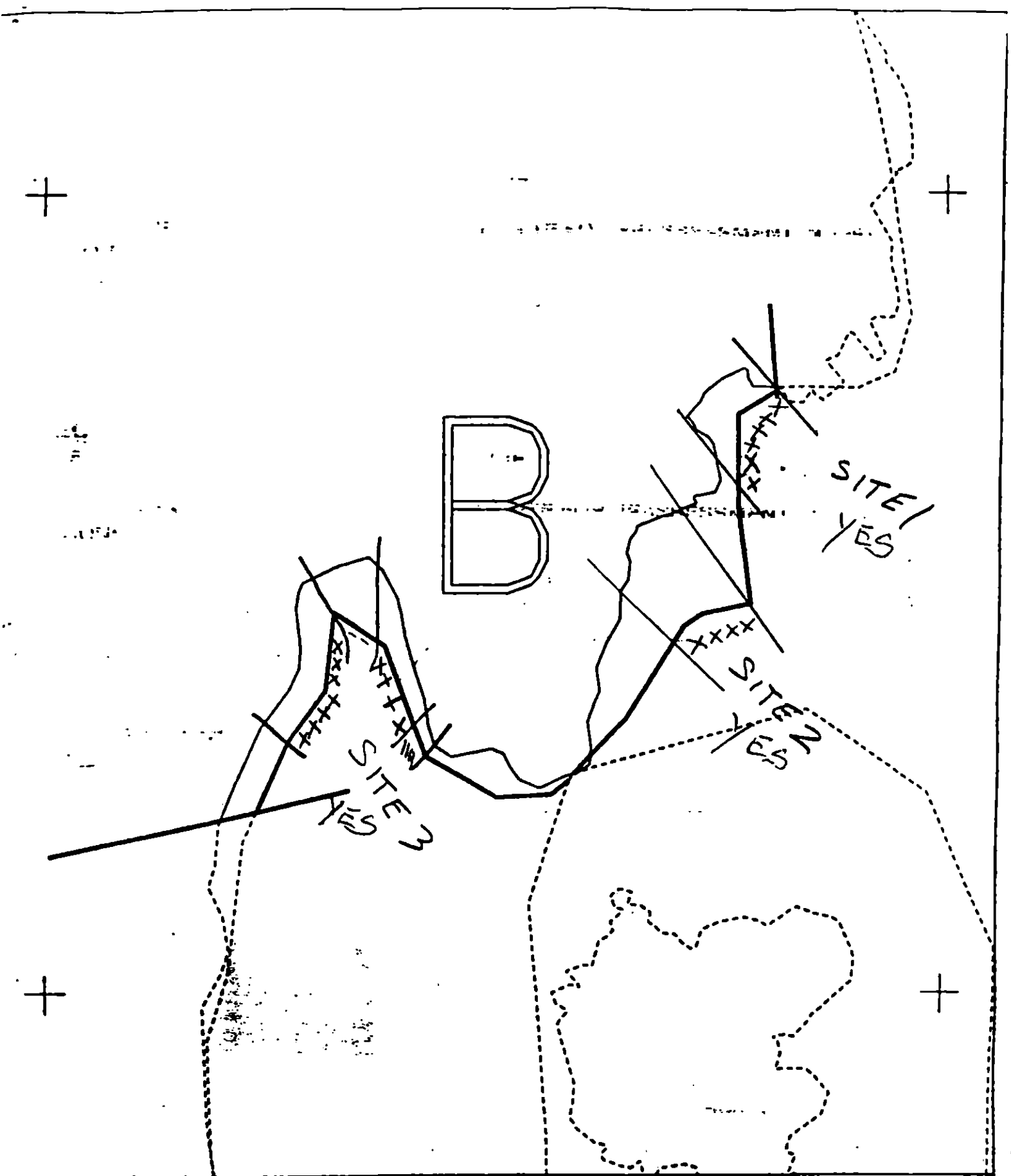
Subdivision Field Map

Map Key: KNIEL-106B

Name: CHANEY

Date: AUG 8 1990





(X	Wide	EL-106 B ADEC Subsegment Length: 549m METERS 0 16 33 67 135 IN State Plane Zone 4 1:25000	 Subdivision Field Map Map Key: KNIEL-106B Name: <u>CHANEY</u> Date: <u>AUG 8 1990</u>
////	Medium		
----	Narrow		
TTTT	Very Light		

SHORELINE EVALUATION

SEGMENT ST/ EL-106 SUBDIVISION C (3 OF 3) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
30,3Q Harbor seal and sea lion molting (8/15 to 9/15)
5T All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 228 m: V.Light 1121 m: No Oil 956 m
Subsurface Oil Observed: Yes X No Maximum Depth 40 cm

RECOMMENDATIONS:

☐ No Treatment Recommended	☐ Snare/Absorbent Booms
☒ 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: Recommended treatment includes 1) bioremediation of surface and subsurface oil in areas shown on attached sketch map. Work should be conducted between 7/1 and 8/15 based on pinned constraints, after approval by ADF&G and USFWS regarding eagle nest.

"IF FEASIBLE" RAKE PRIOR TO BIOREMEDIATION IN AREA OF TEST PIT 7

TAG COMMENTS: _____

TAG APPROVAL DATE: 7/24/90

ADEC ART WEINER Art Weiner

EXXON ANDY TAN Real

NOAA James Talbott - CTM

FOSC: DATE: 5-3-90

DATE: 5-3-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
1D Esther Hatchery release (4/15 to 6/1)
1E Main Bay Hatchery release (4/20 to 5/10)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1);
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 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 (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
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-106-C SUBDIVISION: C DATE 4/8/90

USCG

NAME DAVID A. SCHNEIDER SIGNATURE David A. Schneider

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

PGS/USCG

TILLING AND BIOREMEDIATION METHODS SHOULD BE UTILIZED ON THE TWO SMALL COBBLE/PEBBLE BEACHES LOCATED ON THE NORTHERN SHORE OF THIS ISLAND. CONCENTRATION OF CLEAN-UP RESOURCES IN SUBDIVISION B WILL ALLOW FOR EASY ACCESS/LOGISTICS TO THESE TWO BEACHES IN C. SITE OF ISLAND NEEDS TO BE RE-EVALUATED AFTER SNOW MELT.

PGS

ADEC

NAME Peter Montesano SIGNATURE Peter J. Montesano

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS refer to map for ^NWSE directions:

NW Beach: WITZ with a 70% staining, some coat on surface, but surface is too clean to bioremediate. And fertilizer would not reach subsurface oiling. The LITZ is extended and healthy. At 30cm in Pit #5, there was a LBR seen on interstitial water.

NE Beach: The Supratidal is snow covered and should be examined to determine extent of oiling. The low energy beach also with an extended LITZ. At Pit #7, WITZ, there is considerable oil of significance. Any treatment would have to be preceded by tilling. After tilling a hot water (not steam) wash is recommended, possibly to be substituted with bio. This be. is most easily accessed by LCV's at mid to high tides, low tide access is distant and not easy.

LAND MANAGER

NAME Janetta Pritchard SIGNATURE Janetta Pritchard

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

I concur with ADEC recommendations. The NE beach has an absorbent berm which needs to be picked up. If additional debris is found after the snow melts and a reevaluation of the surf.

OG C. DILLON USCG D. SCHNEIDER SEGMENT ST/ EL-106
 BIO T. BARRY LAND REP J. PLITCHARD (DAR) SUBDIVISION C (3043)
 EXXON A. SNOOK ADEC P. MONTESANO TIME 17:15 to 18:15
 TEAM NO.: 6 TIDE LEVEL: +1 to +1 DATE 06/10/90
 EST. SUBDIVISION LENGTH: 924 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock SUBDIVISIONAL ISLAND
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 90 % B 5 % C 3 % P 2 % G 0 % S 0 % M 0 % V 0
 SLOPE: Long 5 % Hang 25 % Vert 20 % WAVE EXPOSURE: ☒ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 65 m VL 519 m NO 390 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	R	S	E	N	1	2	3	4	SU	U	M	U
ASPHALT PAVEMENT												
POOLED												
COVER												
COAT				X			X		X			
STAIN	X	X	X				X		X			
MOUSSE												
PATTIES												
TARBALLS												
FILM												
NO OIL	Sump on N.E. Beach Supra ITD								S		X	X

PAVEMENT: H F S 0 sq. m by 0

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? ☒ BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE 0

#BAGS 0

Photographs:

Roll No. ST-6-4

Frames 32, 33

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (COLOR)	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UD	UC	1	2	3	4	SU	U	M	U		
1	25					X	.		X						X				C/P
2	20					X	.		X						X				C/P
3	17					X	.		X							X			C/P
4	10				X		6-10		X			X				X			C/P/G
5	35	X					0-35	X				X			X				C/P/G
6	30				X		0-30	X				X		X					C/vegetation
7	40					X	0-7								X				C/P/G
7	40	X					7-35	X				X			X				C/P/G
7	40					X	35-40		X						X		X		Peat

OG 6.1 ON

SEGMENT ST/ EL-106

SUBDIVISION C

DATE 06 Apr 90

CHECKLIST

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

LEGEND

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

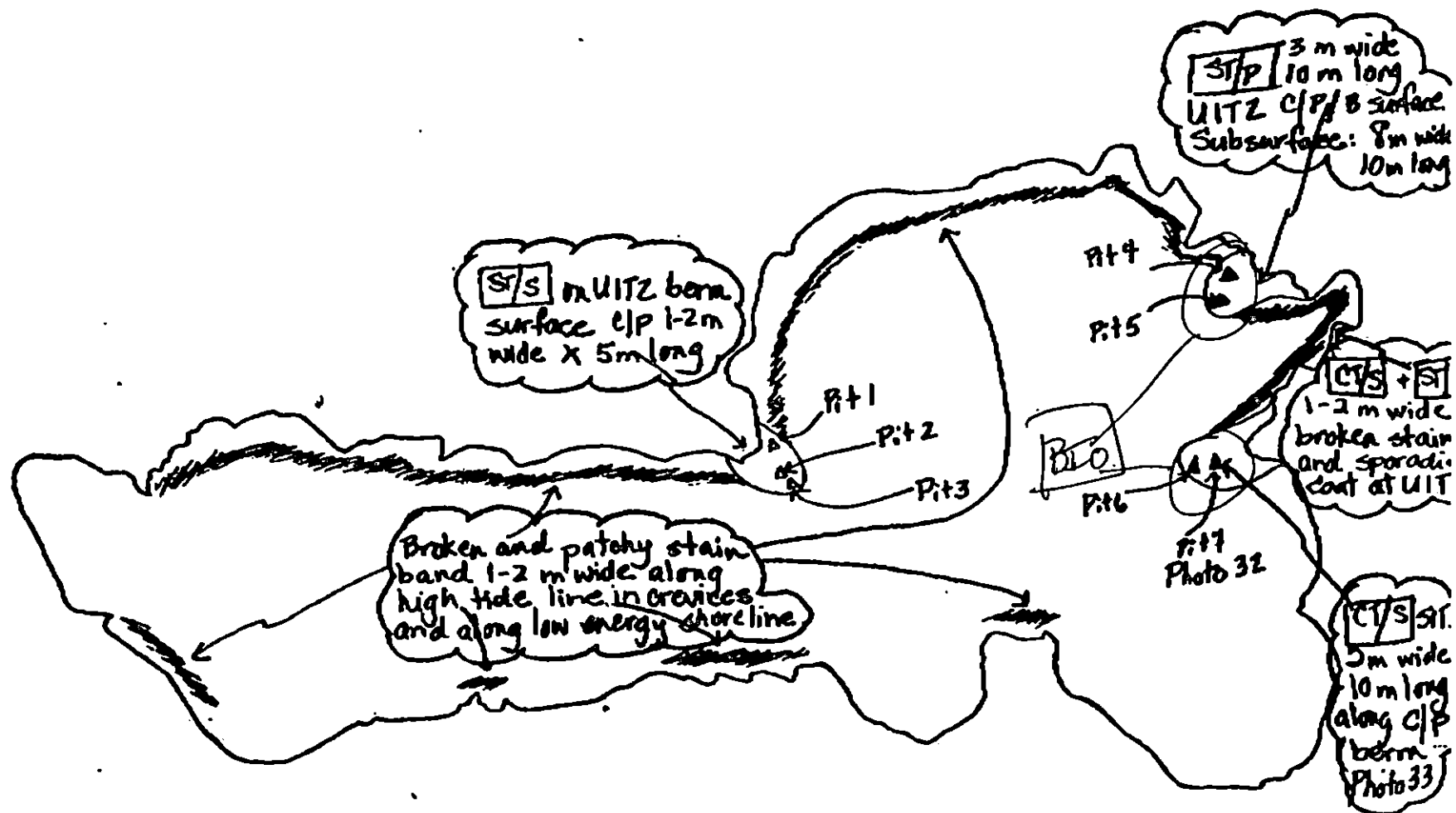
SKETCH MAP

SEGMENT EL-106

SUBDIVISION C

LENGTH - 974m

N →



Oil Character Length (m): AP 0 PO 0 CV 0 CT 25 ST 559 MS 0 PT 0 TB 0 FL 0 NO 390

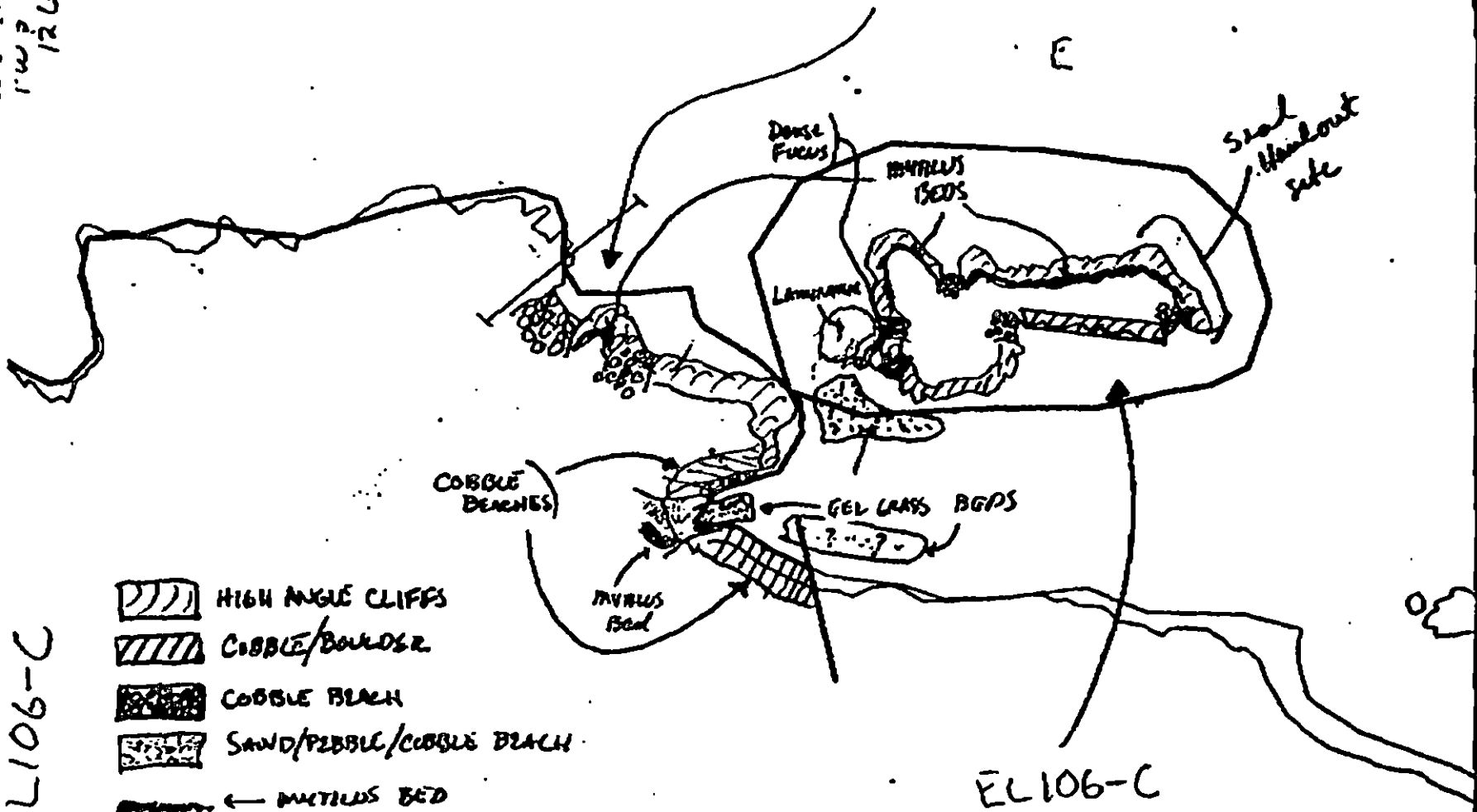
REVISION: 02/04/00

EL106-C

1260

5/5

-  HIGH ANGLE CLIFFS
-  COBBLE/BOULDER
-  COBBLE BEACH
-  SAND/PEBBLE/COBBLE BEACH
-  MUREUS BED
-  ZOYTERA BEDS (EEL GRASS)



EL106-B - "

E

EL106-C
ISLAND COAST.

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

EL-106

ADEC Segment Length: 5078m



Map Key: PWS-1260
Name: _____
Date: _____
Data Entered: _____

SHORELINE ECOLOGICAL SUMMARY

REVISION 08/22/88

Segment ST/ EL-106 Subdivision C Date (mo/day/yr) April 6 1990Time (24 hr) 1300-1445 Biologist 1445 - 1830 Length 974m 1/5A) Substrate type and % of segments:
(1) Bedrock 90 (2) Boulder 5 (3) Cobble 3 (4) Pebble 2 (5) Sand (6) Silt (B) Overall % cover of biota (% of segment): Dense 40 Moderate 50 Low 10

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

Photographs:
Roll No. ST-6-4Frames 28-36

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:

Crow - 5 Pigeon Guillemot - 2
 Pelagic Cormorant ~10 Sea Otter - 2
 Common Loon? - 1 Seals - 2

Ecological Considerations: Killer Whale - 1

- 1) Eagle nest on island should not be disturbed
- 2) Herring spawning on eel grass bed should not be disturbed
- 3) Seal haul out area at South end of island should not be disturbed.

SN

General Comments

I Habitat types -

Similar to 106-B - except there is not sandy beach on this subdivision. See comments for EL106-B

Most of the subdivision is high angle cliffs with well defined intertidal zonation: mussel band is clearly visible below the barnacle zone, with a thick *Fucus* and other macroalgae zone below.

II Major Species - See 106-B

" " "

III

III SPECIES LIST

A. MARINE PLANTS

- 1) DIATOMS / BLUE GREEN ALGAE
- 2) GREEN ALGAE - CHLOROPHYTA
 - SPONGOMORPHA / ACROSIPHONIA M123
 - ULVA S123
 - CLADOPHORA S12
 - ENTEROMORPHA S123

3) RED ALGAE

- PORPHYRA M12
- PETNOCOLIS S12
- RHODOMELA LARIX M12
- RHODYMENIA PALMATA D12
- BOSSIELLA SPP. S12
- CALLIARTHRA S12
- CORALLINA S12
- EUDOCLODIA S12
- HALOSACCION M123
- IRIDAEA S12
- CRYPTOSIPHONIA M12
- MEMBRANOPTERA M12
- MASTOCARPUS S12
- MICROCLADIA / PTEROCLADIA M123
- LITHOTHAMNION S12

4) BROWN ALGAE - PHAEOPHYTA

- FUCUS DISTICHUS M123
- LAMINARIA D12
- HILDEBRANDIA M12
- RALESIA M12
- COSTARIA M12
- ALARIA M123
- SYTOSIPHON S12

5) HIGHER PLANTS - EEL GRASS - R3

B. ANIMALS

1) BARNACLES

- Semibalanus cariosus M123
- Balanus glandula M123
- Cythamorus omali M123

2) POGONIDAE - HAMLET CARDS M123

- Hemigrapsus oregonensis S23
- HAPLOGASTER R23
- PUGETTIA spp. R23

3) Amphipods -

Orchestia spp. M23

4) Mysids - Mysidacea. R. Wala

5) BEACH HOPPERS - ISOPODA S23

6) MUSSELS - Mytilus edulis D12

Modiolus spp. R12

7) Littorina A'scutulata M-D123

L. sitkana M-D123

Nucella lamellosa S123

N. emarginata S23

Scaresia dira M23

Tachygnathus S23

8) LIMPETS

Tectaria scutum M23

T. fenestrata S12

T. parva

Lottia digitalis S12

L. parva S12

Rimosa mitra R12

Siphonaria d. thersites M123

9) CHITONS

Tonicella lineata R12

Mopalia spp. R12

Katharina tunicata R12

10) Sea Stars

Pycnopodia helianthoides M23

Dermasterias R12

Leptasterias M12

Orthasterias R123

Pisaster ochraceus M12

11) Scallops / Clams

Pododesmus S12

12) Anemones

Anthopleura elegantissima S12

A. adenocoma R123

A. xanthogramma R123

Tealici crassicornis R123

Epiactis R123

13) WORMS

SIPUNCULIOS - PHASCULOSOMA spp.

POLYCHAETES -

NEREIDAE *9/123

NUTHYDAS 8/123

OTHES

SERPULIDAE R1234

SERPULA

CRUCIGERA

SPIRORBIDAE M-D 1234

SPIRORBIS spp.

* Juveniles present

D Dense

M Moderate

S Sparse

R RARE

1 On Bedrock

2 Boulder

3 Corals

4 Pebble/Sand

14) FISH -

COHIDAE - 3 spp. M ¹² 234

PHOLIDAE - 1-2 spp. - M 234

15) Hydrocorals - Stylantheca porphyra

16) OTHERS

Natica Clausa moonshell - R 234

Amphissa columbiana R234

Lanellideris fusca ? M1234

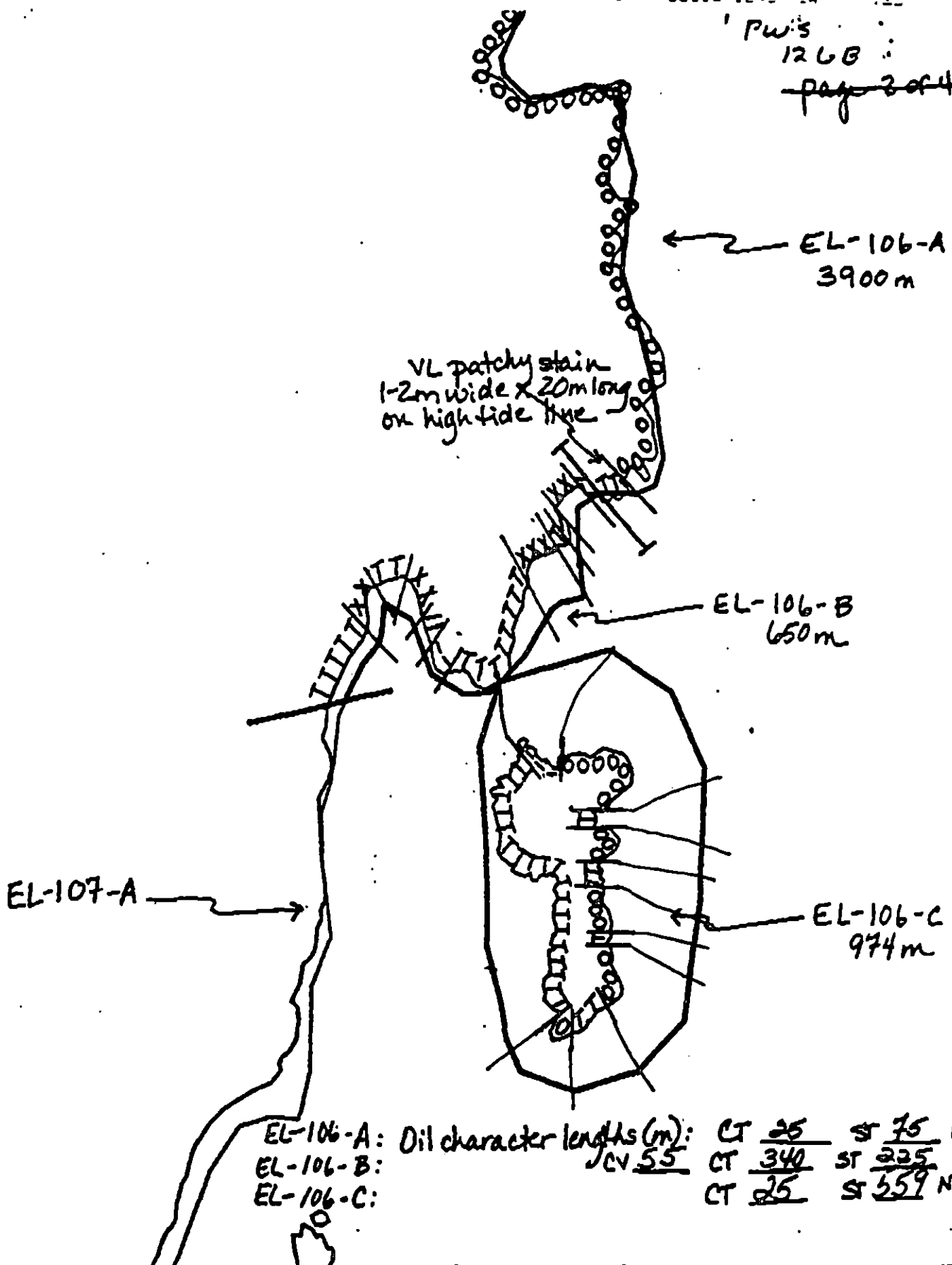
Gnorimosphaeroma oregonensis S1234

Other isopods - 2 spp

Lebbeus spp. R 234

Schizoporella spp. ? M1234

Strongylocentrotus droebachiensis R234



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

EL-106

EXON SEGMENT LENGTH: 5524m
 ADEC Segment Length: 5078m



Map Key: PWS-126a
 Name: C. DILAN
 Date: 4/2/90
 Date Entered:

PWS
126C
~~Page 3 of 4~~

← EL-106-A
3900 m

VL patch stain
1-2m wide, 5-15m
long on high tide line

EL-1

UITZ 3m wide X 25m long
patchy coat on Boulders

Photo 6
MITZ 3m wide X 25m long
VL sporadic dk brown
stain on backsides of bedrock

Photo 5
Large LANG Cobble/pebble beach
All Surface sediments unoiled.

Pit 1 shows what appears to be a
localized subsurface oiled berm
area about 2m X 2m on UITZ.
Snow covered SITZ may be oiled.

↓ PWS
126A

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EL-106

Exxon Segment Length: 6524m
ADEC Segment Length: 5078m



Map Key: PWS-126B

Name: C. Dixon

Date: 4/2/90

Date Entered:

EL-105

EL-106-A
3900m

↓ PWS
126A

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

EL-106

Exxon Segment Length: 5524m
ADEC Segment Length: 5078m

0 100 200 300
METERS



Map Key: PWS-126c

Name: C. Dillon

Date: 4/2/90

Date Entered: _____

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-106 SUBDIVISION C (3 of 3)

WORK WINDOW	
Bioremediation Manual Raking	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

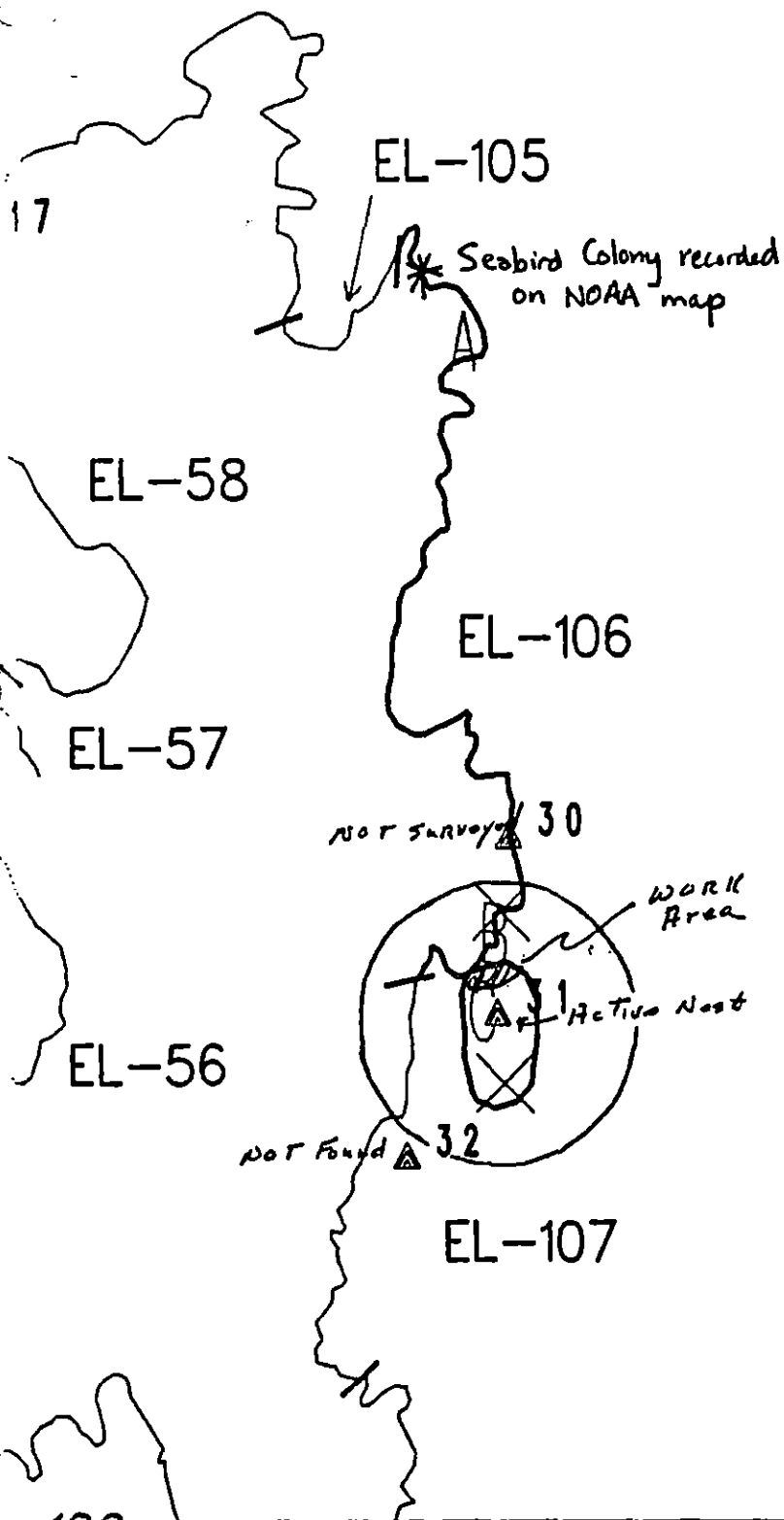
3N,O,P,Q	Harbor Seal & Sea Lion Pupping and Molting	NO TIME CONSTRAINT. Authorized per memorandum dated 5/14/90 from Kathryn Frost/ADF&G to Mark Kuwada/ADF&G
7II	Subsistence: Deer Harvesting	Closed to bioremediation and manual raking after 8/15.
5T	Bald Eagle Nests	Closed to bioremediation and manual raking. USFWS bald eagle impact assessment completed on 5/15/90 by Mike Lockhart indicates an active nest within 400m of the work area.
5R	Seabird Colony	NO CONSTRAINT. Work area is more than 800m from colony.

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 5/29/90
ADEC ART WEINER Art Weiner
EXXON ANDY TETZ Andy Tetz
NOAA B. Wescott B. Wescott
USCG G.A. REITER G.A. Reiter
FOSC [Signature] Date MAY 29 1990

Prepared by Anden Meyer WRG Date 5/28/90



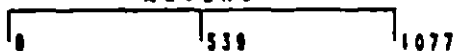
*Incorporates information from
USFWS Bald Eagle Survey 5/15/90.*



Exxon Company, USA
Map Key: KNI-EL-106
May 11, 1990



ECOLOGY MAP 5/28
SEGMENT EL-106
SUBDIVISION C (3-013-)
METERS



- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1767 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.

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 14 cm

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X Manual Pickup

X Bioremediation

 Tarmat: Breakup

 Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

X Spot Washing: X Wands

 Beach Cleaner

 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.

Pick up 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 TEAL

NOAA Burt Wescott

USCG G.A. REITER

FOSC: ML

DATE: 4-20-90

FIELD SHORELINE COMMENT SHEET

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

SCG

NAME DAVID A. SCHNEIDER SIGNATURE David A. Schneider

783/USCG

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

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 CORRE BEACH AT SOUTHERN END OF SUBDIV WILL REQUIRE EXTENSIVE MANUAL SCRUBBING, ALONG FRACTURED ROCK AND BOULDERS, BIOREMEDIATION OF BOULDER/CORRE 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 EL106 - ~~50m~~ 50m from EL106, pocket beach (Pit #1) Boulder, Rock, cracks w/ cobs, pbs 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 reco 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. The 20x30m area with Pit 2 is the area of most concern w/ amoussy penetration. This area is trapped in a ~~bed~~ Bedrock well and does not drain naturally (see DE Photos 90Pomol #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. Allow could perform pickup, scraping, + wiping for a week, possibly longer. The 3 sewer lines trapped in log, Supra must be removed.

LAND MANAGER

NAME Janeetta Pritchard SIGNATURE Janeetta Pritchard

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Beach on north end of subdivision is heavily oiled. Recommended hot water wash. Sewage 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. Oil log and debris need to be removed. Area is good for beach camping (on South end of Subdivision A).

OG C. DILLON USCG D. SCHNEIDER SEGMENT ST/ EL-107
 BIO ST. 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 0 % M 0 % V 0 %
 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 - BAG

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

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

DEBRIS COLLECTED
☒ YES ☐ NO

TYPE oiled trash
united small tr
#BAGS 1

Photographs:

Roll No. ST-6-2

ST-6-3

Frames 4

36, 32, 31, 29, 27
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		NO	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: 08/82

Segment ST/ EL 107 Subdivision A Date (mo/day/yr) April 1 1990

Time (24 hr) 1130-N45 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-6-1
Frames 23 to 36

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 HAWK BIRDS
10 CROWS

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

SEE ATTACHED SLIDES

START 1130 +1-0-0-+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 ~~have~~ 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 ~~potabrya~~ 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*), CHITONS (*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. ~~Re~~ Recruitment is strong for Fucus and other species.

VI SPECIES LIST (cont)

ANIMALS

POLYCHAETE worms

Spirorbis sp. ★ A

Serpula sp. O

Crucigera sp. O

B. Sea Stars

Pyrenopodia helianthoides ★ C

Leptasterias sp. ★ O

Pisaster ochraceus O

Orthasterias typ. 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 pumila ★ A

T. scutum. ★ A

Lottia spp. ★ C

G. Jingle's -

Pododesmus cepio O

H. CRITONS

Katharina tunicata ★ C

Tonicella lineata O

I. Mussels - Mytilus edulis ★ A

Clams - Protothaca staminea ★ R

K. Anemones

★ Anthopleura xanthogramma

Tealca crassicornis O

★ Epiactis sp. O

L. Pulmonates

★ Siphonaria thersites C

M. Crabs -

Acantholithodes

Lonchynchus 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

A - Abundant

O - Occasional

R - RARE

C - Common

ELIOT - A

TIME 1130 START AT N end

see map

Wild life

1 - Bald Eagle nest (1)

5 - Herring Gulls (young, 2) skinned out

1 - Lander or Horned Grebe

Western Gull

Unidentified Seabird

Petrel

SECTION 1 ROCK COBBLE

Has dense Barn Spat Moderate

Fucus rare or absent (some dead adults on bedrock)

Hydrobia moderate on (S, S)

Some on (hole) (spat)

Gastropods - Littorina scarce on cobbles

Mid zone Barnacles some on upper

Fucus - dense adults

slightly

High zone low rocks moderate juveniles

Low - moderate Barnacles on S

no algae

7 Fucus

slightly

7 Cladophora

ELIOT - A

SECTION 2 ROCK COBBLE FACE / Boulder

#4 PIT 1

Cliffs

7 Pulmonate type

77 Barnacles

7 Barnacles

Moderate to dense Hydrobia

7 Dead Fucus on upper

Just beginning to

7 Fucus

Overhang

#3 Beach N of #1 Fucus roots

Small offshore rock

- small Hydrobia

- 7 Fucus

- Hydrophyllum

Rare Hydrobia

7 Barnacles

Thick black scum algae

EL107-A

Beach 2

Cobble/Beach

Heavy cover of *Porolithothamnion* w/ *12 ft zone*

#2 PHOTO - *Porolithothamnion*
COATED ROCKS

End of ST-6-2

#3 Headland

Thamnobryon (A)

> *Ulva* (JAS)

~ *Porolithothamnion* - 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

PHOTO 35

Barrel Settlement at Headland

Headland off Beach 2

> *Ulva* too
dense light spot

moderate *Semichthys* spot in MID zone

Polix *Katharina* juveniles

MIX - *Fucus* ADULTS Dense

Gracilaria moderate

PHOTO 37 *Katharina* juvenile
2-3 cm

25 in 1 m² !! just a head

> *Hedophyllum* low zone

> *Crallina* alga.

Low

Moderate *Fucus*

1 *Fucus* sp.

Polysiphonia like erect w/ "leaves"

Dense - mod *Thamnobryon*.

> *Fucus*

ELIOTA

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

High zone mussel spat (1) moderate
sparse

Lower zone of beach 2

> Gastropods > Hermit crabs

Zostera bed. Seaweed healthy

> Barnacles (1, 2)

Small shrimp

Field of Boulders - Barnacles > Eelgrass

Gastropods > Limpets

< Littorines - 7 mm

Rare Mytilus juvenile spat

> Eelgrass

Anthropoda moderate on vegetation

Under rocks; Flatworms, small

> Fish - Some ?

> Limpets, few Littorines

some mytilus

ELIOTA

ROCK CLIFF

> Mytilus juveniles - spat

Base Barnacle spat 177

77 Littorines?

22

p. 177

23

Mussel recruits & Barnacles

24

Old sand dull black on wall 5 of Bank 3

> Littorines, Littorines

Dune. Midlinton

Mytilus? Hair

Anthopleura xanthogramma

End of ELIOTA

SEGMENT 8 - 2-107

SUBDIVISION #1 (Beach at S. end)

DATE 01 / APRIL 90

CHECKLIST

_____ N Arrow
 _____ Approx. Scale
 _____ Off-Road Entry
 _____ Off-Dial
 _____ Wash
 _____ Length
 _____ % Cover
 _____ Substrate Character
 _____ Est. MW/L/LWL
 _____ SSL
 _____ Profile Location(s)
 _____ Profile(s)
 _____ Pn Location(s)
 _____ Photo Location(s)

LEGEND

1 Δ
PK - No Substrate On

2A
PR - Subsequent CTS

CT/C
CONFIDENTIAL

CT/D
Broken Distribution

CT/P

Policy Distribution
 [-]
 02.00

Splashed Distribute

Old Vengeance

1 ea
Photo location, direction,
and number

SKETCH MAP

SEGMENT EL-107

SUBDIV: A LENGTH-6

N

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

Photo 36

Photos 31-32

Continuous coat/cover M-UITZ
30m wide X 30m long. B/C
surface underlain by c/p/q.
Small patch of oiled grass

SITZ c/p berm
between pg strand + cliff
narrow 20m long CT/C

Narrow broken coat and
patchy stain along high tide line

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

Photograph
CTB M-ULTZ
12 m wide x 50 m
long B/C.

01 Character Length (m): AP _____ PO _____ CV 30 CT 135 ST 50 MS _____ PT _____ TB _____ FL _____ NO _____

REVENUE

SCHNEIDER

OG C. DILLON

SEGMENT EL-107

SUBDIVISION A

DATE 01/17/90

CHECKLIST

- ☐ N Area
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Cl Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. H/W/L/V/L
- ☐ 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

CT/V
Cited Vegetation

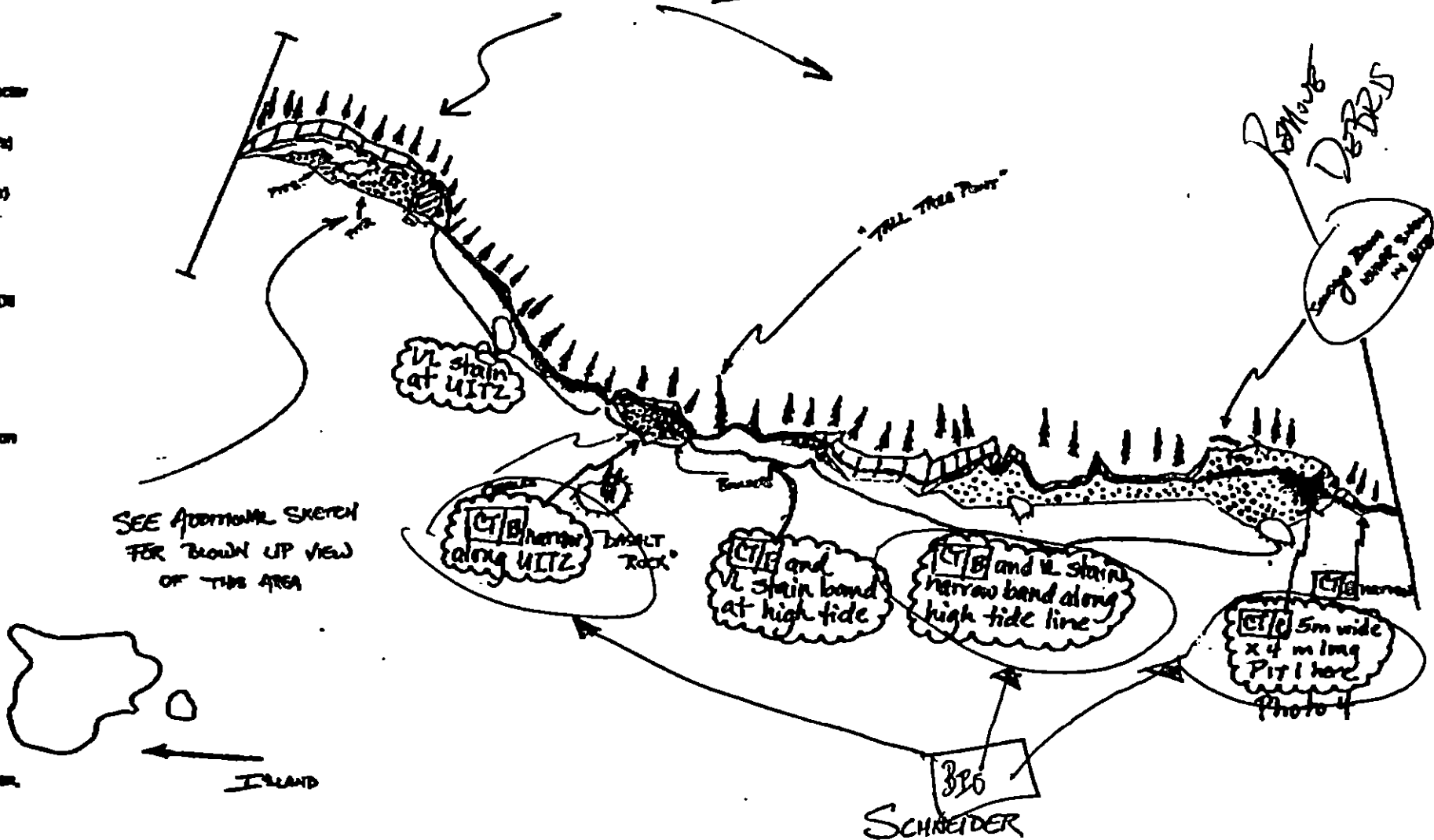
Photo location, direction, and number

1 ●

SKETCH MAP

SEGMENT EL-107
SUBDIVISION A
LENGTH = 625 METERS

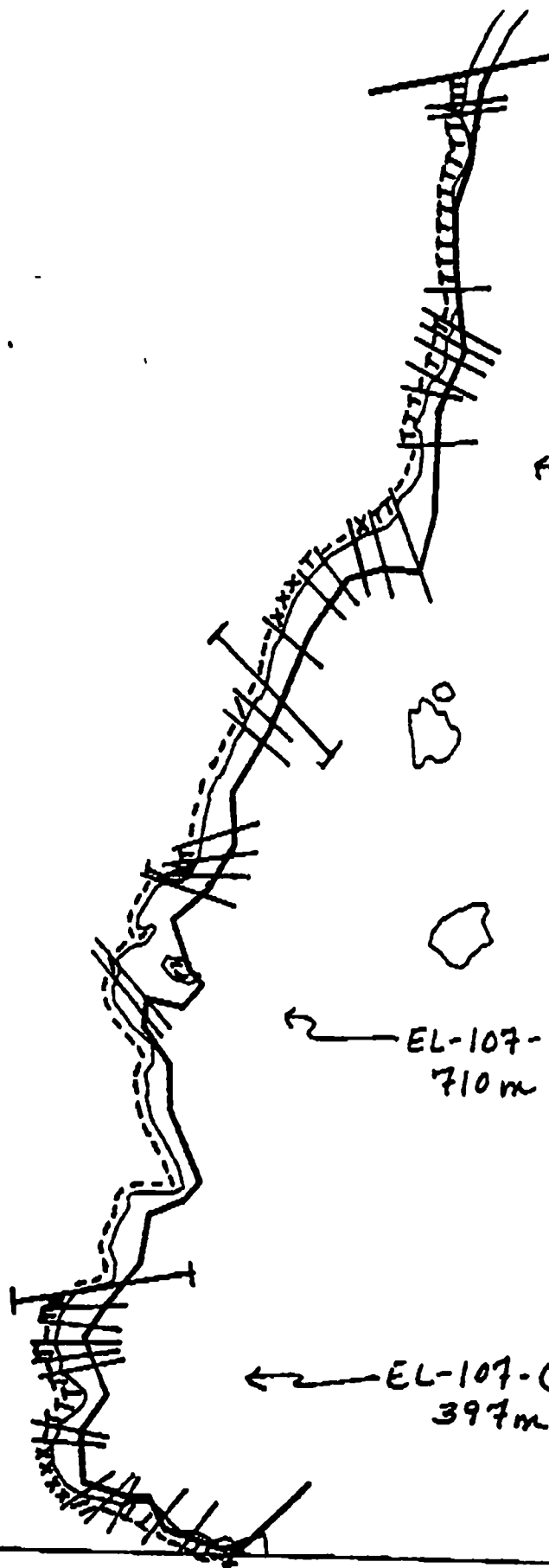
SPOT WASH AS REQUIRED
IN AREA OF PIT 1, 2, + 3.



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



REVISIONS



EL-107-A
625m

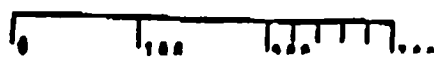
EL-107-B
710m

EL-107-C
397m

EL-107

EXXON SEGMENT LENGTH: 1727m
ADEC Segment Length: 1670m

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



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

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
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 unrolled biota and substrate.

FOSC

Date

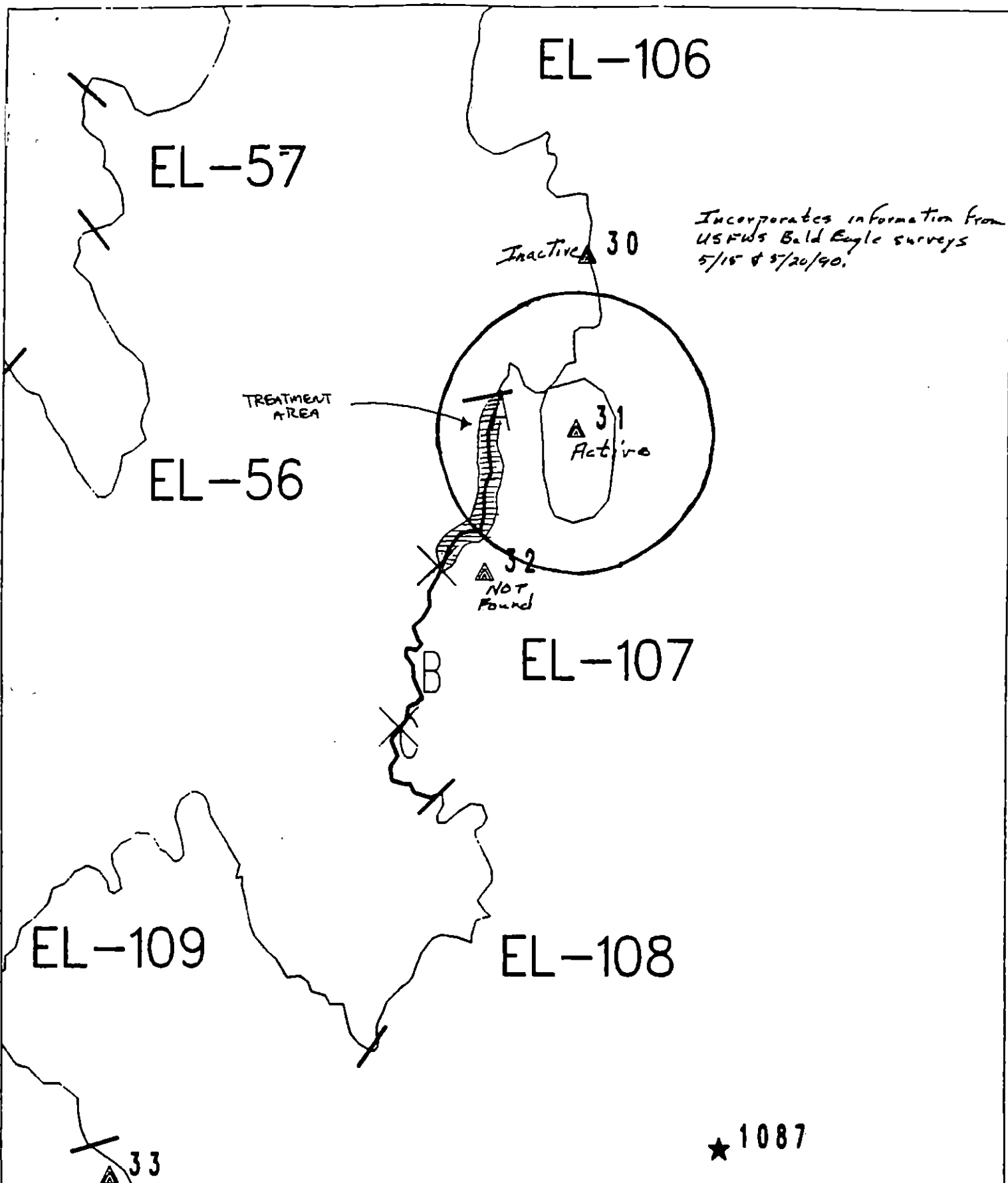
6-10-90

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

ASAP FOLLOWUP RECOMMENDATIONS

ement: 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/ORH was documented 0-15 cm subsurface.

Followup Recommendations: Tag evaluation (sheen) per decision tree.
- Small Hot H2O Header system is recommended to migrate oil to water line.
Agitation is also recommended to loosen oil in the subsurface. Small
Exhaust boom w/ snare boom is recommended to contain and retrieve oil.

Completed by Pickup ☐ YES ☒ NO
 Crew:

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 water. It needs Hot H2O and agitation if oil is to be removed.

Exxon Ray Settel
 (name)

Ray Settel
 (signature)

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

USCG PST Les Bers. Dine
 (name) NOAA: Art Weiner

Art Weiner
 (signature)

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 BLENDED TO WORK.

Land Rep. John Ebof
 (name)

John Ebof
 (signature)

Comments: From Observers Dan's comments collected throughout the swim - Cold water high pressure is NOT an effective tool to remove oil. PH/Prote April hot water high pressure is effective. Site condition is hazardous to wild life and needs immediate treatment.

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

FIELD SHORELINE COMMENT SHEET

SEGMENT AS/EL107 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 Gihormley SIGNATURE Wesley Gihormley 

☒ 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 H2O 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.

ASAP FOLLOWUP RECOMMENDATIONS

oment: 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 site. 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 landas 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

Ray Sitt
(name)

Ray Sitt
(signature)

Comments: I don't agree with the recommendations stated above because hot water flood will probably have the same effects as a landa unit has, this will only push the oil deeper. My recommendation is to re-apply customized and access w/ 94.

USCG

PS1 Sea Breeze
(name) NOAA: ART WENGER

Art Wenger
(signature)

Comments: ALL ACCESSIBLE OIL WAS MANUALLY REMOVED. CONSIDERABLE AMOUNT OF REMAINING OIL IS RECALCITRANT. HWHP WILL REMOVE INTERSTITIAL SOL THAT IS TOO CONCENTRATED FOR CUSTOMBLEND 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?

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 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

FIELD SHORELINE COMMENT SHEET

SEGMENT AS/EL107 SUBDIVISION: A SITE: 2 DATE 8-11-90
 USCG/NOAA PS1 Leo Bersolona Leo Bersolona
 NAME ART WEINGER SIGNATURE Art Weinger

☐ 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 removed) - 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 Sotelo

☐ 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 custodial and winter storms.

2422 . 22

SURFACE OIL

SITE 1

SITE 2

SITE 3

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

165

[illegible][illegible]

Roll No. R011 #3

Frames 3, 4

REVIEWED
8/13/90 *Y/L*

CFE NOTES ATTACHED TO MODIFIED SSAT

SEGMENT SITE EL-107

SUBDIVISION A

DATE 01/19/90

SKETCH MAP

SEGMENT EL-107
SUBDIVISION A
LENGTH = 625m

ASAP #2

AUGUST 11 1990
FROM SSAT MAP

CHANEY
MAP 1 of 2

CT/C

CT/B

CT/A

CT/D

CT/E

CT/F

CT/G

CT/H

CT/I

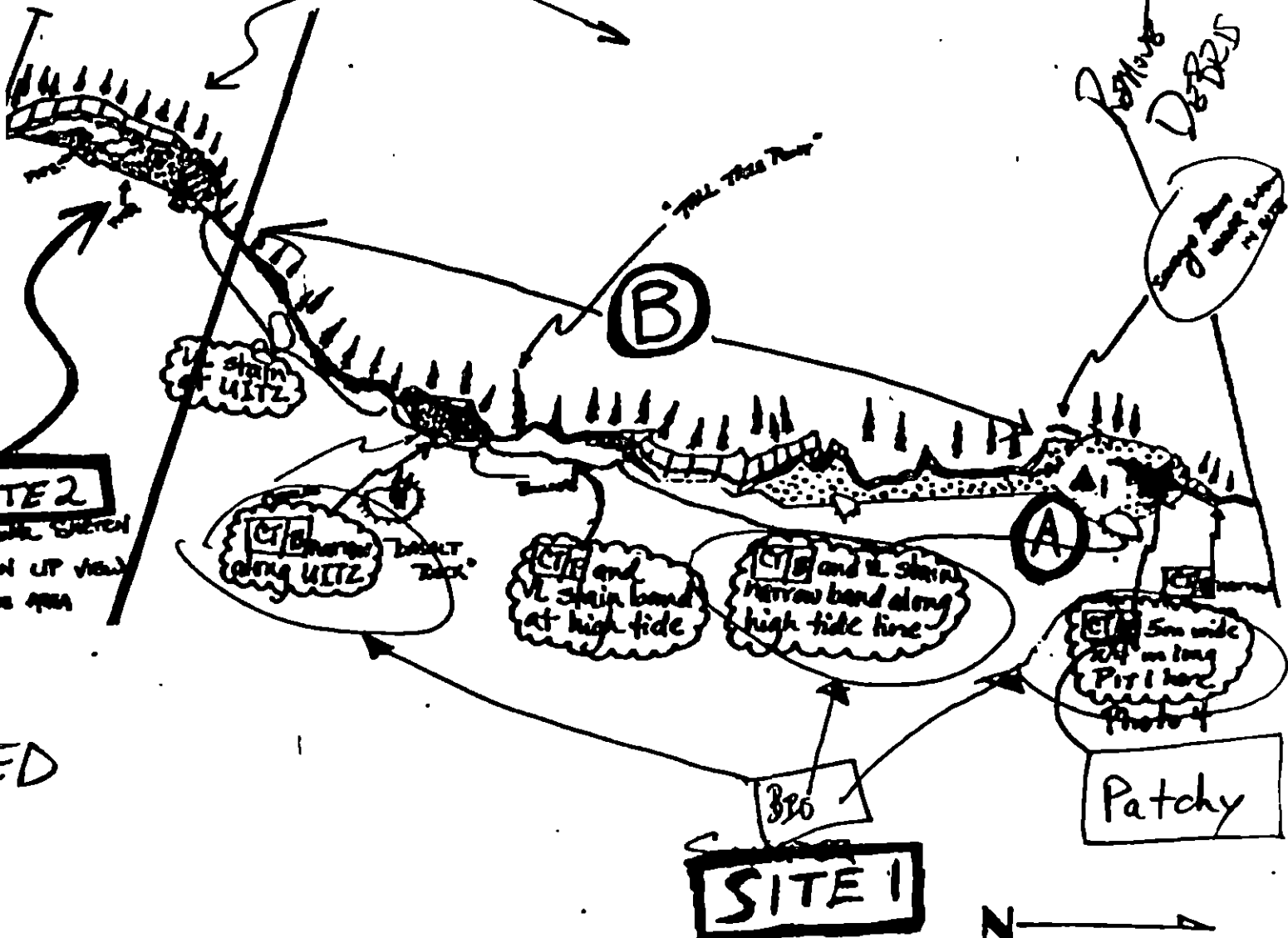
CT/J

CT/K

SITE 2
SEE ATTACHED SKETCH
FOR "WASH UP VIEW"
OF THE AREA

SEE
ATTACHED
NOTES

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



OS Character Length (m): AP _____ PO _____ CV 30 CT 295 ST 300 MS _____ PT _____ TB _____ FL _____ NO _____

REVISIONS

Abstract

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.

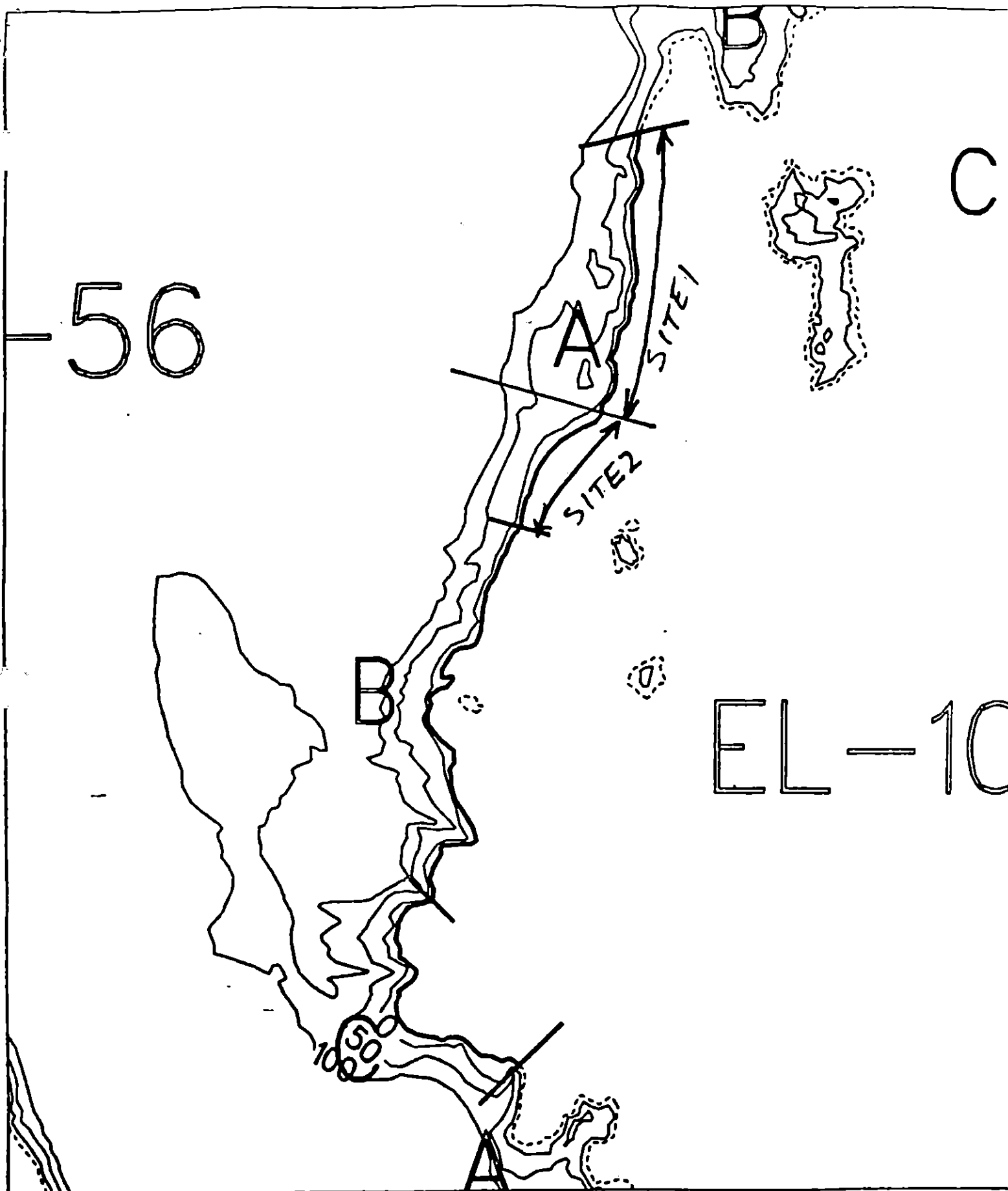
"C"

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

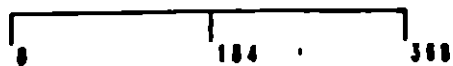
Map Key: KNIEL-107

July 19, 1990

1:7243



METERS



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.

SHPO SIGNATURE: Melvin J. Holmes DATE: 8/17/90

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:

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

COMMENTS: Recommend manual 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:

ADEC JOHN BAUER John Bauer
 EXXON ANDY TEAR Andy Tear FOSC: W DATE: 4-20-90
 NOAA Burl Wiercott Burl Wiercott
 USCG G.A. REITER G.A. Reiter

OG C. DILLON USCG D. SCHNEIDER SEGMENT ST/ EL-107
 BIO J. BARRY LAND REP J. PRITCHARD 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 120 m NO

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	N	E	S	W	~~1~~	~~2~~	~~3~~	~~4~~	~~5~~	SU	U	M	U
ASPHALT PAVEMENT													
POOLED													
COVER	X							X			X	X	
COAT	✓	X				1/2		X			1/2	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 _____

PATTIES / TARBALLS _____ BAG

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

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

DEBRIS COLLECTE
☒ YES ☐ NO

oiled tras.
TYPE cleaned del
united single tr
#BAGS 3

Photographs:

Roll No. ST-6-3

Frames 22

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (COLOR)	BELOW	OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS	
		OP	OR	OL	OF	NO			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

SCG
NAME DAVID A. SCHNEIDER SIGNATURE David A. Schneider

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

783/USCAR

MANUAL REMOVAL OF MOUSE AND DEBRIS FROM SMALL BOULDER POCKET BEHIND IN THE CENTER OF THIS SUBDIVISION. RECOVERY OF OILED DEBRIS ALONG FACE OF VERTICAL BLUFF. (17)

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 is a Penetration to 10cm in Sand, Pebbles, and gravelly, this area is not Blonble or fillable. an omni at the LITE 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 LITE at the time of inspection. This area has a 5x4m, 3-4cm surface mouse coating of DBR oil; apparently not previously washed. I noted a MITZ pit of OP/OU saturation of 12cm in fine sediments. Oiling thick for Bio, and would be effectively treated by an omni after moving some logs at the supratidal. further to the south is oil trapped in cracks along the Rock Faces.

LAND MANAGER

NAME JANETTA PRITCHARD SIGNATURE Janetta Pritchard

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Manually remove mouse and debris 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. Debris along Sea Crevices needs to be removed.

SHORELINE ECOLOGICAL SUMMARY

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), & 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		
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:

Ecological Considerations: 64, 711, 952

SEE ATTACHED PAGES

EL107-B

Same as before

Mytilus

Rock offshoot -

Just below

Turritellidae

Tachychnochus eousus

Pulmonate

Siphonaria hesperites

Sarcoglossum?

Pododesmus cepus - large shell

END AT 1700

EL107-C

2 AP 90

START 1105

Boulder field 1

High > Porphyrin

> Barn

Balanus JANTH?

S, J, I

Mytilus sp. - Rare S-I

FURCS

Rare A

O juv

UVA

Littorina med to J

Lingula L. sp?

Med/scars

#20 Green on beach 1 w/ oil

#19 Closer view

18

Small Closer view

Clips 9 of Beach?

Gull

Killer whale

Modiolus Murex JS

Lingula MOD - Rare

Littorina - moderate L. med/scr

2/2

EL107B

TIME 1945

Cliff Contour

Low > Fucus

~~low~~ - HIGH

Dense Mytilus (J, S)

~~low~~ L. m. s. / m. m. s. / s

Lithothamnion m. s. s

Mucella - m. s. s

#23 - Mussel Recruitment in m. s. s

Also dense LITHO, LITHO

MID Zone Pore

Coralloids

Rhodocycla

Raistrin

~~no~~ Dense Lyngbya

Chyton? A

Katharina

Antedius? Coltham

thuyleria

Lithothamnion

PACCS

Red. A

EL107-B

Boulder Beach 1

7 fucus, 7 moderate recruitment

Sparse Mytilus.

Boulders & don't have the Mytilus like

the cliffs

Same like

NO Nereocystis beds offshore

Boulders the same all over

Blue green cover and green boulders

Feetable

P1 2 Dense Mussel recruits

Dense Puccin V.

Fosteria in pool mid level

THUYA, m. s. s, collanther

Pool - Sponges

Essentially identical to last shot

7/14

Wildlife		ELIOT-B	ELIOT-B
Ravens			Semibalanus Spot Moderate
Crows			Chthamalus
Eagles			All other animals good
Seeds: C. V. Bl.			Beach - G. - G. / Pebbles
Flabellum			Very little on beach
Amphipods			On rocks:
Chironomid?			to some Balanus adalt.
Pezomachus			Moderate " spot
			Brown Dense Lithothamnion
Pt 2			Red / Green Lithothamnion
Dense Bivalves			Rare Rhizomes
Balanus A45			
Semibalanus A - moderate			# 22 + dense in corner pool
Lugalis - moderate A41			CLIFF A - By Boat
Littorina			445 pm.
Pt 3			Normal recruitment throughout
Mytilus			in spots
Semibalanus			
Epractis dense			
Thalassia? Solid Brown			
" Red/green/white spots			
Katharina dense			
Spot dense			

ppv EL107-B

→ *Samolus*
Mytilus -

Rock offshoot -
Int 2h

Turritellidae
Tachytrichas eousus

Pulmonate

~~St~~ *Siphonaria hesperis*

Sarcophaga?

Pododesmus capra - Jorgensen

END AT 1700

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 ^(within). I am not sure that clean up would interfere at all.
- 3) This stretch of beach appears to be recovering ^{well} 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

Entsromorpha spp.

Urospora

B. RED ALGAE - RHODOPHYTA

Ahnfeltia plicata

Lithothamnion sp.

Porphyra perforata

Rhodocela larix

Rhodymenia palmata

Rhodoglossum affine

Calliarthron sp.

Halosaccion glandiforme

Plocamium sp.

Membranoptera platyphylla

Iridaea sp.

Petrocelis

C. Brown Algae - Phaeophyta

Alaria pylaia

Fucus distichus

Laminaria spp.

Ralfsia

Scytosiphon.

Odonthalia

Costaria ?

D. HIGHER PLANTS

ZOSTERA

SEGMENT ST/ EL-107

SUBDIVISION B

DATE 01 APR 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bndy
- ☐ Oil Olet
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HW/LW/LWL
- ☐ SST
- ☐ Profile Location(s)
- ☐ Photo(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

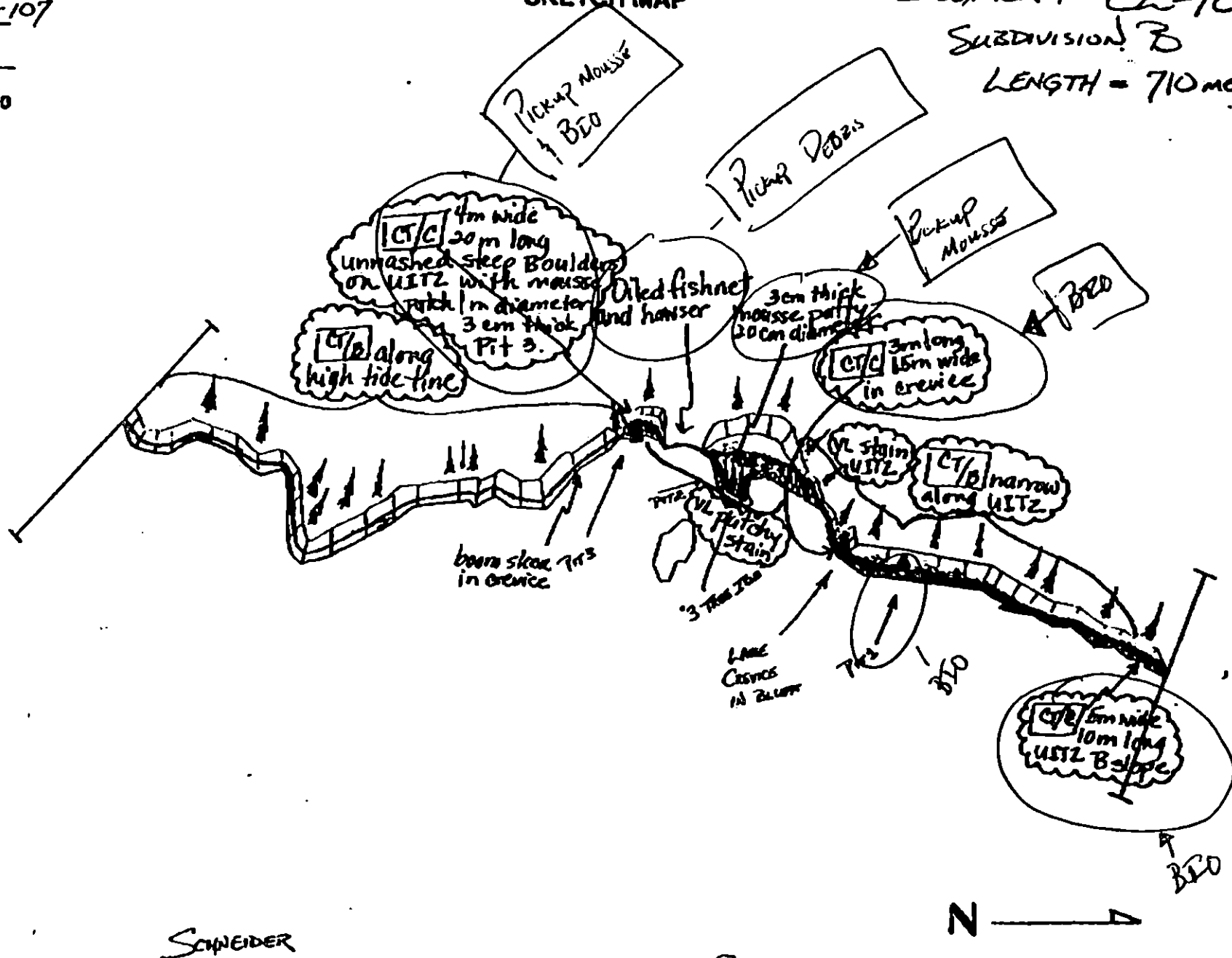
- 1 Δ
Pit - No Subsurface Oil
- 2 Δ
Pit - Subsurface Oil
- CT/C
Continuous Distribution
- CT/B
Broken Distribution
- CT/P
Patchy Distribution
- CT/S
Splashed Distribution

Other Vegetation

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

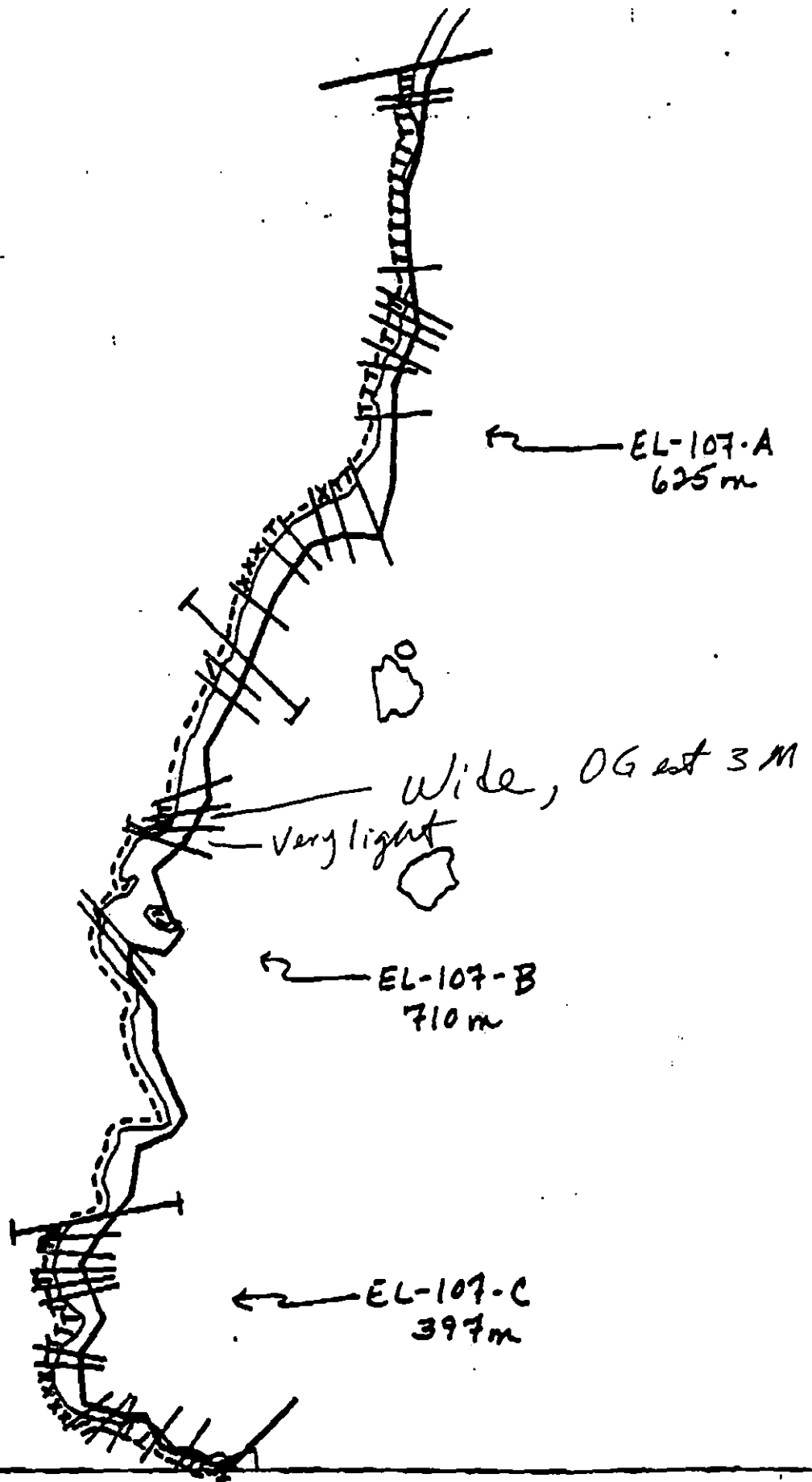
SKETCH MAP

SEGMENT EL-107
SUBDIVISION B
LENGTH = 710 METERS



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

REVISIONS



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

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

0 100 200 300

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 Manual Raking 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 uncolled biota and substrate.

FOSC

DATE

6-10-98

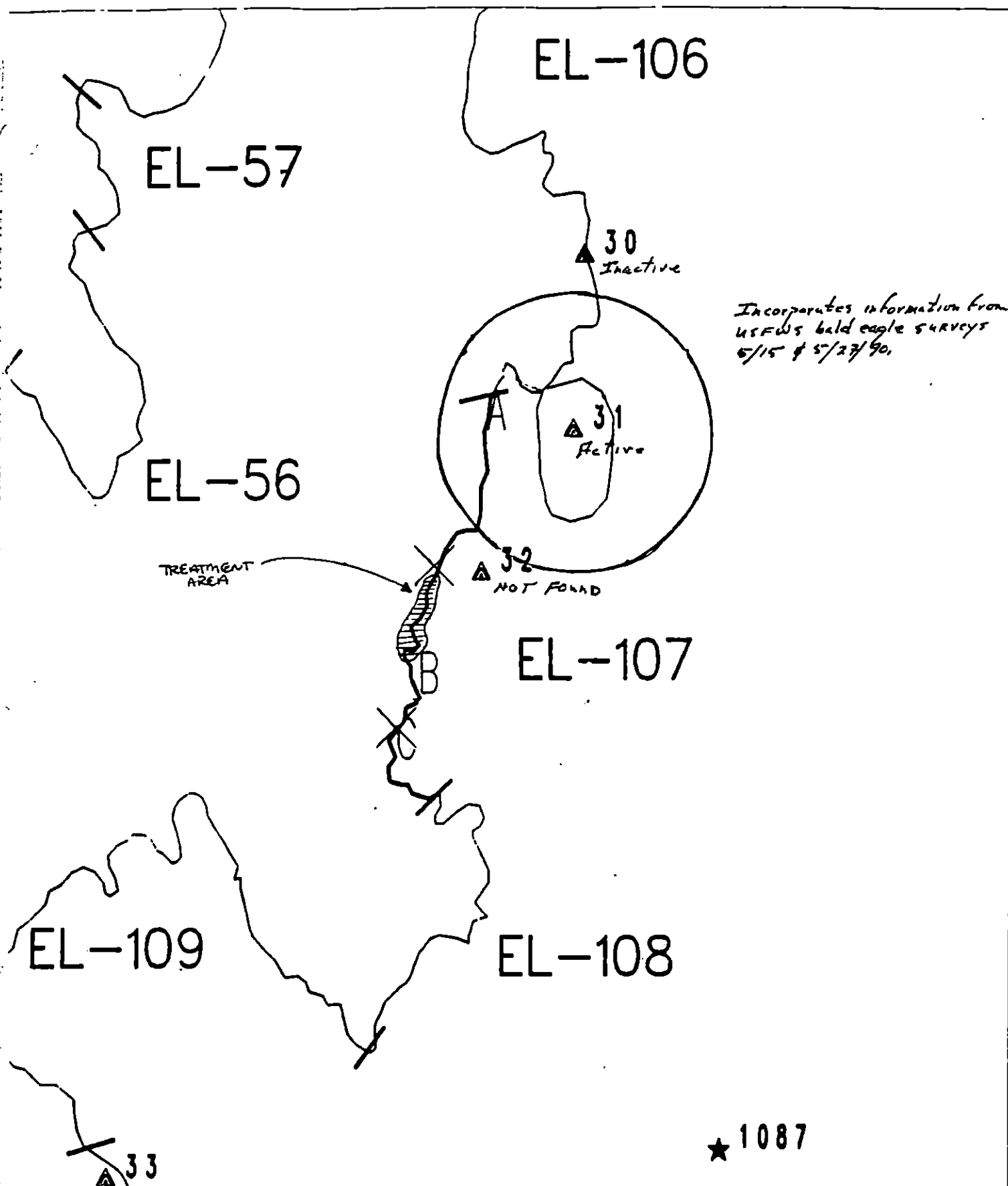
Prepared By:

Wanda Munn VPP

Date

5/31/90

6/8/90



Exxon Company, USA

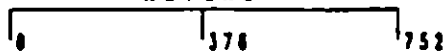
Map Key: KNI-EL-107

May 11, 1990

ECOLOGY MAP 5/30 SEGMENT EL-107

SUBDIVISION B (2 of 3)

METERS



- ★ Seabird Colony
- △ Eagle Nest

1 inch = 1233 feet

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 100M² AREA.

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

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 slots 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 bio. 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

ASAP TAG REVIEW SHEET

Segment: FL 107 Subd: B Site: 2 Date 14 AUG 90
 PRE-Review

Priority For Addressing In 1990

HIGH MEDIUM LOW NTR

Treatment
Recommended:

TILL &
BIOREMEDIATION

As per
Recommendation
Sheet

UG SHEET - BROKEN SPR
SKETCH does not show SPR > 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 NO YES NO YES NO YES NO
~~CG~~ ~~ADEC~~ ~~EXXON~~ ~~LAND MGR~~
 & BAA

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

FIELD SHORELINE COMMENT SHEET

SEGMENT AS/EL107 SUBDIVISION: 8 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 [~100m² OP].

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley 

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

- Southern most pocket Ave on this site has op 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 Ray Sotelo SIGNATURE Ray 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.

ASAP SHORELINE OILING SUMMARY

PAGE 01

TEAM NO. ASAP #2

EXXON SOTELO

SEGMENT AS. EL 107

OG CHANEY

USCG WEINER/BERNALONA

SUBDIVISION B

ADEC EDORALEY

LAND REP EBEL, JOHN

TOTAL NO. SITES 2

DATE AUG 11 1990

TIME 10:50 to 13:05

TIDE LEVEL 0.5 to 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			

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT								
S.O.R.		X				X	X	
POOLED COVER								
COAT	X	X	X			X		
STAIN	X	X	X			X		
MOUSSE								
PATTIES/T.B.								
FILM								
NO OIL					X			X
EST. SITE LENGTH					150			

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

SUBSURFACE OIL

SITE NO.	PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER				OILED INTERVAL	CLEAN BELOW (Y/N)	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS
			OP	OR	OF	NO			SU	UI	MI	LI	
2	1	40			X		0-20	Y		X			PC-PC
2	2	50				X	.	Y		X			PC-PC
2	3	20	X				0-20	N		X			CP-CPR
							.						
							.						
							.						
							.						
							.						
							.						
							.						
							.						
							.						
							.						
							.						
							.						

Photographs: ASAP #2

Roll No. Roll #3

Frames 5, 6

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

REVIEWED

8/13/90 J.W.

COMMENTS SEE ATTACHED NOTES

SEGMENT S: 2-107

SUBDIVISION B

DATE 01 APR 90

SUBDIVISION B
LENGTH = 710 METERS

ASAP #2

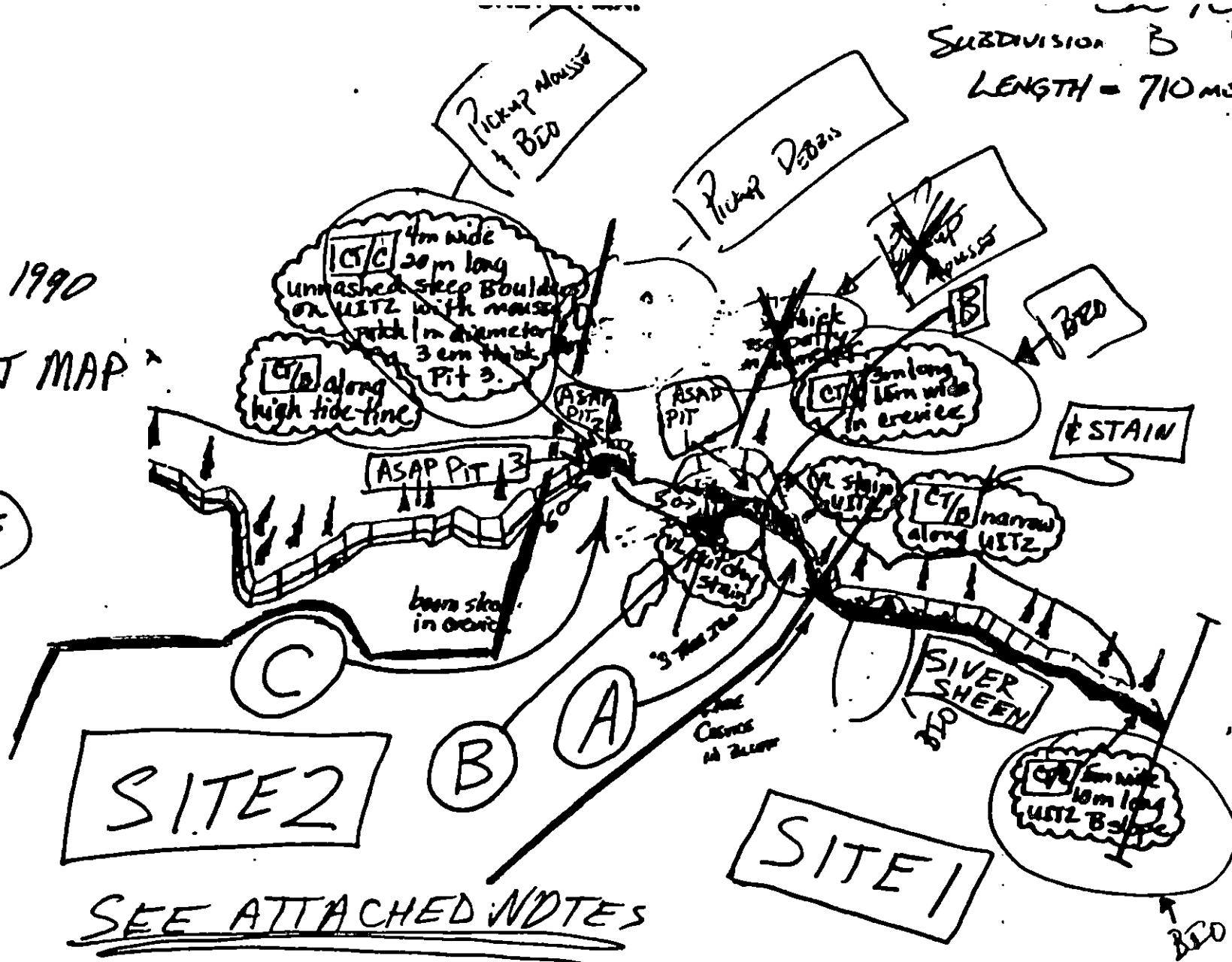
AUGUST 11 1990

FROM SSAT MAP
CHANEY

(SEE NOTES)

-  CT/C
Controlled Distribution
-  CT/B
Broken Distribution
-  CT/P
Pointy Distribution
-  CT/S
Splayed Distribution

Old Vegetation
Photo location, direction,
and number



SEE ATTACHED NOTES

SCHNEIDER



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

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"

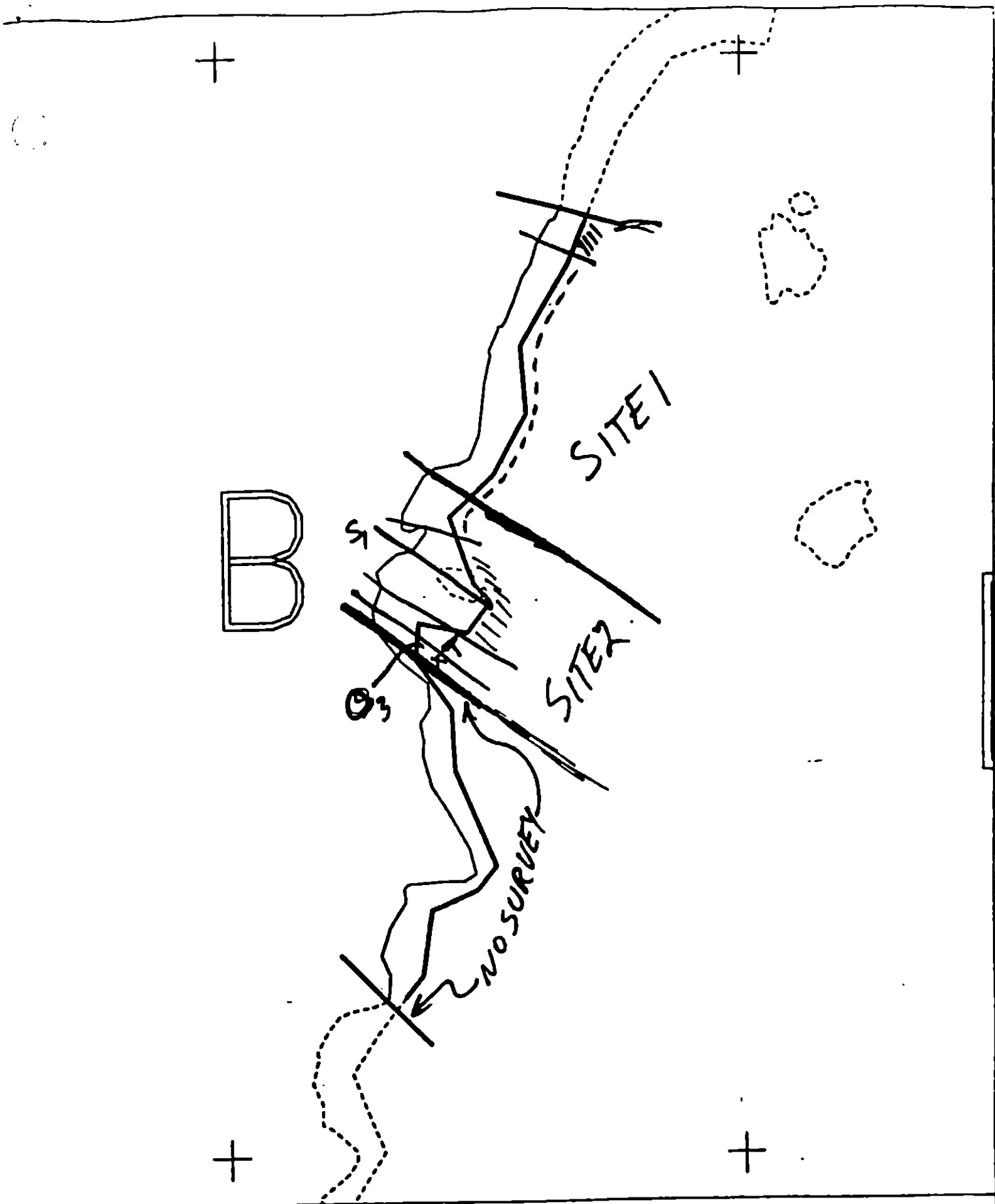
Broken stain and patchy coats in the UITZ. CT/B/U are found on the boulders which dominate the area.

"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 ~~per~~ ^{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.



AAA	Wide	EL-107 B ADEC Subsegment Length: 643m METERS		Subdivision Field Map
///	Medium			Map Key: KNIEL-107B
---	Narrow			Name: <u>CHANEY</u>
TTT	Very Light			Date: <u>AUG 11 1990</u>

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 uncoiled substrate and biota.

SHPO SIGNATURE: Charles E. Hines 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.

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: [Signature] DATE: 4-20-90
NOAA Burt Weslett Burt Weslett
USCG G.A. BEITER G.A. Beiter

FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 EL-107-C SUBDIVISION: C DATE 4/3/90

USCG

NAME DAVID A. SCHNEIDER SIGNATURE David A. Schneider

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED P83/USCAR

Two Pocket Beaches in Subdiv C are in need of treatment. The area adjacent to Subdiv 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 O₂. 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. Stain 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 Bio'd. SW corner of beach (Pit #5) is a rock lined gully w/ snowy Supra and Est. Sydn 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 "C" to S has some pocket UITE oiling only reachable by hands and is not visible from ship. The last pocket of "C" has negligible oil, but a rich coral etc. ITC to be avoided.

LAND MANAGER

NAME ANITA PRITCHARD SIGNATURE Anita Pritchard

☐ 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 SW12 needs to be reassessed after the snow is gone. Because the oil has deeply penetrated the substrate, the use of hot water wash, tilling and bioremediation is recommended. A small stream enters on the N. end of this beach.

SHORELINE OILING SUMMARY

REVISION NO. 1

OG C. DILLON USCG D. SCHNEIDER SEGMENT ST/ EL-107
 BIO J. BARRY LAND REP J. FEITCHARD 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 0 %
 SLOPE: Long 55 % Hang 20 % Vert 25 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 175 m M 75 m N 47 m VL 100 m NO 0

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	C	S	P	A	1	2	3	4	SU	U	M	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 BACNEAR SHORE SHEEN? ☒ NO BR RW SL TI

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	X		
Vegetation			
Trash			
Debris			

DEBRIS COLLECTE ☒ YES ☐ NOTYPE: Small trash#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 N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		DO	UC	1	2	3	4	SU	U	M	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

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

Time (24 hr) 1108-1330 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	
1L	1U 1M 1L	1U 1M	1U 1M 1L	
2	2	2	2	
3	3	3	3	
4	4	4	4	
5	5	5	5	
6	6	6	6	NOT PRESEN

MYTILUS

Dense	Moderate	Sparse	Rare	
1U	1U 1M 1L	1U 1M	1U 1M 1L	
2	2	2	2	
3	3	3	3	
4	4	4	4	
5	5	5	5	
6	6	6	6	NOT PRESEN

GASTROPODS

Dense	Moderate	Sparse	Rare	
1L	1U 1M 1L	1U 1M	1U 1M 1L	
2	2	2	2	
3	3	3	3	
4	4	4	4	
5	5	5	5	
6	6	6	6	NOT PRESEN

FUCUS

Dense	Moderate	Sparse	Rare	
1U	1U 1M 1L	1U 1M	1U 1M 1L	
2	2	2	2	
3	3	3	3	
4	4	4	4	
5	5	5	5	
6	6	6	6	NOT PRESEN

Wildlife Observations/ General Comments:

Glaucaus gull Raven
Seal Crow
Bald Eagles Pigeon Guillemot

Ecological Considerations: 6 Y, 7 II, 5 T-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 +5 → +1

ADDITIONAL COMMENTS

- I - EL107 - C INCLUDES A COBBLE / BOULDER BEACH & A SMALL COVE (BOULDER), BOTH OF WHICH ARE PROTECTED FROM LARGE WAVES. UNLIKE MORE WAVE-EXPOSED COBBLE BEACHS IN THIS SEGMENT THAT HAVE RELATIVELY LOW BIOTIC ABUNDANCES, THOSE IN EL107 - A ~~ARE~~ HAVE DENSE GASTROPOD & ~~AND~~ MYTILUS COVER. THIS IS LIKELY DUE TO THE LOW FREQUENCY OF DISTURBANCE, THUS ALLOWING ~~TO~~ 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 EL107 - 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 CHIFF ROCKS
- B. MYTILUS - DENSITIES ARE FREQUENTLY HIGH ON BEDROCK AND LARGE BOULDER AND OFTEN ~~OR~~ DENSE IN PATCHES ON ^{THE} COBBLE BEACH.
- C. GASTROPODS.
1. PERIWINKLES - LITTORINES 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. WHELLS - 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 - *Stylantheca porphyra*

Anemones - *Anthopleura artemesia*

Chitons - *Tonicella insignis*

Sea Star - *Henricia leviacula*

Brithstars - *Ophiopholis aculeata* ?
Ophiura sp. ?

Crabs

Pagettia gracilis

Acantholithodes hispidus

Hydroids

Sertulariidae.

SNAILS

Littorina digitalis

Nucella emarginata

IV WILDLIFE -

GLAUCUS GULL

SEAL

EAGLES

RAVEN

CRAN

PIGEON GUILLEROT

V General Comments

1) This beach section has a heavy recruitment of mussels, barnacles, and gastropods (limpets, Littorines)

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 @ end of beach 2 EL 107C

7 *Semibalanus* - moderate - dense
mussels - moderate

10 *Sipharopsis* - dense in patches
40 / 1 m²

Protected Side -

Dense *Mytilus* 3 part
Nereis Adults

Dense *Balanus* *Semibalanus*

Made Dense: *Sipharopsis*

Dense *Callinectes*

Mud - *Lygia*

Porphyra

Exposed - Same

2 juvenile *Buccina* 1 part

1 *Mytilus*

Pool ~ 15 m² w/

13 *Callinectes*

1 *Mytilus*

Callinectes, *Buccina*, *Callinectes*

7 *Semibalanus*

white bars - 1

Arctostaphylos?

Anthracoceros?

Syrphus

Invertebrate List

Balanus crenatus

Semibalanus cariosus

Pagurus

Littorina scutulata

L. striata

Nacella lamellosa

Pagurus spp.

Littorina spp.

Mytilus edulis

Spirorbis

Sergula? or *Crucigera* T

Pycnogonidae

Dermasterias

Orthosternus

Mopalia mopalia mucosa

1 *Wulfsbergella*

SNAILS

Nucella lamellosa

Scutella dila - *Buccinidae*

Tonicella lineata

EL107C

Sandy Beach 2

Photo 17 Boulderhead
16 Pits 1

COBBLE/Boulder/pebble beach 2

Lithomus - dense J/S 1000's/m²

14 - Photo of Lithomus

Dense Fucus

large boulders w/ dense Mytilus

Cobble/Boulder - Sparse Lycopodium

Dense Lithomus

mod Sparse Fucus Mytilus

moderate Lithomus / Lycopodium

Dense Spot for Balanus

low dense Cobble - moderate

Gonophytes moderate

Cl. F. at N end of Beach 2 -

mod-dense Murex J/S

> Katharina

bease lycopods (Kotter?)

EL107C

Dense Balanus / Sea A

J/S

Hi Mod Fucus
Dense M10

Eggs

Dense Fucus

Abies / moss

Redden

Anthopleura

13 - Lithothamnion

11 -

Pool Litho

Sargassum Katharina /

Katharina Spot

Anthopleura

Challin

Tunicella serrata

Cove @ Beach 2

Hi / dense brownish

Raflesia

Scandellia

Petrocladia

Phylomena -

microcladia

→ pahrata

> F

SPECIES LIST

CALLOPHYLLIS ? + PALMARIA OR HLOOYMANIA

Keys to Callophyllis

Spp A - Rhodoglossum ?

Pisostus

Gigartina

Urospora - Green-tufted stuff or Cladophora?

Rhodanella larva

Ulva sp

Fucus disticus

Sargassum

Gloiophyllis ?

Beach 2

Moderate # Adult Noto Scutaria

Beach 3

My favorite Beach

Low level zone

Hydrocoleum all over

Heteroclis

High abundant /

Mytilus

Gemmales

Ophiuroidea under rocks

Small greenish stuff...

OG C. DILLON

SEGMENT S1 -107

SUBDIVISION C

DATE 02 / APR 90

CHECKLIST

- ☐ N.A. Area
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. NW/SE/VL
- ☐ SCL
- ☐ Profile Location(s)
- ☐ Photo(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
PR - No Subsurface Oil

2 Δ
PI - Subsurface Oil

CT/C
Continuous Distribution

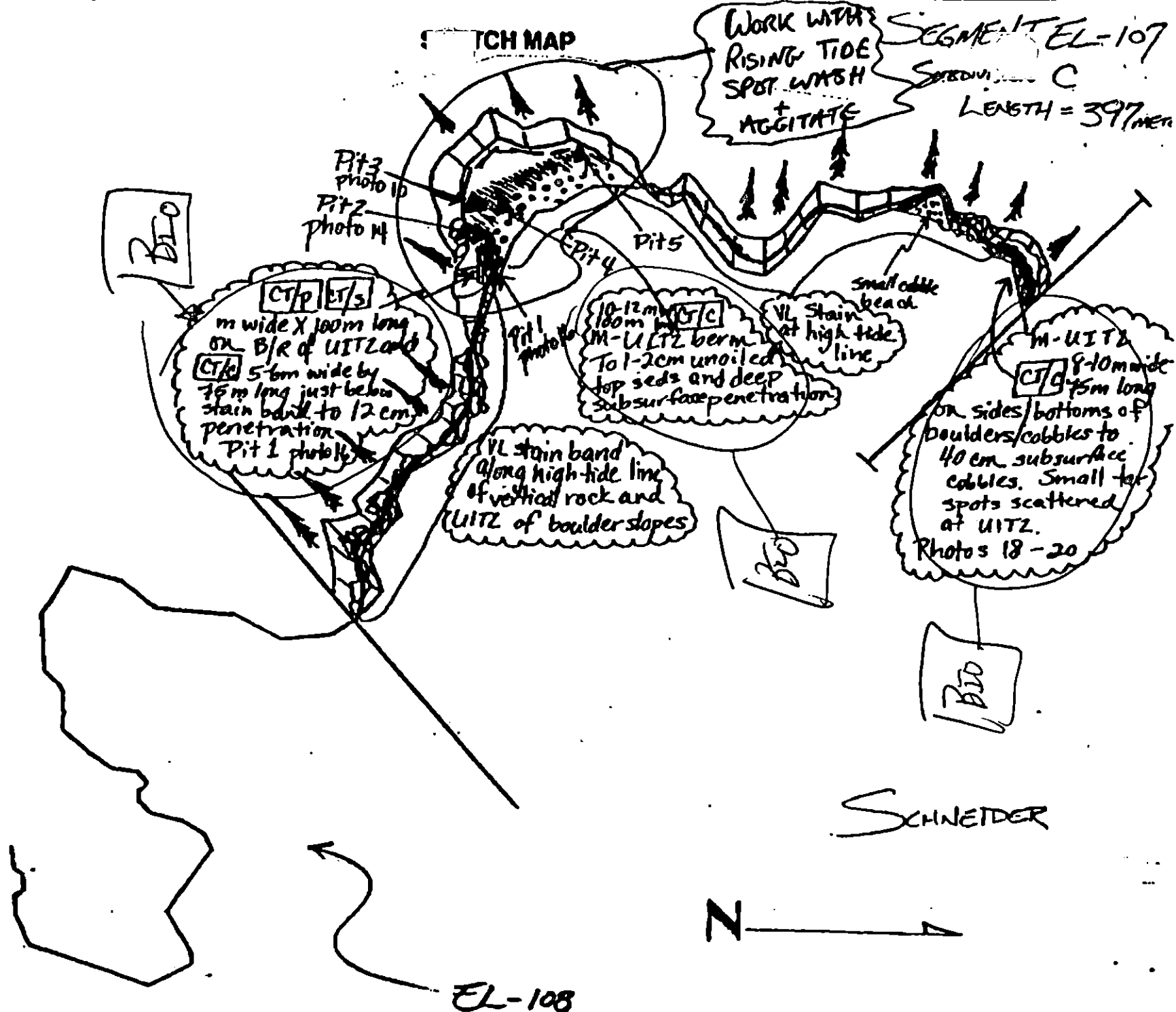
CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Scattered Distribution

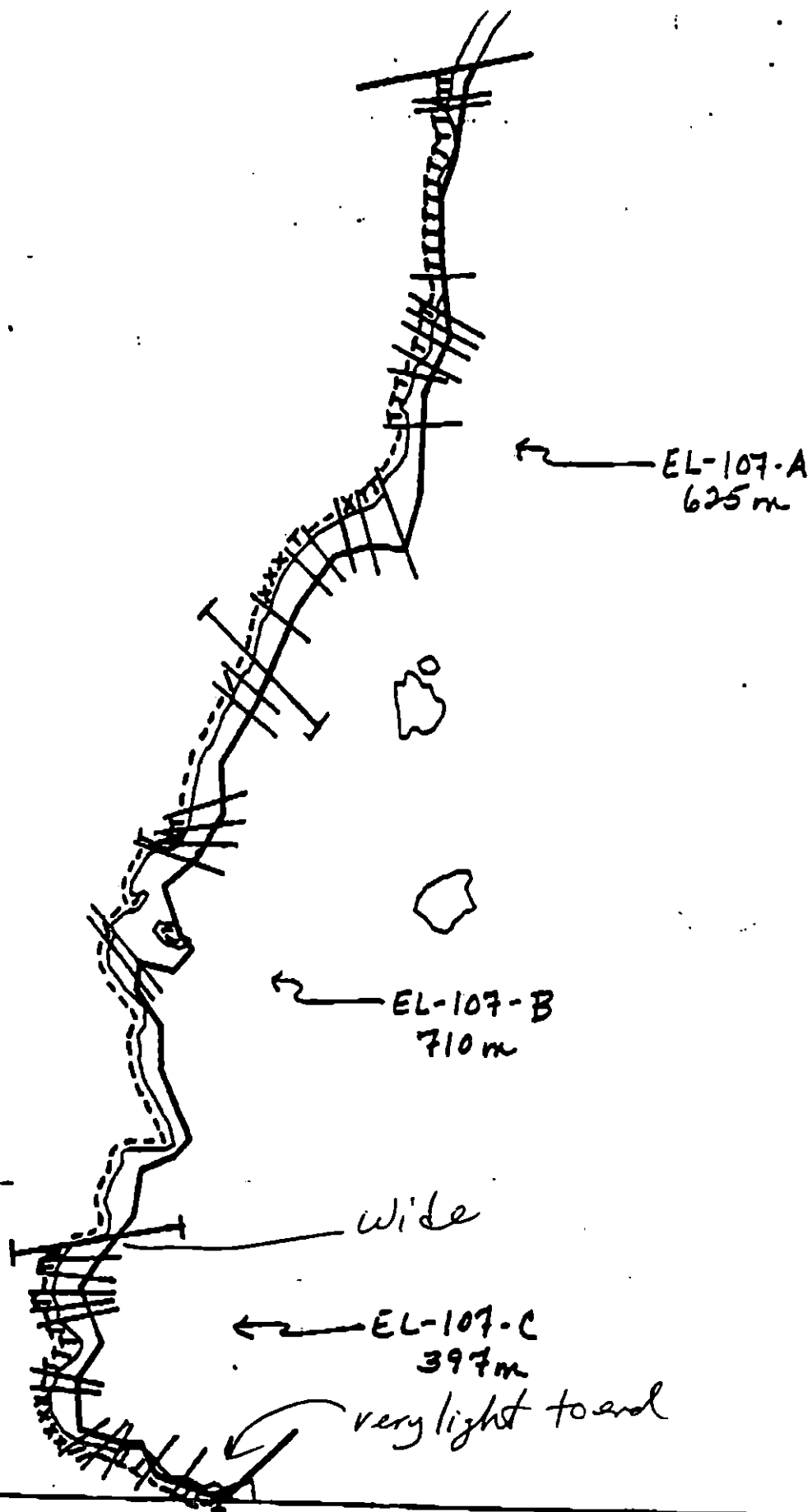
Oil Vegetation

1 ●●
Photo location, direction,
and number



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

REVISION 000000



(XXX 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

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

X NTR

Treatment

Recommended:

NTR

OG - SPORADIC SOR
NO SUBSURFACE OIL

HIGH ENERGY

Priority Site For Reassessment In 1991

YES

NO

 CG

X

YES

NO

X ADEC

YES

 EXXON

NO

X

YES

X LAND MGR

NO

FIELD SHORELINE COMMENT SHEET

SEGMENT AS / ELIOT 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 Coat/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:

Concur w/ ADEC.
SOR/I verba C/U 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.

ASAP FOLLOWUP RECOMMENDATIONS

Project: ASI EL107 Subd.: C Site: 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/I, OP/u. North of the outcrop, the SUTZ is loaded with OP/E
on surface C.P. to a profile of 30-40 cm OP.

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

Completed by Pickup Crew: ☐ YES ☒ NO

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

ADEC

Wesley Ghoramley
 (name)

Wesley Ghoramley
 (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 berm relocation on this site. There
is some oil existing in the berm but relocation would only re-expose
and create more of a hazard. I suggest we give him a choice and reason
in '91.

USCG

Bl Leo Bergelson
 (name) NOAA: ART WENGER

Leo Bergelson
 (signature) Art Wenger

Comments: Agree with storm berm relocation accompanied by hot water
wash and appropriate containment

Land Rep.

John Ebel
 (name)

John Ebel
 (signature)

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

ASAP TAG REVIEW SHEET

Segment: EL107

Subd: C

Site: 2

Date

PRE-Review 14 AUG 90

Priority For Addressing In 1990

HIGH

MEDIUM

LOW

NTR

Treatment
Recommended:

NTR

Am per
Recommendation
Sheet

OG / SKETCH - SOR PATCHY

- SUBSURFACE - OP

NTR

Does not agree with

Recommendation Sheet - indicates H/SOR removal

- STORM BERM relocation

HIGH ENERGY

Priority Site For Reassessment In 1991

YES

NO

YES

CG

YES

NO

YES

ADDEC

YES

NO

YES

EXXON

YES

NO

YES

LAND MGR

TAG 15 AUG 90

STORM BERM Relocation

(BIO already sched)

remove surface OR sediments
Spot wash

LOW

FIELD SHORELINE COMMENT SHEET

SEGMENT AS/ ELIOT SUBDIVISION: C 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:

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 H₂O 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 SITE.
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 custodial and winter storm activity.

ASAP SHORELINE OILING SUMMARY

PAGE 01

TEAM NO ASAP#2 EXXON SoTELO SEGMENT AS FL107
 OG CHANEY USCG WEINER/BERSALONA SUBDIVISION C
 ADEC GHORMLEY LAND REP EBEL, JOHN TOTAL NO. SITES 2
 DATE AUG 11 /90 TIME 13:15 to 13:50 TIDE LEVEL 3.5 to 6.0
 TOTAL EST LENGTH OF SHORELINE SURVEYED: 150m
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WEATHER: ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 OIL CATEGORY LENGTH: W 25 m M 90 m N - m VL - m NO 35 m US 221 m

SURFACE OIL

SITE 1

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT								
S.O.R.				X		X		
POOLED								
COVER				X		X		
COAT	X					X		
STAIN		X	X			X		
MOUSSE								
PATTIES/T.B.								
FILM								
NO OIL					X		X	X
EST. SITE LENGTH					60			

SITE 2

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT								
S.O.R.			X			X		
POOLED								
COVER								
COAT			X	X		X		
STAIN								
MOUSSE								
PATTIES/T.B.								
FILM								
NO OIL					X		X	X
EST. SITE LENGTH					90			

SITE 3

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

SUBSURFACE OIL

SITE NO.	PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER				OILED INTERVAL	CLEAN BELOW (Y/N)	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS
			OP	OR	OF	NO			SU	UI	MI	LI	
1	1	40				X	.	Y		X			P-P
2	2	40	X				30-40	N		X			CPG-BEAG
2	3	20		X			0-20	N	X	X			CPG-CPG
							.						
							.						
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							.						

Photographs: ASAP#2
 Roll No. Roll#3
 Frames 8

STORM BERM

COMMENTS SEE ATTACHED NOTES.

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.

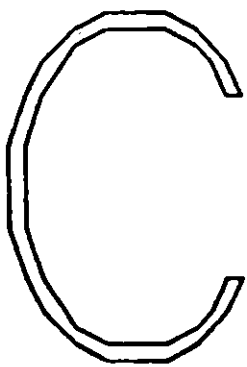
LEGEND

SITE 1

NO SURVEY

SITE 2

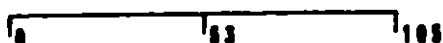
NO SURVEY



EL-107 C

ADEC Subsegment Length: 381m

METERS



Subdivision Field Map

Map Key: KMIEL-107C

Name: CHANEY

Date: AUG 11 1990

XXX

Wide

////

Medium

Narrow

TTTT

Very Light

ASAP Follow-Up Recommendations
TAG Recommendations - August 15, 1990

GOA

SEGMENT

WB-02 C Site 1 Manual pickup of AP and mousse where accessible - one day maximum followed by bioremediation (M.P.)
WB-02 D Site 1 Follow-up with bioremediation application and reassessment in '91 (M.P.)
WB-02 E Site 1 NTR - Reassessment in '91
WB-03 D Site 1&2 Manual pickup of AP and mousse followed by bioremediation - one day maximum (L.P.)
WB-09 A Site 1 Reapply bioremediation (L.P.)
YG-02 A Site 1 NTR

PWS

EL-53 A Site 1 Reapply bioremediation - reassessment in '91 (L.P.)
EL-53 B Site 1 NTR - reassessment in '91
EL-54 A Site 1 Reapply Customblen - manual rake where feasible (M.P.)
EL-104 C Site 1 Bioremediate small patches (L.P.)
EL-106 B Site 1 Reapply bioremediation and reassessment in '91 (M.P.)
Site 2 Reapply bioremediation and reassessment in '91 (M.P.)
Site 3 Reapply bioremediation and reassessment in '91 (M.P.)
EL-107 A Site 1 Reapply bioremediation and reassessment in '91 (M.P.)
Site 2 Reapply bioremediation and reassessment in '91 (M.P.)
EL-107 B Site 2 Manual till, remove surface OP and bioremediate, reassessment in '91 (H.P.)
EL-107 C Site 2 Storm berm relocation, remove OP sediments or spot wash and pickup with snares - bioremediate (L.P.)

ls
ls

See attached Archaeological Contract for EL-107C. R. Byrd / SHPC rep.

TAG

EXXON

ADEC

USCG

NOAA

Ann Tera
RAY MORRIS R.D. Morris
Edith L. ...
Bullabscott Bullabscott

DATED

FOSC

DATED

Aug 15 1990

17 AUG 90

Work closely with land managers to effect cleanup.

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.

SHPO SIGNATURE: Charles E. Homan 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:

X No Treatment Recommended

Treatment Recommended

Manual Pickup

Bioremediation

Tarmat: Breakup

Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

Spot Washing: _____ Wands _____

Beach Cleaner

Other (see comments)

COMMENTS: _____

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

TAG APPROVAL DATE: 4/24/90

ADEC ART WENNER Art Wenner

EXXON *Amey T. G. [Signature]*

NOAA Joseph Talbot, Treasurer

USCG U. S. J. HALL NEW YORK

FOSC:

DATE: 5-3-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
- 1D Esther Hatchery release (4/15 to 6/1)
- 1E Main Bay Hatchery release (4/20 to 5/10)
- 1F Sawmill Bay Hatchery release (4/15 to 6/1)
- 1G Cannery Creek Hatchery release (4/21 to 6/1)
- 1H Remote release site
- 1I Gill net area (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)
 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.
- 6T 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 ~~Recreation: Campsites (6/1 to 9/15)~~
- 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.

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 rock faces and boulders.

ADECNAME Michelle Gae SIGNATURE Mae☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

- 1) Manual scrubbing of B's 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-up of the patches of asphalt in the 2m x 2m section on the east side of the beach should also be considered.
- 3) 1/2 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 MANAGERNAME DAN LOGAN SIGNATURE Dan Logan☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

- 1) MANUALLY RAVO BOULDERS ON EAST SIDE OF BEACH INDICATED ON SKETCH MAP AND
- 2) PICK UP TAR PATCHES IN 2M X 2M SECTION.
- 3) 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. Clants LAND REP D. Logan SUBDIVISION A (1 OF 3)
 EXXON Ti Temlin ADEC M. Baer TIME 10:50 to 12:00
 TEAM NO.: 5 TIDE LEVEL: +1 to 0 DATE 04/01/90
 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: Long 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			
	R	B	P	C	1	2	3	4	5	6	7	8	SU	U	M	L
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT		X						X					X			
STAIN		✓	X					✓	X				✓	X		
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL													S	X	X	

PAVEMENT: H F S 0 sq. m by 0 cPATTIES / 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 barm, t#BAGS 0

Photographs:

Roll No. _____

Frames _____

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CE)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS	
		OP	OR	OL	OF	NO		BO	UC	20L CR	20L FR	5Y SL	10Y SL	TL LRT	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.

PAGE 6 OF 19

OG J. C. Ringel
SEGMENT EL 108

SUBDIVISION A

DATE 04/01/90

CHECKLIST

- ☒ N. Area
- ☒ Approx. Scale
- ☒ Substrate
- ☒ Substrate
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ % of HMLA/WL
- ☒ SSI
- ☒ Profile Location(s)
- ☒ Photo Location(s)
- ☒ Photo Location(s)

LEGEND

1 Δ
Pt - No Subsurface Oil

2 Δ
Pt - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

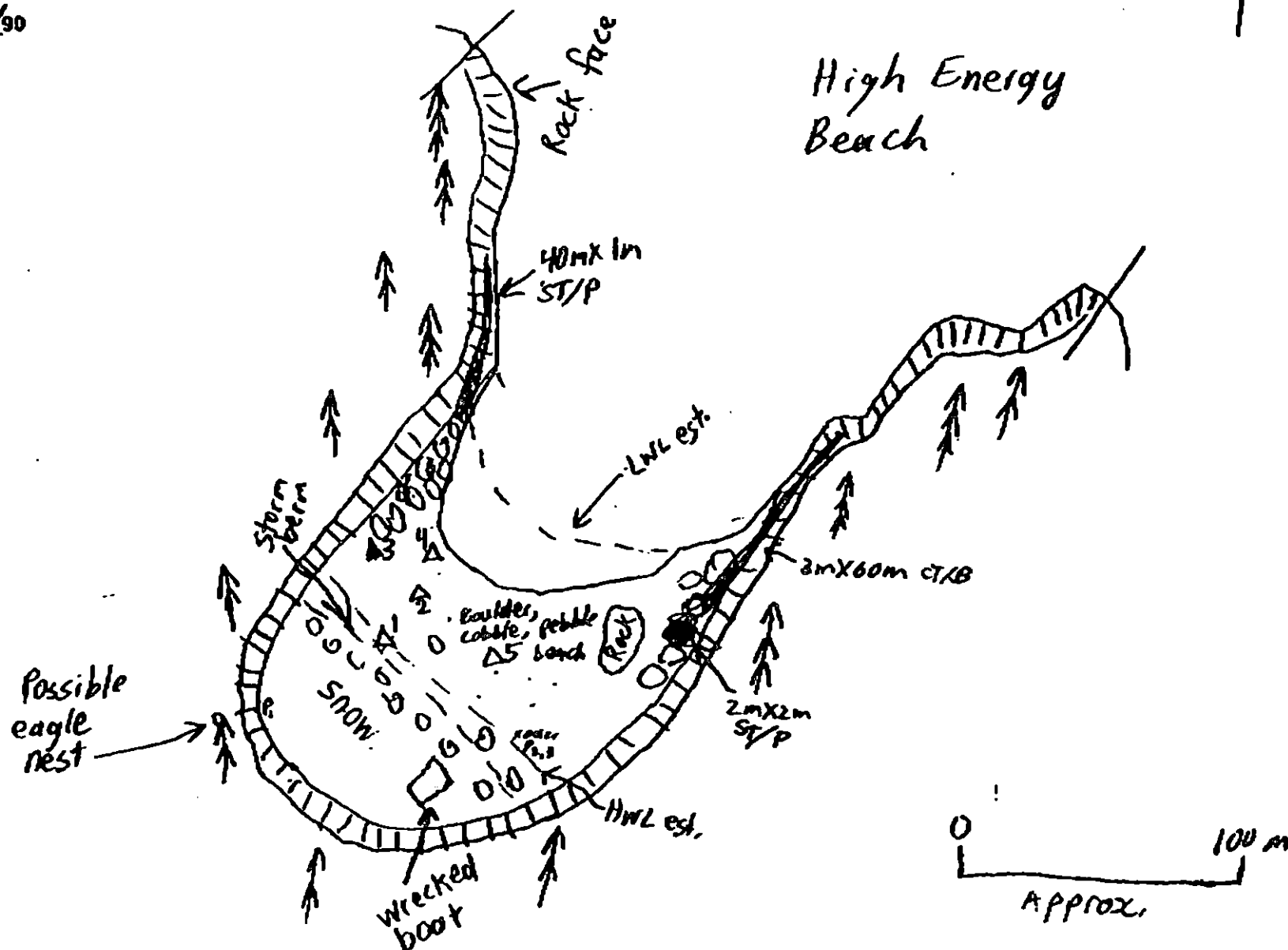
CT/P
Patches Distribution

CT/S
Splashed Distribution

Oiled Vegetation

1 →
Photo location, direction,
and number

ETCH MAP



Page 7 of 19

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

REVISION: 03/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 09/22/90

Segment ST / 108 Subdivision A Date (mo / day / yr) 4/1/90Time (24 hr) 1050-1210 Biologist Crank Tide Height: 1 → 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), &
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
~~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
4, 5

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
4, 5

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
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	~~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
2, 4, 5

Wildlife Observations/ General Comments:

3 Bald Eagle - Adult Fresh Dead Sea Otter in SUPRA (eyes gone)
1 - Harbor Seal - Adult Land Otter Tracks
1 - Gull Deer tracks } in SUPRA snow

Ecological Considerations: River tracks

6Y

711

EL 108 A

Crank

1050 - 1210

Length: 225m

70 ft

Species List:

HITZ

Flora

Endocladia
Cladophora
Porphyra
Green Encrustose (Ultrasera?)

Fauna

Balanus glandula
Littorina

MITZ

Halosarcion
Fucus
Enteromorpha
Gloiopeltis
Spongiomorpha
Porphyra

B. glandula
B. cariosus
Mytilus
Littorina

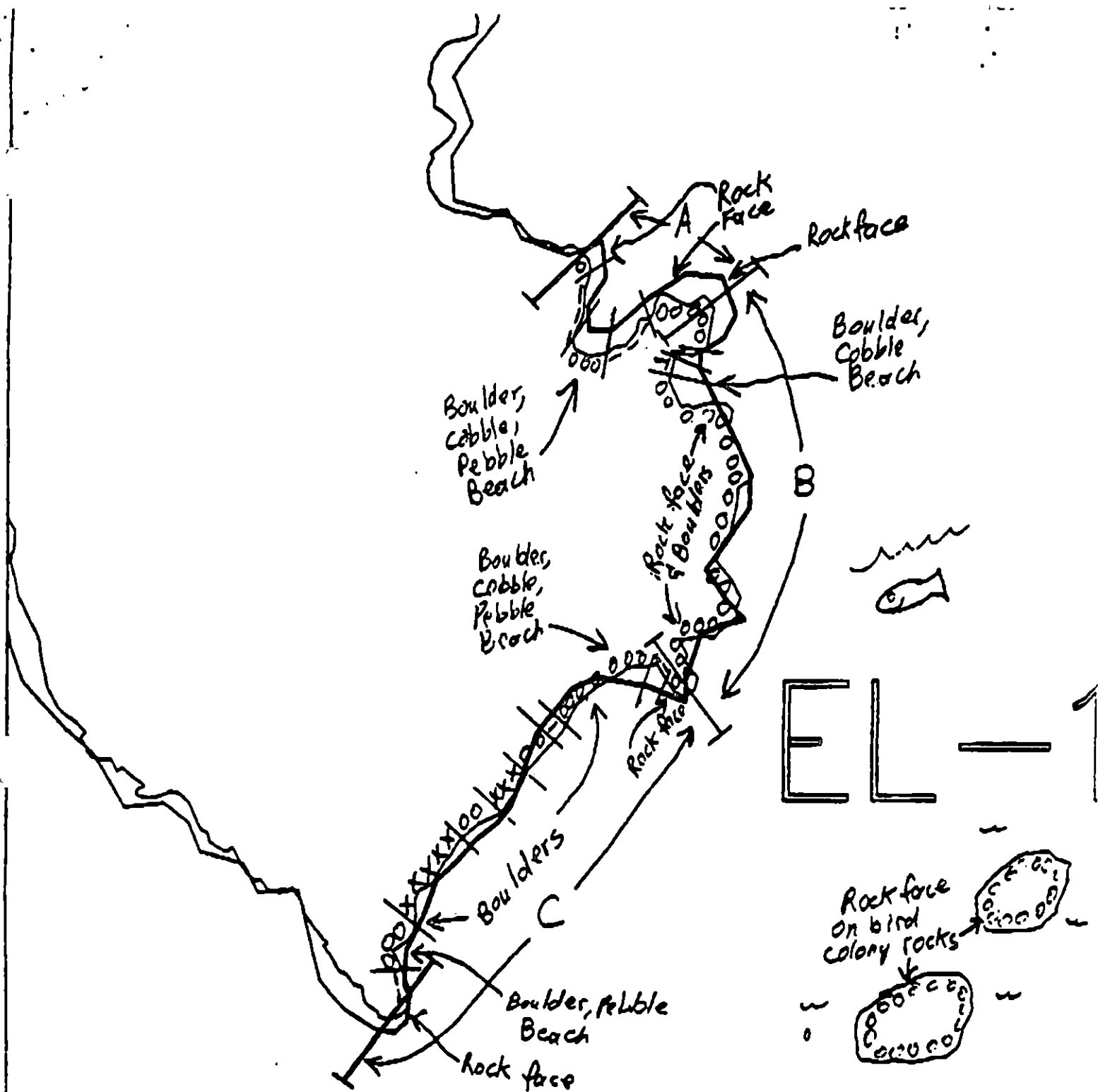
LITZ

Alaria
Bosella
Littorothamnion
Small Blades spp. (Rhodomela? Trepostoma?)
Rhodomela larix
Odonthalia sp
Ulva fenestrata
Calophyllis
Enteromorpha
Green filamentous

Dermasterias
Piaster
Mysids
Orthasterias kochleri
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 stuffing from substrata.
- Small tide pools in LITZ bedrock
- Alaria appears to replace Fucus in LITZ
- Mytilus distribution is patchy. High recruitment. Bed appears healthy = 5% mort
- Mollusca shell in pebble
- High energy beach with rounded rubble/pebble/sand = low macrobiota



PAGE 8 OF 19

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 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.

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:

X No Treatment Recommended

R Treatment Recommended

 Manual Pickup

X Bioremediation

 Tarmat: Breakup

 Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 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 TALL

NOAA Joseph C. Kilpatrick

USCG M. J. HALL

FOSC:

DATE: 5-3-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

COMMENTS

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

SHORELINE OILING SUMMARY

REVISION NO. 83/23

OG J. Springer USCG R. Vandepels SEGMENT ST/ EL 108
 BIO P. Crank LAND REP D. Logan SUBDIVISION B (2 of 3)
 EXXON T. Tomblin 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 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 30 % Hang 10 % Vert 60 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 20 m N 0 m VL 0 m NO 504 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	N	P	S	1	2	3	4	5	6	7	8	SU	U	M	V
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT		X	X			X							X			
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL													X	X	X	

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	X		
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED

☐ YES ☒ NOTYPE 0#BAGS 0

Photographs:

Roll No. 0Frames 0

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
		CP	CR	CL	CF	NO		NO	NC	1 OR 2	3 OR 4	5 OR 6	7 OR 8	9 OR 10	SU	U	M	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.

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

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/20/90

Segment ST/ EL 106 Subdivision B Date (mo / day / yr) 4 / 1 / 90Time (24 hr) 1210 - 1410 Biologist Crank Tidal Height: 0 → +1Length: 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 (3)

Photographs:

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

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

345

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

345

Wildlife Observations/ General Comments:

4 Gulls: 1-heard, 2 on H₂O, 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

10 - 1410

0 → 11 ftSpecies ListFloraFauna

HITZ

Endocladia

Balanus glandula
Littorina
Limpets

MITZ

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

LITZ

Rhodomenia palmata
Sm. bladed reds
Cladophora
Lithothamnion
Bosiella
Alaria
Enteromorpha
Ralphsia
Filamentous greenAmphipod
Littorina
Littorina eggs
Orthasterias koehleri
Piaster
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 (≈ 2m x 3m) covered with Rhodomenia larix. The R. larix is covered with Littorina scots. Sensitive area foot traffic should be avoided.
- Angular cobble behind boulders with dense concentrations of Littorina and Limpets.

Page 2 of 19

OG J. Spi yer
SEGMENT ST/ EL 108SUBDIVISION BDATE 04/01/90

CHECKLIST

- ☒ M Arrow
- ☒ Approx. Scale
- ☒ Seq/Sub Entry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ Cover
- ☒ Substrate Character
- ☒ Ex. FWA/LWA
- ☒ SSL
- ☒ Profile 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

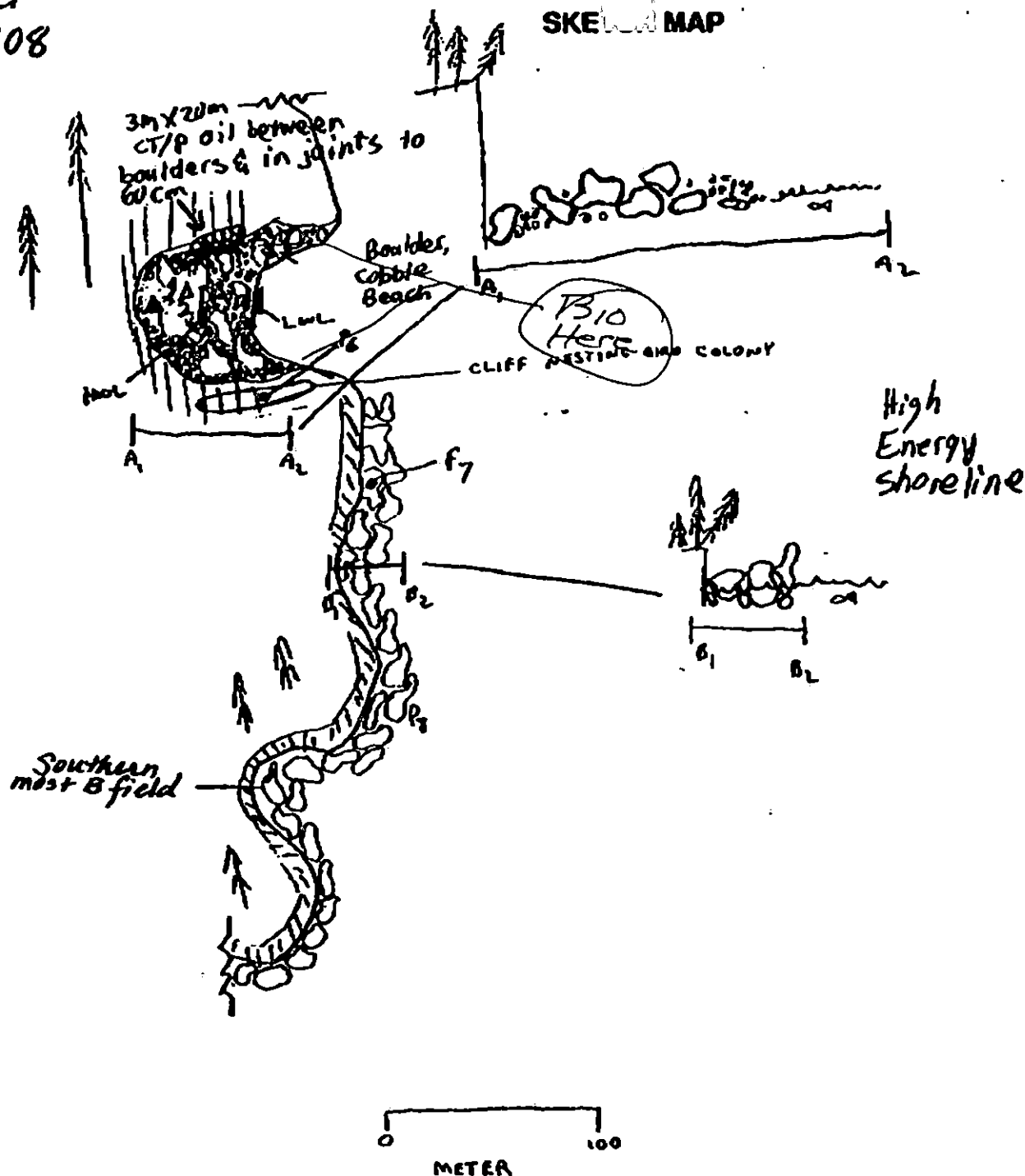
Smeared Distribution

Oiled Vegetation

1 ●→

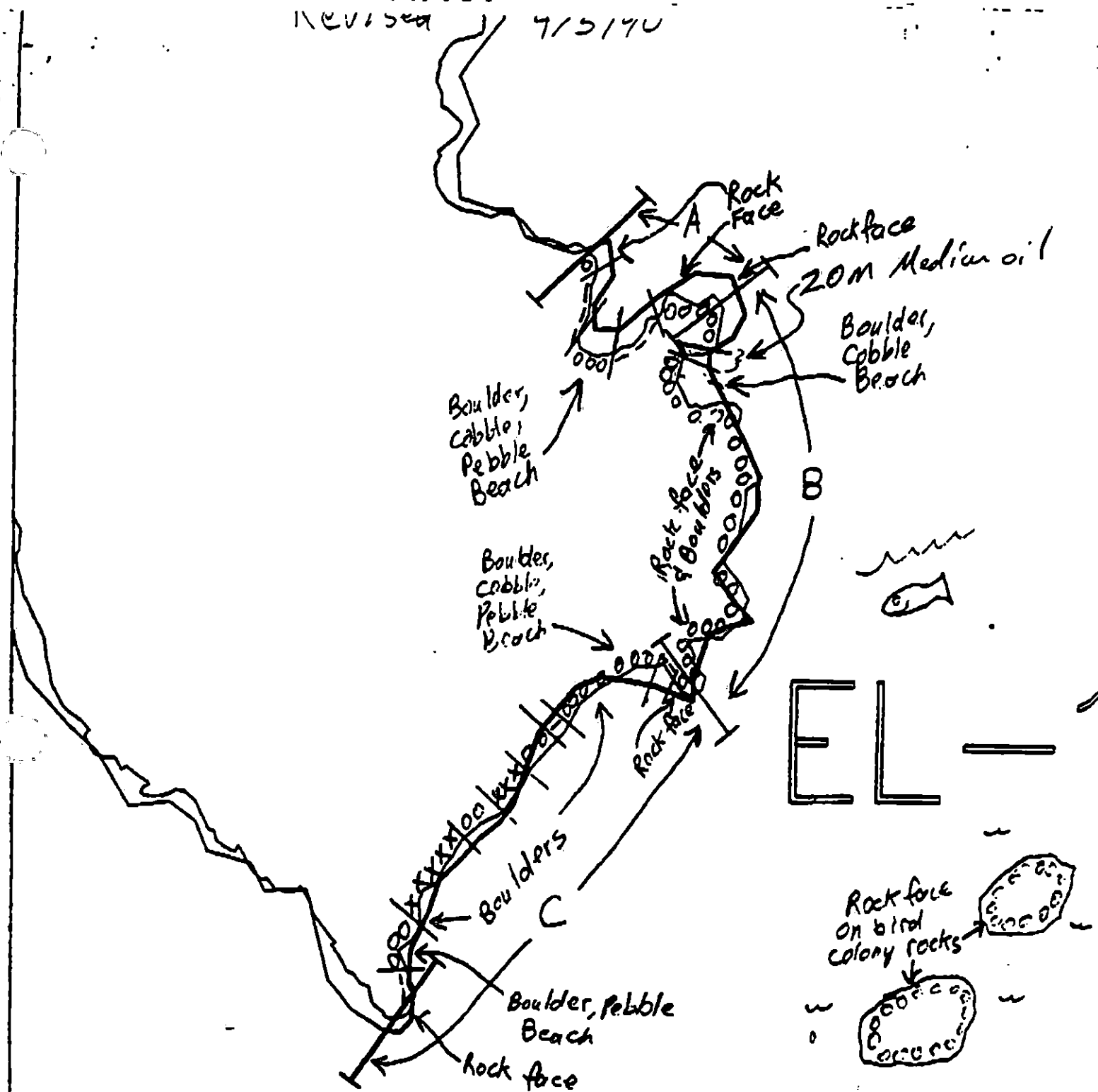
Photo location, direction,
and number

SKE MAP

0 100
METEROil Character Length (m): AP _____ PO _____ CV _____ CT 20 ST _____ MS _____ PT _____ TB _____ FL _____ NO 504

REVISION: 000000

REVISED 7/5/90



EL-1

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: 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.

SHPO SIGNATURE Charles E. H. Smith 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:

☐ No Treatment Recommended	☐ Snare/Absorbent Booms
☒ Treatment Recommended	☒ Oil Snares (pom poms)
☐ Manual Pickup	☐ Absorbents (pads, rolls, etc)
☐ Bioremediation	☐ Spot Washing: <u> </u> Wands
☐ Tarmat: ☐ Breakup	☐ Beach Cleaner
☐ Removal	☐ 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 BIORESTRICTION IN AREAS INDICATED ON SKETCH.

TAG APPROVAL DATE: 9/24/90

ADEC ART WEAVER Art Weaver

EXXON ANDY TERRY Andy Terry

NOAA Joseph J. Hall Joseph J. Hall

USCG M. J. HALL M. J. Hall

FOSC: WJL

DATE: 5-3-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
 1D Esther Hatchery release (4/15 to 6/1)
 1E Main Bay Hatchery release (4/20 to 5/10)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 1I Gill net area (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)
 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
 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.

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 ☒ TREATMENT SUGGESTED

COMMENTS

I suggest placing pompoms 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 Michelle Baer SIGNATURE M Baer☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

EL108 is a high energy beach with a prolific ~~macro~~^{mytilus}, balanus, and fucu. 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 Bs as well as the underlying areas. Two primary methods of treatment are recommended: 1) As the oil warms, pack snare booms in the areas between the Bs, 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 LM Band of 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 ☒ TREATMENT SUGGESTED

COMMENTS

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 SNARE 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. 00/02/78

OG J. Springer USCG R. Vandepels SEGMENT ST/ EL 108
 BIO P. Creak LAND REP D. Logan SUBDIVISION C (30F3)
 EXXON T. Tamlia 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: Long 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			
	10	15	20	25	30	35	40	45	50	55	60	65	SU	U	M	U
ASPHALT PAVEMENT				X		X								X		
POOLED			X			X								X		
COVER	X					X							X	X		
COAT		X				X							X	X		
STAIN		X		X				X					X			
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL															X	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)	BELOW	OIL / FILM COLOR								PIT ZONE	A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO			30	35	40	45	50	55	60	65			
1	30					X	.	X									X		BCPGS
2	20					X	.	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 N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UD	UC	~~1~~	~~2~~	~~3~~	~~4~~	~~5~~	~~6~~	SW	SH	SE	LI		
7	30					X	.		X							X					CP
8	30					X	.		X									X			CP
9	10	X					0-10	X		X						X					CPR
							.														
							.														
							.														
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							.														
							.														

COMMENTS

41

REVIEWED _____ DATE _____

03 J. Springer

SEGMENT EL108SUBDIVISION CDATE 04/01/90

CHECKLIST

- ☒ N Arrow
☒ Approx. Scale
☒ Map Sub Body
☒ Oil Dist.
☒ Width
☒ Length
☒ % Cover
☒ Substrate Character
☒ Est. HWA/LWL
☒ Photo 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

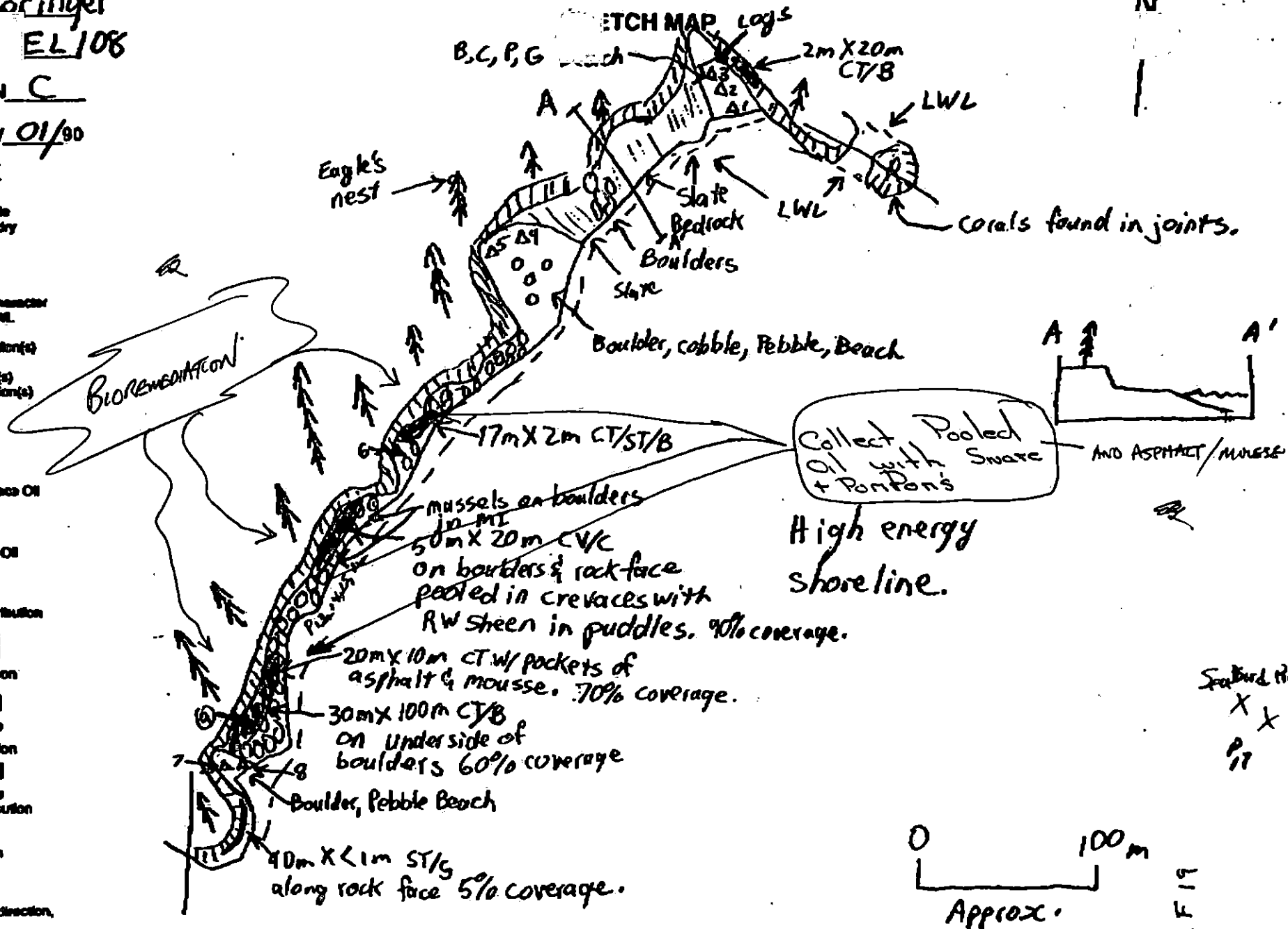
CT/S

Splashed Distribution

Oiled Vegetation

1 $\bullet$

Photo location, direction, and number

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

REVISIONS

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/28/90

Segment ST EL 108 Subdivision C Date (mo / day / yr) 4/1/90Time (24 hr) 1410-1640 Biologist CrankTidal Height: +1 → +7Length: 748m(A) Substrate type and % of segments:
(1) Bedrock 35 (2) Boulder 45 (3) Cobble 15 (4) Pebble 5 (5) Sand (6) Silt (B) Overall % cover of biota (% of segment): Dense 50 Moderate 10 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. Frames

BARNACLES

Dense			Moderate			Sparse			Rare			NOT PRESENT
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	

MYTILUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
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	

GASTROPODS

Dense			Moderate			Sparse			Rare			NOT PRESENT
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	

FUCUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
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	

Wildlife Observations/ General Comments:

Immature Golden Eagle (12th yr Bald Eagle?) - flying Marbled Murrelet - on H₂O
 2 Bald Eagle - Adult
 Sea Otter Seabird Rookery: Pelagic: Brandts Cormorants (100+)

Ecological Considerations:

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

6Y - Special Use Destination

7H - Deer Harvesting

5R - Sea Bird Colony - offshore rocks

16 OF 19

The area is a boulder beach with angular cobble in MITZ, cobble appeared rounded in LITZ observed through H₂O (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* gland. 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 ^{adults and spat} on boulders ; 10% morts.

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

3. LITZ: was unexposed when this area was surveyed. Observations were taken through H₂O. 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 ListFloraFauna

HITZ

Endocladia

Balanus glandula
Limpets
Littorina

MITZ

Filamentous greens
Small bladed red
Rhodomela larix
Fucus
Lithothamnion
Calliarthon
Halosaccion
Gloiopeltis
Endocladia
Odonthalia
Syrtosiphon
Mastocarpus papilataMytilus
Tidepool Sculpin
Balanus glandula
B. cariosus
Small orange sponge
Anthropleura
Littorina
Katharina tunicata
Coral

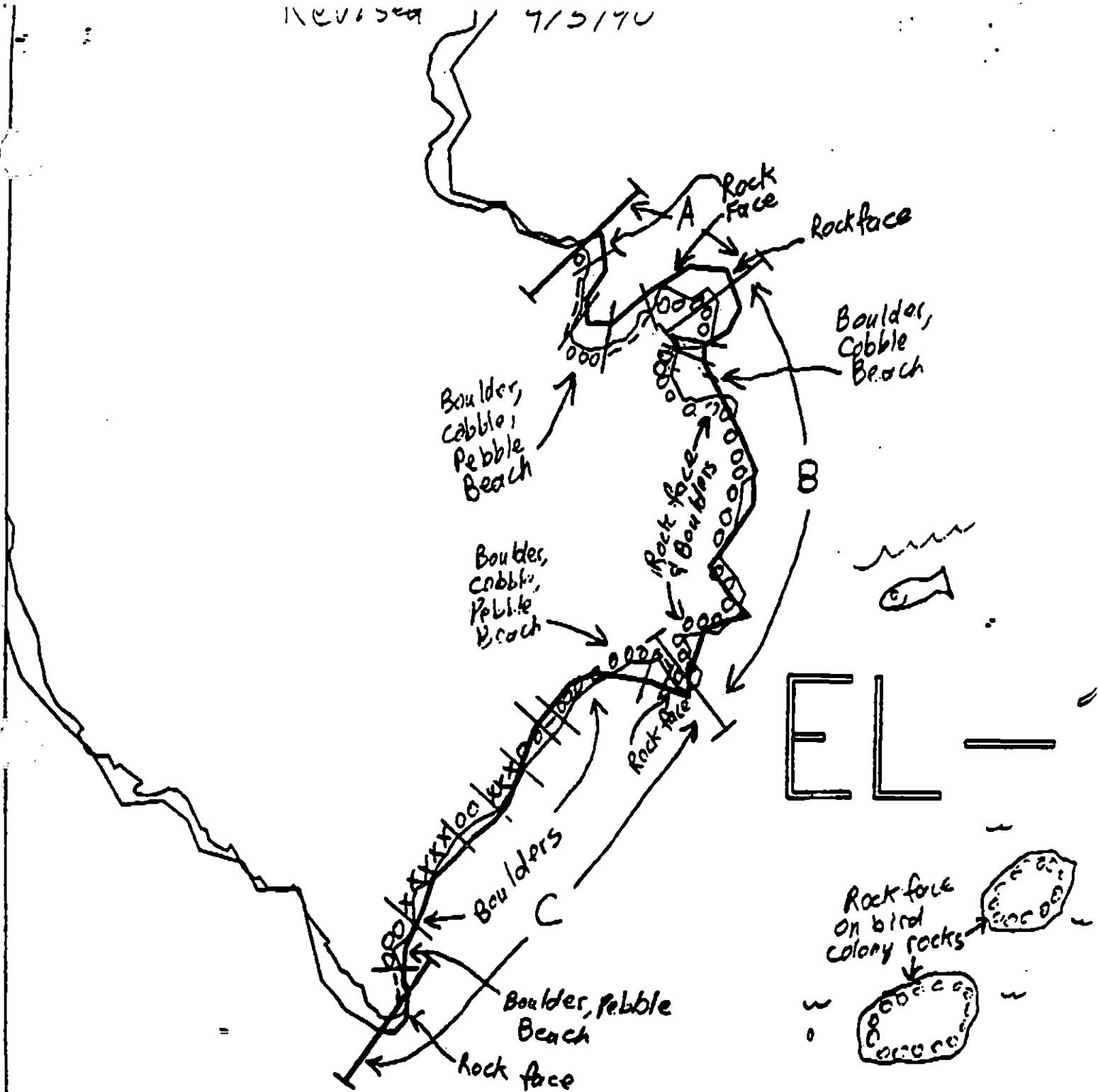
LITZ

Odonthalia
Alaria
Fucus
Cladophora
Bosie lla
Filamentous red
LithothamnionHydroid
Anthropleura
Bryozoan
Siphonaria
PiastrComments

- 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 page⁸¹ 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



Map Key: PWS-128

Name: James Springe

Date: 04/04/90

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

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

WORK WINDOW	
Manual Pickup	OPEN
Bioremediation Other Approved Treatment	WORK PRIOR TO 8/15

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

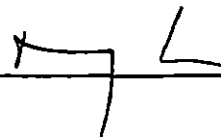
APPLICABLE ECOLOGICAL TIME CONSTRAINTS

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 uncollected biota and substrate.

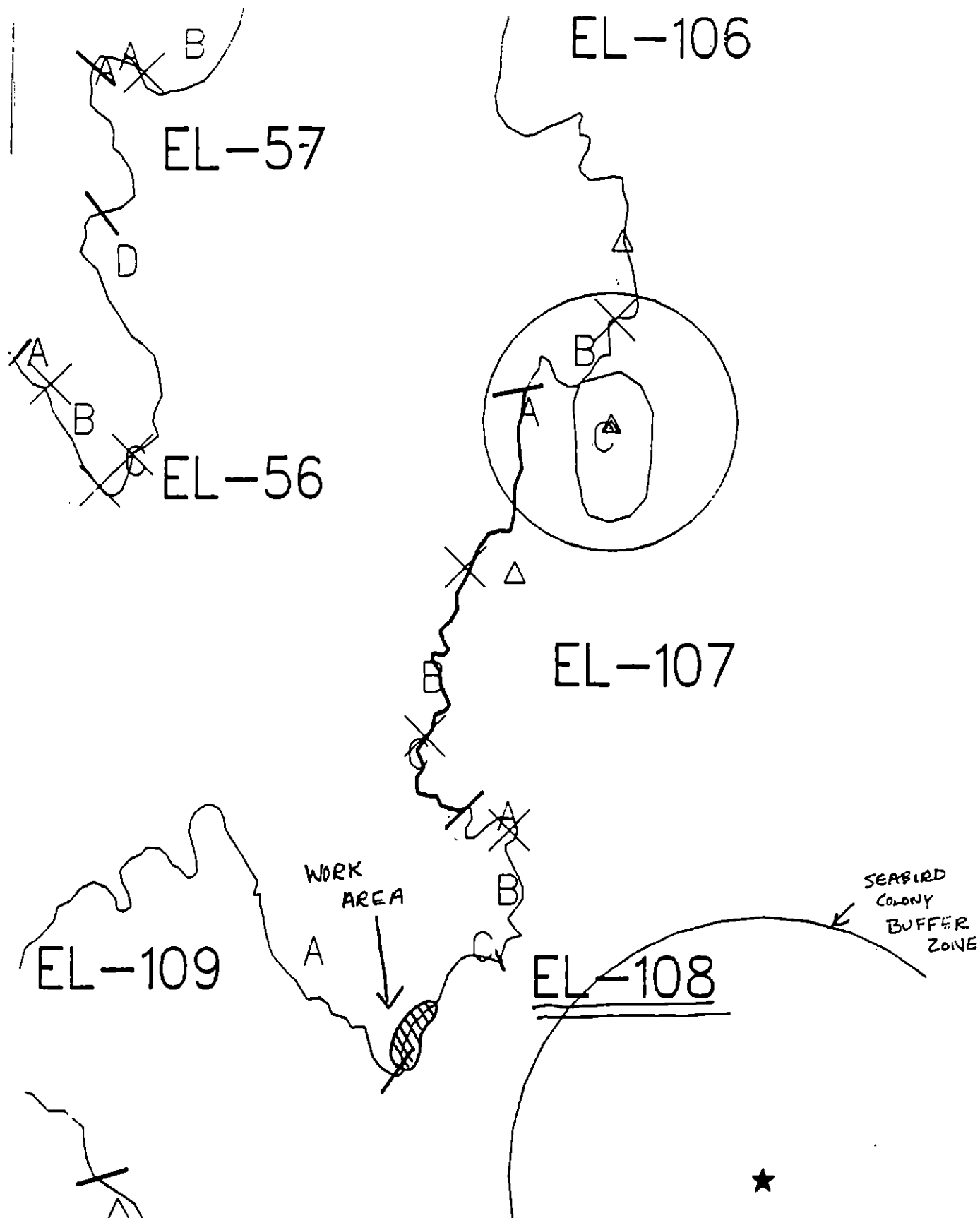
FOSC



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
0 376 752

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

1 inch = 1233 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.

SHPO SIGNATURE: [Signature]

DATE: 5/2/90

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.

TAG COMMENTS: Monitors To Assess Logs And Need For Treatment.

TAG APPROVAL DATE: 5/7/90

ADEC Art Weinst

EXXON Andy Tom

NOAA Gary Petrus

USCG G.A. Reiter

FOSC: [Signature]

DATE: 5-12-90

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G John Morton 267-2324
- Salmon fry nursery area (4/31 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or 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 uncoiled 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
- 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 Rothy 267-2206
- 5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 6/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U Recreation: Tent sites (5/1 to 9/15)
6V Anchorages (5/1 to 9/15)
6W Forest Service cabins (5/1 to 9/15)
6X Lodge (5/1 to 9/15)
6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
7-H Finfish harvesting
7-J Deer harvesting (8/15 to 2/25)
7-L 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 1 EL-109 SUBDIVISION: A DATE 4/23/90

USCG

NAME William E. White

SIGNATURE

William E. White☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

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 J. Montesano☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTEDSee Attached

LAND MANAGER - USDA Forest Service

NAME Don J. Breitinger

SIGNATURE

Don J. Breitinger☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

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 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 on REVISION NO. 02/1/88)

EL109-A ADEC Comments

Peter Montesano

- Bioremediation

- Pit: #3 (Bedrock Plateau), #4, #11 (remove Tar Splatters First #14 (heavy brown Oiling), #16 (marginally Appropriate)
- Pit #6: remove patches, splatters, swarms, 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

REVISION NO. 06-13

OG C. DILLON USCG PS1 E. WHITE SEGMENT ST/ EL-109
 BIO J. BARRY LAND REP D. BREITENBERG (NFS) SUBDIVISION A (1 OF 1)
 EXXON G. STILES ADEC P. MONTESANO TIME 5:30 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: Long 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	B	P	R	1	2	3	4	5	SU	U	M	V
ASPHALT PAVEMENT		X							X		X		
POOLED													
COVER				X	X						X		
COAT													
STAIN	✓	X	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 cPATTIES (TARBALLS) 1 BAGSNEAR 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 unrilled fast#BAGS 3

Photographs:

Roll No. ST-6-16Frames 26, 27, 29, 30, 32

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				AN	DEPTH (cm)	↓	SURFACE SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		NO	UC	1	2	3	4	5	SU	M	M	U				
1	6		X				0-3		X				X		X					N	-	B/C-P/G/H
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-G/G/H
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 4HDATE 4-27-90

OG C. DILLON
TEAM 6

SHORELINE OILING SUMMARY (PAGE 2)
SEGMENT ST/ EL-109 SUBDIVISION A (1 OF 1)

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR					PIT ZONE				A	N	A	V	SURFACE SUBSURFACE SEDIMENT		
		OP	OR	OL	OF	NO		NO	NC	1	2	3	4	5	W	E	N	U							
7	35					X	.		X							X							N	-	C/P-7
8	25					X	.		X							X							N	-	B-C
9	35					X	.		X							X							N	-	C/P-P
10	15	X					0-8		X				X		X								N	-	B/C-P
11	10		X				0-1		X				X			X							N	-	C-P/C
12	30					X	.		X							X							N	-	FG-G
13	4		X				35-38		X					X		X							N	-	P-P/G
14	12				X		0-5		X					X		X							N	-	P-P/C
15	12		X				0-10		X				X			X							N	-	C/R-P
16	10		X				0-8		X				X			X							N	-	B/C-P
17	6		X				0-1		X				X			X							N	-	C-P/C
18	40					X	.		X							X							N	-	P-P/C
19	15		X				6-9		X				X			X							N	12	C/P-P
20	20		X				15-18		X	X						X							N	-	B/C-P
21	6		X				0-6	X					X		X								N	-	B-C/P

REVIEWED MH DATE 4-27-10

SEGMENT EL-709

SUBDIVISION A

DATE 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

- ☐ H Area
- ☐ Approx. Size
- ☐ Seg/Sub Body
- ☐ Oil Dis.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HAZ/AM
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Photo Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
P4 - No Substrate Oil

2 Δ
P4 - Substrate Oil

CT/C
Continuous Distribution

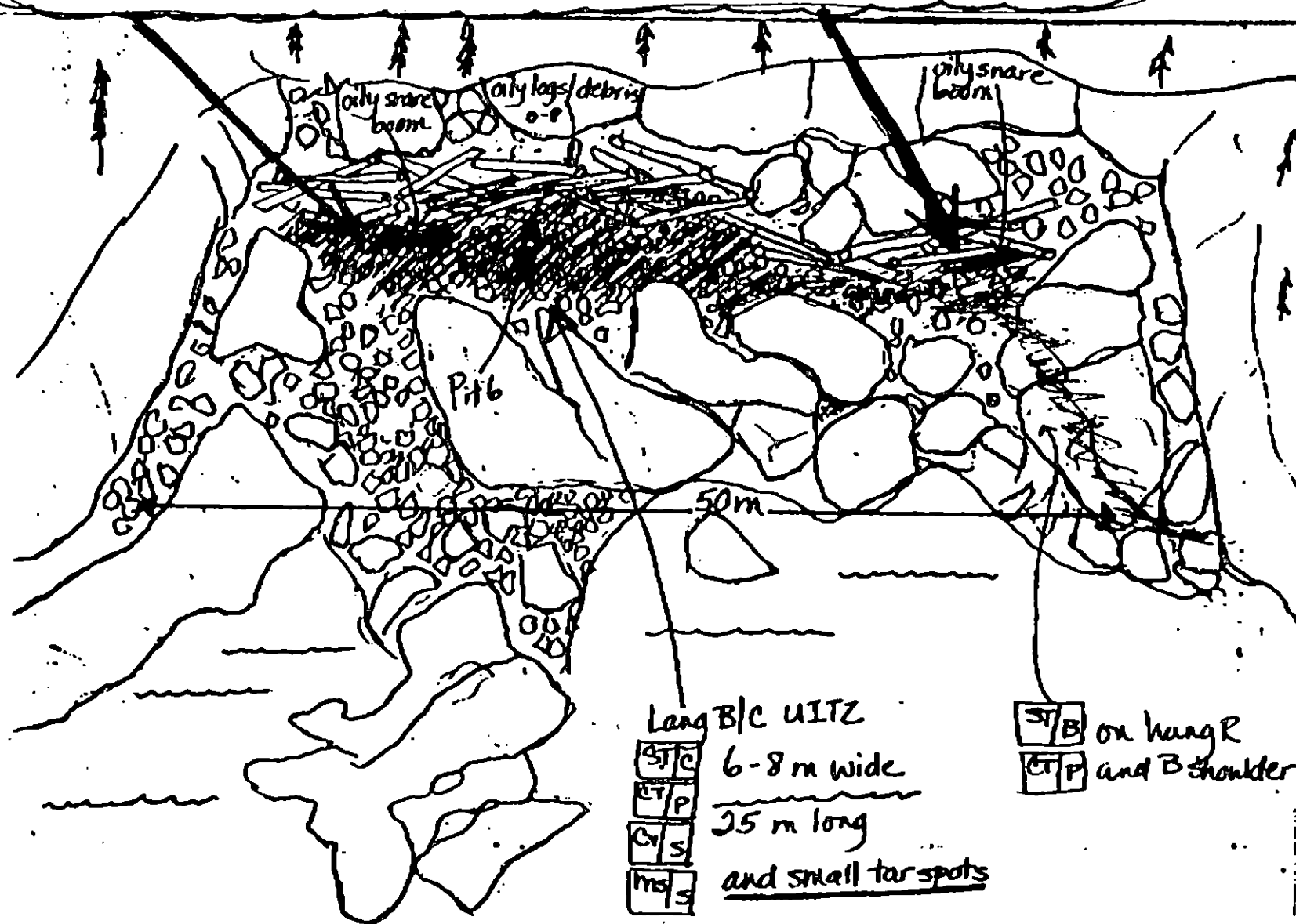
CT/B
Broken Distribution

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 3 CT 15 ST 30 MS 2 PT 0 TB 0 FL 0 NO 0

SEGMENT ST/ EL-109

SUBDIVISION A

DATE 04/23/90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Significant Study
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/LVL
- ☐ SSI
- ☐ 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

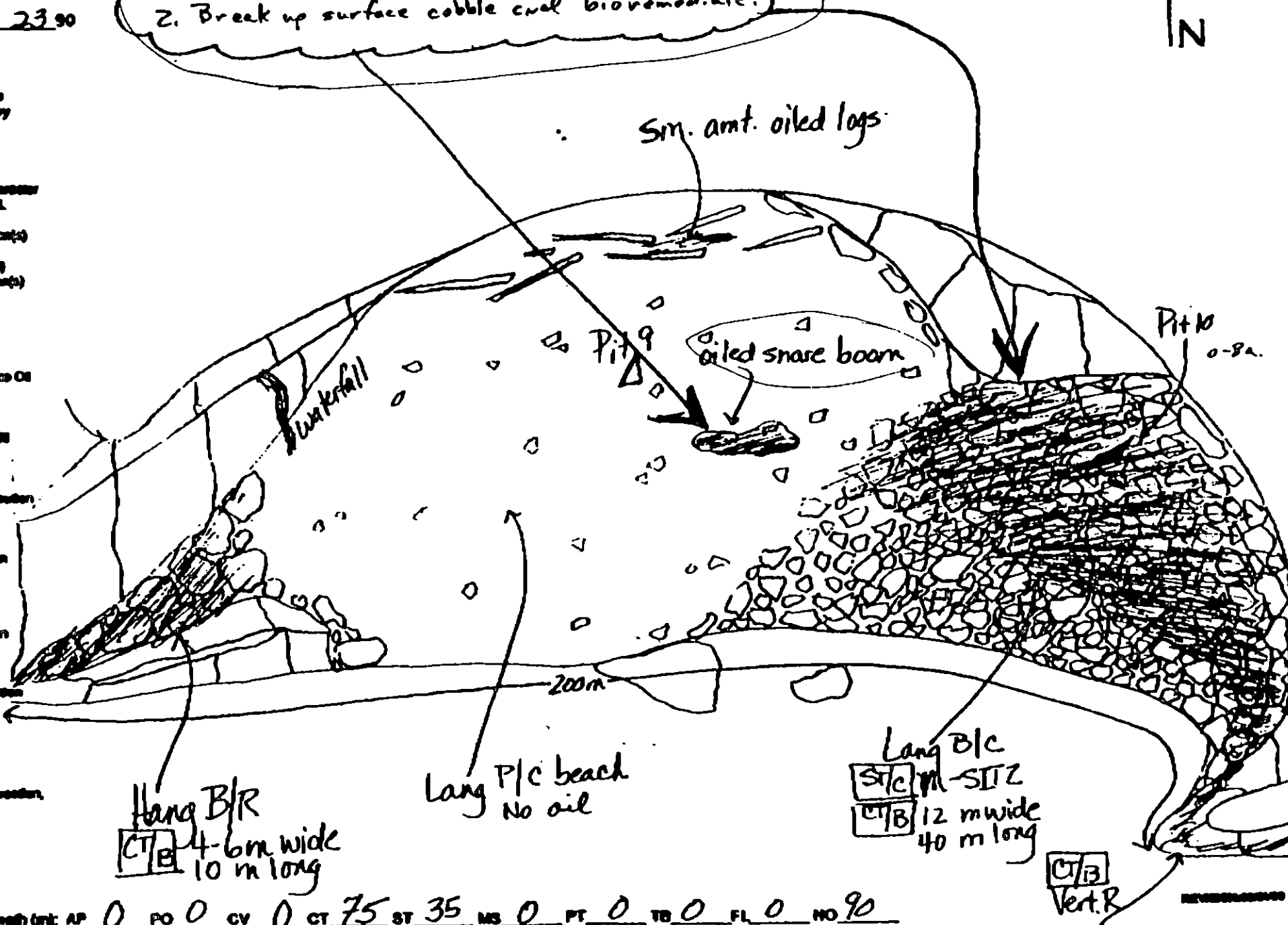
CT/S
Spatched Distribution

eee
Oiled Vegetation

1 ●
Photo location, direction, and number

SKETCH MAP #2

1. Manual pickup of snare boom.
2. Break up surface cobble coral bioherm.



Oil Character Length (m): AP 0 PO 0 CV 0 CT 75 ST 35 MS 0 PT 0 TB 0 FL 0 NO 90

DATE 04, 23 90

ETCH MAP #3



CHECKLIST

_____ N Area
 _____ Approx. Scale
 _____ Sediment Study
 _____ Oil Dist.
 _____ Wash
 _____ Length
 _____ % Cover
 _____ Substrate Character
 _____ Est. HPLA/VL
 _____ SCL
 _____ Profile Location(s)
 _____ Profile(s)
 _____ PB Location(s)
 _____ Photo Location(s)

LEGEND

1

P1 - No Subsurface Oil

2

P1 - Subsurface Oil

CT/C

Continuous Distribution

CT/D

Broken Distribution

CT/P

Patchy Distribution

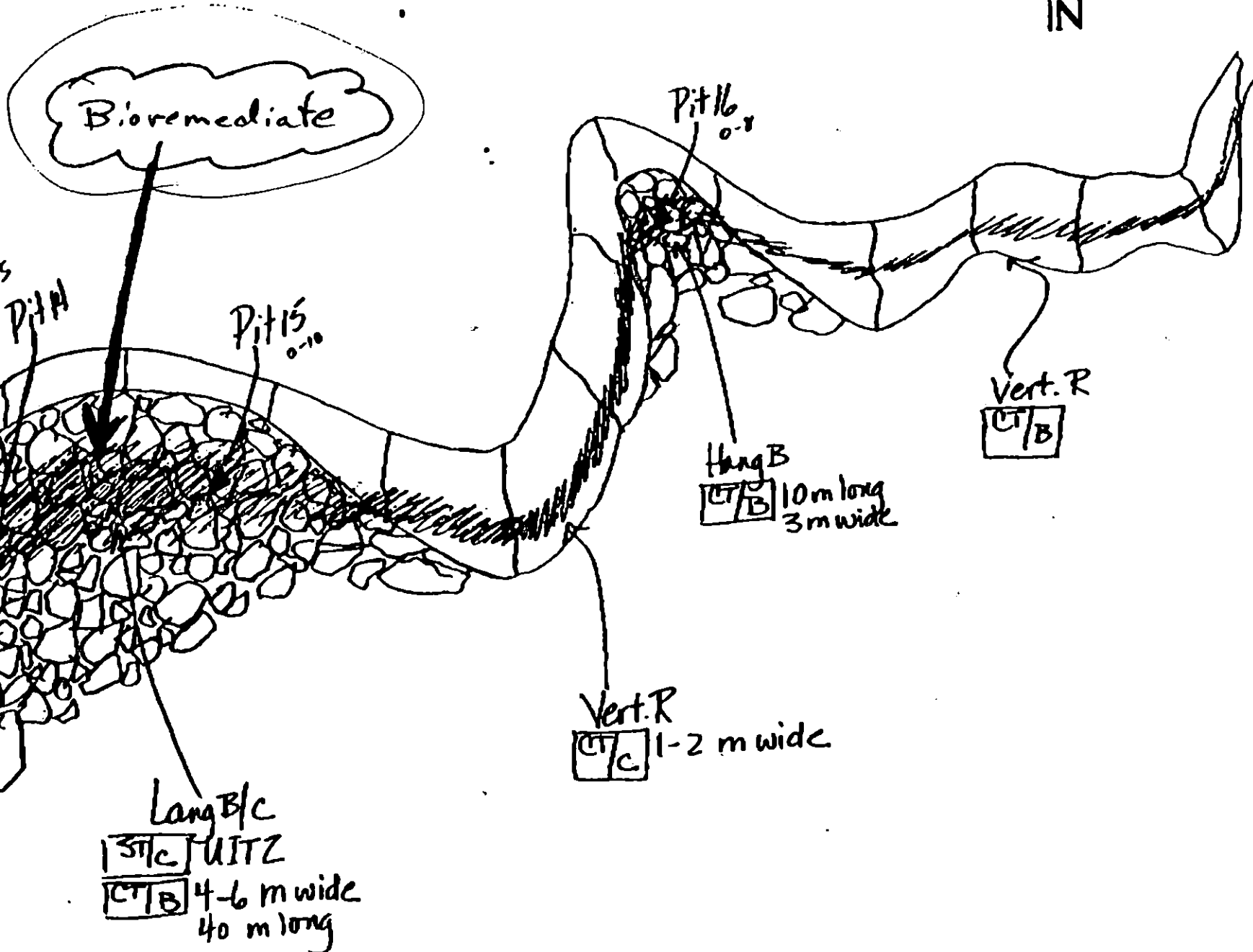
CT/S

Spaced Distribution

Oiled Vegetation

1

Photo location, direction and number



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 L. VILLON

SEGMENT STI EL-109

SUBDIVISION A

DATE 04/23/90

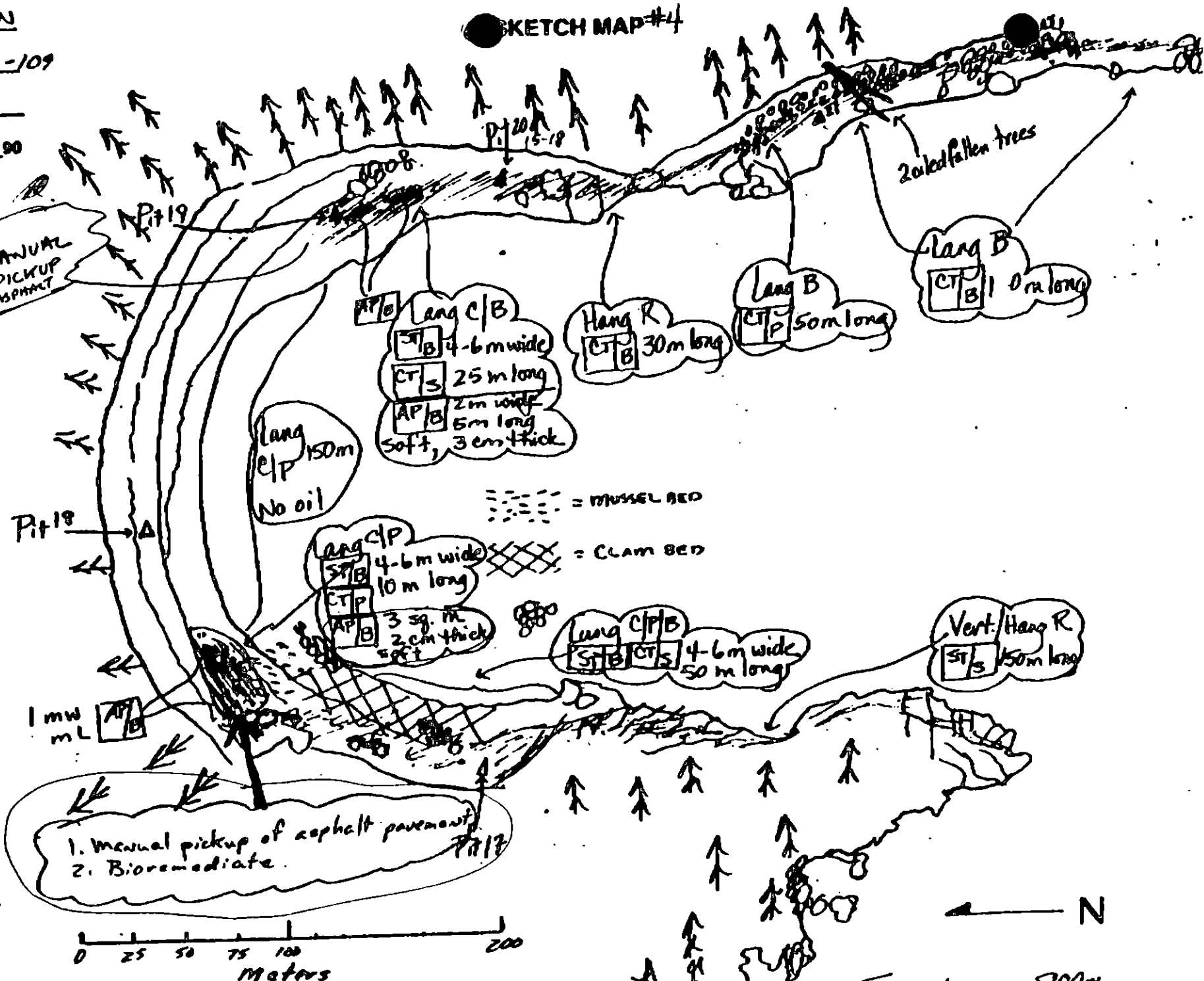
CHECKLIST

- ☐ H Area
- ☐ Approx. Size
- ☐ Seg/Sub Entry
- ☐ Oil Dist
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. MW/LA/VOL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Pits(s)
- ☐ Pit Location(s)
- ☐ 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
- lll
- 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

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/23/90

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	~~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:

Killdeer - 2 Pileated Gull (ADULTS, CHICKS) - 5 Seashore - 1
 Merganser, Common - 6 Pelagic Cormorant - 3 Deer Seal, tracks
 Raven - 1 Herring Gull - 5
 Sharp-shinned Hawk - 5 Glaucous-winged Gull - 6

Ecological Considerations:

- 1) Bird Seabird 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 cleanup operation except perhaps on the NE corner of the bay.

TIME 1500-1945

TIDE +6 → +1

I. General Comments

EL109 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. Mussels are 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. *Nucella* (whelks) are locally dense in the low and middle zones. Kelps are abundant in subtidal areas.

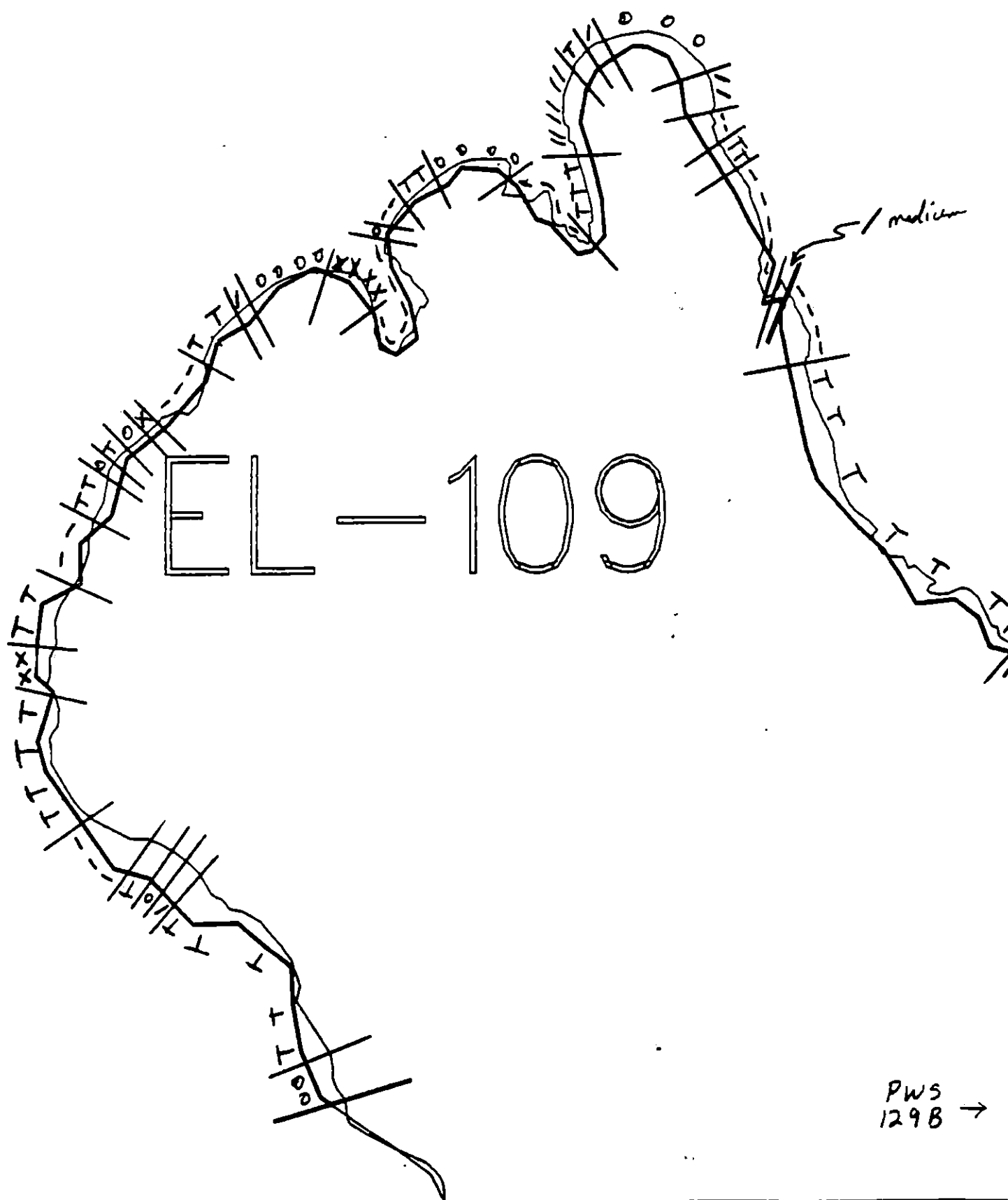
2) Cobble and Pebble Beaches.

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 *Croosera* and other filamentous green algae cover many rocks, and in the low zone where *Fucus* and other algae (*Palmanopsis palmata*, *Ulva*,) are moderate to dense. ^{Barnacles} 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 cobbles under low tide (fishbacks 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. Haynes for
R. Diller

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. Dillon

Date: 4-27-90

Data Entered:

7/13/90

P.P.

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-109 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation 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.

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 uncolled biota and substrate.

TAG ADDENDUM DATE

ADEC

EXXON

NOAA

USCG

5/21/90
 ART WENGER
 ANDY GATZ
 JOHN VALLBOAT
 M. J. HALL

FOSC

DATE

5-21-90

Prepared by:

C. Mays

Date:

5/19/90

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.

SHPO SIGNATURE: Charles 344m 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 Warratt
USCG Clement W. ...
FOSC: [Signature] DATE: 4-22-90

PWS ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EL 110 SUBDIVISION: A DATE 04/03/90

SCG
NAME AEC Vandepels SIGNATURE AEC 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 Mickelle 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 TB, and AP. In the areas w/Bs, the oil can be seen down to 45cm and is SBL ^{below} 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 jost size and larger C w/CT and molasse 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 the underlying C, P, G, & S layers (Note: a 1-2cm layer of OR sand lies under the layer of C, P, G.) The remaining areas should have similar treatment including manual pick-up of TBs.

LAND MANAGER

NAME DAN LOGAN SIGNATURE D 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 SCRAPED 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. 0022

OG J. Springer USCG R. Vandeyels SEGMENT ST/ CL 110
 BIO P. Cichok 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 ☒ Boal ☐ 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			
	K	S	P	B	SW	BR	OR	YL	BL	TL	LR	LR	SU	UI	M	U
ASPHALT 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 crPATTIES / 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 N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SW	BR	OR	YL	BL	TL	LR	SU	UI	M	U		
1	20					X	-		X									X				BCF-GSM
2	35					X	-		X								X					PGSM
3	30					X	-		X									X				CPGSM
4	20					X	-		X										X			CPGSM + Shell fragm
5	30					X	-		X											X		PSM
6	20					X	-		X									X				PGS

COMMENTS

2 of 19

REVIEWED YHDATE 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 N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	BR	BL	BY	BL	BL	BL	SU	U	M	L		
7	15					X	.		X							X					CPGS M
							.														
							.														
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							.														

COMMENTS

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/90

Segment ST EL 110 Subdivision A Date (mo/day/yr) 4/2/90Time (24 hr) 1130-1355 Biologist Crank 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-5-2Frames 20, 21, 22, 23

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

Dense	1L	Moderate	1U	1M	1L	Sparse	1U	1M	1L	Rare	1U	1M	1L
3	3	2	2	2	2	2	2	2	2	2	2	2	2
4	4	3	3	3	3	3	3	3	3	3	3	3	3
5	5	4	4	4	4	4	4	4	4	4	4	4	4
6	6	5	5	5	5	5	5	5	5	5	5	5	5
6	6	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 Tufted Puffins - 5 mature, 1 immature
 4 Raven
 1 - Fox Sparrow
 1 - White-winged Scoter

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: 4/2/90
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 10m 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 1m² patch of *Zostera* in a LITZ tidepool
- Found small clump of eggs 3cm³ in gravel in LITZ - possible Herring.

2 = Boulder
3 = Cobble
4 = Pebble

Segment: EL 110 A Time: 1130
Date: 4/2/90 Tide Height: +3 → +1 Biologist:

Species List

FRAME	PHOTO	DATE	SITE	LOCATION/COMMENTS
NUMBER	GRAPHER		ID	
		MITZ	MITZ	LITZ
				Comments
	<i>Palanus glandula</i>	123	123	23
Semi	<i>Palanus carinus</i>		123	23
	<i>Dermasterias</i>			
	<i>Enteromorpha</i>			23
	<i>Filamentose green algae</i>		3	
	<i>Filamentous red algae</i>			
	<i>Fucus distichus</i>	12	23	23
	<i>Katharina tunicata</i>			
	<i>Laplasteria sp</i>		3	
	<i>Littorina scutellata</i>	123	123	23 Egg in LITZ 34
	<i>Littorina sitkana</i>	123	123	23
	<i>Mytilus mytilus</i>			
	<i>Mytilus edulis</i>	123	123	
	<i>Nucella lamellosa</i>	3	2	3 Egg in LITZ 3
	<i>Orthasterias koebleri</i>			
	<i>Pyropella helianthoides</i>			
	<i>Petracelis</i>		32	
	<i>Pisaster ochraceus</i>			
	<i>Phascolosoma</i>			
	<i>Polychaete worm</i>			
	<i>Rhodonele larx</i>		2	32
	<i>Rhodometopalesta</i>			23
	<i>Rufia/Hildebrandia</i>		23	23
	<i>Scytosiphon</i>	2	2	
	<i>Siphonaria</i>		32	32 Dense in LITZ 34
	<i>Searlesia dira</i>		23	23 Dense in LITZ 34
	<i>Strongylocentrotus sp</i>			
	<i>Serpula</i>			
	<i>Tenidella sp</i>			
	<i>Ulva</i>			3,2
	<i>Zostera</i>		1	1 in tide pool 1 m ²
	<i>Limpia</i>	34	23	
	<i>Heterochaetia</i>		3	Just shell
	<i>Gharaffia</i>		32	
	<i>Endocladia</i>	2	32	2
	<i>Brachydon</i>		3	
	<i>Lithothamnion</i>		3	
	<i>Saxidomus gigantea</i>		3	
	<i>Togatus</i>		3	
	<i>Chelonia</i>		3	
	<i>Basella/Corallina</i>		2	2,3
	<i>Cladophora</i>		2	
	<i>Porphyrion</i>		2	
	<i>Green Encrinurus</i>	2,3	2,3	2,3
	<i>Protodictyon</i>			

OG J. Springer

SEGMENT EL 110

SUBDIVISION A

DATE 04/02/90

CHECKLIST

- ☒ Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Bndry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HAZ/LWR
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Photo Location(s)

LEGEND

1 Δ
PIL - No Subsurface Oil

2 Δ
PIL - Subsurface Oil

CT/C
Continuous Distribution

CT/D
Broken Distribution

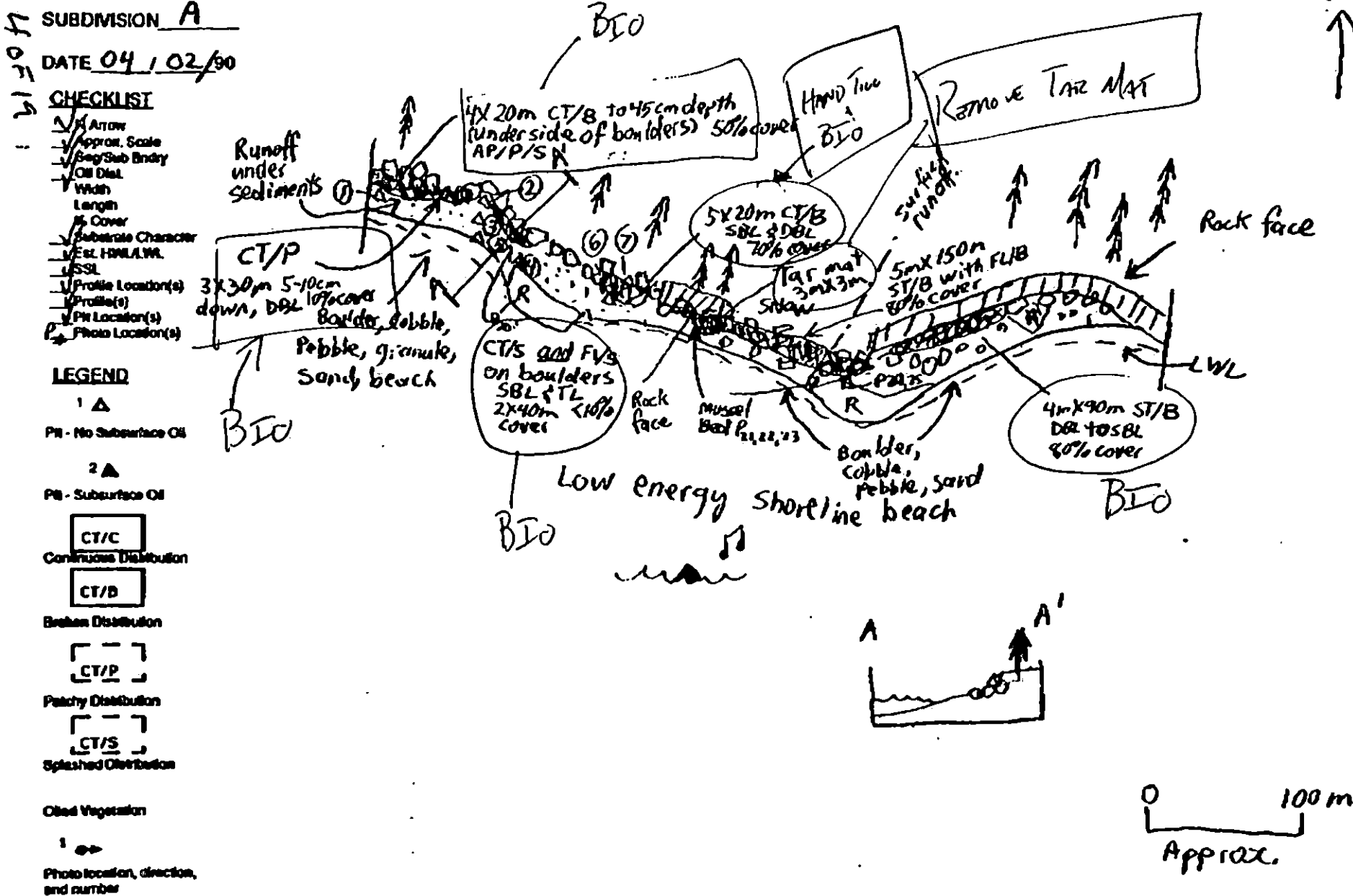
CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oil Vegetation

1 →
Photo location, direction,
and number

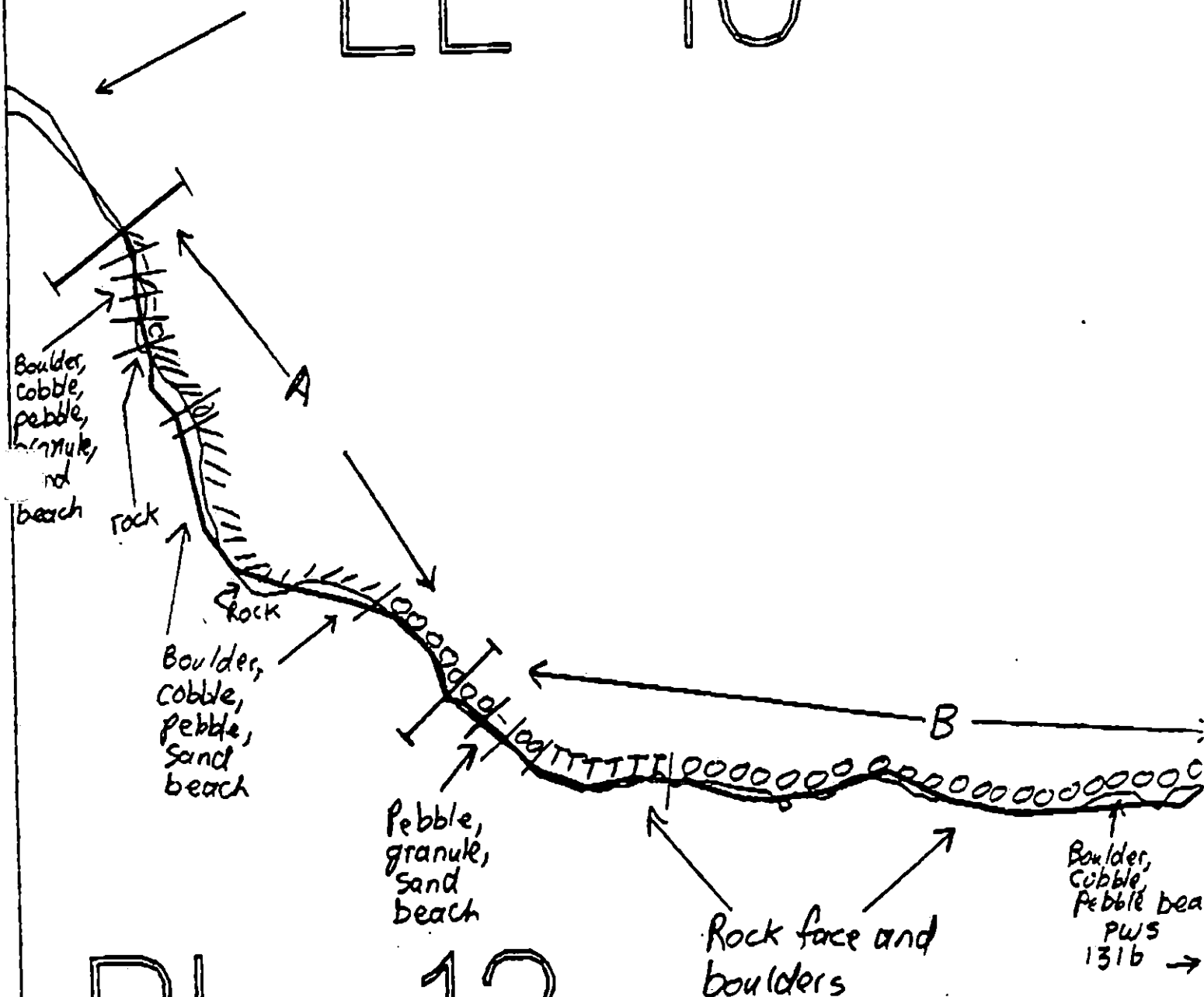
TCH MAP



Oil Character Length (m): AP _____ PO _____ CV _____ CT 110 ST 240 MS _____ PT _____ TB _____ FL _____ NO 250

REVISIONS

EL-15
EL-10



RI-12

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

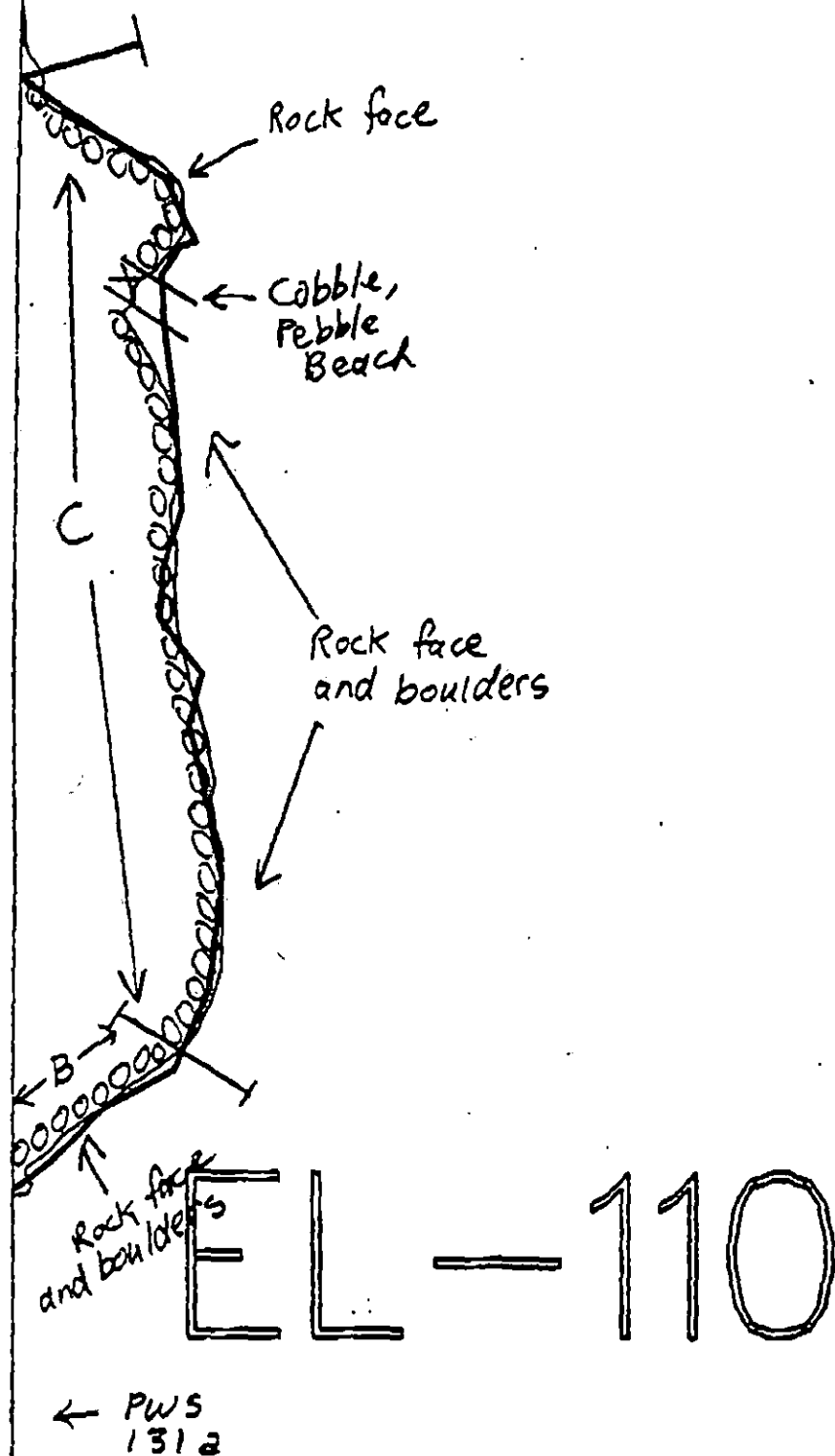
EL-110

ADEC Segment Length: 2620
 18 OF 19

0 100 200 300
 METERS



Map Key: PWS-131a
 Name: James Springe
 Date: 04/02/90
 Date Entered:



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

EL-110

ADEC Segment Length: ²⁶²⁰~~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 uncoiled biota and substrate.

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 Amelia R. Rouse

FOSC: ML DATE: 4-22-90

PWS ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
 1D Esther Hatchery release (4/15 to 6/1)
 1E Main Bay Hatchery release (4/20 to 5/10)
 1F Sawmill Bay Hatchery release (4/20 to 5/10)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 1I Gill net area (6/7 to 8/31)
 1J Purse seine area (7/21 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (6/11 to 7/25)
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
 Restrict boat traffic to essential minimum. Avoid damage to uncolled 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/ 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 B 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) JR. 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. 08/22/88

OG J. Springer USCG R. Vandepels SEGMENT ST/ EL 110
 BIO P. Crank LAND REP D. Logan SUBDIVISION B (2 of 3)
 EXXON T. Tamplin 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			
	C	R	P	B	1	2	3	4	5	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 cmPATTIES / TARBALLS 0 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)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OF	OR	OL	OF	NO		UC	UC	1	2	3	4	5	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	
~~2~~	~~2~~	2	2	2	2	2	2	2	2	2	2	NOT PRESENT
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

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	NOT PRESENT
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

- 1 Bald Eagle flying
 2 Cormorants on cliff face
 8 Crows on boulder
 1 Sea otter

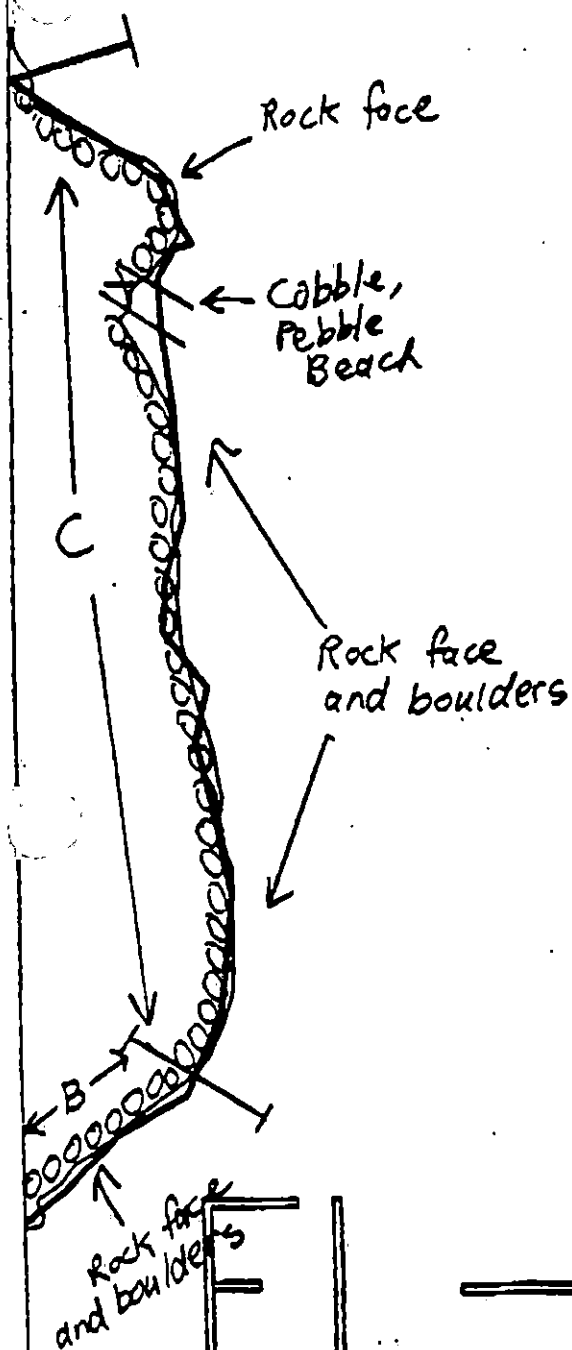
Ecological Considerations:

- 64 - Special Use Destination
 711 - Deer Harvesting
 ST-2 - Eagle Nest - did not find

→ +2.5
pg 2 of 2

pg 2 of 2

Port 4110	1
Comments	
• Weather picked-up and assessment made at rapid pace, minimum cobbles were turned. • Segment consists of Rocky headlands, steep by boulder shoulders and pocket Boulder/cobbles beach. S. beach cobble is round (conv. beach), other beaches have angular cobble. • Fucus concentrations are moderate in LITZ on rounded cobble beach but dense on angular. • Freshwater runoff, small stream on beach. • Oyster shell in drift line. • In oil band <i>Balanus</i> 20% mort.	



EL-110

← PWS
1312

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EL-110

ADEC Segment Length: ²⁶²⁰~~2500~~

19 OF 19



Map Key: PWS-131b

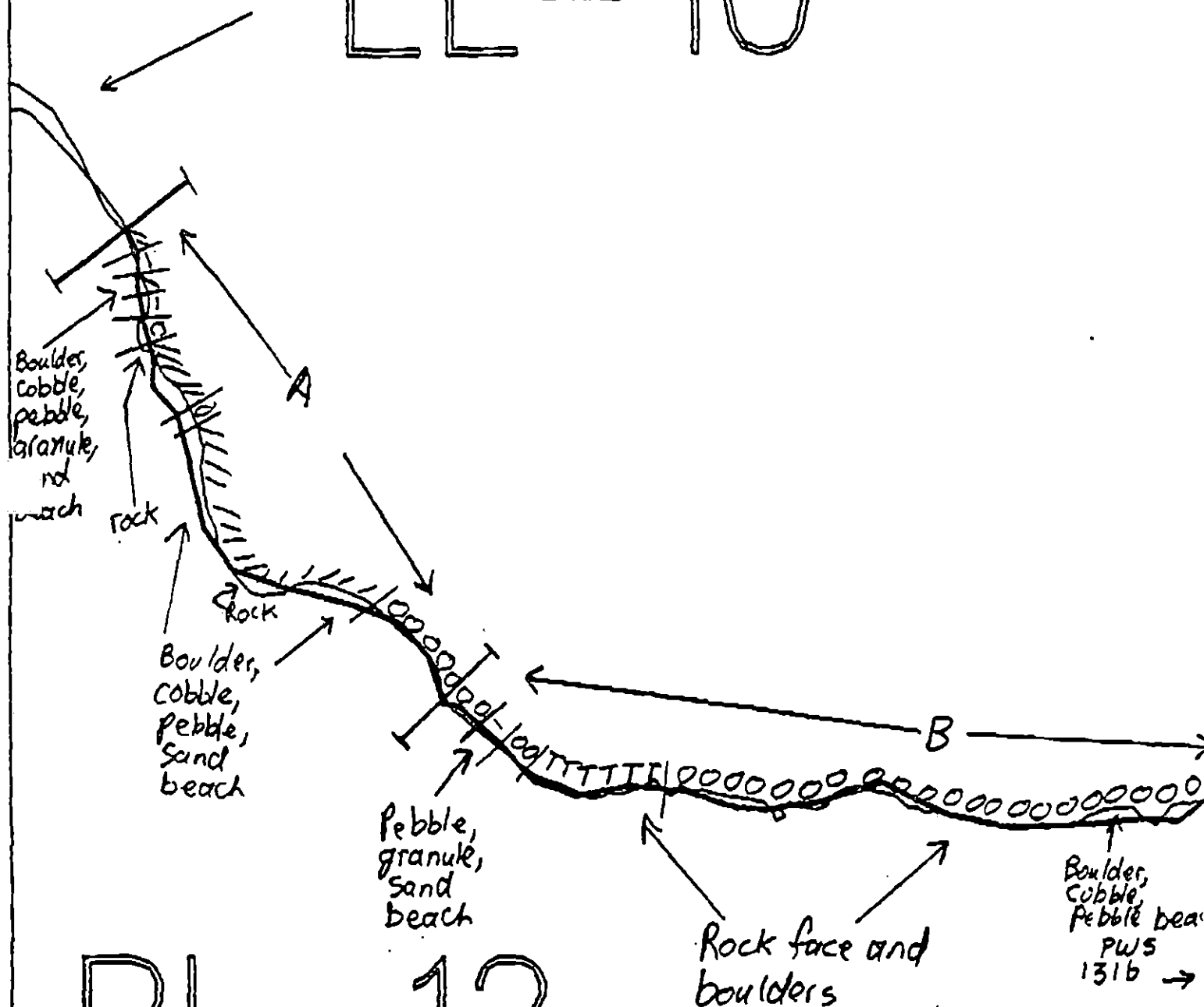
Name: James Springer

Date: 04/02/90

Date Entered:

L-15

EL-10



RI-12

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EL-110

ADEC Segment Length: 2620
2502m
18 OF A



Map Key: PWS-1316

Name: James Springe

Date: 04/02/90

Date Entered:

OG J. SPURGER

SEGMENT ST/110

SUBDIVISION B

DATE 04 102/90

10 OF 19

SWITCH MAP

CHECKLIST

- ☒ N Aster
- ☒ Approx. Scale
- ☒ Seg/Sub Bndry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☒ Est. HAZ/AMR
- ☐ SSL
- ☐ Profile Location(s)
- ☒ Profile(s)
- ☒ Pt Location(s)
- ☒ Photo Location(s)
- ☐ No Photos

LEGEND

1 Δ
P11 - No Subsurface Oil

2 Δ
P14 - Subsurface Oil

CT/C
Continuous Distribution

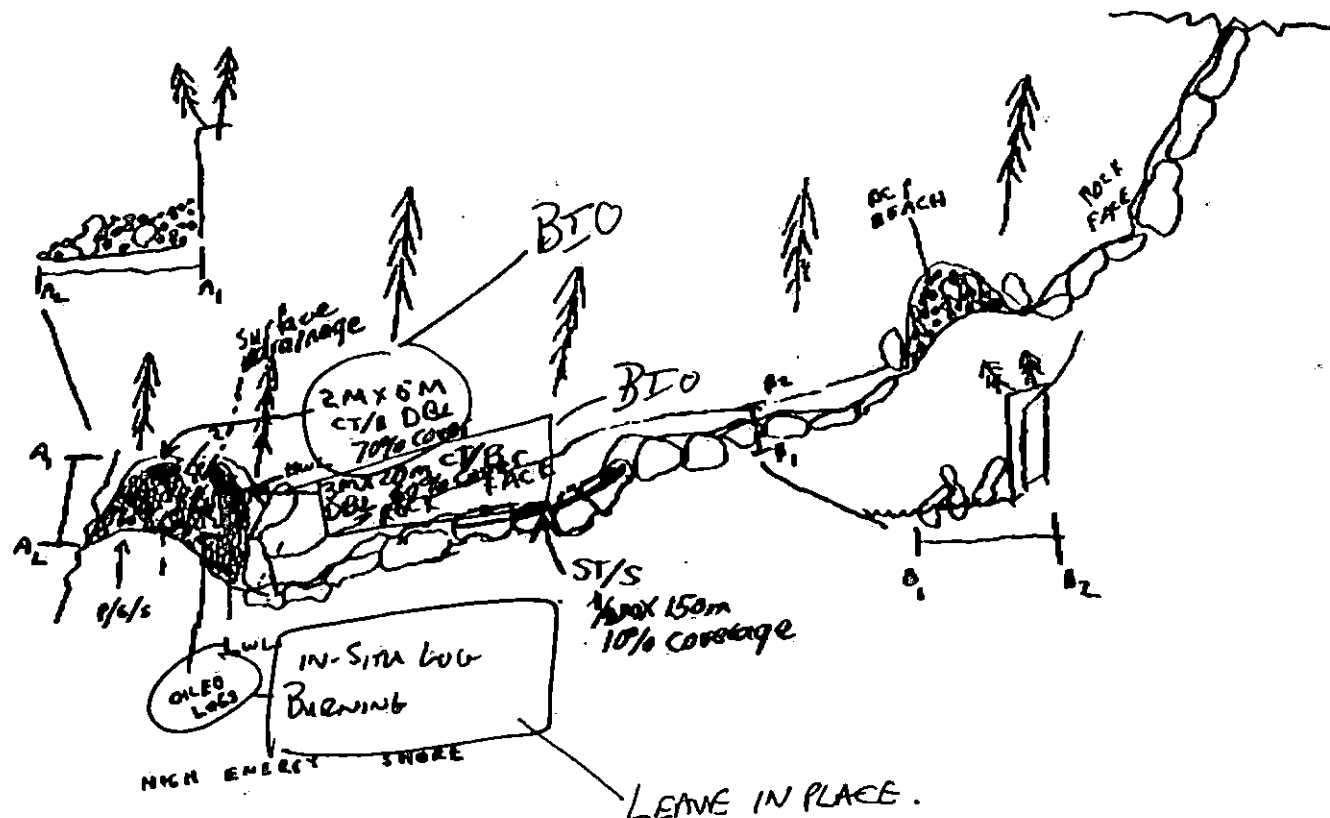
CT/D
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oiled Vegetation

1 ●
Photo location, direction, and number



RE.



Oil Character Length (m): AP PO CV CT 5 ST 150 MS PT TB FL NO 985

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.

SHPO SIGNATURE: Charles J. H. Jones 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 Dan Weiner
EXXON Andy TGR Beal FOSC: DATE: 4-22-90
NOAA Bruce Wescott Bruce Wescott
USCG

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EL 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 OR ☒ TREATMENT SUGGESTED

COMMENTS

The headland in the beginning of the segment has a healthy 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 ROULERS ROCK BEACH ON THE WESTERN EDGE. HOT WATER TREATMENT WILL NOT WORK HERE AS THE OIL WILL FLOW OVER BEACH 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.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG J. Springer USCG R. Vandepels SEGMENT ST/ EL110
 BIO P. Crank LAND REP D. Logan SUBDIVISION C (3043)
 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	N	P	S	1	2	3	4	5	6	7	8	SU	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT		X				X								X		
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL													X		X	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-CE)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS			
		OP	OR	OL	OF	NO		UO	UC	~~1~~	~~2~~	~~3~~	~~4~~	~~5~~	~~6~~	~~7~~	~~8~~	SU	U			M	L	
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

00 J. Springer

SEGMENT ST/ EL 110

SUBDIVISION C

DATE 04/02/90

CHECKLIST

- ☒ M Acor
- ☒ Approx. Scale
- ☒ Vegetation Study
- ☒ OR Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HWA/L/VL
- ☒ Sed
- ☒ Pebble Location(s)
- ☒ Photo Location(s)
- ☒ 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

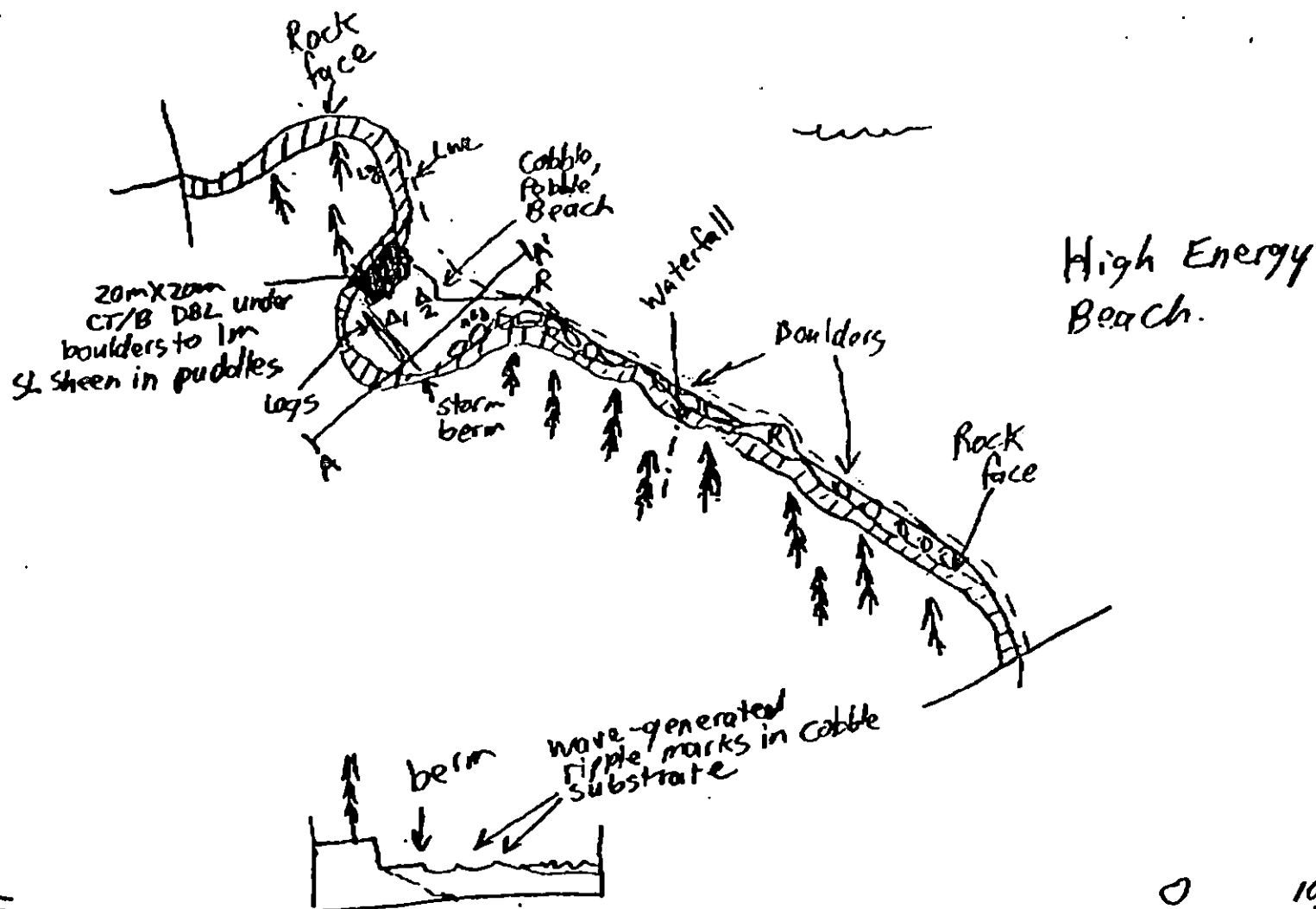
Spashed Distribution

Clad Vegetation

1 ●

Photo location, direction, and number

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 (O)

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	
~~2~~	~~2~~	2	2	2	2	2	2	2	2	2	2	NOT PRESENT
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

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	NOT PRESENT
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

3 Bald Eagles - Adults (2 Flying as pair)
 1 Common Merganser

Ecological Considerations:

6Y - Special Use Destination

711 - Deer Harvesting

ST-2 - Eagle Nest - did not locate

15 OF 19

Segment: EL 110 C
Date: 4/2/90

Time: 1510-1615 · Biologist:
Tide Height: +2.5 → +4

Species List

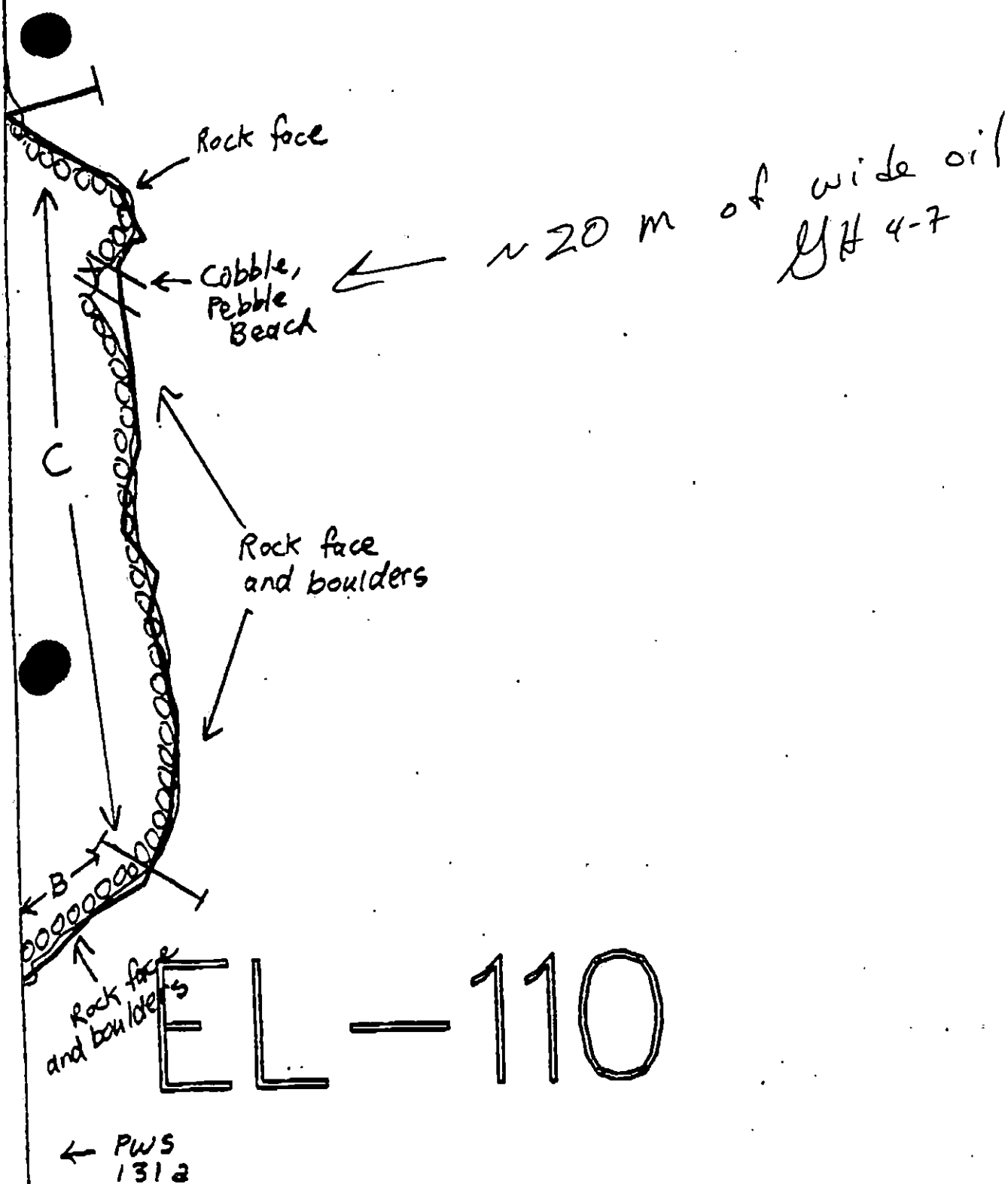
Pg 2 of 2

FRAME NUMBER	PHOTO- GRAPHER	DATE	SITE ID	LOCATION	COMMENTS
		UITZ	MITZ	LITZ	Comments
	<i>Balanus glandula</i>	12	12		
Small	<i>Balanus carolinus</i>		2	2	
	<i>Percastris</i>		1		
	<i>Enteromorpha</i>		12	2	
	<i>Filamentose green algae</i>	123	12	2	
	<i>Filamentous red algae</i>				
	<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>Macalia myra</i>				
	<i>Mytilus edulis</i>	12	12		
	<i>Nikella lamellosa</i>	12	12		
	<i>Orchasteria koehleri</i>				
	<i>Pyramida helianthoides</i>				
	<i>Pelocelis</i>				
	<i>Pisaster ochraceus</i>				
Small	<i>Phascolosoma</i>				
	<i>Polyschoele worm</i>				
	<i>Rhodometaria</i>				
	<i>Rhodometaria anmata</i>			2	
	<i>Rufia/Hildebrandia</i>				
	<i>Scytosiphon</i>	1	1		
	<i>Siphonaria</i>		1		
	<i>Searlesia dira</i>				
	<i>Strongylocentrotus</i> sp				
	<i>Serpula</i>		1		
	<i>Tentella</i> - sp Limax	12	12		
	<i>Ulva</i>				
	<i>Zostera</i>				
	<i>Stigeoclonia</i>	2			
	<i>Ajaria</i>			12	
	<i>Embodia</i>			12	
	<i>Hologaster</i>		2	2	
	<i>Terebra</i>	1			Tidepool
		1			Tidepool
	<i>Pipilo</i>		1		2 animals in Tidepool
					Tidepool

Endocladia
Comments:

- Discolored Mussels on boulder on west side of cobble beach
- Tannic acids leaching from rocks.
- Beach is rounded cobbles = low macro-biota
- Dense biota in bedrock behind boulders.
- LITZ covered by Tide.

16 OF 19



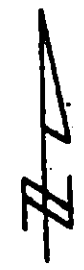
EL-110

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

EL-110

ADEC Segment Length: 2620
~~2577~~
 19 OF 19

0 100 200 300
 METERS



Map Key: PWS-131b
 Name: James Springer
 Date: 04/02/90
 Date Entered:

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.

SHPO SIGNATURE: Charles E. Adams 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:

<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 Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 5/2/90
ADEC ART WENGER
EXXON ANDY GEAR
NOAA GARY PASTOR
USCG KENNETH KETNER

FOSC: W/L DATE: 5-8-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A** Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 1C** Salmon fry nursery area (4/31 to 7/31)
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D** Esther Hatchery release (4/15 to 6/15)
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
- 3N, 3P** Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R** Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S** Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Rothy 267-2206
- 5T** All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U** Recreation: Tent sites (6/1 to 9/15)
6V Anchorages (6/1 to 9/15)
6W Forest Service cabins (6/1 to 9/15)
6X Lodge (6/1 to 9/15)
6Y Special use destination
- 7Z** Subsistence area: Salmon harvesting (5/1 to 9/30)
 Finfish harvesting
 Deer harvesting (8/15 to 2/26)
 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. CT 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 ^{coated} ~~on~~ ^{on and under} large boulders and bedrock outcrops. No sheering noted, oil appears stable.
Resource sensitivity - deer harvesting.

OGC J. Springer USCG R. Vandepels SEGMENT ST/ EL-999
 BIO P. Frank LAND REP C. Huber SUBDIVISION A (1 OF 7)
 EXXON T. Tomblin ADEC M. Baer 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	A	P	B	1	2	3	4	SU	M	N	U
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 BAGS
 NEAR SHORE SHEEN? ☒ NO BR RW SL T

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

 DID YOU COLLECT DEBRIS?
 YES ☐ NO ☐
 TYPE 0
 #BAGS 0

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	SHEEN (Y/N)	I	SURFA SUBSUR SEDIME
		OP	OR	OL	OF	NO		BO	BC	1	2	3	4	SU	M	N	U					
1	30					X	.		X						X				N	2		P/PC
2	40					X	.		X					X								P/P
3	30					X	.		X							X			N	15		PG/L
4	20					X	.		X					X								P/P
5	30					X	.		X							X						P/P
							.															

COMMENTS

REVIEWED JW DATE 4/25/90

00 J. Spr er
SEGMENT STI EL-999

SUBDIVISION A

DATE 04/24/00

CHECKLIST

- ☐ 17 Areas
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ CT DBL
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HAP/LAWL
- ☐ GSI
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

1 A
Pit - No Subsurface CI

2 A
Pit - Subsurface CI

CT/C
Continuous Distribution

CT/B
Broken Distribution

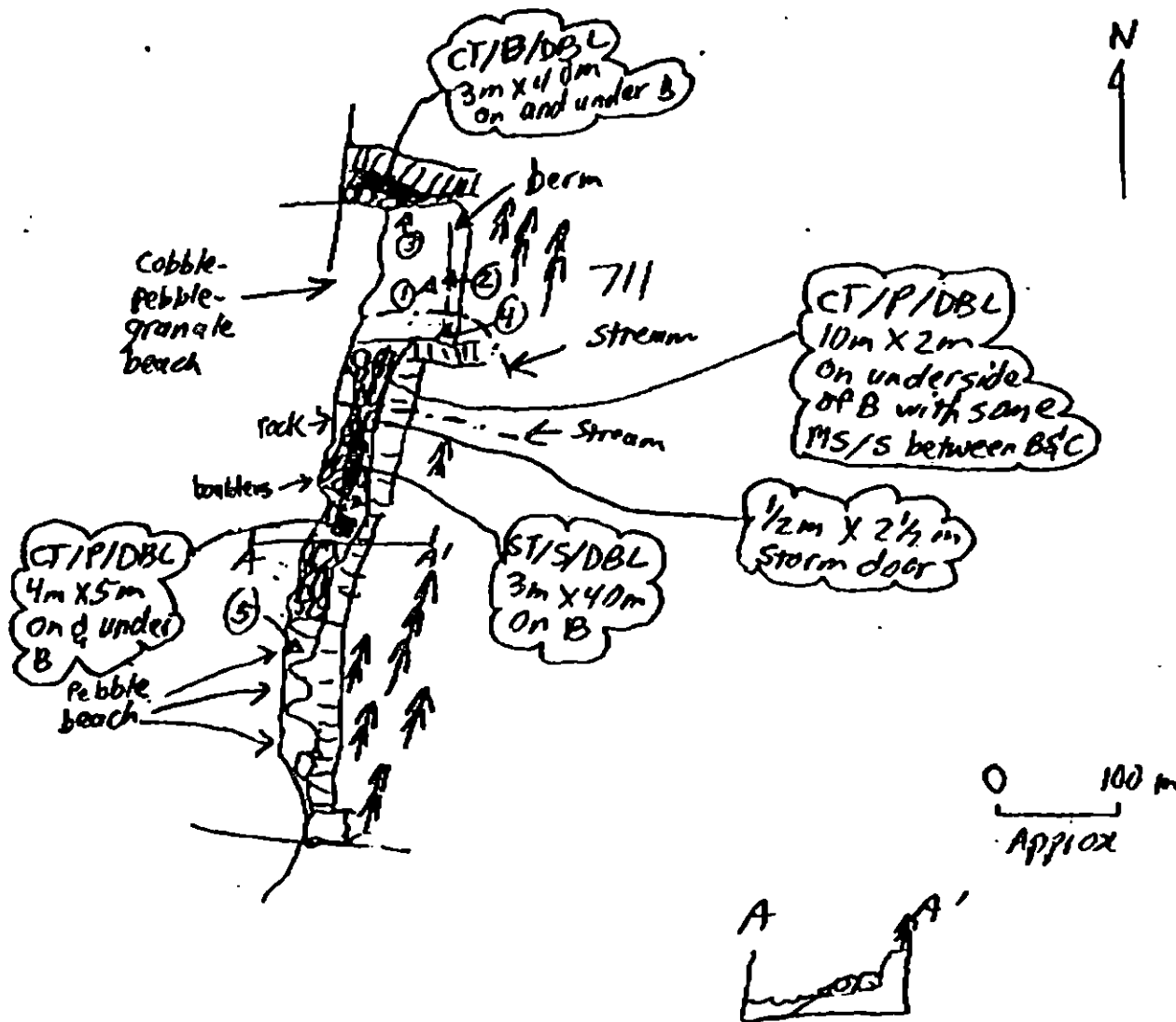
CT/P
Patchy Distribution

CT/S
Spatched Distribution

eee
Other Vegetation

1 00
Photo location, direction,
and number

SIL...CH MAP



SHORELINE ECOLOGICAL SUMMARY

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) Silt

(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 (3)

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	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:

-Exon 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

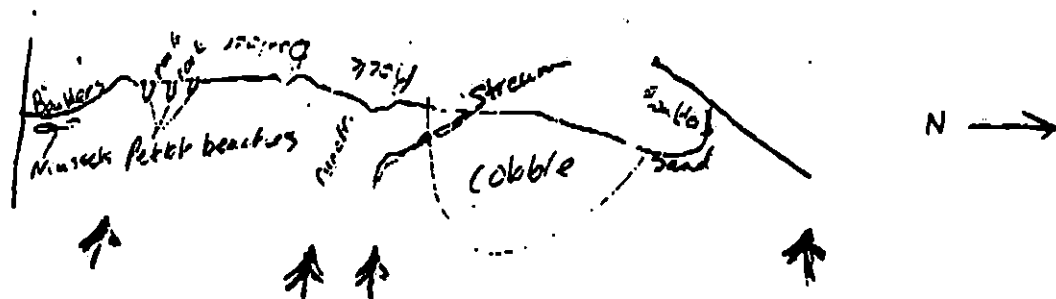
pg 3 of 3

Time: 0730-0830

Date: 4/24/90

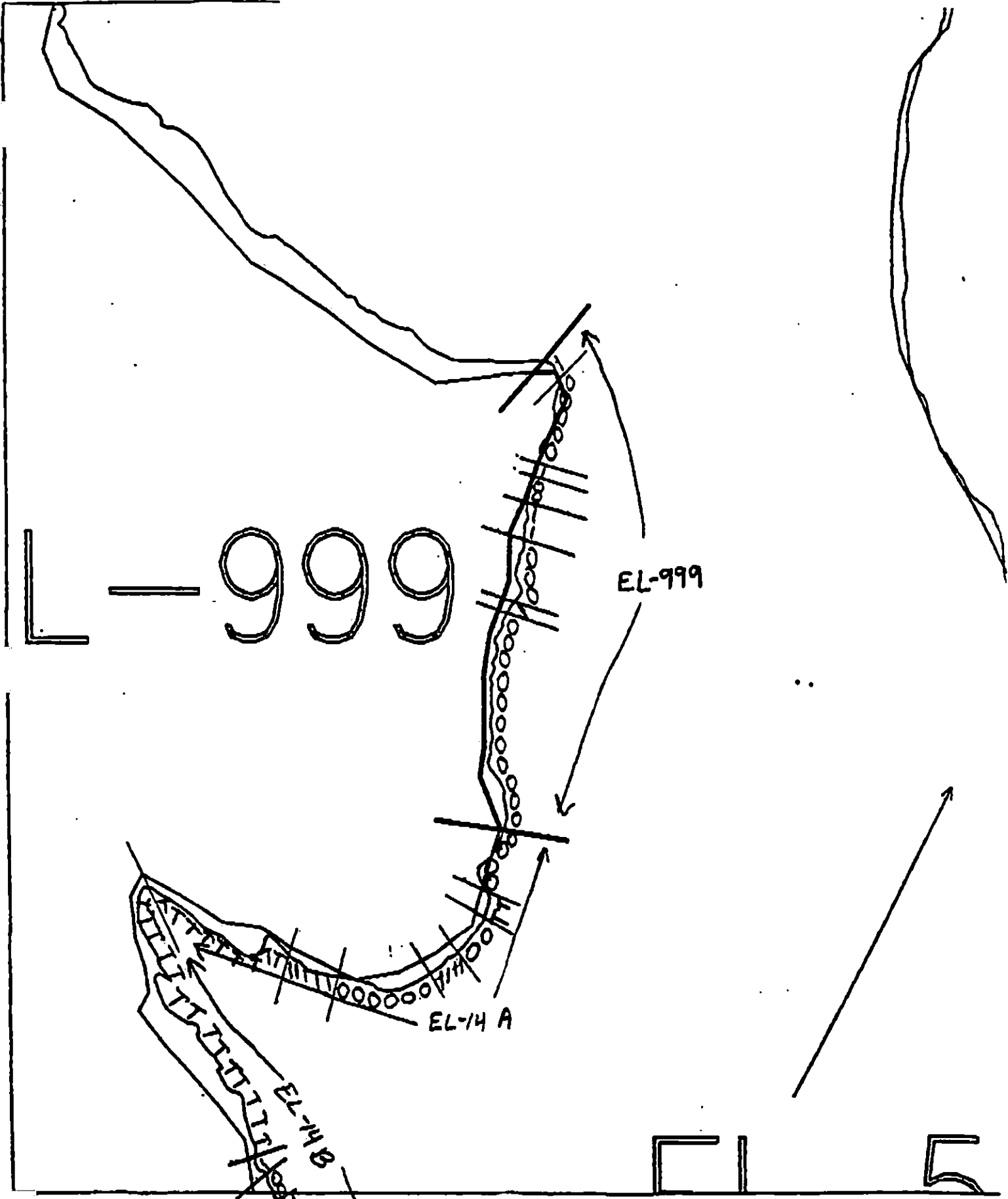
Tide Height: -2 to -1 ft

PWS



Comments

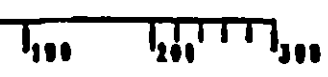
- Lower Intertidal Zone appears to be all they.
- Sand area has dense worm population.
- Middle Intertidal Zone appears to be recovering.
- Cobble is covered with filamentous green algae.
- On the northern boulders, adult barnacles are present. Scarring and 70% mortality, but report is dense - just scattered plates were still soft. In rest of boulder barnacles sparse.
- Near runoff Littorina were moderate.
- Mytilus band on Southern Rock 30m x 42m, dense cover.
- 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 barnacle.
- Low Biota on Pebble beaches. Beaches covered at mid-tide level.



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

EL-999

ADEC Segment Length: ~~478m~~ 588



Map Key: PWS-142

Name: James Springs

Date: 4/24/90

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 uncoiled biota and substrate.

SHPO SIGNATURE: Charles E. Hines 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:

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

COMMENTS: Bioremediate 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: 4/28/20
 ADEC ART WEINER Art Weiner
 EXXON ROY TEAL Roy Teal
 NOAA Burl Wescott Burl Wescott
 USCG KENNETH KERNER Kenneth Kerner

FOSC: W L DATE: 4-27-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

JSCG

NAME _____ SIGNATURE _____

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

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 Brer SIGNATURE M Brer

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

On B field, I recommend manual wiping of the broken CT and removing the BS to pick at the underlying 5 cm of OR 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 clean process. The adjoining B, C and P beach required no treatment. No surface oil was present and pits dug in the U1TZ and M1TZ revealed NO.

LAND MANAGER

NAME DAN LOGAN SIGNATURE Dan Logan

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

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. 00/20/90

OG J. Springer USCG R. Vandepels SEGMENT ST/ EN 45
 BIO P. Crank LAND REP D. Lamm SUBDIVISION A (1041)
 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 9.5 % 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 142 m

SURFACE OIL

CHARACTER	DISTRIBUTION					OIL / FILM COLOR					IMPACTED ZONES			
	C	S	P	S	W	W	W	W	W	W	SW	SE	NE	NW
ASPHALT PAVEMENT														
POOLED														
COVER	X					X					X			
COAT		✓	X			✓	X				X			
STAIN														
MOUSSE														
PATTIES														
TARBALLS														
FILM														
NO OIL											X	X	X	X

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

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☒ YES ☐ NO

TYPE 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)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		SO	DO	W	W	W	W	W	SW	SE	NE	NW		
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. Y. NGER

SEGMENT ST/EN-45

SUBDIVISION A

DATE 04/06/90

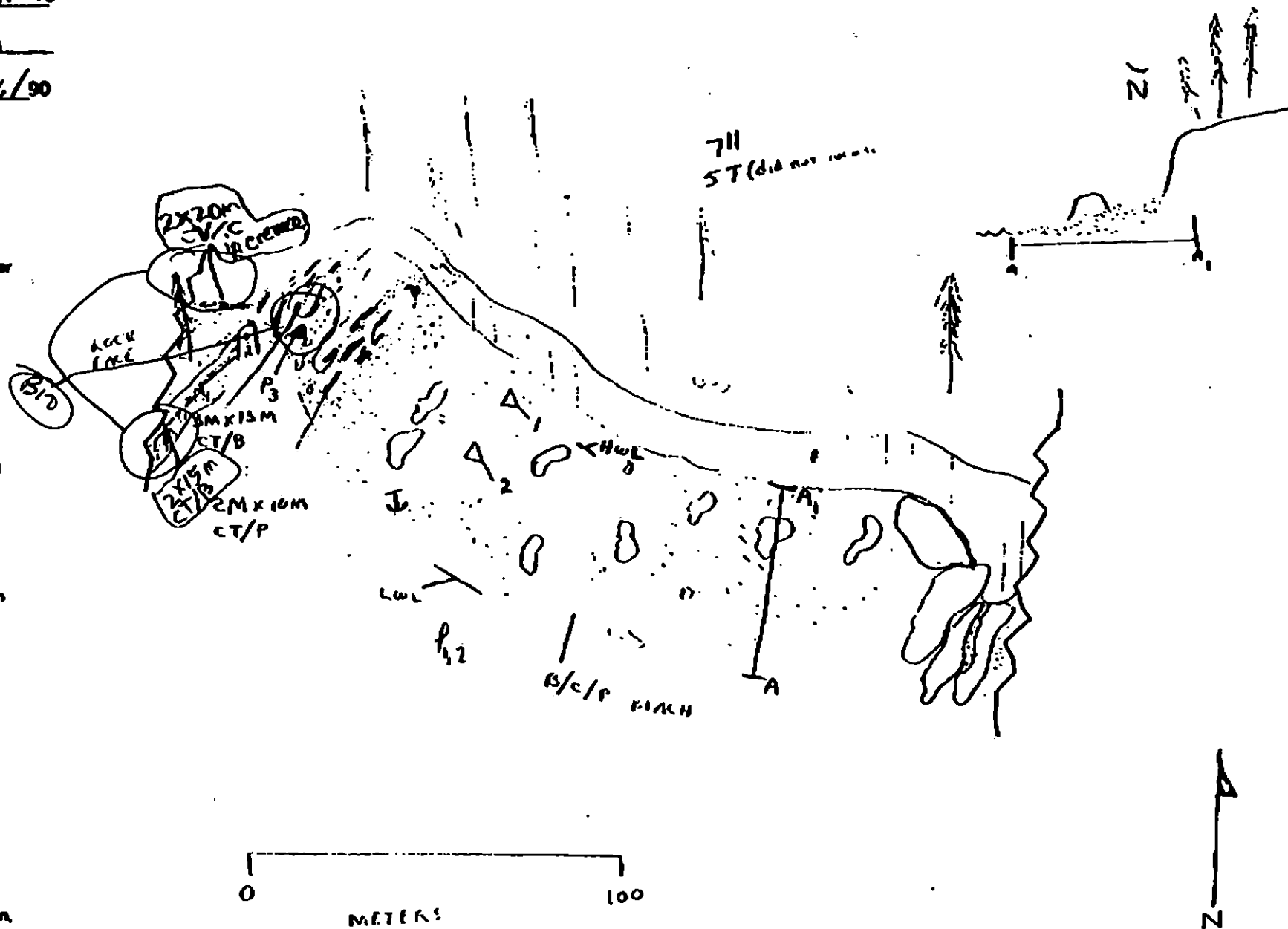
ETCH MAP

CHECKLIST

- ☒ M Area
- ☒ Approx. Scale
- ☒ Seg/Sub Entry
- ☒ Oil Data
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HW/LWL
- ☒ S/L
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ PI Location(s)
- ☒ Photo Location(s)

LEGEND

- 1 Δ
- PI - No Subsurface Oil
- 2 Δ
- PI - Subsurface Oil
- CT/C
- Continuous Distribution
- CT/B
- Broken Distribution
- CT/P
- Patchy Distribution
- CT/S
- Spotted Distribution
- Oil Vegetation
- 1 ●
- Photo location, direction, and number



Oil Character Length (m): AP _____ PO _____ CV 20 CT 40 ST _____ MS _____ PT _____ TB _____ FL _____ NO 147

REVISION 03/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/23/90

Segment ST/EN 45 Subdivision A Date (mo/day/yr) 4/6/90

Time (24 hr) 1510-1530 Biologist Crant 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) SR

(B) Overall % cover of biota (% of segment): Dense 5 Moderate 15 Low 70

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (3)
Photographs: Roll No. ST-5-4
Frames 3

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	NOT PRESENT
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

MYTILUS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	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	

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

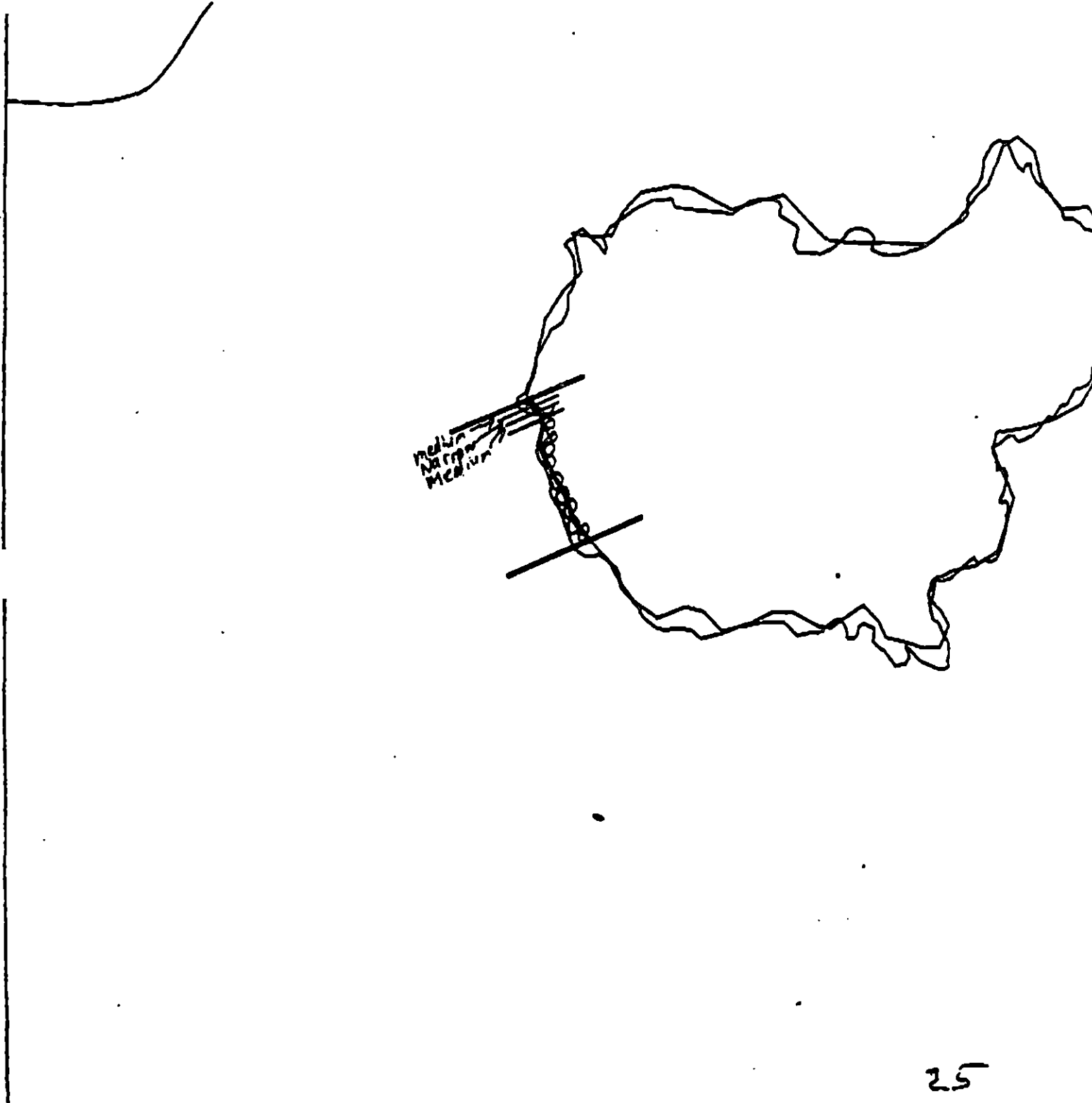
- 1 Bald Eagle - Adult
- 2 Bald Eagles over Estuary to - 1 adult, 1 immature
- 1 Raven, 1 Pigeon Guillemot
- 3 Delagic Cormorants - 2 Breeding Plumage, 1 not

Ecological Considerations:

- ST - Active Bald Eagle Nesting
- 7H - Deer Harvesting

- Heavy Barnacle Scarring on Bedrock
- East Headland B. glandula are dense 10% most.
- Terraced Bedrock has 6 tidepools 0.5m², dense Littorina in tidepools.
- Drift algae included Horminaria spp, Mastocarpus papillatus and Rhodomela palmata.
- LITZ unreported
- Rounded cobble beach = low biota
- Recruitment moderate on boulders and debris not apparent in cobble.

BL-12



Medium
Narrow
Medium

25

XXXX Wide

//// Medium

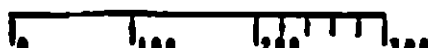
--- Narrow

*T Very Light

No Oil

EN-45

ADEC Segment Length: 207



0 100 200 300
METERS

Map Key: PWS-143

Name: J. Springer

Date: 4/7/90

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 uncoiled biota and substrate.

SHPO SIGNATURE: Kathleen Don Omer 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 WELSH D. Williams

EXXON ANDY GALT Bobal

NOAA Joseph Talbot John

USCG KENNETH KEANE David

FOSC: [Signature] DATE: 6/4/90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
 1D Esther Hatchery release (4/15 to 6/1)
 1E Main Bay Hatchery release (4/20 to 5/10)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 1I Gill net area (6/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (6/11 to 7/25)
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
 Restrict boat traffic to essential minimum. Avoid damage to unopened 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 / EN46 SUBDIVISION: 2 DATE 04-06-96

USCG

NAME

AEC Vandepelt

SIGNATURE

AEC Vandepelt

☐ 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 till 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 be. manual wiping of the 30 x 2M CT/C is also necessary. Hot u wash. would be difficult, and unrealistic for this area. due the difficult access ~~to~~ the large B's in the entry are 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.

SHORELINE OILING SUMMARY

REVISION NO. 03/28/90

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: Long 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			
	C	R	P	N	1	2	3	4	5	SU	U	M	L
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT		X				X		V		X			
STAIN		X						X		X			
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL										X		X	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			
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)	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	L		
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-pain lodged between boulders.

59

OG J. Linger

SEGMENT ST/ EN 46

SUBDIVISION A

DATE 4/6/90

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Peg/Sub Body
- ☒ Ch Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HWA/LWL
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ PR Location(s)
- ☒ Photo Location(s)

LEGEND

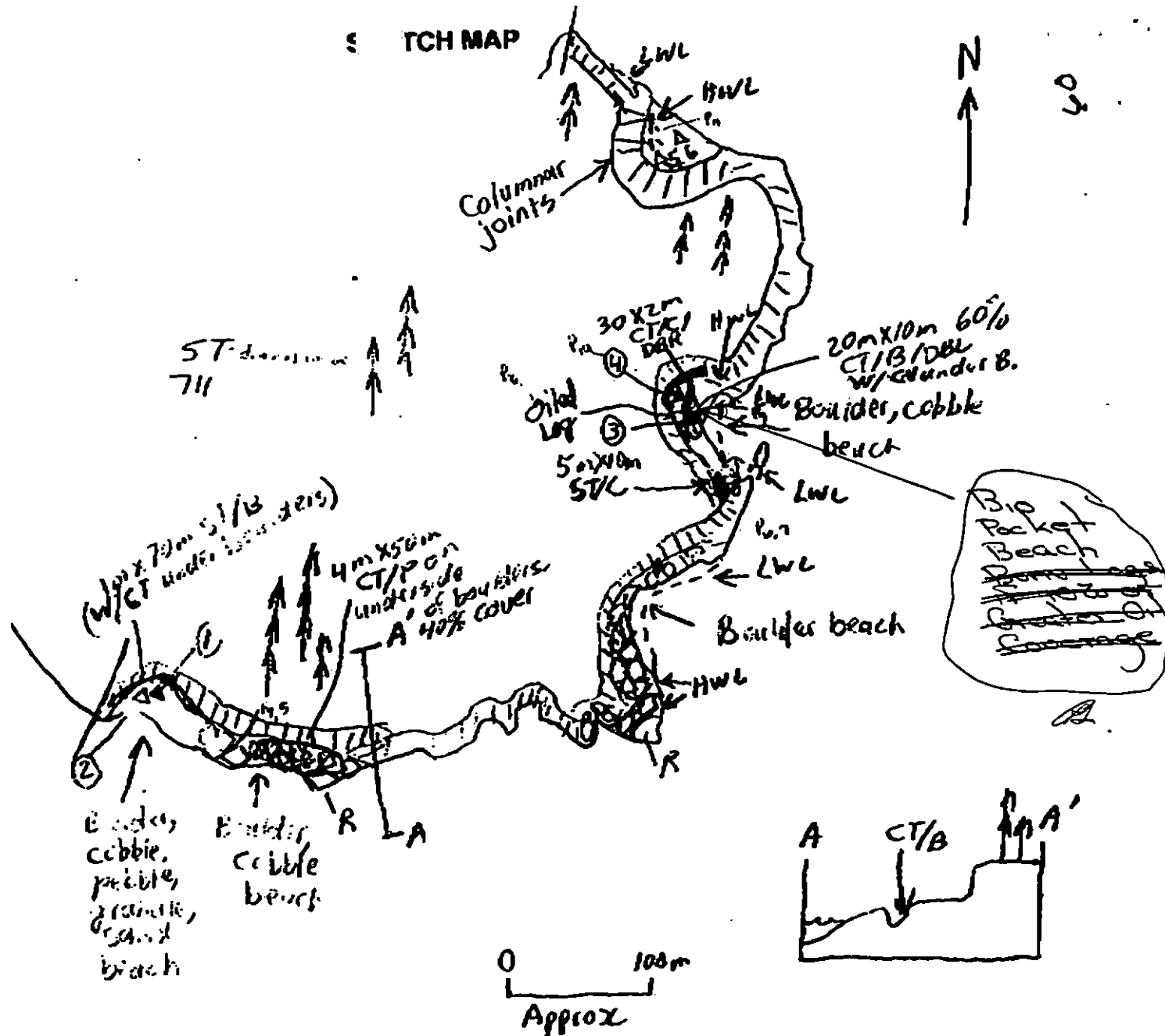
- 1 Δ
Pk - No Subsurface Oil
- 2 Δ
Fit - Subsurface Oil
- CT/C

Continuous Distribution
- CT/B

Broken Distribution
- CT/P

Paddy Distribution
- CT/S

Splashed Distribution
- Oiled Vegetation
- 1 $\Rightarrow$
Photo location, direction, and number



Oil Character Length (m): AP _____ PO _____ CV _____ CT 100 ST 80 MS _____ PT _____ TB _____ FL _____ NO 1110

REVISIONS

SHORELINE ECOLOGICAL SUMMARY

REVISION: C

Segment ST / EN46 Subdivision A Date (mo / day / yr) 4/4/90

Time (24 hr) 1550 - 1740 Biologist Crank Length 1290m
Tide Height: 3.5 → +1 ft

(A) Substrate type and % of segments:
(1) Bedrock 50 (2) Boulder 30 (3) Cobble 10 (4) Pebble 5 (5) Sand 5 (6) Silt

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

711- Deer Harvesting
ST- Active Bald Eagle Nest- not located

46

SEGMENT: ST/ EN 46 SUBDIVISION A LENGTH 1292 m BIOLOGIST Crank pg 2 of 2

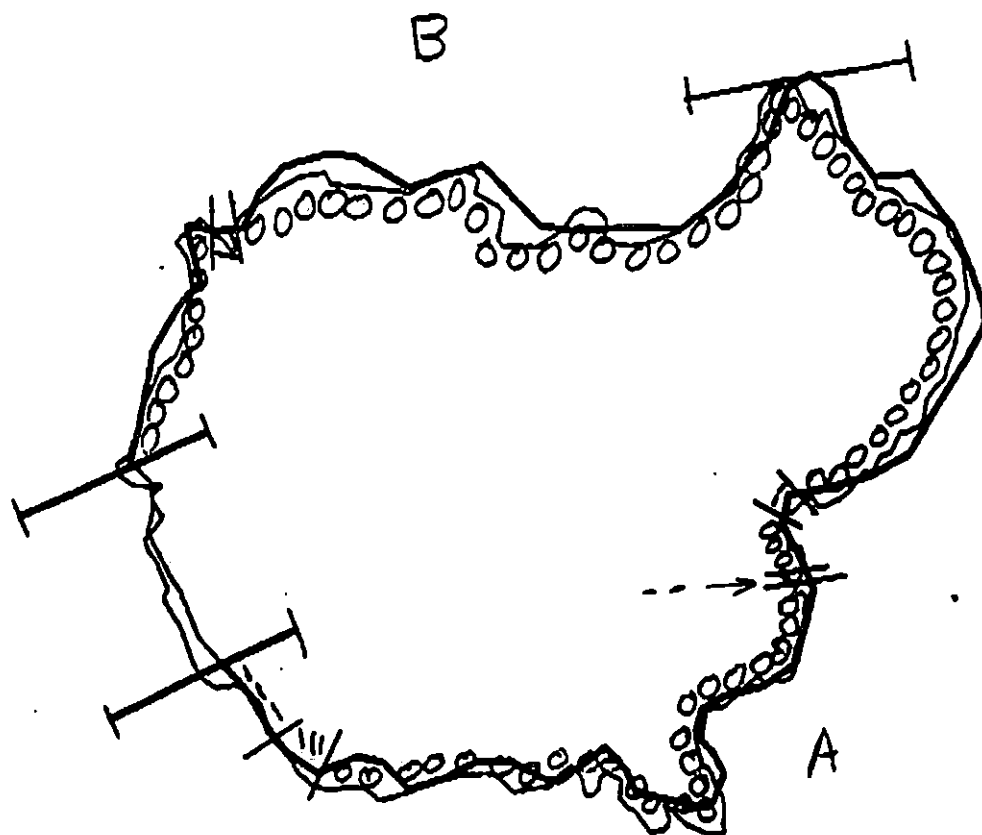
DATE 4/6/90 TIME 1550-1740 TIDE HEIGHT 135 → +1 ft

1-BEDROCK 2-BOULDER 3-COBBLE 4-PERBBLE 5-SAND 6-SILT

FLORA:

[illegible]

28



EN

55

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EN-46

ADEC Segment Length: ²²⁹²~~2244~~m



Map Key: PWS-144

Name: James Springs

Date: 4/6/90

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EN-46 SUBDIVISION A (1 of 2)

WORK WINDOW	
Manual Pickup	OPEN
Bioremediation ~~Log Burning~~ WKK Other Approved Treatment	WORK PRIOR TO 8/15

ARCHAEOLOGICAL STANDARD CONSTRAINT

Cultural resource survey in progress. No treatment until formal constraint entered on shoreline evaluation form.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T Bald Eagle Nest

NO CONSTRAINT. USFWS 6/1/90 map indicates an active nest within 400m of Subdivision A work site. However, the work area is outside the buffer zone established by USFWS on 5/15/90 by Mike Lockhart.

7II Subsistence: Deer Harvesting

No constraint to manual pickup. Closed to bioremediation, log burning, and other approved treatment after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE _____

ADEC _____

EXXON HANCO JAMES James O. Parker FOSC _____

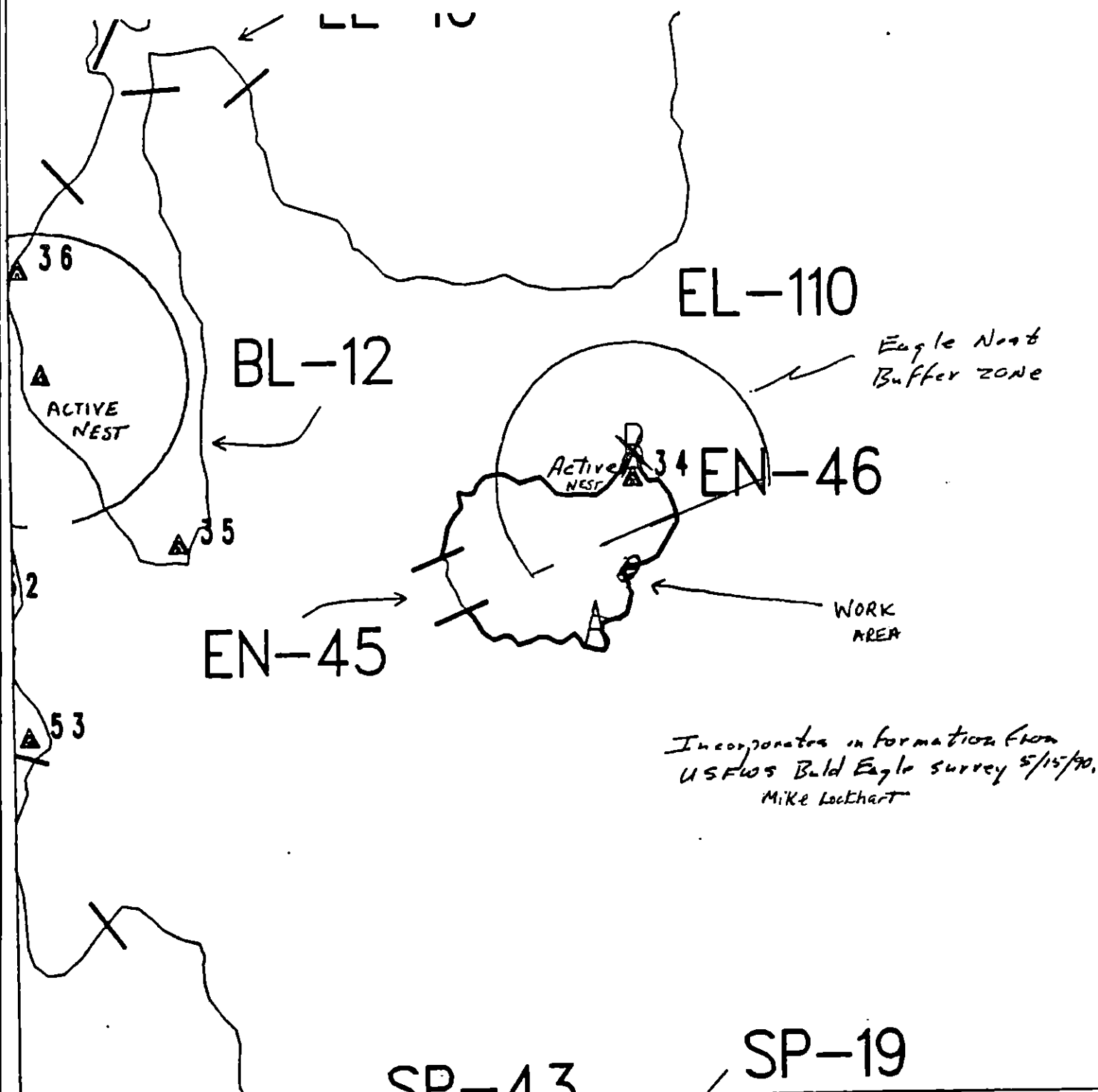
NOAA _____

USCG _____

DATE 6-8-90

Prepared By: WKK

Date 6/7/90



Exxon Company, USA
Map Kavi KNI-EN-46



ECOLOGY MAP 5/28
SEGMENT EN-46
SUBDIVISION A (1 of 2)
METERS



Seabird Colony



Eagle Nest

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.

SHPO SIGNATURE: [Signature] DATE: 5/2/90

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 [Signature]
EXXON [Signature] FOSC: [Signature] DATE: 5-12-90
NOAA [Signature]
USCG [Signature]

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 (8/7 to 8/31)
1J	Purse seine area (7/20 to 9/30)
1K	Purse seine hook-off (7/20 to 9/30)
1L	Set net sites (6/11 to 7/25) 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 3O, 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.
5R	Seabird colony (5/1 to 9/1) Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
5S	Shorebird/waterfowl concentration (4/1 to 5/15) Restrict all activity to essential minimum, especially air traffic.
5T	All Bald Eagle nests (3/1 to 6/1) Active Bald Eagle nests (3/1 to 9/1) Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
6U	Recreation: Tent sites (8/1 to 9/15)
6V	Anchorage (6/1 to 9/15)
6W	Forest Service cabins (6/1 to 9/15)
6X	Lodge (6/1 to 9/15)
6Y	Special use destination
7Z	Subsistence area: Salmon harvesting (5/1 to 9/30)
7HH	Finfish harvesting
7II	Deer harvesting (8/15 to 2/28)
7JJ	Invertebrate harvesting For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / 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 M Baer

☐ 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 SN 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

REVISION NO. 02/21/88

SHORELINE OILING SUMMARY

REVISION NO. 05/22/90

OG J. Springer USCG R. Vandepels SEGMENT ST/ EN46
 BIO P. Crank LAND REP D. Logan SUBDIVISION B (2072)
 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% Vert 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			
	R	B	P	S	1	2	3	4	SU	U	M	V
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 crPATTIES / 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-CH)	BELOW		OIL / FILM COLOR							PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	1	2	3	4	5	6	7	SU	U	M	V		
1	35					X	-		X										X			PGS
2	30					X	.		X								X					P.S.M
							.															
							.															
							.															
							.															

COMMENTS

53

OG J. SPRINGER

SEGMENT ST/EN-46

SUBDIVISION B

DATE 04/06/90

CHECKLIST

- ☒ N Area
- ☒ Approx. Scale
- ☒ Seg/Sub Entry
- ☒ On Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HW/LWL
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ P/L Location(s)
- ☒ P/L Photo Location(s)

LEGEND

1 Δ
P/L - No Subsurface Oil

2 Δ
P/L - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

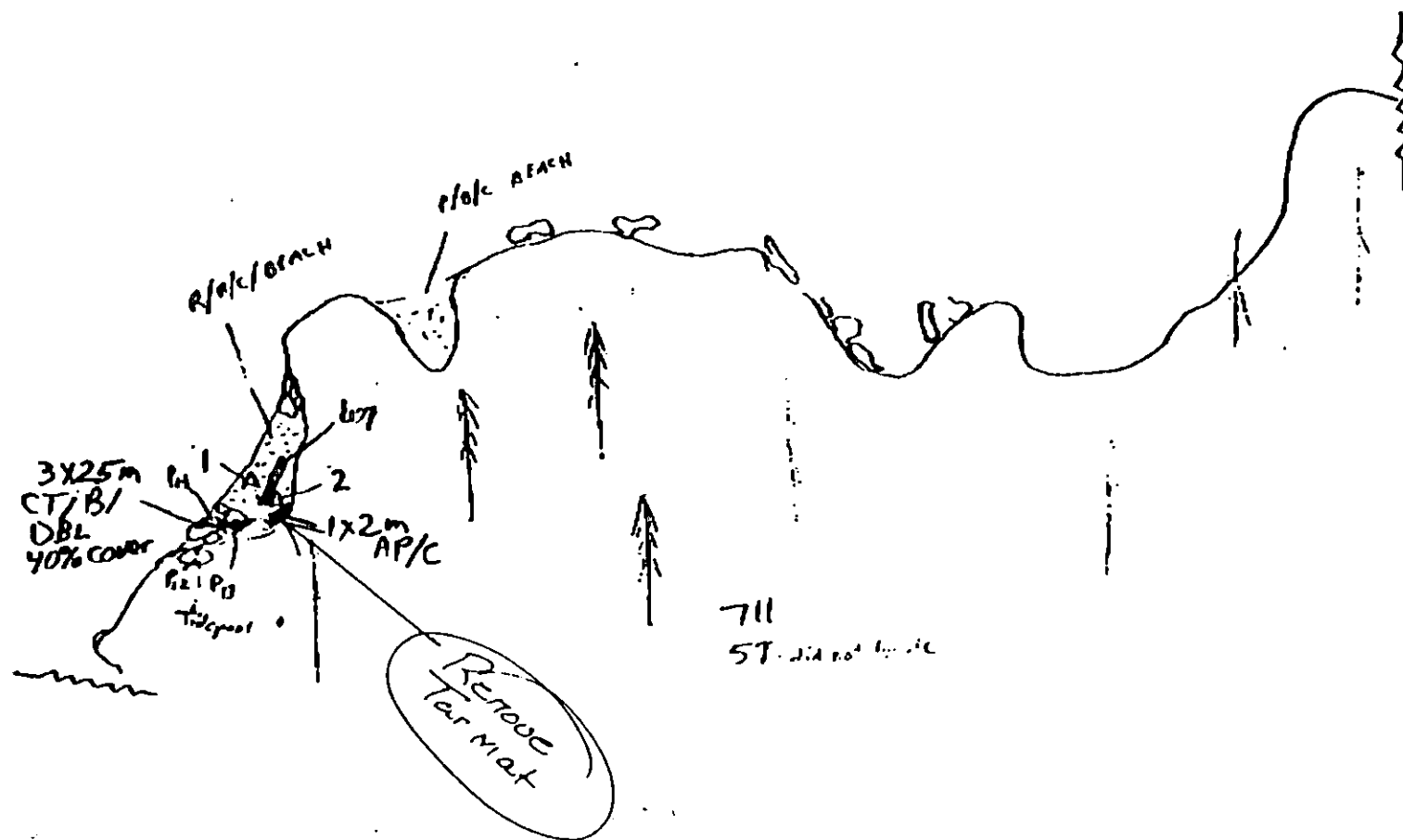
CT/S
Spotted Distribution

Obs Vegetation

1 ●
Photo location, direction,
and number

SKETCH MAP

water



0 100
METERS

N

975

SHORELINE ECOLOGICAL SUMMARY

PG 107-5

Segment ST / EN40 Subdivision B Date (mo/day/yr) 4/4/90
 Time (24 hr) 1740-1840 Biologist Crank Tide Height +1.7 P.S.A.
 Length 1002 m

- (A) Substrate type and % of segments:
 (1) Bedrock 50 (2) Boulder 25 (3) Cobble 15 (4) Pebble 10 (5) Sand (6) Silt
- (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-5-4
 Frames 12, 14

BARNACLES

Dense			Moderate			Sparse			Rare			NOT PRESE
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	

MYTILUS

Dense			Moderate			Sparse			Rare			NOT PRESE
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	

GASTROPODS

Dense			Moderate			Sparse			Rare			NOT PRESEN
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	

FUCUS

Dense			Moderate			Sparse			Rare			NOT PRESEN
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	

Wildlife Observations/ General Comments:

1 - Bald Eagle - Adult
 5 - Glaucous-wing Gulls

- Dense sea star concentrations in lower LITZ through segment
- Fleecy barnacle scarring in LITZ
- Behind oiled rock (located on OG Map) there was 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 1002 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	UTZ	MITZ	UTZ	COMMENTS
BOSSIELLA/CORALLINA				
CALLIARTHRON/CORALLINA		1		Tidepool
CLADOPHORA SPP		2		
COSTARIA SPP				
ENDOCLADIA MURICATA		2		
FILAMENTOUS GREENS		12	2	Sparsely
FILAMENTOUS REDS				
GLOIOPELTIS FURCATA				
HALOSACCION GLANDIFORME				
LAMINARIA SPP				
LITHOTHAMNION		1		Tidepool
NEREOCYSTIS SPP				
PORPHYRA SPP		2	2	
RALPHSIA/HILDENBRANDIA				
RHODOMELA LAMIX				
RHODOMENIA PALMATA		12	12	
SCYTOSIPHON SPP				
ULVA SPP				
ZOSTERA MARINA				
Enteromorpha		1		Tidepool

FAUNA:

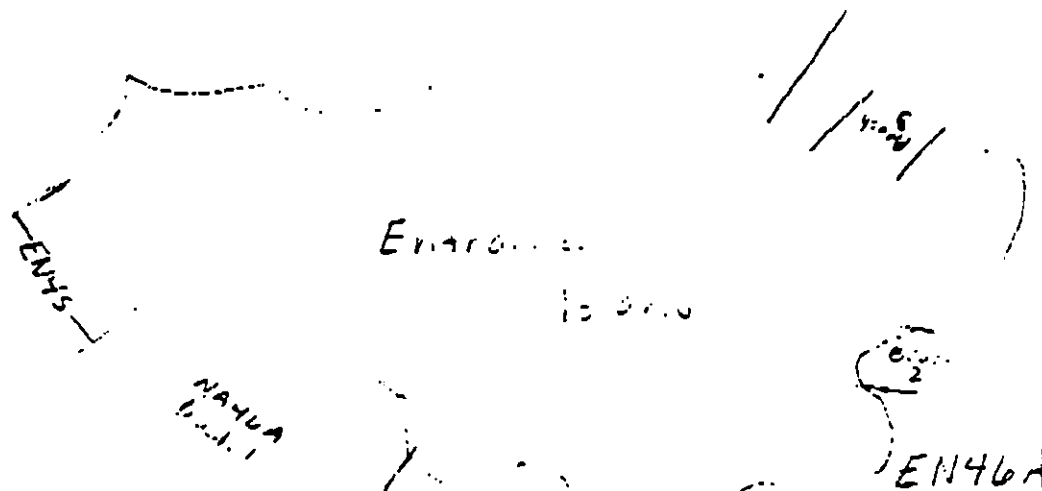
ANTHOPELURA SPP		1		Tidepool
(SEM) BALUNUS CARIOSUS		12	12	
B. GLANDULA	12	123		Heavy scurrying
BRYOZOANS				
CHITONS (OTHER THAN K. TUNICATUS)				
CLAMS				
CRABS				
DERMASTERIUS IMBRICATA				
KATHARINA TUNICATA		1		Tidepool
LEPTASTERIAS HEDYACTIS				
LIMPETS	123	123	123	Dense Testate in Tidepool
LITTORINA SPP	123	123	123	
NUCELLA SPP		1		Tidepool
PAGURUS SPP				
PISASTER OCHRACEUS				
POLYCHAETES				
PYDNOPODIA HELIANTHOIDES				
SEAPLESIA DIRA				
SERPULIDS				
SIPHONARIA THERSITES		12	12	Dense
TEALIA				
Epiactis		1		Tidepool

4/4/90

Crank

EN 46B

pg 201



Location 175

- Most of the bottom is steep and rocky, with some small patches of sand and silt.

Beach 1:

- The beach is composed of small, dark, rounded stones and pebbles. The stones are mostly black and grey, with some brown and red stones scattered throughout.
- The beach is bordered by a line of low, dark, rounded stones and pebbles.
- The beach is bordered by a line of low, dark, rounded stones and pebbles.
- The beach is bordered by a line of low, dark, rounded stones and pebbles.

Beach 2:

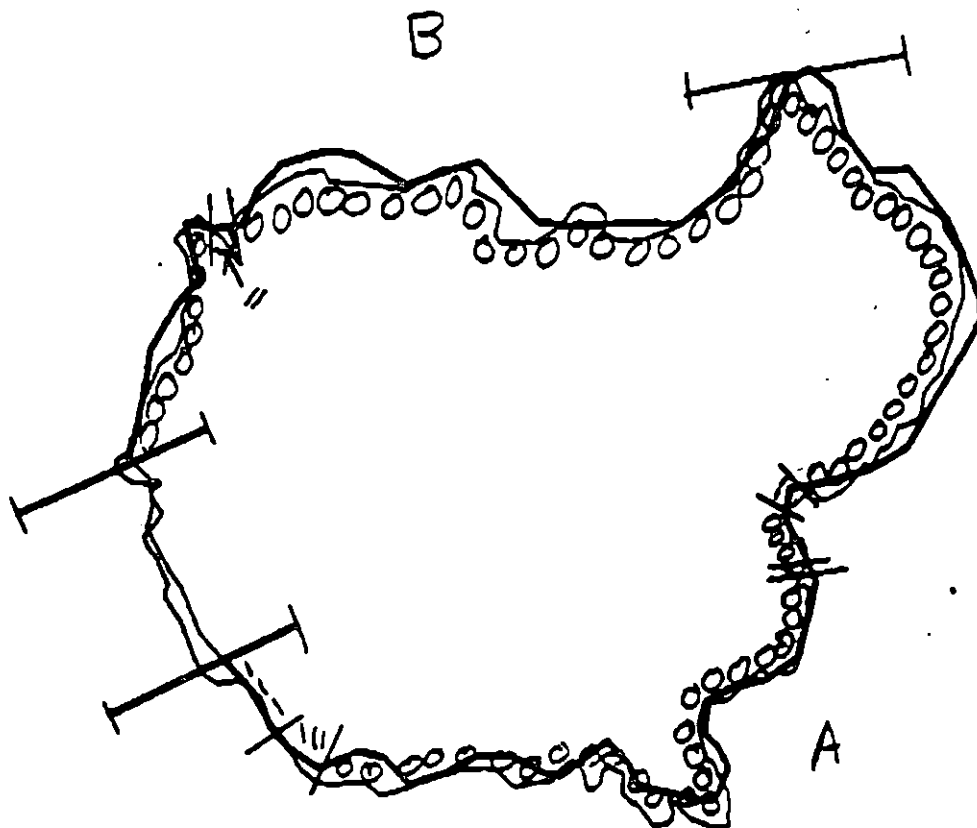
- Small pocket of dark, rounded stones and pebbles. The stones are mostly black and grey, with some brown and red stones scattered throughout.
- The beach is bordered by a line of low, dark, rounded stones and pebbles.
- The beach is bordered by a line of low, dark, rounded stones and pebbles.
- The beach is bordered by a line of low, dark, rounded stones and pebbles.
- The beach is bordered by a line of low, dark, rounded stones and pebbles.

Beach 3:

- The beach is composed of small, dark, rounded stones and pebbles. The stones are mostly black and grey, with some brown and red stones scattered throughout.
- The beach is bordered by a line of low, dark, rounded stones and pebbles.

Flora:

- The beach is composed of small, dark, rounded stones and pebbles. The stones are mostly black and grey, with some brown and red stones scattered throughout.
- The beach is bordered by a line of low, dark, rounded stones and pebbles.
- The beach is bordered by a line of low, dark, rounded stones and pebbles.
- The beach is bordered by a line of low, dark, rounded stones and pebbles.
- The beach is bordered by a line of low, dark, rounded stones and pebbles.



EN

55

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

EN-46

ADEC Segment Length: ²²⁹²~~4424~~m



Map Key: PWS-144
 Name: James Springs
 Date: 4/6/90
 Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EN-46 SUBDIVISION B (2 of 2)

WORK WINDOW

Manual Pickup 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.

711 Subsistence: Deer Harvesting

No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic and beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unrolled biota and substrate. Do not trample or otherwise damage *Fucus*, mussel beds or sea stars.

TAG APPROVAL DATE 5/29/90.
 ADEC Art Weener Art Weener
 EXXON ANDY TSH ANDY TSH
 NOAA BURKSCOTT BURKSCOTT
 USCG G.A. REITER G.A. Reiter

FOS

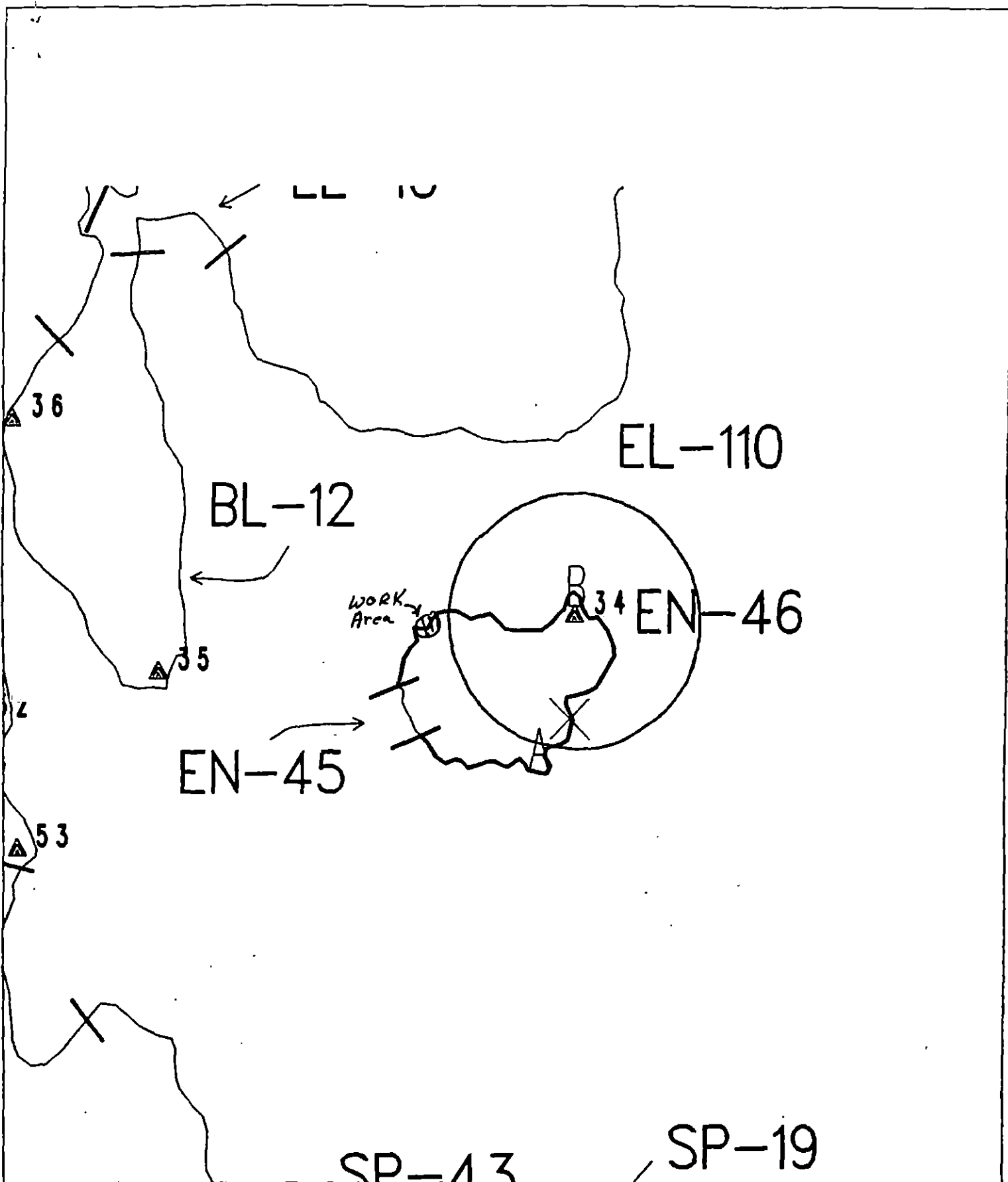
FOSC

DATE _____

MAY 29 1990

Prepared By: Andrew Munn WPK

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

SEGMENT ST/ ER-01 SUBDIVISION A (1 OF 3) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 226-40-16715.

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7JJ Subsistence area: Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: *Charles E. Hume* DATE: 4/23/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 127 m: V.Light 0 m: No Oil 0 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> </u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> Removal	<u> </u> Other (see comments)

COMMENTS: Recommend removal of mousse patties manually from area shown
on sketch map. Work should be conducted between 5/1 and 8/15.

TAG COMMENTS:

TAG APPROVAL DATE: 4/21/90

ADEC *Art Weiner* *Art Weiner*

EXXON *Tim Tate* *Tim Tate*

NOAA *Burl Wescott* *Burl Wescott*

USCG *Kenneth Keane* *Kenneth Keane*

FOSC: *[Signature]* DATE: 4-27-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ ER-01 SUBDIVISION: A DATE 06 APRIL 90

USCG

NAME LARRY FLETCHER SIGNATURE Larry R. Fletcher

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

1. BIO-REMEDIATE.

ADEC

NAME DAVID M. SALE SIGNATURE David M. Sale

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

① REMOVE OIL FROM UNDERLYING SEDIMENTS (BELOW
BUNDLES.

② ASSURE OIL COVER ON ROCKS IS NOT MOBILE

③ BIO REMEDIATE

LAND MANAGER

NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Uses for the segment include subsistence deer and invertebrate harvesting.
Treatment as suggested by ADEC above.

SHORELINE OILING SUMMARY

REVISION NO. 03/25/88

OG Rich Marty USCG Larry Fletcher SEGMENT ST/ ER-01
 BIO Bob Lemon LAND REP Leigh Carlson SUBDIVISION A (173)
 EXXON Jon Gernicki ADEC Dave Sale TIME 17:00 to 17:30
 TEAM NO.: 10 TIDE LEVEL: +0.2m(65') to +0.3m(2.5') DATE 06 April 1990
 EST. SUBDIVISION LENGTH: 111 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: SW to NE
 SURFACE SEDIMENTS: R 60 % B 15 % C 10 % P 10 % G 5 % S 0 % M 0 % V 0 %
 SLOPE: Long 40 % Hang 60 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 111 m VL 0 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	N	P	R	SP	BP	ST	SL	SB	SB	SB	SB	SU	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER			X							X					X	
COAT																
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL													X		X	X

PAVEMENT: H F S None sq. m by 0 cmPATTIES / TARBALLS < 1 BAGSNEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris	X		

DEBRIS COLLECTED ☒ YES ☐ NOTYPE tar balls#BAGS < 1

Photographs:

Roll No. ST 1018Frames 33, 34P.T.S.
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	SP	BP	ST	SL	SB	SB	SB	SB	SU	U	M	U		
1	21		X				0.1		X					X				X					M, S, C, S
							.																
							.																
							.																
							.																
							.																

COMMENTS All observed tar balls were removed during the survey

Revision

RM 7 April 1990

2 of 20

SEGMENT ST/EROI

SUBDIVISION A (all)

DATE 6-7 April 90

CHECKLIST

- Map Area
- Approx. Scale
- Seg/Sub Study
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. HAV/LULU
- SRL
- Profile Location(s)
- Photo(s)
- PH Location(s)
- Photo Location(s)

LEGEND

1 Δ
No Subsurface Oil

2 Δ
Subsurface Oil

CT/C
Continuous Distribution

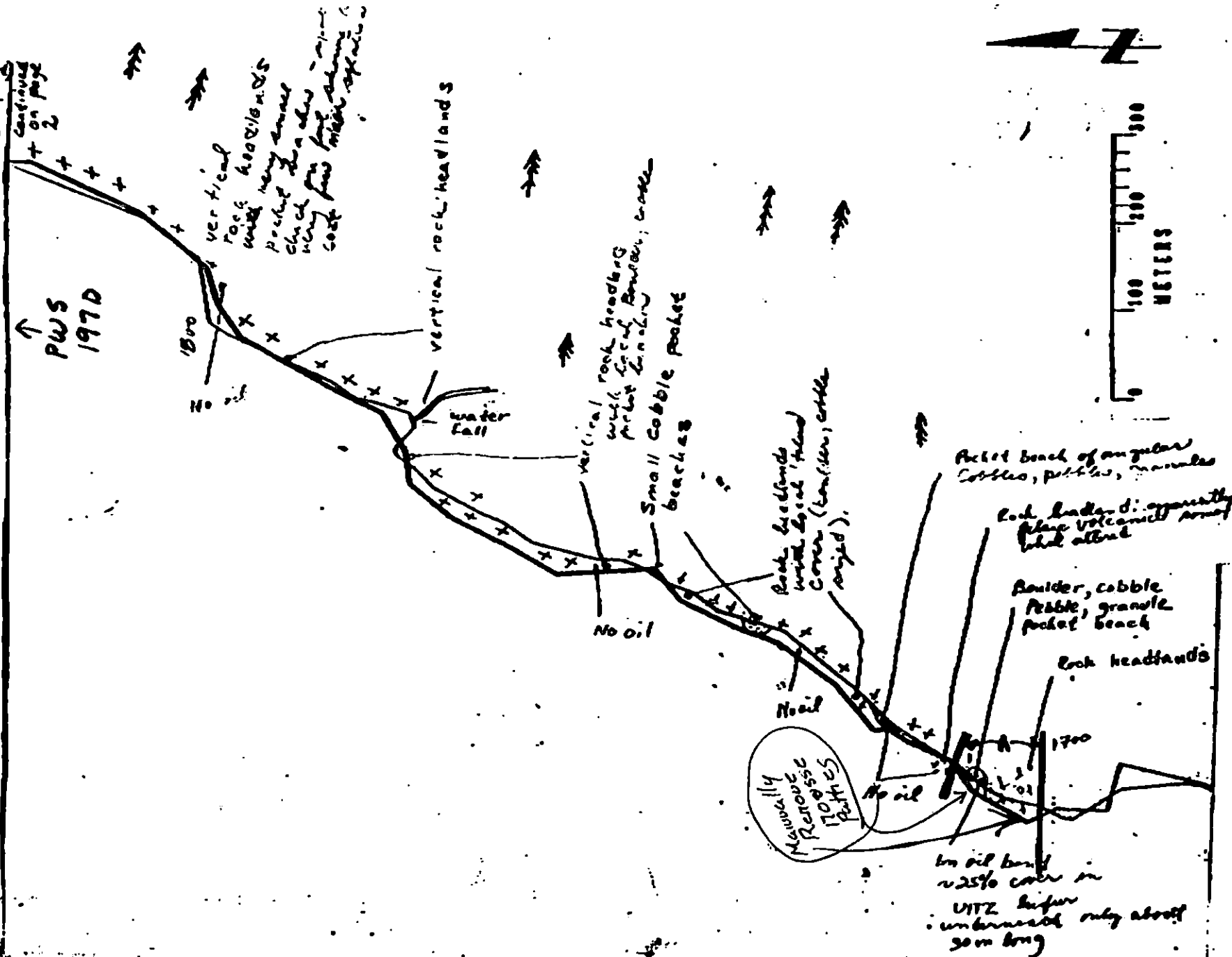
CT/B
Belt Distribution

CT/P
Patchy Distribution

CT/S
Spotted Distribution

Other Vegetation

Photo location, direction, and number



Oil Character Length (m): AP

AP	PO	CV	CT	ST	MS	PT	TB	FL	NO
		11		37.5			14	310	345
				272					1077

SHORELINE ECOLOGICAL SUMMARY

REVISION: 06/28/90

Segment ST/10/ER1 Subdivision A Date (mo/day/yr) 4/6/90
 Time (24 hr) 0700-0840 1700-1930
 Biologist Lemon

- (A) Substrate type and % of segments:
 (1) Bedrock 60 (2) Boulder 15 (3) Cobble 10 (4) Pebble 10 (5) Sand 5 (6) Silt _____
- (B) Overall % cover of biota (% of segment): Dense _____ Moderate _____ Low 20%
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (O)

Photographs: _____
 Roll No. ST/10/8

Frames 33, 34

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

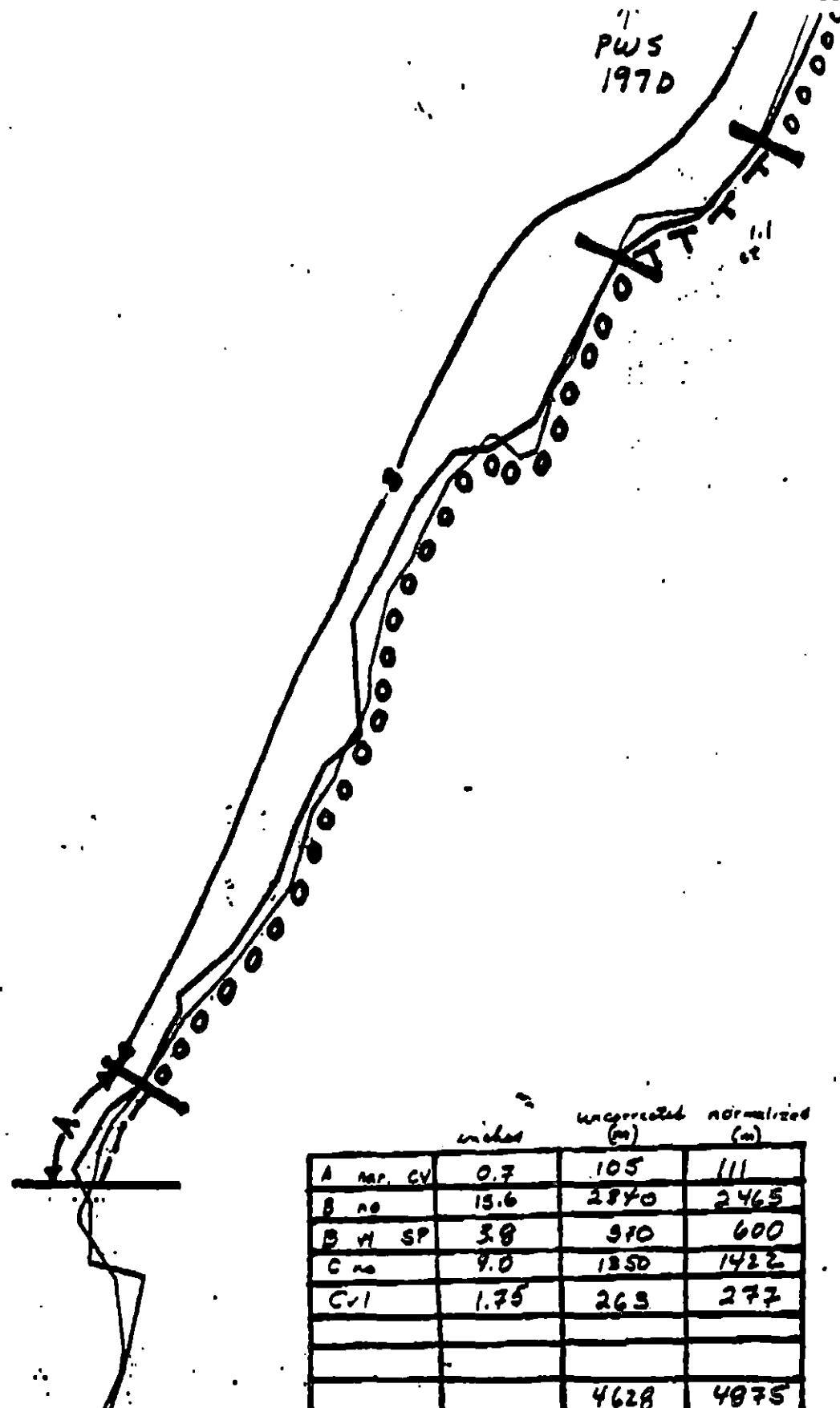
FUCUS

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: Onchidella borealis is included in the gastropod count; Dermasterias (ASTEROID) was occasionally present underneath. The water has been very clear around this island, perhaps 40' from the shelf.

Ecological Considerations: Invertebrate harvest area and hatchery release.



	inches	uncorrected (m)	normalized (m)
A mp. CV	0.7	105	111
B no	15.6	2840	2465
B H SP	3.8	910	600
C no	9.0	1350	1422
Cv1	1.75	263	277
		4628	4875

1/5

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

ER-1.

ADEC Segment Length: 4875m



Map Key: PWS-1970

Name: 07 April 1990

Date: Richard Morley

Date Entered:

V-58

PWS
197A
↓

PWS
197E
2/5 →

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-1 .

ADEC Segment Length: 4875m

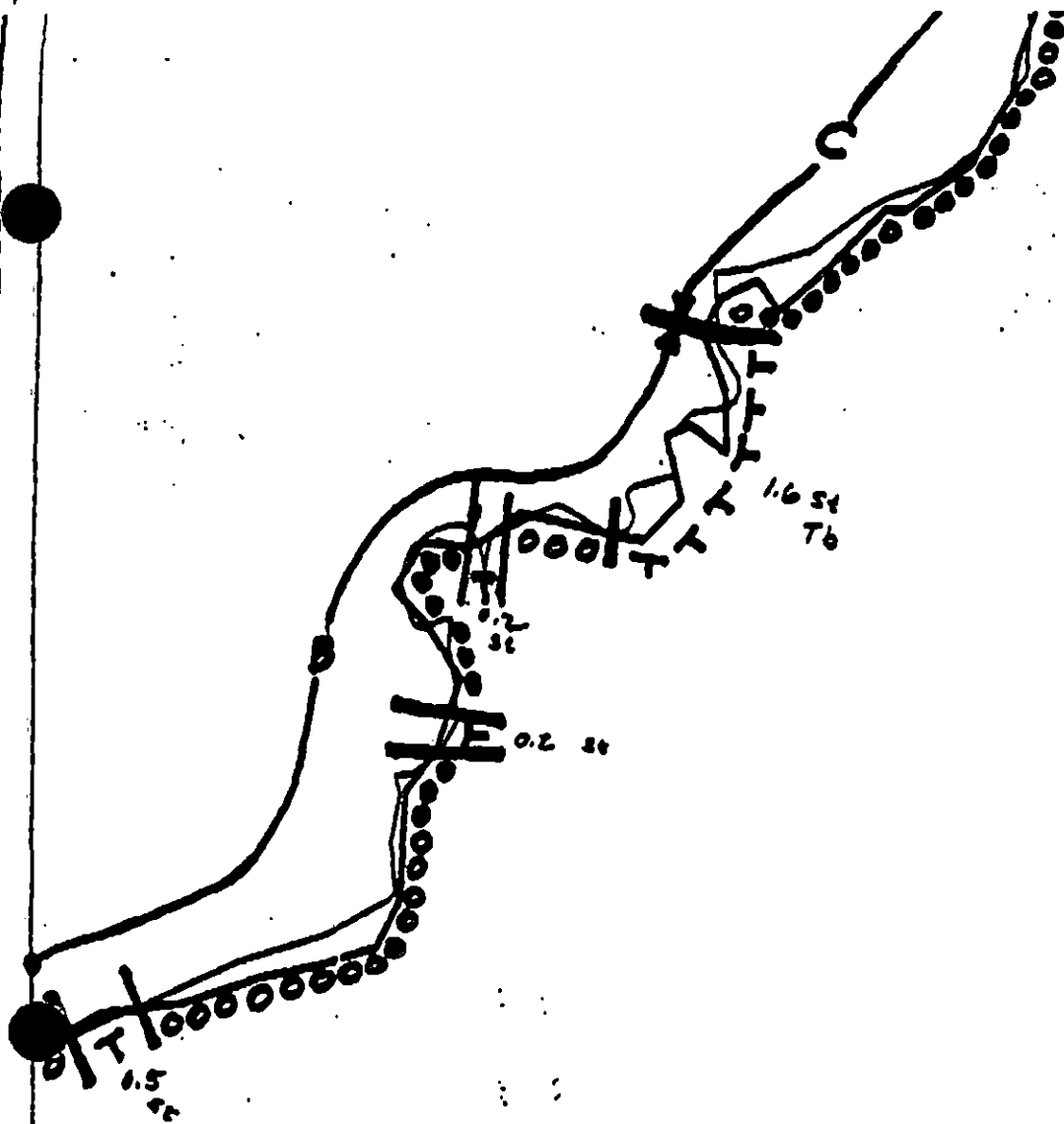
0 100 200 300
METERS

Map Key: PWS-197d

Name: Richard Marty

Date: 07 April 1990

Date Entered:



ER-01

← PWS
1970

3/5

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

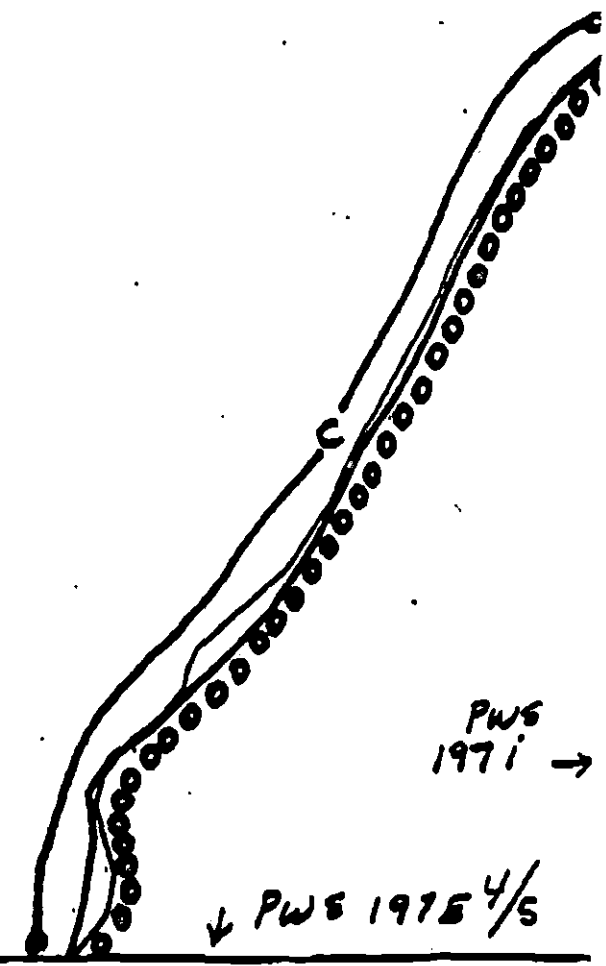
ER-1.

ADEC Segment Length: 4875m



Map Key: PWS-1970
Name: Rich Amity
Date: 07 April 1990
Data Entered:

0



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

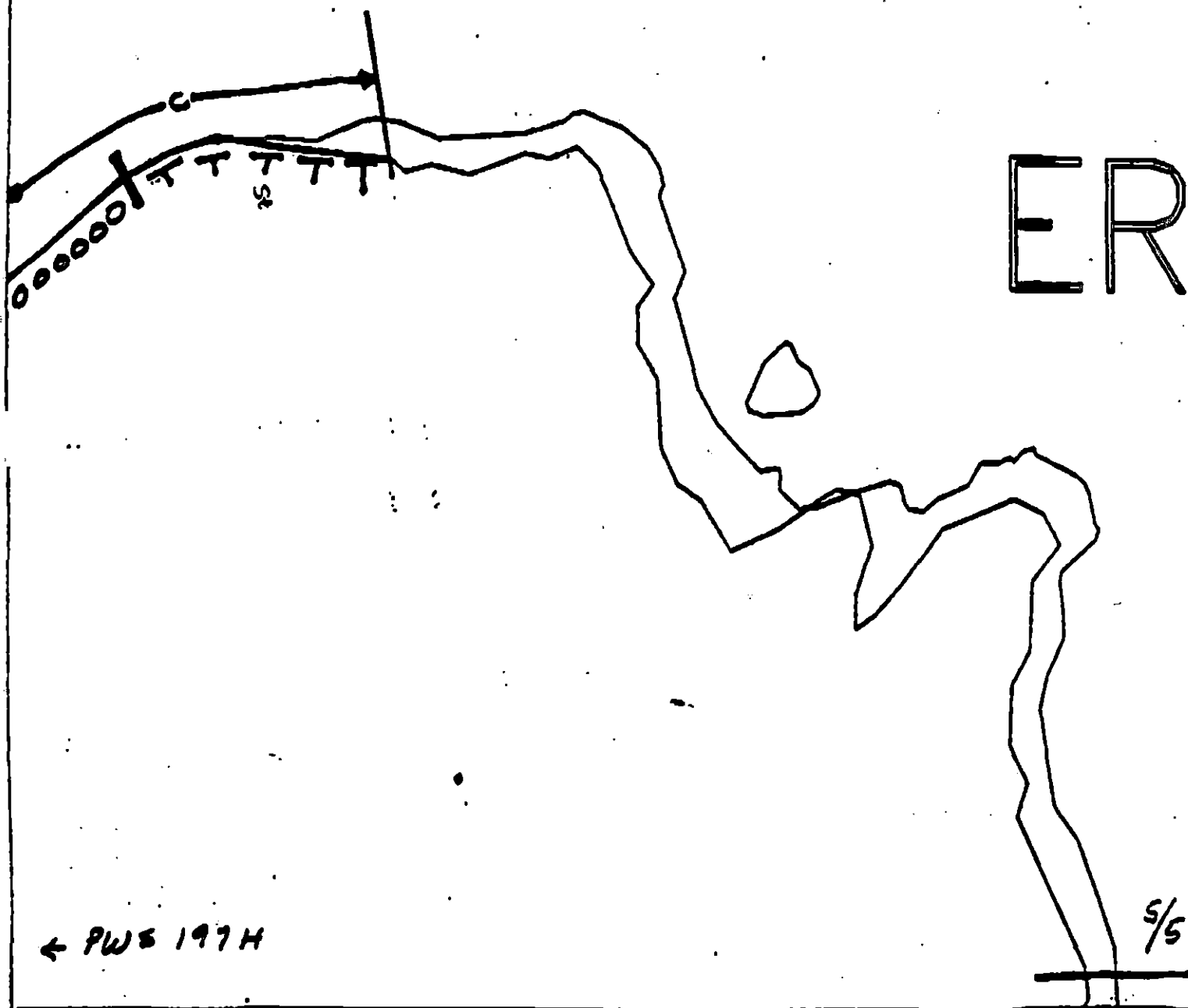
ER-1

ADEC Segment Length: 4875m

0 100 200 300
METERS



Map Key: PWS-197b
Name: Richard Marty
Date: 03 April 1990
Date Entered:



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ER-1

ADEC Segment Length: 4875m



Map Key: PWS-1971

Name: Richard Marty

Date: 07 April 1990

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ ER-01 SUBDIVISION B (2 OF 3) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 226-40-16715.

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
- 1B Salmon stream mouth - spawning (7/10 to 8/31)
- 5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
- 1F Sawmill Bay Hatchery release (4/15 to 6/1)
- 7II Subsistence area: Deer harvesting (8/15 to 2/28)
- 7JJ Subsistence area: Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. H. Jones DATE: 4/23/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 588 m: No Oil 2423 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/21/90

ADEC ART WEINER
EXXON ANDY TATE
NOAA BILL WESSOTT
USCG KENNETH KEANE

FOSC: DATE: 4-27-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A** Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C** Salmon fry nursery area (4/31 to 7/31)
- 1D** Esther Hatchery release (4/15 to 6/1)
- 1E** Main Bay Hatchery release (4/20 to 5/10)
- 1F** Sawmill Bay Hatchery release (4/15 to 6/1)
- 1G** Cannery Creek Hatchery release (4/21 to 6/1)
- 1H** Remote release site
- 1I** Gill net area (6/7 to 8/31)
- 1J** Purse seine area (7/20 to 9/30)
- 1K** Purse seine hook-off (7/20 to 9/30)
- 1L** Set net sites (6/11 to 7/25)
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M** Herring spawning (4/1 to 6/15)
 Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P** Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- SR** 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.
- SS** Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- ST** 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
- 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.

SEGMENT ST/ ER-01 SUBDIVISION: B DATE 06 APRIL 90

USCG

NAME LARRY FLETCHER

SIGNATURE

Larry P. Fletcher

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME DAVID M. SAGE

SIGNATURE

David M. Sage

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

① ASSURE ALL TAIL PATTIES ARE REMOVED.

② DETERMINE SOURCE OF SILVER SHEEN NOTED AT RPD ALGAE UPPER LIMITS.

③ CLEAN OIL FROM SLATE FLAGSTONES ON BEACH NEAR CRAB.
(NOTE AREA WHERE CURT SHOWN ON "CLASTS, CLIOPEL ON PEBBLES, SHELLS")

LAND MANAGER

NAME Leigh Carlson

SIGNATURE

Leigh Carlson ADIVR

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Uses for the segment includes subsistence deer and invertebrate harvesting.
Treatment as suggested by ADEC above.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Rich Marty USCG Larry Fletcher SEGMENT ST/ ER-01
 BIO Bob Lemon LAND REP Leigh Carlson SUBDIVISION B (243)
 EXXON Jon Czarnetzki ADEC Dave Sale TIME 17:30 to 20:00
 TEAM NO.: 10 TIDE LEVEL: +0.2 m (0.5') to +0.8 m (2.5') DATE 06 April 1990
 EST. SUBDIVISION LENGTH: 3065 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: SW to NE
 SURFACE SEDIMENTS: R 70 % B 10 % C 10 % P 5 % G 5 % S % M % V %
 SLOPE: Long 30 % Hang 70 % Vert % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W m M m N m VL 600 m NO 2465 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	C	B	P	N	1	2	3	4	5	6	SU	U	M	V
ASPHALT PAVEMENT														
POOLED														
COVER														
COAT														
STAIN				X				X			X			
MOUSSE														
PATTIES														
TARBALLS				X				X			X			
FILM														
NO OIL											X	X	X	

PAVEMENT: H F S None sq. m by cmPATTIES / TARBALLS < BAGSNEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	2		
Vegetation	0	2	
Trash			
Debris			

DEBRIS COLLECTED
☒ YES ☐ NOTYPE Trash + Tar#BAGS << 1

Photographs:

Roll No. ST/10/9 also ST/10/8Frames 1-13 35-37

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			1	2	3	4	5	6	SU	U	M	V		
1	18				X		10 - 3	X				X			X				N	Pebbles
2	16					X	.								X				N	M, G, S
3	23					X	.								X				N	P, Pent
4	28					X	.								X				N	P, Pent
5	20					X	.								X				N	G, Pent
							.													

COMMENTS All observed tar balls were removed during Revision
the survey RM 7 April 1990

* Does not constitute subsurface oil.

4 of 20

DATE 6-7 / Apr / 90

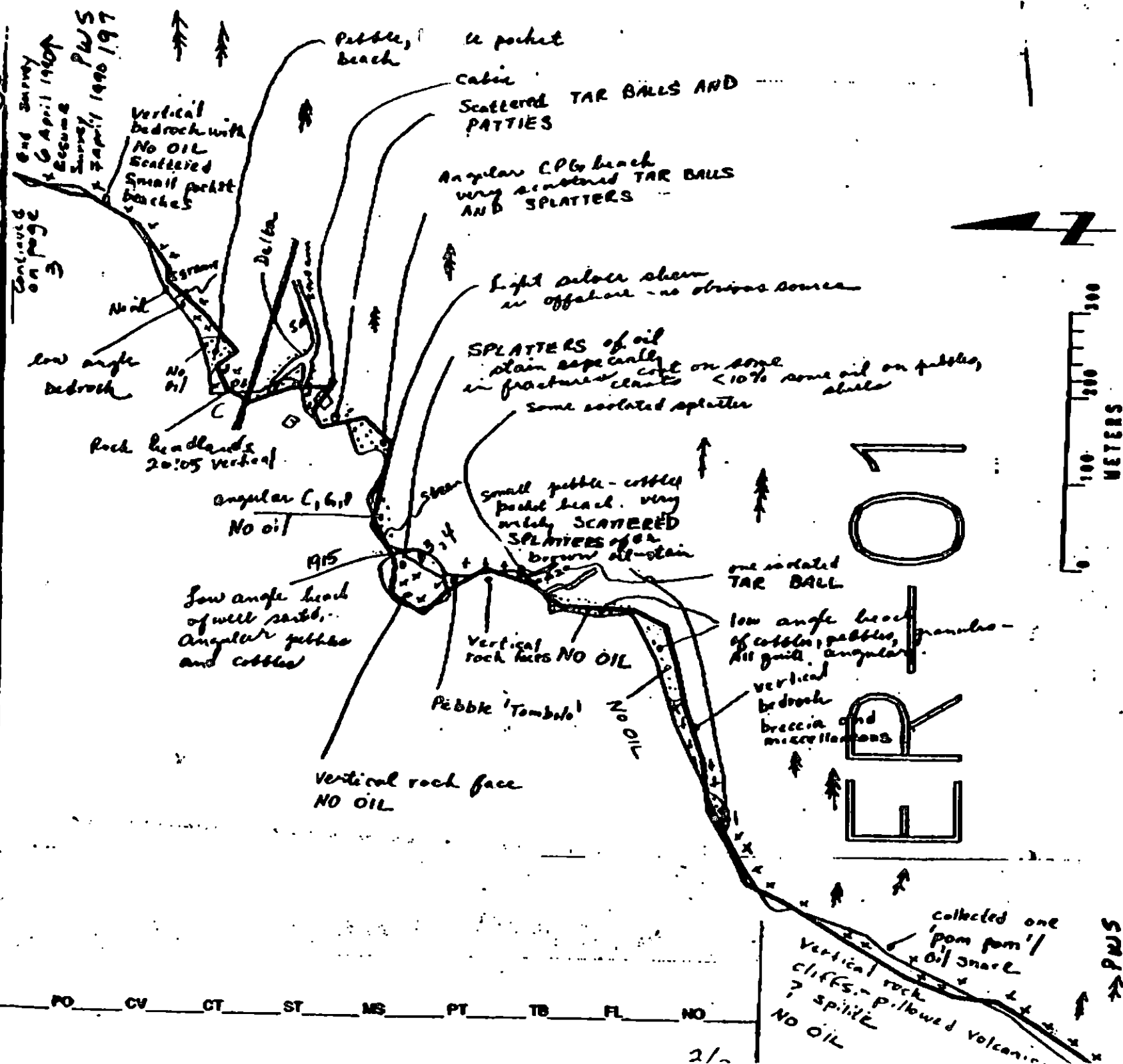
CHECKLIST

- M Arrow
 Approx. Scale
 Seg/Ab. Only
 Oil Dist.
 Width
 Length
 % Cover
 Substrate Character
 Est. HWA/LWA
 SSI
 Profile Location(s)
 Profile(s)
 Pin Location(s)
 Photo Location(s)

LEGEND

- 1 ▲
 Pn - No Subsurface Oil
- 2 ▲
 Pn - Subsurface Oil
- CT/C
 Continuous Distribution
- CT/D
 Broken Distribution
- CT/P
 Patchy Distribution
- CT/S
 Spotted Distribution
- Old Vegetation
- 1 ➡
 Photo location, direction,
 and number

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



529/1975

OG R Mar ty

SEGMENT ST/GR OI

SUBDIVISION B (part)
A (all)

DATE 6-7 April 90

CHECKLIST

- ☐ M Arrow
- ☐ Approx. Scale
- ☐ Sep/Sub Beach
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWA/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ

Pt - No Subsurface Oil

2 Δ

Pt - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

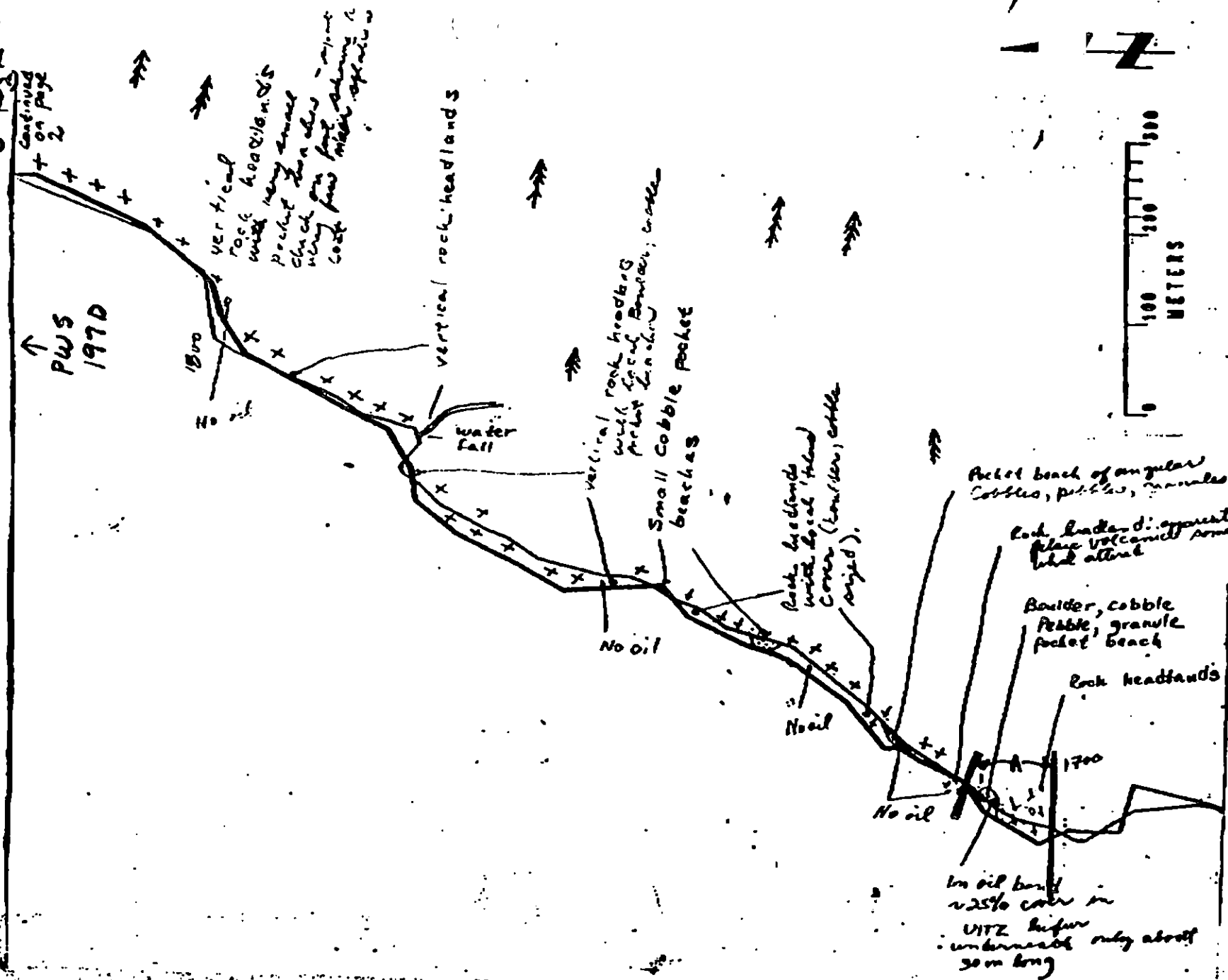
CT/S

Splashed Distribution

Cited Vegetation

1 →

Photo location, direction, and number



Oil Character Length (m):									
AP	PO	CV	CT	ST	MS	PT	TB	FL	NO
A			111						
B				375			14	240	245

REVISIONS

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/23/90

Segment ST/10/ER1 Subdivision B Date (mo/day/yr) 4/6/90

Time (24 hr) 1730 - 2010 Biologist Lemon

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

(B) Overall % cover of biota (% of segment): Dense 80% Moderate Low ST/10/8 Frames 35-37

(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/10/9

Frames 1-13

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	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	
6	6	6	6	6	6	6	6	6	6	6	6	

MYTILUS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	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	
6	6	6	6	6	6	6	6	6	6	6	6	

GASTROPODS

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

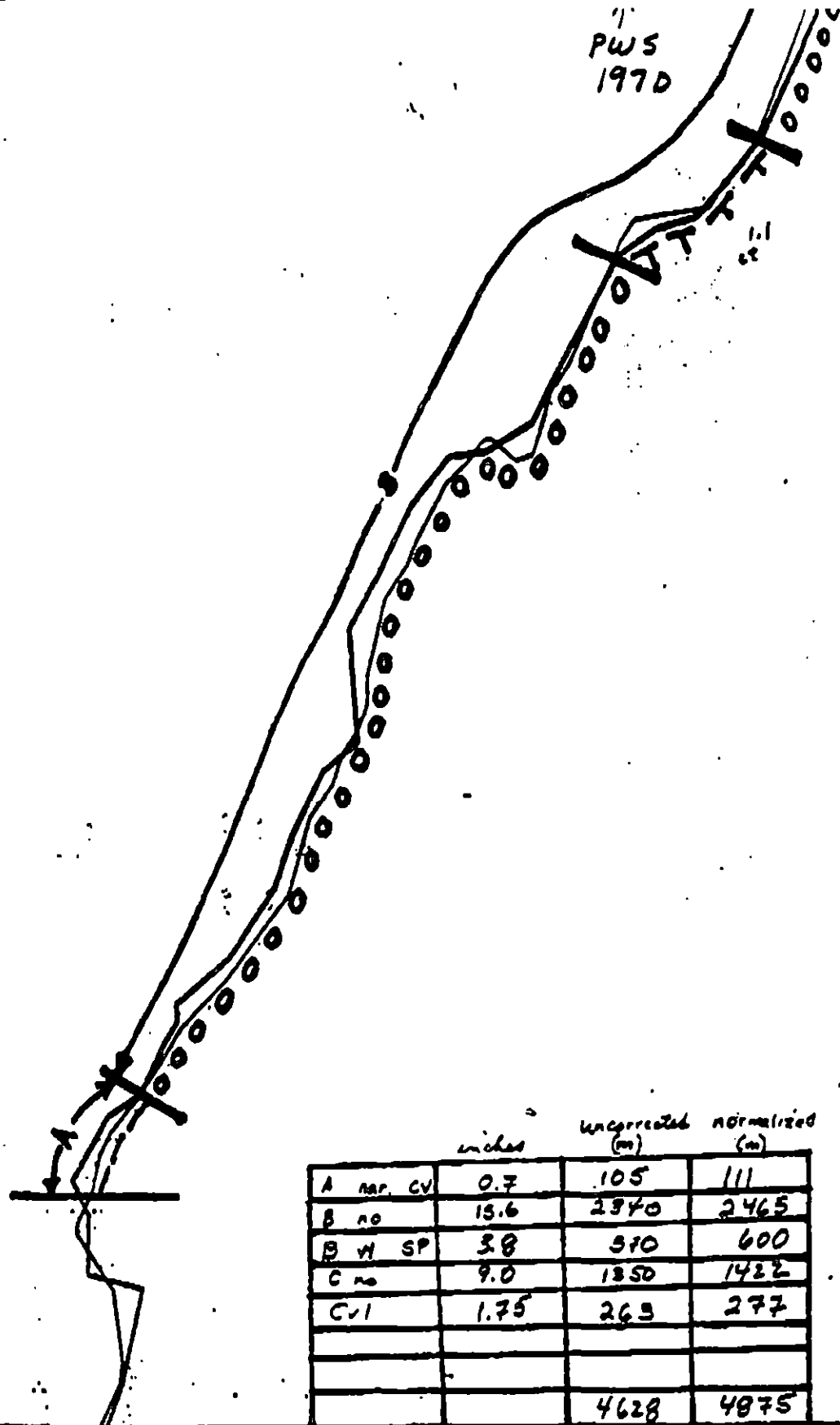
FUCUS

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

Wildlife Observations/General Comments: Mixed red algae covers the low zone about 90% not reflected above; Laminaria dense below. Onchidella borealis makes a significant contribution to the gastropod population on the beach; Katharina is another Mollusc frequently seen. ASTEROIDS sightings included Derasterias, Hemida, Pycnopodia, and Leptasterias hexactis.

Ecological Considerations: Prototheca and Sordaria shells are common along the shore indicate possible commercial potential for these bivalves at lower levels. Checked stream to south end of subdivision found no fish or fish food or oil. Checked stream at north end of subdivision by cabin, found insect larva, no fish and no oil. Invertebrate harvest and hatchery release area.

PWS
1970



	inches	uncorrected (m)	normalized (m)
A nar. CV	0.7	105	111
B no	15.6	2340	2465
B W SP	3.8	370	600
C no	9.0	1350	1422
Cv1	1.75	263	277
		4628	4875

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

ER-1.

ADEC Segment Length: 4875m



Map Key: PWS-1970
 Name: 07 April 1990
 Date: Richard Marty
 Date Entered:

1/5

V-58

PWS
197A
↓

PWS
197E
2/5 →

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ER-1

ADEC Segment Length: 4875m

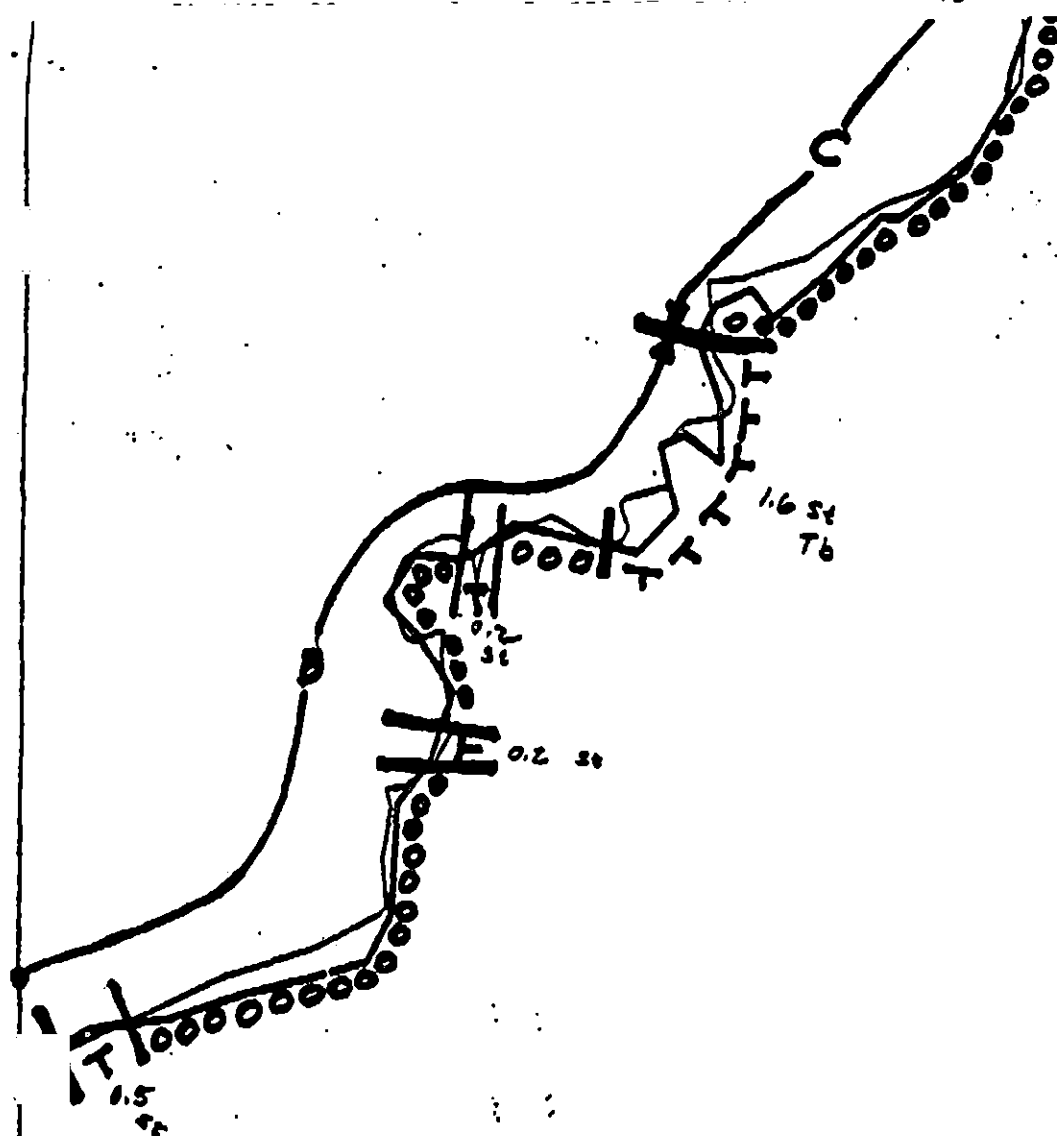


Map Key: PWS-197d

Name: Richard Marty

Date: 07 April 1990

Date Entered:



ER-01

← PWS
1970

3/5

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

ER-1.

ADEC Segment Length: 4875m



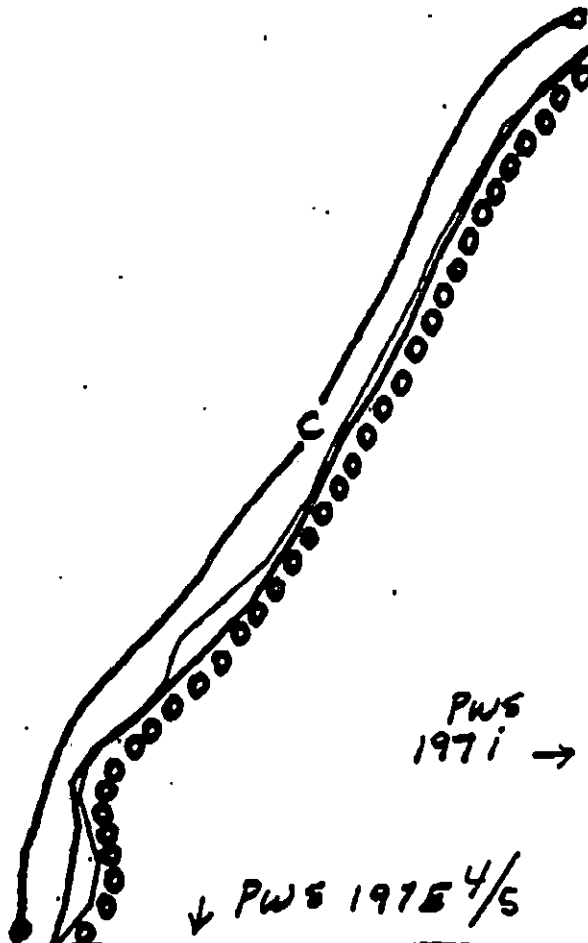
Map Key: PWS-1970

Name: Rich Marty

Date: 07 April 1990

Date Entered:

0



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-1

ADEC Segment Length: 4875m



Map Key: PWS-197b

Name: Richard Marley

Date: 07 April 1990

Date Entered:



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

OOOO No Oil

ER-1

ADEC Segment Length: 4875m



Map Key: PWS-1971

Name: Richard Marty

Date: 07 April 1990

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ ER-01 SUBDIVISION C (3 OF 3) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 226-40-16715.

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
- 1B Salmon stream mouth - spawning (7/10 to 8/31)
- 5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
- 1F Sawmill Bay Hatchery release (4/15 to 6/1)
- 7II Subsistence area: Deer harvesting (8/15 to 2/28)
- 7JJ Subsistence area: Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. (5T) Bald eagle nest in Subdivision C.

SHPO SIGNATURE: Charles E. Adams DATE: 4/23/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 279 m: No Oil 1432 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: 4/21/90

ADEC ART WEINER Art Weiner

EXXON ANDY TATE Andy Tate

NOAA Burt Wescott Burt Wescott

USCG KENNETH KEANE Kenneth Keane

FOSC: DATE: 4-27-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

SEGMENT ST/ ER-01 SUBDIVISION: C DATE 07 APRIL 90

USCG

NAME LARRY FLETCHER SIGNATURE Larry R Fletcher

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME DAVID SARE SIGNATURE David Sare

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

LAND MANAGER

NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY

REVISION NO. 00/20/90

OG Rich Marty USCG Larry Fletcher SEGMENT ST/ ER-01
 BIO Bob Lemon LAND REP Leigh Carlson SUBDIVISION C
 EXXON Jon Czarnecki ADEC Dave Sale TIME 07:30 to 08:30
 TEAM NO.: 10 TIDE LEVEL: +0.8m(2.5) to +1.1m(3.7') DATE 07 April 1990
 EST. SUBDIVISION LENGTH: 1699 m. ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot 2' ☒ Boat 1' ☐ Helo WORKING DIRECTION: SW to NE
 SURFACE SEDIMENTS: R 50 % B 25 % C 15 % P 5 % G 5 % S 0 % M 0 % V 0 %
 SLOPE: Long 50 % Hang 50 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 277 m NO 1422 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	R	B	P	C	1	2	3	4	5	6	7	8	SU	M	N	U
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN				X					X				X			
MOUSSE																
PATTIES																
TARBALLS				X					X				X			
FILM																
NO OIL														X	X	

PAVEMENT: H F S None sq. m by 0 cmPATTIES / TARBALLS <<1 BAGSNEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED

☒ YES ☐ NOTYPE 1 ppm brown#BAGS <<1

Photographs:

Roll No. 55 10/9Frames 14-17

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL CM - CEN (100-200)	BELOW VO UC	OIL / FILM COLOR								PIT ZONE SU M U	A N A	SUBSURFACE SEDIMENTS
		OF	OR	OL	OP	NO			1	2	3	4	5	6	7	8			
1	20					X	.										X	N	S, P
							.												
							.												
							.												
							.												
							.												
							.												

COMMENTS All observed tar balls were removed during the survey

Revision
RM 7 April 1990

100

OG R. Marty

SEGMENT 511 ER 01

SUBDIVISION C(part)

DATE 6-7 April 1990

CHECKLIST

- Map Area
- Approx. Scale
- Seg/Sub Grid
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. HMA/LVL
- S&L
- Profile Location(s)
- Photo(s)
- Photo Location(s)

LEGEND

1 A
Pi - No Subsurface Oil

2 A
Pi - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

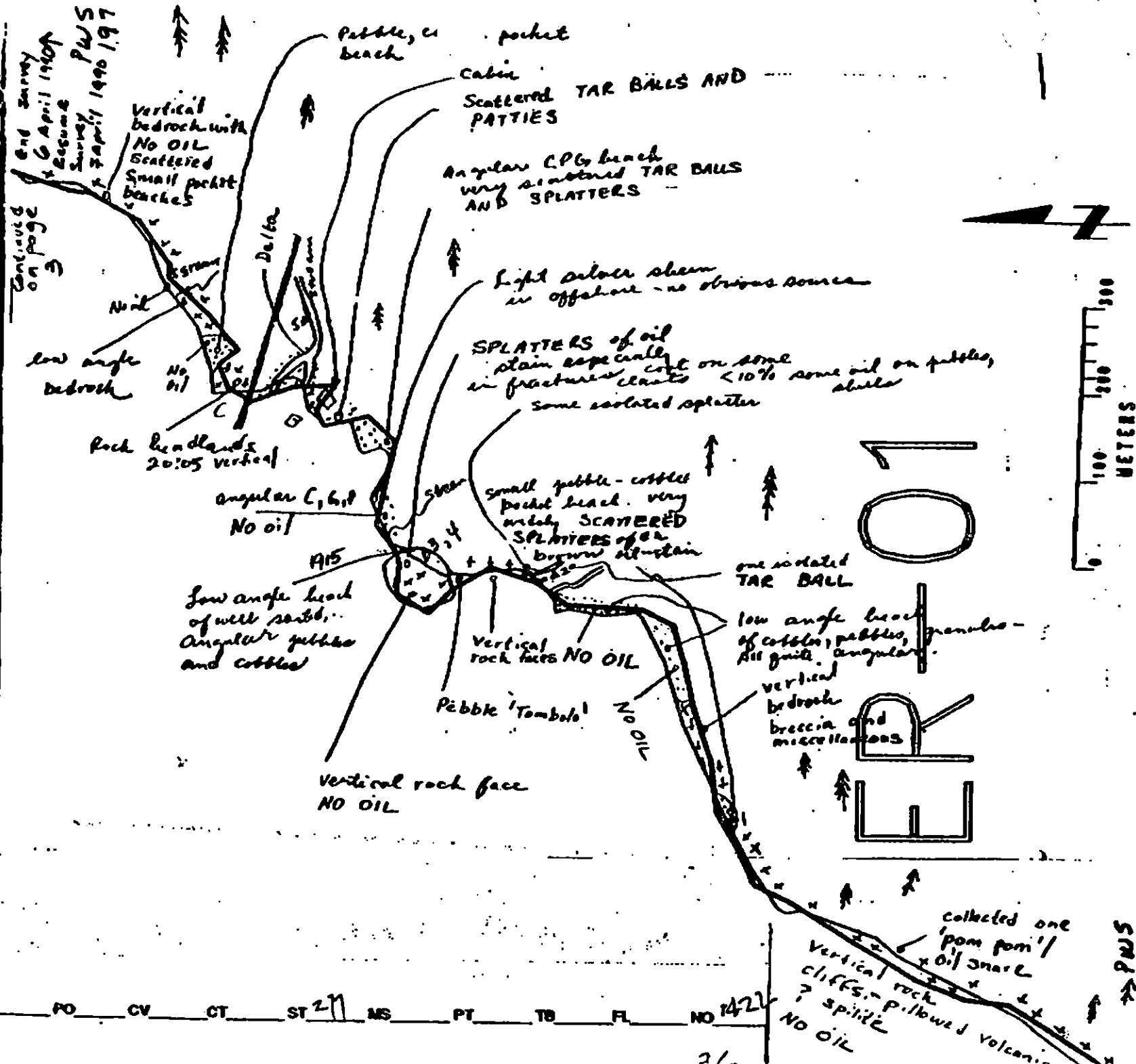
CT/P
Patchy Distribution

CT/S
Spotted Distribution

Oil Vegetation

Photo location, direction, and number

Oil Character Length (m): AP PO CV CT ST 27 MS PT TB FL NO 1422



SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/23/90

Segment ST/10/ER1 Subdivision C Date (mo/day/yr) 4/7/90

0700 - 0835

Time (24 hr) _____ Biologist Lemon(A) Substrate type and % of segments:
(1) Bedrock 50 (2) Boulder 25 (3) Cobble 15 (4) Pebble 5 (5) Sand 5 (6) Silt _____(B) Overall % cover of biota (% of segment): Dense _____ Moderate 55% Low _____

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

Photographs:
Roll No. 55/10/9Frames 14-17

BARNACLES

Dense		
1U	1M	1L
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6

Moderate		
1U	1M	1L
~~2~~	~~2~~	~~2~~
~~3~~	~~3~~	~~3~~
~~4~~	~~4~~	~~4~~
~~5~~	~~5~~	~~5~~
~~6~~	~~6~~	~~6~~

Sparse		
1U	1M	1L
~~2~~	~~2~~	~~2~~
~~3~~	~~3~~	~~3~~
~~4~~	~~4~~	~~4~~
~~5~~	~~5~~	~~5~~
~~6~~	~~6~~	~~6~~

Rare		
1U	1M	1L
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6

NOT PRESENT

MYTILUS

Dense		
1U	1M	1L
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6

Moderate		
1U	1M	1L
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6

Sparse		
1U	1M	1L
~~2~~	~~2~~	~~2~~
~~3~~	~~3~~	~~3~~
~~4~~	~~4~~	~~4~~
~~5~~	~~5~~	~~5~~
~~6~~	~~6~~	~~6~~

Rare		
1U	1M	1L
~~2~~	~~2~~	~~2~~
~~3~~	~~3~~	~~3~~
~~4~~	~~4~~	~~4~~
~~5~~	~~5~~	~~5~~
~~6~~	~~6~~	~~6~~

NOT PRESENT

GASTROPODS

Dense		
1U	1M	1L
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6

Moderate		
1U	1M	1L
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6

Sparse		
1U	1M	1L
~~2~~	~~2~~	~~2~~
~~3~~	~~3~~	~~3~~
~~4~~	~~4~~	~~4~~
~~5~~	~~5~~	~~5~~
~~6~~	~~6~~	~~6~~

Rare		
1U	1M	1L
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6

NOT PRESENT

FUCUS

Dense		
1U	1M	1L
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6

Moderate		
1U	1M	1L
~~2~~	~~2~~	~~2~~
~~3~~	~~3~~	~~3~~
~~4~~	~~4~~	~~4~~
~~5~~	~~5~~	~~5~~
~~6~~	~~6~~	~~6~~

Sparse		
1U	1M	1L
~~2~~	~~2~~	~~2~~
~~3~~	~~3~~	~~3~~
~~4~~	~~4~~	~~4~~
~~5~~	~~5~~	~~5~~
~~6~~	~~6~~	~~6~~

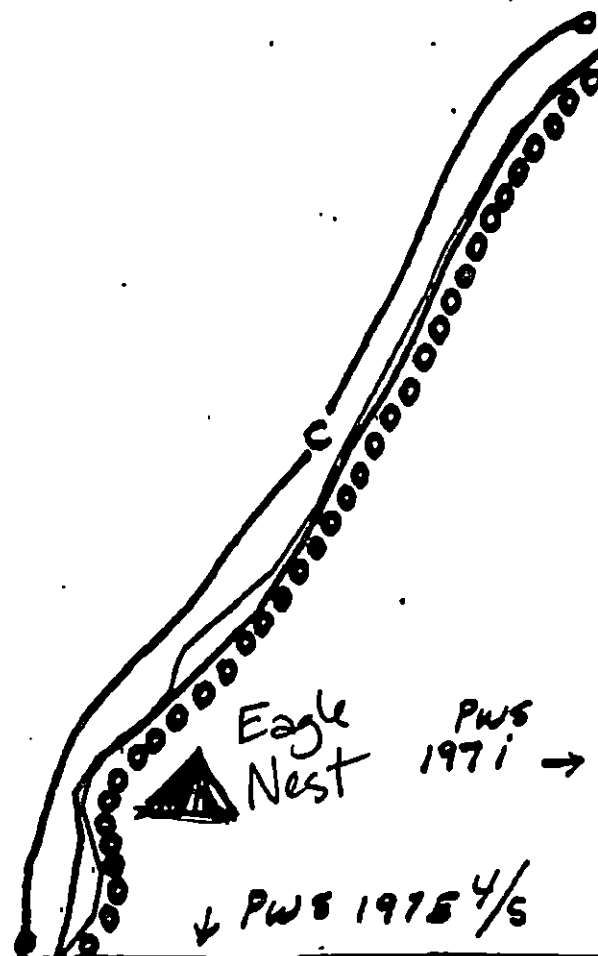
Rare		
1U	1M	1L
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6

NOT PRESENT

Wildlife Observations/General Comments: Mixed red algae makes up much of the low zone cover. Also seen in the low zone were gammarid amphipods (20% cover), Dermasteres (ASTEROIDEA), Sipunculus and free living polychaete worms. 5 waterfowl and 3 deer, 1 otter, and 2 eagles were sighted.

Ecological Considerations: Invertebrate harvest at hatchery release area.

ECOLOGY MAP
SEGMENT ER-1
SUBDIVISION C



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-1

ADEC Segment Length: 4875m



Map Key: PWS-107b

Name: Richard Marley

Date: 03 April 1990

Date Entered:

ECOLOGY MAP
SEGMENT ER-1C



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

ER-1

ADEC Segment Length: 4875m



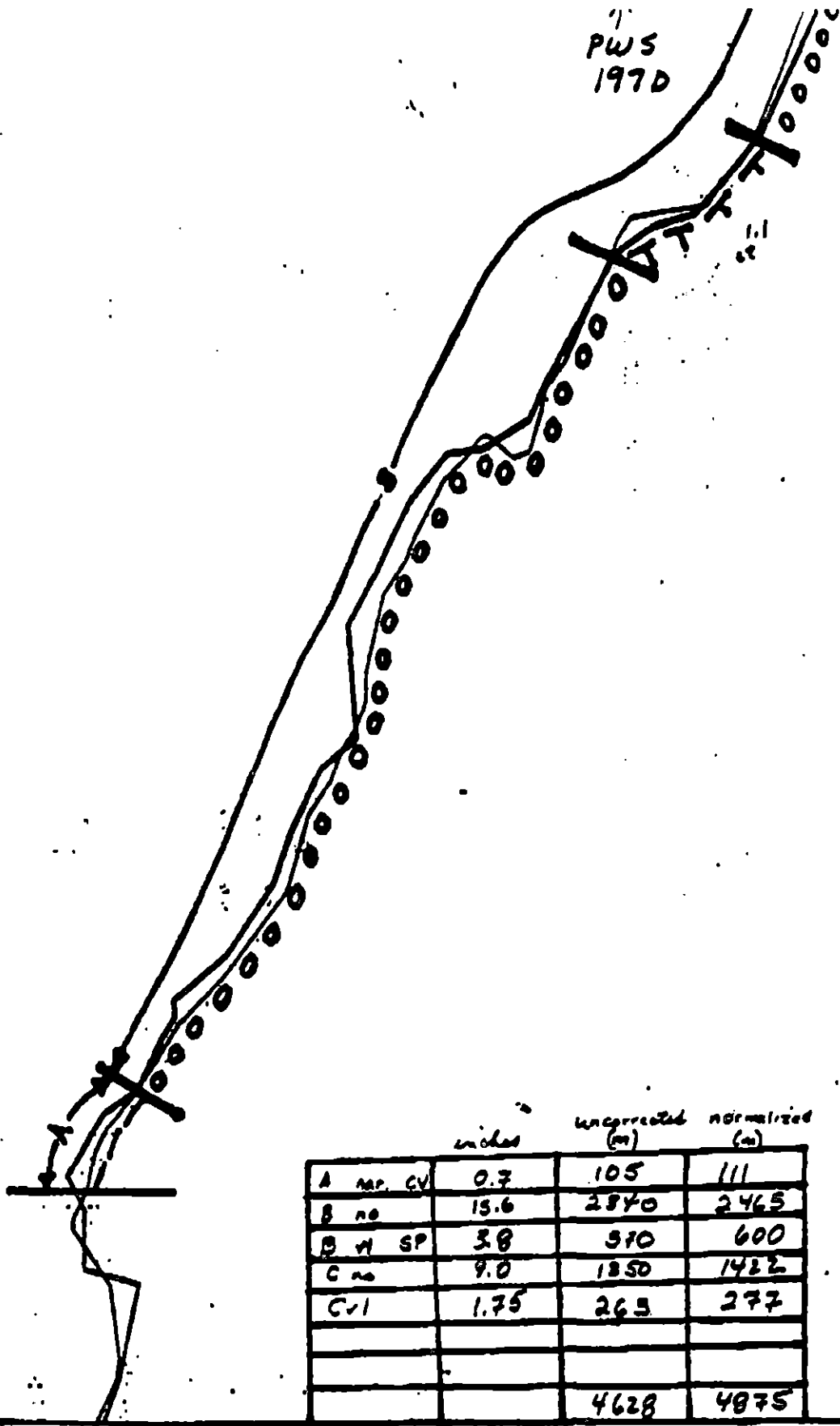
Map Key: PWS-1971

Name: Richard Marty

Date: 07 April 1990

Date Entered:

PWS
1970



	inches	uncorrected (m)	normalized (m)
A mp. CV	0.7	105	111
B no	15.6	2840	2465
B H SP	3.8	370	600
C no	9.0	1850	1422
Cv1	1.75	265	277
		4628	4875

1/5

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

ER-1.

ADEC Segment Length: 4875m



Map Key: PWS-1970
 Name: 07 April 1990
 Date: Richard Marty
 Date Entered:

V-58

PWS
197A
↓

PWS
197E
2/5 →

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-1

ADEC Segment Length: 4875m



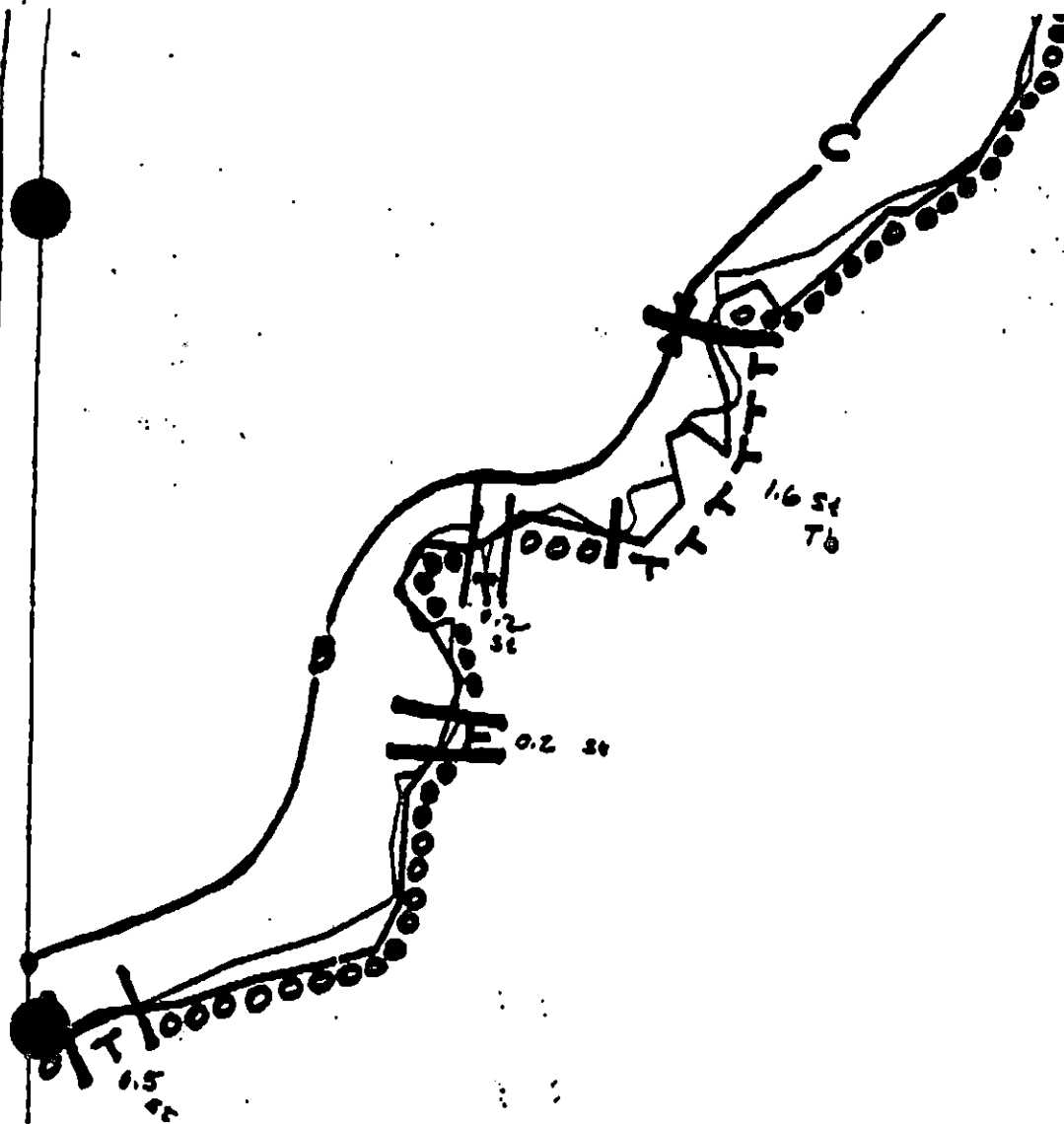
METERS

Map Key: PWS-197d

Name: Richard Marty

Date: 07 April 1990

Date Entered:



↑
PWS
197 H

ER-01

← PWS
1970

3/5

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

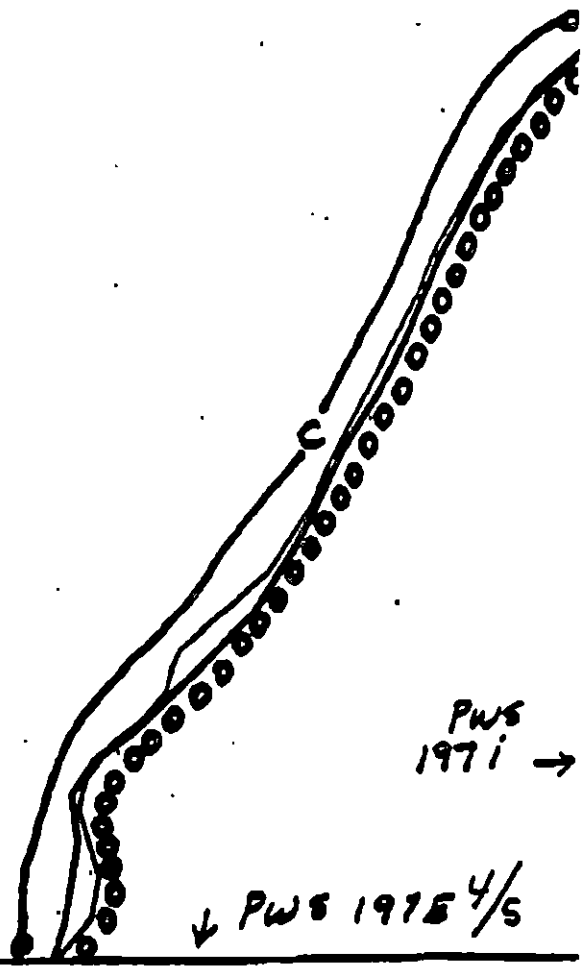
ER-1.

ADEC Segment Length: 4875m



Map Key: PWS-1970
 Name: Rich Amity
 Date: 07 April 1990
 Data Entered:

0



XXXX Wide

/// Medium

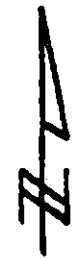
--- Narrow

TTTT Very Light

0000 No Oil

ER-1

ADEC Segment Length: 4875m



Map Key: PWS-1975

Name: Richard Marley

Date: 03 April 1990

Date Entered:



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ER-1

ADEC Segment Length: 4875m



Map Key: PWS-1971

Name: Richard Marty

Date: 07 April 1990

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ ER-02 SUBDIVISION A (1 OF 2) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

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

7JJ Subsistence area: Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: J. Quinn McManus

DATE: 4/23/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 73 m: V.Light 336 m: No Oil 252 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

X No Treatment Recommended

 Treatment Recommended

 Manual Pickup

 Bioremediation

 Tarmat: Breakup

 Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/23/90

ADEC Art Weimer

EXXON Andy Tate

NOAA Joseph Talbott

USCG Kenneth Keane

FOSC: W L

DATE: 4-27-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / ER-02 SUBDIVISION: A DATE 4/7/90

USCG

NAME LARRY FLETCHER SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME DAVID M. SALE SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Some splash on rocks, resting on occasional
"bathtub ring" does not require cleaning as it seems
non-mobile, stable and in a small quantity.

LAND MANAGER

NAME Leigh Carlson SIGNATURE [Signature] ADNR

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Uses include subsistence deer and invertebrate harvesting.
Tar balls were picked up while surveying the subdivision. The
remaining splash on the rocks is stable and is hard to
pick out because of the coloring of the rocks.

12918

SHORELINE OILING SUMMARY

REVISION NO. 03/28/90

OG R. Marty USCG LARRY FLETCHER SEGMENT ST/ ER-02
 BIO B. Lumb LAND REP Leigh Carlson SUBDIVISION A
 EXXON J. Gerasim ADEC Dave Sale TIME 15:10 to 16:00
 TEAM NO.: 10 TIDE LEVEL: (6') to 71.2m (3.75') DATE 04/06/90
 EST. SUBDIVISION LENGTH: 604 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: SW to NE
 SURFACE SEDIMENTS: R 5 % B 10 % C 40 % P 30 % G 15 % S 0 % M 0 % V 0 %
 SLOPE: Long 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 54 m VL 375 m NO 175 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	N	E	S	W	1	2	3	4	5	6	SW	U	M	U
ASPHALT PAVEMENT														
POOLED														
COVER														
COAT			X						X			X		
STAIN														
MOUSSE														
PATTIES														
TARBALLS			X						X			X		
FILM														
NO OIL											X	X	X	

PAVEMENT: H F S 0 sq. m by 0 cmPATTIES / TARBALLS 1 BAGSNEAR SHORE SHEENT? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	2		
Vegetation	2		
Trash			
Debris			

DEBRIS COLLECTED

☒ YES ☐ NOTYPE Tar balls#BAGS 1

Photographs:

Roll No. ST/10/8Frames 24, 25, 26

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm) (bottom)	BELOW	OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS		
		SP. OF	RES. OR	CL. OF	SP. OF	NO			UP	UP	1	2	3	4	5	6	7	8	SW	U			M	U
1	42					X	.											X						Sand, Mud
2	10					X	.											X						G, P
							.																	
							.																	
							.																	
							.																	

COMMENTS Note: all visible Tar balls removed during survey.

There is evidence for two generations of tar here:

- 1). Pre-Eldon Valley tar which is hard and friable. with moss cover
- 2). Eldon Valley tar which is soft and lacks moss cover.

Page 1 of 1

Supratidal zone was snow covered during survey.

Revision

RM 4/6/90

18 of 18

REVIEWED OK DATE 4/10/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST/10/ER 2 Subdivision A Date (mo/day/yr) 4/6/90
 Time (24 hr) 1500 - 1620 Biologist Lemon sunny, no wind 8°C

- (A) Substrate type and % of segments:
 (1) Bedrock 5% (2) Boulder 10% (3) Cobble 40 (4) Pebble 30 (5) Sand 15 (6) Silt
- (B) Overall % cover of biota (% of segment): Dense Moderate 40% Low
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (3)

Photographs:
 Roll No. ST/10/8
 Frames 24-32

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: Low zone occupied by mixed Reds and Greens for about 80% coverage; key groups above don't show this. Gammarid amphipods sparse in drift line; Oligochaete NEMERTANS sparse under rocks in drift line.

Ecological Considerations: Inspected stream, no fish, fish food or oil. Invertebrate harvest area, deer harvest area, hatchery release.

11 of 11

DATE 6 / Apr / 90

CHECKLIST

___ N Arrow
 ___ Apprx. Scale
 ___ Seg/Sub Entry
 ___ CR Dist.
 ___ Width
 ___ Length
 ___ % Cover
 ___ Substrate Character
 ___ Est. PPM/L/ML
 ___ SST
 ___ Profile Location(s)
 ___ Profile(s)
 ___ FR Location(s)
 ___ Photo Location(s)

LEGEND

• 1 Δ

Fit - No Subsurface On

2 ▲
Pit - Subsurface Oil

ET/C
Continuous Distribution

CI/O
System Distribution

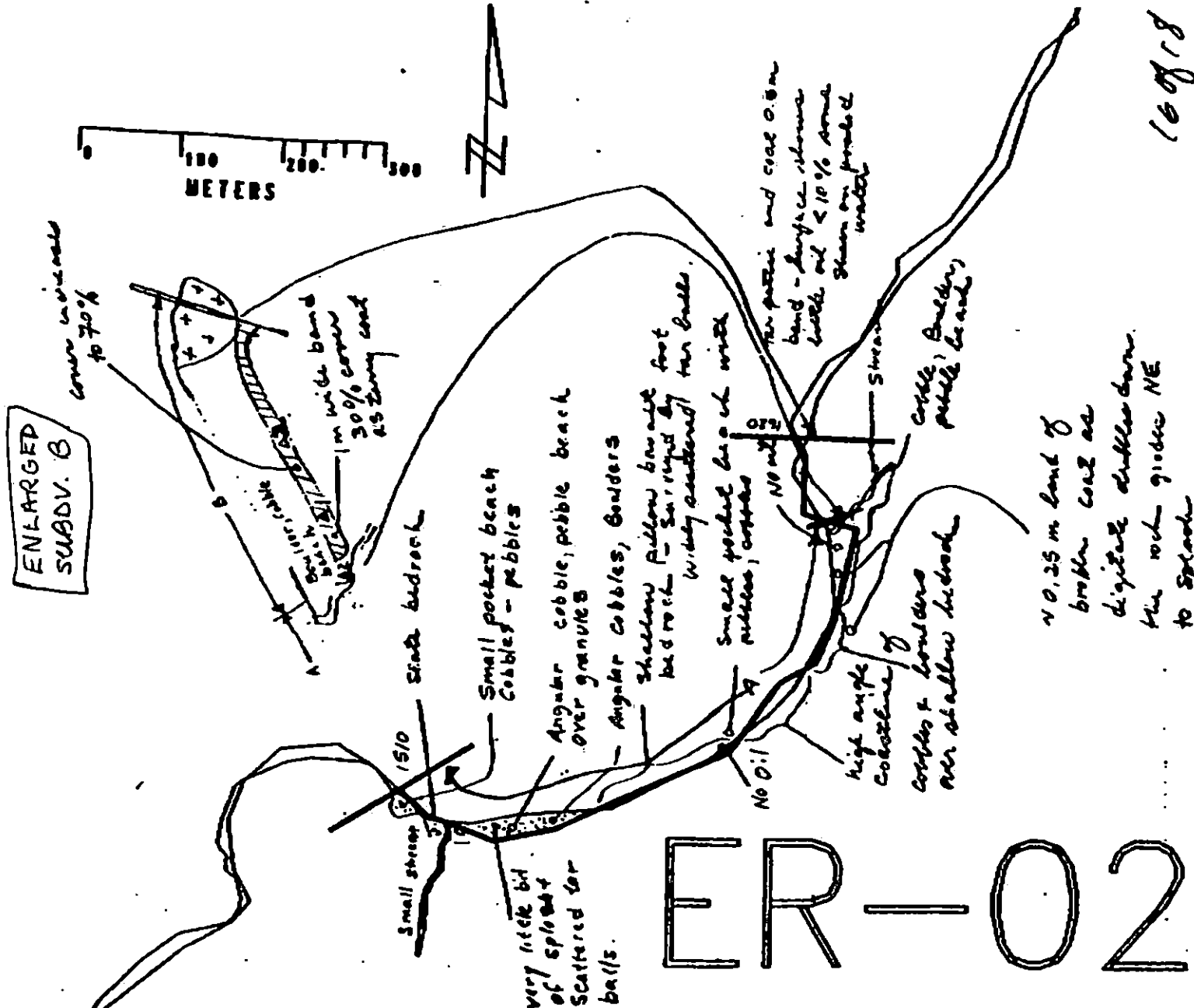
CT/P
Patchy Distribution

CT/S
Spliced Distribution

Older Vegetation

Photo location, direction,
and number

SKETCH MAP



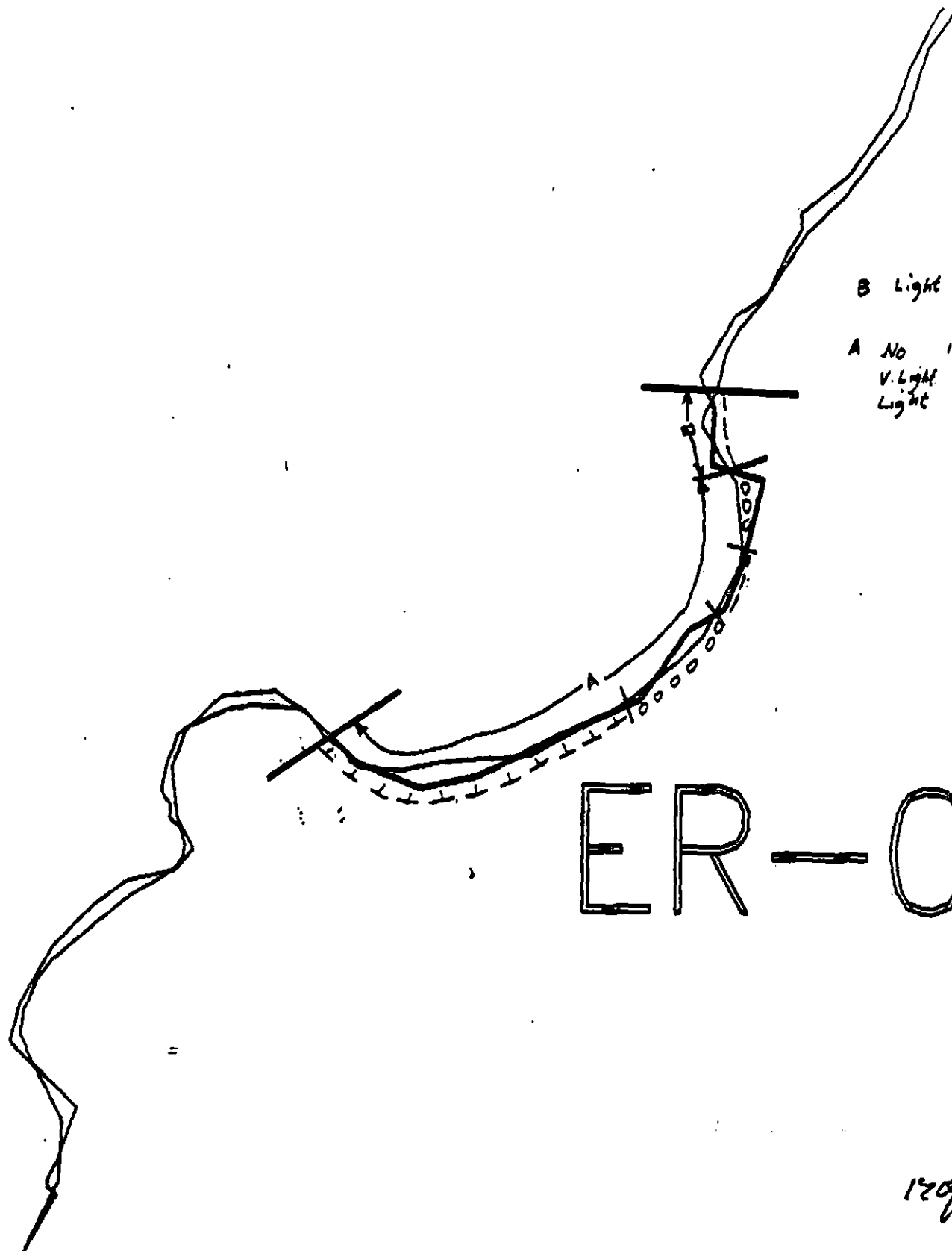
160718

40.25 m land of
brother coast as
digitate diller down.
the rock given NE
to Sphodre

ER-02

Oil Character Length (in): AP 4 PO 54 CV 107 CT 375 ST 179 MS 107 PT 107 TB 107 FL 107 NO 107

2002



B Light 0.6 90m 10'

A No 1.0 150m 17'
V. Light 2.1 315m 3'
Light 0.3 45m 3'
600m 7'

ER-02

120/18

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-2

ADEC Segment Length: 756m



METERS



Map Key: PWS-156

Name: R. Mary

Date: 6 April 1990

Date Entered:

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1F Sawmill Bay Hatchery release (4/15 to 6/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7JJ Subsistence area: Invertebrate harvesting
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 95 m: V.Light 0 m: No Oil 0 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>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: Recommend the manual removal of sporadic tar balls and bio-
remediate the pocket beach as shown on sketch map. Work should be con-
ducted after 6/1.

TAG COMMENTS: MONITOR TO CHECK PRESENCE OF TARBALLS AS
INDICATED ON SKETCH MAP PRIOR TO TREATMENT

TAG APPROVAL DATE: 4/23/90

ADEC ART WEINER

EXXON AMY TAYLOR

NOAA Joseph Talbot

USCG KENNETH KEANE

FOSC: [Signature]

DATE: 4-27-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
 1D Esther Hatchery release (4/15 to 6/1)
 1E Main Bay Hatchery release (4/20 to 5/10)
 1F Seward 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 (5/7 to 6/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (5/11 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 (5/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (5/1 to 9/15)
 6V Anchorages (5/1 to 9/15)
 6W Forest Service cabins (5/1 to 9/15)
 6X Lodge (5/1 to 9/15)
 6Y Special use destination
- 7Z Subistence area: Salmon harvesting (5/1 to 9/30)
 7HH Finfish harvesting
 7I Gear harvesting (5/15 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 / ER-02 SUBDIVISION: B DATE 4/7/90

USCG

NAME LARRY FLETCHER SIGNATURE Larry R Fletcher

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

1. BIO-REMEDIATE OIL COAT.

ADEC

NAME DAVID M. SAGE SIGNATURE David M Sage

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

- ① Remove manually any tar balls, tar mats
- ② Need to remove tarry oil from surface sediments, just below pebble/cobble piles. Shear noted on rocks and in water in pits shows mobility of existing oil ~~settling~~ saturating top 2 cm of sandy soil.

③ Bioremediate

LAND MANAGER

NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Uses include subsistence deer and invertebrate harvesting.
Recommend treatment outlined by ADEC above.

14 of 18

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG R. Marty USCG LARRY FLETCHER SEGMENT ST/ ER-02
 BIO B. Smith LAND REP Leigh Carlson SUBDIVISION 8
 EXXON J. Czerwik ADEC Dave Sals TIME 16:00 to 16:30
 TEAM NO.: 10 TIDE LEVEL: +1.2m (3.95') to +1.8m (3.95') DATE 04/06/90
 EST. SUBDIVISION LENGTH: 107 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: SW to NE
 SURFACE SEDIMENTS: R 10 % B 40 % C 30 % P 20 % G % S % M % V %
 SLOPE: Long 90 % Hang 10 % Vert % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W m M m N 107 m VL m NO m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES				
	R	B	P	S	1	2	3	4	5	6	7	8	SU	U	M	L	U
ASPHALT PAVEMENT																	
POOLED																	
COVER																	
COAT		X		✓				X					✓	X			
STAIN																	
MOUSSE																	
PATTIES																	
TARBALLS																	
FILM																	
NO OIL													X		X	X	

PAVEMENT: H F S sq. m by cmPATTIES / TARBALLS 1 BAGSNEAR SHORE SHEENT NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	2		
Vegetation		2	
Trash			
Debris			

DEBRIS COLLECTED
☒ YES ☐ NOTYPE tar balls#BAGS 1

Photographs:

Roll No. ST/10/8Frames 27-32

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW	OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		SAT. OF	RES. ON	CAT. OL	CAT. OF	NO			UP	VE	1	2	3	4	5	6	7	8	9	10		
1	6				X		0-2	X					X					X			N	S, G, C, M
2	8				X		0-2	X					X					X			N	S G CM

COMMENTS Surface oil is fairly low, but increases immediately beneath, and on the bottom of, the surface veneer.

Revision

RM 4/6/90

13 of 18

SEGMENT ST/ ER02

SUBDIVISION A, B

DATE 6 April 90

CHECKLIST

☐ N Antbr
☐ Approx. Scale
☐ Seg/Sub Entry
☐ Oil Dist.
☐ Width
☐ Length
☐ % Cover
☐ Substrate Character
☐ Est. HML/LWL
☐ SGL
☐ Profile Location(s)
☐ Profile(s)
☐ PH Location(s)
☐ Photo Location(s)

LEGEND

- 1 Δ

PK - No Subsurface On

2 ▲
Pit - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P

Patchy Distribution

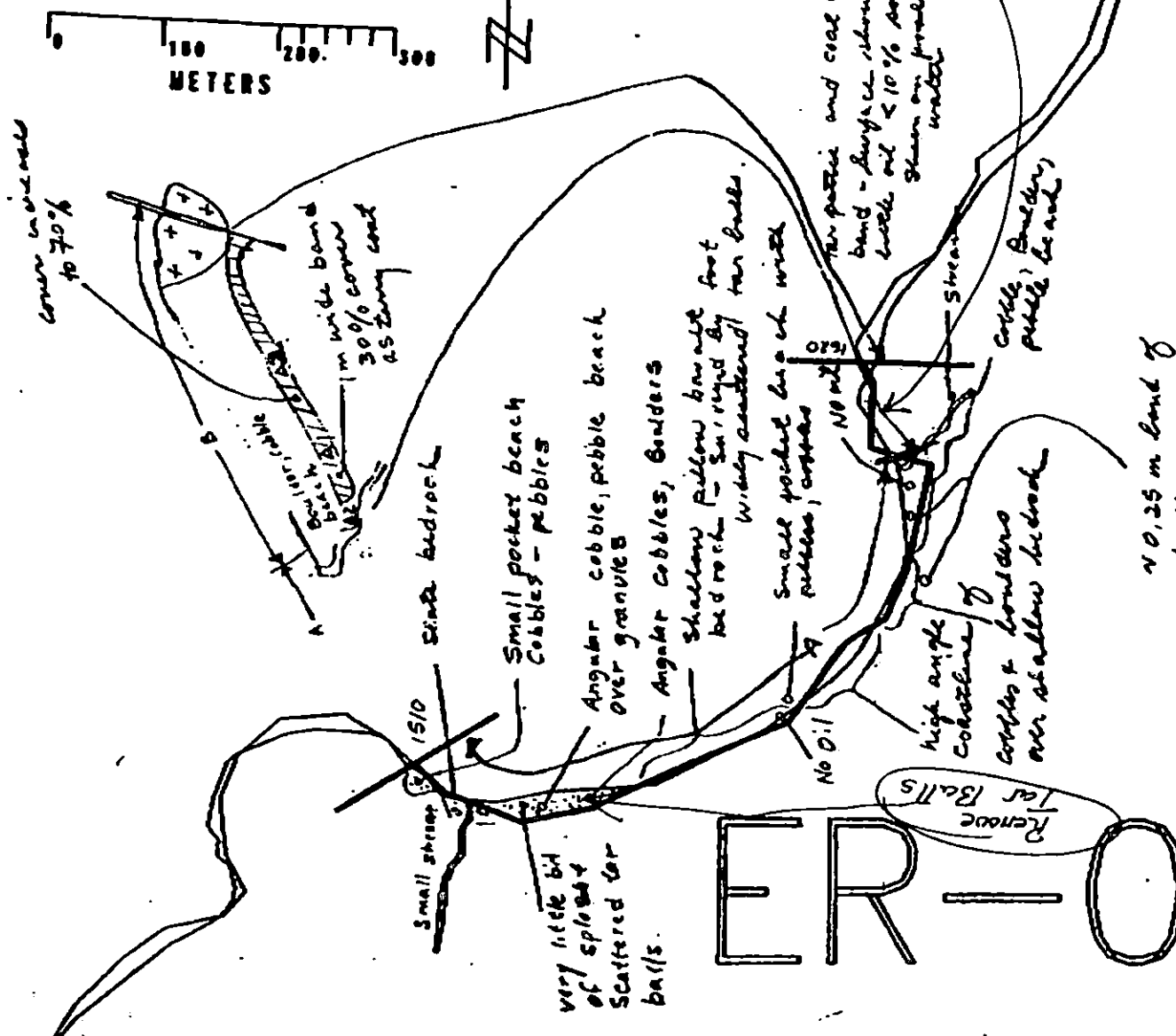
CT/S
Specialized Distribution

Old Vegetation

1 2-2

Photo location, direction,
and number

SKETCH MAP



16818

NO. 25 m land of
brother cost as
digitate shell down.
the when given NE
to Salado

ER-02

Oil Character Length (m): AP 54 PO 107 CV 375 CT 179 ST 107 MS 375 PT 179 TB 107 FL 375 NO 179

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST/10/ER2 Subdivision B Date (mo/day/yr) 4/6/90

Time (24 hr) 1600-1700 Biologist Lemon Clear

(A) Substrate type and % of segments:
(1) Bedrock 10 (2) Boulder 40 (3) Cobble 30 (4) Pebble 20 (5) Sand (6) Silt

(B) Overall % cover of biota (% of segment): Dense Moderate 45% Low

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

Photographs:
Roll No. ST/10/8

Frames 27-32

BARNACLES

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

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	X	X	X	X	X	2
3		3	3	3	3	3	3	X	X	3	3	3
4		4	4	4	4	4	4	4	4	4	4	X
5		5	5	5	5	5	5	5	5	5	5	5
6		6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments: Low zone only has mixed red algae and some green for approx 80% coverage not indicated above.

Ecological Considerations: Invertebrate harvest area, deer harvest, hatchery release.

150/18

B Light 0.6 90m 10:
 A No 1.0 150m 17
 V. Light 2.1 315m 3:
 Light 0.3 45m 2:
 600m 7

ER-02

170/18

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

ER-2

ADEC Segment Length: 756m



Map Key: PWS-156

Name: R. Marm

Date: 6 April 1990

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT ER-2 SUBDIVISION B (2 of 2)

WORK WINDOW	
Manual Pickup	OPEN
Bioremediation	WORK PRIOR TO 7/25

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

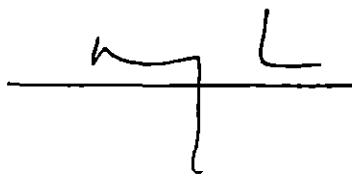
APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1F	Sawmill Bay Hatchery Release	No constraint to manual pickup; closed to bioremediation prior to 6/1.
1K	Purse Seine Hook-off	No constraint to manual pickup; closed to bioremediation after 7/25.
7II	Subsistence: Deer Harvesting	No constraint to manual pickup; closed to bioremediation after 8/15.
7JJ	Subsistence: Invertebrate Harvesting	No constraint to manual pickup. No constraint to bioremediation.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 7/25. Restrict beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

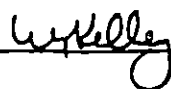
FOSC



DATE

6-16-90

Prepared by:



Date:

6/9/90

TREATMENT AREAS

ER-02

ER-03

USFWS 6/1/90 Map indicates no eagle nests

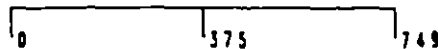


Exxon Company, USA
Map Key: PWS-ER-2
May 11, 1990



ECOLOGY MAP
SEGMENT ER-2
SUBDIVISION B (2 of 2)

METERS



Seabird Colony



Eagle Nest

1 inch = 1229 feet

SHORELINE EVALUATION

SEGMENT ST/ ER-03 SUBDIVISION A (1 OF 1) DATE 4/6/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

7JJ Subsistence area: Invertebrate harvesting

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 48 m: No Oil 2984 m
Subsurface Oil Observed: Yes _____ No ☒ Maximum Depth _____

RECOMMENDATIONS:

X No Treatment Recommended

Treatment Recommended

Manual Pickup

Bioremediation

Tarmat: Breakup

Removal

Snare/Absorbent Booms

Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

Spot Washing: _____ **Wands** _____

Beach Cleaner

Other (see comments)

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 5/13/20.

ADEC JOHN BAUER John

EXXON TWOY TGAZ *AB*

NOAA Bur / Wescott Bur / Wescott

USCG KENNETH PERNE Small Boat

FOSC: 1 1 1 DATE: 4-25-78

1

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 Summit 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 (5/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (5/11 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 (5/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (5/1 to 9/15)
6V Anchorages (5/1 to 9/15)
6W Forest Service cabins (5/1 to 9/15)
6X Lodge (5/1 to 9/15)
6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
7HH Finfish harvesting
7J Bear harvesting (5/15 to 8/31)
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 / E12-3 SUBDIVISION: A DATE 06 APR 90

SCG

NAME LARRY FLETCHER SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME DAVID M. SNE SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

LAND MANAGER

NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

30918

SHORELINE OILING SUMMARY

REVISION NO. 03/02/90

OG R. Mary USCG LARRY FLETCHER SEGMENT ST/ ER-03
 BIO S. Lumber LAND REP Leah Carter SUBDIVISION A
 EXXON J. Czarnski ADEC Dave Sale TIME 07:16 to 09:00
 TEAM NO.: 10 TIDE LEVEL: 1.2m (3.8') to +2.0m (6.5') DATE 04/06/90
 EST. SUBDIVISION LENGTH: 3072 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☐ Foot ☐ Boat ☐ Helo WORKING DIRECTION: SW to NE
 SURFACE SEDIMENTS: R 30 % B 20 % C 10 % P 10 % G 5 % S 5 % M % V %
 SLOPE: Long % Hang % Vert % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W m M m N m VL 48 m NO 3024 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	R	B	C	P	1	2	3	4	5	6	7	8	SU	U	M	V
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN				X					X							X
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL													X	X	X	

PAVEMENT: H F S None sq. m by cmPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	2		
Vegetation		2	
Trash	X		
Debris			

DEBRIS COLLECTED

☒ YES ☐ NOTYPE Snare boom
'pump'#BAGS 1

Photographs:

Roll No 27/148Frames 14-23PITS
SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm - cm) (100-000)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		DET. OF	RES. ON	LOC. OF	TYPE OF	NO		UP	DOWN	1	2	3	4	5	6	7	8	SU	U	M	V		
1	6					X	.												X			N	S, G
2	13					X	.													X		↓	S, G
							.																
							.																
							.																
							.																

COMMENTS Oiling in very lightly oiled portion of segment is quite minor

Revision

RM 4/6/90

29/18

OG R.1

SEGMENT ST/EE-3

SUBDIVISION A (el)

DATE 6 April 90

CHECKLIST

- ☐ M Area
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/AML
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PI Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
Downward extend
PT - ~~not determined~~
of oiling determined

2 Δ
Bottom of oiling recess
PT - ~~not determined~~
PT depth

CT/C
Continued Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

CT/S
Splashed Distribution

CT/S
Splashed Distribution

CT/S
Splashed Distribution

CT/S
Splashed Distribution

Oil Vegetation

Oil Vegetation

Oil Vegetation

Oil Vegetation

Oil Vegetation

Oil Vegetation

Oil Vegetation

Oil Vegetation

Oil Vegetation

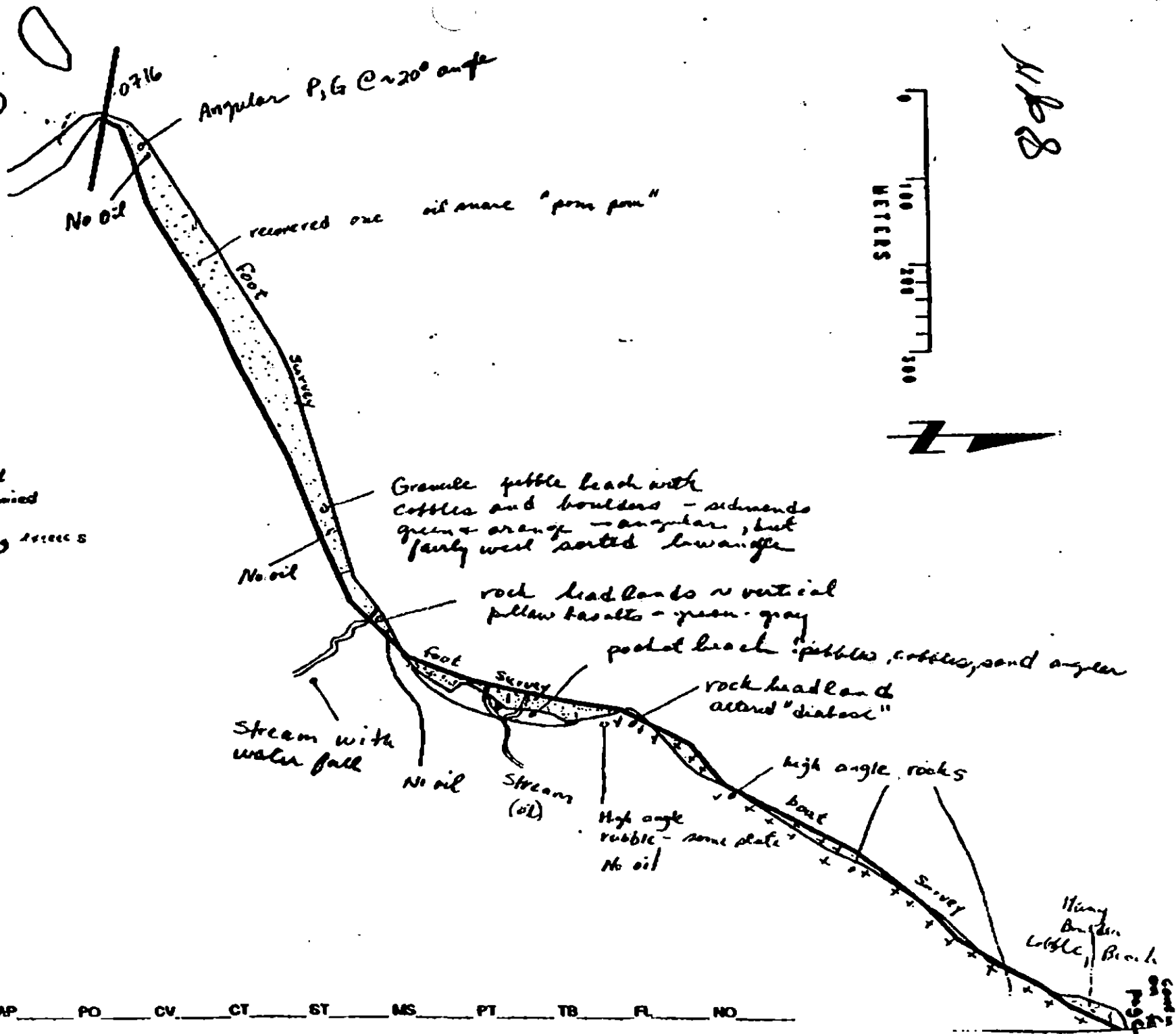
Oil Vegetation

Oil Vegetation

Oil Vegetation

Oil Vegetation

Oil Vegetation



OG clarity

SEG ST/ER-3

SUBDIVISION A (pt)

DATE 6 April 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Dist
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Ch
- ☐ Est. HAZARD
- ☐ SSI
- ☐ Profile Locat
- ☐ Profile(s)
- ☐ Photo Locat
- ☐ Photo Locat

LEGEND

- 1 A
- Photo Locat Showing Base of oiling
- 2 A
- Photo Locat Downward extent of oiling determined
- CT/C
- Continuous Distribution
- CT/B
- Broken Distribution
- CT/P
- Patchy Distribution
- CT/S
- Splashed Distribution
- Oiled Vegetation
- Photo locat, direction, and number

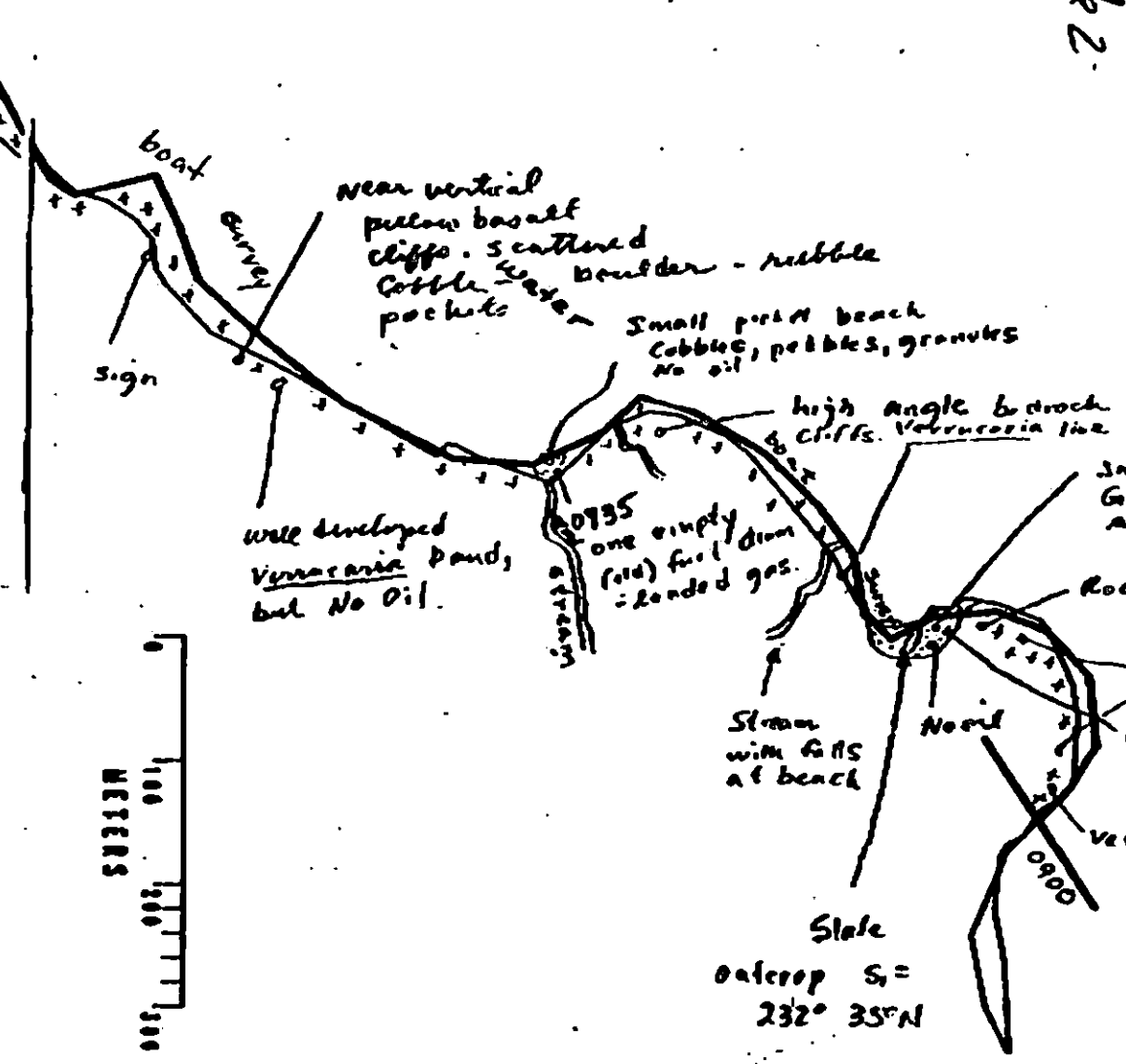
SKETCH MAP

882

No Oil

high angle bedrock face with local irregular coat of boulders & cobbles.

Cont. from previous page



SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/25/78

Segment ST/10/ER3 Subdivision F Date (mo / day / yr) 4/5/80
 Time (24 hr) 0700 - 0900 Biologist Lennon 4°C, wind 6 mph NE, cloudy

- (A) Substrate type and % of segments:
 (1) Bedrock 50 (2) Boulder 20 (3) Cobble 10 (4) Pebble 10 (5) Sand 10 (6) Silt _____
- (B) Overall % cover of biota (% of segment): Dense _____ Moderate 60% Low _____
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (O)

Photographs:
 Roll No. ST/10/8
 Frames 14-23

BARNACLES

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	XU	XM	XL	2	2	2	2	2	2	
3	3	3	3	3	3	XU	3	3	3	3	3	
4	4	4	4	4	4	XU	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	
2	2	2	2	2	2	XU	XM	XL	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	
2	2	2	XU	XM	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	

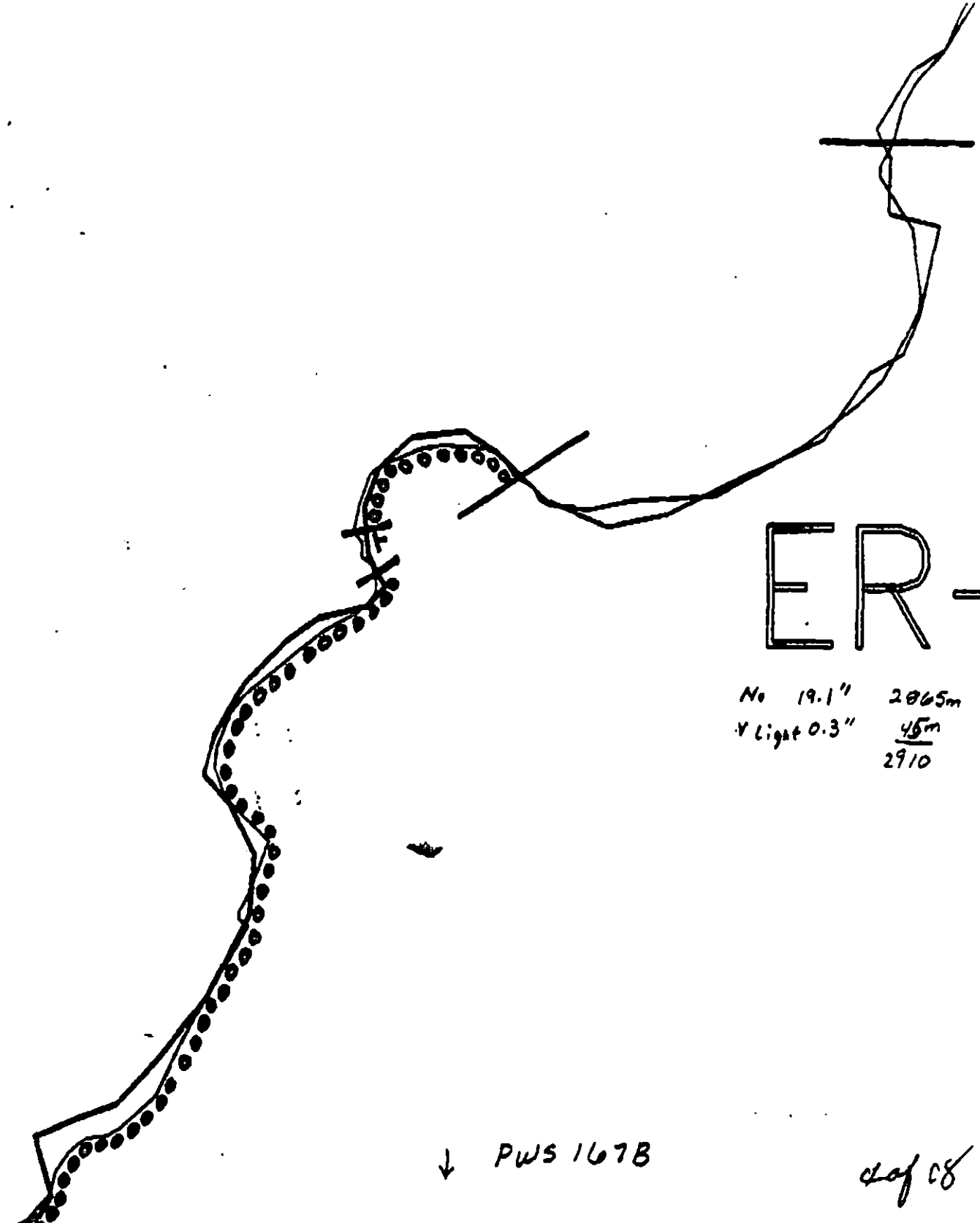
FUCUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	XU	XM	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	

Wildlife Observations/ General Comments: Intertidal extras; Pycnopodia helianthoides (ASTEROIDEA) gammarid amphipods, epicratus (ANATRIDAE) all observed in low zone, plants included 50% cover of Mytilus reds. Sightings included 5 deer, 2 eagle, 2 sealions, 2 harbor seals, 2 otters, and 12 gulls and heard crows.

Ecological Considerations: Three streams were checked; no fish or fish food or oil in pits was found. Deer harvest area, input, harvest, hatchery release.

9/18



ER-

No	19.1"	2065m	3024.
Light	0.3"	45m	48-
		2910	3072

↓ PWS 167B

claf 08

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

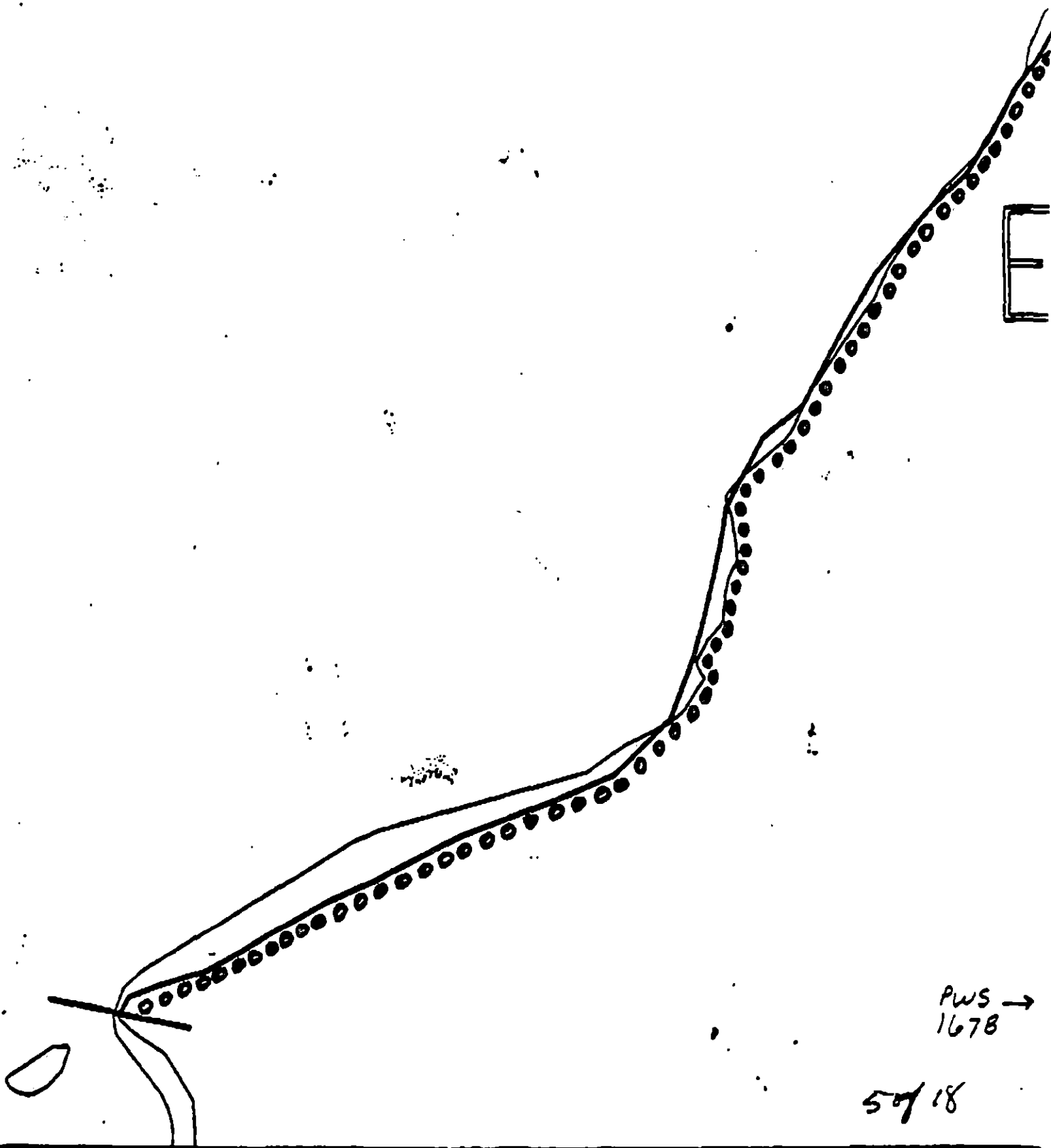
ER-3

ADEC Segment Length: 3031m

0 100 200 300
 METERS



Map Key: PWS-1676
 Name: Rich Marty
 Date: 6 April 1990
 Date Entered:



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-3

ADEC Segment Length: 5031m



Map Key: PWS-1678

Name: Rich Marty

Date: 6 April 1990

Date Entered:

R-03

← PWS 167A

6 of 18

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-3

ADEC Segment Length: 303m



Map Key: PWS-167b

Name: Rich MartyDate: 6 April 1990

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ ER-04 SUBDIVISION A (1 OF 2) DATE 4/5/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

1B Salmon stream mouth - spawning (7/10 to 8/31)

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

7HH Subsistence area: Finfish harvesting

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

7JJ Subsistence area: Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Hume DATE: 8/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 367 m: No Oil 1925 m

Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

X No Treatment Recommended

Treatment Recommended

Manual Pickup

Bioremediation

 Tarmat: Removal

Snare/Absorbent Booms

Oil Snares (pom poms)

Absorbents (pads, rolls, etc)

Spot Washing: Wands

Beach Cleaner

_____ Other (see comments)

COMMENTS: _____

TAG COMMENTS: _____

1000

TAG APPROVAL DATE: 4/25/90.

ADEC ART WEAVER Art Weaver

EXXON ANDY TETZ Real

NOAA Jason Talbott JCT

USCG KENNETH KANE

FOSC: DATE: 5-3-70

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A ~~Salmon stream release - fry outmigration (3/1 to 5/15)~~
 1B ~~Salmon stream release - spawning (7/15 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 ~~Seawall Bay Hatchery release (4/15 to 6/1)~~
- 1G Cannery Creek Hatchery release (4/21 to 6/1)
- 1H Remote release site
- 1I Gill net area (6/7 to 8/31)
- 1J Purse seine area (7/20 to 9/30)
- 1K Purse seine hook-off (7/20 to 9/30)
- 1L Set net sites (6/11 to 7/25)
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
 Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 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 ~~Fluke harvesting~~
- 7I Bear 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 ER-04 SUBDIVISION: A DATE 05 APRIL 90

BCG

NAME LARRY FLETCHER SIGNATURE Larry R Fletcher

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

ADEC

NAME DAVID M. SALE SIGNATURE David M Sale

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

OIL STAIN ON ROCKS DOES NOT SEEM PROBLEM.
NO TREATMENT NECESSARY.

LAND MANAGER

NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

Public uses for the segment include subsistence deer,
fin fish and invertebrate harvesting.

SHORELINE OILING SUMMARY

REVISION NO. 03/92/90

OG R. Math USCG LARRY FLETCHER SEGMENT ST/ ER-04
 BIO S. Lumb LAND REP Larry Carlson SUBDIVISION A
 EXXON J. Czerniak ADEC Dave Sels TIME 17:00: to 17:35
 I NO.: 10 TIDE LEVEL: +0.3m (1') to +0.3m (1') DATE 04/08/90
 SUBDIVISION LENGTH: 2244 m ☐ Sun ☐ Clouds ☒ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 5 % B 10 % C 40 % P 30 % G 10 % S 5 % M 0 % V 0 %
 SLOPE: Long 90 % Hang 10 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 332 m NO 1912 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	R	B	C	P	1	2	3	4	5	6	7	8	SU	U	M	V
ASPHALT PAVEMENT POOLED																
COVER																
COAT																
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
NO OIL																

PAVEMENT: H F S None sq. m by 0 cmPATTIES / TARBALLS 2 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/10/8Frames 1-8

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm - cm) (YES-NO)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		Dist. of Oil	Dist. of Oil	Dist. of Oil	Dist. of Oil	Dist. of Oil		UP	DOWN	1	2	3	4	5	6	7	8	SU	U	M	V		
1	37						X															N	SG
2	35						X																GS
3	32						X																GS
4	50						X																GS
5	8						X																SG
6	20						X															V	GS (slate)

COMMENTS

Revision

RM 4/5/90

38/5

26/12

REVIEWED DIL DATE 4/8/90

OG Rich 4

SEGMENT ST/ ER DY

SUBMISSION A(PJ)

DATE 05 April 90

CHECKLIST

- N Arrow
- Approx. Scale
- Sup/Sub Beach
- Oil Dst
- Width
- Length
- % Cover
- Substrate Character
- Est. HMR/AMR
- SSL
- Profile (Location)
- Profile(s)
- Pt Location(s)
- Photo Location

LEGEND

1 A

Pt - No Substrate OS

2 A

Pt - Substrate OS

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Spotted Distribution

Other Vegetation

Photo location, direction, and number

Map cont. on page 2

PWS 1706

Pebble, granule beach

No oil

Cobbles, boulders, granules, sand

No oil (except 1 tar patty)

Cobbles, granules, sand

Cobbles, boulders, pebbles on shallow bedrock

Pebble, cobble pocket beach

Shallow slate bedrock

Scattered thin bands of splattered "stain"

High angle pebble, cobble boulder beach over shallow slate bedrock, S, = N70E 80W

No oil

Splatter in MIZ - UIZ Cont <1% cover

Well sorted sand, gravel beach. The sediments are 1% slate fragments

The supratidal zone is snow covered.

rock headland

1 MAP

8 of 12



1/2

Note: Pt 2 & 4 refer to sediments exposed by downward erosion of the stream

Splattered stain in MIZ best developed in cracks in the bedrock where it penetrates somewhat

No oil

Stream

Stream

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

OG Field 174

SEGMENT ST/EC04

SUBDIVISION AVB

DATE 05 April 94

CHECKLIST

☐ M Area
☐ Approx. Scale
☐ Seismic Data
☐ Oil Data
☐ Length
☐ % Cover
☐ Substrate Character
☐ Est. Habitat
☐ SSZ
☐ Profile Location(s)
☐ Position(s)
☐ Photo Location(s)
☐ Photo Location(s)

LEGEND

1 A

Pl. No. Substrate Oil

2 A

Pl. Substrate Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

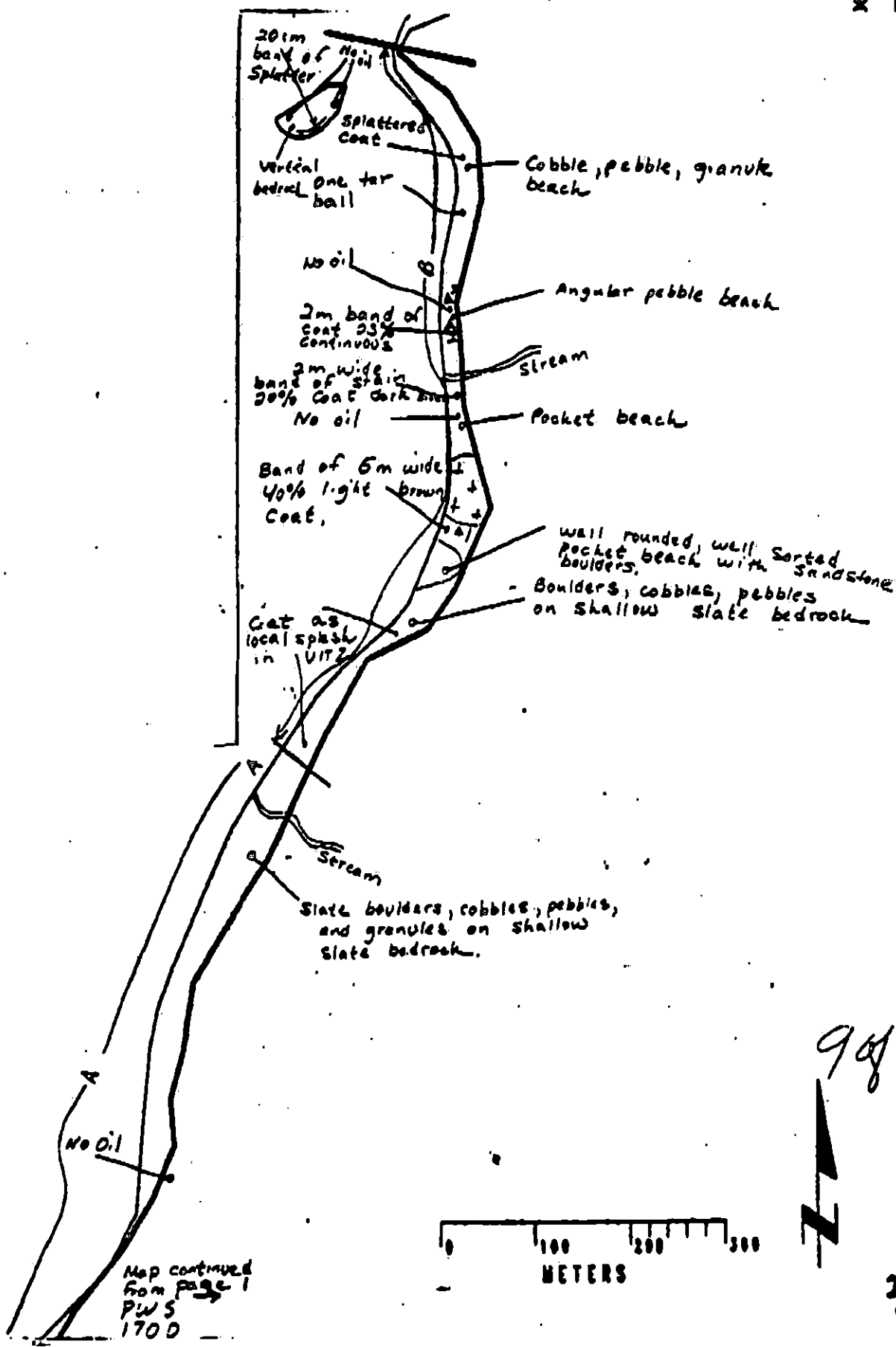
Spotted Distribution

Other Vegetation

1 0-1

Photo location, elevation,
and number

ITCH MAP



Character Length (m): AP PO CV CT 576 ST US PT TB FL NO 216

9 of 12

2/3

Map continued
from page 1
PW 5
1700

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/20/90

Segment ST/10/ER4 Subdivision A Date (mo/day/yr) 4/5/90
 (1400 - 1630) (24 hr) Biologist Lemon Snowing; wind 7 mph NE

- (A) Substrate type and % of segments:
 (1) Bedrock 5 (2) Boulder 10 (3) Cobble 40 (4) Pebble 30 (5) Sand 15 (6) Silt
- (B) Overall % cover of biota (% of segment): Dense Moderate 35% Low
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (3)

Photographs:
 Roll No. ST/10/8
 Frames 1-8

BARNACLES

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

MYTILUS

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

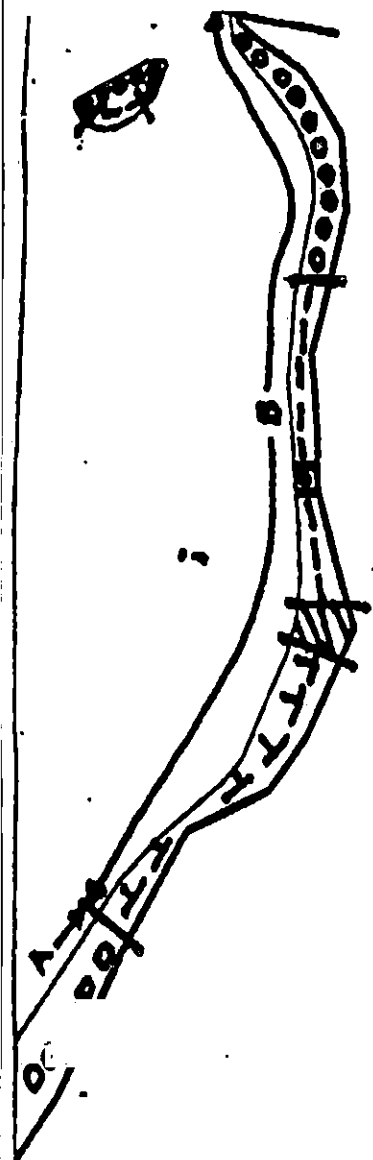
GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments: Other noteworthy marine biota: common'd amphipods present under every cobble all zones, but not under drift line; Oesmerestia sp (brown algae); Orchidella borealis, Mucella sp., Ratharina (MOLLUSCS) all present. Halosaccion - foliose red algae shared the low zone w/ Fucus. Pisaster ochraceus, Orchastria koehleri and Solaster stimpsoni (ASTEROIDEA) occasionally present in the low zone. Ecological Considerations: the latter occasionally cast up in drift. Fish? eggs in low zone. Terrestrially; deer, bear, and other tracks and scat common on snow and sand. → checked 2 streams, 3rd one had a cave? did not check; no fish or food found. Deer harvest, invertebrate harvest, hatchery release, finfish harvest, stream spawn.



B	No	1.3	195m	216
	V.Light	1.7	255m	283
	Light	1.5	225m	249
	Med.		<u>40m</u>	<u>44</u>
			715m	792

A.	No	11.5	1725m	1912
	V.Lt	<u>2.0</u>	<u>300m</u>	<u>332</u>
			2025.	2244
			2740	$\Sigma = 3036$

128/12

← PWS
1702

XXXX Wide

ER-4

Map Key: PWS-170d

/// Medium

Name: R. Marty

--- Narrow

ADEC Segment Length: 3110m

Date: 5 April 1990

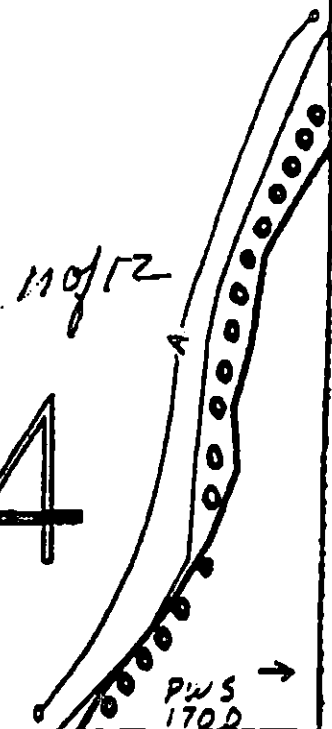
TTTT Very Light



0000 No Oil

Date Entered:

ER-04



↓ PWS 170A

PWS 1700 →

XXXX Wide

ER-4

/// Medium

--- Narrow

ADEC Segment Length: 3110m

TTTT Very Light



0000 No Oil



Map Key: PWS-170c

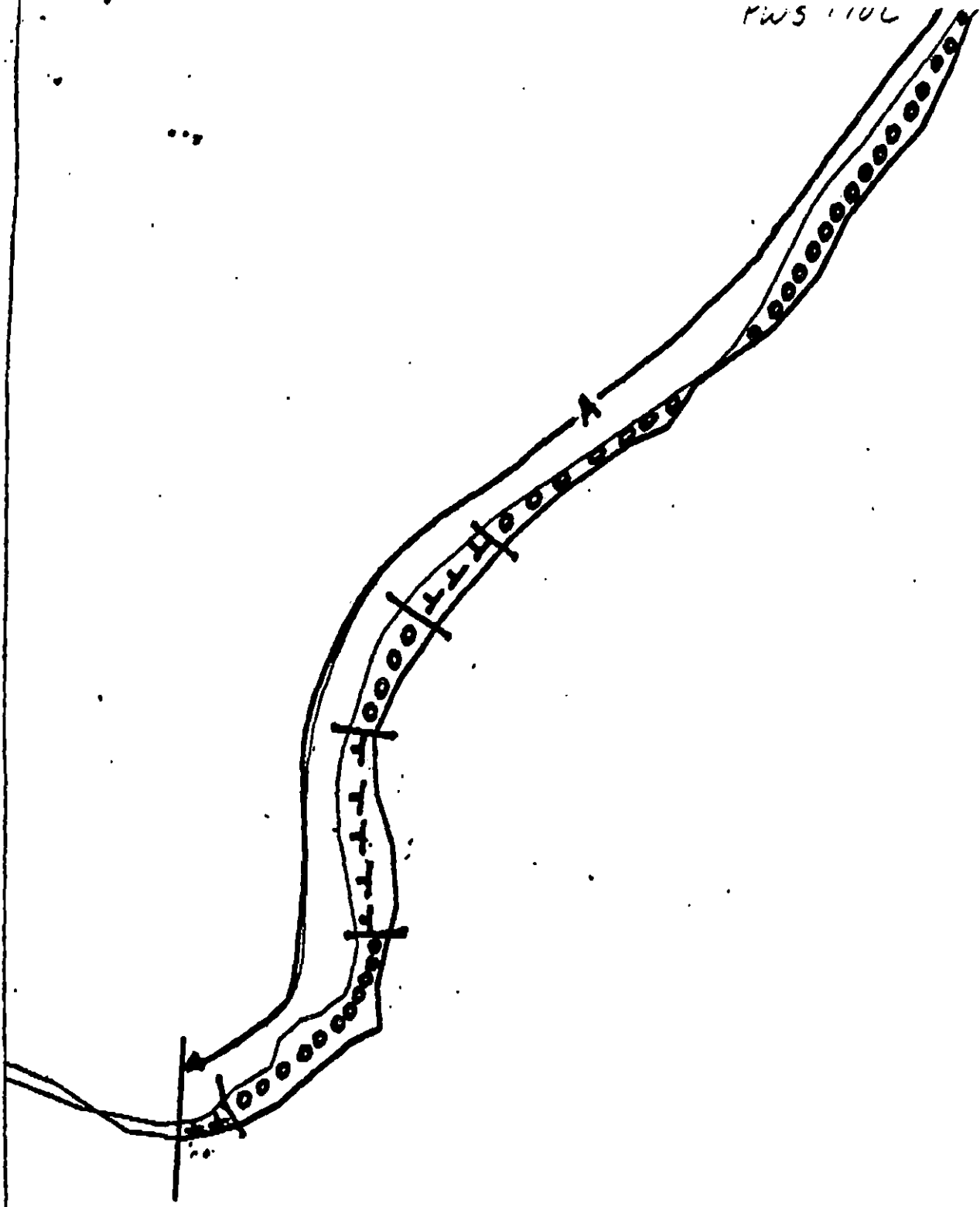
Name: R. Marty

Date: 5 April, 1990

Date Entered:

PWS 1106

Sub Segment A
Continued on next
page



10 of 12

XXXX Wide

ER-4

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ADEC Segment Length: 3110m



Map Key: PWS-170a

Name: R. Marty

Date: 5 April 1990

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ ER-04 SUBDIVISION B (2 OF 2) DATE 4/5/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Anadromous stream no. 226-50-16436

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

1B Salmon stream mouth - spawning (7/10 to 8/31)

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

7HH Subsistence area: Finfish harvesting

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

7JJ Subsistence area: Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Other constraints as listed above. ADF&G catalogued anadromous stream in Subdivision A.

SHPO SIGNATURE: Charles J. Hume DATE: 4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 43 m: Narrow 234 m: V.Light 272 m: No Oil 269 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> Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: Recommend bioremediation between 6/2 and 7/9. Bioremediation may not be conducted within 100m of anadromous fish stream without prior permission of ADF&G.

TAG COMMENTS:

TAG APPROVAL DATE: 4/25/90

ADEC Art Weimer Art Weimer

EXXON Andy Tait Andy Tait

NOAA Joseph Talbot Joseph Talbot

USCG Kenneth Keane Kenneth Keane

FOSC: DATE: 5-3-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
- 1D Esther Hatchery release (4/15 to 6/1)
- 1E Main Bay Hatchery release (4/20 to 5/10)
- 1F Sawmill Bay Hatchery release (4/15 to 6/1)
- 1G Cannery Creek Hatchery release (4/21 to 6/1)
- 1H Remote release site
- 1I Gill net area (8/7 to 8/31)
- 1J Purse seine area (7/20 to 9/30)
- 1K Purse seine hook-off (7/20 to 9/30)
- 1L Set net sites (6/11 to 7/25)
 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
- 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 ST1 ER-04 SUBDIVISION: B DATE 05 APRIL 90

NAME

LARRY FLETCHER

SIGNATURE

[Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

1. BIO-REMEDIATE, OIL COAT AND SPLASH.

NAME

DAVID M. SALE

SIGNATURE

[Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

THIS BEACH SEGMENT REQUIRES SOME SORT OF TREATMENT;

① THE UNDERLYING SEDIMENTS (SATURATED TO APPROX. 2 CM) NEED TO BE REMOVED. OIL SHEEN ON ROCK SURFACE SHOWS MOBILITY OF OIL AT THIS TEMPERATURE (40C).

② BIOREMEDIATE LARGER ROCKS FOR REMOVAL OF COVER.

LAND MANAGER

NAME Leigh Carlson

SIGNATURE

Leigh Carlson ADNR

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Public uses for the segment include subsistence deer, finfish and invertebrate harvesting. Recommend bioremediation of oil coat and splash as the oil is not of a consistency to be recovered by manual methods short of removing a portion of the beach.

7 of 12

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG R. Mertz USCG LARRY FLETCHER SEGMENT ST/ ER-00 04
 BIO B. Lamber LAND REP Larry Carson SUBDIVISION B
 TUNN J. Czarnicki ADEC Dave Sals TIME 14:08 to 17:35
 I NO.: 10 TIDE LEVEL: +1.9m (6') to +0.3m (1') DATE 04/05/90
 SUBDIVISION LENGTH: 792 m ☐ Sun ☒ Clouds ☒ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 10 % B 20 % C 40 % P 20 % G 10 % S 0 % M 0 % V 0 %
 SLOPE: Lang 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 44 m N 249 m VL 293 m NO 216 m

SURFACE OIL

CHARACTER	DISTRIBUTION					OIL / FILM COLOR					IMPACTED ZONES				
	S	B	P	C	P	1	2	3	4	5	SU	U	M	N	V
ASPHALT PAVEMENT															
POOLED															
COVER															
COAT			X												
STAIN															
MOUSSE															
PATTIES															
TARBALLS															
M															
NO OIL											X		X	X	

PAVEMENT: H F S None sq. m by 0 cmPATTIES / TARBALLS < 1 BAGSNEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	0	2	0
Vegetation	0	0	0
Trash	0	0	0
Debris	0	0	0

DEBRIS COLLECTED
☐ YES ☒ NOTYPE 0#BAGS 0

Photographs:

Roll No. ST/10/8Frames 9-13

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm-in)	BELOW		OIL / FILM COLOR					PIT ZONE					A N A	SUBSURFACE SEDIMENTS
		SP	FS	CL	OF	NO		UP	UC	1	2	3	4	5	SU	U	M	N	V		
1	12				X		0-4	X					X		X					N	GS
2	5	X					0-2	X					X		X					N	GS
3	14	X					0-2	X					X		X					N	S

* Oiled interval < 5 cm does not constitute subsurface oil.
COMMENTS

Revision

RM 4/5/90

20/5

5/12

OG Rich Mary

SEGMENT ST/EC04

SUBDIVISION A18

DATE 05 April 94

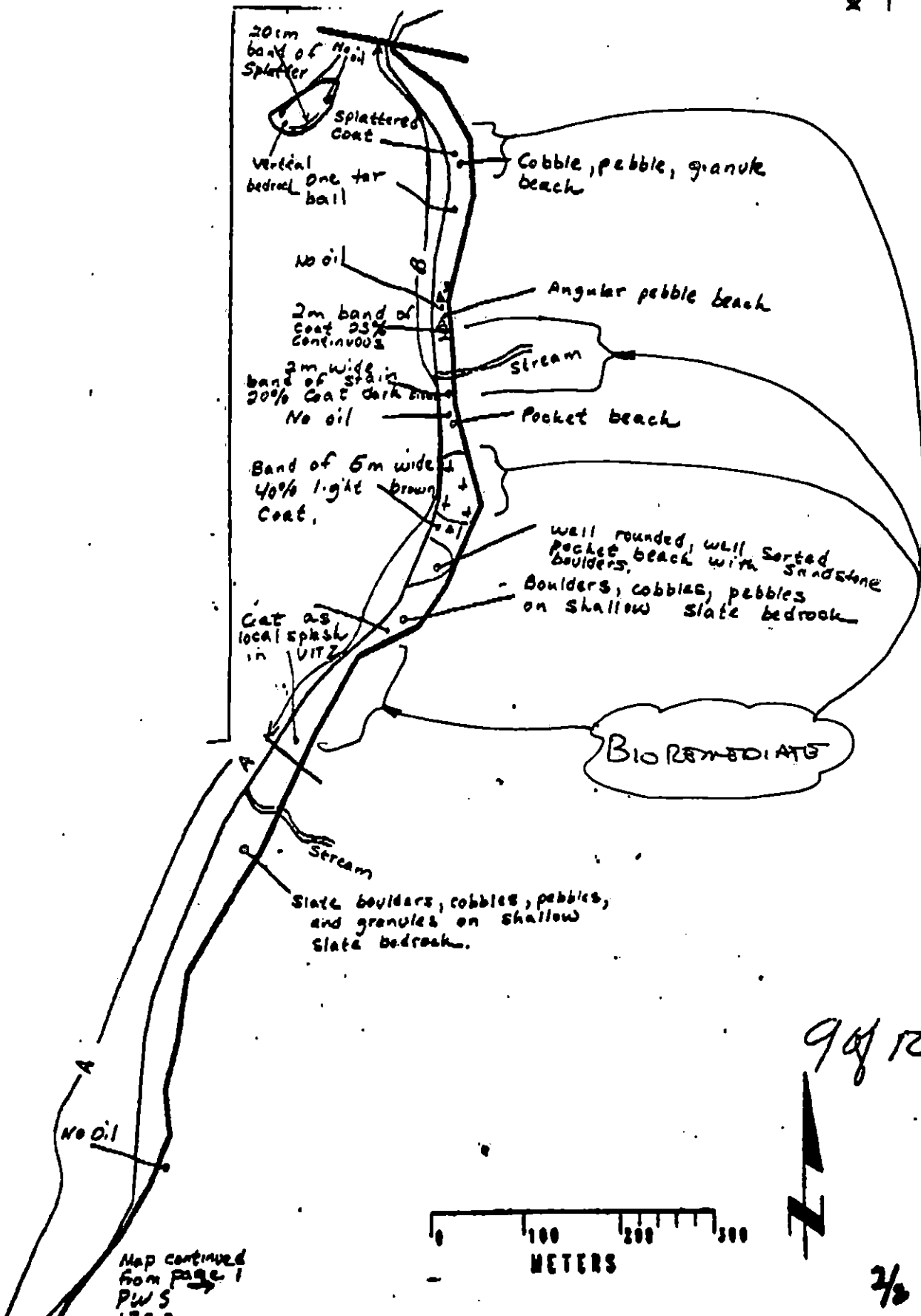
CHECKLIST

- ✓ M. Area
- ✓ Approx. Scale
- ✓ Sepsis Study
- ✓ Oil Data
- ✓ Width
- ✓ Length
- ✓ % Cover
- ✓ Substrate Character
- ✓ Eel. HWM/LWL
- ✓ SSZ
- ✓ Profile Location(s)
- ✓ Profile(s)
- ✓ P/L Location(s)
- ✓ Photo Location(s)

LEGEND

- 1 Δ
- 2 Δ
- Pr: No Subsurface Oil
- Pr: Subsurface Oil
- CT/C
- Continuous Distribution
- CT/B
- Broken Distribution
- CT/P
- Patchy Distribution
- CT/S
- Splashed Distribution
- Clad Vegetation
- Photo location, direction, and number

SKETCH MAP



OR Check A B (m): AP PO CV CT 576 ST MS 1912
NO 216

Map continued from page 1
PWS

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/88

Segment ST/10/ER 4 -- Subdivision B Date (mo/day/yr) 4/5/90Time (24 hr) 1630 - 1800 Biologist Lemon Snowing; wind 7 mph NE

- (A) Substrate type and % of segments:
 (1) Bedrock 10 (2) Boulder 20 (3) Cobble 40 (4) Pebble 20 (5) Sand 10 (6) Silt
- (B) Overall % cover of biota (% of segment): Dense Moderate 60% Low
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (O)

Photographs: Roll No. ST/10/8Frames 9-13

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

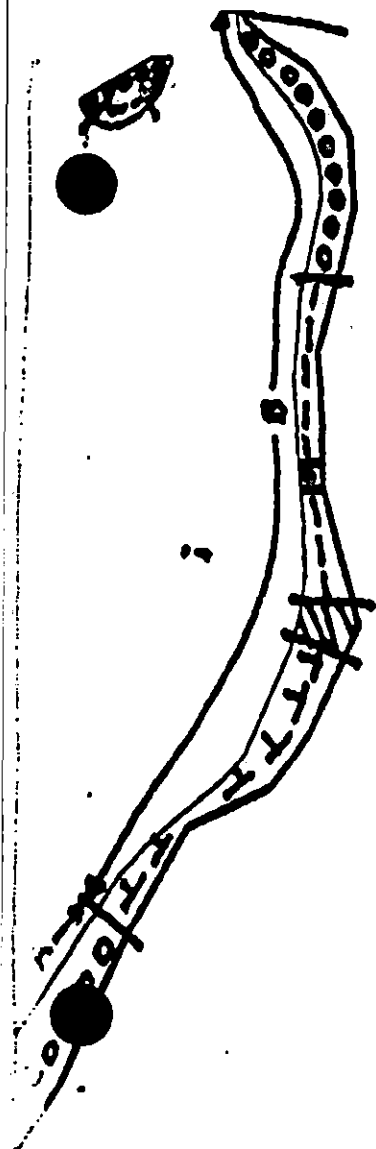
NOT PRESENT

Wildlife Observations/ General Comments: Other noteworthy marine biota: Dermasterias (on bedrock), Scalaster ~~simpsoni~~, Ophiaster koshleri, and Pycnopodia helianthoides ovigerous ♀ (ASTEROIDEA) were all seen at about 2 meter intervals along the shore. Common amphipods were found along the drift line and annelid worms in the low zone. One high zone area about 1 meter wide and 3 long had a dense mussel cover, otherwise as reported above.

Mammals: deer tracks and otter scat on shore; otter and harbor seal in water.

→ Inspected stream, tiny eggs (not salmon) found. Saxidomus giganteus (bivalve) shells common on beach suggests a nearby bed perhaps of substantial value. Deer harvest, invertebrate harvest, hatchery release, finfish harvest, stream spawning.

6 of 12



B	No	1.3	195m	216
	V. Light	1.7	255m	283
	Light	1.5	225m	249
	Med.			
			<u>40m</u>	<u>44</u>
			715m	792

A.	No	11.5	1725m	1912
	V. Lc	<u>2.0</u>	<u>300m</u>	<u>332</u>
			2025.	2244
			2740	Σ = 3036

12/12

← PWS
1700

XXXX Wide

●/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-4

ADEC Segment Length: 3110m



Map Key: PWS-170d

Name: R. Marty

Date: 5 April 1990

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT ER-4 SUBDIVISION B (2 of 2)

WORK WINDOW

Bioremediation More Than 100m From Stream	WORK PRIOR TO 7/1
Bioremediation Less Than 100m from stream	WORK PRIOR TO 7/1 (ADF&G MONITOR REQ.)

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

ADF&G catalogued anadromous stream (226-50-16436 is located in adjacent Subdivision A more than 100m from recommended treatment area. An uncatalogued stream is present in Subdivision B. This subdivision is closed to bioremediation less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation is permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation more than 100m from stream.

1F Sawmill Bay Hatchery Release

Closed to bioremediation prior to 6/1.

7HH Subsistence: Finfish Harvesting

Closed to bioremediation after 7/1.

7II Subsistence: Deer Harvesting

Closed to bioremediation after 8/15.

7JJ Subsistence: Invertebrate Harvesting

No constraint to bioremediation.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or bank. No flushing of pollutants or sediment into stream drainage. Restrict boat and air traffic and beach disturbance to essential minimum after 7/1. Avoid any unnecessary disturbance or damage to uncolled biota and substrate.

FOSC

[Signature]

Date

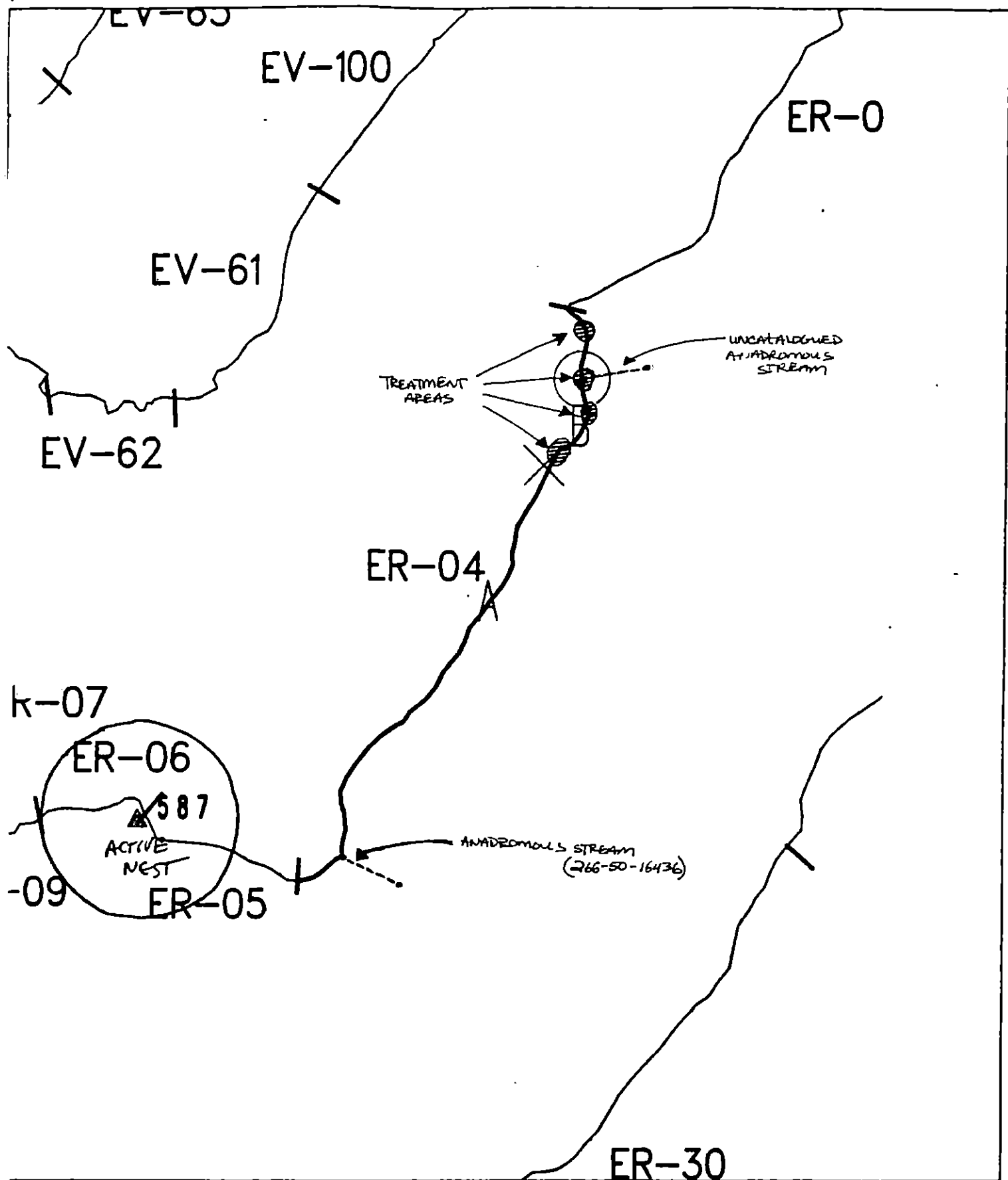
6-10-90

Prepared by

[Signature]

Date

6/10/90



Exxon Company, USA

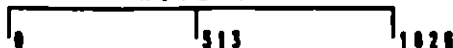
Map Key: PLS-ER-4

May 11, 1990 6/4/90



ECOLOGY MAP SEGMENT ER-4 SUBDIVISION B (2 of 2)

METERS



Seabird Colony



Eagle Nest

1 inch = 1683 feet

SHORELINE EVALUATION

SEGMENT ST/ ER-05 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Salmon stream mouth (no. 16436); Salmon fry outmigration (1A) - 3/1 to 5/15 and spawning (1B) - 7/10 to 8/31; Sawmill Bay Hatchery release (1F) - 4/15 to 6/1. Contact ADF&G for dates and locations. Deer harvest (7II) - 8/15 to 2/28. Special use area (6Y) - 6/1 to 9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: No disturbance of stream bed or banks unless authorized by ADF&G. Contact ADF&G Habitat Division prior to treatment for permit. Avoid disturbance/damage to unoiled biota and substrate.

SHPO SIGNATURE: Mark Z. Thomas DATE: April 12, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 342 m: V.Light 208 m: No Oil 270 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: Breakup and remove tarmats. Manual pickup of scattered tarballs. Bioremediation of coated area shown on sketch map. Work between 5/15 - 7/10 based on constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/12/90

ADEC JOHN BAUER

EXXON ANDY TGAZ

NOAA Burt Wescott

USCG M. J. HALL

FOSC:

DATE: 4-19-90

SEGMENT ST/ ER-05 SUBDIVISION: A DATE 04 APRIL 90

USCG

NAME LARRY FLETCHER SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

1. MANUALLY REMOVE ASPHALT AND TAR BALLS.
2. BIO-REMEDiate.

ADEC

NAME DAVID M. SALE SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

- ① MANUALLY REMOVE ASPHALT AND TAR PATCHES AND ANY SUBSURFACE OILED SEDIMENTS.
- ② CLEAN ANY OIL FROM INTERSTICES OF ROLLERS AND ASPHALT.
- ③ BIOREMEDiate

LAND MANAGER

NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Public uses for the segment include recreation and subsistence deer harvesting. Recommend manual removal followed by bioremediation.

180622

SHORELINE OILING SUMMARY

REVISION NO. 00/25-90

OG R. Marty USCG LARRY FLETCHER SEGMENT ST/ ER-05
 BIO B. Lumb LAND REP Lang Canyon SUBDIVISION A (10FI)
 EXXON J. Garmache ADEC Dave Sale TIME 18:02 to 19:45
 TEAM NO.: 10 TIDE LEVEL: +0.7m(2.2') to +0.92m(30') DATE 04/04/90
 EST. SUBDIVISION LENGTH: 750 m ☐ 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 20 % C 20 % P 20 % G 10 % S 20 % M % V %
 SLOPE: Long 100 % Hang % Vert % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W m M m N 3/8 m VL 167 m NO 265 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	R	B	C	P	1	2	3	4	5	S	M	V	U
ASPHALT PAVEMENT		X	✓						X		X		✓
POOLED													
COVER													
COAT				X				X					X
STAIN													
MOUSSE													
PATTIES													
TARBALLS				X				X			X		
FILM													
NO OIL										X			

PAVEMENT: H F (S) 275 sq. m by 3 cmPATTIES / TARBALLS BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	2		
Vegetation	2		
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE #BAGS

Photographs:

Roll No. ST/10/7Frames 29-36

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm-in) (CM-IN)	BELOW	OIL / FILM COLOR							PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		SP. OF	FS. OR	LY. CL	OF	NO			1	2	3	4	5	6	7	8	9	U	M		
1	12	X					0 - 3	X						X					X	N	S
							.														
							.														
							.														
							.														
							.														

COMMENTS

Asphalt (Z) $165m \times 2 \times 0.65 = 214.5m^2$ (Z) $60m \times 1m \times 0.50 = 30m^2$ (II) $30m \times 2m \times 0.50 = 30m^2$

OILED INTERVAL $< 5cm$ IN $274.5m^2$
 NOT CONSTITUTE SUBSURFACE OIL

Revision

RM 4/4/90

17 of 22

REVIEWED DATE 4-6-90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 09/22/90

Segment ST/10/GR5 Subdivision A Date (mo/day/yr) 4/4/90
 Time (24 hr) 1800 - 1900 Biologist Lemon Rain

- (A) Substrate type and % of segments:
 (1) Bedrock 10 (2) Boulder 20 (3) Cobble 20 (4) Pebble 20 (5) Sand 30 (6) Silt _____
- (B) Overall % cover of biota (% of segment): Dense _____ Moderate 35 Low _____
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (O)
 Photographs: Roll No. ST/10/7
 Frames 29-36

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

IASTROPODS

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: Inspected 2 streams, found no salmon or food for salmon.

Ecological Considerations: Hutchery release, spawning, deer harvest.

OG R. Marty

SEGMENT ST/ ER 05

SUBDIVISION A

DATE 06 April 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Boundary
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWM/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pht Location(s)
- ☐ 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

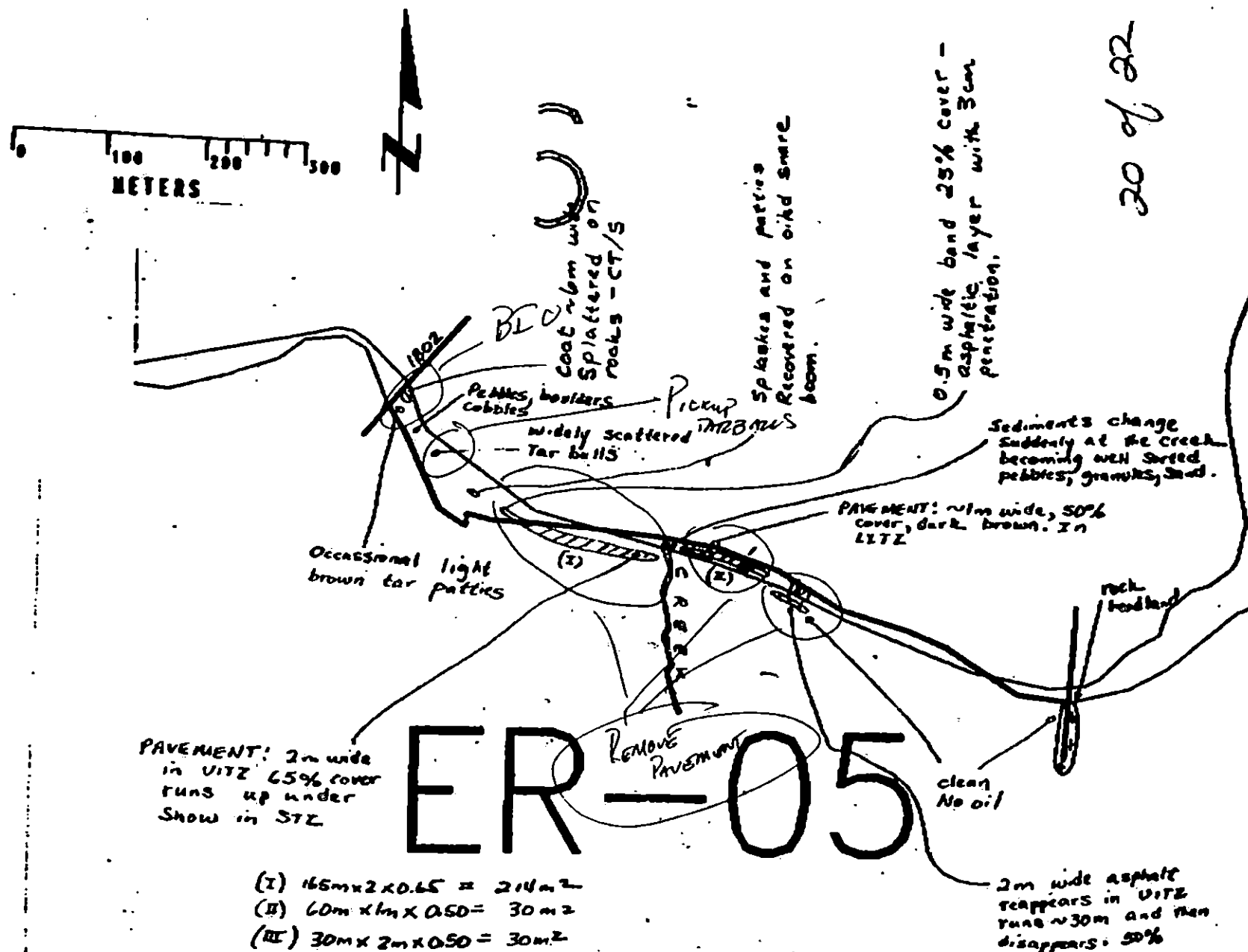
Scattered Distribution

Oil Vegetation

1 $\rightarrow$

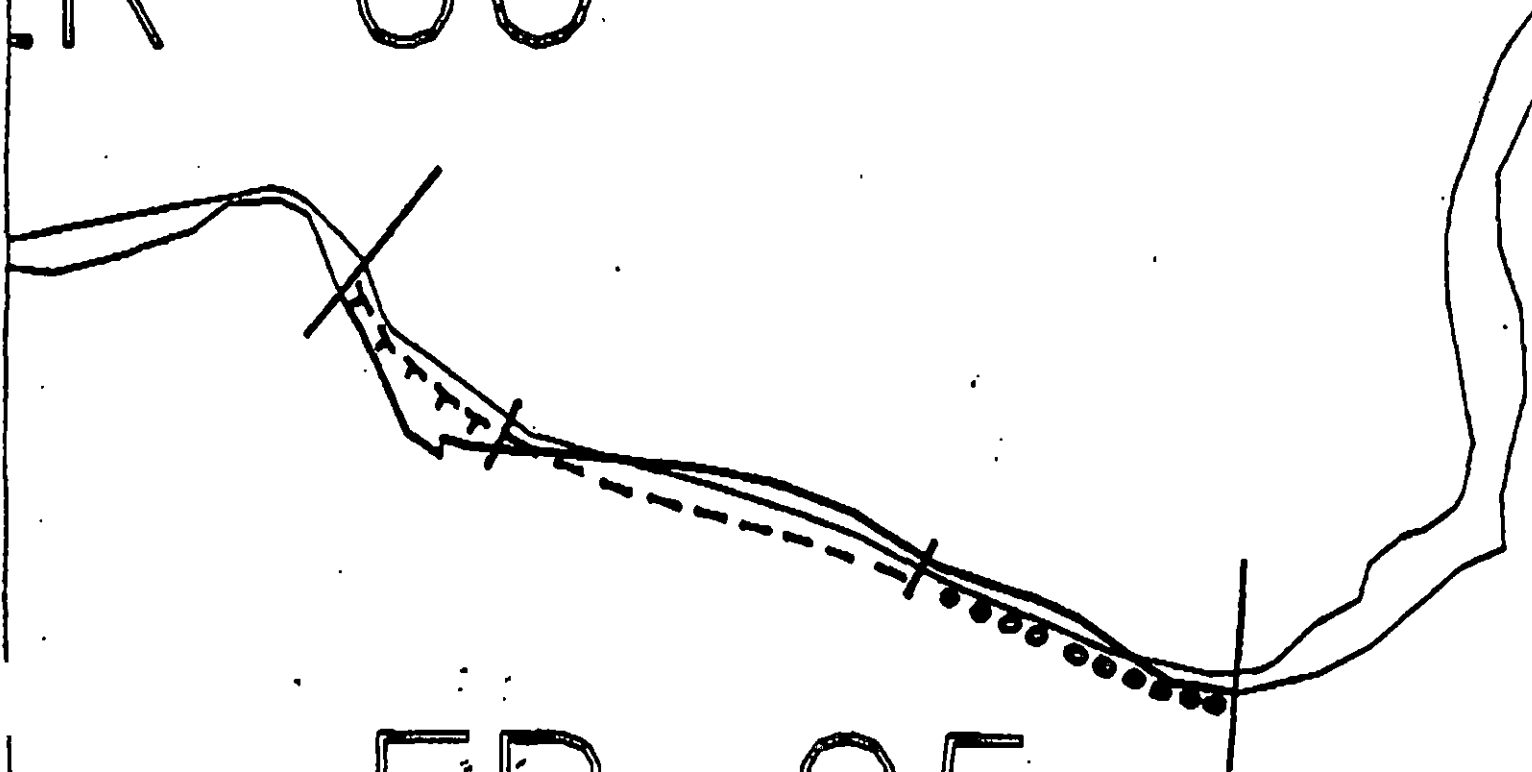
Photo location, direction, and number

SKETCH MAP



20 of 22

R-06



ER-05

No	1.75	263	2
V. Light	1.1	165	16
Light	2.1	315	31
		<u>743</u>	<u>75</u>

19 of 22

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ER-5

ADEC Segment Length: 820m



Map Key: PWS-171

Name: R. Marty

Date: 04/04/90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT ER-5 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup & Tarmat Removal More Than 400m From Eagle Nest	OPEN
Manual Pickup & Tarmat Removal Less Than 400m From Eagle Nest	CLOSED
Bioremediation More Than 400m From Eagle Nest	WORK PRIOR TO 8/15
Bioremediation Less Than 400m From Eagle Nest	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Stream	ADF&G catalogued anadromous stream (226-50-16432) is present in Subdivision A. This subdivision is closed to bioremediation less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation is permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation more than 100m from stream. No constraint to manual pickup and tarmat removal.
1F	Sawmill Bay Hatchery Release Area	No constraint to manual pickup and tarmat removal; closed to bioremediation prior to 6/1.
5T	Bald Eagle Nest	USFWS bald eagle impact assessment completed on 5/26/90 by Mike Lockhart indicates an active nest within 400m of the work area. Closed to manual pickup, tarmat removal and bioremediation less than 400m from active nest. No constraint to manual pickup, tarmat removal and bioremediation more than 400m from nest.
7II	Subsistence: Deer Harvesting	No constraint to manual pickup and tarmat removal; closed to bioremediation after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

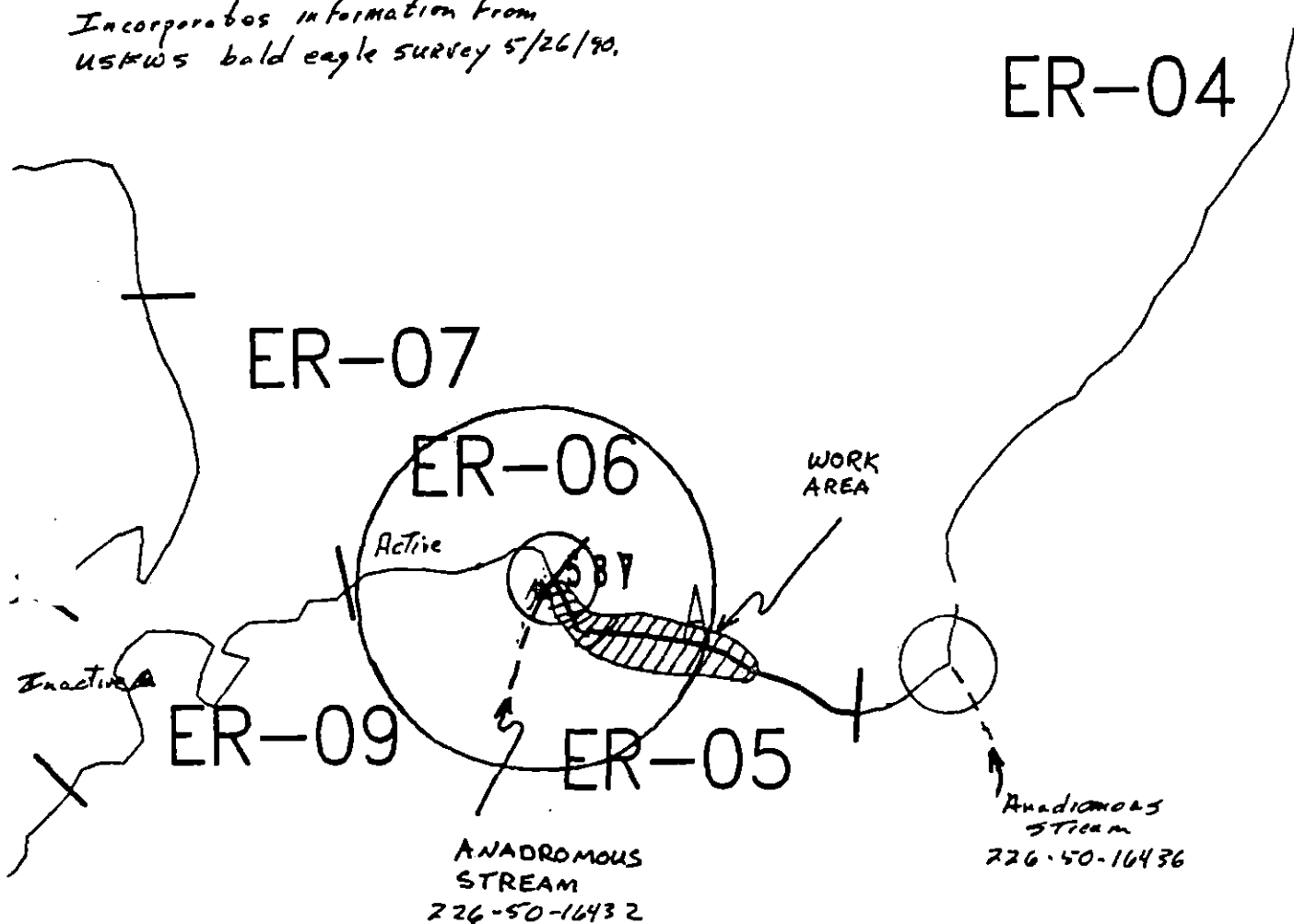
No disturbance to stream bed or banks. No flushing of pollutants or sediments into stream drainage; do not allow Inipol to enter stream flow. On-site examination and consultation by ADF&G monitor is required prior to bioremediation in order to authorize a setback distance from the stream during chemical application; if ADF&G monitor's presence is impossible, authorization may be given by the ADEC monitor. No personnel or boats within 400m of active nest. Restrict boat and air traffic and all disturbance to essential minimum. Air approach and takeoff from and to seaward only; maintain ~~800m~~ horizontal, 300m vertical distance from nests. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM (STREAM NO. 226-50-16432)
FOR ADDITIONAL CONSTRAINT INFORMATION

FOSC

DATE 6.10.90

Incorporates information from
USFWS bald eagle survey 5/26/90.



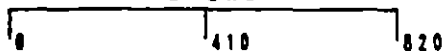
Exxon Company, USA

Map Key: PWS-ER-5

May 11, 1990



ECOLOGY MAP 6/1
SEGMENT ER-5
SUBDIVISION A (1 of 1)
METERS



- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1346 feet

ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-50-16432

SEGMENT ER-5 SUBDIVISION A

WORK WINDOW	
Tarmat Removal	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Stream	No constraint to tarmat removal.
1F	Sawmill Bay Hatchery Release	No constraint to tarmat removal.
5T	Bald Eagle Nest	Closed to tarmat removal. USFWS bald eagle impact assessment completed on 5/26/90 by Mike Lockhart indicates an active nest within 400m of the work area.
7II	Subsistence: Deer Harvesting	No constraint to tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

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

SEE SUBDIVISION CONSTRAINT ADDENDUM ER-5A
FOR ADDITIONAL CONSTRAINT INFORMATION.

TAG APPROVAL DATE 6/04/90
ADEC Ray Moore
EXXON Andy Teal
NOAA John C. Talbot
USCG G.A. Deiter

FOSC

Date

Prepared by

Date

Incorporates information from
USFWS bald eagle survey 5/26/90.

ER-04

ER-07

ER-06

Active
Eagle
Nest

587

WORK
AREA

Inactive

ER-09

ER-05

ANADROMOUS
STREAM
226-50-16432

ANADROMOUS
STREAM
226-50-16436

Anadromous Stream Evaluation: 226-50-16452



Exxon Company, USA
Map Key: PMS-ER-5
May 11, 1990



ECOLOGY MAP 6/1
SEGMENT ER-5
SUBDIVISION A (1 of 1)
METERS
0 410 820

★ Seabird Colony
▲ Eagle Nest

1 inch = 1346 feet

SHORELINE EVALUATION

SEGMENT ST/ ER-06 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Salmon stream no. 226-50-16432 and 16430

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
- 1B Salmon stream mouth - spawning (7/10 to 8/31)
- 1F Sawmill Bay hatchery release (4/15 to 6/1)
- 5T All bald eagle nest (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)
- 6U Recreation: Tent sites (6/1 to 9/15)
- 7HH Subsistence area: Finfish harvesting
- 7II Deer harvesting (8/15 to 2/28)
- 7JJ Invertebrate harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Dmac DATE: 4/18/90

DILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 125 m: V.Light 0 m: No Oil 415 m
Subsurface Oil Observed: Yes X No Maximum Depth 7+ 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>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 and bioremediation as shown on
sketch map. Work should be conducted between 6/1 and 7/10 as a result
of hatchery and salmon constraints and with the approval from ADF&G and
USFWS regarding eagle nest.

TAG COMMENTS: _____

TAG APPROVAL DATE: 4/18/90
ADEC JOHN BAUER John Bauer
EXXON AMY TAN Amy Tan FOSC: ML DATE: 4-22-90
NOAA Burt W. Smith Burt W. Smith
USCG G.A. BEITER G.A. Beiter

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

SEGMENT ST/ ER-06 SUBDIVISION: A DATE 04 APRIL 90

USCG

NAME LARRY FLETCHER SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

1. MANUALLY REMOVE ASPHALT.
2. BIO-REMEDiate.

ADEC

NAME DAVID M. SALE SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

- ① MANUALLY REMOVE TAR BALLS, ASPHALT AND SATURATED SEDIMENTS TO 3-4 cm.

LAND MANAGER

NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Public uses for the segment include recreation and tent sites and subsistence harvesting of deer, finfish and invertebrates. Recommend manual removal followed by bioremediation.

12 of 22

SHORELINE OILING SUMMARY

REVISION NO. 00000

OG R. M. M. G. USCG LARRY FLETCHER SEGMENT ST/ ER-06
 BIO S. L. M. G. LAND REP Leigh Carter SUBDIVISION A
 EXXON J. G. M. G. ADEC Dave Sals TIME 17:30 to 18:02
 TEAM NO.: 10 TIDE LEVEL: 0.5 m (1.79) to 0.5 m (1.79) DATE 04/04/90
 EST. SUBDIVISION LENGTH: 526 m ☐ Sun ☒ Clouds ☒ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 30 % B 30 % C 20 % P 20 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 90 % Hang 0 % Vert 10 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 119 m VL 0 m NO 408 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	C	R	P	S	1	2	3	4	5	SW	U	M	L
ASPHALT PAVEMENT			X						X	X	X		
POOLED													
COVER			X					X				X	X
COAT													
STAIN													
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL													

PAVEMENT: H F (S) 45 sq. m by 3 cm

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash	X		
Debris			

DEBRIS COLLECTED

☒ YES ☐ NO

TYPE Shore form

#BAGS 2

Photographs:

Roll No. 55/10/7

Frames 25-28

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm - cm) (100-000)	BELOW	OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		1	2	3	4	5			1	2	3	4	5	SW	U	M	L		
1	7	X					0-7	X					X		X			N	G, S

COMMENTS

Revision

RM 4/4/90

13 of 22

66 R. Marty

SEGMENT ST/ ER06

SUBDIVISION A

DATE 04 Apr. 190

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Bndry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HMA/LA/VA
- ☐ SCL
- ☐ 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

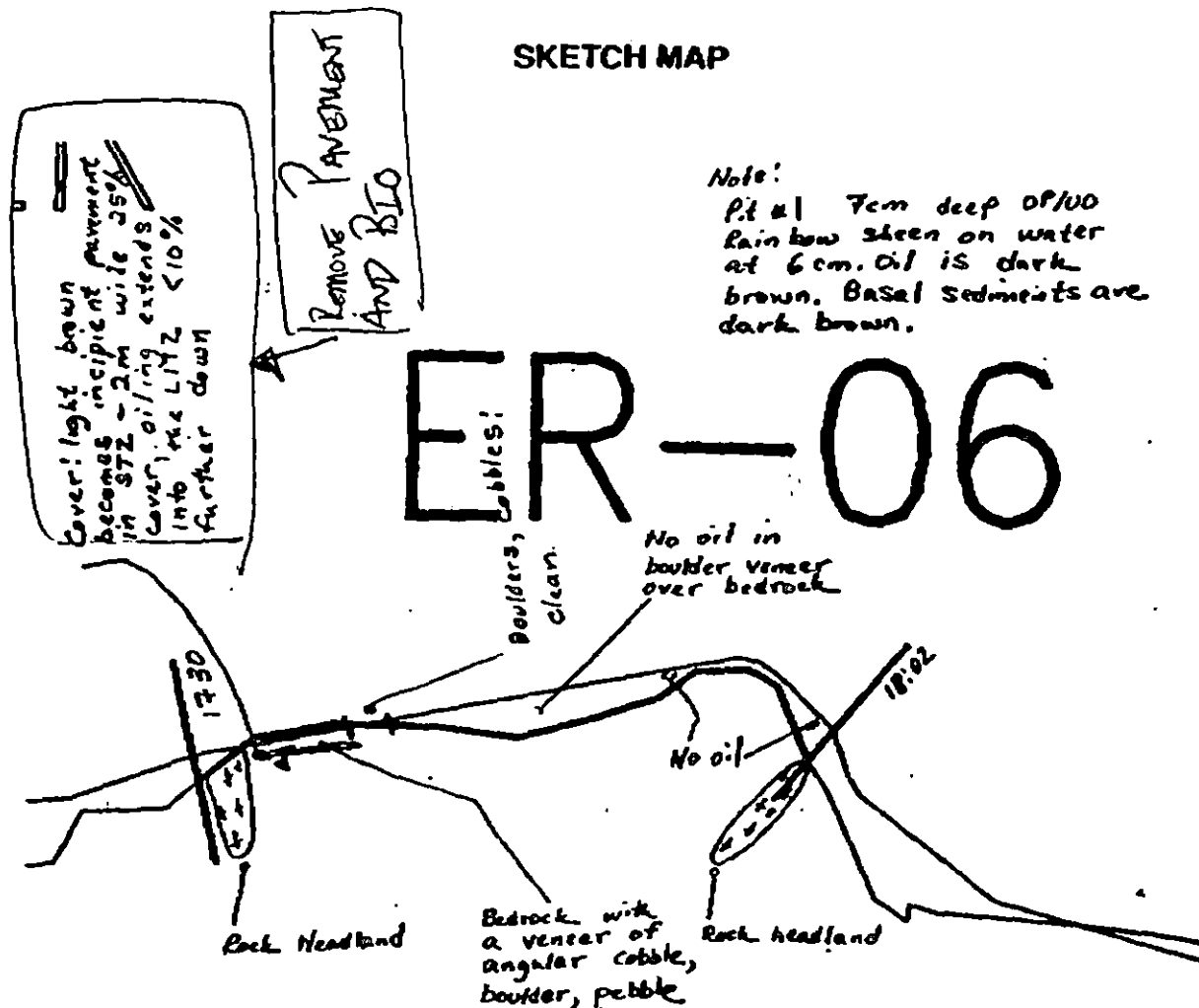
Splashed Distribution

Oil on Vegetation

1 $\Rightarrow$

Photo location, direction,
and number

SKETCH MAP



0 100 200 300
METERS

15 of 22

SHORELINE ECOLOGICAL SUMMARY

REVISION: 10/2/90

Segment ST/10/ER6 Subdivision Fr Date (mo/day/yr) 4/4/90
1730-1800
 Time (24 hr) _____ Biologist Lemon Rain _____

- (A) Substrate type and % of segments:
 (1) Bedrock 30 (2) Boulder 30 (3) Cobble 20 (4) Pebble 20 (5) Sand _____ (6) Silt _____
- (B) Overall % cover of biota (% of segment): Dense _____ Moderate 40% Low _____
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (C)
- Photographs: _____
 Roll No. ST/10/7
 Frames 25-28

BARNACLES

Dense			Moderate			Sparse			Rare			NOT PRESENT
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	

MYTILUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
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~~	

STROPODS

Dense			Moderate			Sparse			Rare			NOT PRESENT
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	

FUCUS

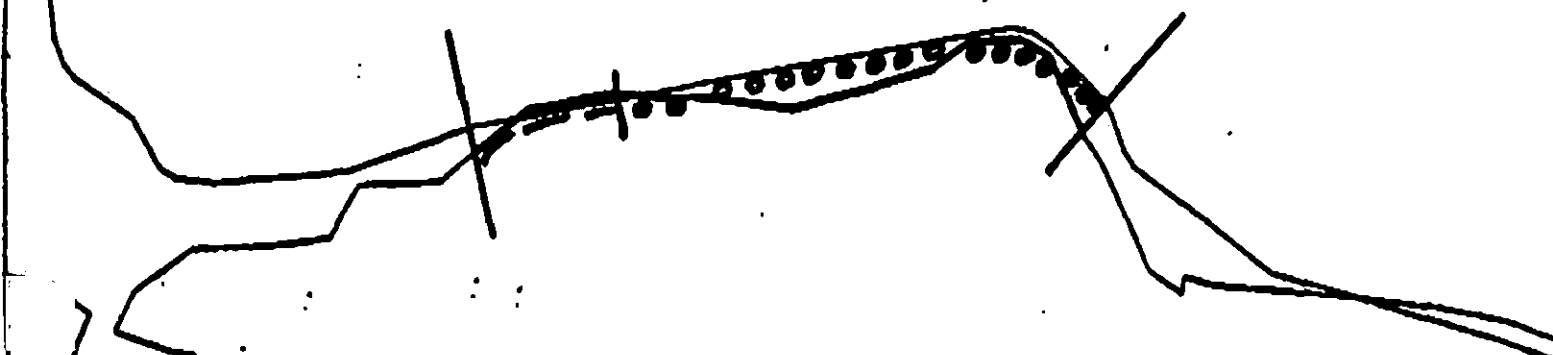
Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	~~2~~	~~2~~	~~2~~	~~2~~	~~2~~	2	2	2	
3	3	3	3	3	~~3~~	~~3~~	~~3~~	~~3~~	3	3	3	
4	4	4	4	4	~~4~~	~~4~~	~~4~~	~~4~~	4	4	4	
5	5	5	5	5	~~5~~	~~5~~	~~5~~	~~5~~	5	5	5	
6	6	6	6	6	~~6~~	~~6~~	~~6~~	~~6~~	6	6	6	

Wildlife Observations/ General Comments: Anthodusa xanthogramma in high tide pool.
 Lots of Rhodophyta in low zone includes Halosaccus; also Spinribus (annelida).

Ecological Considerations: Invertebrate harvest, spawning, deer harvest, hatchery release, fin fish harvest, Tent sites, bald eagle nest.

ER-07

ER-06



ER-09

No	2.6	390	408
Light	0.75	$\frac{113}{503}$	$\frac{118}{526}$

ER-(

140/22

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-6

ADEC Segment Length: 540m



Map Key: PWS-172

Name: Richard Narty

Date: 4 April 1990

Date Entered:

ADDENDUM; SUBDIVISION CONSTRAINTS

SEGMENT ER-6 SUBDIVISION A (1 of 1)

WORK WINDOW

Tarmat Removal More Than 400m From Eagle Nest	OPEN
Tarmat Removal Less Than 400m From Eagle Nest	CLOSED
Bioremediation Less Than 400m From Eagle Nest	CLOSED
Bioremediation More Than 400m From Eagle Nest and Less Than 100m From Stream	WORK PRIOR TO 7/10 (ADF&G MONITOR REQ.)

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Streams	ADF&G catalogued streams (226-50-16430, 16432) are present in Subdivision A. This subdivision is closed to bioremediation less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation is permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation more than 100m from stream. No constraint to tarmat removal.
1F	Sawmill Bay Hatchery Release	No constraint to tarmat removal; closed to bioremediation prior to 6/1.
1K	Purse Seine Hook-off	No constraint to tarmat removal; closed to bioremediation after 7/20.
5T	Bald Eagle Nest	USFWS bald eagle impact assessment completed on 5/26/90 by Mike Lockhart indicates an active nest within 400m of the work area. Closed to tarmat removal and bioremediation less than 400m from active nest. No constraint to tarmat removal and bioremediation more than 400m from nest.
7HH	Subsistence: Finfish Harvesting	No constraint to tarmat removal and bioremediation.
7II	Subsistence: Deer Harvesting	No constraint to tarmat removal; closed to bioremediation after 8/15.
7JJ	Subsistence: Invertebrate Harvesting	No constraint to tarmat removal and bioremediation.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or bank. No flushing of pollutants or sediments into stream drainage; do not allow inipol to enter stream flow. On-site examination and consultation by ADF&G monitor is required prior to bioremediation in order to authorize a setback distance from the stream during chemical application; if ADF&G monitor's presence is impossible, authorization may be given by the ADEC monitor. Restrict boat and air traffic and all disturbance to essential minimum. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM (STREAM NO. 226-50-16430)
FOR ADDITIONAL CONSTRAINT INFORMATION

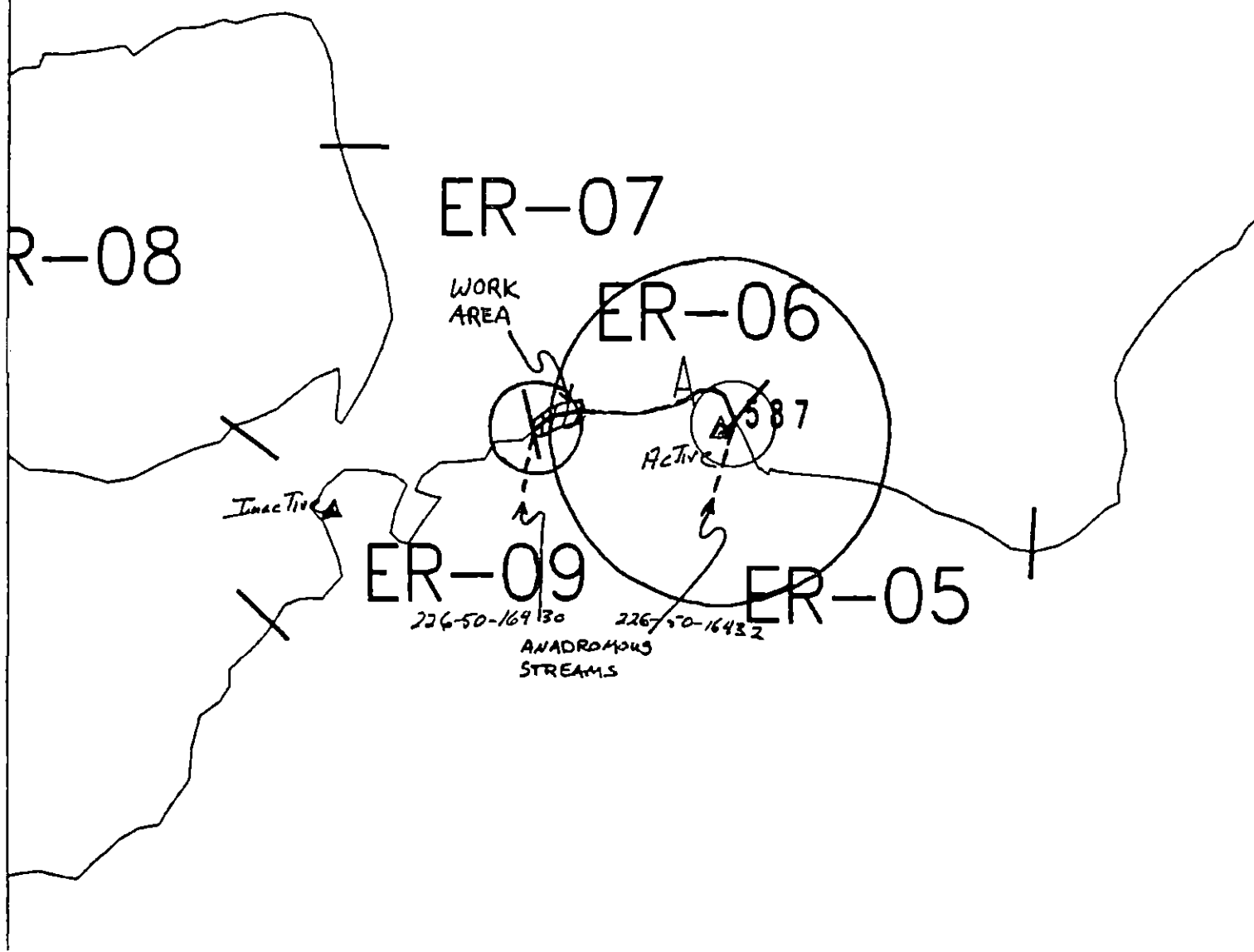
FOSC

DATE

6-10-90

Incorporates information from
USFWS bald eagle survey 5/26/90.

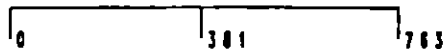
ER-



Exxon Company, USA
Map Key: PWS-ER-6
May 11, 1990



ECOLOGY MAP ^{6/1}
SEGMENT ER-6
SUBDIVISION A (1 of 1)
METERS



Seabird Colony



Eagle Nest

1 inch = 1251 feet

ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-50-16430

SEGMENT ER-6 SUBDIVISION A

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Stream	ADF&G catalogued anadromous streams (226-50-16430 and -16432) are on the two boundaries of Subdivision A. No constraint to manual pickup and tarmat removal.
1F	Sawmill Bay Hatchery Release	No constraint to manual pickup and tarmat removal.
1K	Purse Seine Hook-off	No constraint to manual pickup and tarmat removal.
5T	Bald Eagle Nest	NO CONSTRAINT. Bald eagle nest is more than 400m from work site.
7HH	Subsistence: Finfish Harvesting	No constraint to manual pickup and tarmat removal.
7II	Subsistence: Deer Harvesting	No constraint to manual pickup and tarmat removal.
7JJ	Subsistence: Invertebrate Harvesting	No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

400m 6/3
No disturbance to stream bed or banks. Restrict boat and air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from active nests. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

SEE SUBDIVISION CONSTRAINT ADDENDUM ER-6A
FOR ADDITIONAL CONSTRAINT INFORMATION.

TAG APPROVAL DATE 6/04/90.

ADEC RAY MARRAS R. Marras

EXXON AMY TSN ACH

NOAA JOSEPH TILBOTT J. Tilbott

USCG G.A. REITER G.A. Reiter

FOSC

Date

6/4/90

Prepared by

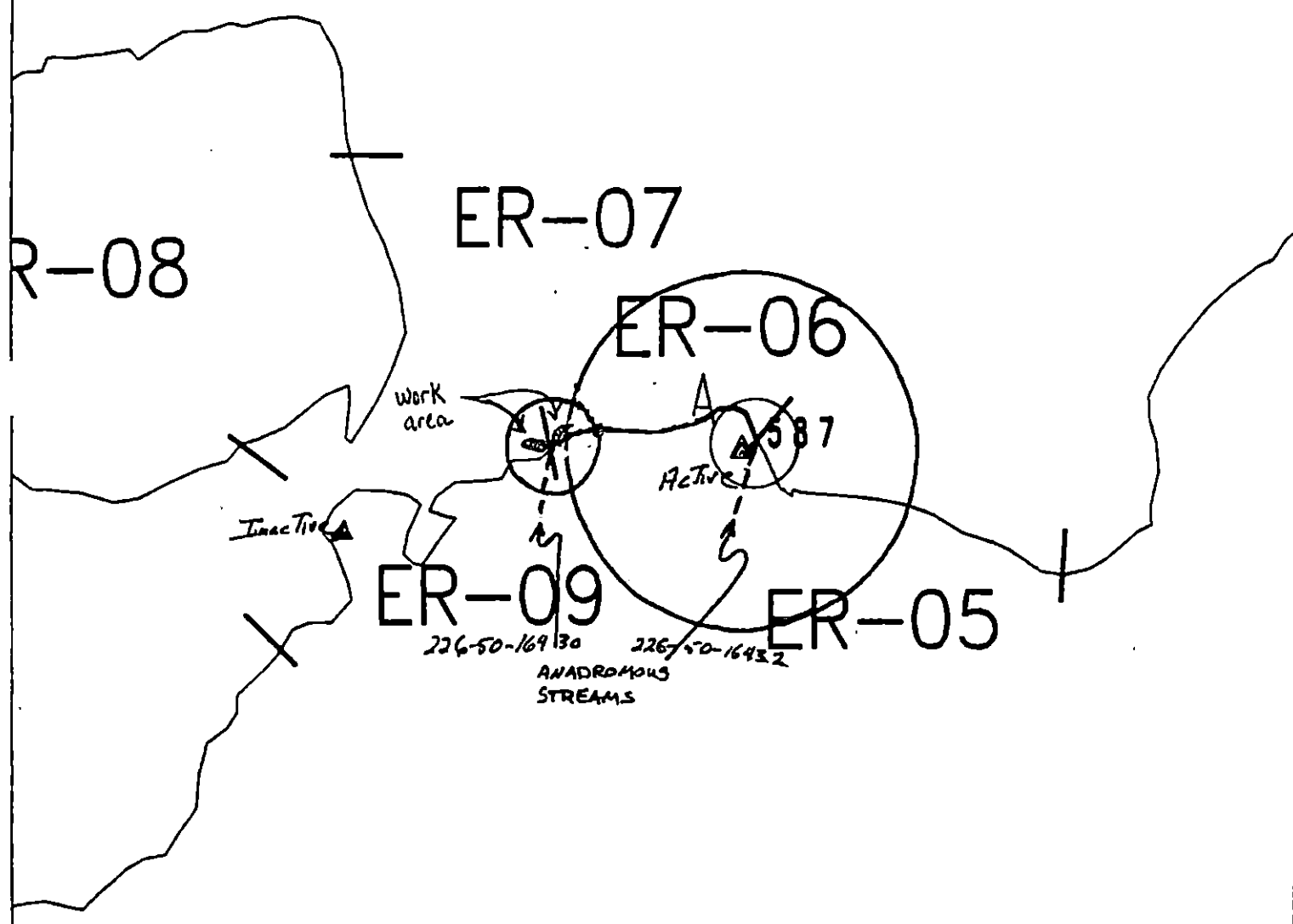
Anders Meyer AM

Date

6/3/90

Incorporates information from
USFWS bald eagle survey 5/26/90.

ER-



Anadromous Stream Evaluation: 226-50-16430



Exxon Company, USA
Map Key: PMS-ER-6
May 11, 1990



ECOLOGY MAP
SEGMENT ER-6
SUBDIVISION A (1 of 1)
METERS
0 381 763

- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1251 feet

SHORELINE EVALUATION

SEGMENT ST/ ER-07 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G Anadromous stream no. 226-50-16428

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

1B Salmon stream mouth - spawning (7/10 to 8/31)

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

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.

SHPO SIGNATURE: Charles J. H. H. H.

DATE: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 923 m: V. Light 99 m: No Oil 0 m

Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X Manual Pickup

X Bioremediation

X Tarmat: Breakup

X Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommend manual removal of tarmat and asphalt patches
followed by bioremediation. Work should be conducted between 6/2 and
7/9 based on above salmon constraints. No treatment should be performed
at the Special Study site (Exxon AP-16) on the east shore of the small
islet (see sketch map); Contact SCAT office for specific restrictions
(564-3660).

TAG COMMENTS:

TAG APPROVAL DATE: 4/19/90.

ADEC ART WENNER Art Wenner

EXXON ANDY TEAL Andy Teal

NOAA Bruce Wescott Bruce Wescott

USCG KENNETH KEENE Kenneth Keene

FOSC:

DATE: 4-25-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A Salmon fry release - by submergence (5/1 to 5/15)
1B Salmon fry release - by submergence (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 Seward 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 (5/7 to 8/31)

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

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

1L Set net sites (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 unrolled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

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

3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)

Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

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

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

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

Restrict all activity to essential minimum, especially air traffic.

5T All Bald Eagle nests (3/1 to 6/1)

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

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

6U Recreation: Tent sites (5/1 to 9/15)

6V Anchorages (5/1 to 9/15)

6W Forest Service cabins (5/1 to 9/15)

6X Lodge (5/1 to 9/15)

6Y Special use destination

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

7HH Finfish harvesting

7H Bear harvesting (5/15 to 2/25)

7JJ Invertebrate harvesting

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

SEGMENT ST/ ER-07 SUBDIVISION: A DATE 04 APRIL 90**ISCG**NAME LARRY FLETCHER SIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

1. MANUALLY REMOVE ASPHALT AND TAR PATCHES.
2. BIO-REMEDIATE.

ADECNAME DAVID M. SALE SIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

- ① MANUALLY REMOVE ASPHALT AND TAR PATCHES FROM SHORELINE OF ISLAND AND TOMBOLO.

TOMBOLO NEEDS TO BE TREATED/CLEANED AT A LOW TIDE TO ACCESS. TOMBOLO ALSO HAD A SHEEN OF OIL IN THE PIT, ESPECIALLY WHEN SURFACE SEDIMENTS FELL INTO PIT. THERE IS A COLOR DIFFERENCE (DARKER IN TOP 2 CM) BETWEEN SURFACE AND SUBSURFACE. THERE MAY BE MORE OIL IN THE TOMBOLO THAN JUST TAR BALLS/PATCHES.

LAND MANAGERNAME Leigh Carlson SIGNATURE Leigh Carlson ADNR☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Listed as priority 1 by PWSCA. Listed as public use area in the PWS area plan. Area used for recreation and subsistence deer harvesting. Recommend manual removal followed by bioremediation.

SHORELINE OILING SUMMARY

REVISION NO. 02/22/90

OG R. Mary USCG LARRY FLETCHER SEGMENT ST/ ER-07
 BIO B. Linn LAND REP Lang Carter SUBDIVISION A
 EXXON J. C. Gernick ADEC Dave Sale TIME 15:15 to 15:35
 TAM NO.: 10 TIDE LEVEL: 0.5m (1.7') to 0.3m (1.7') DATE 04/04/90
 EST. SUBDIVISION LENGTH: 914 m ☐ Sun ☒ Clouds ☒ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to SE
 SURFACE SEDIMENTS: R 20 % B 10 % C 10 % P 15 % G 15 % S 40 % M 10 % V 10 %
 SLOPE: Lang 100 % Hang 100 % Vert 100 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 100 m M 100 m N 903 m VL 21 m NO 100 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	N	S	E	W	1	2	3	4	5	SW	SE	NE	NW
ASPHALT PAVEMENT			X	✓					X	X	✓	✓	
POOLED													
COVER													
COAT			✓						✓		✓	✓	
STAIN													
MOUSSE													
PATTIES			X						X		X		
TARBALLS			X						X		X		
FILM													
NO OIL													

PAVEMENT: H F (S) 496 sq m by 2 cmPATTIES / TARBALLS 1 BAGSNEAR SHORE SHEENT NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	2		
Vegetation	1		
Trash			
Debris			

DEBRIS COLLECTED

☐ YES ☒ NO

TYPE

#BAGS

Photographs:

Roll No. 55/10/7Frames 20-24

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm - cm) (100-000)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		SP. OF	GR. OF	LY. OF	CL. OF	NO		UP	LC	1	2	3	4	5	SW	SE	NE	NW		
1	15					X	.									X			N	A
2	20	X					0.1		X			X				X			N	G
3	10	X					0.2		X			X					X			G
4	25					X	0.1	?				X					X	Y		S
5	7	X					0.0.5		X							X				S
							.													

* Oiled interval less than 5cm in G/S sediments does not constitute subsurface oil.

COMMENTS

Asphalt $150 \times 2 \times 25\% (C) = 75$ $210 \times 3 \times 35\% (C) = 221$ $210 \times 2 \times 10\% (C) = 42$ $263 \times 3 \times 20\% (N) = 158$
4% m2

Revision

RM 4/4/90

804 22

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/22/90

Segment ST/10/ER7 Subdivision A Date (mo/day/yr) 4/4/90

Time (24 hr) 1500 - 1600 Biologist Lemon Rain

A) Substrate type and % of segments:
(1) Bedrock 20 (2) Boulder (3) Cobble 10 (4) Pebble 15 (5) Sand 55 (6) Silt

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

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

Photographs:
Roll No. ST/10/7

Frames 20-24

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	X	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

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

ASTROPODS

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	X	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

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: In mid zone found nudibranch eggs, annelid worms, Scorpaenidae on Fucus. Deer and possibly wolf-like tracks in snow.

Ecological Considerations: clam shells (Tresus sp.) from apparent raised bed as described for section 8. Hatchery release, spawning, deer harvest, set aside. Checked stream and found no fish or potential food.

11 of 22

OG R. Marly

SEGMENT ST/600

SUBDIVISION 4

DATE 02/1 April 80

CHECKLIST

- Map
- Approx. Scale
- Segment Study
- On Data
- Width
- Length
- % Cover
- Substrate Character
- Est. Habitat
- SSL
- Profile Location(s)
- Profile(s)
- Photo Location(s)
- Photo Location(s)

LEGEND

1 A

R: No Substrate OS

2 A

R: Substrate OS

CT/C

Condition Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Scattered Distribution

Old Vegetation

1 a

Photo location, direction,
and number

On Character

In pit: AP 903 PO

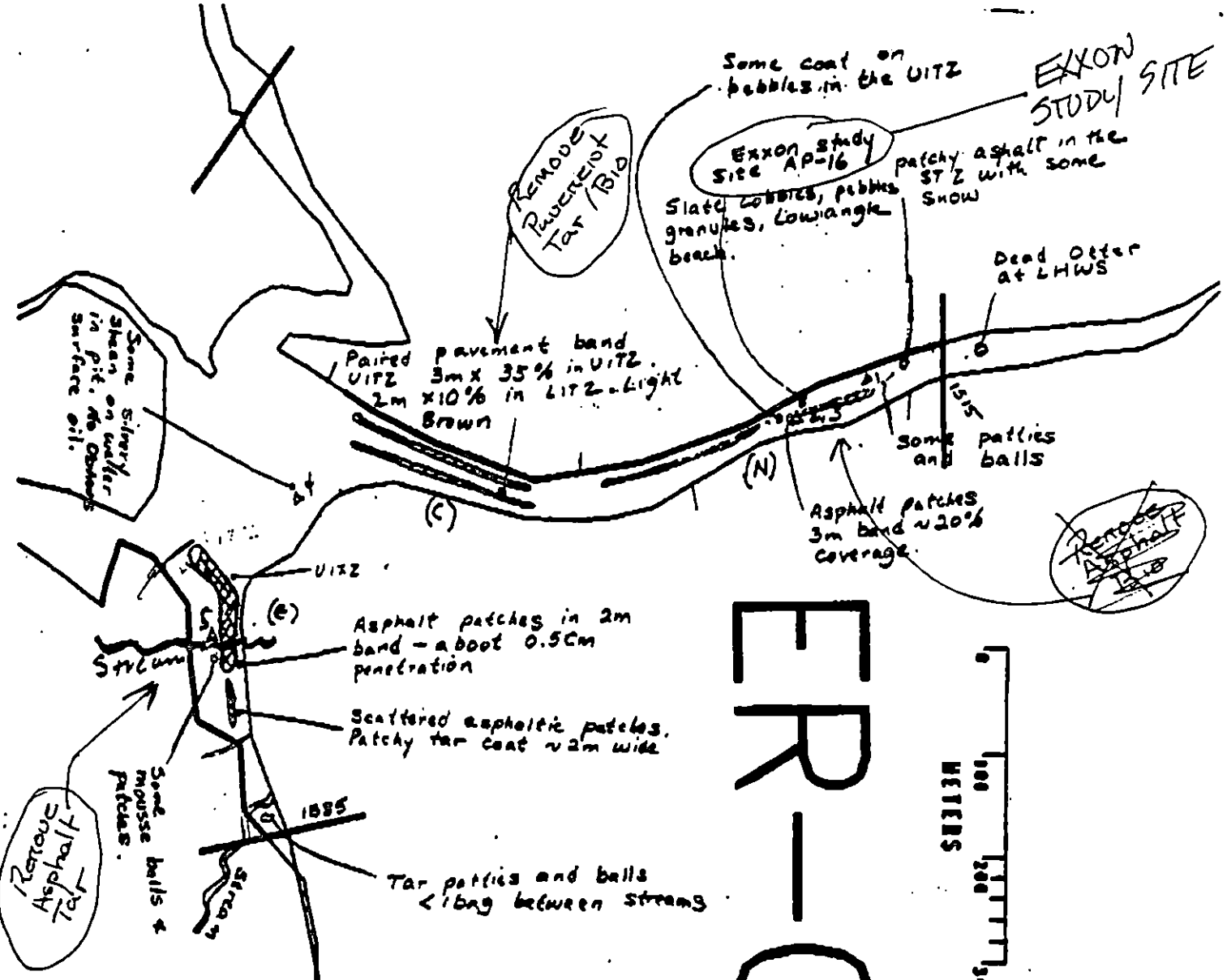
CV

CT 600 ST

NS

TB 75 R

NO



METERS



ER-07

9/22

ER-07

ER-

ER-09

very light 0.5 75 81
Light 5.6 840 90:
915 904

10 of 22

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-7

ADEC Segment Length: 1022m



METERS



Map Key: PWS-173

Name: Richard Marty

Date: 04/04/90

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT ER-7 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation More Than 100m From Stream	WORK 6/1 to 7/20
Bioremediation Less Than 100m From Stream	WORK 6/1 TO 7/10 (ADF&G MONITOR REQ.)

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Streams	ADF&G catalogued anadromous streams (226-50-16428 and 16430) are present in Subdivision A. This subdivision is closed to bioremediation less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation is permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation more than 100m from stream. No constraint to manual pickup and tarmat removal.
1F Sawmill Bay Hatchery Release	No constraint to manual pickup and tarmat removal; closed to bioremediation prior to 6/1.
1K Purse Seine Hook-off	No constraint to manual pickup and tarmat removal; closed to bioremediation after 7/20.
7II Subsistence: Deer Harvesting	No constraint to manual pickup and tarmat removal; closed to bioremediation after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or bank. No flushing of pollutants or sediment into stream drainage. Restrict boat and air traffic to essential minimum after 7/20. Restrict beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unloiled biota and substrate.

SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM FOR (STREAM NO. 226-50-16428)
FOR ADDITIONAL CONSTRAINT INFORMATION

TAG APPROVAL DATE 6/04/90
ADEC Ray Manna's R. Manna
EXXON Steve Tan
NOAA Joseph J. J. J. J.
USCG John J. J. J.
FOSC [Signature] Date 6/5/90

Prepared by Andru Manna Date 6/4/90

EV-62

Incorporates information from
USFWS bald eagle survey 6/1/90.

ER-08

ER-07

ER-06

ER-09

ER-05

EXXON STUDY SITE (AP-16)

TREATMENT
AREAS

Active Δ 587

ANADROMOUS STREAM
(226-50-16430)

ANADROMOUS STREAM
(226-50-16428)

Inactive Δ

-10



Exxon Company, USA

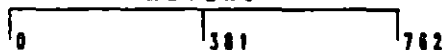
Map Key: PWS-ER-7

May 11, 1990

ECOLOGY MAP 5/30
SEGMENT ER-7

SUBDIVISION A (1 of 1)

METERS



Seabird Colony



Eagle Nest

1 inch = 1250 feet

ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-50-16428

SEGMENT ER-7 SUBDIVISION A

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B	Salmon Stream	ADF&G catalogued anadromous stream (226-50-16428) is in Subdivision A. No constraint to manual pickup and tarmat removal.
1F	Saw Mill Bay Hatchery Release	No constraint to manual pickup and tarmat removal.
1K	Purse Seine Hook-off	No constraint to manual pickup and tarmat removal.
7II	Subsistence: Deer Harvesting	No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Restrict boat and air traffic to essential minimum after 7/20. Restrict beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to uncollected biota and substrate.

SEE SUBDIVISION CONSTRAINT ADDENDUM ER-7A
FOR ADDITIONAL CONSTRAINT INFORMATION.

TAG APPROVAL DATE 6/04/90
ADEC RAG Morris
EXXON Andy
NOAA Joseph Talbot
USCG G. J. Heister

FOSC

DATE

Prepared By:

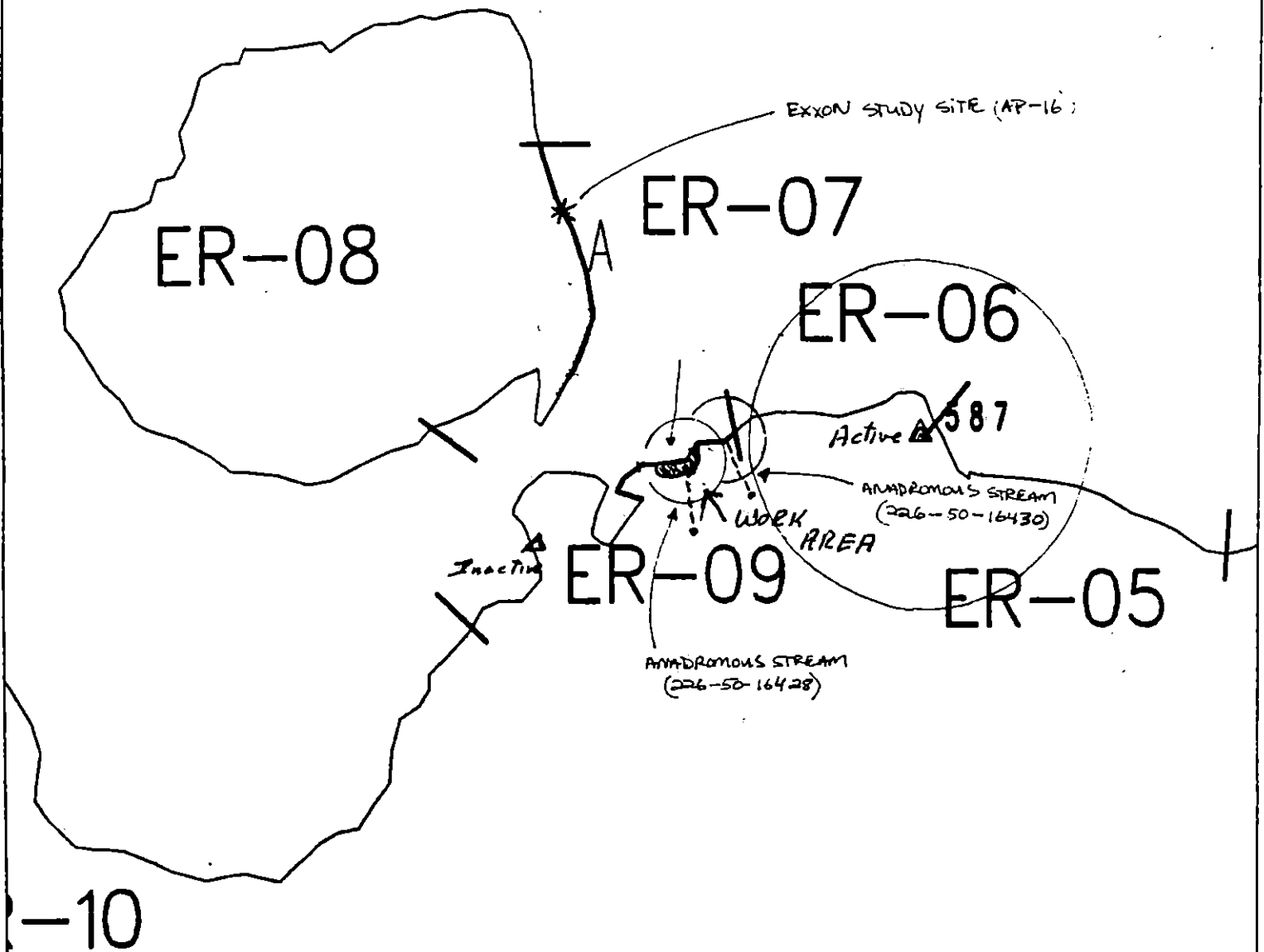
Date

6/3/90

Handwritten signature

EV-62

Incorporates information from
USFWS bald eagle survey 5/26/90.



Anadromous Stream Evaluation: 226-50-16428



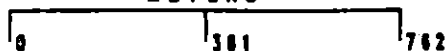
Exxon Company, USA
Map Key: PWS-ER-7
May 11, 1990



ECOLOGY MAP 5/31
SEGMENT ER-7

SUBDIVISION A (1 of 1)

METERS



Seabird Colony



Eagle Nest

1 inch = 1250 feet

ASAP

SEGMENT AS / EL-7 SUBDIVISION: A SITE: 1 DATE 8/1/90**USCG**NAME MSC Michael D. Brown SIGNATURE Michael D. Brown

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

ADECNAME John Hays SIGNATURE John Hays

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

Work order modification sent in for AP manual pickup on
 this segment. should be reassessed following additional treatment. Heaviest AP found
 adjacent to tot site.

LAND MANAGERNAME DOUGLAS GIBSON SIGNATURE Douglas Gibson

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

EXXONNAME Martinez M.J. SIGNATURE Martinez M.J.

☒ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991
 REASON: To Check For Asphalt.

GENERAL DATA

SEG ID: ER-7 SBOV: A SITE: 1 TEAM: 1 DATE: 8/1/90
SITE LGTH 340 OIL CATEGORIES: W 0 M 0 N 850 VL 150 NO 190 U 0 ⁴³²
1991 REASSESSMENT: USCG: N ADEC: Y LDMGR: N EXXON: 5/1/94 F.W.

SURFACE DATA

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

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

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

CHAR #: 4 OIL CHAR: NO OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU X UI MI LI X

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

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

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

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

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

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

ASAP DATA ENTRY FORM

SUBSURFACE DATA

PAGE 2 OF 2SEGMENT ID: ER-7 SUBDIV: A SITE: 1PIT # 1 PIT DEPTH 15 OIL CHARACTER NO OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI X MI LI SUBSURF SEDIMENT: BRK BLD COB PEB X GRN SAN MUD VEG F.W. PIT # 2 PIT DEPTH 30 OIL CHARACTER NO OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI X MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI
SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

ASAP TAG REVIEW SHEET

Segment: ERO7

Subd: A

Site: 1

Date

PRE-Review 11 AUG 90

Priority For Addressing In 1990

 HIGH

 MEDIUM

 X LOW

 NTR

Treatment

Recommended: MANUAL REMOVE - ASPHALT PATCHES & TAR BALLS

↑
only Because of SITE 2 clean-up
But MATRIX Calls
for NTR

Priority Site For Reassessment In 1991

YES

NO

 CG X

YES

NO

 X ADEC

YES

NO

 X EXXON

YES

NO

 LAND MGR X

TAG 13 AUG 90
NTR

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT EB-07 SUBDIVISION A DATED 8-1-90

MODIFICATION CLASS I CLASS II ✓ CLASS III

1. REASON FOR MODIFICATION

Some Friable Asphalt Mat Still on Segment.

2. SUGGESTED ADJUSTMENT TO WORK PLAN

Manually Remove Asphalt Mat Patches.

3. TIMING ISSUES

ADEC [Signature]

EXXON [Signature]

USCG [Signature]

LAND MANAGER [Signature] (If field rep is on scene)

SEGMENT AS/ ER-7 SUBDIVISION: A SITE: 2 DATE 8/1/90**JSCG**NAME MSC Michael D. Brown SIGNATURE Michael D. Brown☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:**ADEC**NAME John Hoyer SIGNATURE John Hoyer☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:

Work order modification sent in for AP manual pickup on
this segment, should be reassessed following additional treatment.

LAND MANAGERNAME DOUGLAS GIBSON SIGNATURE Douglas Gibson☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:**EXXON**NAME Martinez N.W. SIGNATURE Nicholas G. Martinez☒ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON: To check for Asphalt

GENERAL DATA

SEG ID: ER-7 SBDV: A SITE: 2 TEAM: 1 DATE: 8/1/90
SITE LGTH 250 OIL CATEGORIES: W 0 M 0 N 250 VL 150 NO 190 U 432 F.W.
1991 REASSESSMENT: USCG: 11 ADEC: 4 LDMGR: 4 EXXON: 4

SURFACE DATA

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

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

CHAR #: 3 OIL CHAR: NO OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU X UI MI LI X

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

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

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

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

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

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

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

ASAP DATA ENTRY FORM

SUBSURFACE DATA

PAGE 2 OF 2SEGMENT ID: ER-7 SUBDIV: A SITE: 2PIT # 1 PIT DEPTH 30 OIL CHARACTER NO OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI X MI LI SUBSURF SEDIMENT: BRK BLD COB PEB X GRN X SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

ASAP TAG REVIEW SHEET

Segment: ER07 Subd: A Site: 2 Date
PRE-Review 11 AUG 90

Priority For Addressing In 1990

 HIGH MEDIUM X LOW NTR

Treatment
Recommended:

~~MANUAL REMOVE - ASPHALT PAVED~~ ~~TAR~~ ~~BRIS~~

MATRIX calls for
M/P of ASPHALT
ON BROKEN

Priority Site For Reassessment In 1991

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

TAG 13 AUG 90

Additional TAR MAT removal &
CUSTOMER

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT EB-07 SUBDIVISION A DATED 8-1-90

MODIFICATION CLASS I CLASS II ✓ CLASS III

1. REASON FOR MODIFICATION

Some Friable Asphalt Mat Still on Segment.

2. SUGGESTED ADJUSTMENT TO WORK PLAN

Manually Remove Asphalt Mat Patties.

3. TIMING ISSUES

ADEC [Signature]

EXXON [Signature]

USCG [Signature]

LAND MANAGER [Signature] (If field rep is on scene)

ASAP SHORELINE OILING SUMMARY

PAGE 1 OF

TEAM NO. ONE EXXON MARTINEZ SEGMENT AS/ ER-7
 OG Reimer USGS BROWN SUBDIVISION A
 ADEC HAYES LAND REP GIBSON TOTAL NO. SITES 2
 DATE 8/1/90 TIME 151010:40 TIDE LEVEL 7 10 7
 TOTAL EST LENGTH OF SHORELINE SURVEYED: 590 m
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WEATHER: ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 OIL CATEGORY LENGTH: W 0 m M 0 m N 250 m VL 50 m NO 190 m US 0 m

432 F.W.

SURFACE OIL

SITE 1

SITE 2

SITE 3

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT				I	I			
S.O.R.								
POOLED								
COVER								
COAT				U	U			
STAIN								
MOUSSE								
PATTIES/T.B.				X	X	X		
FILM								
NO OIL					X			X
EST. SITE LENGTH						340		

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT		F			F			
S.O.R.								
POOLED								
COVER								
COAT								
STAIN								
MOUSSE								
PATTIES/T.B.			X		X	X		
FILM								
NO OIL					X			X
EST. SITE LENGTH						250		

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

SUBSURFACE OIL

SITE NO.	PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER				OILED INTERVAL (CM-DM)	CLEAN BELOW (Y/N)	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS
			OP	OR	OF	NO			SU	UI	MI	LI	
1	1	15				X	.		X				P-P
2	1	30				X	.		X				P-PG
							.						
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Photographs:

Roll No. ASAP-01-01Frames 16 & 17Reviewed
F.W.

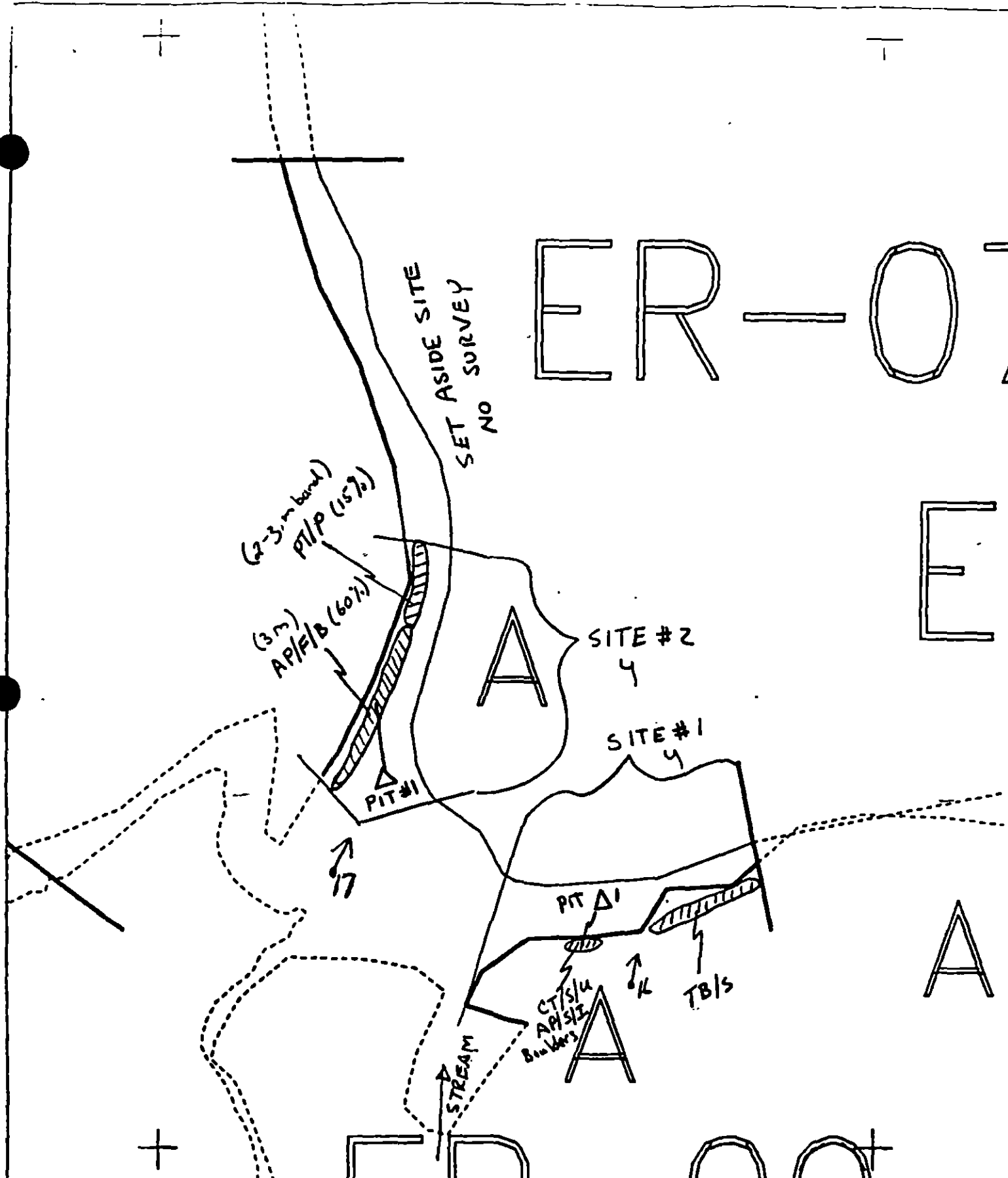
COMMENTS The only significant oiling on this subdivision is the Tarmat remaining on site #2. This area was manually worked and Tarmat removed. The mat present is in and around the trenches left by previous work??
 The current oiling may represent more oiling being brought to surface in worm

REVISION NO. 7/27/88

ER-0

E

A



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

ER-7 A
ADEC Subsegment Length: 1022m
METERS
AK State Plane Zone 4 1:4831
per-7a

Subdivision Field Map
Map Key: PWSER-7A
Name: Reimer
Date: 8/1/90
Date Entered:



ER-0

E

SITE #2
yes

SITE #1
yes

A

TTTTT
OOOOT

A

A

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

ER-7 A
ADEC Subsegment Length: 1022m
METERS
0 125 248
AK State Plane Zone 4 1:4831
per-7a



Subdivision Field Map
Map Key: PWSER-7A
Name: Reimer
Date: 8/1/90
Data Entered:

ER-0

E

A
SITE # 2
YES

SITE # 1
YES

A

A

ER-7 A

ADEC Subsegment Length: 1022m
METERS

0 125 248

AK State Plane Zone 4, 1:4831
per-7a



Subdivision Field Map

Map Key: PWSE-7A

Name: Reimer

Date: 8/1/10

Data Entered:

XXXX

Wide

////

Medium

Narrow

TTTT

Very Light

0000

No Oil

SHORELINE EVALUATION

SEGMENT ST/ ER-08 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1F Sawmill Bay Hatchery release (4/15 to 6/1)
6U Recreation: Tent sites (6/1 to 9/15)
7II Deer harvesting (8/15 to 2/28)

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 523 m: V. Light 1026 m: No Oil 1313 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>X</u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u>X</u> Tarmat: <u>X</u> Breakup	<u> </u> Beach Cleaner
<u> </u> <u>X</u> Removal	<u> </u> Other (see comments)

COMMENTS: The recommended treatment activities are as follows: 1) Manual ~~break up~~ and removal of tarmats, 2) Bioremediation of areas shown on attached sketch map. Work after 6/1 based on above hatchery constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90
ADEC JOHN BAUER
EXXON ANDY TAT
NOAA Bert Wescott
USCG KENNETH KEANE

FOSC: *[Signature]* DATE: 4-22-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

SEGMENT ST/ ER-8 SUBDIVISION: A DATE 04 APRIL 90**ISCG**NAME LARRY FLETCHER SIGNATURE Larry B Fletcher☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

1. REMOVE ASPHALT AND TAR PATCHES MANUALLY.
2. BIO-REMEDIATE.

ADECNAME DAVID M. SALE SIGNATURE David M Sale☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

- ① REMOVE ASPHALT AND TAR PATCHES MANUALLY
MOVE ROCKS WHERE NECESSARY TO GET ALL OF ASPHALT
- ② BIOREMEDIATION

LAND MANAGERNAME Leigh Carlson SIGNATURE Leigh Carlson ADNR☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

Listed as priority 1,3 by PWS CA. Listed in PWS area plan as public use area for anchorage, recreation and subsistence uses. Recommend manual removal followed by bioremediation.

2 of 22

SHORELINE OILING SUMMARY

REVISION NO. 02/22/90

OG R. Marty USCG LARRY FLETCHER SEGMENT ST/ ER-08
 BIO B. Smith LAND REP Lang Carlson SUBDIVISION A
 EXXON J. Gerasinski ADEC Dave Sale TIME 13:19 to 15:15
 TEAM NO.: 10 TIDE LEVEL: +1.8m (6') to +0.6m (1.8') DATE 04/04/90
 EST. SUBDIVISION LENGTH: 3072 m ☐ Sun ☒ Clouds ☒ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: _____ to clockwise
 SURFACE SEDIMENTS: R 40 % B 40 % C 20 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long _____ % Hang _____ % Vert _____ % WAVE EXPOSURE: ☒ Low ☒ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 550 m VL 1067 m NO 1455 m

SURFACE OIL

$$225 \times 1 \times 30 + 75 \times 1 \times 0.1 =$$

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	W	M	N	VL	NO	W	M	N	VL	NO	W	M	N	VL	NO	U
ASPHALT PAVEMENT			X						X						X	X
POOLED																
COVER																
COAT			X	✓				X					X	✓		
STAIN			X					X					X			
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL														X		

PAVEMENT: H F (S) 75 sq. m by 3 cmPATTIES / TARBALLS 1 BAGS

NEAR SHORE SHEEN? NO BR RW (SL) TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	2		
Vegetation	2		
Trash			
Debris			

DEBRIS COLLECTED

☐ YES ☒ NOTYPE 0#BAGS 0

Photographs:

Roll No. ST 10/2Frames 14-19

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm - cm) (200-250)	BELOW	OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS	
		SP. OF	RED. OR	LOC. OL	SP. OF	NO			W	M	N	VL	NO	W	M	N	U				
1	5					X	.	X								X				N	P, G
2	10		X				0.1	X					X			X					P, G.
							.														
							.														
							.														
							.														

COMMENTS Segment consists mainly of high angle cliffs.
 Pavement is concentrated near junction with ER-07.

* oiled interval < 5 cm does not constitute subsurface oil.

Revision

RM 4/4/90

3 of 22

REVIEWED W

DATE

4/9/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST/10/ER8 Subdivision A Date (mo/day/yr) 4/4/90Time (24 hr) 1230 - 1500 Biologist Lemon Rain, wind 12 mph, waves 1/3 mile, 4°C

- A) Substrate type and % of segments:
 (1) Bedrock 40 (2) Boulder 40 (3) Cobble 20 (4) Pebble _____ (5) Sand _____ (6) Silt _____
- (B) Overall % cover of biota (% of segment): Dense 70% Moderate _____ Low _____
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (3)

 Photographs:
 Roll No. ST/10/7
 Frames 14-19

BARNACLES

Dense			Moderate			Sparse			Rare			NOT PRESENT
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	

MYTILUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
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	

ASTROPODS

Dense			Moderate			Sparse			Rare			NOT PRESENT
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	

FUCUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
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	

Wildlife Observations/ General Comments: Greatest total coverage on bedrock was through the mid zone. Red and Alaria and Katharina and Halosaccaria all moderate in low zone. Endocladia in high zone. Leptasterias hexactis in mid. Littorina seen laying eggs.

Ecological Considerations: Beds of Tresus (bivalve) have apparently been uplifted and now died in the zones we see today; deeper water may hold many more; important for subsistence and recreation. Odocoileus hemionus (deer), Mustella vison (mink) and bald eagle were sighted. A dead Enhydra lutra (sea otter) was found unholed, only skin & bones remaining.

Tent sites, deer harvest

OG Richard Marty

SEGMENT ST/ER-08

SUBMISSION A

DATE 24 April 80

CHECKLIST

- N Area
- Approx. Scale
- Seafloor Entry
- Oil Out
- Width
- Length
- % Cover
- Substrate Character
- Est. HWA/LWA
- SSL
- Profile Location(s)
- Profile(s)
- PA Location(s)
- Photo Location(s)

LEGEND

1 A

PA - No Subsurface Oil

2 A

PA - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Spotted Distribution

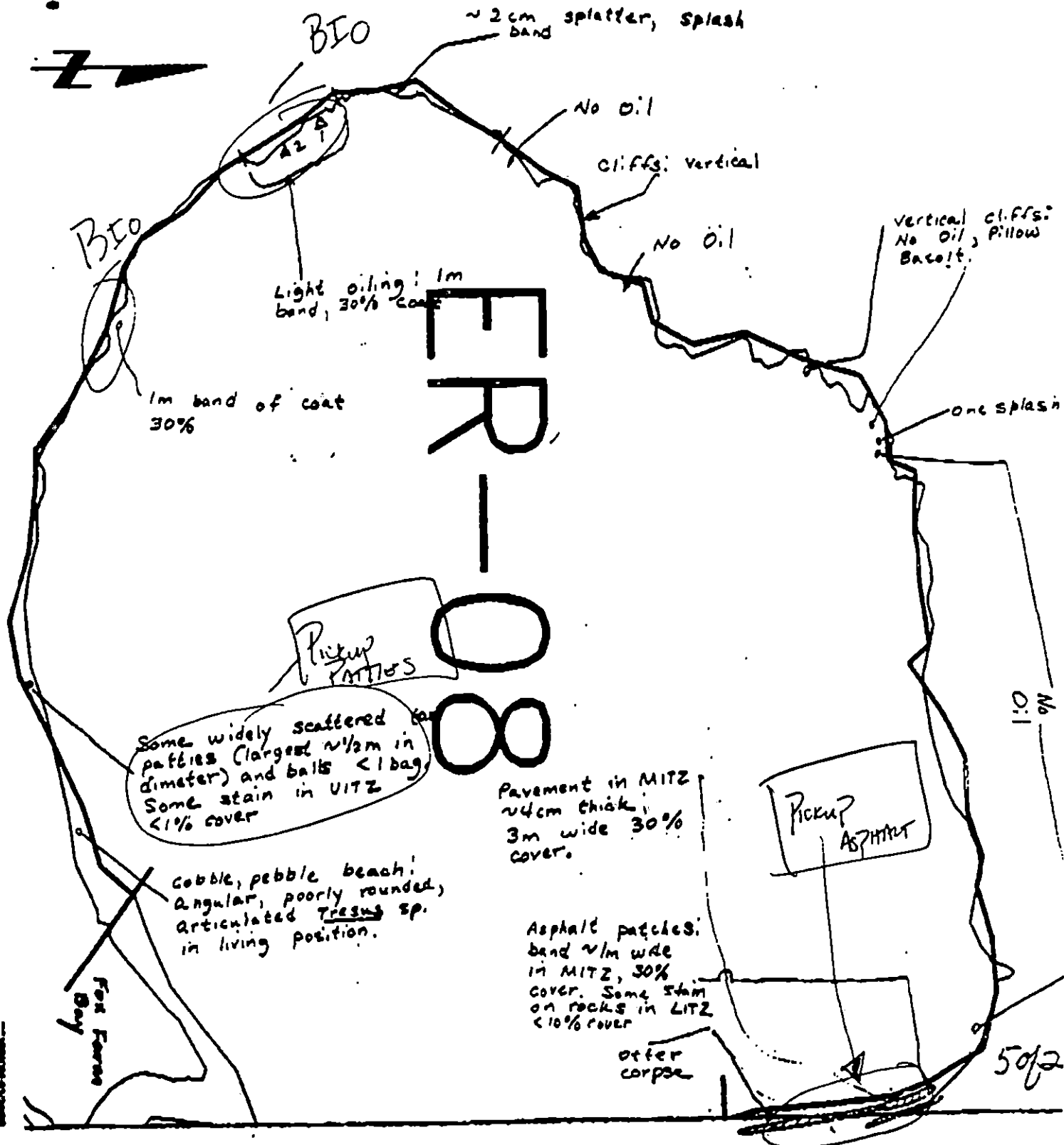
Other Vegetation

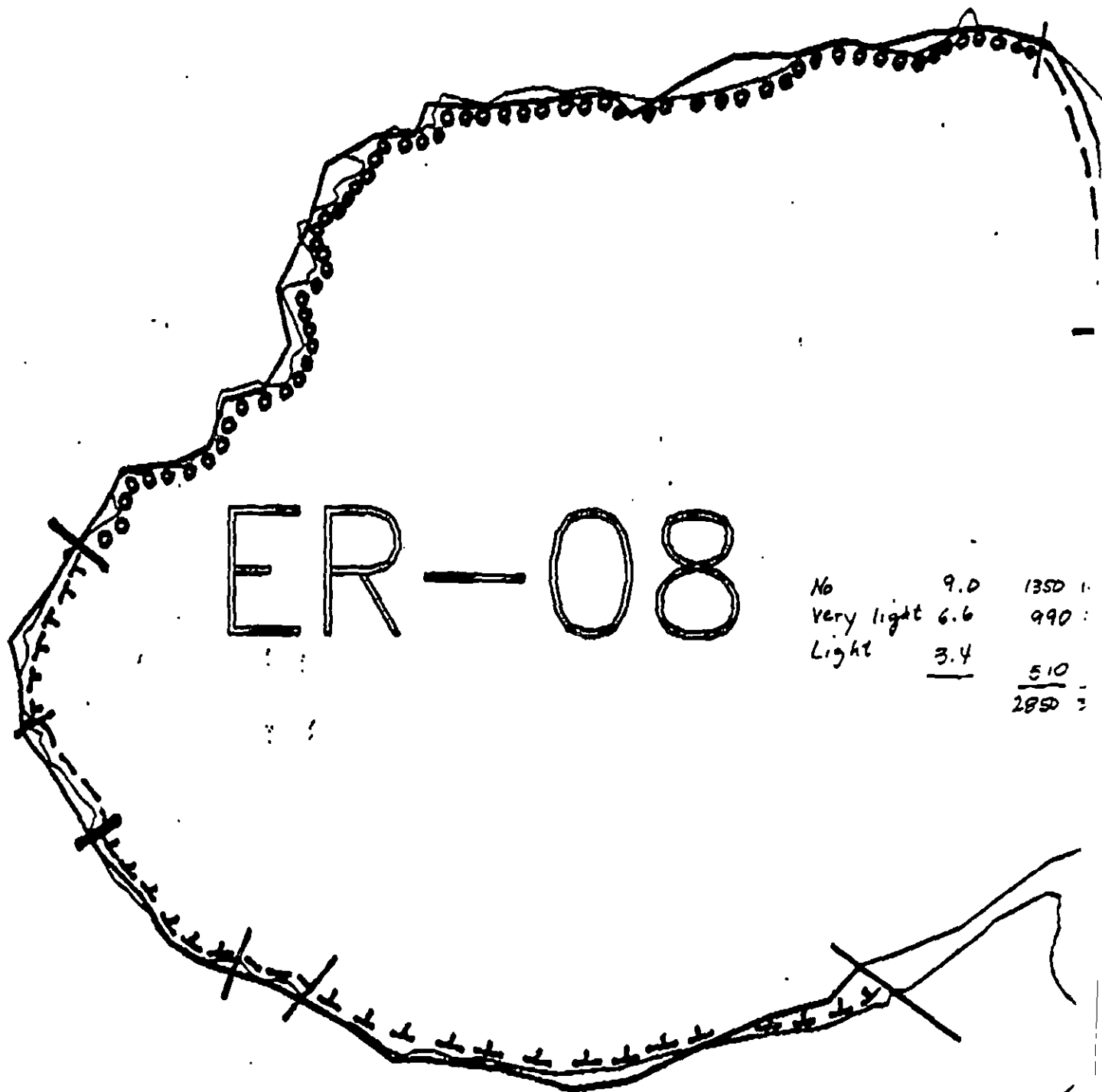
1

Photo location, direction, and number



On Character L: n): AP 240 PO CV 340 CT ST MS TB 1067 FL NO 1455





No	9.0	1350
Very light	6.6	990
Light	<u>3.4</u>	<u>510</u>
		2850

40/22

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-8

ADEC Segment Length: 2852m

0 100 200 300
METERS



Map Key: PWS-174a

Name: Richard Marty

Date: 04/04/90

Date Entered:

FIELD SHOPELINE COMMENT SHEET

SEGMENT AS/ ER-Y SUBDIVISION: A SITE: 1 DATE 8/1/90

ISCG

NAME MICHAEL D. BROWN SIGNATURE Michael D. Brown

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

ADEC

NAME John Hoyer SIGNATURE John Hoyer

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

Work order modification sent in ^{for} ~~with~~ this area.

Oiling consisted of 3a band of AP/P/F in UITE needs manual P.U.
No further treatment recommended for this site beyond work order modification.

LAND MANAGER

NAME DOUGLAS GIBSON SIGNATURE Douglas Gibson

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

EXXON

NAME Martinez N.J. SIGNATURE Neddy Martinez

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

To see if any additional asphalt forms.

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT ER-08 SUBDIVISION A. DATED 8-1-90.

MODIFICATION CLASS I CLASS II ✓ CLASS III

1. REASON FOR MODIFICATION

Asphalt Patches (Friable) starting at E
End of Segment need to be removed.

2. SUGGESTED ADJUSTMENT TO WORK PLAN

Manually Remove Asphalt Patches.
@ Site #1 on Sketch Map.

3. TIMING ISSUES

ADEC *[Signature]*

EXXON *[Signature]*

USCG *[Signature]*

LAND MANAGER *Douglas Gibson* (If field rep is on scene)

GENERAL DATA

SEG ID: ER-8 SBDV: A SITE: 1 TEAM: 1 DATE: 8/1/90
SITE LGTH 200 OIL CATEGORIES: W 0 M 0 N 340 VL 300 NO 60 U 0
1991 REASSESSMENT: USCG: N ADEC: y LDMGR: / EXXON: / 2162 F.W.

SURFACE DATA

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

CHAR #: 2 OIL CHAR: T.B OIL DIST: CONT BRKN PTCH SPLH X
TIDAL ZONE: SU UI X MI X LI

CHAR #: 3 OIL CHAR: NO OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU X UI MI LI X

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

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

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

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

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

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

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

ASAP DATA ENTRY FORM

SUBSURFACE DATA

PAGE 5 OF 5

SEGMENT ID: ER-8 SUBDIV: A SITE: 1

PIT # 1 PIT DEPTH 20 OIL CHARACTER NO OIL INTVAL: FROM TO
 CLEAN BELOW: PIT ZONE: SU UI X MI LI
 SUBSURF SEDIMENT: BRK BLD COB PEB X GRN X SAN MUD VEG

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

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

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

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

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

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

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

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

FIELD SHORELINE COMMENT SHEET

SEGMENT AS / ER-8 SUBDIVISION: A SITE: 2 DATE 8/1/90

ISCG

NAME Michael D. Brown SIGNATURE Michael D. Brown

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

ADEC

NAME John Hayer SIGNATURE John Hayer

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

*No treatment at this time only remains of
oiling were ET/S.*

LAND MANAGER

NAME DOUGLAS GIBSON SIGNATURE Douglas Gibson

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

EXXON

NAME McIntyre, N.S. SIGNATURE McIntyre, N.S.

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

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT ER-08 SUBDIVISION A. DATED 8-1-90.

MODIFICATION CLASS I CLASS II ✓ CLASS III

1. REASON FOR MODIFICATION

Asphalt Patches (Friable) starting at E
End of Segment need to be removed.

2. SUGGESTED ADJUSTMENT TO WORK PLAN

Manually Remove Asphalt Patches.
@ Site #1 on Sketch Map.

3. TIMING ISSUES

ADEC

EXXON

USCG

LAND MANAGER Douglas Gibson

(If field rep is on scene)

GENERAL DATA

SEG ID: E2-8 SBDV: A SITE: 2 TEAM: 1 DATE: 8/1/90
F.W. SITE LGTH 60¹²⁰ OIL CATEGORIES: W 0 M 0 N 340 VL 300 NO 60 U 0
1991 REASSESSMENT: USCG: N ADEC: / LDMGR: / EXXON: / 2162 F.W.

SURFACE DATA

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

CHAR #: 2 OIL CHAR: NO OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU X UI MI LI X

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

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

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

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

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

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

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

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

GENERAL DATA

SEG ID: ETZ-8 SBOV: A SITE: 3 TEAM: 1 DATE: 8/1/90
SITE LGTH 250 OIL CATEGORIES: W 0 M 0 N 340 VL 300 NO 60 U 0
1991 REASSESSMENT: USCG: N ADEC: y LDMGR: y EXXON: ✓

SURFACE DATA

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

CHAR #: 2 OIL CHAR: CV OIL DIST: CONT BRKN PTCH ✓ SPLH X
TIDAL ZONE: SU UI 7/8 MI LI

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

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

CHAR #: 5 OIL CHAR: NO OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU X UI MI LI X

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

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

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

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

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

SEGMENT AS/ ER-8 SUBDIVISION: A SITE: 3 DATE 8/1/90JSCGNAME Michael D. Brown SIGNATURE Michael D. Brown☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:ADECNAME John Hayes SIGNATURE John Hayes☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:

Patches of MS and SOR found here, they have been customblended but should be reassessed for more bio. treatment in 1991. Oil consistency is moderate OR and accumulations are in discontinuous band see sketch map site #3.

LAND MANAGERNAME DOUGLAS GIBSON SIGNATURE Douglas Gibson☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:

DON'T HAVE INFORMATION WHEN BIO SQUAD VISITED/
TREATED THIS SITE. RECOMMEND FURTHER APPLICATION IN 90
IF TIME ALLOWS. TURN OVER ROCKS AND SPRAY TREATMENT.
(EAST END OF SITE 3 ONLY NEEDS TREATMENT)

EXXONNAME Martinez M.D. SIGNATURE Nicholas G. Martinez☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON:

FIELD SHORELINE COMMENT SHEET

SEGMENT AS/ ER-8 SUBDIVISION: A SITE: 4 DATE 8/1/90

SCG

NAME MSTC Michael D. Brown SIGNATURE Michael D. Brown

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

ADEC

NAME John Hayer SIGNATURE John Hayer

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

No treatment recommended at this time. Turtles remaining are sporadic and well weathered.

LAND MANAGER

NAME DOUGLAS GIBSON SIGNATURE Douglas Gibson

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

EXXON

NAME Martinez M.W. SIGNATURE Martinez M.W.

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

GENERAL DATA

SEG ID: ER-Y SBOV: A SITE: 4 TEAM: 1 DATE: 8/1/90
SITE LGTH 130 OIL CATEGORIES: W 0 M 0 N 340 VL 300 NO 60 U 0
1991 REASSESSMENT: USCG: N ADEC: / LDMGR: / EXXON: /

SURFACE DATA

CHAR #: 1 OIL CHAR: PT^{TS} OIL DIST: CONT BRKN PTCH SPLH X
TIDAL ZONE: SU UI X MI X LI

CHAR #: 2 OIL CHAR: NO OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU X UI MI LI X

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

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

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

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

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

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

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

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

ASAP SHORELINE OILING SUMMARY

PAGE 1 OF 2

TEAM NO. ONE EXXON MARTINEZ SEGMENT AS/ ER-8
 OG Reimer USGS BROWN SUBDIVISION A
 ADEC HAYES LAND REP GIBSON TOTAL NO. SITES 4
 DATE 8/1/90 TIME 10:11:55 TIDE LEVEL 6 to 6
 TOTAL EST LENGTH OF SHORELINE SURVEYED: 640 m
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WEATHER: ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 OIL CATEGORY LENGTH: W 0 m M 0 m N 340 m VL 300 m NO 60 m US 0 m
 2162 F.W.

SURFACE OIL

SITE 1

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT			F			F		
S.O.R.								
POOLED								
COVER								
COAT								
STAIN								
MOUSSE								
PATTIES/T.B.				X		X	X	
FILM								
NO OIL					X			X
EST. SITE LENGTH					200			

SITE 2

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT								
S.O.R.								
POOLED								
COVER								
COAT								
STAIN								
MOUSSE								
PATTIES/T.B.								
FILM								
NO OIL					X			X
EST. SITE LENGTH					60-120			

SITE 3

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT								
S.O.R.				I		I		
POOLED								
COVER			✓	1/4		✓	1/4	
COAT			X			X		
STAIN								
MOUSSE				I		I		
PATTIES/T.B.								
FILM								
NO OIL					X			X
EST. SITE LENGTH					250			

SUBSURFACE OIL

SITE NO.	PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER				OILED INTERVAL (CM-CH)	CLEAN BELOW (Y/N)	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS
			OP	OR	OF	NO			SU	UI	MI	LI	
1	1	20				X	.		X				P-GP
							.						
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Photographs:

Roll No. ASAP-01-01

Frames R, 19, 20, 21

COMMENTS Site # 1 was previously worked with the removal of Tarmat according to Exxon Rep. The existing tarmat is in and around the trenches on the beach where material was removed. This is a bit of a mystery. Reviewed F.W.

SURFACE OIL (CONTINUED)

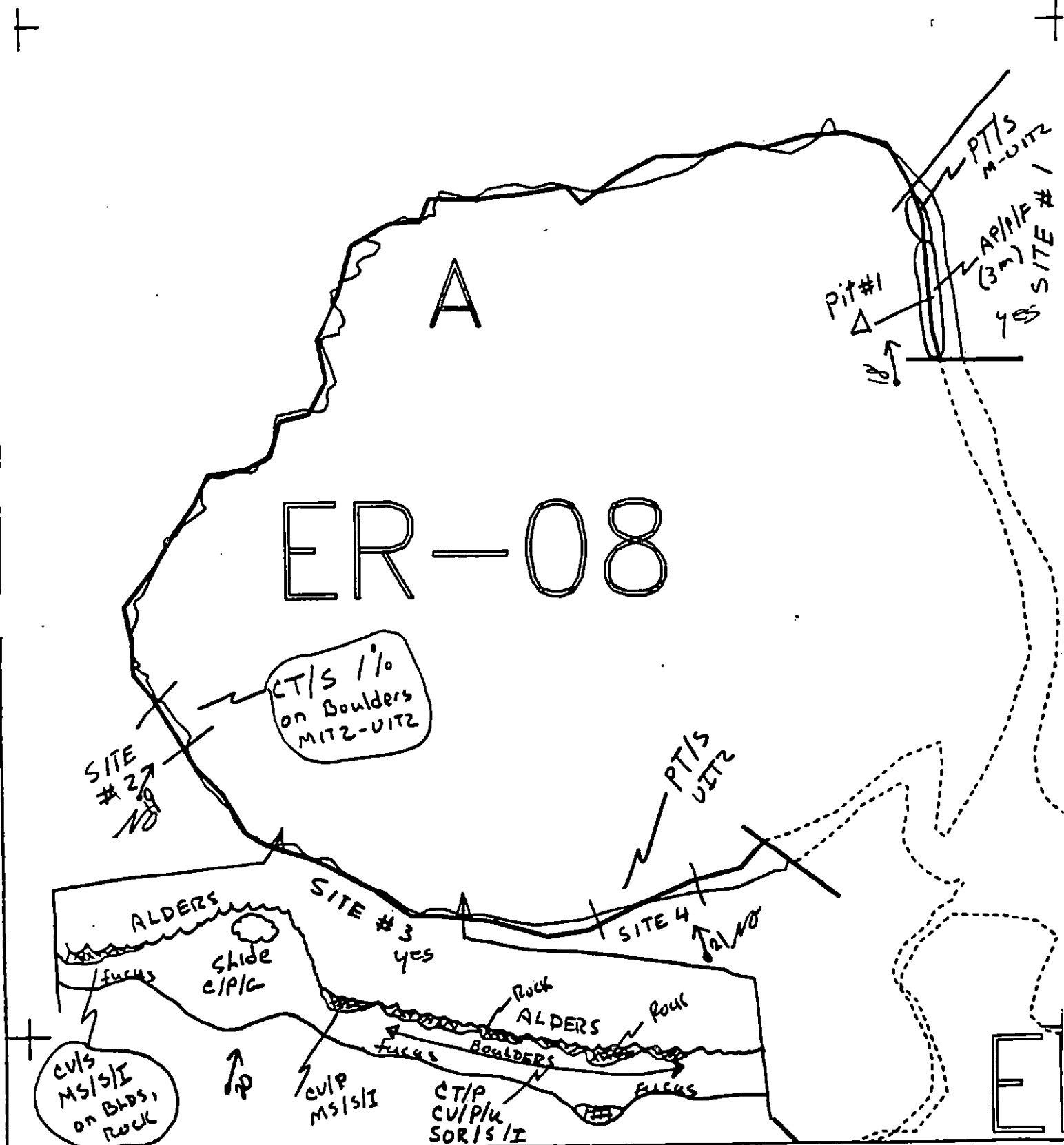
SITE									
CHARACTER	DISTRIBUTION				OILED ZONES				
	/C	/B	/P	/S	SU	UI	M	L	
ASPHALT									
S.O.R.									
POOLED									
COVER									
COAT									
STAIN									
MOUSSE									
PATTIES/T.B.				X	X	X			
FILM									
NO OIL					X			X	
EST. SITE LENGTH					/ 30				

SITE									
DISTRIBUTION				OILED ZONES					
/C	/B	/P	/S	SU	UI	M	L		

SUBSURFACE OIL (CONTINUED)

SITE NO.	PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER				OILED INTERVAL	CLEAN BELOW (Y/N)	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS
			OP	OR	OF	NO			SU	UI	M	LI	
							.						
							.						
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COMMENTS



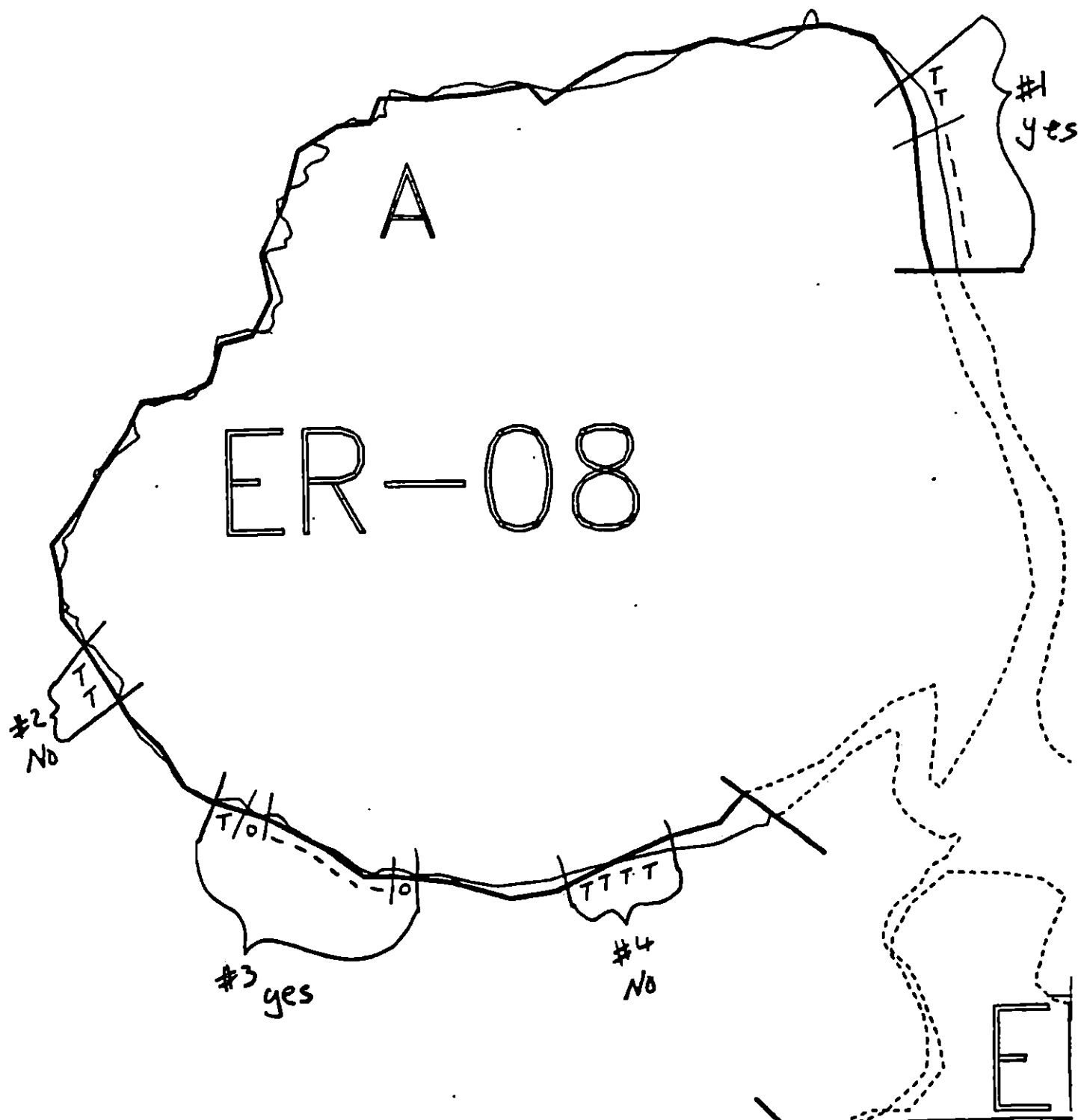
XXXX Wide
 //// Medium
 ---- Narrow
 TTTT Very Light
 0000 No Oil

ER-8 A
 ADEC Subsegment Length: 2862m
 METERS

0 185 370
 AK State Plane Zone 4 1:7282
 98-8a



Subdivision Field Map
 Map Key: PWSE-8A
 Name: Reimer
 Date: 8/1/90
 Date Entered:



ER-8 A

ADEC Subsegment Length: 2862m
METERS

0 100 370

AK State Plane Zone 4 1:7202



Subdivision Field Map

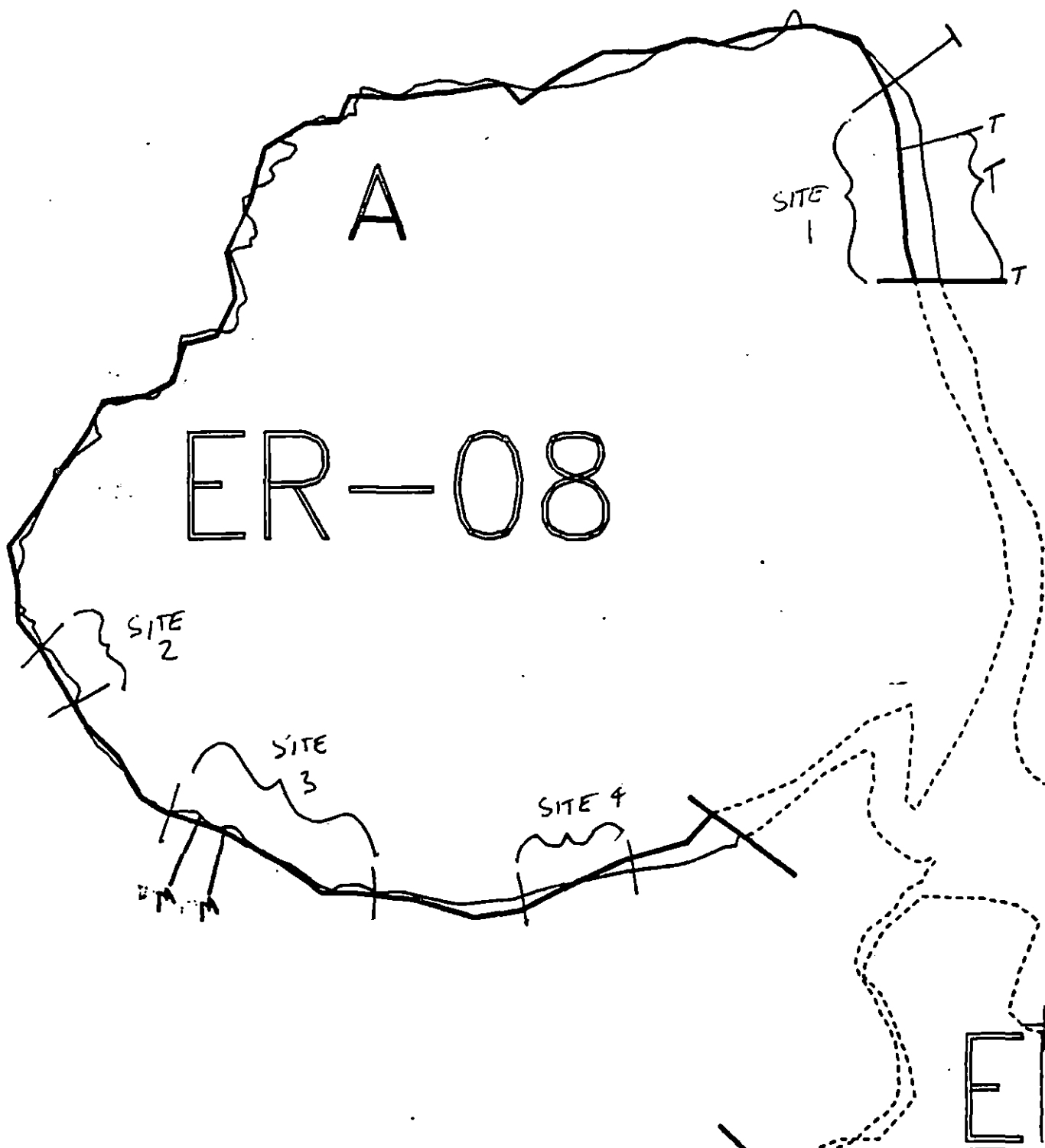
Map Key: PMSER-8A

Name: Reimer

Date: 8/1/90

Date Entered:

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



XXXX
 ////

 TTTT
 0000

Wide
 Medium
 Narrow
 Very Light
 No Oil

ER-8 A
 ADEC Subsegment Length: 2882m
 METERS
 0 188 376
 AK State Plane Zone 4 1:7282
 ver-8a



Subdivision Field Map
 Map Key: PWSE-BA
 Name: Reimer
 Date: 8/1/90
 Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ ER-09 SUBDIVISION A (1 OF 1) DATE 4/3/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1F Sawmill Bay Hatchery release (4/15 to 6/1)
6V Recreation: Anchorages (6/1 to 9/15)
6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Shack 3/1/0mer DATE: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 399 m: V.Light 677 m: No Oil 71 m
Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

RECOMMENDATIONS:

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

COMMENTS: Recommend manual removal of tarballs, mousse, oiled vegetation and debris from locations shown on sketch map. Work should be conducted after 6/1. Avoid disturbance to "set-aside" study site (Exxon AP-16) in adjacent segment (ER-07).

BIOREMEDIATION FOR THE AREA INDICATED ON SKETCH

TAG COMMENTS: _____

TAG APPROVAL DATE: 4/12/90
ADEC ART WEINER
EXXON ANDY TALL
NOAA Burt Wescott
USCG KENNETH KEANE

FOSC: [Signature] DATE: 4-25-90

FIELD SHORELINE COMMENT SHEET

3431

SEGMENT ST/ ER-9 SUBDIVISION: _____ DATE 03 APRIL 90**USCG**NAME LARRY FLETCHER SIGNATURE Larry R Fletcher☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

1. MANUALLY REMOVE TAR PATTIES.
2. BIO-REMEDIATE.

ADECNAME DAVID M. SALE SIGNATURE David M Sale☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

- ① MANUAL REMOVAL OF TAR PATTIES
- ② INCLUDE ROCK WASHING IN AREA OF CERCLA SITE TO REMOVE TARRY PATCHES ON ROCKS

RECOMMEND CLEANING AT TIDE LEVELS BELOW 4' TO REMOVE TAR PATTIES FROM TOMBOLO

LAND MANAGERNAME Leigh Carlson SIGNATURE Leigh Carlson ADNR☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

Listed as priority 1 by PWSCA. Listed in PWS area plan as public use area for anchorage, recreation and subsistence uses. A-frame shelter located among spruce trees on the Tombo. Recommend manual removal of mousse and asphalt patties. Possible washing of tarry mousse cover near CERCLA site. Follow-up with bioremediation.

US Rich Party

SEGMENT 8/ ER-9

SUBDIVISION 1

DATE 03 April 00

REPORT

1000

100

11

10

**Estimate of
Estimated
Estimated**

11

11

11

1

LEGEND

Δ

25 - 26 September

2

Index

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2-8044

22

►

11

CT/C

Conclusion

CTM

100

7.

CTM

Study Design

37

「**に**」

1

References

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1

THE FUTURE

Discussion

4

SHORELINE ECOLOGICAL SUMMARY

REVISION: 00-00-00

Segment ST/10/EA 9 Subdivision A Date (mo/day/yr) 4/3/90
 Time (24 hr) 1800 - 1900 Biologist Lemon Rain 4/31

- (A) Substrate type and % of segments:
 (1) Bedrock 20 (2) Boulder 0 (3) Cobble 10 (4) Pebble 15 (5) Sand 55 (6) SM 0
- (B) Overall % cover of biota (% of segment): Dense 0 Moderate 0 Low 15%
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (3)

Photographs: Roll No. ST/10/7
 Frames 9-13

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

ASTROPODS

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

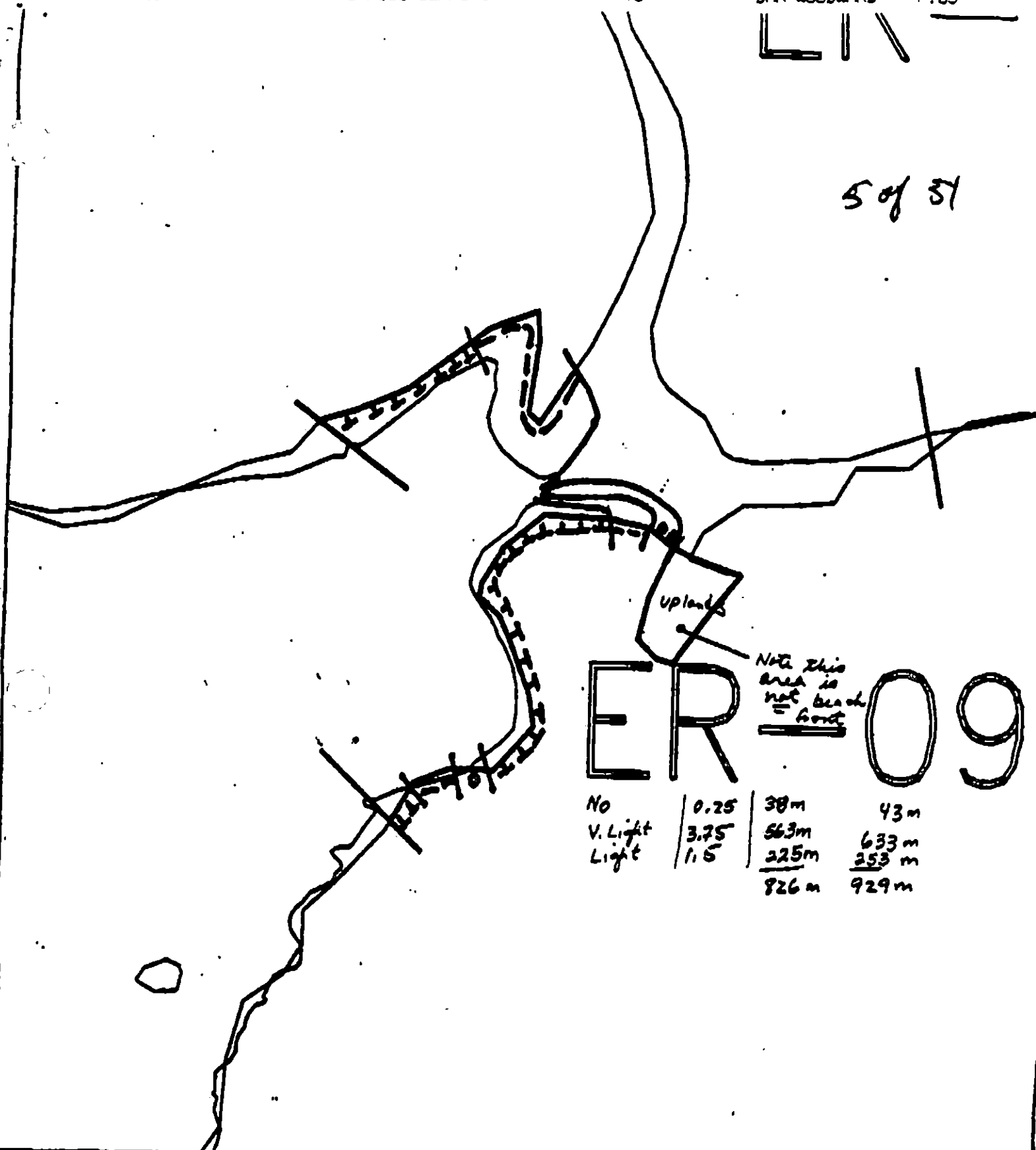
Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments: one bird skeleton observed. Low zone not visible except from skiff; Laminaria seen in front of bedrock areas. Apparent, be raised clam beds here similar to EA 10; Pododemus capra shells not uncommon also. Trash has been burned on this beach leaving pavements of melted plastic. Oil is at 10' level.

Ecological Considerations: Stream between EA 9 and EA 8 was extended; one insect larva found; no fish fry. Deer harvest, hatchery release, anchorage. There may be clam beds of recreational value at tide levels lower than available for this survey.

5 of 31



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-9

ABEC Segment Length: 1484m



Map Key: PWS-175

Name: R. MartyDate: 03 April 1990

Date Entered:

WORK PLAN ADDENDUM

Segment ER-09

Subdivision A.

Dated 6/20/90

MODIFICATION

1. REASON FOR MODIFICATION

REQUEST FOR BIO EXTENSION WITHIN THE SUBDIVISION

2. ADJUSTMENT TO WORK PLAN

- ADD BIOREMEDIATION AS INDICATED ON THE SKETCH

SHPO APPROVAL NEEDED YES X
NO

SHPO SIGNATURE Chak Z/Dme 6/22/90

Inspection Constraint Applies

Refer: Archaeological Constraint on original work plan.

TAG APPROVAL DATE 6/20/90

ADEC Ran Williams R. Williams

EXXON Amy Tam Paul

NOAA Joseph Gilbert J. Tam

USCG G.A. REITER G.A. Reiter

FOSC W L DATE 7-10-90

Prior to working subdivision, check with US F+WL to ensure their people are out of the area.
↓
camps included

ASAP

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT ER-09 SUBDIVISION A ^{Site 1+2} DATED 8/2/90

MODIFICATION CLASS I CLASS II ✓ CLASS III

1. REASON FOR MODIFICATION

Asphalt, Residual oil and tarballs on segment.

Site #1 SOR/H/B PT/S TB/S

Site #2 AP/P/B See sketch map for locations

2. SUGGESTED ADJUSTMENT TO WORK PLAN

Manually remove AP SOR/H and PT/TB also recommend reapplication of Bio on Site 1 work areas identified on sketch map.

3. TIMING ISSUES

REQUEST EXXON ARCHAEOLOGIST TO BE PRESENT DURING MANUAL REMOVAL OF FRIABLE ASPHALT. HISTORIC DOMESTIC ARTIFACTS OBSERVED IN TIDAL ZONE (GIBSON, USFS).

ADEC *[Signature]*

EXXON *[Signature]*

→ USCG *[Signature]*

LAND MANAGER *[Signature]*

(If field rep is on scene)

→ NOTE THAT 947 PUTT UP TO EACH OTHER, THIS END OF 9 is all that needs-worked on 9.

SEGMENT AS/ ER-9 SUBDIVISION: A SITE: 1 DATE 8/1/90**ISCG**NAME MSTC Michael D. BrownSIGNATURE *Michael D. Brown*☐ YES☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

ADECNAME John HayesSIGNATURE *John Hayes*☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Oil remaining on site 1 consists of heavy SOR at some subsurface to 10cm. In addition there is a stream on this site that should be reevaluated as there was oil remaining in the form of SOR on the northern bank. See sketch map for SOR + TB locations.

LAND MANAGERNAME DOUGLAS GIBSONSIGNATURE *Douglas Gibson*☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

EXXONNAME McIntyreSIGNATURE *Robert G. McIntyre*☐ YES☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

GENERAL DATA

SEG ID: ER-9 SBOV: A SITE: 1 TEAM: 1 DATE: 8/1/90
SITE LGTH 800 OIL CATEGORIES: W 0 M 0 N 20 VL 350 NO 530 U 202 F.W.
1991 REASSESSMENT: USCG: N ADEC: y LDMGR: y EXXON: N

SURFACE DATA

CHAR #: 1 OIL CHAR: SOR OIL DIST: CONT BRKN H PTCH X SPLH I
TIDAL ZONE: SU UI 4/4 MI LI

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

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

CHAR #: 4 OIL CHAR: T.B. OIL DIST: CONT BRKN PTCH SPLH X
TIDAL ZONE: SU UI X MI X LI

CHAR #: 5 OIL CHAR: ^{FL}~~FL~~ OIL DIST: CONT BRKN PTCH SPLH X
TIDAL ZONE: SU UI X MI LI

CHAR #: 6 OIL CHAR: NO OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU X UI MI LI X

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

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

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

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

ASAP DATA ENTRY FORM

SUBSURFACE DATA

PAGE 2 OF 2SEGMENT ID: ER-9 SUBDIV: A SITE: 1PIT # 1 PIT DEPTH 10^{ft} OIL CHARACTER OR OIL INTVAL: FROM 0 TO 10
CLEAN BELOW: N PIT ZONE: SU UI X MI LI SUBSURF SEDIMENT: BRK BLD X COB X PEB X GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
CLEAN BELOW: PIT ZONE: SU UI MI LI SUBSURF SEDIMENT: BRK BLD COB PEB GRN SAN MUD VEG

SEGMENT AS / ER-9 SUBDIVISION: A SITE: 2 DATE 8/1/90**USCG**NAME MSFC Michael D. Brown SIGNATURE Michael D. Brown☐ YES☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

ADECNAME John Hayes SIGNATURE John Hayes☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Oiling consists of AP/P in 5 areas along this sub-section.
 Recommend manual PU in 1990. See sketch for location.

LAND MANAGERNAME DOUGLAS GIBSON SIGNATURE Douglas Gibson☐ YES☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

REQUEST EXXON ARCHAEOLOGIST TO BE PRESENT DURING
 MANUAL REMOVAL OF FRIABLE ASPHALT. HISTORIC DOMESTIC
 ARTIFACTS OBSERVED IN TIDAL ZONE (GIBSON, USFS)

EXXONNAME Martinez NLS SIGNATURE Nicholas G. Martinez☐ YES☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

GENERAL DATA

SEG ID: FR-9 SBDV: A SITE: 2 TEAM: 1 DATE: 8/1/90
SITE LGTH 450 OIL CATEGORIES: W 0 M 0 N 70 VL 350 NO 530 U 202 rw
1991 REASSESSMENT: USCG: N ADEC: y LDMGR: y EXXON: N

SURFACE DATA

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

CHAR #: 2 OIL CHAR: T.B. OIL DIST: CONT BRKN PTCH X SPLH ✓
TIDAL ZONE: SU UI ✓ MI X LI

CHAR #: 3 OIL CHAR: NO OIL DIST: CONT BRKN PTCH SPLH
TIDAL ZONE: SU X UI MI LI X

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

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

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

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

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

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

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

PAGE 1 OF

SURFACE OIL

SITE 1

SITE 2

SITE 3

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT								
S.O.R.		H	X	I		H I		
POOLED								
COVER			X			X		
COAT				X		X		
STAIN								
MOUSSE								
PATTIES/T.B.				X		X	X	
FILM				X		X		
NO OIL					X			X
EST. SITE LENGTH								500

DISTRIBUTION				OILED ZONES			
/C	/B	/P	/S	SU	UI	MI	LI
	P				P		
		X	✓		Y	X	
				X			X

450

[illegible]

SUBSURFACE OIL

[illegible]

Photographs:

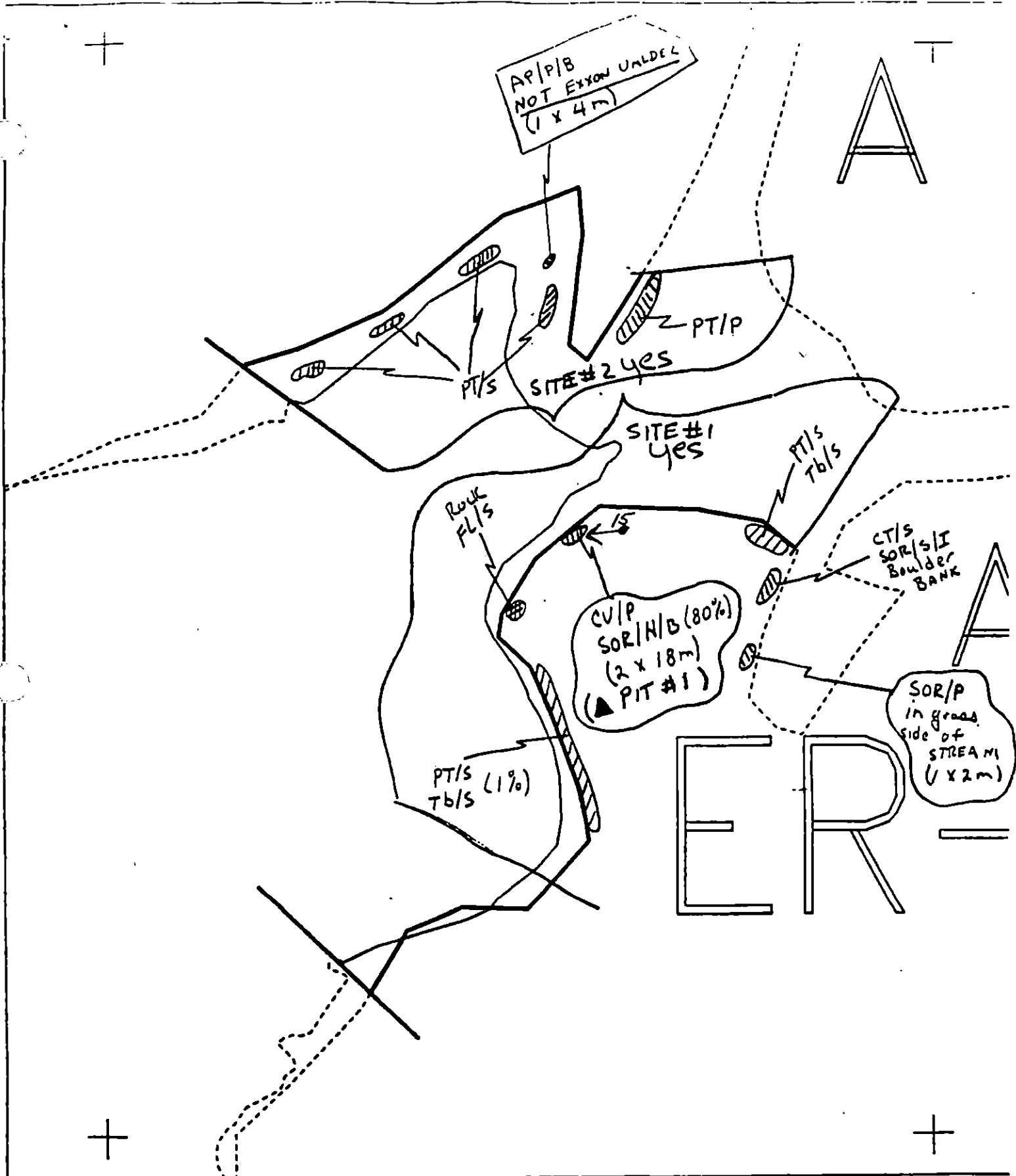
Roll No.

Frames

COMMENTS The only significant oiling on this segment is a small 2 x 18 m area on a Rock/Boulder Terrace with Heavy SUR remaining after it appears some manual work was done. The remaining oil is in the form of separate Tachella and Antlion.

Reviewed F.10.
REVISION NO. 7/2

REVISION NO. 7/27/88



XXX
///

TTT
0000

Wide
Medium
Narrow
Very Light
No Oil

ER-9 A

ADEC Subsegment Length: 1152m

METERS

0 100 102

AK State Plane Zone 4 1:3771
per-90



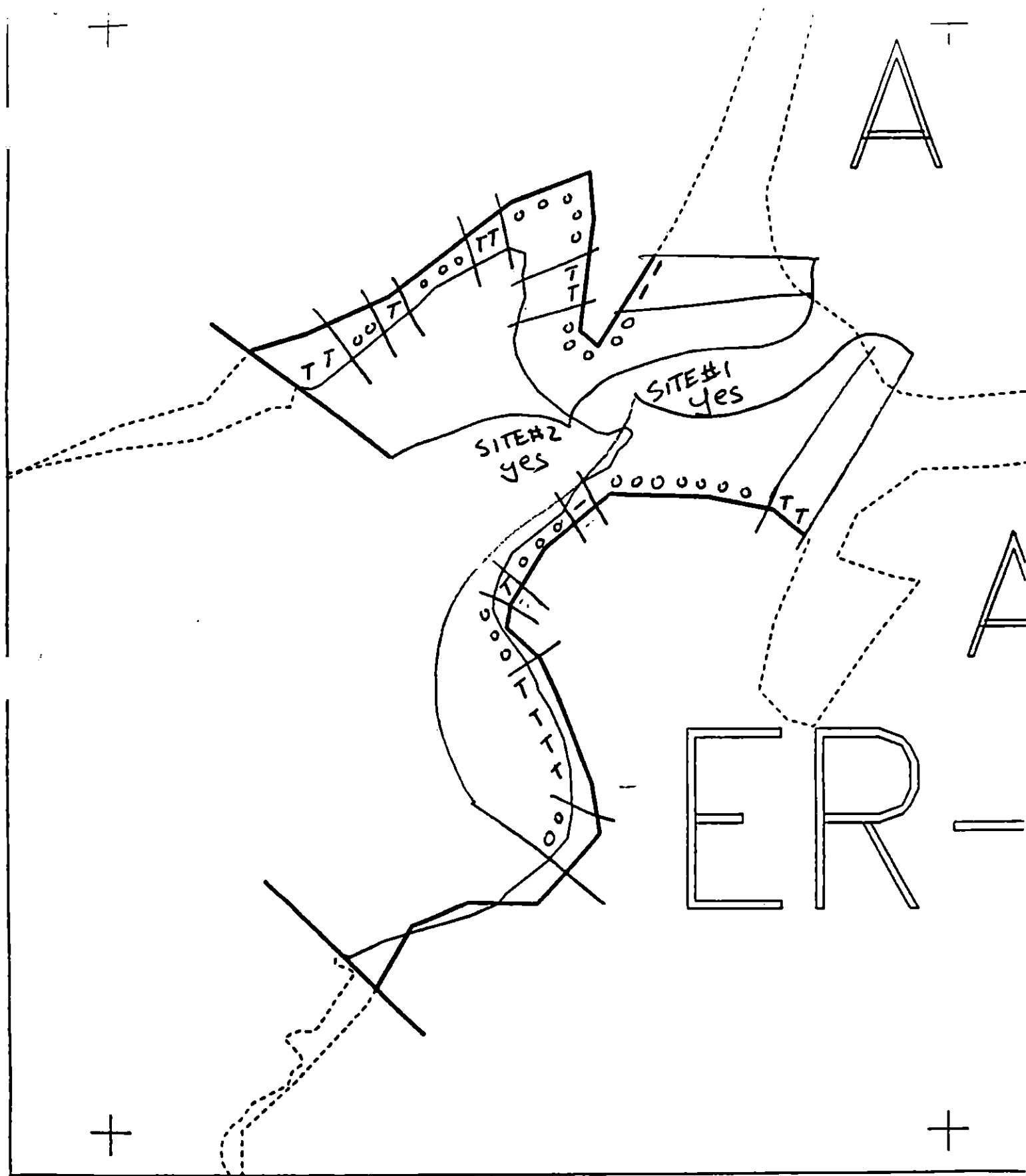
Subdivision Field Map

Map Key: PWSE-9A

Name: Reimer

Date: 8/1/90

Data Entered:



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

ER-9 A

ADEC Subsegment Length: 1152m

METERS

0 50 100

AK State Plane Zone 4 1:3771
per-9a



Subdivision Field Map

Map Key: PWSE-9A

Name: Reimer

Date: 8/1/90

Date Entered:



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

ER-9 A
 ADEC Subsegment Length: 1152m
 METERS
 0 100 102
 AK State Plane Zone 4 1:3771
 per-9a



Subdivision Field Map
 Map Key: PWSE-9A
 Name: Reimer
 Date: 8/1/90
 Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ ER-10 SUBDIVISION A (1 OF 1) DATE 4/3/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Sawmill Bay Hatchery release (1F) - 4/15 to 6/1. Contact ADF&G for
dates and locations. Deer harvesting (7II) - 8/15 to 2/28; Tent
sites (6U) - 6/1 to 9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-
oiled biota and substrate.

SHPO SIGNATURE: Charles E. Adams DATE: April 12, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 226 m: V.Light 928 m: No Oil 1104 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>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> </u> Other (see comments)

COMMENTS: Manually remove tarballs and tarmat. Bioremediate as
indicated on sketch map. Work after 6/1.

TAG COMMENTS:

TAG APPROVAL DATE: 4/12/90.
ADEC JOHN BAUER
EXXON ANDY TSK
NOAA Burl Wescott
USCG M. J. HALL

FOSC: DATE: 4-19-90

FIELD SHORELINE COMMENT SHEET

8 of 31

SEGMENT ST/ ER-10 SUBDIVISION: _____ DATE 03 APRIL 90USCGNAME LARRY FLETCHERSIGNATURE Larry Fletcher☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

1. MANUALLY REMOVE ASPHALT AND TAR BALLS.
2. BIO-REMEDIATE.

ADECNAME DAVID M. SAESIGNATURE David M. Sae☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED
(LIMITED)

- ① REMOVE TAR PATCHES AND ASPHALT
- ② BIOREMEDIATE AREAS OF HEAVY COVER

THE HI-ANGLE FACES ON THIS SECTION HAVE A RICH DIVERSITY OF ALGAE AND OTHER INTENTIONAL LIFE. THE OILING APPARENT HERE DOES NOT WARRANT MAJOR DISTURBANCE OF THE COMMUNITY EQUILIBRIUM.

LAND MANAGERNAME Leigh CarlsonSIGNATURE Leigh Carlson

ADNR

☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

Listed as priority 1 by PWSA. Listed in PWS area plan as public use area for anchorage, recreation and subsistence uses. Most of the oil on the segment is splatters which blend in fairly well with the coloring of the rocks and the rich biota growing on them. Most of the tidelands in the segment consist of large angular boulders that are difficult to walk on. Recommend manual removal of asphalt pavement and tar balls followed by bioremediation.

SHORELINE OILING SUMMARY

2 of 3
REVISION NO. 00-2000

OG B. M. H. H. USCG LARRY FLETCHER SEGMENT ST/ ER-10
 PIO B. L. H. H. LAND REP L. H. H. H. SUBDIVISION A (1 OF 1)
 XXON J. G. H. H. ADEC D. H. H. H. TIME 13:30 to 17:30
 TEAM NO.: 10 TIDE LEVEL: +0.85 to +1.0 m DATE 04/03/90
 EST. SUBDIVISION LENGTH: 2434 m ☐ Sun ☒ Clouds ☒ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 5 % B 65 % C 20 % P 10 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 10 % Hang 50 % Vert 40 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 264 m VL 977 m NO 1194 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	R	B	P	A	1	2	3	4	SU	U	M	U
ASPHALT PAVEMENT			X					X				X
POOLED												
COVER												
COAT			X					X		X		
STAIN			X					X		X		
MOUSSE												
PATTIES												
TARBALLS				X				X		X		
FILM												
NO OIL												

PAVEMENT: H F (8) 2 x 105 x 30% 63 sq. m by 3 cm

PATTIES / TARBALLS 1 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT			DEBRIS COLLECTED ☐ YES ☒ NO
	SM	MD	LG	
Logs	<u>2</u>			TYPE <u> </u> #BAGS <u> </u>
Vegetation	<u>0</u>			
Trash				
Debris				

Photographs:

Roll No. ST/10/6 and ST/10/7
 Frames 30-37 and 1-8

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW	OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		ST. OF	FE. OF	LT. OF	CH. OF	NO			1	2	3	4	5	SU	U	M	U		
1	12	X					0-3	X				X		X				N	G, C
2	5	X					0-1.5	X				X				X		N	S, G

COMMENTS * OILED INTERVAL < 5 cm IN PIT NOS. 1 AND 2
 DO NOT CONSTITUTE SUBSURFACE OIL

Revision

RM 4/3/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 000000

Segment ST/10/ER10 Subdivision A Date (mo/day/yr) 4/3/90
1340-1620
 Time (24 hr) _____ Biologist Lemon Rain _____

9 of 31

- (A) Substrate type and % of segments:
 (1) Bedrock 5 (2) Boulder 65 (3) Cobble 20 (4) Pebble 10 (5) Sand _____ (6) Silt _____
- (B) Overall % cover of biota (% of segment): Dense 70% Moderate _____ Low _____
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (3)

Photographs:
 Roll No. ST/10/6 and 7
 Frames 30-37 and 1-8

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: From skiff Alaria could be seen as a moderate low zone cover. Saw shore had many shells of Protothaca, Saxidomus, Tresus (BIVALVE) some appearing to have died beached in a zone higher than normal for the species. Littorina laying eggs, pictures. Harbor seal or otter (3) family sighted by skiff driver.

Ecological Considerations: Laminaria spp. subtidally.
 → Tent sites, deer harvest, hatchery release. Also note that many shells of the bivalves Protothaca, Saxidomus, and Tresus are present on the beach. There may be recreational or commercial value in these bivalves. Four streams were checked for anadromous fish, none found, nor any food for them; snow blocked access in many cases.

SKETCH MAP

OG R. Marfy

SEGMENT ST/ EE-10

SUBDIVISION A

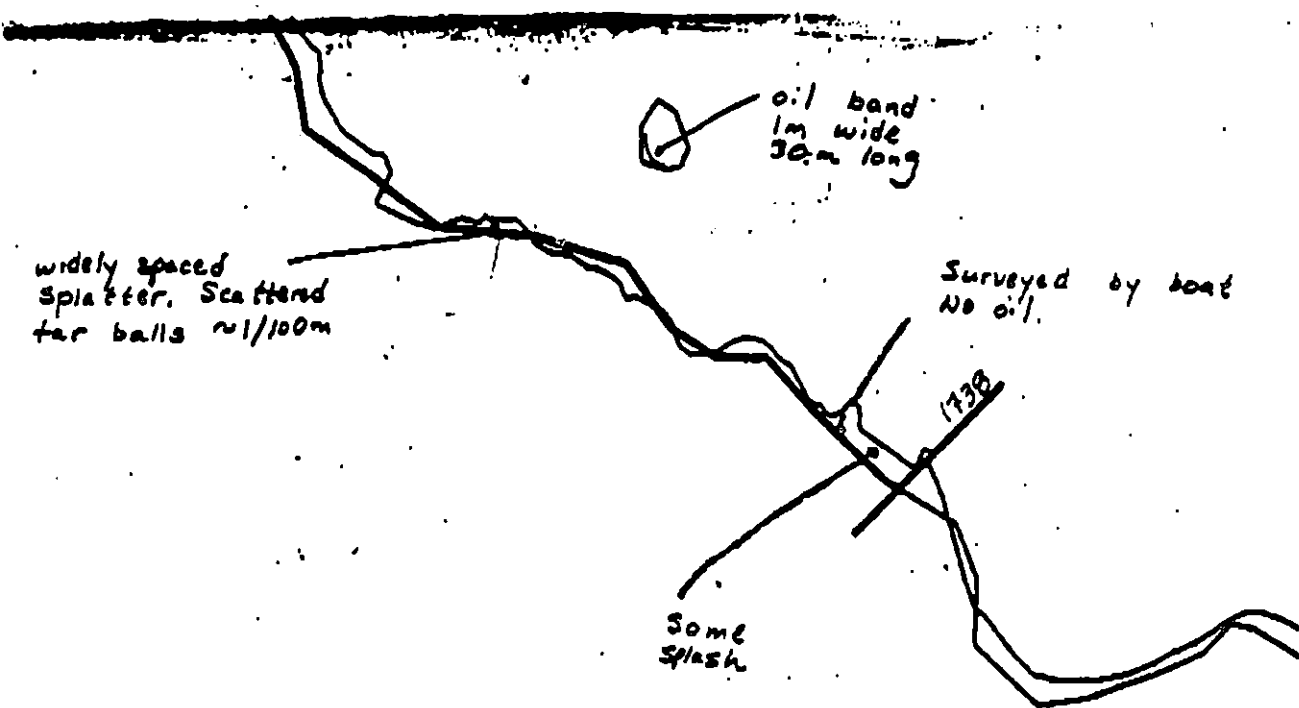
DATE April 3 / 80

CHECKLIST

- ☐ M. Area
- ☐ Approx. Scale
- ☐ Sample Grid
- ☐ CR Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ E. H. M. A. M.
- ☐ SCL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PM Location(s)
- ☐ Photo Location(s)

LEGEND

- 1 Δ
- 2 Δ
- PM - Substrate CR
- CT/C
- CR/B
- Broken Outlines
- CT/P
- PM - Distances
- CT/S
- Special Outlines
- Dead Vegetation
- 1 $\rightarrow$
- Photo location, direction, and number



2/2



12 of 31

Tracer Length (m): AP PO CV CT ST MS PT TB FL NO

PHOTOGRAPH

SEGMENT ST/ER-10

SUBMISSION A

DATE April 3/90

CHECKLIST

- ☐ M. Area
- ☐ Aquatic, Scuba
- ☐ Seafloor Study
- ☐ Oil Data
- ☐ Beach
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Eel, Fish, AWL
- ☐ Soil
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Profile Location(s)
- ☐ Profile Location(s)

LEGEND

1 A

Profile Subsurface Oil

2 A

Profile Subsurface Oil

CT/C

Composite Distribution

CT/B

Broken Distribution

CT/P

Profile Distribution

CT/S

Profile Distribution

CT/S

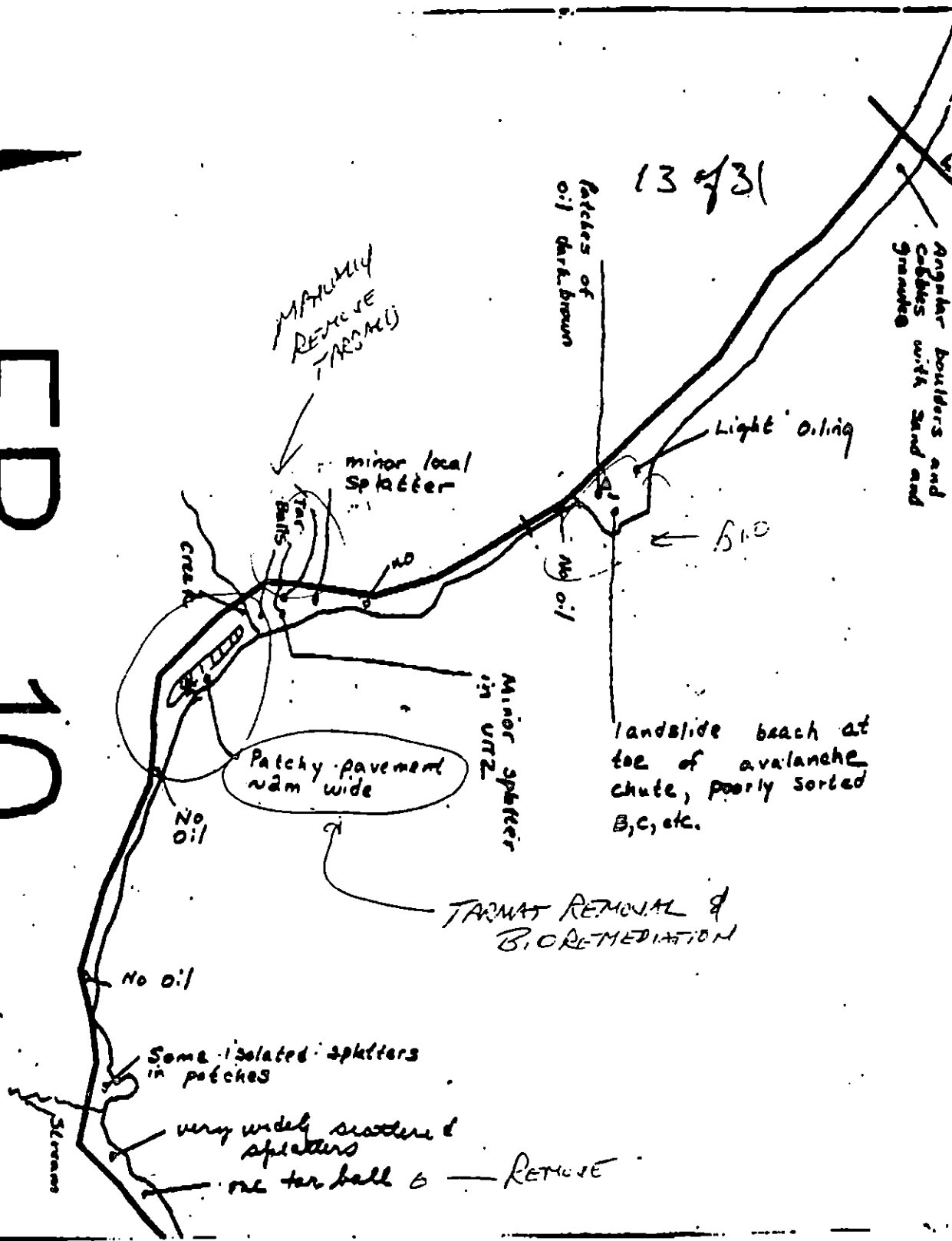
Oil Distribution

1



ER-10

Oil Character Length (m): AP 105 PO CV CT 159 ST 105 MS PT TB 97 FL NO 119



1/2

No	7.7	1,155	1194
V. Light	6.3	945	972m
Narrow	1.7	255	264m
		<u>2555m</u>	<u>2434m</u>

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ER-10

PWS
1468 →

XXX Wide

/// Medium

--- Narrow

TTTT Very Light

OOOO No Nil

ER-10

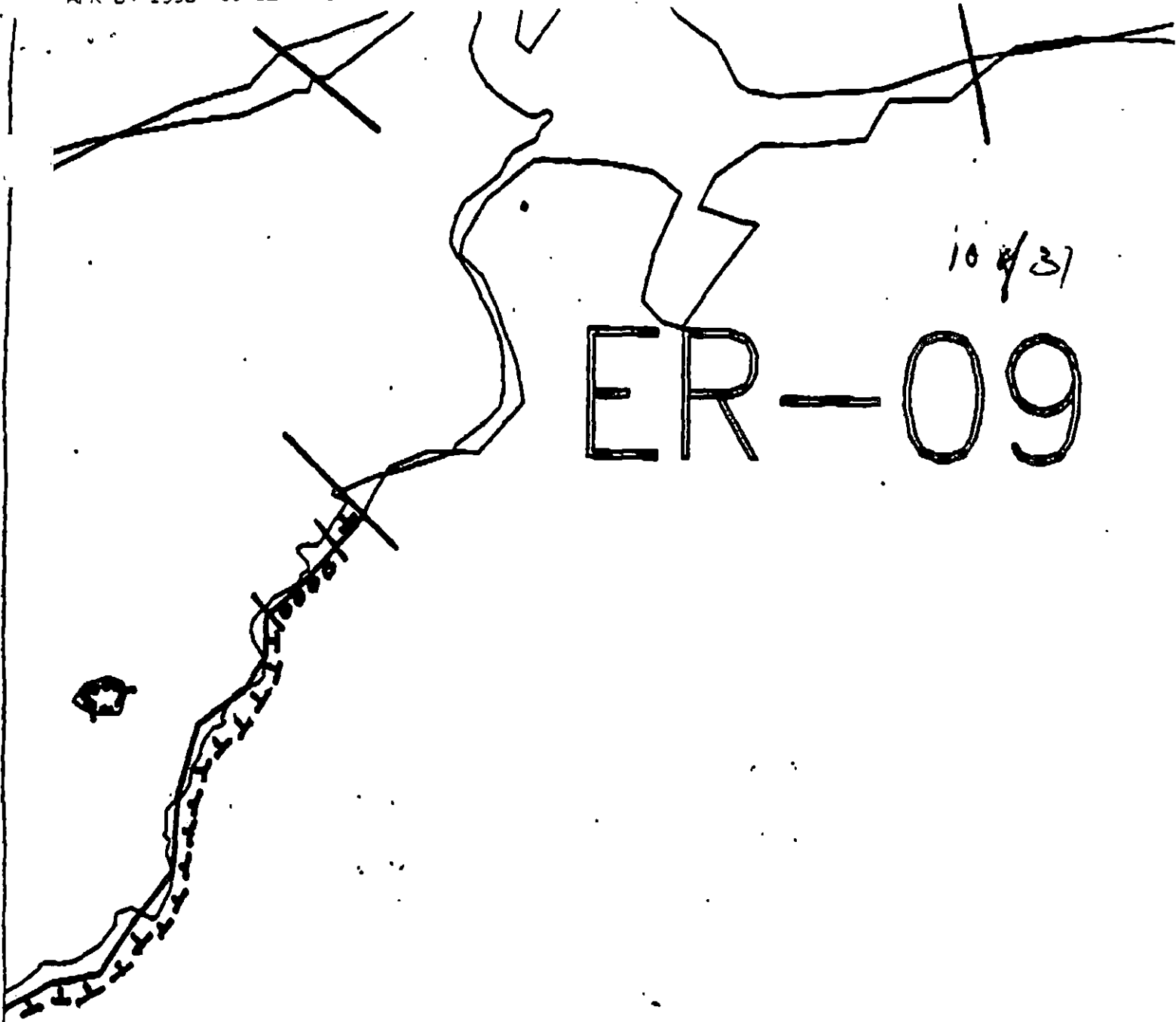
ADEC Segment Length: 2259m

Map Key: PWS-1468

Name: MARTYDate: 4-3-90

10/31

ER-09



← PWS
146A

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-10

ADEC Segment Length: 2250m



Map Key: PWS-146b

Name: _____

Date: _____

Date Entered: _____

SHORELINE EVALUATION

SEGMENT ST/ ER-11 SUBDIVISION A (1 OF 1) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Sawmill Bay Hatchery release (1F) - 4/15 to 6/1; Contact ADF&G for dates and locations. Deer harvesting (7II) - 8/15 to 2/28; Anchorages (6V) - 6/1 to 9/15. Special use designation (6Y) - 6/1 to 9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-oiled biota and substrate.

OILING CATEGORIZATION:

Wide 0 m: Medium 1093m: Narrow 157 m: V.Light 0 m: No Oil 0 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>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> </u> Other (see comments)

COMMENTS: Manual removal of asphalt tarmat and oiled debris. Bio-remediation as indicated on sketch map. Work after 6/1 based on hatchery constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/13/90

ADEC JOHN BAWER

EXXON ANDY TEAL

NOAA Bud Wescott

USCG G.A. REITER

FOSC:

DATE: 4-20-90

FIELD SHORELINE COMMENT SHEET

16 of 3

SEGMENT ST / ER-11 SUBDIVISION: _____ DATE 03 APRIL 90USCGNAME LARRY FLETCHER SIGNATURE Larry R Fletcher☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

1. MANUALLY REMOVE ASPHALT AND TAR PATTIES.
2. BIO-REMEDIATE.

ADECNAME DAVID M. SAE SIGNATURE David M Sae☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

- ① MANUAL REMOVAL OF ASPHALT AND TAR BALLS / PATTIES
 - WILL REQUIRE SCRAPING OFF SOME SEDIMENTS
 - USE OF BORCAT W/ OVERSIZED TIRES MAY BE APPLICABLE ON TH. SEGMENT. [NOTE: SOME ASPHALT MAY BE UNDER SPRING BERM]
- ② CLEAN BOULDERS OF COVER
 - RAIN CAUSING SHEEN ON ROCKS SHOWS SOME OIL MOBILITY
 - MOBILE OIL MUST BE REMOVED
- ③ BIOREMEDIATE

LAND MANAGERNAME Leigh Carlson SIGNATURE Leigh Carlson ADNR☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Listed as priority 1, 3 by PWSCA. Listed in PWS area plan as public use area for anchorage, recreation and subsistence uses. The segment has nice sandy beaches and flat areas for tent camping, especially around the lagoon at pits 2, 3 and 4. Recommend manual removal of asphalt pavement and debris followed by bioremediation, especially in the areas around the boulders.

SHORELINE OILING SUMMARY

REVISION NO. 000000

OG R. M. M. C. USCG LARRY FLETCHER SEGMENT ST/ ER-11 744
 BIO B. L. M. C. LAND REP Long Canyon SUBDIVISION A (1 OF 1)
 EXXON J. C. M. C. ADEC Dave Sals TIME 11:30 to 13:30
 TEAM NO.: 10 TIDE LEVEL: +2m to +0.8m DATE 04/03/90
 EST. SUBDIVISION LENGTH: 1207 m ☐ Sun ☒ Clouds ☒ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 5 % B 5 % C 45 % P 25 % G 10 % S 15 % M 5 % V
 SLOPE: Long 100 % Hang 5 % Vert 5 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 1140 m M 147 m N 147 m VL NO m NO NO m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	R	B	C	P	W	M	N	VL	SW	U	M	U
ASPHALT PAVEMENT		X		V	0				XV	XV	XV	XV
POOLED												
COVER		X		V					XV	XV	XV	XV
COAT												
STAIN												
MOUSSE												
PATTIES												
TARBALLS												
FILM												
NO OIL												

PAVEMENT: H F (S) 4275 sq. m by 4 c
 Average 15m wide x 114c x 25%

PATTIES / TARBALLS — BAGS

NEAR SHORE SHEEN? NO BR RW (SL) TL
 Note: Sheen quite local & very light

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

DEBRIS COLLECTED ☐ YES ☒ NO

TYPE —

#BAGS —

Photographs:

Roll No. ST/10/6

Frames 21-29

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER						OILED INTERVAL (cm - cm) (0.5-0.5)	BELOW	OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		Wt. of CP	Wt. of CR	Wt. of CL	Wt. of CP	NO	UP			15	20	25	30	35	SW	U	M	U			
* 1	15		X				0.2	X					X			X		N	S		
* 2	12	X					0.3	X					X			X		N	S		
3	60					X	NA								X			N	S		
* 4	15	X					0.3	X							X			N	PMS		
* 5	35	X					0.2	X					X		X			Y	PMS		
* 6	19	X					0.5	X					X			X		N	S		

7 56 X

COMMENTS

Widely distributed soft asphalt patches.

* OILED INTERVAL ^{<5cm} IN PIT NOS. 1, 2, 4, 5 AND 6
 DO NOT CONSTITUTE SUBSURFACE OIL

Revision N S

RM 4/3/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/23/90

Segment ST/10/ER11 Subdivision A Date (mo/day/yr) 4/3/90
 Time (24 hr) 1100 - 1330 Biologist Lemon Rain 15 of 81

- (A) Substrate type and % of segments:
 (1) Bedrock (2) Boulder 5 (3) Cobble 45 (4) Pebble 25 (5) Sand 25 (6) SR
- (B) Overall % cover of biota (% of segment): Dense Moderate Low 20%
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (3)

Photographs: ST/10/6
 Roll No.
 Frames 21-29

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: One sighting each for otter, sealion, seal, eagle, deer. 15 gulls. Dead otter *Enhydra lutra* in lagoon; no evidence of oil. The drift line at the snow line had 35% amphipod coverage and an oligochaete (annelida).

Ecological Considerations: deer harvest, hatchery release.

SEGMENT ST/EC-II

SUBDIVISION A

DATE 03 / April 90

CHECKLIST

- ☐ N Area
- ☐ Approx. State
- ☐ Sample Study
- ☐ Oil Dtl
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Ext. 100% LIT
- ☐ SST
- ☐ Pebble Location(s)
- ☐ Pebble(s)
- ☐ P/L Location(s)
- ☐ P/L Location(s)

LEGEND

- 1 A
- 2 A
- Pt. - Substrate Or
- CT/C
- Continuous Distribution
- CT/B
- Broken Distribution
- CT/P
- Pebble Distribution
- CT/S
- Optimal Distribution
- Dead Vegetation
- 1
- Phys. location, direction, and number

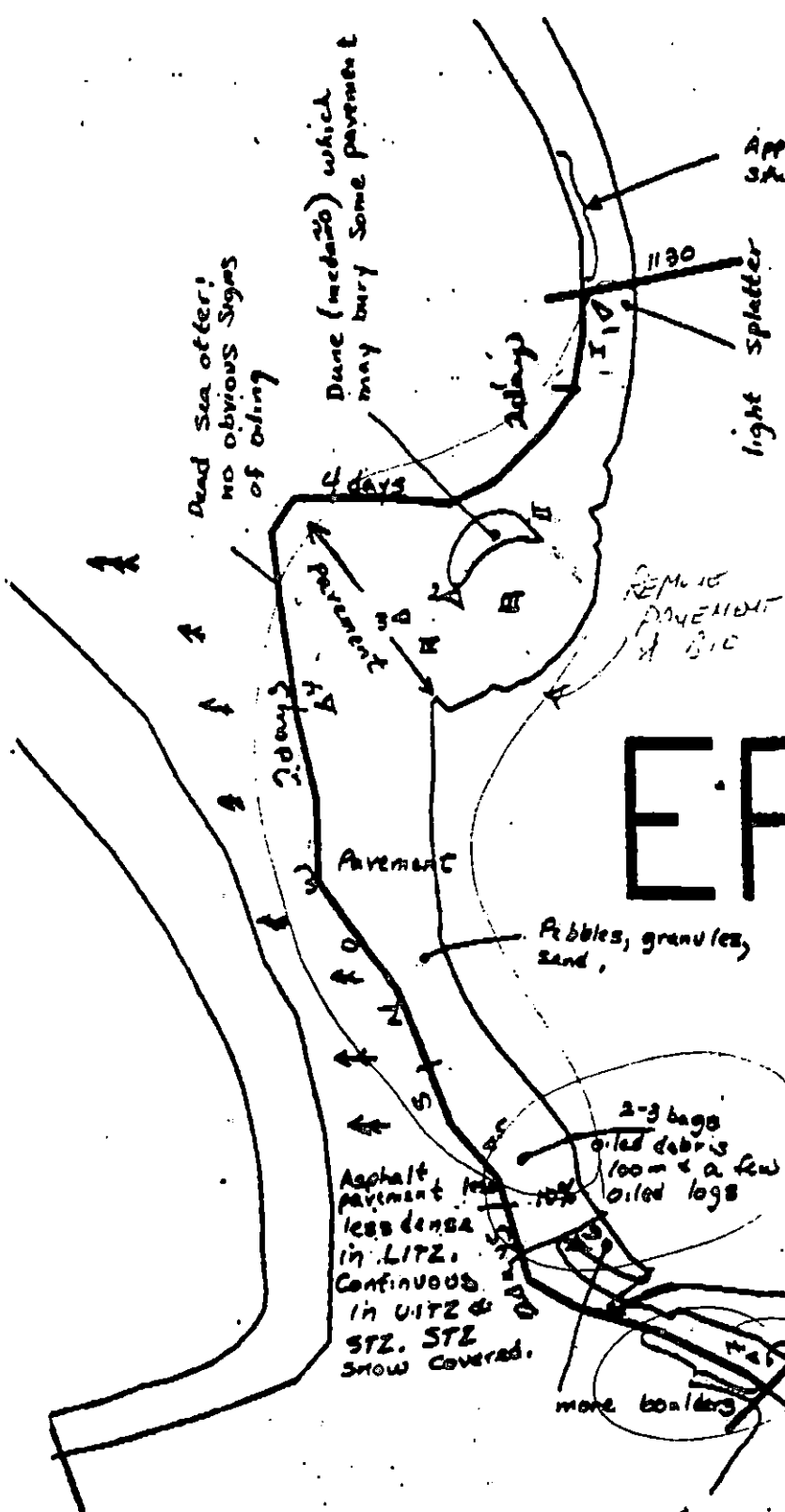
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Approximate location of Exxon study site AP-18

100 200 300 METERS

- NOTES: Days are estimates for a 12 man crew.
- I. Light patches split for first 50m. Then 4m band: ~60% cover; dark brown. Pavement is soft, 2cm thick.
 - II. Pavement continues in UITZ STZ: soft, 2cm thick.
 - III. Entire beach is paved 30m wide 25% cover 5cm thick.
 - IV. Pavement buried in UITZ by well sorted sediments.

ER-11



Approximate location of Exxon study site AP-17

Oil Character Length (m): AP 1281 PO CV 1281 CT ST NS PT TB FL NO

SKETCH MAP

620987

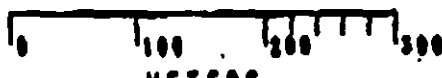
Light 1.0" = 150m
 Medium 7.75" = 1163m
 1313m

ER-11

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

ER-11A

ADEC Segment Length: 1250m



Map Key: PWS-147

Name: Rich Marty

Date: 3 April 1990

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT ER-11 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation	WORK 6/1 to 7/20

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1F	Sawmill Bay Hatchery Release	No constraint to manual pickup and tarmat removal. Closed to bioremediation prior to 6/1.
1K	Purse Seine Hook-off	No constraint to manual pickup and tarmat removal. Closed to bioremediation after 7/20.
7II	Subsistence: Deer Harvesting	No constraint to manual pickup and tarmat removal. Closed to bioremediation after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 7/20. Restrict beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

TAG APPROVAL DATE 5/29/90
ADEC ART WEINER
EXXON ANDY TEAR
NOAA B. Wescott
USCG G.A. BEITER

FOSC

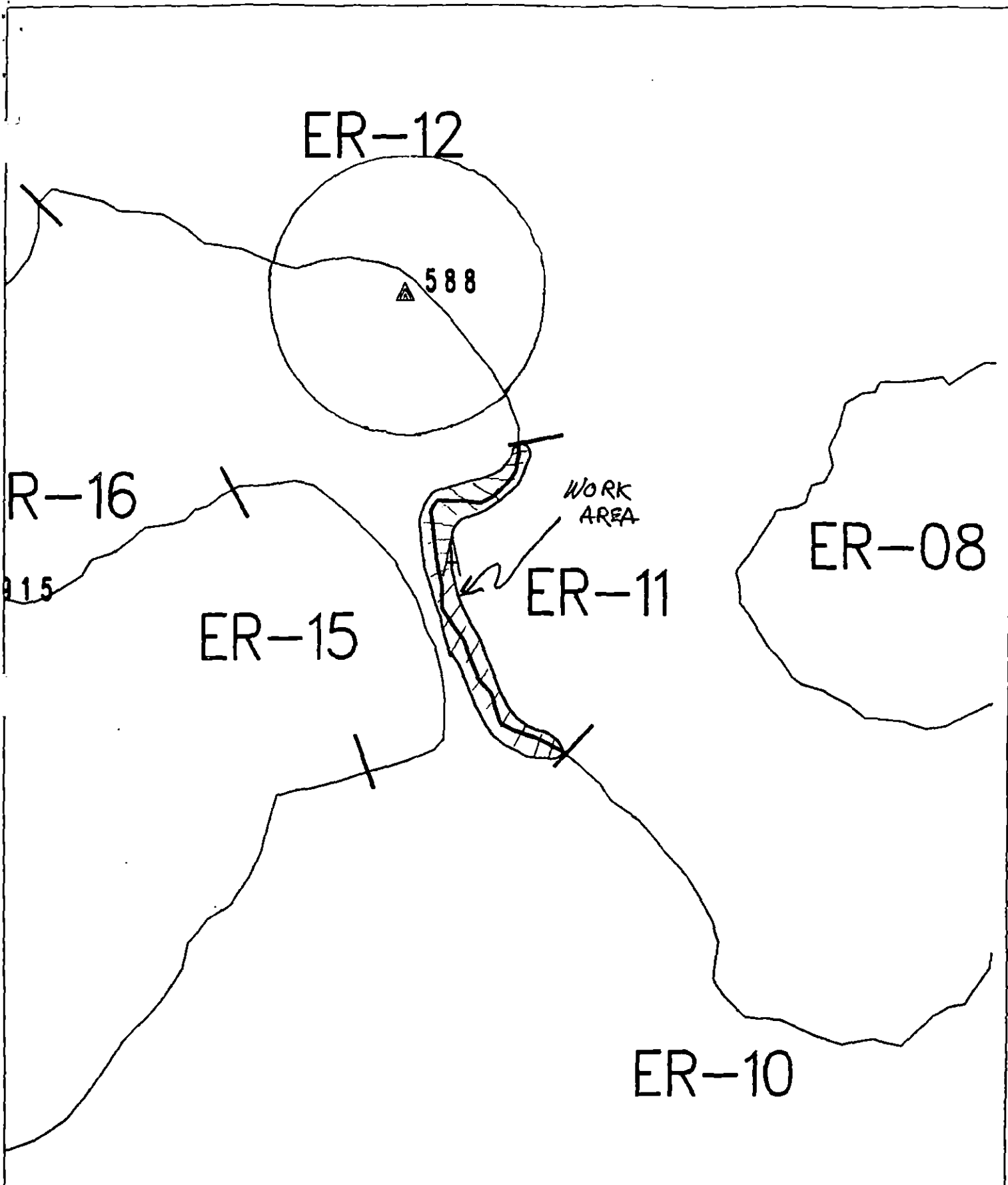
DATE

MAY 29 1990

Prepared By: Andie Meyer WRC

Date

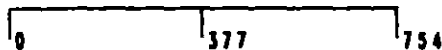
5/28/90



Exxon Company, USA
Map Key: PWS-ER-11
May 11, 1990



ECOLOGY MAP
SEGMENT ER-11
SUBDIVISION A (1 of 1)
METERS



Seabird Colony



Eagle Nest

1 inch = 1236 feet

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT ER-11 SUBDIVISION A (141) DATED 6/4/90
 MODIFICATION CLASS I CLASS II CLASS III X

1. REASON FOR MODIFICATION-

A "lense" of oil ran approx. 800 of the 1200m of the beach segments where this lense reached the surface it was manually removed. However areas ^{between treatment zones} in High-Supra Intertidal zone are characterized by a lense of oil approx. 10cm thick from between 3 and 10cm below the surface of the substrate. These areas with a subsurface are marked on the attached map.

2. SUGGESTED ADJUSTMENT TO WORK PLAN

ER-11 A(141) is recommended for bioremediation. However, in order to effectively expose oil in the subsurface lense to the biopile or Combi-blend and facilitate its effectiveness, I recommend that the area marked on attached map be mechanically tilled. For areas below High Intertidal Zone no mech. tilling is recommended. Because of the lagoon's sensitivity, no mech. tilling in this area.

3. TIMING ISSUES

TAO field assessment 7/10/90 area identified approx 1-3 cm thick below the cobble veneer with of the sporadic patches 1-3m broken BU112 - natural degradation occurring (dubly in nature) no further treatment required. Picked up oil soaked sorbent pad.

ADEC Robert B. McCreedy Dale W. Darden EROII 6/11/90
 EXXON [Signature]
 USCG [Signature] [Signature] EROII 6/11/90
 LAND MANAGER [Signature] (If field rep is on scene)

WORK PLAN ADDENDUM

Segment ER - 11

Subdivision A

Dated 7/11/90

MODIFICATION

1. REASON FOR MODIFICATION

- REQUEST FROM FIELD FOR MECHANICALLY ASSISTED TILLING OF A "BURIED LENS" AS PER ATTACHED.

2. ADJUSTMENT TO WORK PLAN

TAG REVIEW OF THE AREA IN QUESTION ON 7/10 ~~REVEALED~~
IDENTIFIED THE FOLLOWING.

- LENSE FOUND AS INDICATED HOWEVER MAXIMUM THICKNESS FOUND 1-3 CM. BAND WAS CHARACTERIZED AS BROKEN + PATCHY USUALLY W. A 1m BAND. THE REMAINING OIL WAS CRUMBLY IN NATURE AND AT LOW CONCENTRATION.

TAG RECOMMENDATION: — NO FURTHER TREATMENT REQUIRED

SHPO APPROVAL NEEDED YES _____
NO X

SHPO SIGNATURE _____

TAG APPROVAL DATE 7/11/200

ADEC JOHN BAUER John Bauer

EXXON And-Ten Deal

NOAA Burl Wescott Burl Wescott

USCG G.A. REITER G.A. Reite

FOSC

DATE 7-11-90

ER-11 A (10F2) 6/4/90

* Areas recommended for
mech. tilling prior to
bioremediation on
attached Work Plan
Modification Recommendation

→ Area is a lagoon and should
not be mechanically tilled

----- Areas with subsurface lenses of oil
and these areas recommended for tilling

R. P. McCleary
P. T. Calley USC



SEGMENT AS / ER-11 SUBDIVISION: A SITE: 1 DATE 8/2/90**ISCG**NAME MSIC Michael D. Brown SIGNATURE Michael D. Brown

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

ADECNAME John Hayes SIGNATURE John Hayes

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

Recommend on work order modification that AP+SOR
 be raked, aerated and customblended. Site should be reassessed.

LAND MANAGERNAME DOUGLAS GIBSON SIGNATURE Douglas Gibson

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

EXXONNAME Martinez N.W. SIGNATURE N.W. Martinez

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

Seeing S.O.R. appear where tar mat was
 removed. S.O.R. is almost a soft friable
 mat, no thickness to it 1-2 cm.

GENERAL DATA

SEG ID: ER-11 SBOV: A SITE: 1 TEAM: 1 DATE: 8/1/90
SITE LGTH: OIL CATEGORIES: W H N VR NO U
1991 REASSESSMENT: USCG: ADEC: LONGR: EXXON:

SURFACE DATA

CHAR #: 7 OIL CHAR: CT OIL DIST: CONT — BRKN X PTCH X SPLH X
TIDAL ZONE: SU 0 UI X MI — LI —

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

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

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

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

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

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

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

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

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

ASAP DATA ENTRY FORM

SUBSURFACE DATA

PAGE 3 OF 3

SEGMENT ID: ER-11 SUBDIV: A SITE: 1

PIT # 1 PIT DEPTH 20 OIL CHARACTER OR OIL INTVAL: FROM 0 TO 3
 CLEAN BELOW: u PIT ZONE: SU - UI X MI - LI -
 SUBSURF SEDIMENT: BRK - BLD - COB X PEB X GRN X SAN X MUD - VEG -

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

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

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

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

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

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

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

PIT # PIT DEPTH OIL CHARACTER OIL INTVAL: FROM TO
 CLEAN BELOW: PIT ZONE: SU UI MI LI

ASAP SHORELINE OILING SUMMARY

PAGE 1 OF

TEAM NO. ONE EXXON MARTINEZ SEGMENT AS/ EX-11
 OG Reimer USGS BROWN SUBDIVISION A
 ADEC HAYES LAND REP GIBSON TOTAL NO. SITES 1
 DATE 8/2/90 TIME 9:00 to 10:30 TIDE LEVEL 5 to 7
 TOTAL EST LENGTH OF SHORELINE SURVEYED: 1250 m
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WEATHER: ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 OIL CATEGORY LENGTH: W10 m M100 m N500 m VL440 m NO100 m US0 m

SURFACE OIL

SITE 1

SITE 2

SITE 3

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT			~~F~~	~~F~~	~~F~~	~~F~~	~~F~~	~~F~~
S.O.R.	M	H	MH		M	MH	M	M
POOLED								
COVER				X			X	
COAT		0	✓	X	0	X		
STAIN			X			X		
MOUSSE								
PATTIES/T.B.				X		X	X	X
FILM								
NO OIL								
EST. SITE LENGTH					1250			

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

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

SUBSURFACE OIL

SITE NO.	PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER				OILED INTERVAL (cm)	CLEAN BELOW (Y/N)	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS
			OP	OR	OF	NO			SU	UI	MI	LI	
1	1	20		H			0-3	Y		X			C-PGS
							.						
							.						
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Photographs:

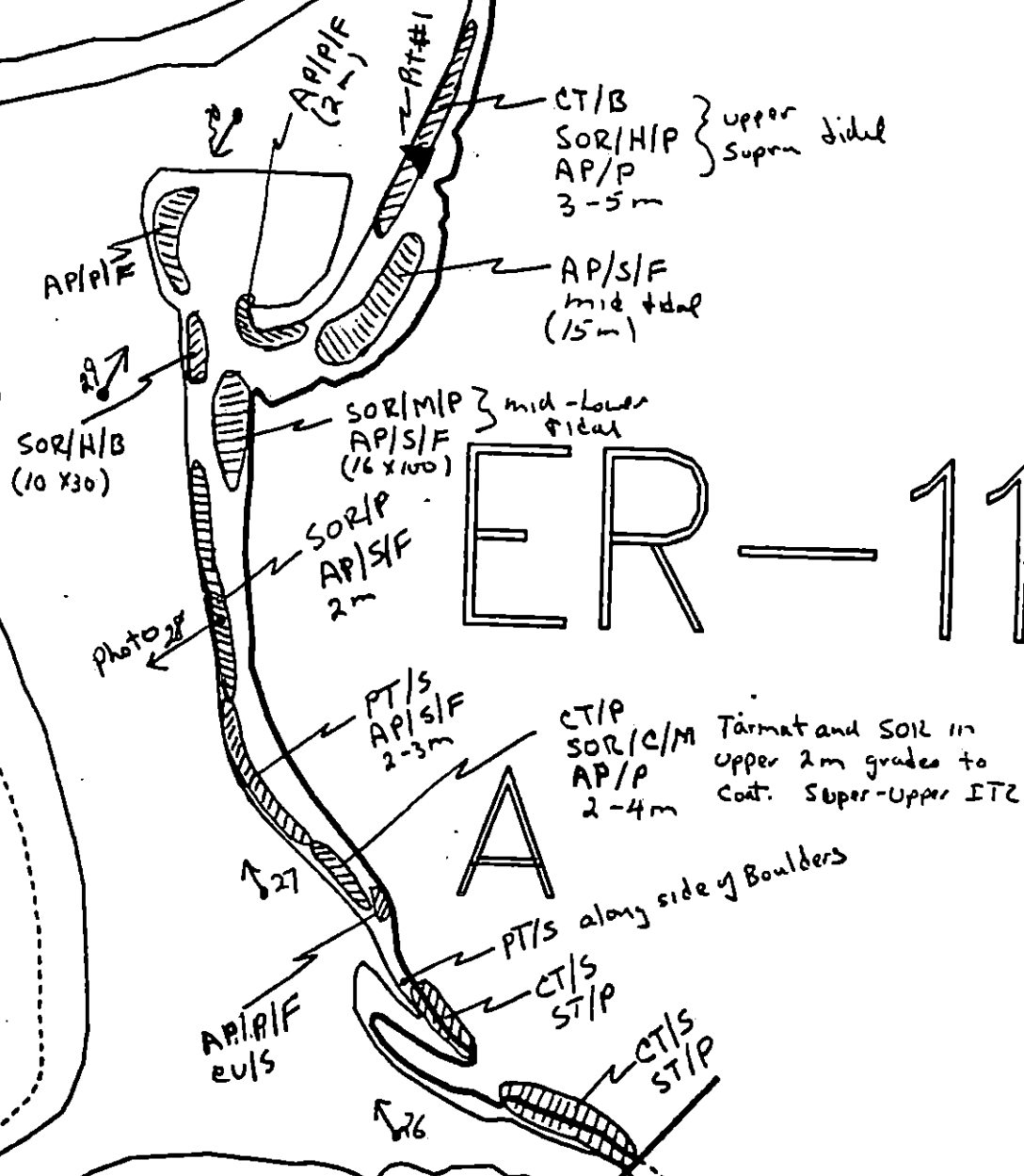
Roll No. ASAP-01-01

Frames 26-30

REVIEWED
8/6/90 YW

COMMENTS The majority of this site has friable Tarmut. The predominate concentration is in a 2-3m band in the UIT2, however sporadic to patchy areas are found in and around ebbles in mid and lower IT2 as well. Much of this site has had manual removal, and Tarmuts are

5



SEGMENT ER-11A

Segment Location Map

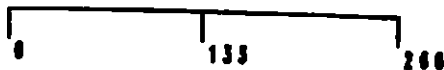
Map Key: PWSER-11

July 19, 1990

1:5245



METERS



A hand-drawn map showing a river or stream. A building with two windows is drawn on the right bank. A bracket on the left bank points to the text "Tarmats along entire AREA".

ER-11



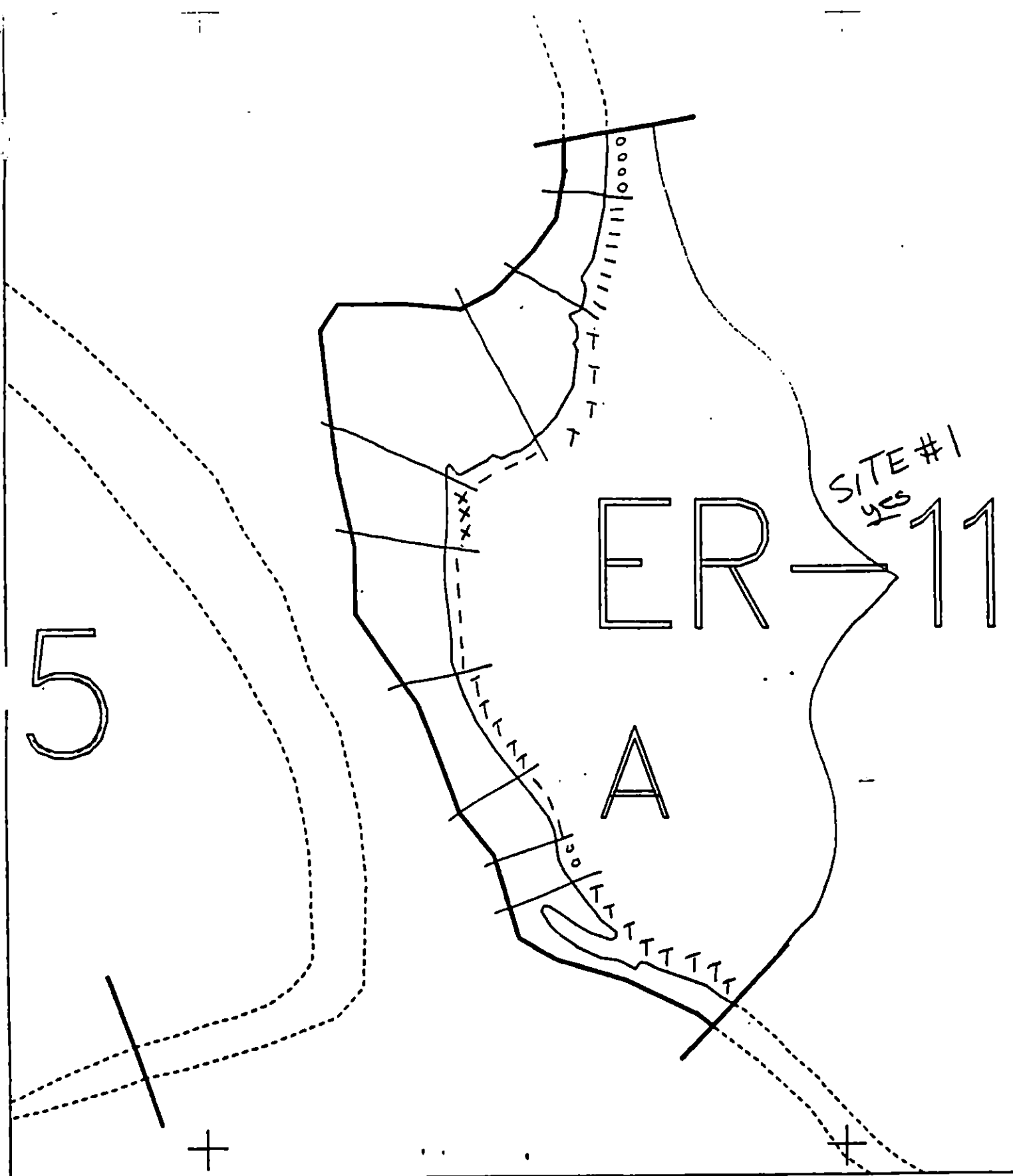
ER-11 A

**ADEC Subsegment Length: 1250m
METERS**

AK State Plane Zone 4 1:5245
per-11a



Subdivision Field Map
Map Key: PWSE-11A
Name: Reimer
Date: 8/1/90
Data Entered:



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

ER-11 A
 ADEC Subsegment Length: 1250m
 METERS
 0 133 200
 AK State Plane Zone 4 1:5245
 per-11a

Subdivision Field Map
 Map Key: PWSE-11A
 Name: Reimer
 Date: 8/2/90
 Date Entered:



SHORELINE EVALUATION

SEGMENT ST/ ER-12 SUBDIVISION A (1 OF 3) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1F Sawmill Bay Hatchery release (4/15 to 6/1)
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide_0_m: Medium_0_m: Narrow_259_m: V.Light_0_m: No Oil_204_m
Subsurface Oil Observed: Yes_X No Maximum Depth 30 cm

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> <u> </u> Beach Cleaner
<u> </u> <u> </u> Removal	<u> </u> Other (see comments)

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 7/24/90.

ADEC ART WEINER Art Weiner

EXXON *Amy Eric*

NOAA Josh Talbot Lead Cr

USCG M. J. HALL

FOSC:

DATE: 5-3-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

GMENT ST / ER-12 SUBDIVISION: A DATE 02 APRIL 90**USCG**NAME LARRY FLETCHER SIGNATURE Larry R Fletcher☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

21 of 31

ADECNAME David M. Saxe SIGNATURE David M Saxe☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED**LAND MANAGER**NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTEDListed as priority 2;4 by PWS CA. Listed as public use area
in PWS area plan.

SHORELINE OILING SUMMARY

REVISION NO. 000000

E. NAME R. NAME USCG LARRY REYNOLDS SEGMENT ST/ ER-12 19/3
 B. NAME B. NAME LAND REP Lang Canyon SUBDIVISION A (10F3)
 EASON J. Green ADEC Dark Sand TIME 16:15 to 18:00
 TEAM NO.: 10 TIDE LEVEL: +1.2m (4') to +1.8m (6') DATE 04/02/80
 EST. SUBDIVISION LENGTH: 462 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: NW to SE
 SURFACE SEDIMENTS: R 5 % B 45 % C 45 % P 2 % G 3 % S 0 % M 0 % V 0 %
 SLOPE: Long 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 251 m VL 0 m NO 216 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	N	S	E	W	1	2	3	4	SW	SE	NE	NW
ASPHALT PAVEMENT												
POOLED												
COVER												
COAT					X			X	X	X		
STAIN												
MOUSSE												
PATTIES												
TARBALLS												
FILM												
NO OIL												X

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

OILED DEBRIS	AMOUNT	
	EST	MO/LG
Logs		
Vegetation		
Trash		
Debris		

DEBRIS COLLECTED
☐ YES ☐ NOTYPE 0BAGS 0

Photographs:

Roll No. ST1016Frames 11-13SUBSURFACE OIL *oiled interval $\leq$ 5cm in pits 1-3 does not constitute subsurface oil

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW	OIL / FILM COLOR					PIT ZONE	A N A	SUBSURFACE SEDIMENTS
		OF	ON	CL	OF	NO			UP	IE	1	2	3			
1	20	X					0.3	X			X			X		S
2	39			X			0.30	X			X			X		S
3	10	X					0.9	X			X			X		S

COMMENTS

N/A! Stained clasts run up
 under the snow in the STZ
 make up 4/10% cover across
 MITZ, VITZ

Revision

RM 4/2/90

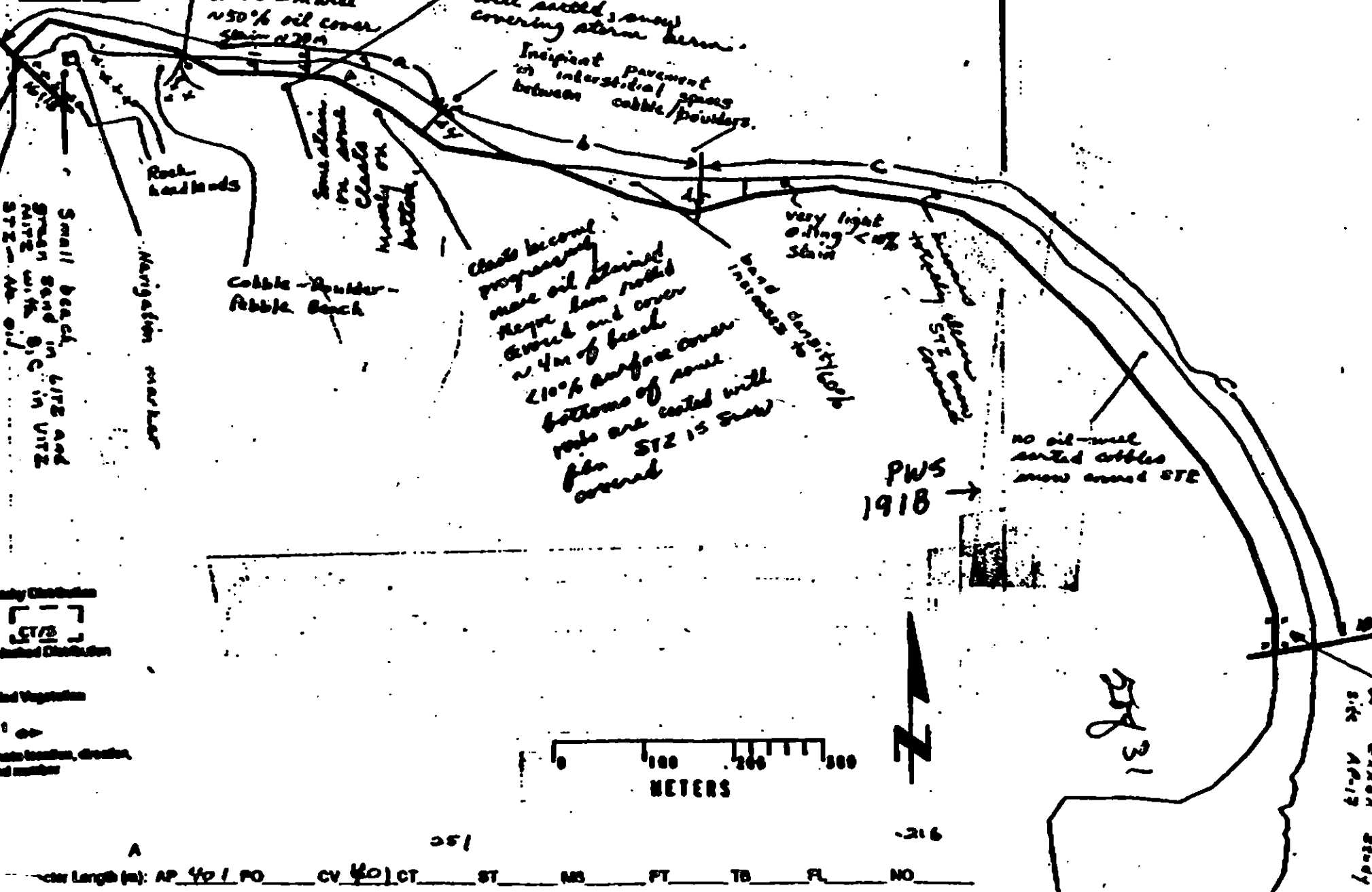
SKETCH MAP

Rich Marty

PROJECT ST/ER-12

DIVISION A-C

TE 02 / April 90



SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/02/90

Segment ST/10/ER 12 Subdivision A Date (mo / day / yr) 4 / 2 / 90
1630 - 1700
 Time (24 hr) 1630 - 1700 Biologist Bob Leman

204 31

- (A) Substrate type and % of segments:
 (1) Bedrock 5 (2) Boulder 45 (3) Cobble 45 (4) Pebble 5 (5) Sand 0 (6) SR 0
- (B) Overall % cover of biota (% of segment): Dense 0 Moderate 0 Low 15%
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low L; L); juveniles / adults (X), new settlement (3)

Photographs:
 Roll No. ST/10/6
 Frames 1-9

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

ASTROPODS

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

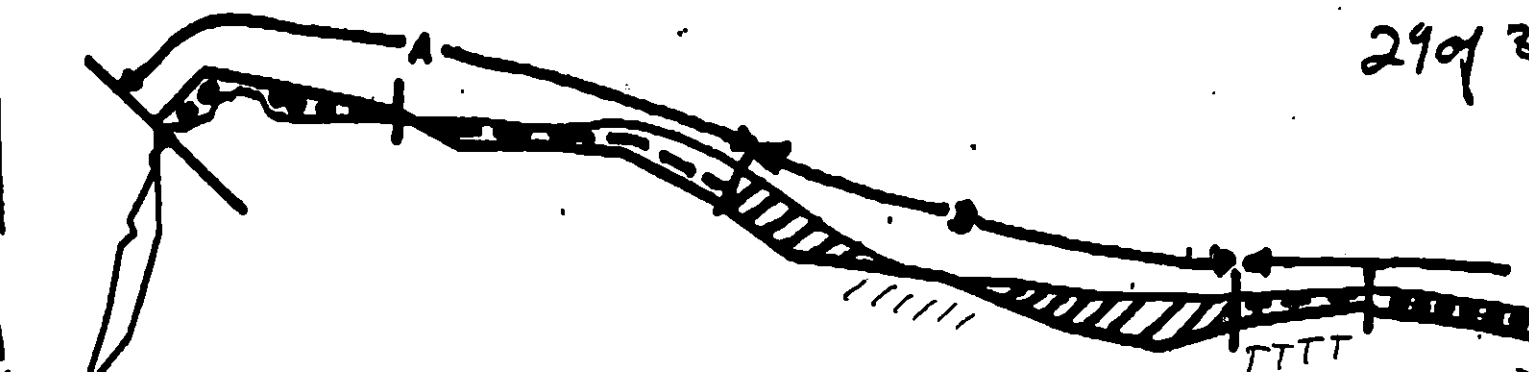
Wildlife Observations/ General Comments: Lower zone not visible except by wading. Most biota found under cobbles; gammarid amphipods, onchidella borealis. Bedrock made up very little of this segment. Drift and detritus feeding sparse. 1 Otter sighting and Tracks.

Ecological Considerations: Bald eagle, deer harvest, hatchery release.

Ecology Map

ER-

29 of 3



TTTT

Eagle
Nest
SW

PWS
1918

	Inches			Unadj		Normalised		
	A	B	C	A	B	A	B	C
No	1.5"		5	145m		700m	216	836
Very Light			25"			75m		94
Light	1.5"			225m			251	
Med		2.4			360m		401	
						1605	467	461

1605 467 461

R-16

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

ER-12

ABCC Segment Length: 1788m

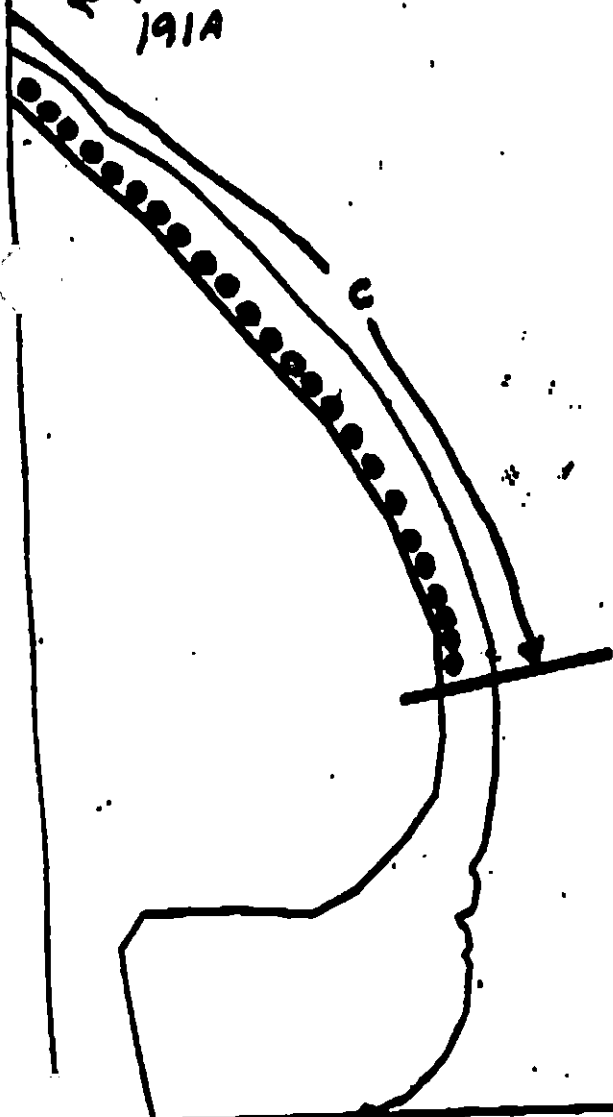
Map Key: PWS-1918

Name: R. Marty

Date: 2 April 1990

30 of 31

← PWS
191A



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

ER-12

ADEC Segment Length: 17.8m



Map Key: PWS-191b

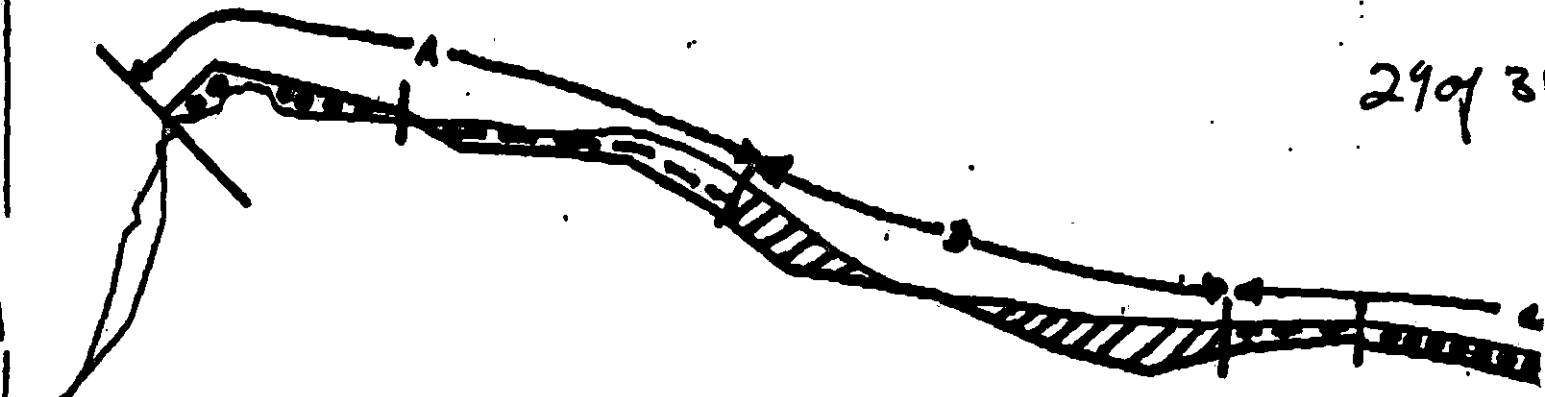
Name: Richard Marty

Date: 2 April 1990

Date Entered:

ER-

29 of 31

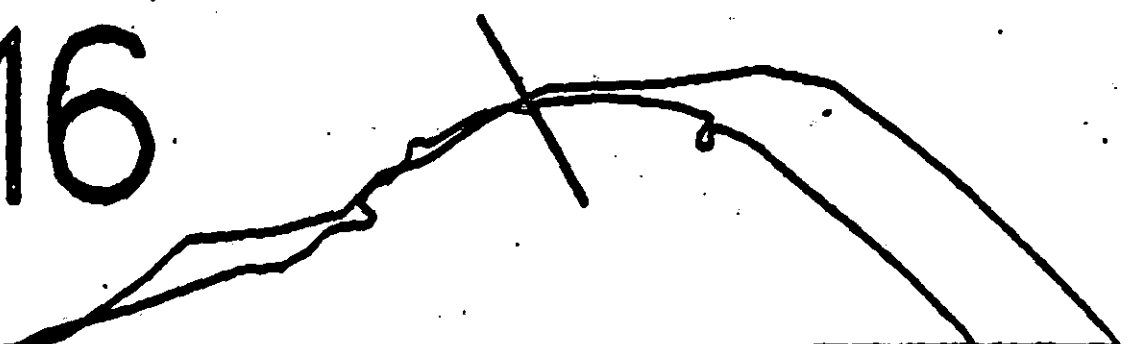


	Inches			Unadj			Normalized		
	A	B	C	A	B	C	A	B	C
No	1.5"		5	193m		750m	216		836
Very Light			0.5"			75m			84
Light	1.5"			225m			251		
Med		2.4			300m			401	

1605 467 461 1780

PWS
1918-

R-16



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

ER-12

ABCC Segment Length: 1788m

Map Key: PWS-1910

Name: S. Marty

Date: 2 April 1990

SHORELINE EVALUATION

SEGMENT ST/ ER-12 SUBDIVISION B (2 OF 3) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1F Sawmill Bay Hatchery release (4/15 to 6/1)
5T-1 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.

SHPO SIGNATURE: Charles J. Hines DATE: 4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 417 m: Narrow 0 m: V.Light 0 m: No Oil 0 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>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: Recommended treatment includes 1) manual pick up of oiled debris, 2) bioremediation of areas shown on attached sketch map. Work should be conducted after 6/1 based on salmon and eagle nest constraint and after the approval of USFWS regarding eagle nest.

TAG COMMENTS: Remove ASPHALT PATCHES INDICATED ON SKETCH.

TAG APPROVAL DATE: 4/24/90.

ADEC ART WEINER Art Weiner

EXXON ANDY TEAL Andy Teal

NOAA Joseph Talbott JCT

USCG Mr. J. Hall

FOSC: ML DATE: 5-3-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

MENT ST / FR-12 SUBDIVISION: B DATE 02 APRIL 90

USCG

NAME LARRY FLETCHERSIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

1. MANUALLY REMOVE TAR MATS (ASPHALT) AS MUCH AS POSSIBLE.
2. BREAK-UP ANY REMAINING OIL.
3. BIO-REMEDIATE,

23 of 31

ADEC

NAME DAVID M. JARESIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

- ① MANUALLY REMOVE TAR MATS AS MUCH AS POSSIBLE.
- ② CLEAN ROCKS OR COVER UNTIL STAIN REMAINS
 - A) HOSE WASHING (BACKPACKS)
- ③ TURN TO EXPOSE ROCKS TO FURTHER WEATHERING
- ④ BIO-REMEDIATE

THOUGH THIS SECTION WILL BE DIFFICULT TO CLEAN, THE ENVIRONMENTAL RESTRAINT OF HATCHERY RELEASE REQUIRES ELIMINATION OF ALL POSSIBLE WORK-ON.

LAND MANAGER

NAME Leigh CarlsonSIGNATURE Leigh Carlson ADNR☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

Listed as priority 2, 4 by PWSCA. listed as public use area in PWS area plan. Treatment as mentioned above by ADEC.

Most of the oiling is on cobble/boulder beach that is usable for recreational uses.

SHORELINE OILING SUMMARY

REVISION NO. 000000

ON R. Marsh USCG LARRY FETTER SEGMENT ST/ ER-12
B. Sander LAND REP Leigh Carter SUBDIVISION B (ZOF3)
ON d. C. Sander ADEC Port Sander TIME 10:15 to 12:00
 TEAM NO.: 10 TIDE LEVEL: +1.2m (4') to +1.8m (6') DATE 04/12/90
 EST. SUBDIVISION LENGTH: 401 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow 22 of 3
 UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: NW to SE
 SURFACE SEDIMENTS: R 5 % B 45 % C 45 % P 2 % G 3 % S 0 % M 0 % V 0 %
 SLOPE: Long 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 401 m N 0 m VL 0 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	A	B	P	S	1	2	3	4	S	M	V	U
ASPHALT PAVEMENT			X					X		X	X	
POOLED												
COVER			X					X		X	X	
COAT												
STAIN												
MOUSSE												
PATTIES									S			
TARBALLS									Z			
FILM									O			
NO OIL									E			X

PAVEMENT: H F 962 sq. m by 3 on
 PATTIES / TARBALLS 0 BAGS
 NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs		2	
Vegetation		2	
Trash		2	
Debris		2	

DEBRIS COLLECTED
☐ YES ☒ NO
 TYPE 0
 #BAGS 0

Photographs:

Roll No. ST/10/6
 Frames 14-18

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER						OILED INTERVAL (Cm-in) (Pit-0-2)	BELOW	OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE BEDMENTS
		OP	OR	OL	OP	NO	1			2	3	4	5	6	S	M	V	U			
4	15	X					0.3		X								X			N	S.G
5	15	X					0.3		X								X			N	S
							.										S				
							.										N				
							.										O				
							.										W				

COMMENTS: "Pavement" is extremely soft. Becomes progressively better developed to east. Then there is a sharp drop in oiling to Subsegment C.
 * OILED INTERVAL < 5 cm. IN PIT NOS. 4 AND 5. DO NOT CONSTITUTE SUBSURFACE OIL

Revision
 RM 4/2/90

SW 4/17/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 000000

Segment ST/10/ER12 Subdivision B Date (mo/day/yr) 4/2/90
 (24 hr) 1700-1730 Biologist Bob Lemon

24 of 31

- (A) Substrate type and % of segments:
 (1) Bedrock 45 (2) Boulder 50 (3) Cobble 5 (4) Pebble 5 (5) Sand 8 (6) SM 8
- (B) Overall % cover of biota (% of segment): Dense Moderate Low 10%
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (3)

Photographs: ST/10/6
 Roll No.

Frames 14-18

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	NOT PRESENT
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

MYTILUS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	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	

GASTROPODS

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

FUCUS

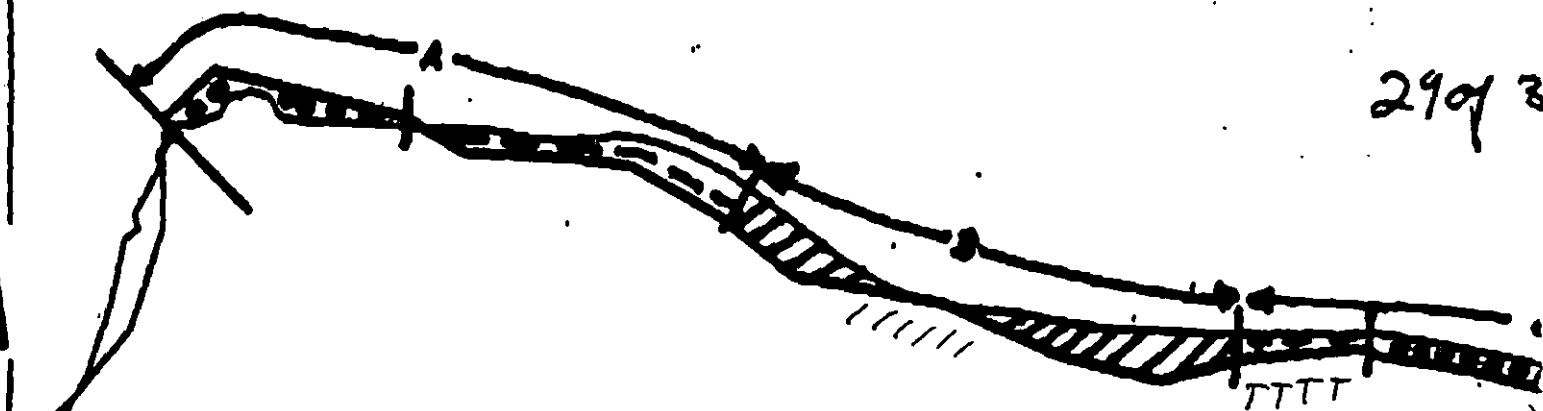
Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	2	2	2	2	2	2	2	2	NOT PRESENT
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

Wildlife Observations/General Comments: amphipods at waterline. Live Littorines in old. Lower zone not surveyed. Little drift on this beach

Ecological Considerations: Bald eagle, deer harvest, hatchery release.

ER-

29 of 3



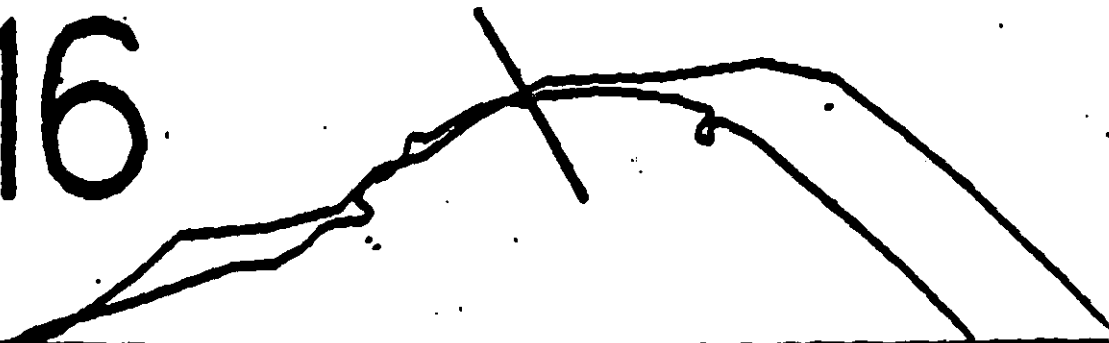
	TAGLES			Unadl		Normal road		
	A	B	C	A	B	A	B	C
No	1.5"		5	195m		70m	216	836
Very Light			25"			75m		84
Light	1.5"			225m		251		
Med		2.4			340m		401	

1605 165 161 1700

Eagle Nest CWS

PWS 1918

R-16



XXXX Wide

//// Medium

--- Narrow

ER-12

ADEC Segment Length: 1788m

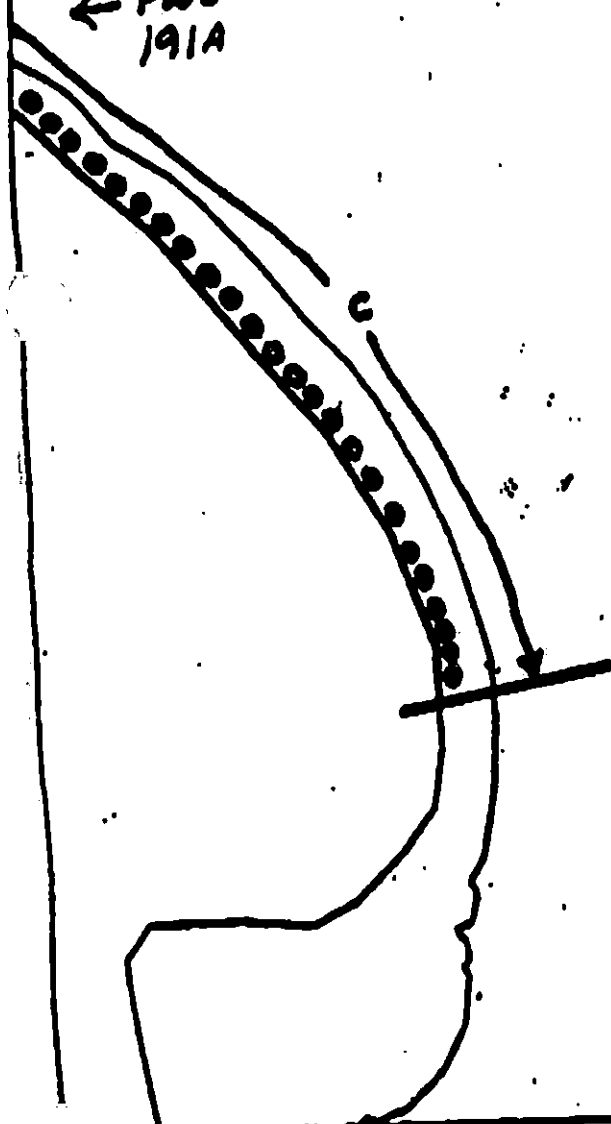
Map Key: PWS-1918

Name: R. Mary

Date: 2 April 1990

30/31

← PWS
191A



XXXX Wide

//// Medium

--- Narrow

TTT Very light

ER-12

ADEC Segment Length: 17.88m

Map Key: PWS-191b

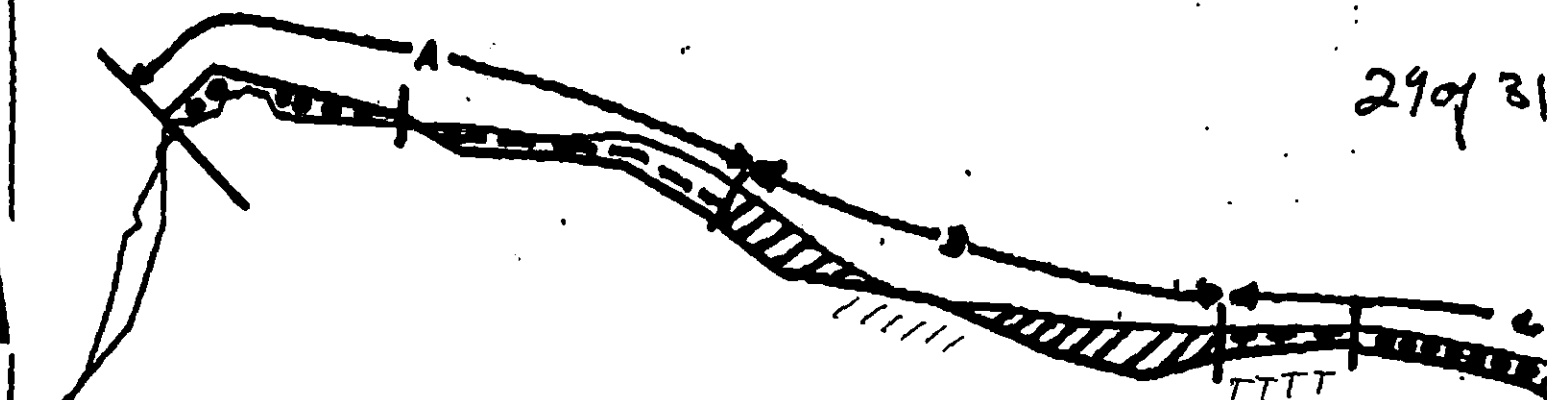
Name: Richard Martin

Date: 3 April 1990



ER-

29 of 31



	Inches			Unad/			Normalised		
	A	B	C	A	B	C	A	B	C
No	1.3"		5	145m		75m	216		836
Very Light			0.5"			75m			84
Light	1.3"			225m			251		
Med		2.4			360m			401	

1605 463 461 1780

PWS
1918 -

R-16

XXXX Wide

//// Medium

---- Narrow

ER-12

ABEC Segment Length: 1788m

Map Key: PWS-1910

Name: B. MaryDate: 2 April 1990

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT ER-12 SUBDIVISION B (2 of 3)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation	WORK 6/1 - 7/20

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1F	Sawmill Bay Hatchery Release	No constraint to manual pickup and tarmat removal; closed to bioremediation prior to 6/1.
1K	Purse Seine Hook-off	No constraint to manual pickup and tarmat removal; closed to bioremediation after 7/20
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS bald eagle impact assessment completed on 5/26/90 by Mike Lockhart indicates no active nests within 400m of the work area.
7II	Subsistence: Deer Harvesting	No constraint to manual pickup and tarmat removal; closed to bioremediation after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 7/20. Restrict beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unrolled blots and substrate.

TAG ADDENDUM DATE 6/01/90

ADEC Ran Morris

EXXON Ami G.H.

NOAA G.A. Reiter

USCG G.A. Reiter

FOSC

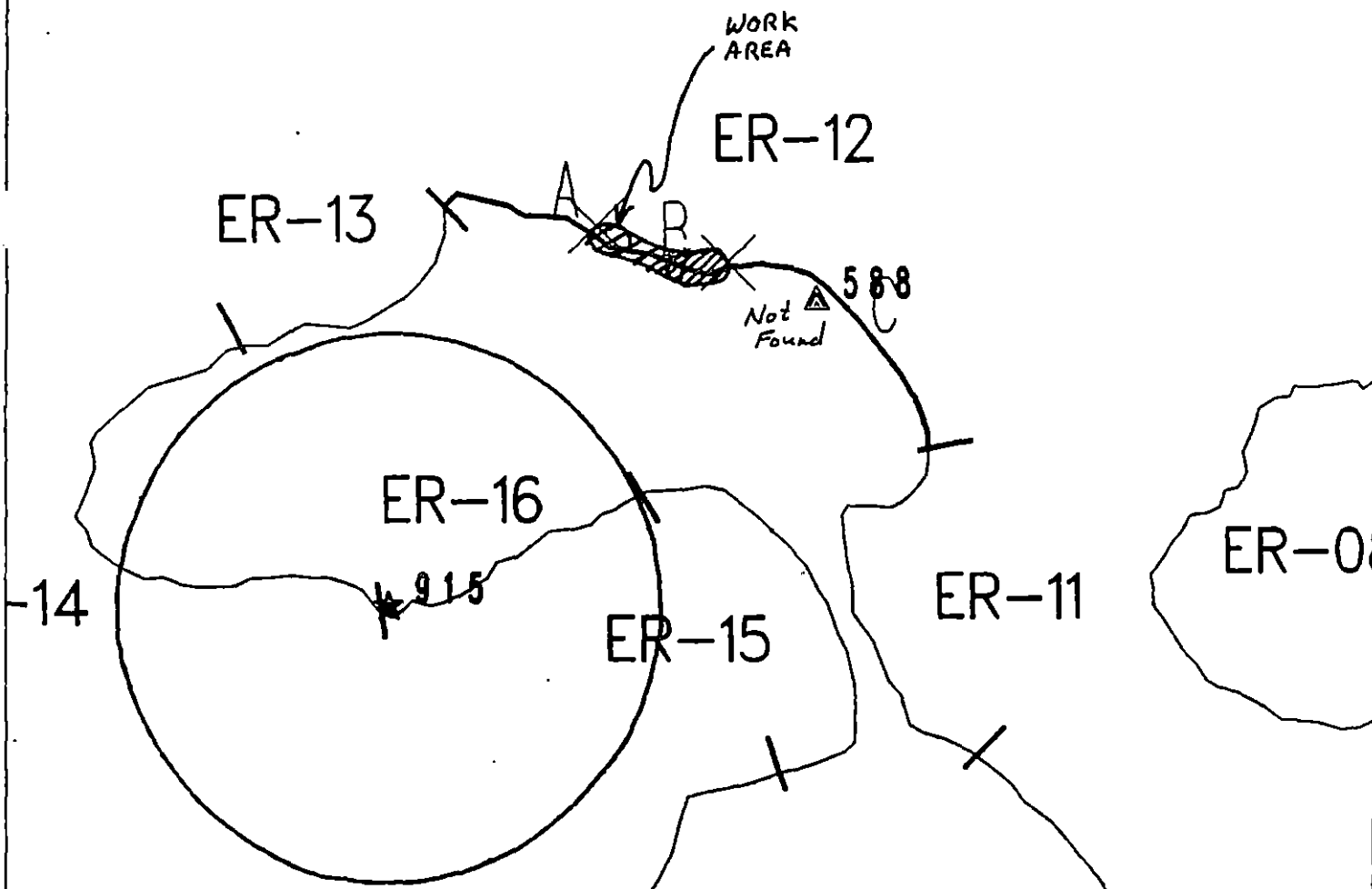
DR Prome, CDR, USCG DATE 6/2/90
Acting

Prepared by: Charles Meyer

Date: 5/31/90

Incorporates information from
USFWS bald eagle surveys 5/26/90.

EV-63



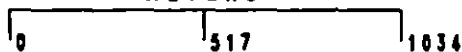
Exxon Company, USA
Map Key: PWS-ER-12
May 11, 1990



ECOLOGY MAP 5/30 SEGMENT ER-12

SUBDIVISION B (2 of 3)

METERS



- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1696 feet

SHORELINE EVALUATION

SEGMENT ST/ ER-12 SUBDIVISION C (3 OF 3) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1F Sawmill Bay Hatchery release (4/15 to 6/1)
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. Eagle nest in Subdivision C.

SHPO SIGNATURE [Signature] DATE: 4/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 107 m: No Oil 771 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: 4/24/90.
ADEC ART WEINER
EXXON ANDY TATE
NOAA Joseph Talbot
USCG M. J. HALL

FOSC: [Signature] DATE: 5-3-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
1D Esther Hatchery release (4/15 to 6/1)
1E Main Bay Hatchery release (4/20 to 5/10)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
1I Gill net area (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)
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 unloiled 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 8/1)
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
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.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / ER-12 SUBDIVISION: C DATE 02 APR 90

USCG

NAME LARRY FLETCHER SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

26 of 31

ADEC

NAME DAVID M. SNE SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

LAND MANAGER

NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Listed as priority 2, 4 by PWS CA. Listed as public use area
in PWS area plan.

SHORELINE OILING SUMMARY

REVISION NO. 000000

R. MACH USCG LARRY FLETCHER SEGMENT ST/ ER-12
B. L... LAND REP Larry Fletcher SUBDIVISION C (3 of 3)
 EXXON J. Gonzalez ADEC Port San... TIME 16:15 to 18:00
 TEAM NO.: 10 TIDE LEVEL: +1.2m (4') to +1.8m (6') DATE 04/02/90
 EST. SUBDIVISION LENGTH: 920 m ☐ Sun ☒ Clouds ☒ Fog ☒ Rain ☒ Snow 25%
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: NW to SE
 SURFACE SEDIMENTS: R 5 % B 45 % C 45 % P 2 % G 3 % S 0 % M 0 % V 0 %
 SLOPE: Long 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 84 m NO 836 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	R	B	P	S	1	2	3	4	SU	M	N	U
ASPHALT PAVEMENT												
POOLED												
COVER												
COAT												
STAIN				X			X		X			
MOUSSE												
PATTIES									5			
TARBALLS									2			
FILM									0			
NO OIL									3			

PAVEMENT: H F 8 NOISE sq. m by 0 cm

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs		2	
Vegetation	2	2	
Trash		2	1
Debris		1	1

DEBRIS COLLECTED ☐ YES ☒ NO

TYPE 0

#BAGS 0

Photographs:

Roll No: ST/0/6

Frames 19, 20

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm-in)	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		W	R	L	C	N		W	R	1	2	3	4	SU	M	N	U		

COMMENTS: There is a sharp change between subsegments B & C

Revision:

RM 4/2/90

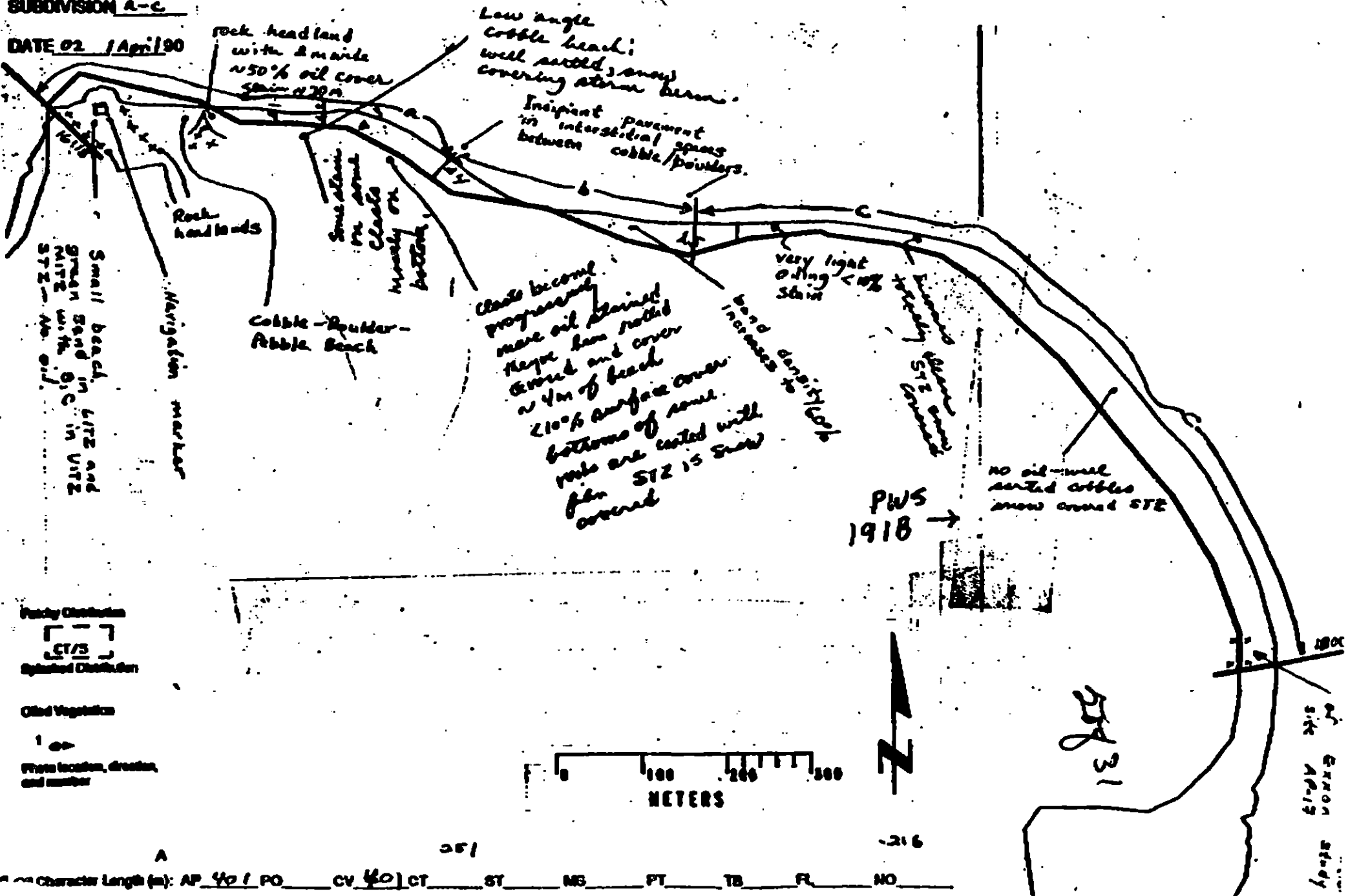
SKETCH MAP

OG Rich Map

SEGMENT ST/ER-12

SUBDIVISION A-C

DATE 02 / April / 90



SHORELINE ECOLOGICAL SUMMARY

REVISION: 000000

Segment ST/10/BR12 Subdivision C Date (mo/day/yr) 4/2/90
 (730-1800)
 Time (24 hr) _____ Biologist Bob Lemon

27 of 31

- (A) Substrate type and % of segments:
 (1) Bedrock _____ (2) Boulder 45 (3) Cobble 50 (4) Pebble 5 (5) Sand _____ (6) Silt _____
- (B) Overall % cover of biota (% of segment): Dense _____ Moderate _____ 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/10/6Frames 19-20

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

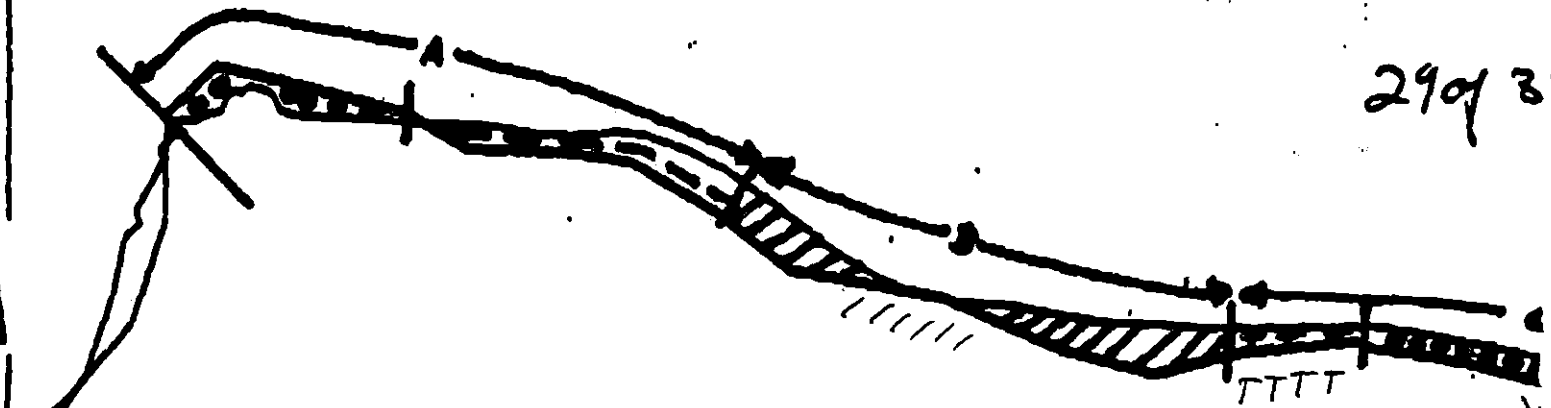
Wildlife Observations/ General Comments: Under cobbles at waterline; polychaetes, flatworms, phlebotomus, and nematodes. 2 eagles sighted. Little drift on this beach. Lower zone not surveyed.

Ecological Considerations: Bald eagle, deer harvest, hatchery release.

Ecology Map

ER-

29 of 30



Eagle Nest
SW

No	Inches			Unads			Normalised		
	A	B	C	A	B	C	A	B	C
Very Light	1.5"		5	145m		750m	216		836
Light	1.5"		2.5"			75m			84
Med		2.4			360m			401	

1605 469 461 1780

PWS
1918 -

R-16

ER-12

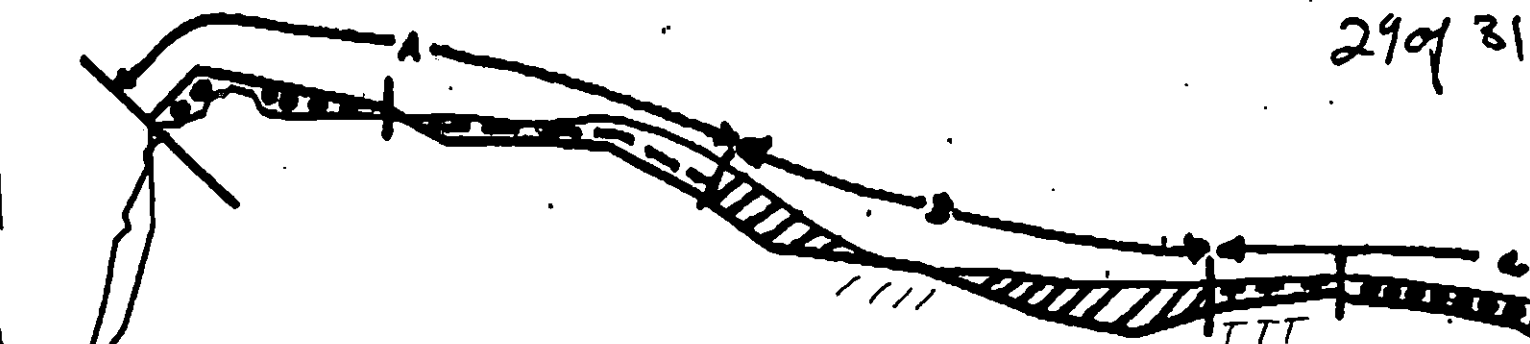
XXXX Wide
 /// Medium
 --- Narrow
 TTTT Very Light

ABCC Segment Length: 1788m

Map Key: PWS-1918
 Name: S. Mary
 Date: 2 April 1990

ER-

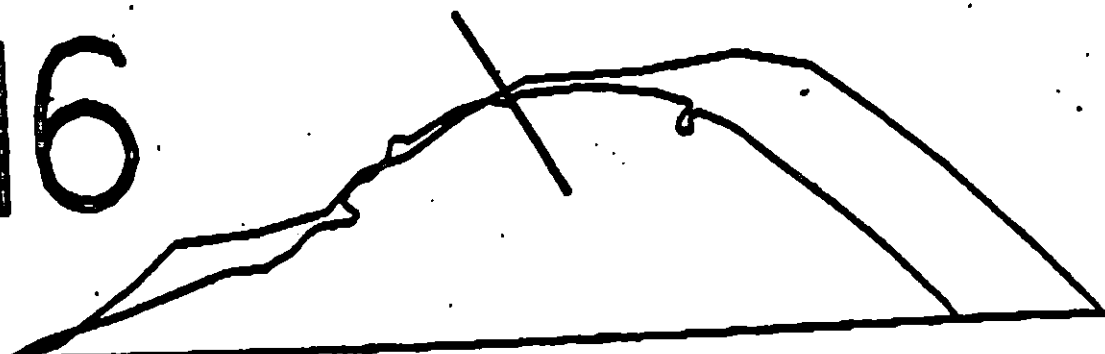
29 of 31



	Inches			Unadj			Normalized		
	A	B	C	A	B	C	A	B	C
No	1.3"		5	195m		750m	216		836
Very Light			0.5"			75m			94
Light	1.5"			225m			251		
Med		2.4			360m			401	
1605 467 461 1780									

PWS
1918-

R-16



XXXX Wide
 //// Medium
 --- Narrow
 TTTT Very Light
 A A A A M A I I

ER-12

ADEC Segment Length: 1780m

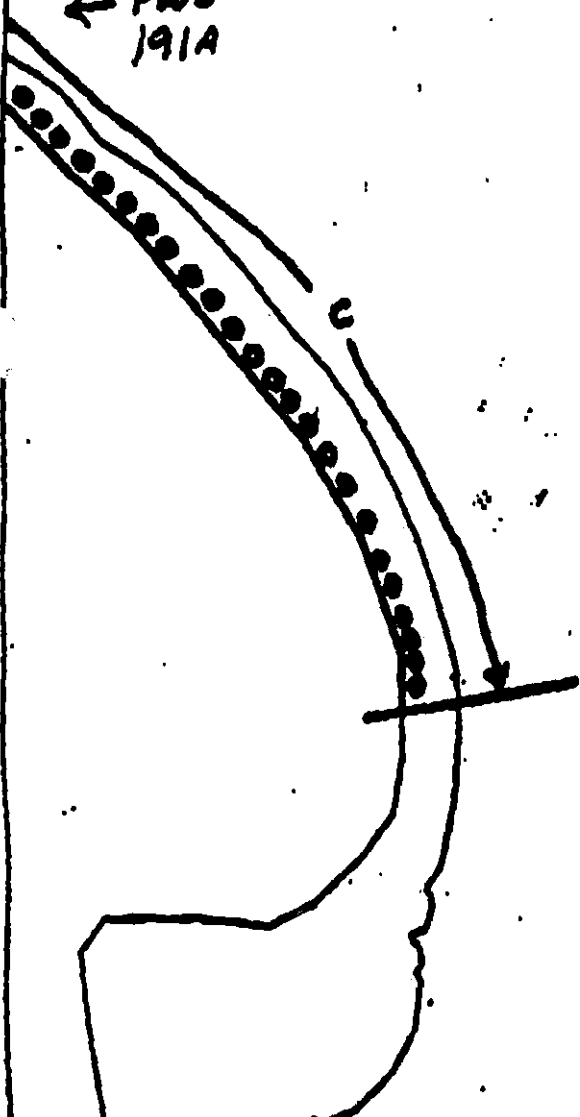


Map Key: PWS-1910
 Name: B. Mary
 Date: 2 April 1990
 Date Entered:



30/31

← PWS
191A



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

ER-12

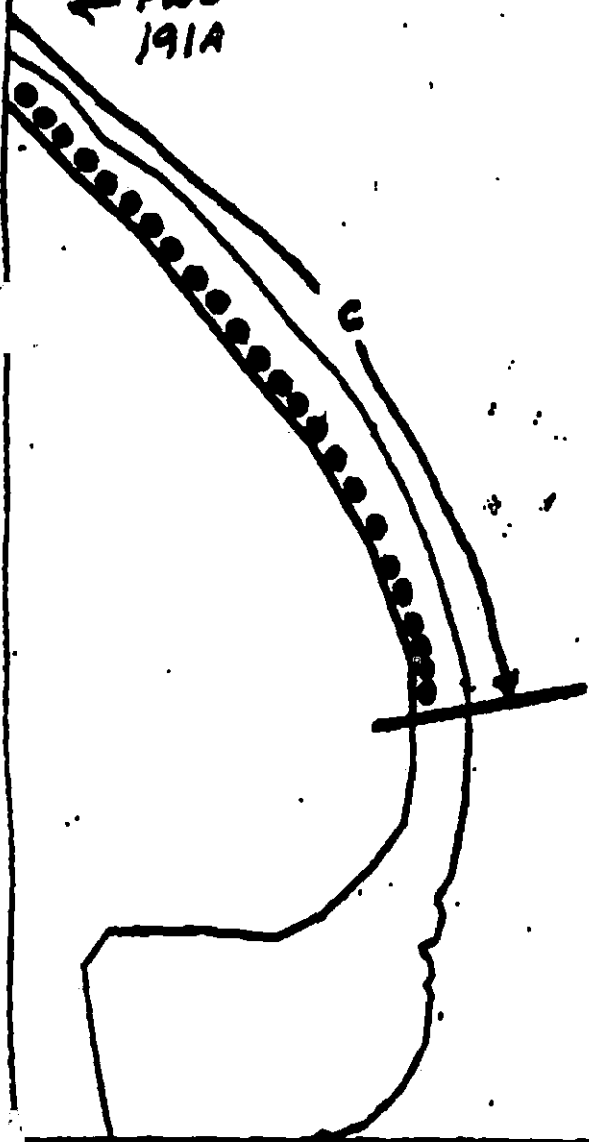
ADEC Segment Length: 1788m



Map Key: PWS-191b
 Name: Richard Mart
 Date: 2 April 1990
 Date Entered:

309 31

← PWS
191A



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

ER-12

ABEC Segment Length: 1738m



Map Key: PWS-101b

Name: Richard Mark

Date: 2 April 1990

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ ER-13 SUBDIVISION A (1 OF 1) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Sawmill Bay Hatchery release area (1F) - 4/20 to 5/10; subsistence deer harvest area (7II) - 8/15 to 2/28; Special use area (6Y).

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-oiled biota and substrate.

SHPO SIGNATURE: Charles E. H. Jones DATE: April 11, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 716 m: No Oil 109 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: 4/11/90

ADEC JOHN BAUER John Bauer

EXXON ARMY TGAZ Army TGAZ

NOAA Bud Wesscott Bud Wesscott

USCG G.A. REITER G.A. Reiter

FOSC:

DATE: 4-19-90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / ER-13 SUBDIVISION: _____ DATE 02 APRIL 90

USCG
NAME LARRY FLETCHER SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

ADEC
NAME DAVID M. SALE SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

What LOOKED LIKE STAIN ON THIS SEGMENT WAS MASKED BY DIATOMS AND PORPHYRA (RED ALGAE), AS WELL AS FILAMENTOUS GREEN ALGAE. OTHER INTERTIDAL LIFE, SUCH AS MUSSELS, LITORINA, LIMPETS, SEEMED TO BE IN GOOD HEALTH. EVEN IF THE OIL WE SPOTTED WAS ACTUALLY OIL, ~~THEY~~ IT IS AS A STAIN.

LAND MANAGER
NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

Listed as priority 2,4 by PWSCA. Listed as public use area in.
PWS area plan.

SHORELINE OILING SUMMARY

REVISION NO. 02/20/90

OG R. Mally USCG LARRY FLETCHER SEGMENT ST/ ER-13
 BIO B. Lumb LAND REP Leigh Carlson SUBDIVISION A (LOFI)
 EXXON J. Gzarnski ADEC Dave Sale TIME 14:30 to 16:05
 TEAM NO.: 10 TIDE LEVEL: +0.5m (1.5') to +1.1m (3.5') DATE 04/02/90
 EST. SUBDIVISION LENGTH: 988 m ☐ Sun ☐ Clouds ☒ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 15 % B 30 % C 20 % P 15 % G 20 % M 0 % V 0 %
 SLOPE: Long 0 % Hang 50 % Vert 50 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 767 m NO 121 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	R	B	C	P	1	2	3	4	5	6	SU	U	M	L
ASPHALT PAVEMENT														
POOLED														
COVER														
COAT														
STAIN														
SSE														
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	2		
Vegetation	2		
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE 0
 #BAGS 0

Photographs:

Roll No. ST/10/6

Frames 1-10

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm - cm) (04-08)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		SP. OP	REL. OR	CL. OL	FILM OF	NO		UP PIT	DOWN PIT	1	2	3	4	5	6	SU	U	M	L		
1	50					X	-										X			N	P, G
2	35					X	-										X			N	P, G
3	32					X	-											X		N	S
							-														
							-														
							-														

C COMMENTS: Difficult to differentiate between stains of oil and algae growing on rocks.

Revision:

RM 4/2/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/22/90

Station ST/10/ER13 Subdivision none Date (mo/day/yr) 4/2/90
1440 - 1600
 Time (24 hr) _____ Biologist Bob Lemon 6°C

- (A) Substrate type and % of segments:
 (1) Bedrock 15 (2) Boulder 30 (3) Cobble 20 (4) Pebble 15 (5) Sand 20 (6) Silt _____
- (B) Overall % cover of biota (% of segment): Dense _____ Moderate 60% Low _____
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (3)

 Photographs: ST/10/6

 Frames 1-10

BARNACLES

Dense			Moderate			Sparse			Rare			NOT PRESENT
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	

MYTILUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
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	

GASTROPODS

Dense			Moderate			Sparse			Rare			NOT PRESENT
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	

FUCUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
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	

Wildlife Observations/ General Comments: Biota rich on isolated bedrock; absent in scour channels. Possible rain band appears to be diatom scuzz in high zone. 2 generations of *Halosaccion* occupying same spots locally abundant. *Porphyra* (*Rhodophyta*) locally abundant in high zone boulders. *Filamentous* greens locally abundant in low zone boulder tops.

Logical Considerations: deer harvest, hatchery release

OG Rich y

SEGMENT ST/ ER 13

SUBDIVISION A

DATE 04/02/90

CHECKLIST

☐ N Arrow
☐ Approx. Scale
☐ Seg/Sub Bdry
☐ Oil Dist.
☐ Width
☐ Length
☐ % Cover
☐ Substrate Character
☐ Est. HML/LWL
☐ SSL
☐ Profile Location(s)
☐ Photo(s)
☐ Pk Location(s)
☐ Photo Location(s)

LEGEND

1 Δ
Pk - No Subsurface Oil

2 Δ
Pk - Subsurface Oil

$\square$ CT/C
Continuous Distribution

$\square$ CT/B
Broken Distribution

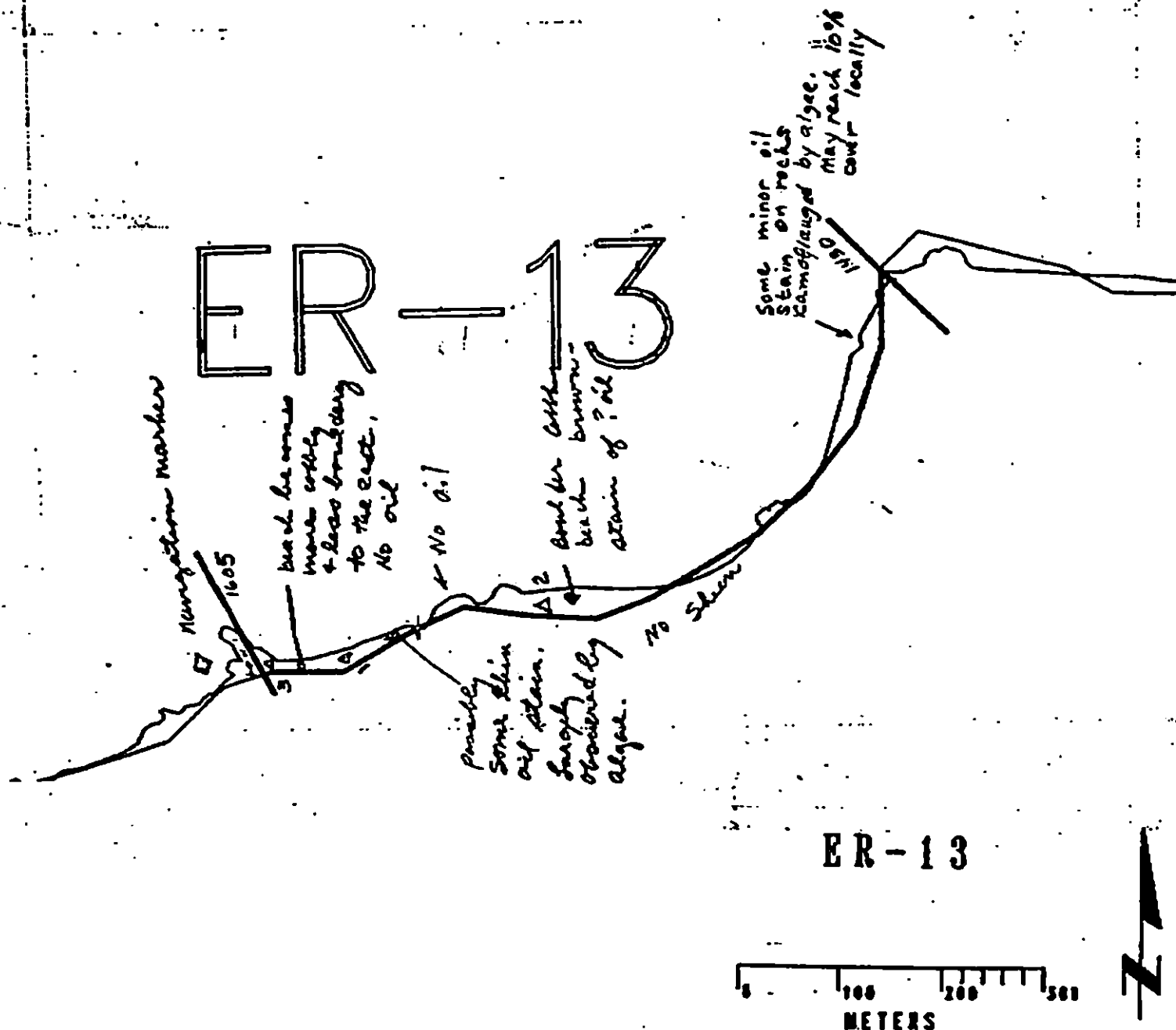
$\square$ CT/P
Patchy Distribution

$\square$ CT/S
Splashed Distribution

Oiled Vegetation

$\rightarrow$
Photo location, direction,
and number

SKETCH MAP



ER-13

	inches	unadj	normalized
Very light	4.75"	713	767
No	0.75"	113	121
		826	888

ER-16

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

ER-13

ADEC Segment Length: 825m

Map Key: PWS-149

Name: MARTYDate: 4-2-90

SHORELINE EVALUATION

SEGMENT ST/ ER-14 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Near Sawmill Bay Hatchery (1F) - 4/15 to 6/1; Seabird colony (5R) -
5/1 to 9/1; Anchorages (6V) - 6/1 to 9/15; Deer harvesting (7II) -
8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Keep traffic and disturbance to
minimum, especially in vicinity of bird colony. Restrict air
traffic to absolute minimum.

SHPO SIGNATURE: Bell Jan Olen DATE: 4/10/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 1782 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: No treatment recommended. No oil found during survey.

TAG COMMENTS:

TAG APPROVAL DATE: 4/10/90
IDEC JOHN BAUER
EXXON ARMY TEAR FOSC: DATE: 4-19-90
NOAA Buckley Scott
USCG G.A. REITER

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ ER-14 SUBDIVISION: _____ DATE 01 APRIL 90**USCG**NAME LARRY FLETCHER SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED**ADEC**NAME DAVID M. SALE SIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

If fall survey (walk-a-thon) was correct in oil estimate, a lot of cleaning has occurred over the winter. all that remains is staining. Access is difficult

LAND MANAGERNAME Leigh Carlson SIGNATURE Leigh Carlson ADNR☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Bird rookery shown for segment in PWS area plan.

(15)

SHORELINE OILING SUMMARY

REVISION NO. 000000

BIO R. Mantz USCG Larry Fletcher SEGMENT ST/ ST 10/4
 LAND REP Leigh Carlson SUBDIVISION A (1 of 1)
 EXXON J. C. Gammie ADEC Dave Sale TIME 16:00 to 16:45
 TEAM NO.: 10 TIDE LEVEL: +1.5m (+5') to +1.8m (+6') DATE 04 / 01 / 90
 EST. SUBDIVISION LENGTH: 2433 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☐ Foot ☒ Boat ☐ Helo WORKING DIRECTION: SE to NO
 SURFACE SEDIMENTS: R 90 % B 10 % C 0 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 0 % Hang 50 % Vert 50 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 2433 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	10	15	20	25	30	35	40	45	50	SU	U	M	U
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT													
STAIN													
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL										X	X	X	X

PAVEMENT: H F S 0 sq. m by 0 cmPATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? NO BR RW BL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE 0#BAGS 0

Photographs:

Roll No. ST/10/4Frames 25 - 36 - 37?

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm-in)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UD	UC	30	40	50	60	70	SU	U	M	U		

COMMENTS

(10)

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/23/90

Segment ST/10/ER14 Subdivision none Date (mo/day/yr) 4/1/901600-1645Time (24 hr) _____ Biologist Bob Leman(A) Substrate type and % of segments:
(1) Bedrock 90 (2) Boulder 10 (3) Cobble _____ (4) Pebble _____ (5) Sand _____ (6) Silt _____(B) Overall % cover of biota (% of segment): Dense 80% Moderate _____ Low _____

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

Photographs:
Roll No. ST/10/4Frames 25-36-37?

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 SCORED
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: surveyed via skiff drive by, low zone not seen and not scored here; several pictures taken. Gastropods could not be seen well enough to score them here. N.W. shore had a greater proportion of plants perhaps not fairly recognized here. Nereocystis kelp on both sides.

Logical Considerations: seabird colony, deer harvest, hatchery release, anchorages

(16)



EF

No 2433m

(13)

XXXX Wide

//// Medium

--- Narrow

TTTT

ER-14A

ADEC Segment Length: 1782m

Map Key: PWS-150

Name: R. Marty

Date: 1 April 1990



(14)

XXX Wide

/// Medium

--- Narrow

TTTT Very Light

ER-14A

ADEC Segment Length: 1782m

0 100 200 300



Map Key: PWS-150

Name: R. Marty

Date: 1 April 1990

SHORELINE EVALUATION

SEGMENT ST/ ER-18 SUBDIVISION A (1 OF 1) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Sawmill Bay Hatchery release area (1F) - 4/15 to 6/1; Subsistence
deer harvest area (7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-
oiled biota and substrate.

SHPO SIGNATURE: Wanda J. Holmes DATE: April 14, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 199 m: V. Light 813 m: No Oil 1207 m
Subsurface Oil Observed: Yes X No Maximum Depth 27 cm

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS: DUE TO THE HIGH HUMAN USE OF THIS EMBAYMENT
BIOREMEDIATE THE STAINED AREA FOLLOWING FURTHER
DETERMINATION BY FIELD MONITORS

TAG APPROVAL DATE: 4/12/90

ADEC JOHN BAUER EXXON ANDY TEAL NOAA Barbara USCG M. J. HALL FOSC: WJL DATE: 4-19-90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ ER-18 SUBDIVISION: _____ DATE 02 APRIL 90

USCG

NAME LARRY FLETCHER SIGNATURE Larry R Fletcher

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

ADEC

NAME DAVID M. SALE SIGNATURE David M Sale

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

"Bath tub Ring" on ROCKS seems to be STABLE AND NOT
LIKELY TO MOBILIZE. NO TREATMENT RECOMMENDED AS LONG
AS SEGMENT DOES NOT BEGIN TO GREEN AS WARMER TEMPS
OCCUR

LAND MANAGER

NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

Listed as priority 1 by PWSCA. Listed as public use area in
PWS area plan. Segment is located adjacent to good anchorage
area in South Twin Bay. The splatters of oil in the middle portion
of the segment are mainly in symmetrical lines that are easily
visible from a boat. For aesthetic purposes, rearranging some
of the boulders would break-up the unnatural line created
by the oiling

SHORELINE OILING SUMMARY

REVISION NO. 02/20/90

OG R. Mandy USCG LARRY FLETCHER SEGMENT ST/ ER-18
 BIO B. Lumb LAND REP Leigh Carlson SUBDIVISION A (1 OF 1)
 CON J. Czernicki ADEC Dave Sale TIME 10:50 to 13:30
 TEAM NO.: 10 TIDE LEVEL: +1.5m (5') to +0.3m (1') DATE 04/02/90
 EST. SUBDIVISION LENGTH: 2379 m ☐ Sun ☒ Clouds ☒ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 40 % B 20 % C 20 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 20 % Hang 40 % Vert 40 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 206 m VL 856 m NO 1317 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	R	B	P	S	1	2	3	4	5	6	7	8	SU	U	M	V
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL													X	X	X	

PAVEMENT: H F 8 None sq. m by 0 cmPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs		2	0
Vegetation		2	0
Trash			
Debris			

Note: Sheen was probably produced from a float of fishing boats in bay on 04/01

DEBRIS COLLECTED ☐ YES ☒ NOTYPE 0#BAGS 0

Photographs:

Roll No. ST-10/5Frames 10-28

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm-in)	BELOW	OIL / FILM COLOR								PIT ZONE	A N A	SUBSURFACE SEDIMENTS
		SP. OF	FL. OR	CL. OF	CL. OF	NO			1	2	3	4	5	6	7	8			
1	16					X	-										X	N	P, C
2	29					X	5-27		X	X							X	Y	S, M.
3	25					X	-										X	N	S
4	12					X	5-10		X	X							X	N	P
5	9					X	5-7		X	X							X	N	G
							-												

COMMENTS

Note: Snow in supratidal zone.

Revision

RM 4/2/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/28/90

Segment ST/10/ER18 Subdivision none Date (mo/day/yr) 4/2/90
1100 - 1330
 ne (24 hr) Biologist Bob Lemon Wind 6 mph NE.

- (A) Substrate type and % of segments:
 (1) Bedrock 40 (2) Boulder 20 (3) Cobble 20 (4) Pebble (5) Sand 20 (6) Silt
- (B) Overall % cover of biota (% of segment): Dense 70% Moderate Low
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (3)

Photographs:
 Roll No. ST/10/5

Frames 10-28

BARNACLES

Dense			Moderate			Sparse			Rare			NOT PRESENT
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	

MYTILUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
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	

GASTROPODS

Dense			Moderate			Sparse			Rare			NOT PRESENT
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	

FUCUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
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	

Wildlife Observations/General Comments: Barnacles ranged from high through low zones; many large old Semibalanus cariosus present. Fucus in reproductive condition. Sensitive or unusual organisms included Pagurus heros, Scorpaenidae (ANNELIDA), Telia (ANTHOZOA), Katharina (POLYCHAETA), Onchidella borealis (OPISTHOBRANCHIA), Alania and Nereocystis beds below today's tide.

Ecological Considerations: Deer harvest, hatchery release. Also many shells and perhaps a suitable habitat for Saxidomus giganteus, and Tresus copan (BIVALES) were found about mid segment. Anadromous stream was not confirmed; snow covered above the tide line; the intertidal runoff was inspected.

DATE 04 / 02 / 90

___ N Arrow
 ___ Approx. Scale
 ___ Seg/Sub Body
 ___ Oil Dist.
 ___ Wash
 ___ Length
 ___ % Cover
 ___ Substrate Character
 ___ Est. INFLUENCE
 ___ SSL
 ___ Profile Location(s)
 ___ Profile(s)
 ___ Pt Location(s)
 ___ Photo Location(s)

1 Δ
PH - No Subsurface Oil

2 ▲
Pit - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P

Patchy Distribution
 [-]
 CI/S

Splashed Distribution

Other Vegetation

1 

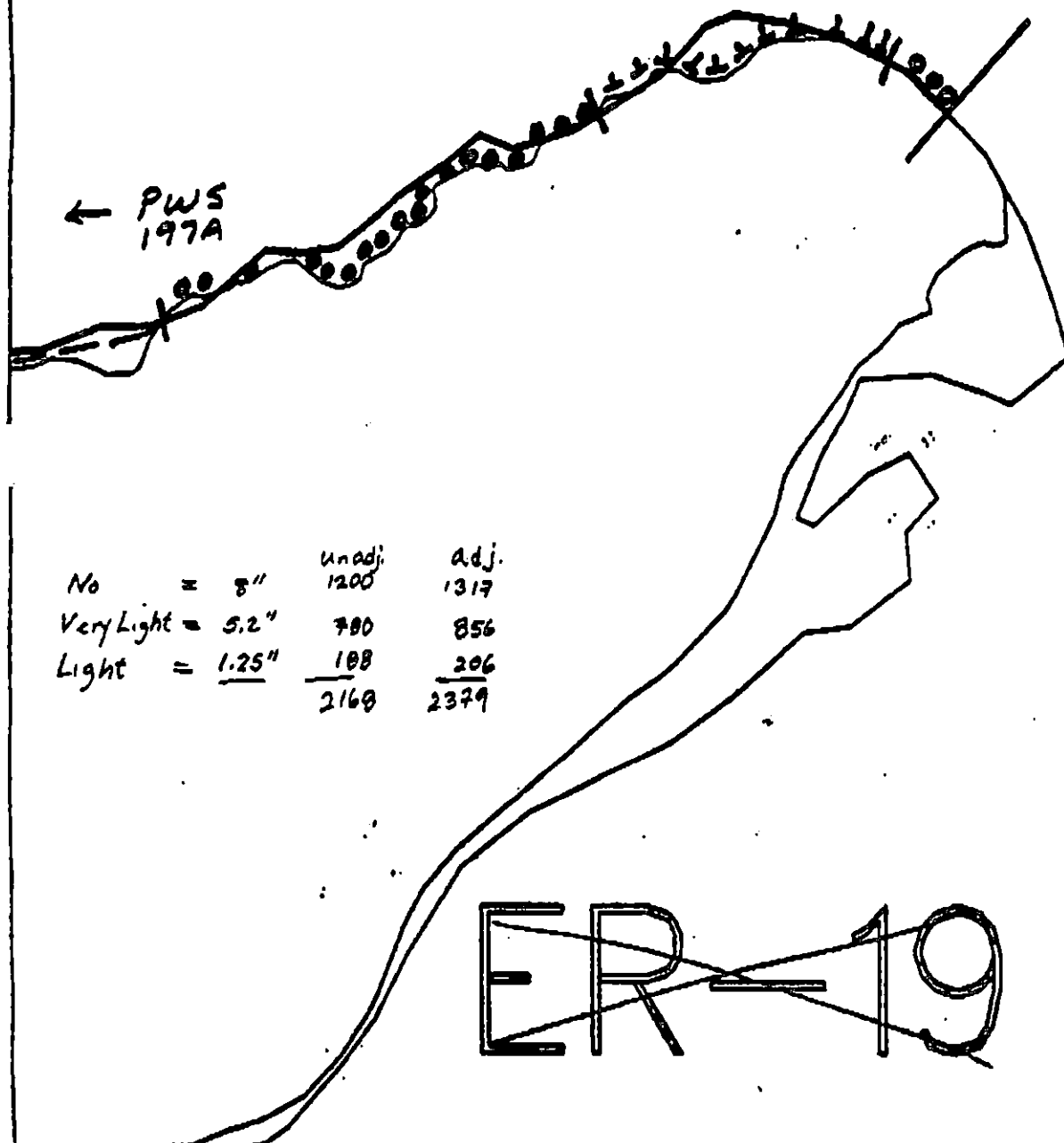
Photo location, direction,
and number

Hand-drawn map of a coastline with various annotations. The map shows a winding shoreline with several points marked. Annotations include:

- boulder beach no oil
- sandy pocket
- No oil band of splash covering <5%
- clean
- rock headlands surveyed by boat
- small cove
- well sorted cobbles beach 20m by 10m surveyed
- very light No oil
- some splashing
- very light oiling <10% cover 30cm band
- No oil here near the 'amandras' stream
- occasional splashing at some points
- No oil running in boat occasional spots checks
- PWS 197A
- 10:50
- Specter on road & cover dark black
- oil band 2m wide 20% cover more concentrated in sub surface
- pig, hogs splash

Oil Character: Length (in): AP _____ PO _____ CV _____ CT 1062 ST 500 MS _____ PT _____ TB _____ FL _____ NO _____

0 100 200 300
METERS



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

ER-18

ADEC Segment Length: 2379m



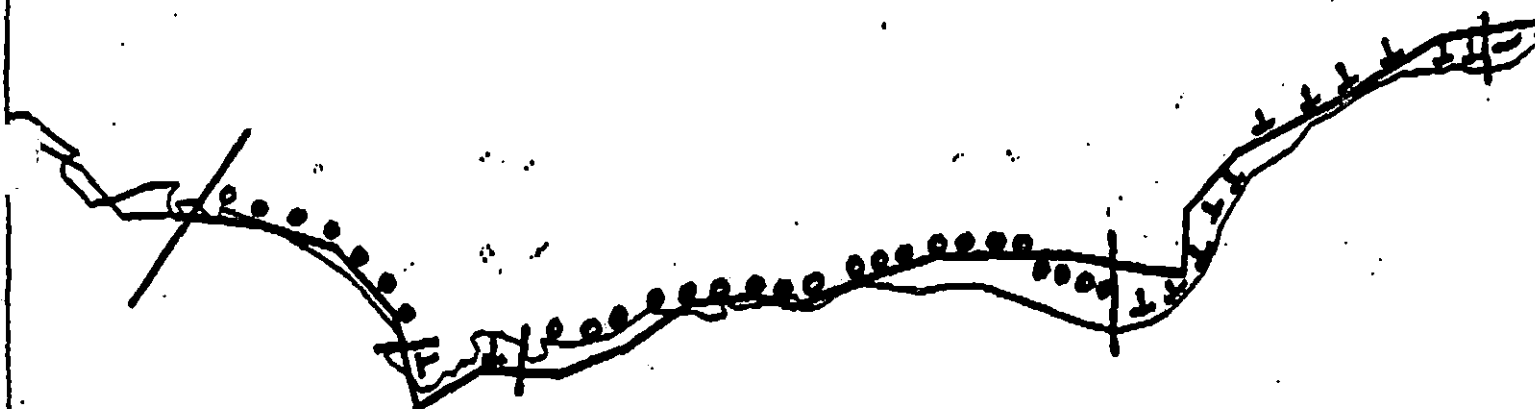
Map Key: PWS-197b

Name: Rick Marty

Date: 2 April 1990

Date Entered:

ER-18



PWS
1978 -

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ER-18

ADEC Segment Length: 2379m



Map Key: PWS-1978

Name: Rich Marty

Date: 2 April 1990

Data Entered:

2/2

SHORELINE EVALUATION

SEGMENT ST/ ER-19 SUBDIVISION A (1 OF 1) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Near Sawmill Bay Hatchery (1F) - 4/15 to 6/1; Stream mouth (cata-
log no. 16406) Fry outmigration (1A) - 3/1 to 5/15; Spawning (1B) -
7/10 to 8/31; Deer harvesting (7II) - 8/15 to 2/28; South Twin Bay
is a recreational anchorage (6V) - 6/1 to 9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: No specific subdivision con-
straints identified.

SHPO SIGNATURE: Rachel Joa Durr DATE: 4/10/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 306m: No Oil 2330 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

☒ 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: No treatment recommended due to only isolated minor stain
found during survey.

TAG COMMENTS: RECREATION USE TO HS MEDIUM USE BY ISCC
MINOR STAIN IN ONE LOCATION, DOES NOT WARRANT
INTRUSION

TAG APPROVAL DATE: 4/6/90
ADEC JOHN BAUER
EXXON ANDY TEE FOSC: [Signature] DATE: 4-19-90
NOAA Bull Wessott
USCG G.A. PETER, G.H. Durr

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ ER-19 SUBDIVISION: _____ DATE 01 APRIL 90USCGNAME LARRY FLETCHER SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTEDADECNAME DAVID M. SALE SIGNATURE [Signature]☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

see land Mgr. comments, below. Rounded cobble beach seems to have rubbed itself clean under high energy environment. Cobble did not allow pits deeper than 15-20 cm.

LAND MANAGERNAME Leigh Carlson SIGNATURE Leigh Carlson ADNR☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Listed in PWS area plan for public use/anchorage. Listed as priority 1 by PWSCA. Area directly behind storm berm still covered by snow. Did not appear likely to have oiled debris under snow cover.

(2)

SHORELINE OILING SUMMARY

REVISION NO. 032878

OG R. Monte USCG Larry Fletcher SEGMENT ST/ SE-19
B. Sambo LAND REP Lugh Carlson SUBDIVISION A(10F1)
 (ON J. Cymochin ADEC Dive Sale TIME 14:05 to 16:30
 TEAM NO.: 10 TIDE LEVEL: +0.6m (2') to +2.0m (6.5') DATE 04/01/90
 EST. SUBDIVISION LENGTH: 2163 m ☒ Sun ☐ Clouds ☒ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: 14:05 to 16:30
 SURFACE SEDIMENTS: R 50 % B 40 % C 10 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Lang 0 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☐ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 150 m M 2013 m N 0 m VL 150 m NO 2013 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	D	R	P	N	1	2	3	4	D	U	M	U
ASPHALT												
PAVEMENT												
POOLED												
COVER												
COAT												
STAIN				X							X	
MOUSSE												
PATTIES												
TARBALLS												
FILM												
NO OIL									S	X		X

PAVEMENT: H F S 0 sq. m by 0 cmPATTIES / TARBALLS NONE 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/10/4Frames 18-24

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	NO	1	2	3	4	D	U	M	U		
1	15					X	0									X			PC
2	10					X	0								X				PC
3	12					X	0								X				PG
4	15					X	0								X				C
							0												
							0												

COMMENTS

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST/10/ER19 Subdivision none Date (mo/day/yr) 4/1/90Time (24 hr) 1400-1530 Biologist Bob Lemon(A) Substrate type and % of segments:
(1) Bedrock 1 (2) Boulder 1 (3) Cobble 50 (4) Pebble 39 (5) Sand 10 (6) Silt (B) Overall % cover of biota (% of segment): Dense Moderate Low 4%

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

Photographs:

Roll No. ST/10/4Frames 18-24

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: sparse drift line at about +10 had Diptera (INSECTA) and AMPHIPODS in sparse abundance. Supratidal snow had deer, bear, and other tracks - 1 eagle sitting. The water covered the low zone but wading led me to believe there was little change from general trend at the water line.

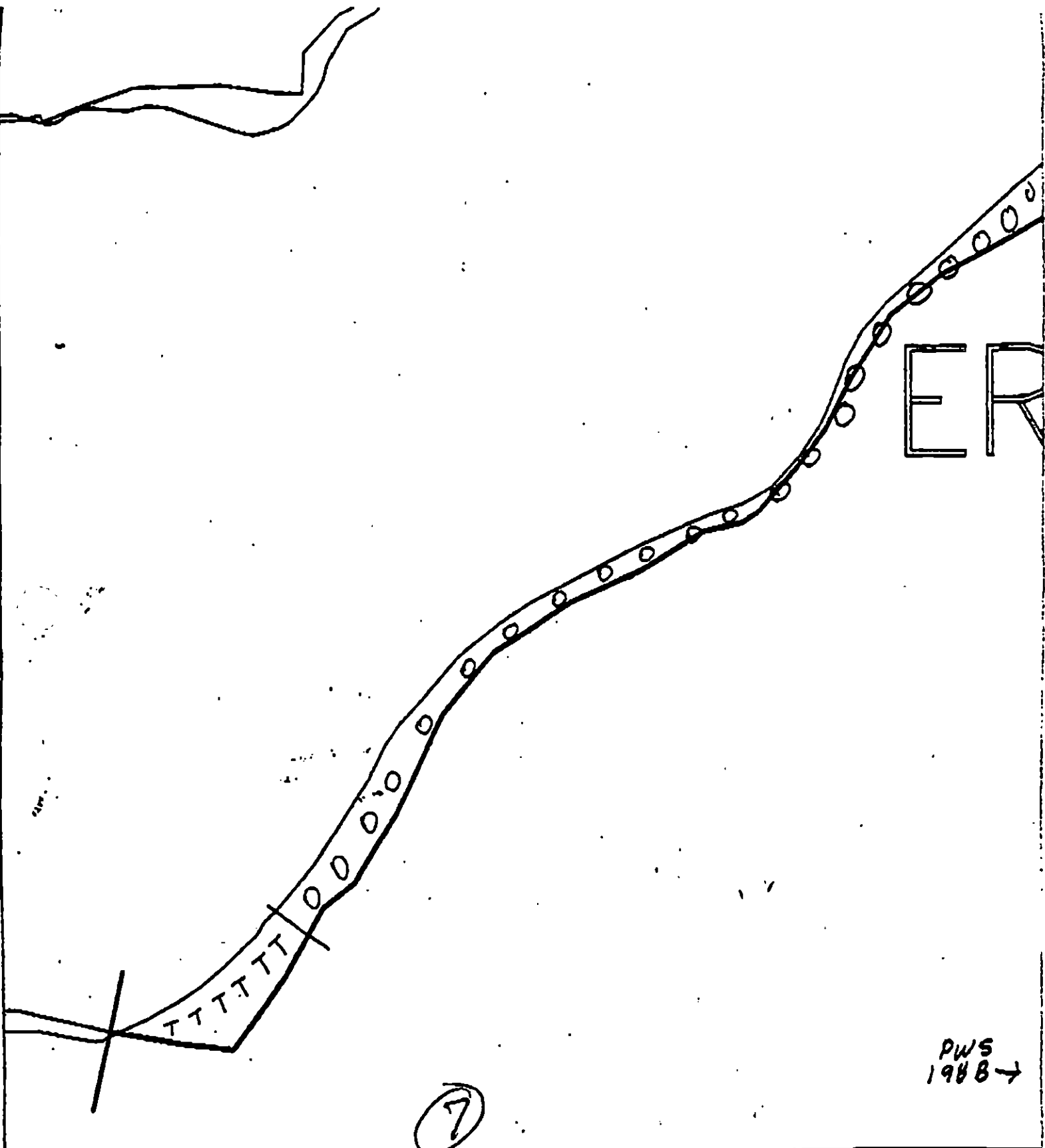
Ecological Considerations: deer harvest, hatchery release, stream spawning.

APR-01-1990 21:36 FROM BRASOS SEAHORSE

TO

DAN WOODWARD

P.07



XXX Wide

/// Medium

--- Narrow

TTTT Very light

ER-19 A

ADEC Segment Length: 2163m

Map Key: PWS-1988

Name: R. Marty

Date: 1 April '90

3/3

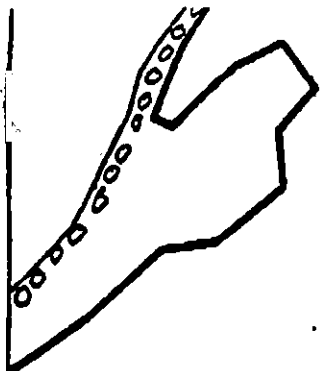
APR-01-1990 21:36 FROM BRASOS SEAHORSE

TO

DAN WOODWARD

P.06

↑
PWS
1980



← PWS 198A

⑥

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

ER-19A

ADEC Segment Length: 2163m

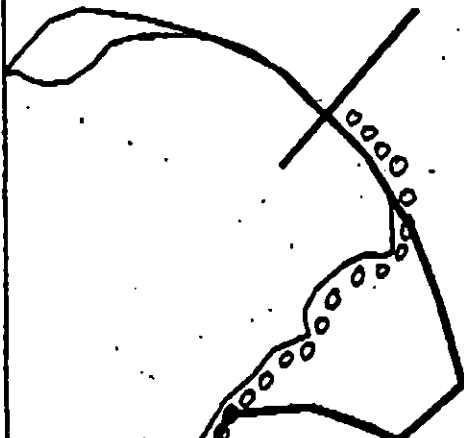
Map Key: PWS-198b

Name: R. Morley

1 April 1990

2/3

ER-10



(5)

↓ PWS 1988

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO NA 0:1

ER-19A

ADEC Segment Length: 2163m



Map Key: PWS-1988

Name: R. Marty

Date: 1 April '90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ ER-20 SUBDIVISION A (1 OF 3) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7HH Subsistence area: Finfish harvesting

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Hume DATE: 4/23/90

OILING CATEGORIZATION:

Wide 0 m: Medium 98 m: Narrow 47 m: V.Light 180 m: No Oil 96 m
Subsurface Oil Observed: Yes X No Maximum Depth 25 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: Recommend bioremediation of area shown on sketch map.

TAG COMMENTS:

TAG APPROVAL DATE: 4/21/90.

ADEC Art Weinst Art Weinst
EXXON ANDY TEAL Bea
NOAA Burt Wescott Burt Wescott
USCG KENNETH KEANE Kenneth Keane

FOSC: Myh DATE: 4-27-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
 1D Esther Hatchery release (4/15 to 6/1)
 1E Main Bay Hatchery release (4/20 to 5/10)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 1I Gill net area (3/7 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)
 Finfish harvesting
 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.

SEGMENT ST/ ER20 SUBDIVISION: A DATE 08 APRIL 90

USCG

NAME LARRY FLETCHER SIGNATURE Larry R Fletcher

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

1. MANUALLY REMOVE ANY TAR PARTICLES OR BALLS.
2. BIO-REMEDIATE.

ADEC

NAME DAVID M. SALE SIGNATURE David M Sale

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

- ① Remove subsurface sediments and oil.
- ② WASH oil from boulder faces, including cleaning crevices and fracture joints of oil.
- ③ Bioremediate

Care should be taken to remove oiled sediments from beneath boulder piles, to avoid later mobilization.

LAND MANAGER

NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED
COMMENTS

Uses for the area include subsistence finfish and deer harvesting. This subdivision needs more treatment than just manual removal and bioremediation. Will need to use some type of washing method.

SHORELINE OILING SUMMARY

REVISION NO. 02/22/90

OG Richard Marty USCG Larry Fletcher SEGMENT ST/ ER-20
 BIO Bob Leman LAND REP Leigh Carlson SUBDIVISION A
 EXXON Jon Czarnski ADEC Dave Sale TIME 08:27 to 09:30
 TEAM NO.: 10 TIDE LEVEL: 1.1m(3.5') to 1.7m(5.5') DATE 07 / April / 80
 EST. SUBDIVISION LENGTH: 463 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: NW to SE
 SURFACE SEDIMENTS: R 60 % B 15 % C 10 % P 10 % G 5 % S 0 % M 0 % V 0 %
 SLOPE: Long 35 % Hang 55 % Vert 10 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 85 m N 27 m VL 163 m NO 188 m

SURFACE OIL

CHARACTER	DISTRIBUTION					OIL / FILM COLOR					IMPACTED ZONES			
	C	N	P	B	NO	BU	U	M	U		BU	U	M	U
ASPHALT PAVEMENT														
POOLED														
COVER		✓		X			✓				✓			
COAT			X				X				X			
STAIN				X			X				X			
MOUSSE														
PATTIES														
TARBALLS														
FILM														
NO OIL											X		XX	

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	2		
Vegetation		2	
Trash			1
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE _____

#BAGS 0

Photographs:

Roll No. 35/10/9Frames 18-23

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	UO	BU	U	M	U		BU	U	M	U		
1	22	X					0-3	X				X			X				N	B, C
	22				X		3-4		X			X			X				N	B, C
2	27	X					0-10	X				X			X				N	B, C
			X				10-25		X			X			X				N	B, C
3	6	X					0-6	X				X			X				N	C, R, H
4	24		X				0-12		X			X			X				N	C, G / Rock

COMMENTS

Revision
R. Marty 8 April 1990

2 of 17

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/90

Segment ST/10/ER 20 Subdivision A Date (mo/day/yr) 4/7/90
0830-0930
 Time (24 hr) 0830-0930 Biologist Lemon

- (A) Substrate type and % of segments:
 (1) Bedrock 60 (2) Boulder 15 (3) Cobble 10 (4) Pebble 10 (5) Sand 5 (6) Silt
- (B) Overall % cover of biota (% of segment): Dense Moderate 60% Low
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (O)

Photographs: ST/10/9
 Roll No. ST/10/9

Frames 18-23

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

ASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments: Mixed red algae made up much of the low zone cover. Demomasteria (ASTEROID), gammarid amphipods, Serotinus and other Polychaetes were common in the low zone. 2 waterfowl or 1 deer or 2 eagle sightings were made.

Ecological Considerations: Stream mouth spawning, finfish harvest, deer harvest.

58

Page Entered:

Subtract 4 from 45.

Area of asphalt 20m x 9m x 20% cover
 pavement in stream bed
 is covered with boulders
 Smells like pavement in
 soft, as on river.

Possible
 "plattered"
 drain

4m band of
 10-15% cover
 30%

Rock boulders
 Red San Juan

No oil on
 Ventral head land

Redrock headlands with
 2m wide band of broken
 cover on rocks.

ER-1

"pooled oil"

XXXX Wide
 Medium
 NOT FLOW
 TTTT Very Light
 0000 No Oil

ADEC Segment Length: 1667m

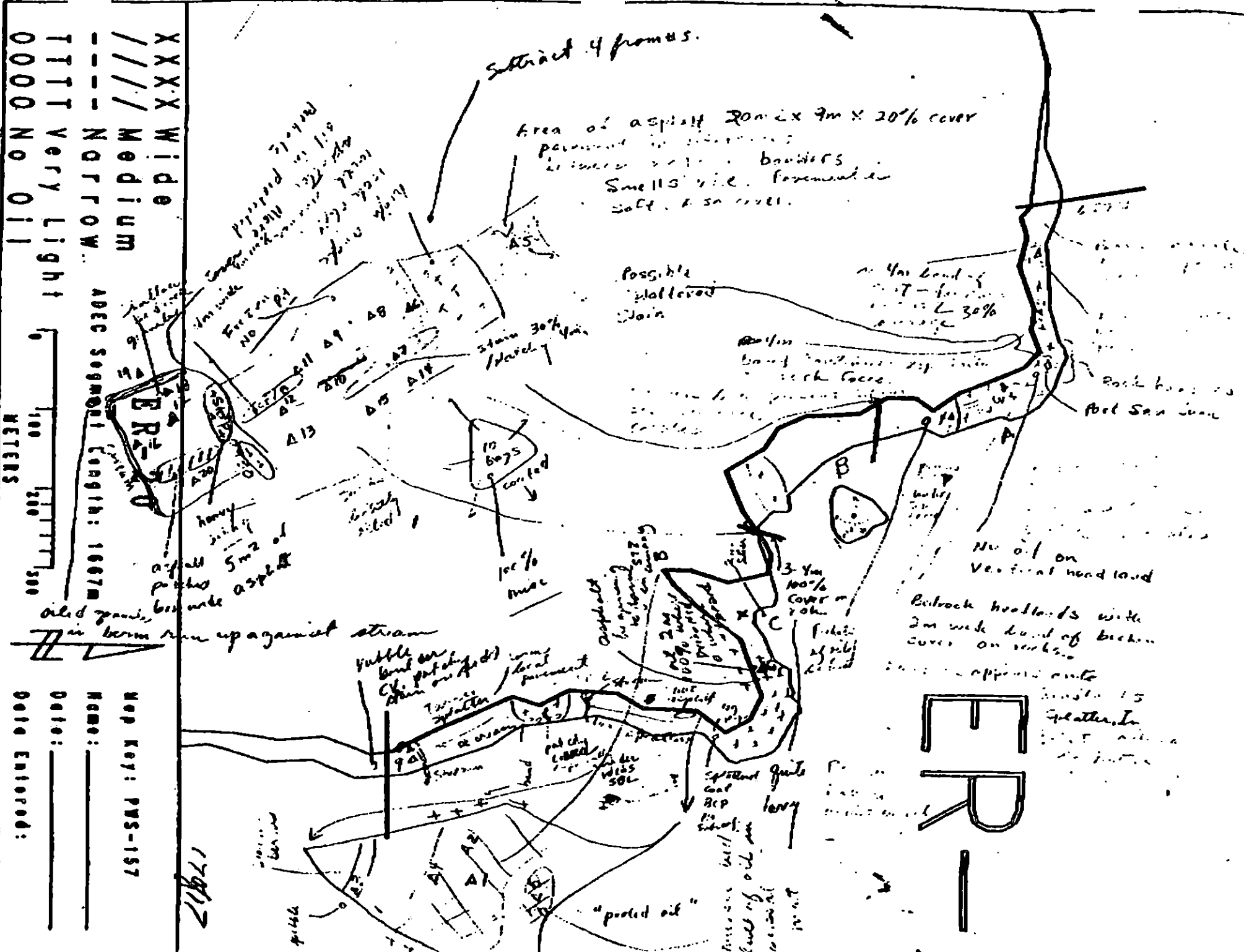
METERS
 0 100 200 300

oil on gravel, boulders
 in berm run up against stream

ubble on
 bank on
 stream on (red)
 some local
 pavement

Map Key: PWS-157
 Name: _____
 Date: _____
 Date Entered: _____

17417



OG R. City

SEGMENT 31 ER20

SUBDIVISION A

DATE 7 April 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Grid
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HRA/LA/VL
- ☐ SSI
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pli Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
Pli - No Subsurface Oil

2 Δ
Pli - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

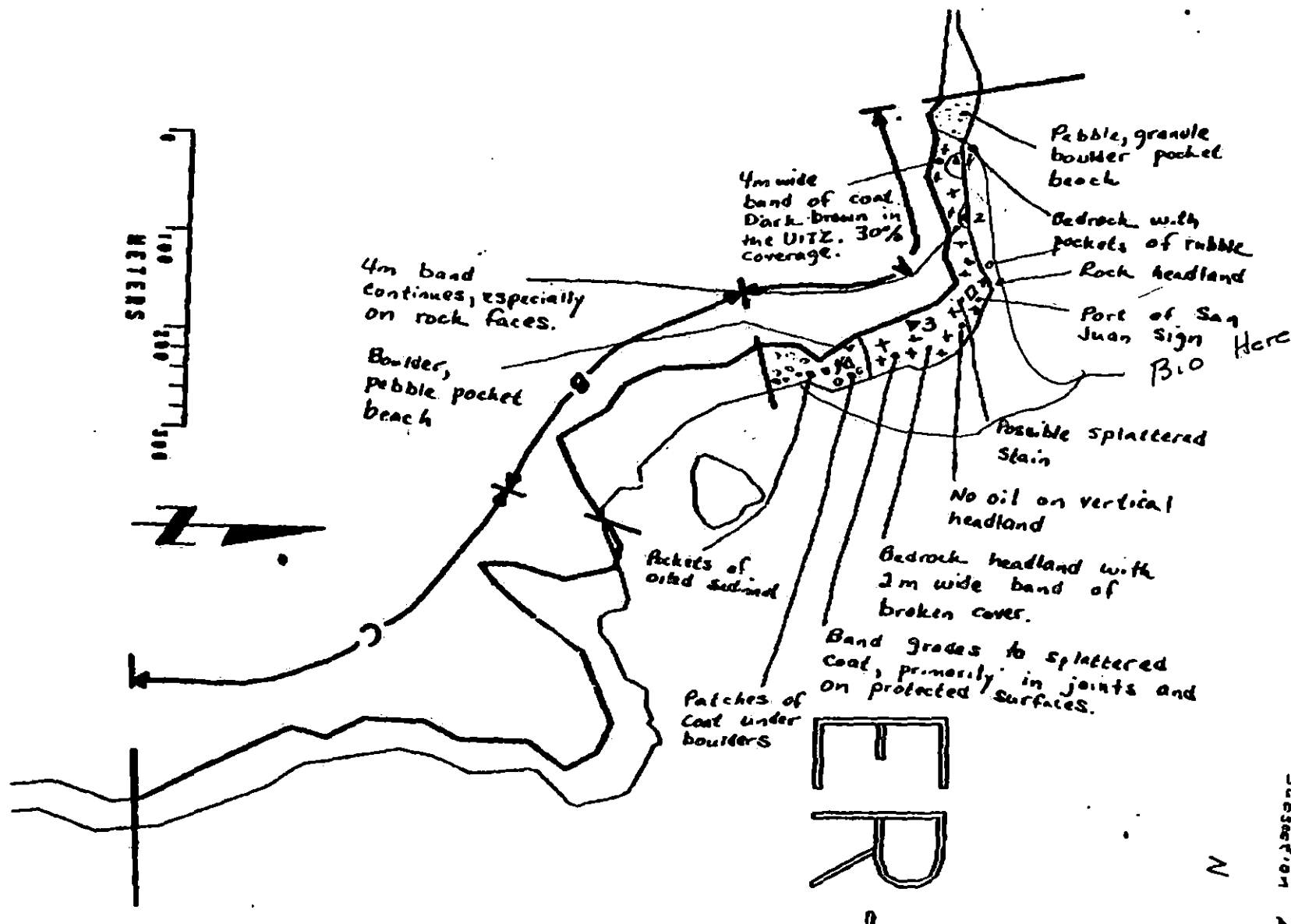
CT/P
Patchy Distribution

CT/S
Splattered Distribution

Oil Vegetation

1 ●
Photo location, direction, and number

SKETCH MAP

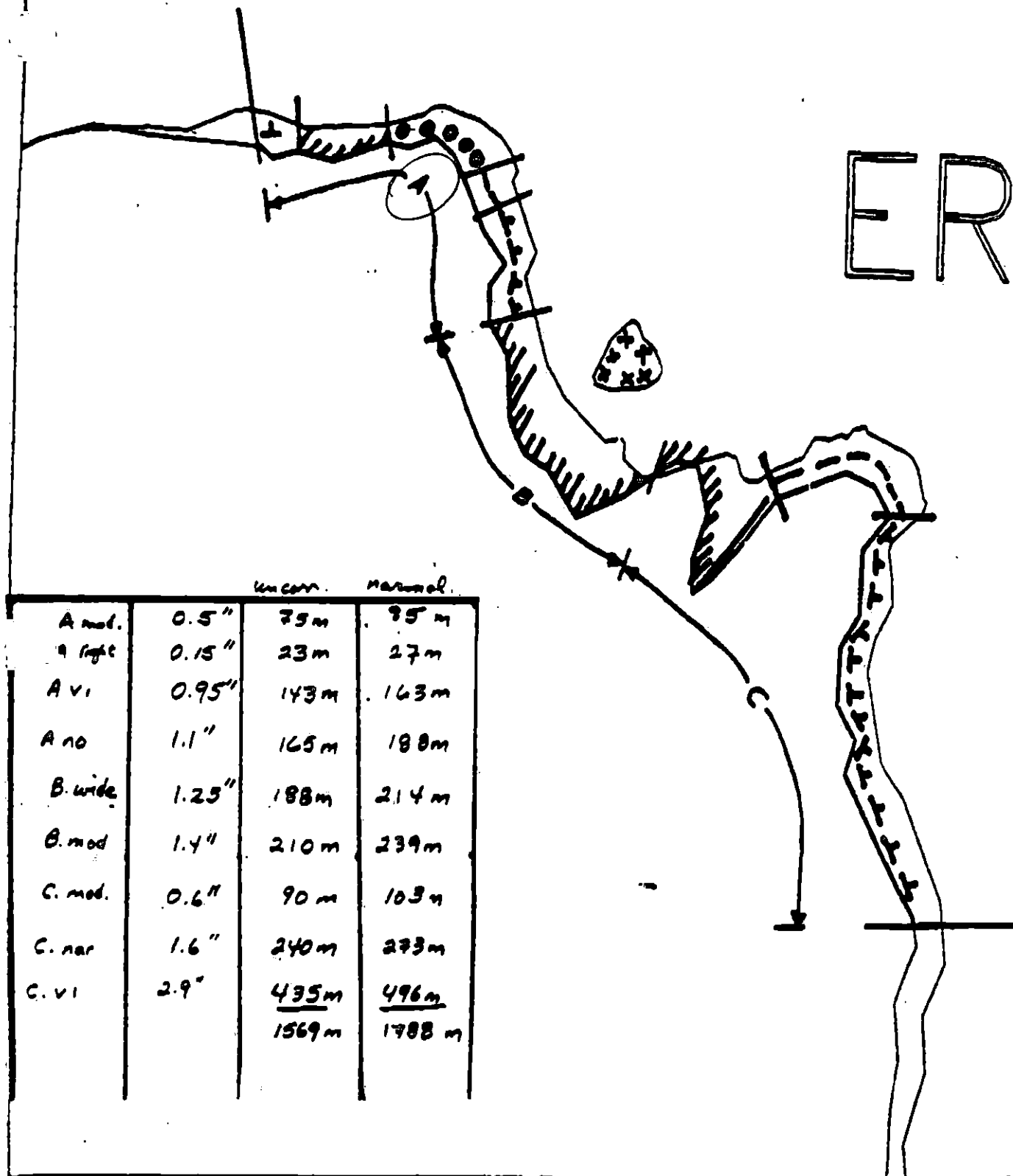


Subsorption A

Oil Character Length (m): AP PO CV 40 CT 210 ST 40 MS PT TB FL NO

REVISION 002/00

ER-



		uncorr.	normal
A mod.	0.5"	75m	95m
A light	0.15"	23m	27m
A v.	0.95"	143m	163m
A no	1.1"	165m	188m
B wide	1.25"	188m	214m
B mod	1.4"	210m	239m
C mod.	0.6"	90m	103m
C nar	1.6"	240m	273m
C. v.	2.9"	<u>435m</u>	<u>496m</u>
		1569m	1788m

15 of 17

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-20 A

ADEC Segment Length: 1667m



Map Key: PWS-157

Name: R. Marty

Date: 7 April 1990

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT ER-20 SUBDIVISION A (1 of 3)

WORK WINDOW

Bioremediation

WORK PRIOR TO 7/1

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1K	Purse Seine Hook-off	Closed to bioremediation after 7/25.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.
7HH	Subsistence: Finfish Harvesting	Closed to bioremediation after 7/1.
7II	Subsistence: Deer Harvesting	Closed to bioremediation after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic to essential minimum after 7/1. Restrict beach disturbance to essential minimum after 8/15. ^{WPK} No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from active nests. Avoid any unnecessary disturbance or damage to unrolled blots and substrate.

FOSC

DATE

6-10-98

Prepared by:

WPKelley

Date:

6/9/98

LV-51

EV-50

EV-52

TREATMENT
AREA

No boat, beach
Aircraft access
USFWS survey
5/26/90

ER-20

ACTIVE
NEST



Exxon Company, USA
Map Key: PMS-ER-20

ECOLOGY MAP

SEGMENT ER-20

SUBDIVISION A (1 of 3)

METERS

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

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT ER-20 SUBDIVISION A DATED 6-10-90MODIFICATION CLASS I ✓ CLASS II CLASS III

1. REASON FOR MODIFICATION

CURRENT WORK ORDER ADDENDUM SPECIFIES BIOREMEDIATION

2. SUGGESTED ADJUSTMENT TO WORK PLAN

LAND MANAGER (CVC) WISHES TO DELETE BIOREMEDIATION

3. TIMING ISSUES

None

ADEC

Dale W. Dandrea

EXXON

M. D. Jones 8/14/90

USCG

Gary J. Perry

LAND MANAGER

Marko Matis (DNR) (If field rep is on scene)

-ING ON CU/SOR WAS LOCATED ON BOTH SIDES OF THE
-HE SOR WAS LOOSE, GRANULAR MATERIAL THAT WAS BROKEN
BY THE CROW. THE CU WAS SET IN BOWLS IN THE ATTENTION HQ 7/27/98
N OF THE SITE. THIS AREA SHOW SIGNS OF PREVIOUS
-IN THE STREAM WAS NOT CATASTROPHIC AS DID THE. ANNA. MAD/RUM. ETC.

SHORELINE EVALUATION

SEGMENT ST/ ER-20 SUBDIVISION B (2 OF 3) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7HH Subsistence area: Finfish harvesting
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles H. Jones DATE: 4/23/90

OILING CATEGORIZATION:

Wide_221*m: Medium_320**m: Narrow_0 m: V.Light_0 m: No Oil_0 m
Subsurface Oil Observed: Yes X No Maximum Depth 46+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: <u> </u> Breakup	<u> </u> <u> </u> Beach Cleaner
<u> </u> <u> X </u> Removal	<u> </u> Other (see comments)

COMMENTS: Recommend 1) removal of tar mat and asphalt patches, and 2) bioremediation with raking of areas indicated on sketch map.

* 221m Exxon length (no islet shown on ADEC map)
** 320m ADEC length

TAG COMMENTS: _____

TAG APPROVAL DATE: 4/21/90.
ADEC: Art Weiner Art Weiner
EXXON: Andy Tan Andy Tan
NOAA: Bud Wesscott Bud Wesscott
USCG: Kenneth Kane Kenneth Kane

FOSC: ✓ DATE: 4-27-80

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 8/1)
- 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.

SEGMENT ST/ ER20 SUBDIVISION: R DATE 28 APRIL 9

USCG

NAME LARRY FLETCHER SIGNATURE Larry R Fletcher

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

ENTIRE SUB DIVISION HAS HEAVY SUB-SURFACE OIL. NO SHEEN SIGHTED AT THIS TIME, HOWEVER THE HEAVY OILING MAY BEGIN TO SHEEN LATER DURING WARM WEATHER.

ADEC

NAME DAVID M. SAGE SIGNATURE David M Sage

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

This section remains very badly oiled, and, because of proximity to hatching and the village of Chonega, should be completely cleaned up. All treatment methods should be considered.

- ① wash oil with high pressure foam bottom feeder
- ② remove and/or clean oiled sediments below boulder piles
- ③ oiled sediments in main beach area will either require flushing by implantation of pipe in upper beach; or removal of sediments. Attention should be paid to oiled gravel & debris in upper beach near stream.

LAND MANAGER

NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

Uses for the area include subsistence finfish and deer harvesting. This subdivision contains a salmon stream which is oiled and should be looked at by ADF+G. The segment is heavily oiled and will need some type of washing or other intensive method to remove it.

SHORELINE OILING SUMMARY

REVISION NO. 03/23/90

OG Richard Marty USCG Larry Fletcher SEGMENT ST/ ER-20
 BIO Bob Lemon LAND REP Lugh Carlson SUBDIVISION B
 EXXON Jon Czarnski ADEC Dave Sale TIME 16:18 to 17:00
 TEAM NO.: 10 TIDE LEVEL +1.7m (5.5) to 0.9m (3.0) DATE 07 April 1990
 EST. SUBDIVISION LENGTH: 453 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 10 % B 10 % C 30 % P 20 % G 20 % S 10 % M 0 % V 0 %
 SLOPE: Lang 100 % Hang 0 % Ven 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 244 m M 239 m N 0 m VL 0 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	N	NE	E	SE	1	2	3	4	5	6	7	8	SU	U	M	U
ASPHALT PAVEMENT			X							X				X	X	X
POOLED																
COVER	X			✓					X	✓			X	X	X	
COAT		X							X				X			
STAIN			X	✓					X	✓			✓	✓	✓	
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL													X			

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs		X	
Vegetation		X	
Trash		X	
Debris		0	

DEBRIS COLLECTED
☐ YES ☒ NOTYPE 0#BAGS 0

Photographs:

Oiled debris concentrated on island and in storm berm

Roll No. ST/10/10

1-14

Frames and ST/10/9

24-38

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			1	2	3	4	5	6	7	8			
1	18	X					0-15	X					X				X	N	granules
2	6	X					0-6	X				X					X	N	Granules, Pebbles
3	46			X			6-46	X					X				X	N	Granules, Pebbles
4	34					X	.	X									X	N	G, P
5	43			X			17-24	X				X					X	N	G, S, Peat
6	35			X			10-35	X				X					X	N	G, S, Peat

Pits continued on separate sheet

COMMENTS

Revision

RM 8 April 1990

* oil ≤ 5 cm deep not constituting
 subsurface oiling.

78/17

SHORELINE OILING SUMMARY (PAGE ___ OF ___)

REVISION 03/23/90

SEGMENT ST/ ER 20 SUBDIVISION 8

SUBSURFACE OIL (CONTINUED)

Pits continued from previous page

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL Can - on POLLING	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	VC	SP	BP	BR	TR	OT	BL	GR	TR	SV	U	M	U		
7	40					X	.											X				N	G, S, Peat
8	43			X			11 - 43	X						X					X			N	G, S, Peat
* 9	6			X			1 - 22	X						X						X		N	G, S, Peat
10	17					X	.													X		N	G, S
11	20					X	.													X		N	G, S
12	25					X	.												X			N	P
* 13	25			X			10 - 16		X					X				X				N	P
* 14	27	X					0 - 27	X						X				X				N	P
* 15	34	X					0 - 4		X					X				X				N	S, G
16	50					X	.													X		N	G
							.																
							.																
							.																
							.																

COMMENTS

Revision

RM 07 April 1990

* oil is being done for
constitute subsurface oil.

8/17

REVIEWED _____ DATE _____

SHORELINE ECOLOGICAL SUMMARY

Segment ST 10 / ER 30 Subdivision B Date (mo / day / yr) 4 / 7 / 90
 Time (24 hr) 1530-1700 Biologist Lemon

REVISION: 03/22/90

- (A) Substrate type and % of segments:
 (1) Bedrock 10 (2) Boulder 10 (3) Cobble 30 (4) Pebble 20 (5) Sand 30 (6) Silt _____
- (B) Overall % cover of biota (% of segment): Dense _____ Moderate _____ Low 20
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs: Roll No. ST 10/10 and ST 10/9

Frames 1-14 and 24-38

BARNACLES

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

NOT PRESENT

ASTROPODS

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

NOT PRESENT

Wildlife Observations/ General Comments: This subdivision is exposed to a 70 mile NE. fetch and gets a lot of spray and it also got a lot of oil. therefore large areas are unoccupied - 16 pits were dug in this subdivision.

Ecological Considerations: Stream mouth spawning, finfish forage, deer forage.

10817

Area of asphalt 20m x 9m x 20% cover
 pavement in 1960s
 in 1960s 20m x 9m x 20% cover
 Small 10' x 10' box
 soft, 1.5m cover.

Possible
platform
Join

$\therefore \frac{7}{10} = \frac{L}{36\%}$

Port San Juan

No. 1 on
Ve. front hand land

Redrock headlands with
2m wide band of black
cover on rocks.

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

ADC Segment Length: 1667

LETTERS

Map Key: PWS-157
Name: _____
Date: _____
Date Entered: _____

一、

"posted out"

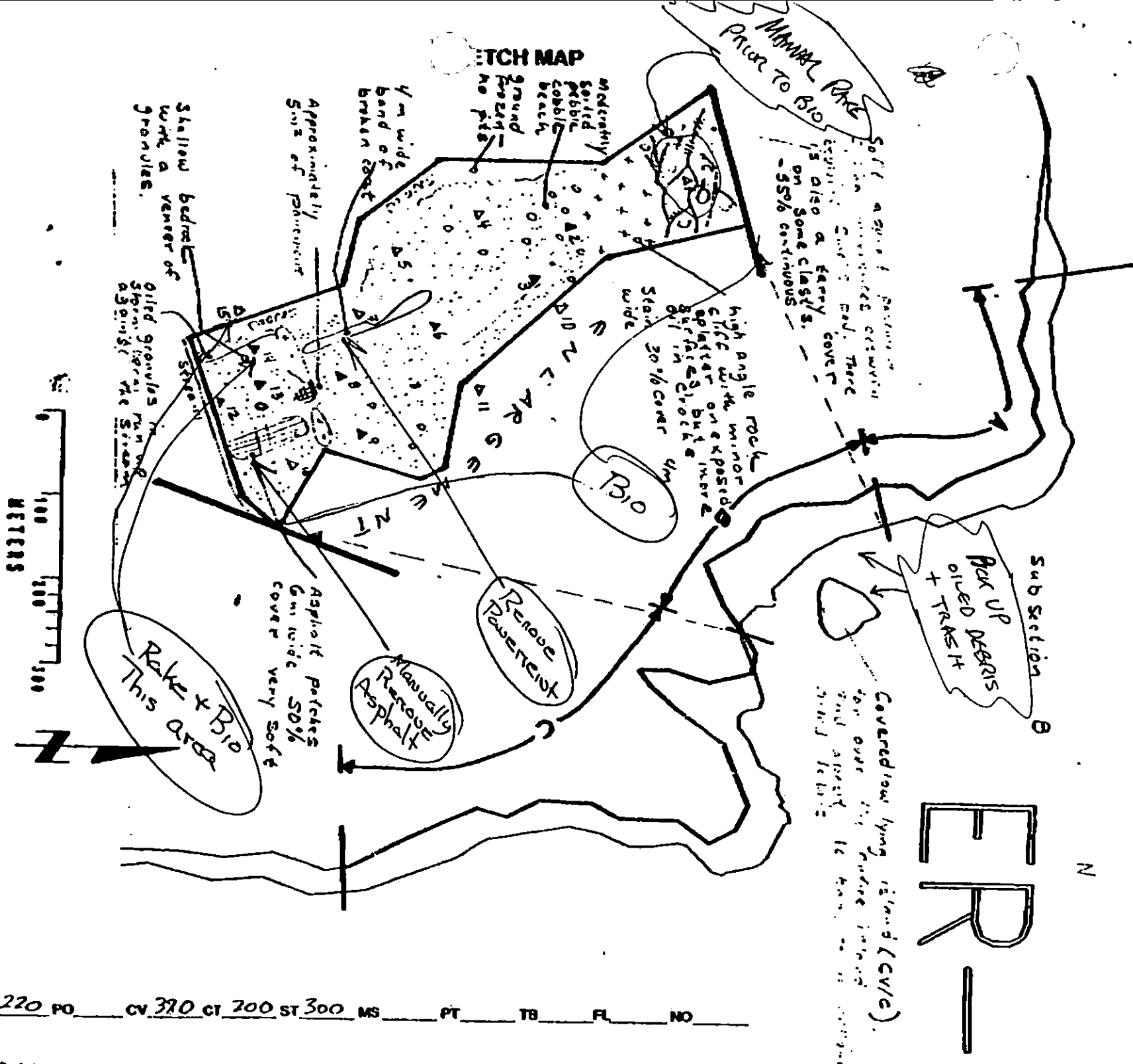
OG R.1
 SEGMENT VII ER 20
 SUBDIVISION 6
 DATE 7 April 90

CHECKLIST

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

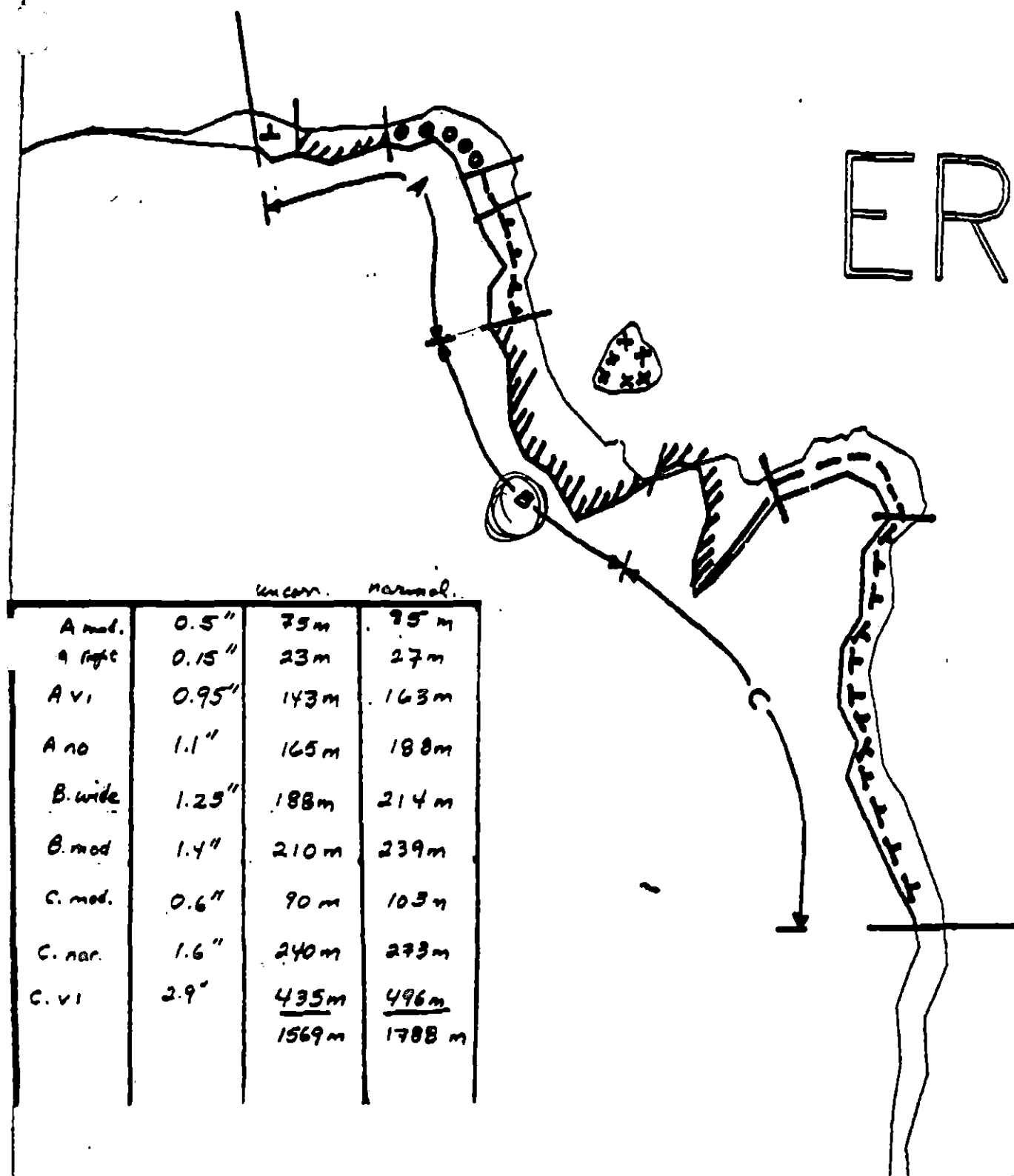
LEGEND

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



Oil Character Length (m) AP 220 PO CV 370 CT 200 ST 300 MS PT TB FL NO

ER-



15 of 17

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-20

ADEC Segment Length: 1667m



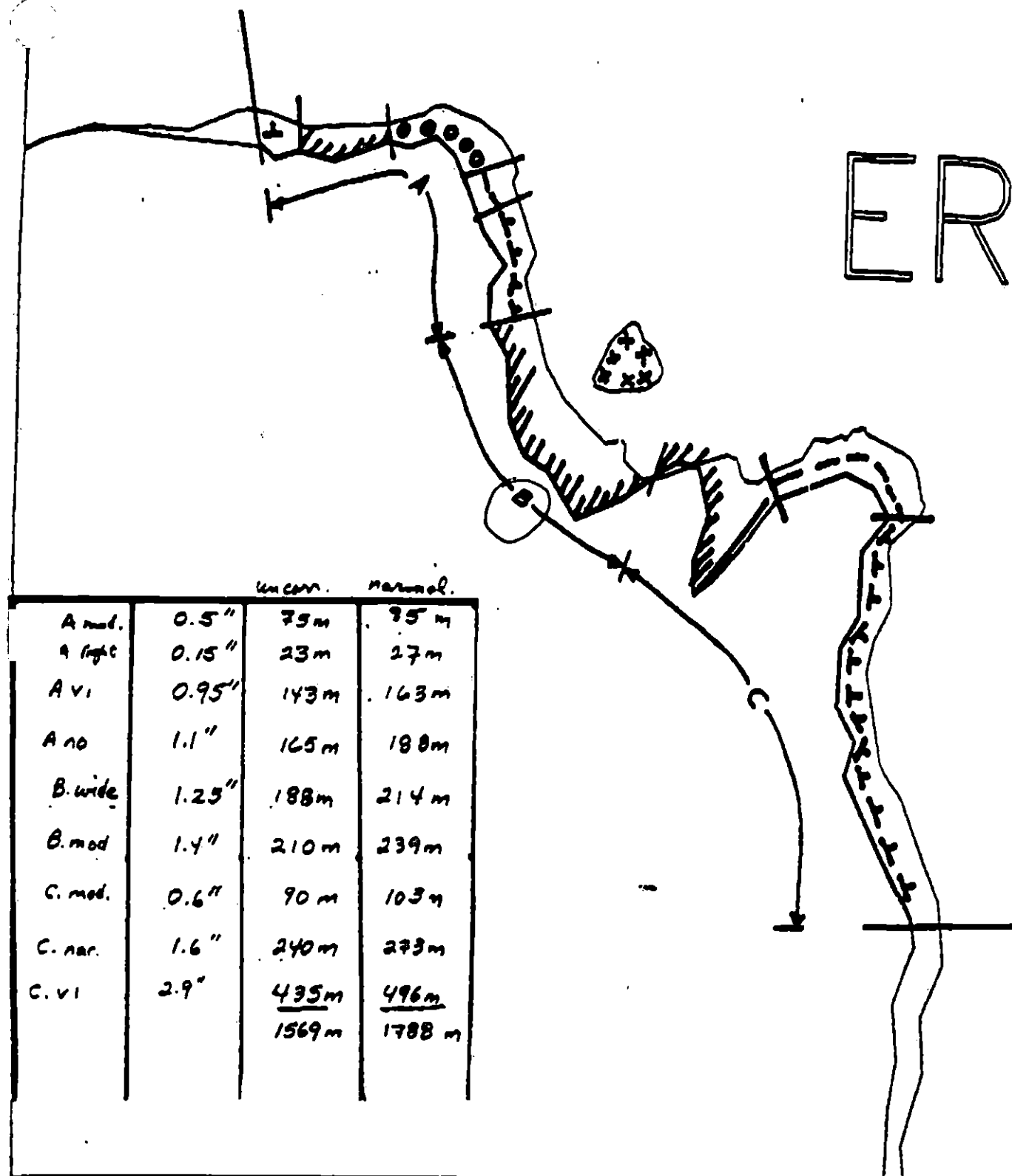
Map Key: PWS-157

Name: R. Marty

Date: 7 April 1990

Date Entered:

ER-



15 of 17

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-20

ADEC Segment Length: 1667m



Map Key: PWS-157

Name: R. Marty

Date: 7 April 1990

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT ER-20 SUBDIVISION B (2 of 3)

WORK WINDOW	
Manual Pickup Tarmat Removal	CLOSED
Bioremediation Manual Raking	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1K	Purse Seine Hook-off	No constraint to manual pickup and tarmat removal; closed to bioremediation and manual raking after 7/25.
5T	Bald Eagle Nest	USFWS 6/1/90 map indicates an active nest in Subdivision A. Closed to manual pickup, tarmat removal, manual raking, and bioremediation within 400m of active nest.
7HH	Subsistence: Finfish Harvesting	No constraint to manual pickup and tarmat removal. Closed to bioremediation and manual raking after 7/1.
7II	Subsistence: Deer Harvesting	No constraint to manual pickup and tarmat removal; closed to bioremediation and manual raking after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

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

Prepared by: W. Kelley

FOSC

DATE 6-10-90

Date

6/9/90

LV-51

EV-50

EV-52

ER-20

No Boat, beach
Aircraft Access
USFWS Survey
5/26/90
(Lockhart)

ACTIVE
NEST

TREATMENT
AREA



Exxon Company, USA
Map Key: PWS-ER-20
June 04, 1990

ECOLOGY MAP SEGMENT ER-20

SUBDIVISION B (2 of 3)

METERS

0 417 834



Seabird Colony



Active Eagle Nest



Inactive Eagle Nest

1 inch = 1368 feet

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT ER-20 SUBDIVISION B DATED 6-10-90MODIFICATION CLASS I ✓ CLASS II CLASS III

1. REASON FOR MODIFICATION

CURRENT WORK ORDER ADDITION SPECIFIED MAJOR PUMP,
TANK REMOVAL, MAJOR PUMPING AND BIOREMEDIATION
LAND MANAGER (CVC) WISHES TO DELETE BIOREMEDIATION.

2. SUGGESTED ADJUSTMENT TO WORK PLAN

LAND MANAGER (CVC) WISHES TO DELETE BIOREMEDIATION
DELETE BIOREMEDIATION

3. TIMING ISSUES

NONE

ADEC Dale W. GardnerEXXON Mojoer 8/14/90USCG Harry J. PerryLAND MANAGER Marka Mather (DNR) (If field rep is on scene)

SEGMENT ST/ ER-20 SUBDIVISION C (3 OF 3) DATE 4/7/90

SEGMENT ST/ ER-20 SUBDIVISION C (3 OF 3) DATE 4/7/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

7HH Subsistence area: Finfish harvesting

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. Stream mouth in segment Subdivision C is not recorded in ADF&G anadromous catalogue (USGS Seward A-3, Rev. 12/89).

SHPO SIGNATURE: Markus J. Hines DATE: 4/23/90

OILING CATEGORIZATION:

Wide 0 m: Medium 318 m: Narrow 147 m: V.Light 462 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 40 cm

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> X </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> X </u> Other (see comments)

COMMENTS: Manual pick up of oiled debris. Spot wash using pom poms to control sheen. Burn logs and debris if approved. Bioremediation with mechanical tilling. MECHANICAL TILLING SHOULD NOT BE ALLOWED IN THE AREA OF DENSE MUSSEL BEDS IN THE LITZ

TAG COMMENTS: _____

TAG APPROVAL DATE: 4/21/78

ADEC ART WEINER Art Weiner

EXXON AMT TAZ Real

NOAA Bull Wescott Bull Wescott

USCG KENNETH KEANE *Kenneth Keane*

FOSC: DATE: 4-27-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
- 1D Esther Hatchery release (4/15 to 6/1)
- 1E Main Bay Hatchery release (4/20 to 5/10)
- 1F Sawmill Bay Hatchery release (4/15 to 6/1)
- 1G Cannery Creek Hatchery release (4/21 to 6/1)
- 1H Remote release site
- 1I Gill net area (6/7 to 8/31)
- 1J Purse seine area (7/20 to 9/30)
- 1K Purse seine hook-off (7/20 to 9/30)
- 1L Set net sites (6/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 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.

APR-06-1990 22:22 FROM BRASUS SEAFORSE TO CAPT WOODWARD F.12
SEE ATTACHED COMMENT SHEET

SEGMENT ST/ ER20 SUBDIVISION: C DATE 08 APRIL 9

USCG

NAME LARRY FLETCHER SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

THIS SUB DIVISION IS HEAVILY OILED. NO SHEEN SIGHTED AT THIS TIME, HOWEVER IT MAY BEGIN TO SHEEN LATER DURING WARM WEATHER.

ADEC

NAME DAVID M. SAE SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

- ① BADLY TARRED COAT ON BEDROCK MUST BE WASHED UNTIL STAIN REMAINS.
- ② OILED SEDIMENTS MUST BE REMOVED OR CLEANED IN PLACE WITH ROCK WASHING.
- ③ OIL TAIL ON SURFACE OF BEACH [ENLARGEMENT] WAS BECOMING MOBILE IN WARM SUN.
- ④ REMOVE OILED DEBRIS.
- ⑤ BIOREMEDIATION

LAND MANAGER

NAME Leigh Carlson SIGNATURE Leigh Carlson ADNIR

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

Uses for the area include subsistence finfish and deer harvesting.

This subdivision needs more treatment than just manual removal and bioremediation. Will need to use some type of washing method.

12417

SHORELINE OILING SUMMARY

REVISION NO. 03/23/90

OG Richard Marty USCG Larry Fletcher SEGMENT ST/ ER-20
 BIO Bob Lemon LAND REP Lugh Carlson SUBDIVISION C 172
 EXXON Jan Czarnoki ADEC Dave Sale TIME 17:00 10:19:00
 TEAM NO.: 10 TIDE LEVEL: 10.9m (10.15m 0.5) DATE 07 April 1990
 EST. SUBDIVISION LENGTH: 272 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: 1 to 5
 SURFACE SEDIMENTS: R 15 % B 30 % C 15 % P 15 % G 15 % S 5 % M 5 % V 5 %
 SLOPE: Long 90 % Hang 10 % Vert 5 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 103 m N 273 m VL 496 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	B	P	R	1	2	3	4	5	6	7	8	SU	U	M	V
ASPHALT PAVEMENT				X						X			X			
POOLED		X								X					X	
COVER		X	0	✓						X			X		0	
COAT				X						X			X			
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL																X

PAVEMENT: H F (S) 5 sq. m by 5 cmPATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash	X		
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE _____

#BAGS 0

Photographs:

Roll No. ST/10/10Frames 15-26

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		VO	VO	1	2	3	4	5	6	7	8	SU	U	M	V		
* 1	24	X					0-4		X					X				X				Y	P, M
* 2	15			X			2-4		X	X								X				Y	Point, Pebbles
3	37					X	.											X				N	P, S
* 4	15	X					0-15	X					X					X				N	G, S
* 5	6			X			1-6	X					X					X				N	S
* 6	62			X			6-40	X										X					G

COMMENTS

Revision

RM 07 April 1990

* oil depths $\leq$ 5m & not

constitute submergence.

11 of 17

SUBSURFACE OIL (CONTINUED)

[illegible]

COMMENTS

Pil 7 - light silver sheen on water in pil

Revision

RM 7 April 1990

16817

REVIEWED _____ DATE _____

SHORELINE ECOLOGICAL SUMMARY

REVISION: 09/25/90

Segment ST/10/22 Subdivision C Date (mo / day / yr) 4 / - / 77
 Time (24 hr) 1700 - 1700 Biologist Lemon

- (A) Substrate type and % of segments:
 (1) Bedrock 15 (2) Boulder 30 (3) Cobble 15 (4) Pebble 15 (5) Sand 20 (6) Silt 5
- (B) Overall % cover of biota (% of segment): Dense Moderate 55% Low
- (C) Density, substrate preference (by number from A. above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:
 Roll No. 57/10/10

Frames 15 - 215

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

ASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments: Gastropods include Onchidella borealis, oligochaetes under drift line, oligochaetes living in pit at pit 1. Most remarkable were Mytilus beaded on 6 cm of oil pit 5. Frame 19 roll 10, many deer tracks, all scat along E. shore.

Ecological Considerations: Inspected stream, no fish larvae - (some quick fish (4cm) dotted away); pit by stream was gilled. Prototheca staminea (BIVALVE) shells not uncommon suggesting possible oyster beds of commercial value. Stream mouth spawning. fin fish harvest, deer harvest.

179/17

OG P. d. Marty

SEGME 11 ER 20

SUBDIVISION C

DATE 7 April 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Endry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HRA/L/VL
- ☐ 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

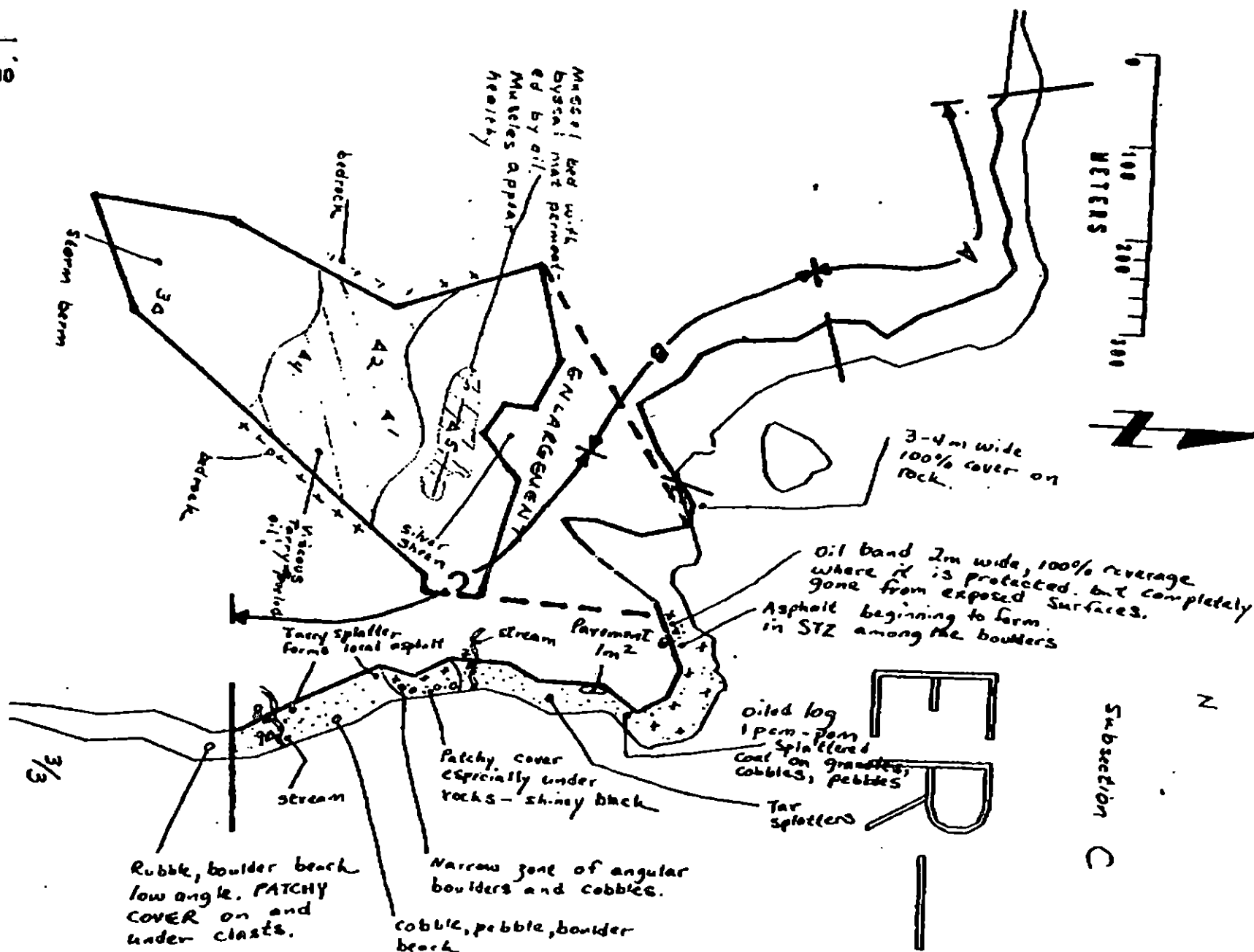
CT/P
 Patchy Distribution

CT/S
 Splashed Distribution

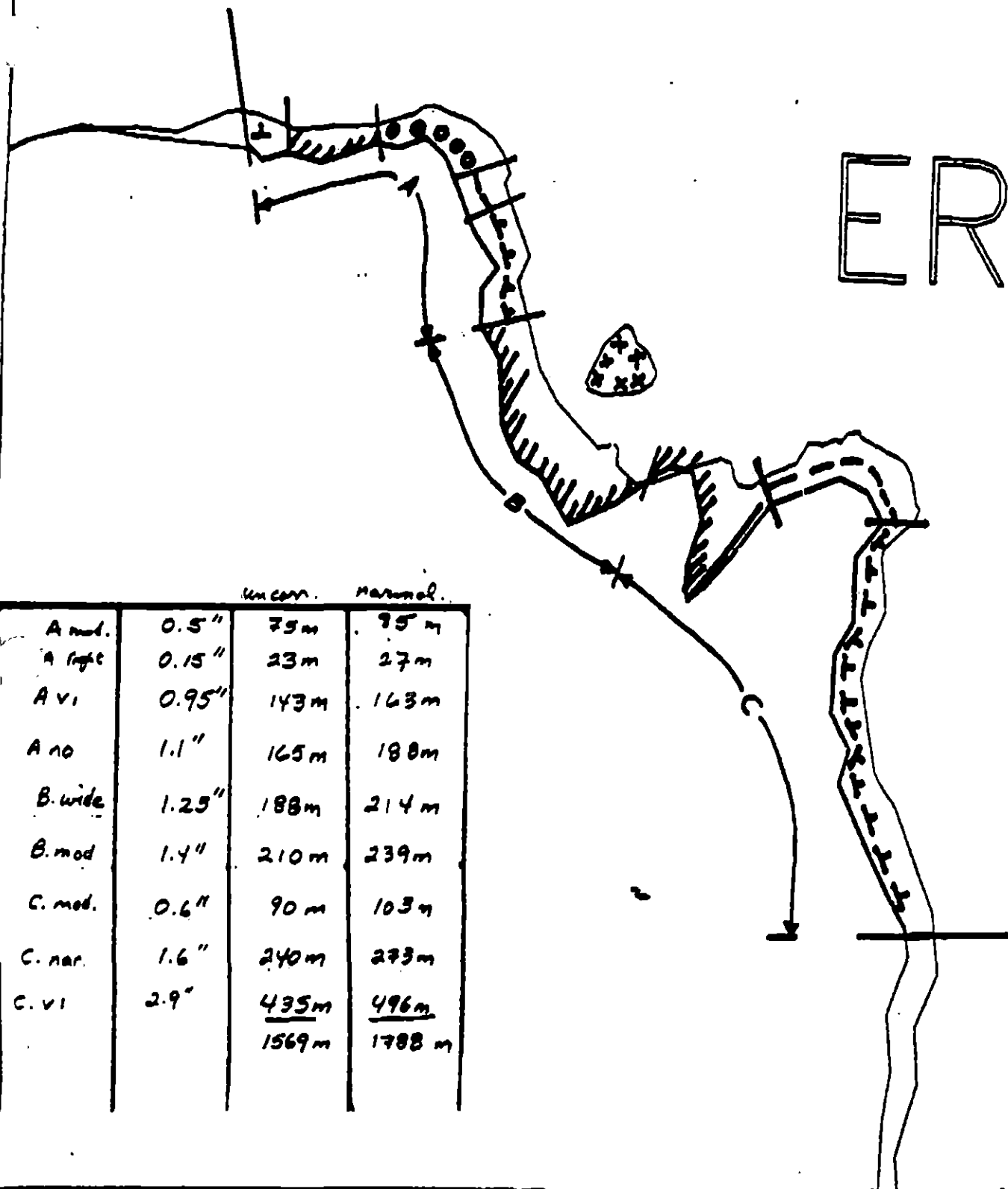
Oiled Vegetation

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

KETCH MAP



Oil Character Length (m) AP 5 PO 60 CV 70 CT 735 ST MS PT TB FL NO



		uncorr.	normal.
A. med.	0.5"	75m	95m
A. light	0.15"	23m	27m
A. vi	0.95"	143m	163m
A. no	1.1"	165m	188m
B. wide	1.25"	188m	214m
B. mod	1.4"	210m	239m
C. med.	0.6"	90m	103m
C. nar.	1.6"	240m	273m
C. vi	2.9"	<u>435m</u>	<u>496m</u>
		1569m	1788m

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-20

ADEC Segment Length: 1667m

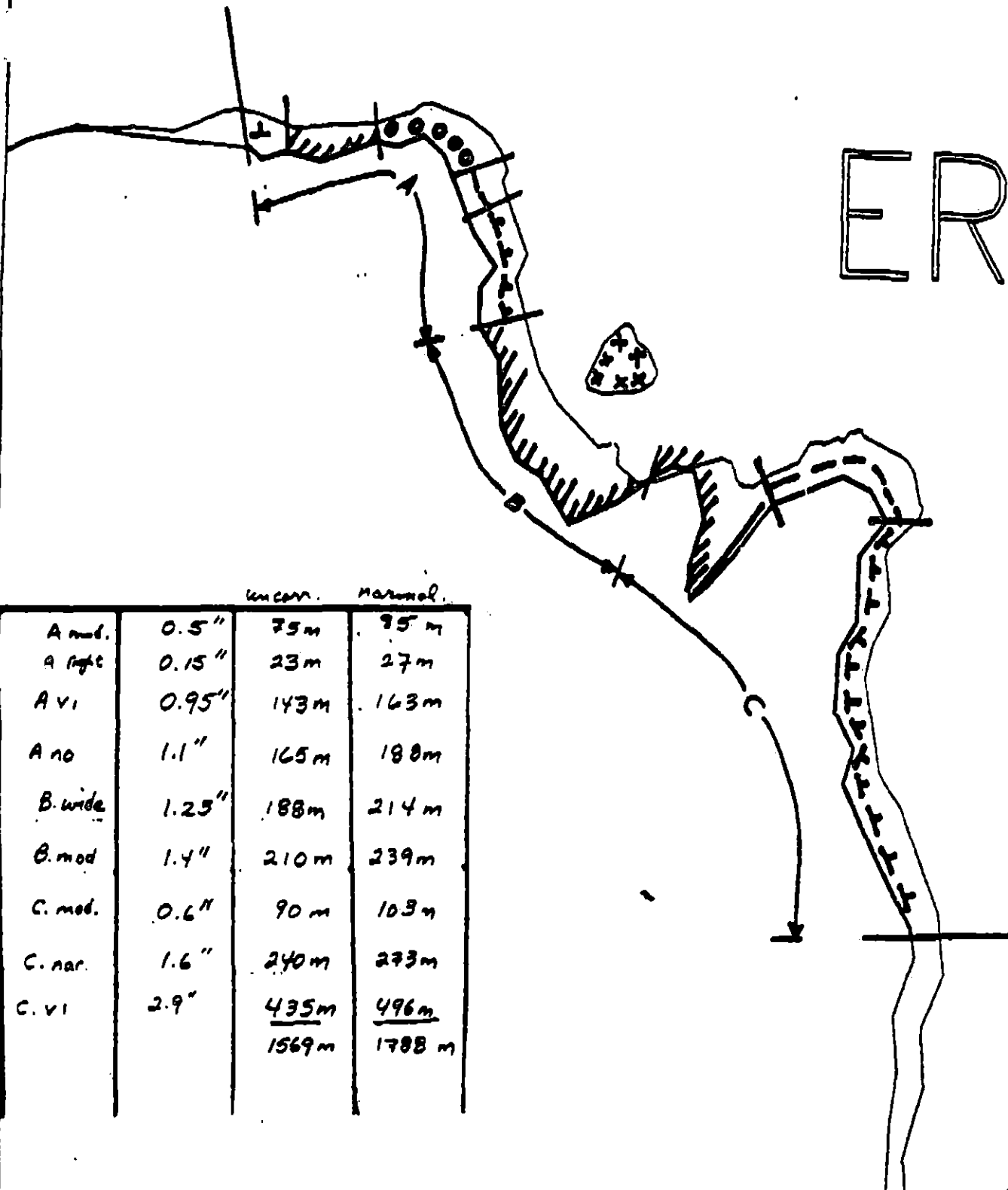


Map Key: PWS-157

Name: R. Marty

Date: 7 April 1990

Date Entered:



ER-

uncorr. normal.

A mod.	0.5"	75m	95m
A light	0.15"	23m	27m
A vi	0.95"	143m	163m
A no	1.1"	165m	188m
B wide	1.25"	188m	214m
B mod	1.4"	210m	239m
C mod.	0.6"	90m	103m
C nar.	1.6"	240m	273m
C vi	2.9"	<u>435m</u>	<u>496m</u>
		1569m	1788m

15 of 17

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-20

ADEC Segment Length: 1667m



Map Key: PWS-157

Name: R. Marty

Date: 7 April 1990

Date Entered:

WORK PLAN ADDENDUM

Segment ER-20

Subdivision: C

Dated: 5/9/90

MODIFICATION

1. REASON FOR MODIFICATION

- Snow melt in SUITZ revealed additional tarmats, requested from field for further clarification to continue access and removal of asphalt lens.

2. ADJUSTMENT TO WORK PLAN

- Manually remove asphalt lens that continues under the storm berm.
Manually rake down clean storm berm material into the UITZ to access
the lens where practical. Clean material removal should not exceed
a depth of 12".
- Consultation with Cultural Resource Staff indicates no concern
archaeologically no further action required.

SHPO APPROVAL NEEDED YES

NO X

SHPO SIGNATURE _____

TAG APPROVAL DATE 5/9/90.

ADEC	ART WENNER	Art Wenner
EXXON	ANNY TEAL	Anny Teal
NOAA	Burl Wescott	Burl Wescott
USCG	D. D. ROME	DD Rome

FOSC W L DATE 5-9-80

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT ER-20 SUBDIVISION C (3 of 3)

WORK WINDOW	
Manual Pickup	CLOSED
Bioremediation Mechanical Tilling Spot Washing Other Approved Treatment	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1K	Purse Seine Hook-off	No constraint to manual pickup and oiled log/debris burning; closed to bioremediation, mechanical tilling, spot washing, and other approved treatment after 7/25.
5T	Bald Eagle Nest	USFWS 6/1/90 map indicates an active nest in Subdivision C. Closed to manual pickup, bioremediation, mechanical tilling, spot washing, and other approved treatment within 400m of active nest. No constraint to manual pickup, bioremediation mechanical tilling, spot washing, and other approved treatment more than 400m from active nest.
7HH	Subsistence: Finfish Harvesting	No constraint to manual pickup. Closed to bioremediation after 7/1.
7II	Subsistence: Deer Harvesting	No constraint to manual pickup. Closed to bioremediation, mechanical tilling, spot washing, and other approved treatment after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

Date

6-12-90

Prepared by

Date

6/12/90

LV-51

▲ 434

▲ 375

▲ 435

▲ 437

▲ 436

EV-50

EV-52

ER-20

TREATMENT AREAS

ACTIVE NEST

▲ 368

Eagle Nest
Buffer Zone



Exxon Company, USA

Map Key: PMS-ER-20

~~Rev. 11, 1988~~ 6/4/90

ECOLOGY MAP
SEGMENT ER-20
SUBDIVISION C (3 of 3)

METERS

0 417 834

- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1368 feet

WORK PLAN MODIFICATION RECOMMENDATION

SEGMENT ER-20C SUBDIVISION C DATED 6-12-90MODIFICATION CLASS I / CLASS II CLASS III

1. REASON FOR MODIFICATION

CURRENT WORK ORDER ADDENDUM SPECIFIES MINUTE AERUP,
BIOREMEDIATION, MECHANICAL TILLING, SPOT GRASSING-
LAND MANAGER (CVC) WISHES TO DELETE BIOREMEDIATION

2. SUGGESTED ADJUSTMENT TO WORK PLAN

DELETE BIOREMEDIATION

3. TIMING ISSUES

NONE

ADEC Dele W. GardnerEXXON M. D. Spence 8/16/90USCG Harry D. PerryLAND MANAGER Steve M. Martin (If field rep is on scene)

Steve M. Martin (DNR)

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT ER-20 SUBDIVISION C (3 of 3)

WORK WINDOW	
Manual Pickup	OPEN CLOSED
Bioremediation	OPEN CLOSED
Mechanical Tilling	
Spot Washing	
Other Approved Treatment	

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1K	Purse Seine Hook-off	No constraint to manual pickup and oiled log/debris burning; closed to bioremediation, mechanical tilling, spot washing, and other approved treatment after 7/25.
5T	Bald Eagle Nest	USFWS 6/1/90 map indicates an active nest in Subdivision C. Closed to manual pickup, bioremediation, mechanical tilling, spot washing, and other approved treatment within 400m of active nest. No constraint to manual pickup, bioremediation mechanical tilling, spot washing, and other approved treatment more than 400m from active nest. OPEN AS PER USFWS SURVEY OF 7/12 TUMKWAY OPEN AS PER DISCUSS! W/ GAIL EMM ON 7/20/90 ATTACHED (Note)
7HH	Subsistence: Finfish Harvesting	No constraint to manual pickup. Closed to bioremediation after 7/1.
7II	Subsistence: Deer Harvesting	No constraint to manual pickup. Closed to bioremediation, mechanical tilling, spot washing, and other approved treatment after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

Date 6-12-90

Prepared by

Date 6/12/90

Change Revision
G.A. Reiter
for FOSC

FAX TRANSMITTAL COVER SHEET

WE ARE TRANSMITTING VIA A RICOH FAX 07

OUR NEW FAX NUMBER IS 907-573-5135

DATE: July 11, 1990
TIME: 2:30p

SENT TO: EXXON

ATTENTION: TOM KELLY

THIS FAX IS BEING SENT BY: Gail EVANOFF 

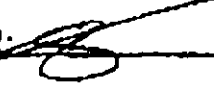
NUMBER OF PAGES (INCLUDING THIS SHEET): 1

FAX 564-3771

IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL BACK AS SOON
AS POSSIBLE. (907) 573-5118.

.....
☐ ORIGINALS WILL BE SENT VIA: ☐ US MAIL - EXPRESS MAIL
☐ US MAIL - FIRST CLASS
☐ HAND DELIVERY - _____
☐ ORIGINALS WILL NOT BE SENT ☐ OTHER - _____
.....

NOTE. RE: ER 20 (B) (C). CVC is willing to extend the
workwindow up to July 25, 1990 for manual raking and pickup to
proceed. NOTE: I have not been able to confer with CVC land Mgrs.
regarding segment readiness for bioremediation. CVC proposes to submit
its recommendation 7/12/90. Thank you.

FAX OPERATOR: 



Discussed ER20C with Gail E. 7/24/90
Asked Gail if we could go in to finish Manual work
and Bio, even though after July 1 date (Subcutaneous)
She said OK. T told her. need look at brown area

REVISED 01/10/89
BY DJT

SHORELINE EVALUATION

SEGMENT ST/ ER-21 SUBDIVISION A (1 OF 1) DATE 4/23/90

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.

SHPO SIGNATURE: Charles E. Adams DATE: 5/3/90

OILING CATEGORIZATION:

Wide_0_m: Medium_0_m: Narrow_0_m: V.Light_179_m: No Oil_3010_m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

☒ No Treatment Recommended
☐ Treatment Recommended
☐ Manual Pickup
☐ Bioremediation
☐ Tarmat Removal

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

COMMENTS: _____

TAG COMMENTS:_____

TAG APPROVAL DATE: 5/3/80.

ADEC ART WEINER Art Weiner

EXXON NOT TOL Real

NOAA Gary Peterson

USCG KENNETH KESTER

FOSC: ML DATE: 5-8-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A** Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 1C** Salmon fry nursery area (4/31 to 7/31)
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D** Esther Hatchery release (4/15 to 8/15)
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 uncultivated intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 3N, 3P** Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- SR** 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
- SS** 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 267-2205
- ST** 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 (6/1 to 9/15)
6W Forest Service cabins (6/1 to 9/15)
6X Lodge (6/1 to 9/15)
6Y Special use destination
- 7Z** Subsistence area: Salmon harvesting (5/1 to 9/30)
 Finfish harvesting
 Deer harvesting (8/15 to 2/28)
 Invertebrate harvesting
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / ER-21 SUBDIVISION: A-1 of 1 DATE 04-23-90

SCG
NAME Michael Buchanan SIGNATURE M Buchanan

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

ADEC
NAME John Hayes SIGNATURE J Hayes

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
MENTS

Walked entire segment. Only oiling observed
was light discontinuous tar/stain band at U.I.T.Z.

LAND MANAGER
NAME MARSHIA MARTIN / DNR SIGNATURE Marshia Martin

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

Rare splatters of stain & coat.

SHORELINE OILING SUMMARY

REVISION NO. 06/13/90

OG Mike Foget ^{NOAA} uses Mike Buckman SEGMENT ST/ ER-21
 BIO Kathleen Conlin LAND REP DJR Marsh Marin SUBDIVISION A (1 OF 1)
 EXXON Larry Olson ADEC John Hayes TIME 16:00 17:45
 TEAM NO. 11 TIDE LEVEL +5.5 → +1.5 DATE 4/23/90
 EST. SUBDIVISION LENGTH: 3163 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☒ Rock steep rocky cliff Backshore
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 25 % B 50 % C 20 % P 5 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 10 % Hang 80 % Vert 10 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 180 m NO 3083 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	W	M	N	VL	1	2	3	4	SU	U	M	L
ASPHALT PAVEMENT												
POOLED												
COVER												
COAT					X					X		
STAIN			X	X	X					X		
MOUSSE												
PATTIES												
TARBALLS												
FILM												
NO OIL									X		X	X

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

OILED DEBRIS	AMOUNT			DID YOU COLLECT DEBRIS?
	SM	MD	LG	
Logs				YES ☐ - NO ☒
Vegetation				
Trash				
Debris				
				TYPE <u>0</u>
				#BAGS <u>0</u>

Photographs:

Roll No. 0Frames 0

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR				PIT ZONE				ANALYSIS	SHEEN (N/A)	↓	SURFACE - SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		US	UC	1	2	3	4	SU	U	M	L				
1	20					X	-	X						X				N	-		B, C, G
2	40					X	-	X						X				N	-		P
3	20					X	-	X						X				N	-		P, B
							-														
							-														
							-														

COMMENTS Shore Zone consists mostly of high angle Boulder / Rock Beach with a large Boulder / Cobble beach at the southern end of the segment. Some ST/S staining was observed in the HITZ which was <<10% distribution. Some of the Boulders had a small amount of coating.

REVIEWED 7W DATE 4/25/90

OG M.K. Cooper

SEGMENT S₁ - R-21

SUBDIVISION A

DATE 4 / 23 / 90

CHECKLIST

☐ N Arrow
☐ Approx. Scale
☐ Seg/Chs Body
☐ Ch Dist.
☐ Width
☐ Length
☐ % Cover
☐ Substrate Character
☐ Est. HW/LA/WL
☐ SSL
☐ Profile Location(s)
☐ Profile(s)
☐ Pt Location(s)
☐ Photo Location(s)

LEGEND

1 Δ

PT - No Subsurface Oil

2 Δ

PT - Subsurface Oil

☐ CT/C
Continuous Distribution

☐ CT/D

Broken Distribution

☐ CT/P

Patchy Distribution

☐ CT/S

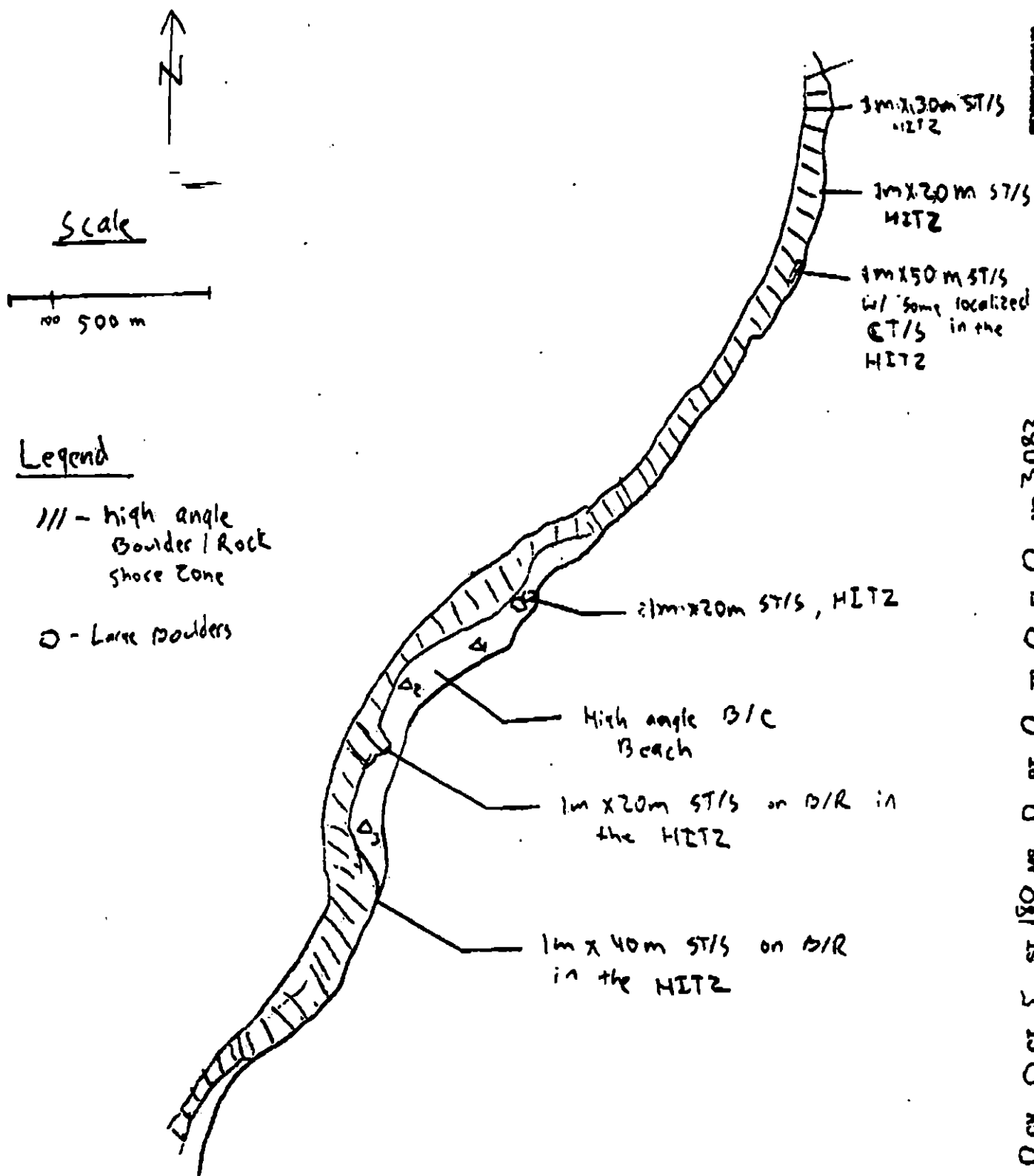
Splashed Distribution

Oil'd Vegetation

1 $\oplus$

Photo location, direction,
and number

S CH MAP



Oil Character Length (m): AP $\emptyset$ PO $\emptyset$ CV $\emptyset$ CT $\emptyset$ ST 180 MS $\emptyset$ PT $\emptyset$ TB $\emptyset$ FL $\emptyset$ NO 3083

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/76

Segment ST / ER-2 Subdivision A (1 OF 1) Date (mo / day / yr) 04/23/90

Time (24 hr) 1600-1740 Biologist K.E. CONLAN

- (A) Substrate type and % of segments:
 (1) Bedrock 25 (2) Boulder 50 (3) Cobble 20 (4) Pebble 5 (5) Sand 0 (6) Silt 0
- (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:
 Roll No. —

Frames —

BARNACLES

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

NOT PRESENT

MYTILUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	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:

2 HARLEQUIN DUCKS

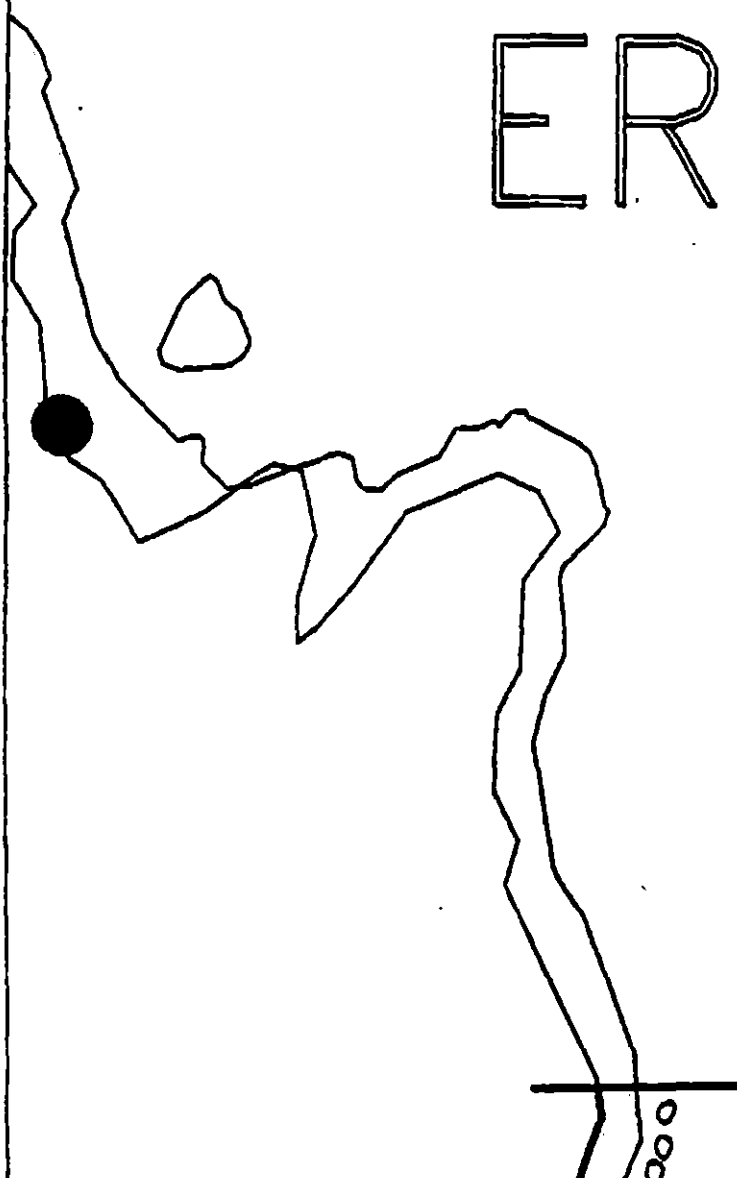
1 BALD EAGLE

1 SEA OTTER

Ecological Considerations:

ABUNDANT AMPHIPODS AMONGST COBBLES IN M12

ER-20



↓ PWS
2010

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

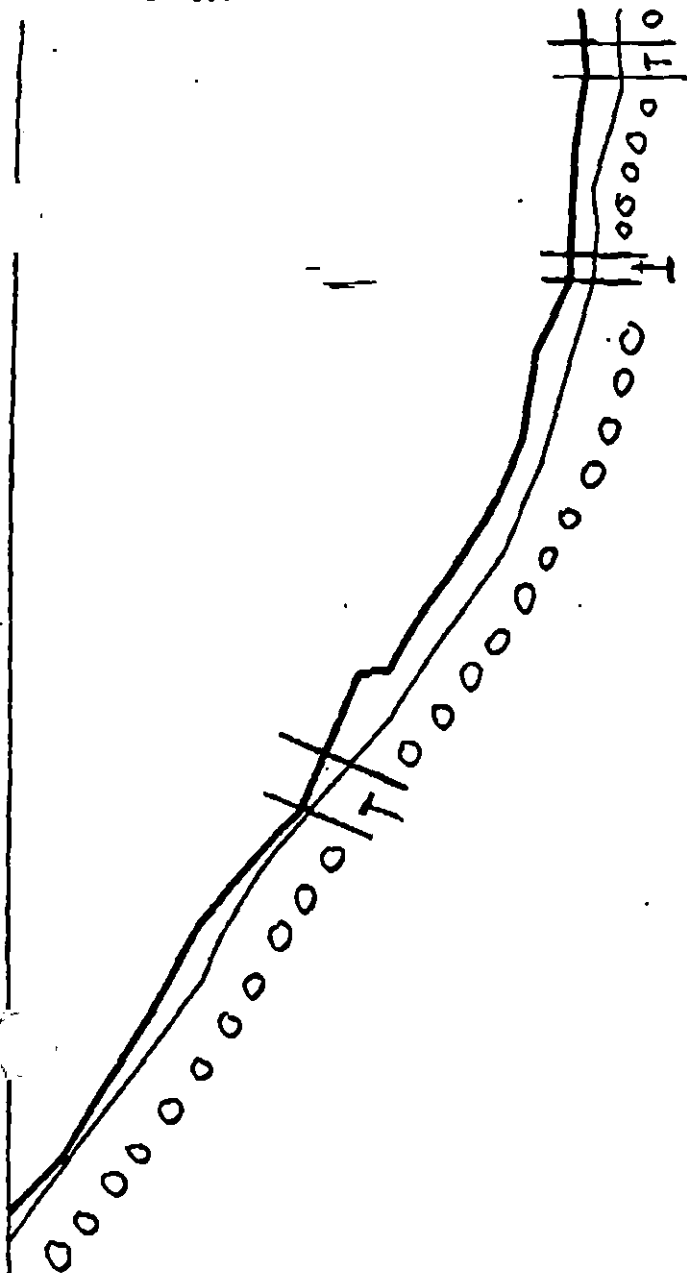
ER-21A

ADEC Segment Length: 3183m



Map Key: PWS-2011
Name: Mike Foyet
Date: 4/23/90
Data Entered:

↑ PWS
201F



← PWS
201C

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

ER-21A

ADEC Segment Length: 3163m



METERS



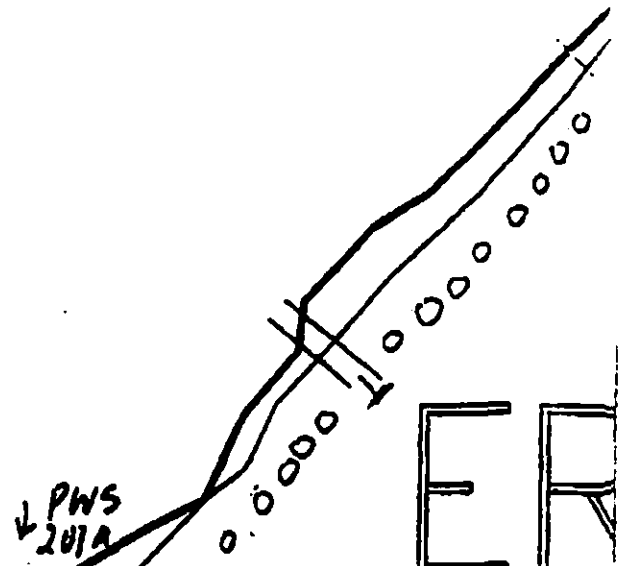
Map Key: PWS-201d

Name: Mike Fogel

Date: 4/23/90

Date Entered:

PWS
2010 →



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-21A

ADEC Segment Length: 3163m



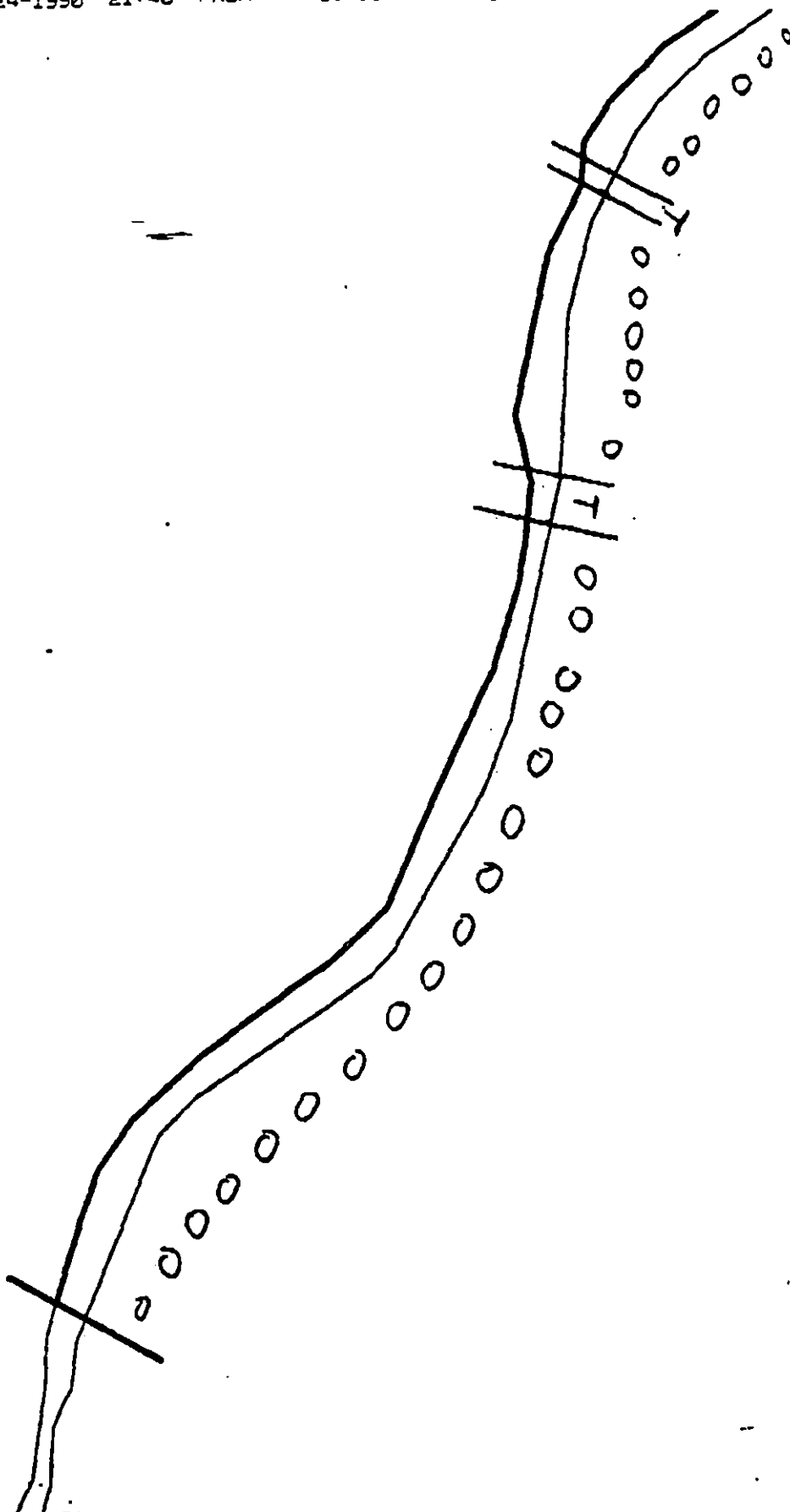
Map Key: PWS-201c

Name: Mike Foget

Date: 4/23/90

Date Entered:

↑ PWS
201C



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-21A

ADEC Segment Length: 3163m



Map Key: PWS-2010

Name: Mike Foget

Date: 4/23/90

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ ER-23 SUBDIVISION A (1 OF 1) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Sawmill Bay Hatchery release area (1F) - 4/15 to 6/1; Subsistence deer harvest area (7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Avoid disturbance/damage to un-oiled substrate and biota.

SHPO SIGNATURE: Charles E. Hoffman DATE: April 12, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 166 m: V.Light 140 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 25 cm

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> <u> </u> Beach Cleaner
<u> </u> <u> </u> Removal	<u> </u> Other (see comments)

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 1/1/80
ADEC JOHN BAUER
EXXON ANDY TATE
NOAA Bill Worrell
USCG M. J. HALL

FOSC: DATE: 4-19-90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / ER-23 SUBDIVISION: _____ DATE 02 APRIL 90

USCG

NAME LARRY FLETCHER SIGNATURE Larry R Fletcher

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME DAVID M. SALE SIGNATURE David M Sale

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

BAND OF OILING ON THIS SEGMENT IS LIMITED TO A COVER THAT SEEMS STABLE AND NOT LIKELY TO BECOME MOBILE. BIO REMEDIATION MAY HAVE A POSITIVE EFFECT HERE IN REDUCING COVER FURTHER TO STAIN. THIS PENINSULA HAS A SEA LION ROOKERY AT N. END, AND SHOULD BE MONITORED FOR STAIN DURING SUMMER. REMEDIATION, HOWEVER, WOULD PROBABLY NOT BE EFFECTIVE ON THE LARGER BOULDERS.

LAND MANAGER

NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Listed as priority 2 by PWSCA. Beach is steep and consists of large boulders. Not the best of sites for landing a skiff --d taking a leisurely walk along the beach. Oil stain on the boulders does not rub off easily. Oiled cobbles under the boulders may benefit from some bioremediation.

SHORELINE OILING SUMMARY

REVISION NO. 000000

OG R. M. M. USCG LARRY FLETCHER SEGMENT ST/ ER-23
 BIO B. L. M. LAND REP Larry Carlson SUBDIVISION A (1 of 1)
 ON J. C. M. ADEC Dave Sales TIME 9:55 to 10:00
 M NO.: 10 TIDE LEVEL 2.2m (7') to 1.5m (5') DATE 04/02/90
 EST. SUBDIVISION LENGTH: 319 m ☒ Sun ☒ Clouds ☒ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 75 % B 25 % C 25 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 180 m VL 139 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	R	B	P	N	1	2	3	4	5	6	7	8	SW	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL																

PAVEMENT: H F S None sq. m by 0 cm

PATTIES / TARBALLS None BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	2		
Vegetation	2		
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE 0
 #BAGS 0

Photographs:

Roll No. ST/10/5

Frames 1-9

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
		SP	OR	CL	OF	NO			1	2	3	4	5	6	7	8			
1	20					X	5-20	X									X	N	G, S
2	13					X	5-10	X									X	N	G, S
3	27			X			5-25	X	X									N	G, S
4	27					X	.												G, P
5	23					X	.												P, G
							.												

COMMENTS

Revision

RM 4/2/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 05/28/90

Segment ST/10/ER23 Subdivision none Date (mo/day/yr) 4/2/90Time (24 hr) 1000 - 1100Biologist Bob Lemon(A) Substrate type and % of segments:
(1) Bedrock _____ (2) Boulder 75 (3) Cobble 25 (4) Pebble _____ (5) Sand _____ (6) Silt _____(B) Overall % cover of biota (% of segment): Dense _____ Moderate _____ Low 10%

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

Photographs:

Roll No. ST/10/5Frames 1-8,9

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

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	X	X	2
3	3	3	3	3	3	3	3	3	X	X	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

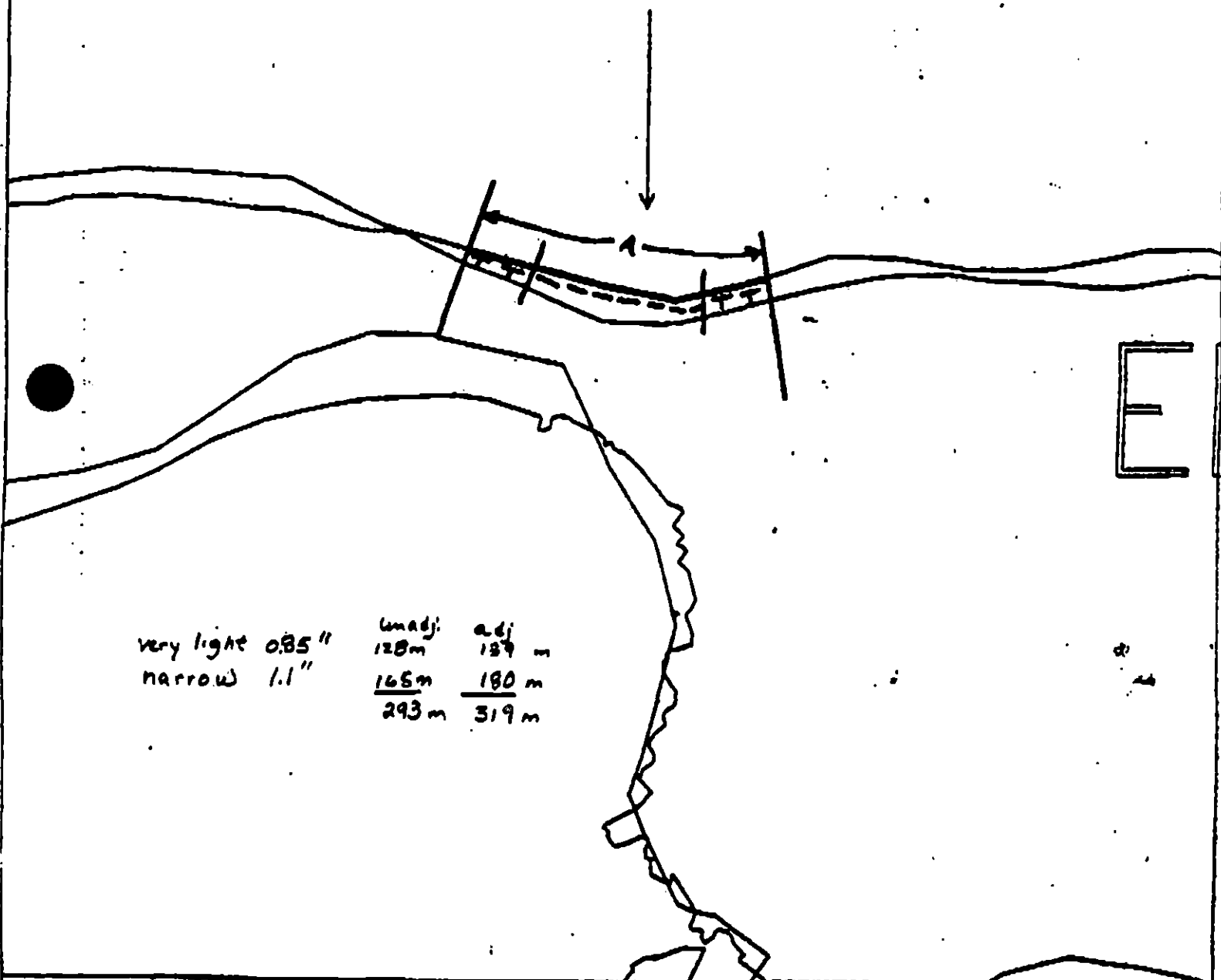
Wildlife Observations/ General Comments: low zone not surveyed; mid zone partially surveyed through the water by wading. Whale blows seen from boat, 4 animals a long distance away. From top of Tumbolo 12 gulls, 2 sealions, 7 waterfowl, numerous bears and deer scat.

From +8' boulder tops were 90% covered with filamentous chlorophyta and Porphyra (Rhodophyta),

Ecological Considerations: and a few w/ Proscella (Chlorophyta). Gammarid amphipods were present, but sparse under cobbles. A very high energy setting, w/ rounded

clasts.
→ Deer harvest area, sealions about a mile away.

ER-23



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-23

ADEC Segment Length: 305m



Map Key: PWS-160

Name: Risk Map

Date: 4/2/90

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ ER-25 SUBDIVISION A (1 OF 1) DATE 4/20/90

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.

SHPO SIGNATURE: [Signature] DATE: 5/1/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 146 m: No Oil 989 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 5/1/90

ADEC [Signature]
EXXON [Signature]
NOAA [Signature]
USCG [Signature]

FOSC: [Signature] DATE: 5-9-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
1D Esther Hatchery release (4/15 to 6/1)
1E Main Bay Hatchery release (4/20 to 5/10)
1F Sewmill 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 (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)
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.
- SR 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.
- SS Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.
- ST All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (8/1 to 9/15)
6V Anchorages (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 areas: Salmon harvesting (5/1 to 9/30)
7H-H Finfish harvesting
✓ 7J 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 ER-25 SUBDIVISION: A DATE 4/20/90

USCG

NAME RANDOLPH HUBBARD SIGNATURE Randolph W. Hubbard

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

1. SPOTTED film

ADEC

NAME J. LYNN MARTIN SIGNATURE J. Lynn Martin

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ONLY OIL WAS A LIGHT STAIN AT BOTH THE NORTH
END AND SOUTH END OF SUB-SEGMENT, THEREFORE
NO TREATMENT IS REQUIRED

LAND MANAGER

NAME MARSHA MARTIN / DNR SIGNATURE Marsha Martin

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Degree of oil minimal to RARE,

SHORELINE OILING SUMMARY

REVISION NO. 00/12/88

OG Reimer USCG Hulward SEGMENT ST/ ER-25
 BIO Zamora LAND REP M. Martin (DR) SUBDIVISION A (1 OF 1)
 EXXON Arbuskle ADEC L. MARTIN TIME 12:00 to 1:45
 TEAM NO. 16 TIDE LEVEL +6 + +5 DATE 4 / 20 / 90
 EST. SUBDIVISION LENGTH: 1090 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: South to North
 SURFACE SEDIMENTS: R 10 % B 30 % C 20 % P 40 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 70 % Hang 30 % Vert 0 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 160 m NO 930 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	W	M	N	VL	W	M	N	VL	W	M	N	VL
ASPHALT PAVEMENT												
POOLED												
COVER												
COAT					X	X	X		X	X		
STAIN												
MOUSSE												
PATTIES												
TARBALLS												
FILM												
NO OIL									X			X

PAVEMENT H F S 0 sq. m by 0 cmPATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT			DID YOU COLLECT DEBRIS?
	SM	MD	LG	
Logs	X	X		YES ☐ NO ☒
Vegetation				
Trash				TYPE _____
Debris				
				#BAGS _____

Photographs:

Roll No. ST-16-10Frames 1-6

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	SHEEN (Y/N)	SURFACE-SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		W	U	W	M	N	VL	W	M	N	VL			
1	50					X	.								X			N	-	P-PG
2	25					X	.								X			N	-	P-PG
3	20					X	.								X			N	-	B-PGC
4	20					X	.								X			N	-	P-GM
5	30					X	.								X			N	-	P-PG
6	30					X	.								X			N	-	P-P

COMMENTS generally low angle pebble, rubble, boulder beach. Alternating packets of finer (pebble) beach sections are found with coarser (boulder) regions. This is probably controlled by the underlying bedrock structure and back shore topography - The general trend is for a coarsening of sediments to the north. The only oil found along this section of beach was sporadic splatters or remnant coatings on rubble and boulders associated with the coarser sections of beach. The northern third of

The segment was not surveyed due to the rough rocky nature of the shoreline and no Helo access - This section of shoreline is indicated as having NO oil

REVIEWED W DATE 4-21-90

ER-25

ETCH MAP

SUBDIVISION A - 104-1

DATE 4 / 10 90

CHECKLIST

- ☒ N Area
- ☒ Approx. Scale
- ☒ Seg/Bld Body
- ☒ Cl Clot.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Endotele Character
- ☒ Est. HPA/LAL
- ☒ SGL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Pn Location(s)
- ☒ Photo Location(s)

LEGEND

- 1 Δ**
PG - No Submarine Oil

- 2A
PH - Suburban CH

CT/C
Controlled Unclassified

CT/D

Business Objectives

CT/P

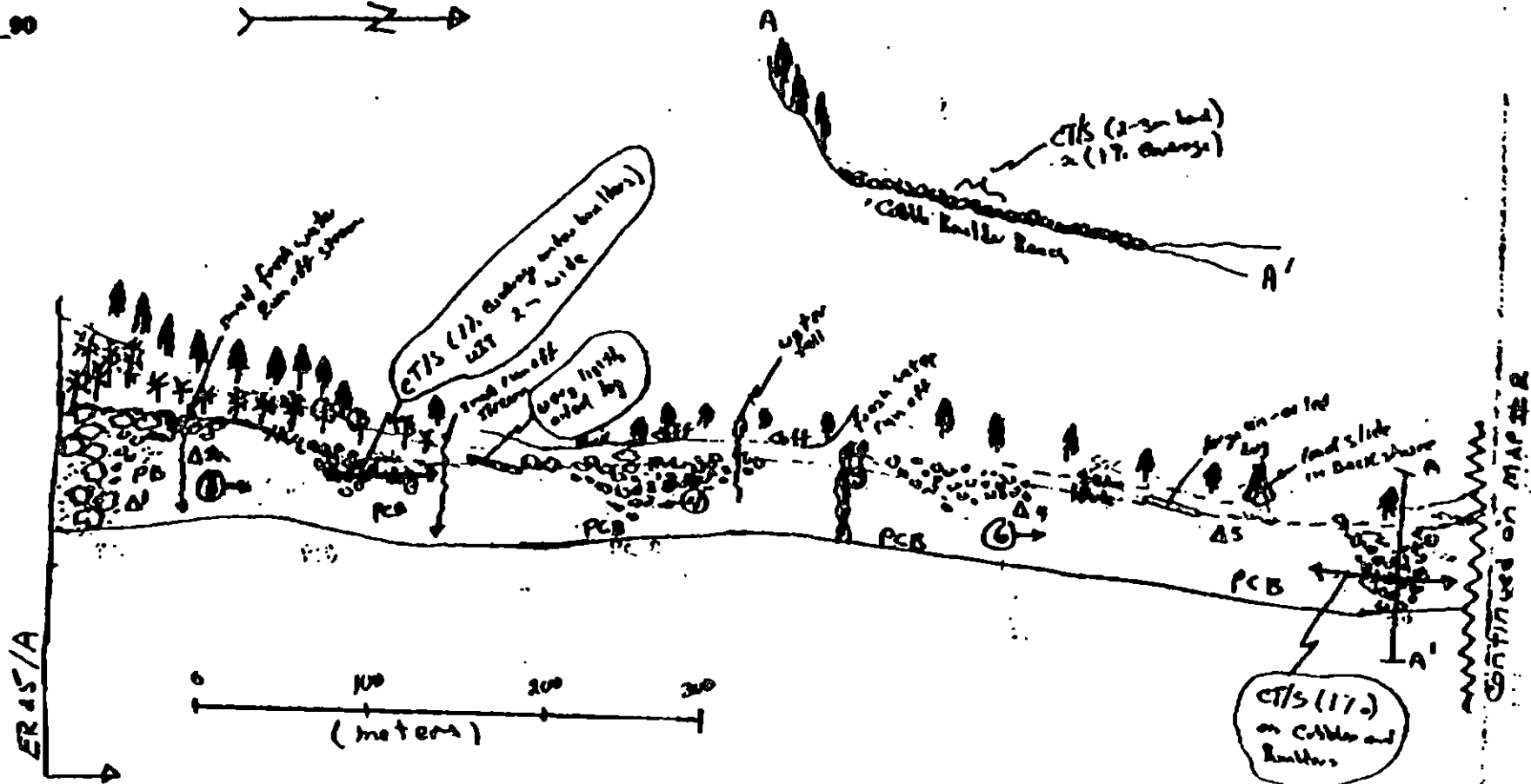
Punchy Distribution

CT/3

Systematic Distortions

lll
Oiled Vegetation

Photo location, direction,
and number



Abte? Thoo

OS Character Length (in): AP 0 PO 0 CV 0 CT 160 ST 0 MS 0 PT 0 TB 0 FL 0 NO 930

OG K ES

SKETCH MAP

SEGMENT ST/ER-25

SUBDIVISION A - map #2

DATE 4 / 20 80

CHECKLIST

- ☒ H Area
- ☒ Approx. Scale
- ☒ Layable Study
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ X-Cover
- ☒ Substrate Character
- ☒ Est. HW/LVL
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Pt Location(s)
- ☒ 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

Spotted Distribution

Old Vegetation

1 →

Photo location, direction,
and number



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

REVISIONS

SHORELINE ECOLOGICAL SUMMARY

REVISED 08/28/90

Segment ST / ER 25 Subdivision A Date (mo / day / yr) 4 / 20 / 90

Time (24 hr) 1300 on 1345 off Biologist TONY ZAMORA

(A) Substrate type and % of segments:
(1) Bedrock 10 (2) Boulder 30 (3) Cobble 20 (4) Pebble 40 (5) Sand — (6) Silt —

(B) Overall % cover of biota (% of segment): Dense 10 Moderate 80 Low 10 (62 NOT EXPOSED)

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

Photographs:
Roll No. ST-16-10

Frames 1-6

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

- SEAGULL & SEALION SPOTTED, DEER SCAT
- VERY DENSE LITTORINES ON BLOR & CBL IN MITZ.
- LOW TIDE NOT SURVEYED

Ecological Considerations: FII, W,

- SITE APPEARS HEALTH. NEW GROWTH OF BARNACLES, MYTILUS, FLUTURINE.
- AS WELL AS MANY LITTORINE EGGS AND FISH EGGS UNID.
(PROBABLY. HERRING)

PLWS ↑
214 6

UN SURVEYED
STEEL
Rocky / boulder
Shoreline - no oil
indicated on ADC
MAP.

ER-

Subsegment A

XXXX Wide

Medium

----- Narrow

TTTT Very Light

0.000 No Oil

ER-25

ADEC Segment Length: 1638m

EXON : 162.0m

METERS

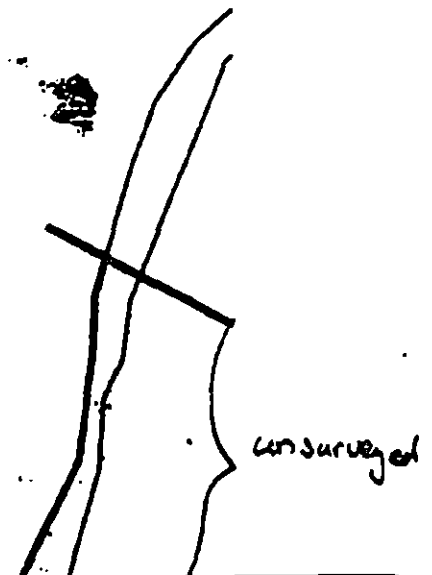
Map Key: PWS-21.4e

Name: Reimer

Date: 4/20/90

Date Entered:

17 cm



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ER-25

ADEC Segment Length: 1636m



Map Key: PWS-214b

Name: ReimerDate: 4/20/90

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ ER-26 SUBDIVISION A (1 OF 1) DATE 4/8/90

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.

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 75 m: No Oil 615 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> <u> </u> Removal	<u> </u> Other (see comments)

COMMENTS:

TAG COMMENTS:

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

FOSC: [Signature] DATE: 4-25-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ ER-26 SUBDIVISION: A DATE 4/8/90

USCG

NAME LARRY FLETCHER SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME DAVID M. SALE SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

LAND MANAGER

NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Area used for subsistence deer harvesting.

SHORELINE OILING SUMMARY

REVISION NO 03/22/90

OG Richard Marty USCG Larry Fletcher SEGMENT ST/ ER-26
 BIO Bob Lemon LAND REP Lugh Carlson SUBDIVISION A 1/1
 EXXON Jon Czernicki ADEC Dave Sale TIME 07:40 10 08 30
 TEAM NO.: 10 TIDE LEVEL: 1.02m (0.2') 1.037m (1.2') DATE 8 / April / 90
 EST. SUBDIVISION LENGTH: 750 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo 35 WORKING DIRECTION: N 10 S
 SURFACE SEDIMENTS: R % B 15 % C % P 20 % G 20 % S 10 % M % V %
 SLOPE: Long 100 % Hang % Vert % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W m M m N m VL 64 m NO 686 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	C	A	P	A	SP	BP	OP	GP	LP	SU	U	M	U
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT													
STAIN				X						X		X	
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL										X		X	X

PAVEMENT: H F S None sq. m by cmPATTIES / TARBALLS None BAGSNEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	2		
Vegetation	2		
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE #BAGS

Photographs:

Roll No. ST/10/11 and ST/10/12Frames 1-7 and 33-36

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		VO	VC	SP	BP	OP	GP	LP	SU	U	M	U		
1	25					X	.								X				N	G, S
2	20					X	.								X				N	S, G, N
3	44					X	.								X				N	G
4	29					X	.								X				N	P, S
5	48					X	.								X					S, C
6	65					X	.									X				S, G, C

Revision

RM 8 April 1990

COMMENTS

1 of 24

OG R. 7

SEGMENT ST/ ER-26

SUBDIVISION 4

DATE 8 / Apr 1990

CHECKLIST

☐ M. Area
☐ Aspect, Slope
☐ Sea/Sub Beach
☐ Oil Dist.
☐ Width
☐ Length
☐ % Cover
☐ Substrate Character
☐ Eel H/W/L/M/L
☐ S/L
☐ Profile Location(s)
☐ Profile(s)
☐ Photo Location(s)
☐ Photo Location(s)

LEGEND

1 Δ

Pt. No Substrate Oil

2 Δ

Pt. Substrate Oil

CT/C

Coastal Distribution

CT/D

Beach Distribution

CT/P

Beach Distribution

CT/S

Splashed Distribution

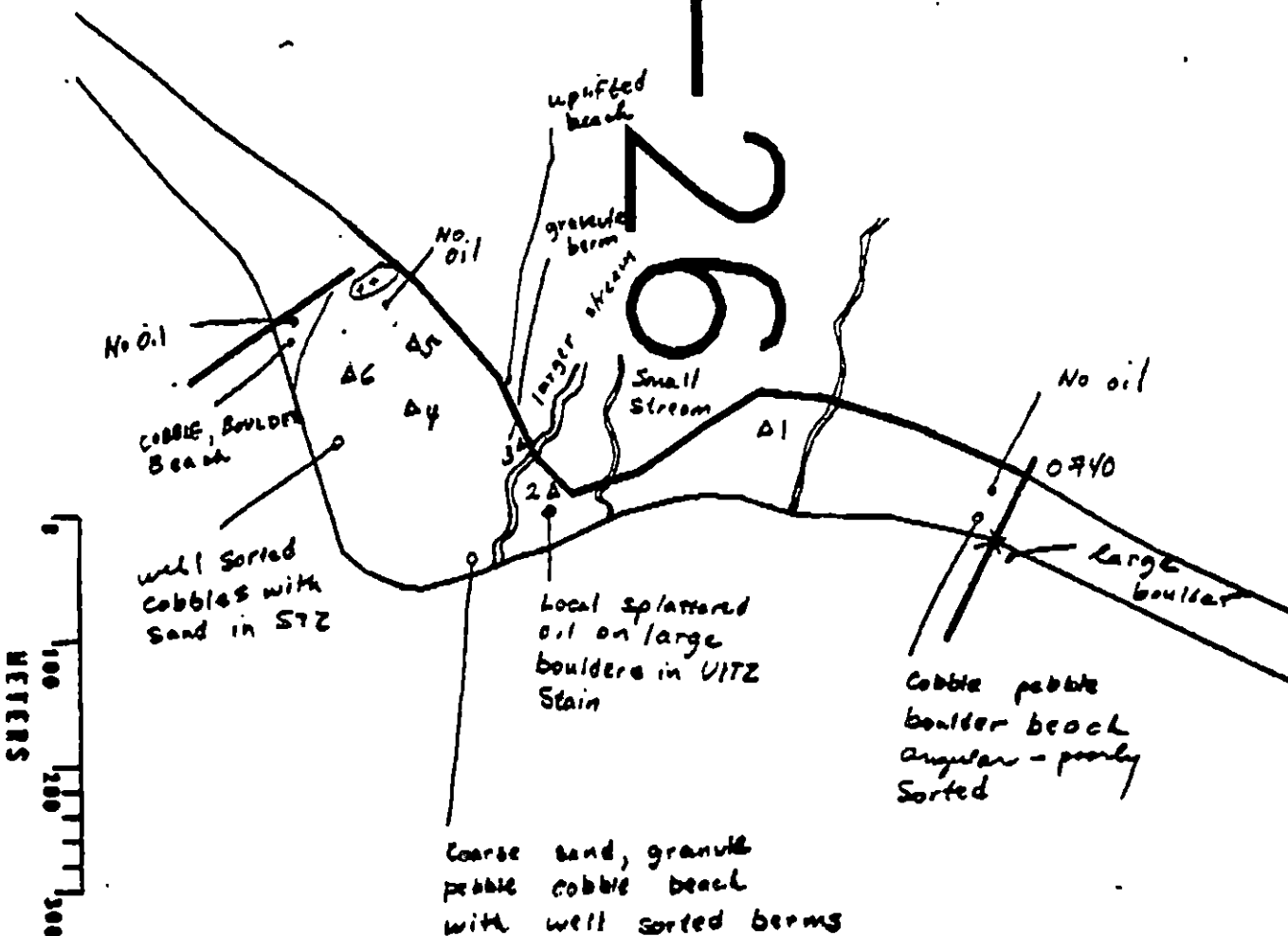
Oil Vegetation

1 0-+

Photo location, direction, and number

ETCH MAP

ER-26



OB Character Length (m): AP PO CV CT ST Cy MS PT TB FL NO 696

3 of 24

SHORELINE ECOLOGICAL SUMMARY

REVISION: 09/23/90

Segment ST/10/ER 26 Subdivision A Date (mo/day/yr) 4/8/90Time (24 hr) 0700-0900 Biologist L. L. L. L. clear, calm(A) Substrate type and % of segments:
(1) Bedrock (2) Boulder 15 (3) Cobble 35 (4) Pebble 20 (5) Sand 30 (6) Silt (B) Overall % cover of biota (% of segment): Dense Moderate 50% Low

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

Photographs:
Roll No. ST/10/1100 ST/10/10Frames 1-7 - 33-36

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	X	2	2	2	2	X	2	2
3	3	3	3	X	3	3	3	3	X	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

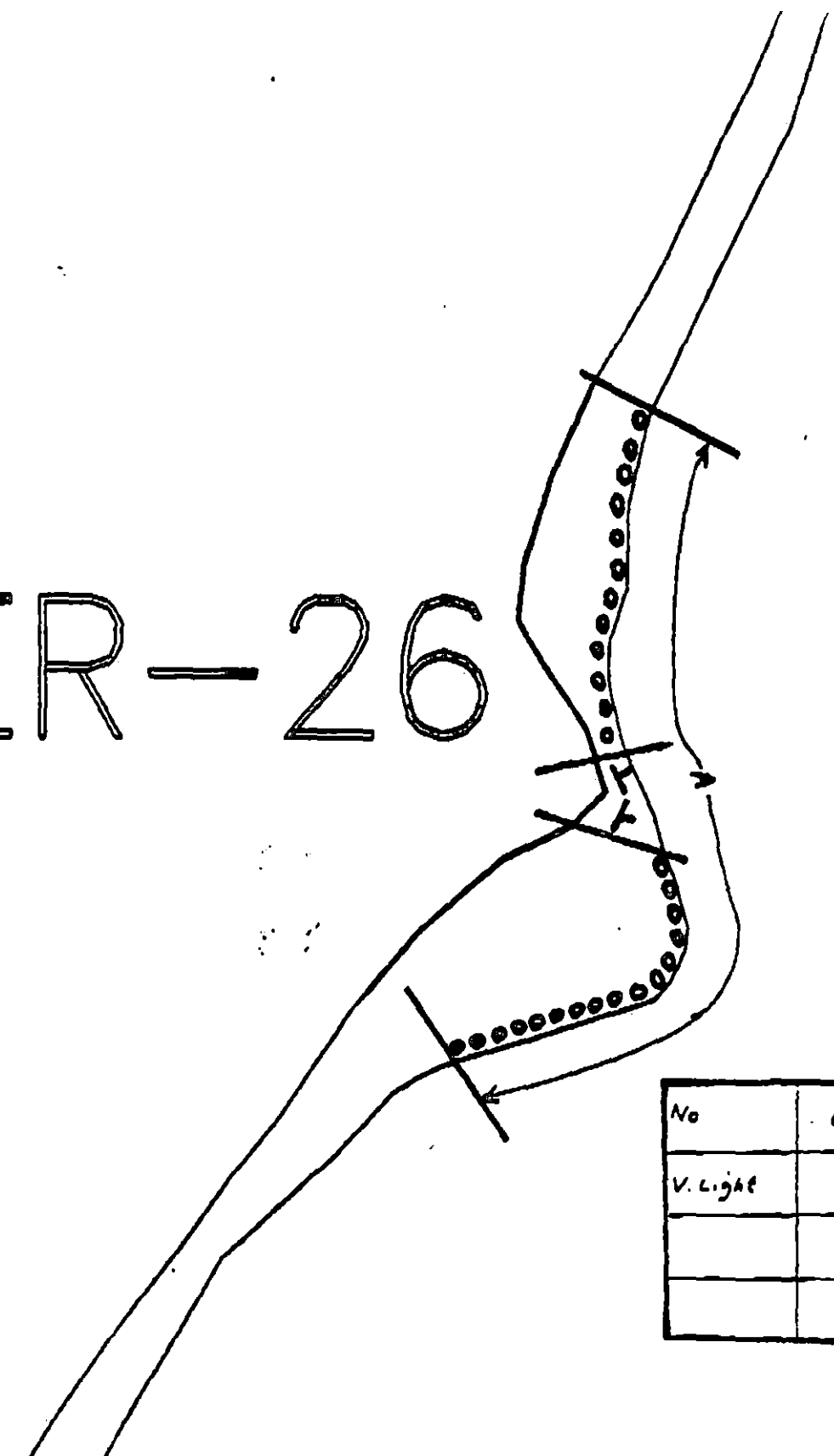
NOT PRESENT

In the water quite few of 1 section was sighted.
Wildlife Observations/ General Comments: Low zone cover included Holothuridae, Polysiphonia sp and other
Low and mid zone animals included Oviraptor & Idotea sp, Gemma sp, Leptasterias sp.
(ISCOPODA), AMPHIPODA, Pagurus sp. (DECAPODA), Spizella (ANNELEDA), Spizella sp, Leptasterias
heros including 4 mm juveniles (ASTERIDEA). On the Terrestrial abundant deer tracks and scat
Ecological Considerations: on some bear tracks w scat. Flat uplands of Elymus grass and Picea
spruce trees.

Checked stream for fish and insect larva, found nothing, pit by stream was clean.
Deer harvest area. Flat uplands would make good hunting sites.

5 of 29

ER-26



No	4.3"	645m	686.
V. Light	0.4"	60m	64
		705m	750-

4 of 24

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

OOOO No Oil

ER-26

ADEC Segment Length: 690m



Map Key: PWS-163

Name: Richard MartyDate: 8 April 1990

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ ER-27 SUBDIVISION A (1 OF 1) DATE 4/8/90

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.

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 36 m: No Oil 964 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 8/19/20

ADEC ART WENOR Art Wenor

EXXON ANDY TAYLOR Head 0

NOAA Burl Wasyk Ruckelshaus

USCG KENNETH KEANE *Kenneth Keane*

FOSC: ✓ ✓ DATE: 5-1-90

DATE: 5-1-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage.
No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
1D Esther Hatchery release (4/15 to 6/1)
1E Main Bay Hatchery release (4/20 to 5/10)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
1I Gill net area (6/7 to 8/31)
1J Purse seine area (7/20 to 9/30)
1K Purse seine hook-off (7/20 to 9/30)
1L Set net sites (6/11 to 7/25)
For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass.
Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 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
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.

DRAFT

SEGMENT ST/ ER-27 SUBDIVISION: A DATE 4/8/90

SCG
NAME LARRY FLETCHER SIGNATURE Larry R Fletcher

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC
NAME DAVID M. SOVE SIGNATURE David M Sove

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

LAND MANAGER
NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

segment area used for subsistence deer harvesting.

7 of 24

OG Richard Marty USCG Larry Fletcher SEGMENT ST/ ER-27
 BIO Bob Lemon LAND REP Larry Carlson SUBDIVISION A
 EXXON Jon Czorneki ADEC Dave Sale TIME 07:30 10:09:47
 TEAM NO.: 10 TIDE LEVEL: 1.5 m (5') to 0.37 m (1.2') DATE 08 April 1990
 ST. SUBDIVISION LENGTH: 1009 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 5 % B 38 % C 30 % P 20 % G 10 % S 10 % M % V %
 SLOPE: Long 100 % Hang % Vert % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 37 m NO 972 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	C	N	P	S	BR	BL	GR	OR	TL	LR	SU	U	M	U
ASPHALT PAVEMENT														
POOLED														
COVER														
COAT														
STAIN				X					X				X	
MOUSSE														
PATTIES														
TARBALLS														
FILM														
NO OIL														

PAVEMENT: H F S None sq. m by cm

PATTIES / TARBALLS None BAGS

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	2		
Vegetation		2	
Trash			
Debris			

DEBRIS COLLECTED

☐ YES ☒ NO

TYPE

#BAGS

Photographs:

Roll No. ST/10/11

Frames 8-11

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		VO	UC	BR	BL	GR	OR	TL	LR	SU	U	M	U		
1	22					X	.									X				N	G.S, P.C
							.														
							.														
							.														
							.														
							.														

COMMENTS Staining is very minor

6 of 24

OG R. Mc

SEGMENT ST/ ER-27

SUBDIVISION A

DATE 8 April 90

CHECKLIST

- ☐ H Area
- ☐ Approx. Scale
- ☐ Seg/Sub Bndry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HW/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pix Location(s)
- ☐ 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

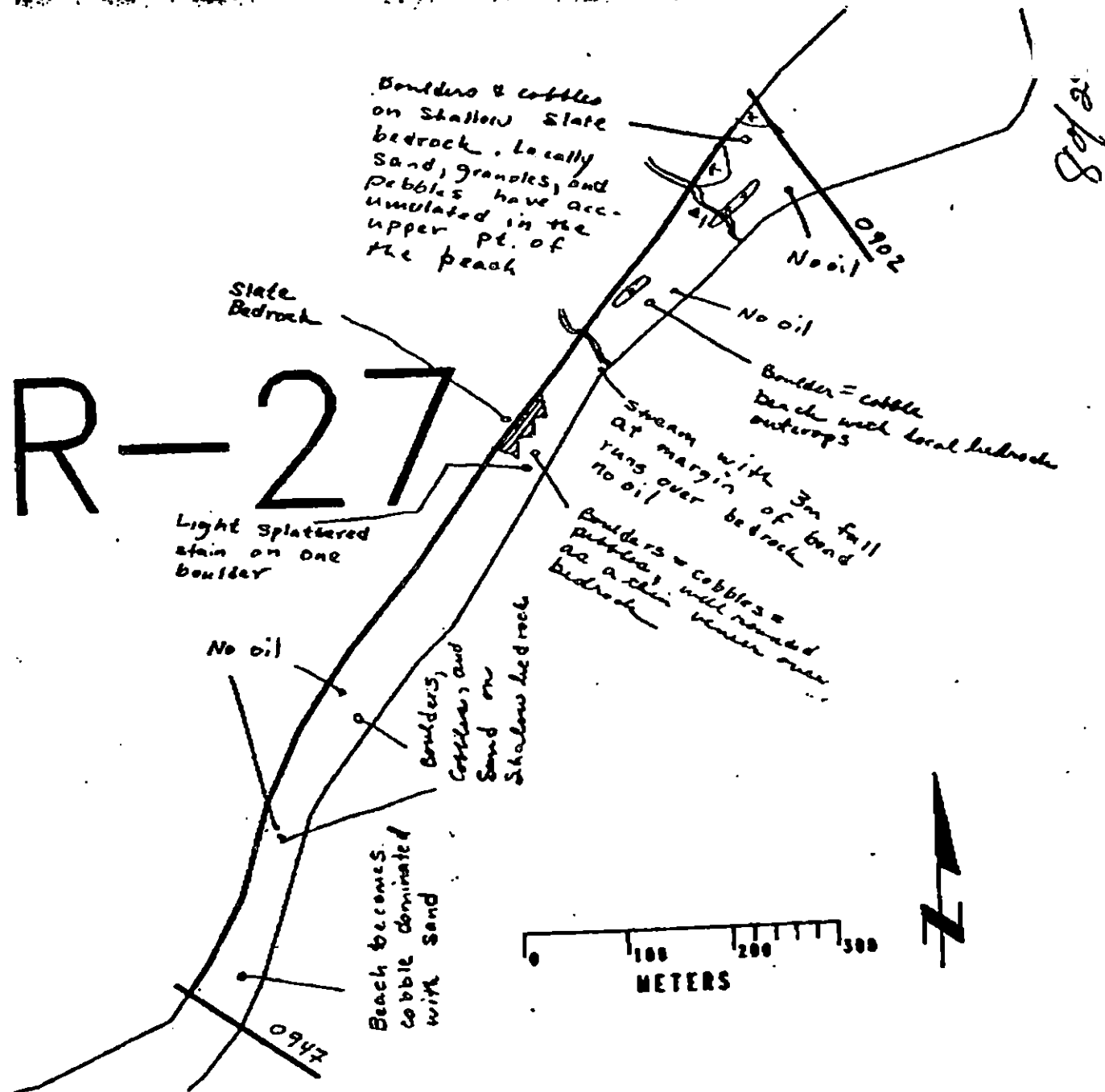
Splashed Distribution

Oiled Vegetation

1 →

Photo location, direction, and number

ER-27



Oil Character Length (m): AP _____ PO _____ CV _____ CT _____ ST 37 MS _____ PT _____ TB _____ FL _____ NO 972

REVISION: 12/8/88

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/23/90

Segment ST/10/ER27 Subdivision A Date (mo/day/yr) 4/8/90
 (24 hr) 0930-0940 Biologist Lemon class color

- (A) Substrate type and % of segments:
 (1) Bedrock 5 (2) Boulder 25 (3) Cobble 30 (4) Pebble 20 (5) Sand 10 (6) Silt
- (B) Overall % cover of biota (% of segment): Dense Moderate 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 (O)

Photographs: Roll No. ST/10/11
 Frames 8-11

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments: Amphipods and insects were found in the drift line. Low and mid biota *Gyrodactylus* sp., *Isoetes* sp. ovigerous ♀ (ISOPODA), *Leptasterias hexactis* (ASTEROIDEA), *Pagurus* sp. (DECAPODA). Took a picture of classic zonation.

Ecological Considerations: checked stream found nothing fish would feed on or any fish. Another stream with waterfall right away was not checked, assumed not anemoneous.

10/29

ER-27

No	6.2"	930m	972m
V. Light		35m	37m
		965m	1009m

9 of 25

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ER-27

ADEC Segment Length: 1000m



Map Key: PWS-164

Name: Richard MartyDate: 8 April 1990

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ ER-28 SUBDIVISION A (1 OF 1) DATE 4/8/90

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.

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 78 m: No Oil 190 m
Subsurface Oil Observed: Yes X No Maximum Depth 20 cm

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS:_____

TAG APPROVAL DATE: 7/20/70

ADEC ART WENNER, Art Wenner

EXXON *Amey T. Galt*

NOAA Ben Westcott Ben Westcott

USCG KENNETH KEENE Kenneth Keene

FOSC: W L DATE: 4-26-80

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

SEGMENT ST/ ER-28 SUBDIVISION: A DATE 4/8/90

ISCG

NAME LARIZY FLETCHER SIGNATURE Larry 12 Fletcher

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME DAVID M. SAGE SIGNATURE David M. Sage

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

THE OIL WE FOUND: STAINING THE GEDDLE/COBBLE BEACH
ON THIS SEGMENT IS WEATHERED FROM THE NATURAL
GRINDING OF THESE WELL-ROUNDED STONES BY WAVE ACTION.
THOUGH SOME OIL WAS FOUND IN A BAND ~ 3-10 CM.
DEEP IN MAIN STORM DRUM, WITH A FEW MORE CYCLES
OF TURNING, IT SHOULD CLEAN ITSELF OUT TO A STAIN.

LAND MANAGER

NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Area used for subsistence deer harvesting.

12 of 29

OG Richard Marty USCG Larry Fletcher SEGMENT ST/ ER-28
 BIO Bob Lemon LAND REP Leigh Carlson SUBDIVISION A
 EXXON Jon Czorneki ADEC Dave Sale TIME 09:47 to 10:20
 EAM NO.: 10 TIDE LEVEL: 1.9m(5') to 1.85m(6') DATE 8 April 1990
 ST. SUBDIVISION LENGTH: 304 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R — % B — % C 60 % P 30 % G 10 % S — % M — % V — %
 SLOPE: Long 100 % Hang — % Vert — % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W — m M — m N — m VL 101 m NO 203 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	B	P	N	SP	BP	CP	GP	TP	TL	LT	LU	SU	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN				X				X					X			
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL													X	X	X	

PAVEMENT: H F S None sq. m by — cm

PATTIES / TARBALLS None BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	1		
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE E

#BAGS —

Photographs:

Roll No. ST/10/11

Frames 12-18

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL Cm - Cm (range)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UC	SP	BP	CP	GP	TP	TL	LT	LU	SU	U	M	U		
1	35					X	5-20		X									X					P, S
2	35			X			5-20		X				X					X					P
3	19					X	.											X					P
4	25					X	.											X					P
5	49					X	.											X					P
							.																

COMMENTS Oil limited to a lense in the north of the Segment.

Revision
R. Marty 8 Apr

11 of 24

OG R. Mar

SEGMENT ST/ ER-28

SUBDIVISION A

DATE 8 April 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Body
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HRA/LVA
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ

Pt - No Subsurface Oil

2 Δ

Pt - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

Splashed Distribution

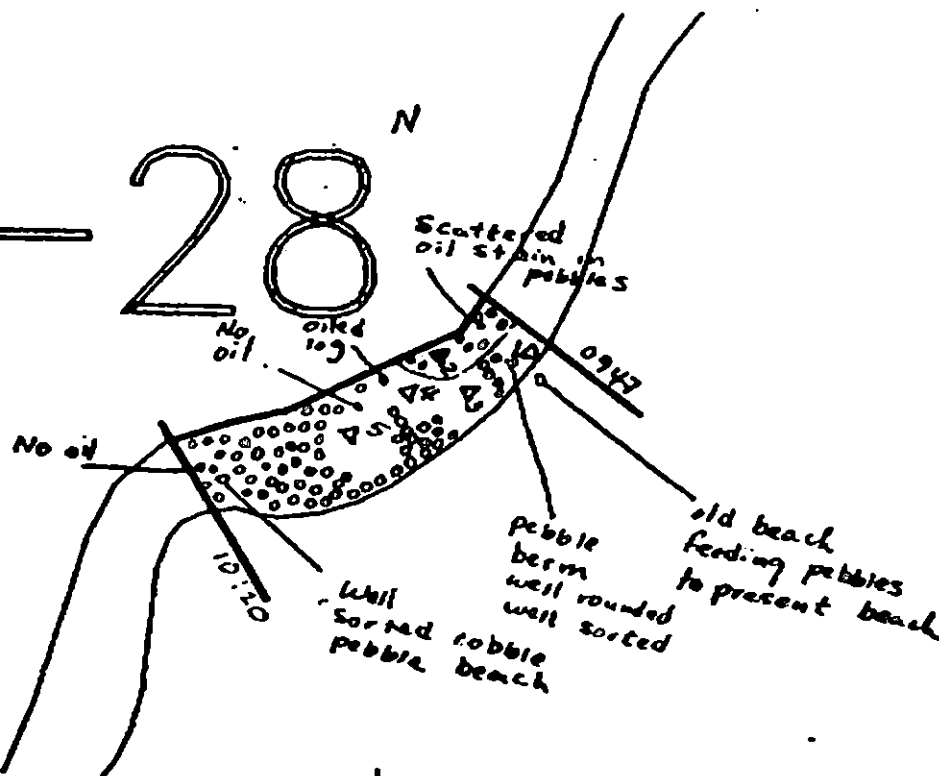
Old Vegetation

1 $\Rightarrow$

Photo location, direction,
and number

SI H MAP

ER-28



ref

Oil Character Length (m): AP _____ PO _____ CV _____ CT _____ ST 101 MS _____ PT _____ TB _____ FL _____ NO 203

REVISION 05/0000

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/25/88

Segment ST/10/ER29 Subdivision A Date (mo/day/yr) 4/8/90

Time (24 hr) 0940 - 1030 Biologist Leman clear, calm

(A) Substrate type and % of segments:
(1) Bedrock 1 (2) Boulder 1 (3) Cobble 59 (4) Pebble 30 (5) Sand 10 (6) Silt

(B) Overall % cover of biota (% of segment): Dense 52 Moderate 52 Low 52

(C) Density, substrate preference (by number from A, above), & Photographs:
vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); Roll No. ST/10/11
juveniles/adults (X), new settlement (3) Frames 12-18

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

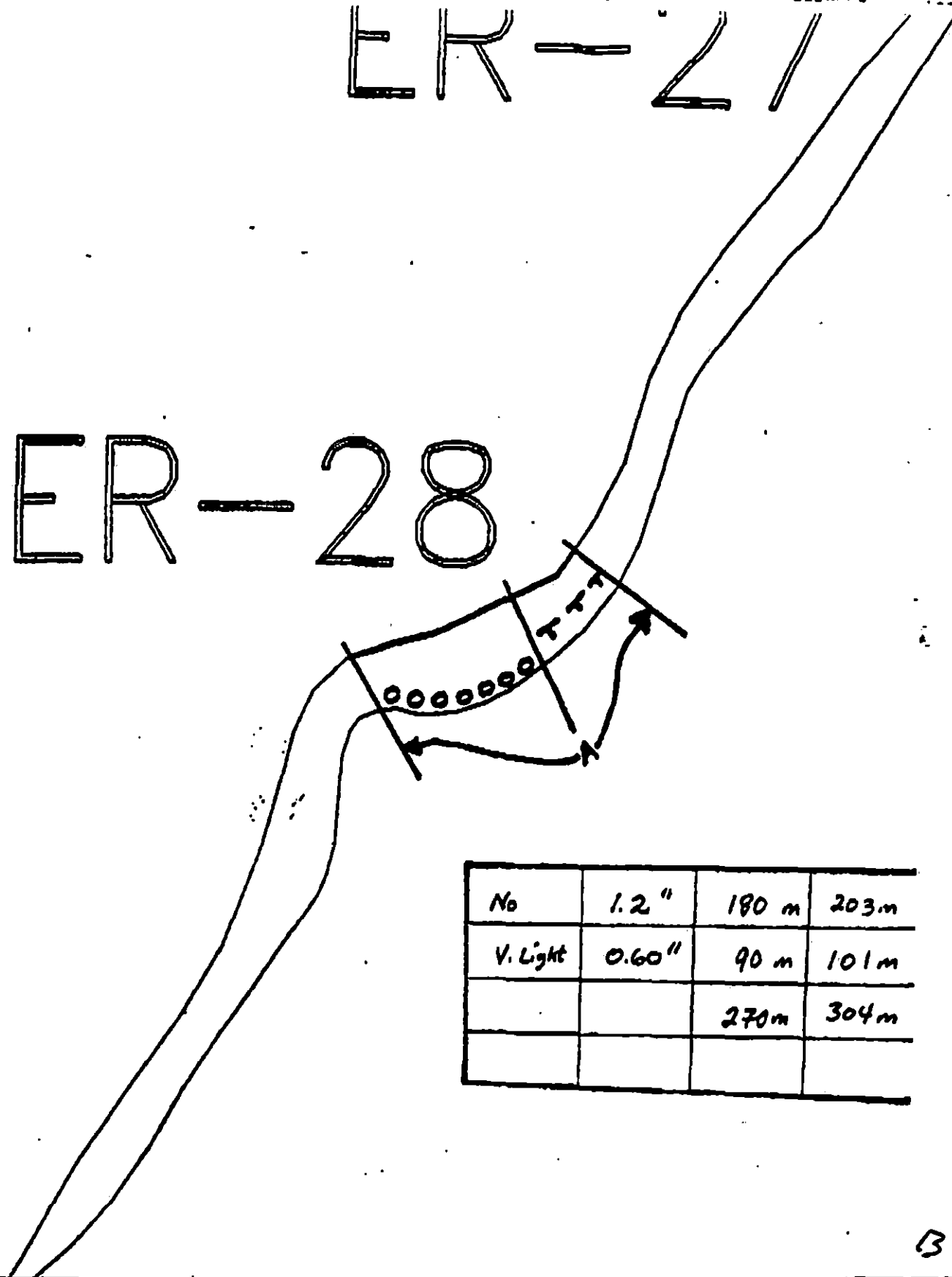
Wildlife Observations/General Comments: Low zone had filamentous greens on cobble tops.
Insects in drift line. Deer tracks at scat, bear scat common. Shadegail. Not much
biota on this beach.

Ecological Considerations: Flat uplands would make good tenting sites. Deer harvest site.

15/24

ER-21

ER-28



13 of 24

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ER-28

ADEC Segment Length: 268m



Map Key: PWS-165

Name: Richard Marty

Date: 8 April 1990

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ ER-29 SUBDIVISION A (1 OF 1) DATE 4/8/90

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 uncoiled biota and substrate.

SHPO SIGNATURE: Mark E. Hansen DATE: 4/20/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 746 m: No Oil 1433 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

X No Treatment Recommended

Treatment Recommended

Manual Pickup

Bioremediation

Tarmat: _____ Breakup

Removal

Snare/Absorbent Booms

Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

Spot Washing: _____ **Wands** _____

Beach Cleaner

Other (see comments)

COMMENTS: _____

TAG COMMENTS:_____

TAG APPROVAL DATE: 4/20/90.

ADEC ART WELNER *Art Welner*

EXXON *And TGA*

NOAA Burt Werroff Burt Werroff

USCG KENNETH KEANE *Kenneth Keane*

FOSC: 7 DATE: 4-26-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
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.

SEGMENT ST/ ER-29 SUBDIVISION: A DATE 4/8/90

USCG

NAME LARRY FLECHER SIGNATURE Larry R Fletcher

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME DAVID M. SAGE SIGNATURE David M Sage

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

LAND MANAGER

NAME Leigh Carlson SIGNATURE Leigh Carlson ADNR

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

segment area used for subsistence deer harvesting.

17024

SHORELINE OILING SUMMARY

REVISION NO 03/23/90

OG Richard Marty USCG Larry Fletcher SEGMENT ST/ ER-29
 BIO Bob Lemon LAND REP Leigh Carlson SUBDIVISION A
 EXXON Jon Czernski ADEC Dave Sale TIME 16 40 10 18 45
 TEAM NO 10 TIDE LEVEL 1.85m (6') 10⁺ 1.17m (38') DATE 8 / April / 90
 T SUBDIVISION LENGTH 2142 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 LANDS DESCRIPTION ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION N to S
 SURFACE SEDIMENTS R 10 % B 10 % C 80 % P 0 % G 0 % S 10 % M 0 % V 0 %
 SLOPE Lang 100 % Hang 0 % Vert 0 % WAVE EXPOSURE ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH W 0 m M 0 m N 0 m VL 806 m NO 1336 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	S	P	N	SP	DR	OR	OL	SL	TL	LR	BL	SU	U	M	U
ASPHALT																
PAVEMENT																
POOLED																
COVER																
COAT																
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL																

PAVEMENT H F S None sq m by None cmPATTIES / TARBALLS None BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☒ YES ☐ NOTYPE Log + Misc#BAGS 1-2

Photographs

DEBRIS COLLECTED

Roll No ST 10/11Frames 19-26

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		VO	UC	SP	DR	OR	OL	SL	TL	LR	BL	SU	U	M	U		
1	26					X	.													X		N	P, G, S
2	30					X	.													X		N	B, C
3	12					X	.													X			M
							.																
							.																
							.																
							.																

COMMENTS There appear to be a number of staining mechanisms at work on this beach

1) Oil staining

2) Iron/Mn staining

3) 'Tannin' staining from alders etc

It is quite difficult to differentiate between these, and some of the sediments mapped as 'oil stained' may actually be oil free

160/20

OG R. No.

S CH MAP

SEGMENT SUR-29

SUBDIVISION A

DATE 7 April 90

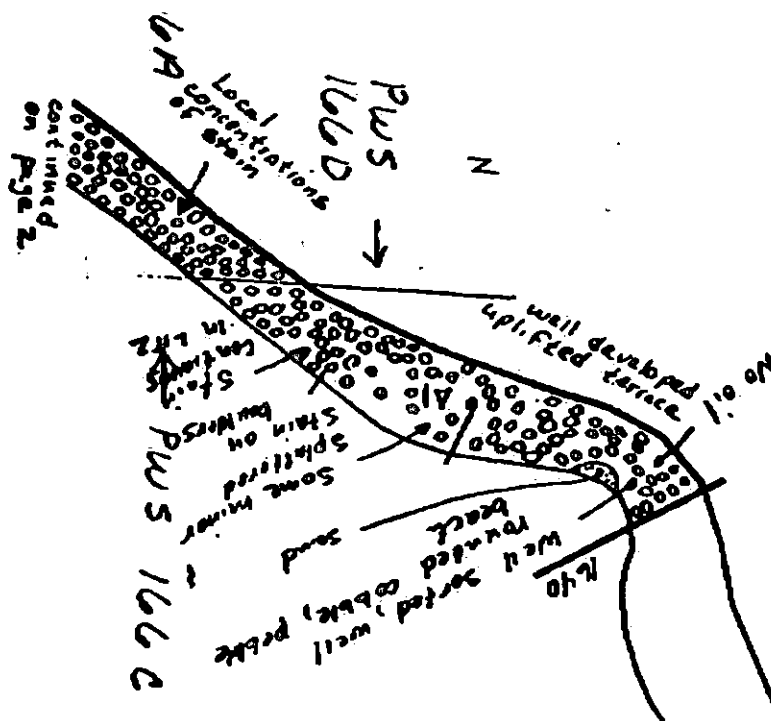
CHECKLIST

- ☐ N Area
- ☐ Approx. Scale
- ☐ Seg/Sub Body
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/LWL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pin Location(s)
- ☐ Photo Location(s)

LEGEND

- 1 Δ
Pin - No Subsurface Oil
- 2 Δ
Pin - 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

METERS
0
100
200
300



Oil Character Length (m): AP 1806 PO 206 CV 806 CT 806 MS 806 PT 806 TB 806 FL 806 NO 1336

REVISION 200000

OG R. Morty

SEGMENT

R. 29

SUBDIVISION A

DATE 8 April 5

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/AML
- ☐ SSI
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PB Location(s)
- ☐ 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 on Vegetation

1 $\odot$

Photo location, direction, and number

0
100
200
300
METERS



Oil Character Length (m): AP 198 29 PO CV CT ST MS PT TB FL NO

REVISION 230400

One oiled log
(removed)

3
moss

iron and manganese
stain or ? staining
from alder trees

sand layer

sandy patch

Banker
Cobble beach
well sorted
well rounded

sandy patch

sandy patch
No oil
stain disappears

well sorted
cobbles

stain

well sorted
cobble beach
with scattered stain
< 10% cover

PUS 100C

Continued from
pg 1

2/2

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/90

Segment ST/10/ER29 Subdivision A Date (mo/day/yr) 4/8/90

Time (24 hr) 1600 - 1900 Biologist Lemon

- (A) Substrate type and % of segments:
 (1) Bedrock (2) Boulder 10 (3) Cobble 80 (4) Pebble (5) Sand 10 (6) Silt
- (B) Overall % cover of biota (% of segment): Dense Moderate Low 10%
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (3)

Photographs: Roll No. ST/10/11

Frames 19-26

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	NOT PRESENT
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

MYTILUS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	2	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	

ASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments: High zone includes insects, amphipods and isopods in drift line; the latter two in mid zone also. Filamentous greens on boulder tops about 30% cover in mid zone. Low zone includes Habacoccus, Rhodospira, Ulva, Poophyllum including P. sporobolus, and other filamentous reds; and Ulva (Chlorophyta). Low zone animals included Gammarus (isopods) or Pisaster (ASTEROIDEA). 5 sea lions

Ecological Considerations: and an otter and 3 eagles were sighted. Deer tracks and scat, and bear scat were abundant along the snow line. Game trails crossed the snow to the beach. Checked a substantial stream for oil, insects and fish; found none.

→ Deer Harvest area -

23 of 24

PWS 166C

ER-29

V. Light	5.25	788m	806m
No.	8.7	1305m	1336m
		2093m	2142m

20/24

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ER-29

ADEC Segment Length: 2178m

0 100 200 300
METERS

Map Key: PWS-166C

Name: Richard MartyDate: 8 April 1990

Date Entered:

ER.

PWS →
1660

↓ PWS 166A

2204 21 8

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ER-29

ADEC Segment Length: 2179m

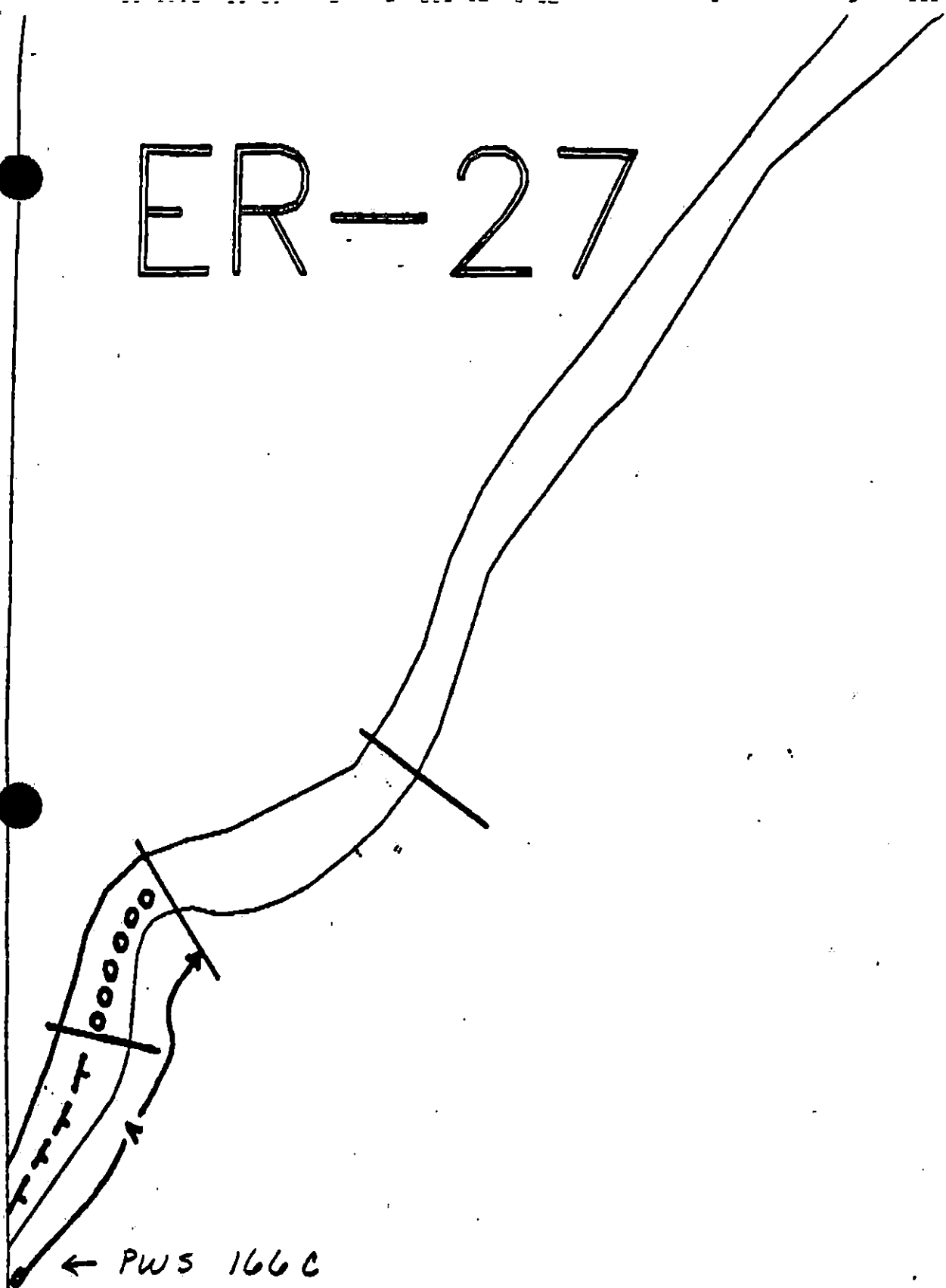


Map Key: PWS-1660

Name: Richard MartyDate: 8 April 1990

Date Entered:

ER-27



220/24

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

ER-29

ADEC Segment Length: 2179m



Map Key: PWS-166C

Name: Richard Marty

Date: 8 April 1990

Date Entered:

ARLIS
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Anchorage, Alaska