



EVOS
GC
1552
.P75
S42
1990
v.6

[Shoreline evaluations, 1990].

EA-01 – EL-104

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SHORELINE EVALUATION

SEGMENT ST/ EA-01 SUBDIVISION A (1 OF 1) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Hume DATE: June 12, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 521 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 manual pick up of oiled debris and oiled trash.
Work should be conducted before 5/1 due to seabird constraint. If work
after 5/1 is anticipated, it should be scheduled with permission of
ADF&G and USFWS.

TAG COMMENTS:

TAG APPROVAL DATE: 4/20/90
ADEC ART WEINER
EXXON ANDY TAT
NOAA Burl Wescott
USCG KENNETH KIRBY

FOSC: W L DATE: 6.17.90

Include manual pickup of mouse
patties and tarballs

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 Subistence 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 / EA - 1 SUBDIVISION: A DATE 4-9-90

~~NOAA~~
~~USCG~~
NAME

John Naughton

SIGNATURE

John J. Naughton

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Only one mouse patten, piece of oil soaked cloth and few stains observed. No clean up recommended since this island will become important sea bird nesting site later on and is reported to be an important perched haul-out site on a seasonal basis.

~~ADEC~~
NAME

Scott Shetter

SIGNATURE

Scott Shetter

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

EA-1 EAST AMATULI 540 meters seg. length
Staining observed on storm berm drift. Several less than 4cm tar balls observed. Impact found in Supra-tidal areas. 6 pits to 30cm no sub surface oil observed. High energy beach conditions. Access limited to weather conditions and surf.
A High SEA'S gillnet observed in storm berm. Drift debris plastics etc found in great quantities.

~~LAND MANAGER~~

NAME LINDA HAGEN

SIGNATURE

Linda M. Hagen USFWS

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Even though the Barren Island area is an important area for murres (nesting), this area had such little evidence of oil that no clean-up should be needed at this beach area. so no activity should cause no concern at

SHORELINE OILING SUMMARY

REVISION NO. 03/23/90

OG Penland NOAA USCG Naughton SEGMENT ST/ EA 1
 BIO Seagrass LAND REP Hagen SUBDIVISION A
 EXXON Byars ADEC Shelton TIME 9 : 37 : 11
 TEAM NO.: 19 TIDE LEVEL: 0.0 to 0.0 DATE 4 / 9 / 80
 EST. SUBDIVISION LENGTH: 540 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 10 % C 50 % P 15 % G 15 % S 0 % M 0 % V 0 %
 SLOPE: Lang 90 % Hang 10 % Vert 10 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 540 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	10	25	50	75	1	2	3	4	5	6	7	8	SU	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN				X		X		X		X						
MOUSSE				X				X								
PATTIES																
TARBALLS				/		/				/						
FILM																
NO OIL													X	X	Y	

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

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

DEBRIS COLLECTED

☒ YES ☒ NOTYPE NETS/ROPS#BAGS 10

Photographs:

Roll No. ST-19-7Frames ?

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	UG	SO	PO	IO	FO	GT	BL	DR	TL	LR	SU	LI	MI			LI
1	30					X	.												X					Gravel
2	30					X	.													X				"
3	30					X	.															X		"
4	30					X	.												X					"
5	30					Y	.													X				"
6	30					Y	.															X		"

COMMENTS

- stain logs and scattered mousse in the only oil observed.
- scattered tar balls

SHORELINE ECOLOGICAL SUMMARY

REVISION: 06/22/98

Segment ST / EA-1 Subdivision A Date (mo / day / yr) 4/9/90Time (24 hr) 8:38 Biologist SP/6HT(A) Substrate type and % of segments:
(1) Bedrock _____ (2) Boulder _____ (3) Cobble _____ (4) Pebble _____ (5) Sand _____ (6) Silt _____(B) Overall % cover of biota (% of segment): Dense _____ Moderate _____ Low 100

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

Photographs:
Roll No. _____

Frames _____

BARNACLES

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

NOT PRESENT

MYTILUS

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

Gravel/sand beach; Boulders/outcrops at ends; with leafy red algae

lower, normal Fucus/Balanas higher

Fairly abundant small barnacles, apparently last year's B. carassus?



MANUAL PICK UP
OF OILED TRASH & DEBRIS
BURN OILED LOGS OR
PICKUP IF POSSIBLE

0000 No Oil

EA-1

ADEC Segment Length: 521m



Date: 4-9-90

Date Recd. _____
 BY: _____

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EA-1 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup

CLOSED

ARCHAEOLOGICAL MONITOR REQUIRED ON SITE.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5R Seabird Colony

Closed to all activities; work site is less than 800m from seabird colony.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

Date

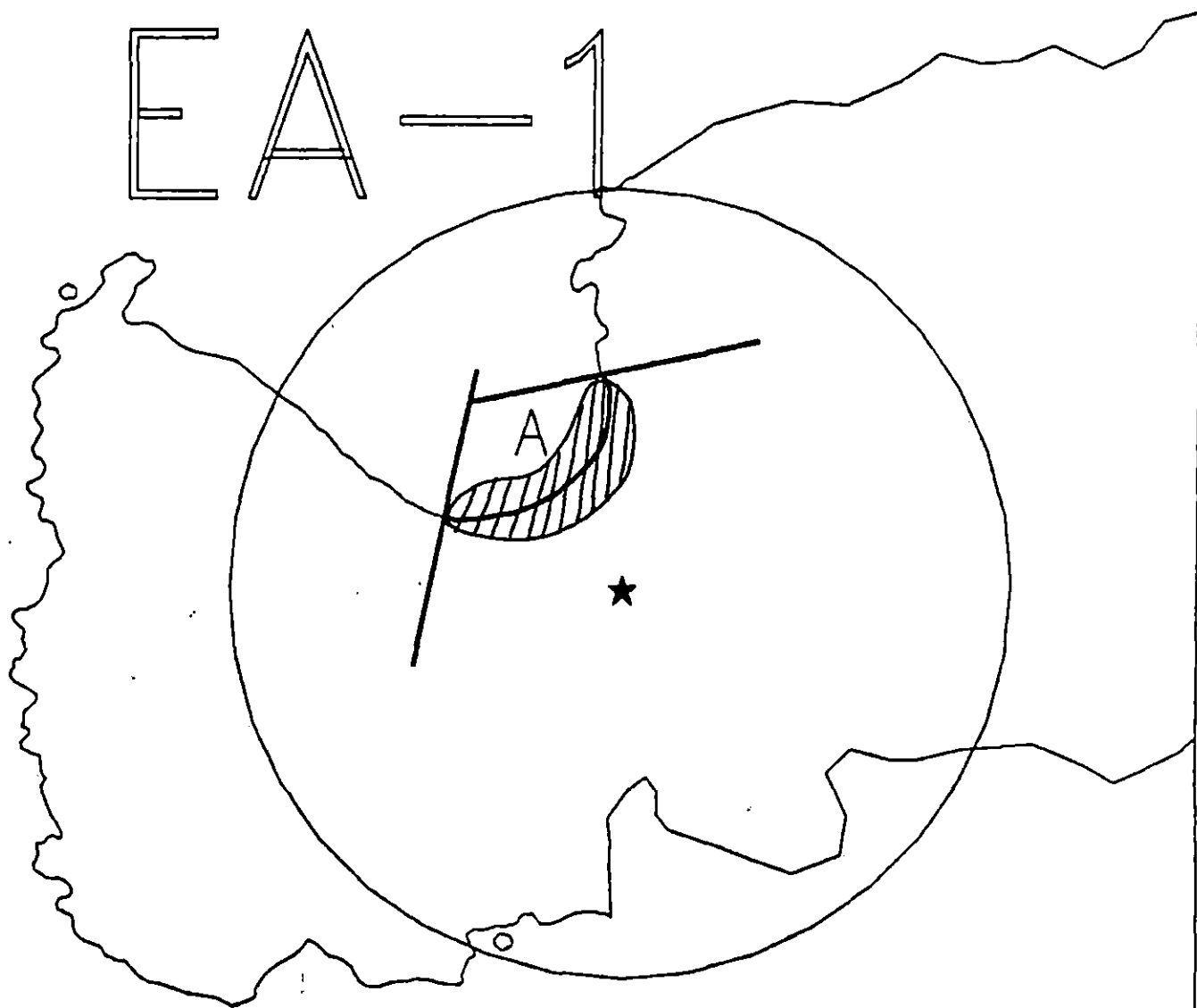
7-12-90

Prepared by

Date

7/12/90

EA-1



Dixon Company, USA

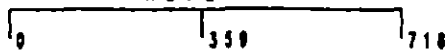
Map Key: KEN-EA-1

June 10, 1990



ECOLOGY MAP SEGMENT EA-1 SUBDIVISION A (1 of 1)

METERS



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

1 inch = 1178 feet

SHORELINE EVALUATION

SEGMENT ST/ EB-01 SUBDIVISION A (1 OF 2) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
1E Main Bay Hatchery release (4/20 to 5/10)
1L Set net sites (6/11 to 7/25)
6V Recreation: Anchorages (6/1 to 9/15)
6Y Recreation: Special use destination
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 90 m: No Oil 344 m
Subsurface Oil Observed: Yes X No Maximum Depth 18 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 subsurface oil at northern end
of subdivision (see sketch map). Work should be conducted between 6/1
and 6/11 with permission of USFWS due to eagle nest constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: 4/19/90.
ADEC JOHN BAUER
EXXON ANDY TEAL
NOAA Burt Wessett
USCG KELLY KOTHE

FOSC: W L DATE: 5-12-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

1A	Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B	Salmon stream mouth - spawning (7/10 to 8/31) No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
1C	Salmon fry nursery area (4/31 to 7/31)
1D	Esther Hatchery release (4/15 to 6/1)
1E	Main Bay Hatchery release (4/20 to 5/10)
1F	Sawmill Bay Hatchery release (4/15 to 6/1)
1G	Cannery Creek Hatchery release (4/21 to 6/1)
1H	Remote release site
1I	Gill net area (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 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.
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 (8/1 to 9/15)
6V	Anchorage (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
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 / EB-1 SUBDIVISION: A (B IS SEPARATE) DATE 4/2/90

USCG

NAME GARY OTT

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME MICHAEL J. EBEL

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

EB-1-A

LAND MANAGER - USDA FOREST SERVICE

NAME DON J. BREITINGER

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

EB-1 Sub A

18 833

SHORELINE ECOLOGICAL SUMMARY

REVISION: 10/22/90

Segment ST / EB-1 Subdivision A Date (mo / day / yr) 4/2/90Time (24 hr) 155-1575 Biologist SHARMAN(A) Substrate type and % of segments: SHADIV.
(1) Bedrock 15 (2) Boulder 25 (3) Cobble 35 (4) Pebble 20 (5) gravel Sand 5 (6) Silt(B) Overall % cover of biota (% of segment): Dense SHADIV. Moderate X Low

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

Photographs:
Roll No. ST-12-3Frames None

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 (NUCULA, LITTORINA, LIMPETS)

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: 1 adult eagle, 1 raven, 1 crow. Intertidal community appears normal and healthy.

Ecological Considerations: According to the Priorities and Windows table, this segment has an Environmental Priority of 1. However, none of the identified sensitivities are particularly significant ecologically, except for the salmon spawning stream (Code 1 B) which is not in this segment - rather, it is in Segment EB-2. See this section for segment EB-2, and note that the stream is mislocated re. the Priorities and Windows table. However, since the stream is quite close to this (EB-1-A) segment boundary, it probably be good to share this spawning stream sensitivity with EB-2.

SHORELINE OILING SUMMARY

REVISION NO. 03/2

OG Randy McBride USCGC DAA, Gary Ott SEGMENT ST/ EB-1
 BIO Lewis Sherman LAND REP/ICES Jon Breiting SUBDIVISION A (10F2)
 EXXON Leonard Herbst ADEC Mike Ebel TIME 14:55 to 15:15
 TEAM NO.: 12 TIDE LEVEL: 1.65' to 1.75' DATE 4/1/90
 EST. SUBDIVISION LENGTH: 383 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: North to South
 SURFACE SEDIMENTS: R 15 % B 25 % C 35 % P 20 % G 5 % S 0 % M 0 % V 0
 SLOPE: Long 25 % Hang 40 % Vert 35 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 85 m NO 228 m

SURFACE OIL

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

PAVEMENT: H F S 0 sq. m by 0

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED ☐ YES ☒ NO

TYPE 0

#BAGS 0

Photographs:

Roll No. ST-12-3

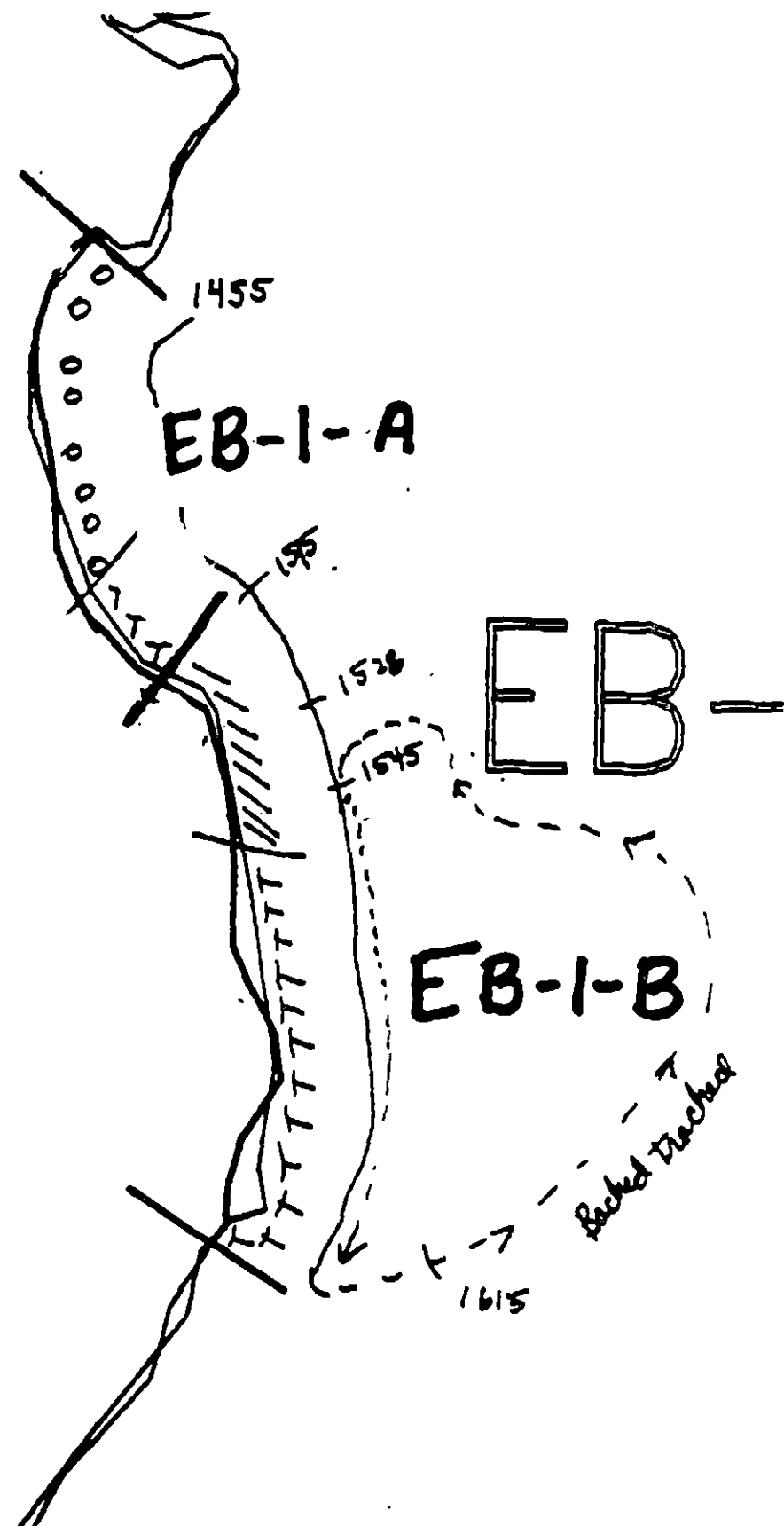
Frames 7-9

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	1	2	3	4	5	SU	U	M	L		
1	40					X	.	X							X					P6 photo 1
2	30				X		15-18	X		X						X				P65 photo 2
							.													
							.													
							.													
							.													

COMMENTS

Very light to no oiling along this large curvilinear pocket beach. No cleanup recommended.



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

EB-1-A

ADEC Segment Length: 965m

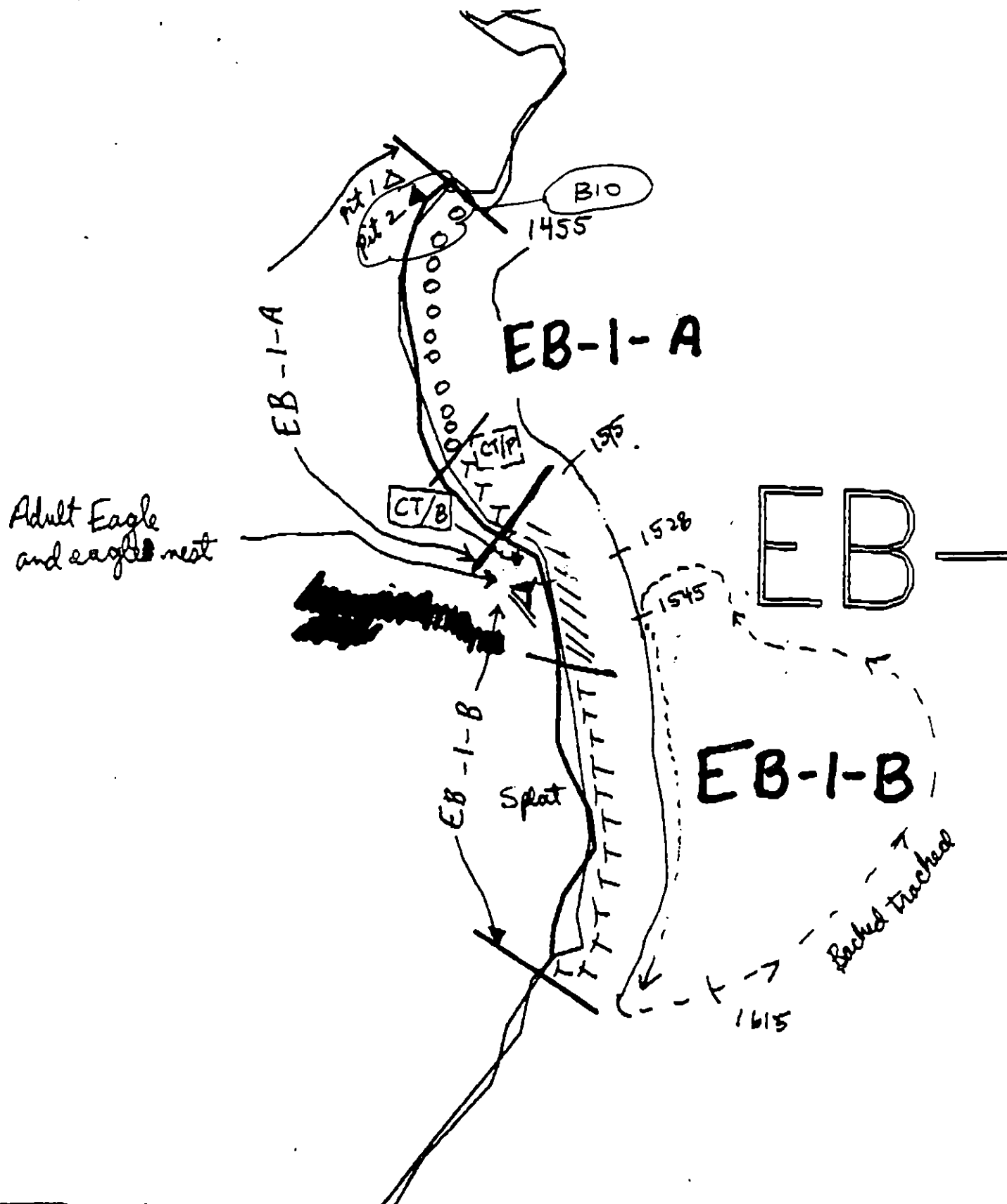


Map Key: PWS-104

Name: Randy McBride

Date: 4/3/90

Date Entered:



XXXX Wide

//// Medium

----- Narrow

TTTT Very Light

0000 No Oil

EB-1

ADEC Segment Length: 965m



Map Key: PWS-104

Name: Randy McBride

Date: 4/3/90

Date Entered:

4/5 Page 15 of 24

216633

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EB-1 SUBDIVISION A (1 of 2)

WORK WINDOW

Bioremediation

WORK 6/4 - 6/7

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1E	Main Bay Hatchery Release	Subdivision open to bioremediation 6/4 to 6/8 per verbal authorization from Larry Peltz/ADF&G to Tom Monihan/Exxon on 5/24/90. No constraint to bioremediation after 6/15.
1I	Gill Net Area	Closed to bioremediation after 6/7.
1L	Set Net Sites	Closed to bioremediation from 6/11 to 7/25.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS bald eagle impact assessment completed on 5/22/90 by Mike Lockhart indicates no active nests within 400m of the work area.

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 6/4/90
ADEC Ramond W. Macias
EXXON Alvin Tom
NOAA Joseph Takatt
USCG G.A. REITER

FOSQI [Signature]

DATE 6/6/90

Prepared By: [Signature]

Date 6/2/90

Incorporate information from
USFWS Eagle Survey 5/22/90

EB-2

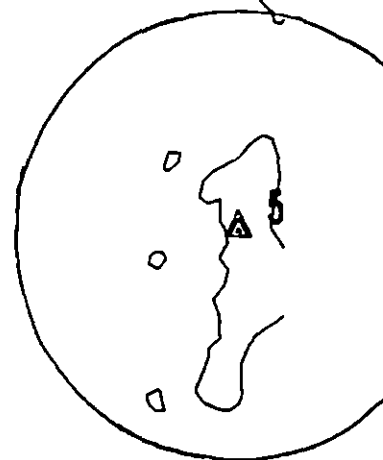
Work
Area

EB-1

Inactive
Nest

EB-5

EB-6



Exxon Company, USA
Map Key: PMS-EB-1
May 11, 1990



ECOLOGY MAP 5/28
SEGMENT EB-1
SUBDIVISION EB (1 of 2)
METERS

0 351 701



Seabird Colony



Eagle Nest

1 inch = 1150 feet

SHORELINE EVALUATION

SEGMENT ST/ EB-01 SUBDIVISION B (2 OF 2) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)

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

1L Set net sites (6/11 to 7/25)

6V Recreation: Anchorages (6/1 to 9/15)

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Eagle nest in subdivision B (see location on segment map).

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

OILING CATEGORIZATION:

Wide 0 m: Medium 159 m: Narrow 0 m: V.Light 372 m: No Oil 0 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: 4/19/90
ADEC [Signature]
EXXON [Signature]
NOAA [Signature]
USCG [Signature]

FOSC: 8

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 Sot 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.
- ✓ 6A 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 Subistence 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 / EB-1 SUBDIVISION: B (A IS SEPARATE) DATE 4/2/90

JSCG

NAME GARY OTT

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME MICHAEL J. EBEL

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

EB-1-B The wide band on this subdivision consisted of a VL (thin) surface coat that was discontinuous and patchy; volumetrically there was very little oil here and what contamination that did exist on this bedrock was low grade tar (not environmentally risky to other areas).

LAND MANAGER - USDA FOREST SERVICE

NAME DON J. BREITINGER

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

EB-1 subdiv. B

SHORELINE OILING SUMMARY

REVISION NO. 03/28/90

OG Randy McBride NDRA USCG Gary Ott SEGMENT ST/ EB-1
 BIO Levin Shorman LAND REP Dan Breitingen SUBDIVISION B (20F2)
 EXXON Leonard Harbor ADEC Mike Elia TIME 15:15 to 16:30
 TEAM NO.: 12 TIDE LEVEL: +2.0' to +3.9' DATE 4/2/90
 EST. SUBDIVISION LENGTH: 590 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: North to south
 SURFACE SEDIMENTS: R 25% B 45% C 25% P 6% G 3% S 1% M 0% V 0%
 SLOPE: Long 20% Hang 40% Vert 40% WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 150 m N 0 m VL 440 m NO 0 m

SURFACE OIL

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

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

Roll No. ST-12-3Frames 7 and 9

SUBSURFACE OIL - No pits

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	OP	NO		DO	UC	1	2	3	4	5	SU	U	M	U		

COMMENTS

broken
 A 29' foot wide, ~~blocking~~ coat of medium oiling lies along the middle ~~intertidal~~ intertidal to upper intertidal zone (see sketch). The oil is dried and appears to pose no further environmental damage. This is further reinforced by the amount of moderate wave exposure available along this subdivision. (continued on next page)

Page 1 of 2

3/25

REVIEWED _____ DATE _____

EB-1-B

Due to the amount of fetch across Knight
Island Passage, ^(especially winds from the E/SE) wave activity in
conjunction with ^{normal} tidal processes, will
wash and flush the rocks and
sediments efficiently throughout the
year.

Randy McBride

OG

Page 2 of 2

4/25

03 Mch 80

SEGMENT EB-1

SUBDIVISION B

DATE 4 / 2 / 90

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Substr. Entry
- ☒ Oil Dist.
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HAV/LAV
- ☒ SS
- ☒ Profile Location(s)
- ☒ Photo Location(s)
- ☒ Photo Location(s)

LEGEND

1 Δ
Pb - No Subsurface Oil

2 Δ
Pb - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

[CT/P]
Patched Distribution

[CT/S]
Splashed Distribution

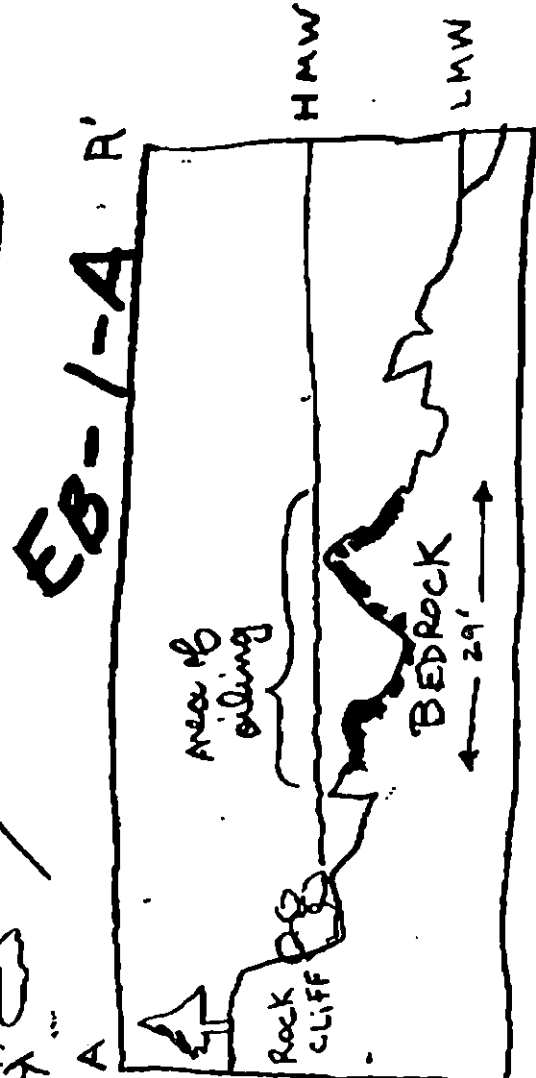
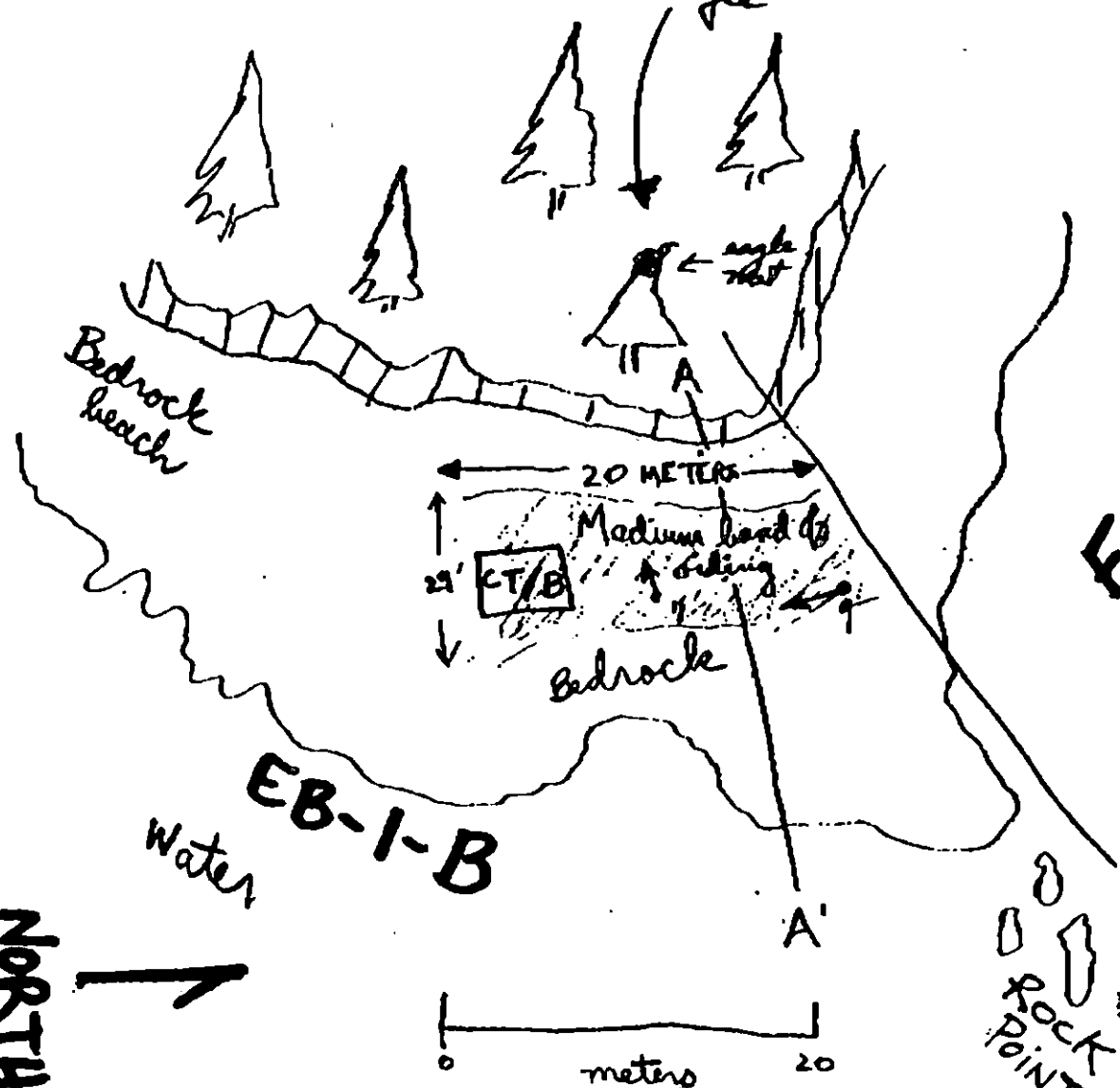
Oil Vegetation

1 →
Photo location, direction, and number

ETCH MAP

NOTE:

Eagle Nest
and adult eagle



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

REVISION 2388

NEW YORK: 1972

Time (24 hr) 15/5-1546 Biologist SHARMA

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

Photographs:
Roll No. ST-12-3

Frames 7, 8, 9

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

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

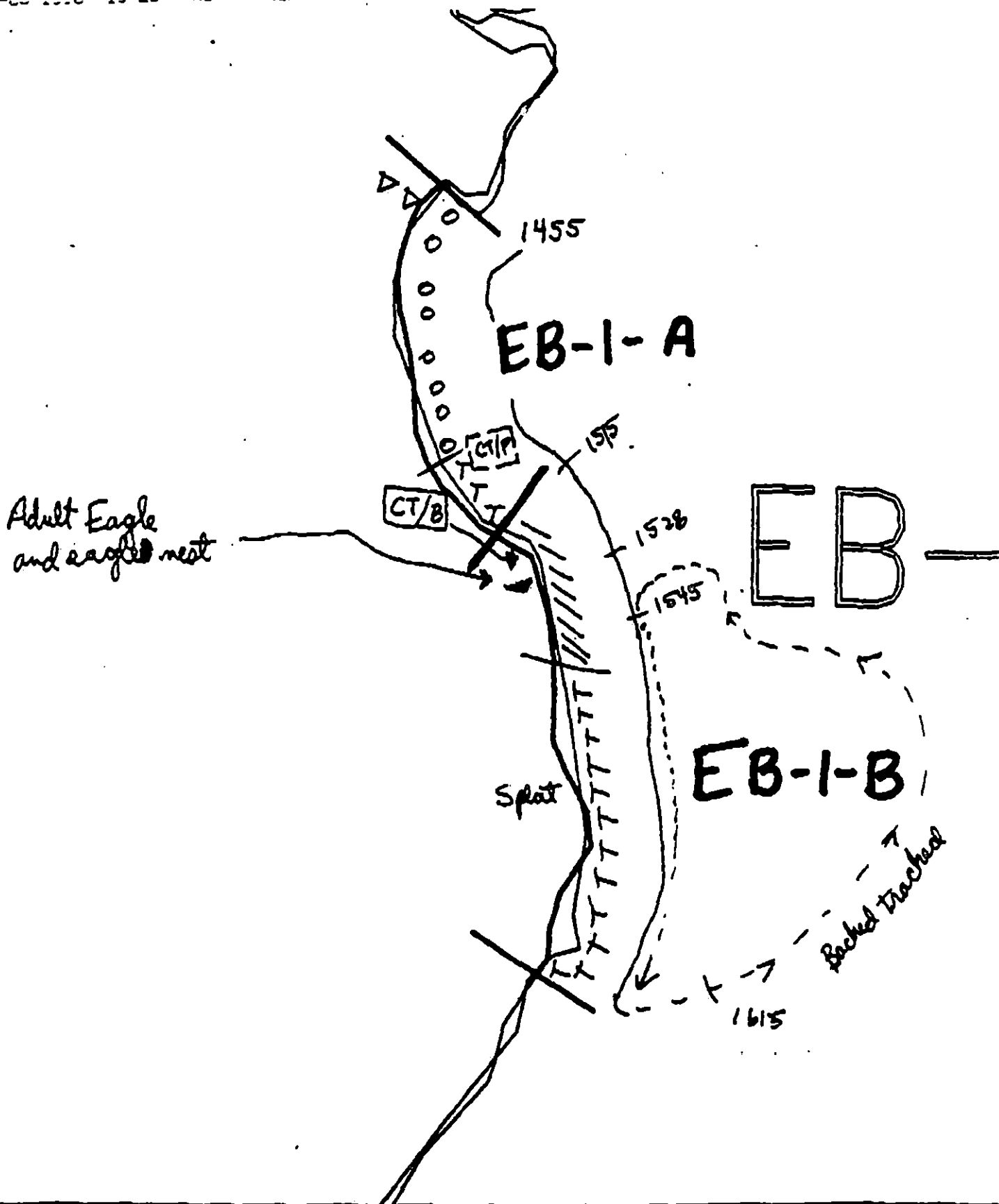
NOT PRESENT

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

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

NOT PRESENT

Ecological Considerations: ~~There are~~ Ecological Considerations for ED-1-A, & note again that the salmon spawning stream (Code 1A) is not in this segment but rather in nest door (to ED-1-A) in segment ED-2. There is an eagle nest with a proprietary adult at the N. end of this subdivision (see Computer map & aerial map) which very possibly will become clearly active in the next couple weeks.



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EB-1

ADEC Segment Length: 965m



Map Key: PWS-104

Name: Randy McBride

Date: 4/3/90

Date Entered:

SHORELINE EVALUATION

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

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)

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

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

6V Recreation: Anchorages (6/1 to 9/15)

6Y Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles R. H. Hines DATE: 4/18/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 337 m: No Oil 2242 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: 4/18/90

ADEC ART WERNER Art Werner

EXXON ANDY TEAL Andy Teal

NOAA Bruce Westcott Bruce Westcott

USCG G.A. BEITER G.A. Beiter

FOSC: My h DATE: 4-22-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- ~~Salmon fry nursery area (4/31 to 7/31)~~
~~Esther Hatchery release (4/15 to 6/1)~~
~~Main Bay Hatchery release (4/20 to 5/10)~~
~~Sawmill Bay Hatchery release (4/15 to 6/1)~~
~~Cannery Creek Hatchery release (4/21 to 6/1)~~
~~Remote release site~~
~~Gill net area (5/7 to 5/31)~~
~~Purse seine area (7/20 to 9/30)~~
~~Purse seine hook-off (7/20 to 9/30)~~
~~Set net sites (6/11 to 7/25)~~
~~For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.~~
- 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 (5/7 to 5/31)
- 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 (5/1 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 / EB - 2 SUBDIVISION: A (ENTIRE SEG.) DATE 4/2/90**USCG**NAME GARY OTTSIGNATURE *[Signature]*☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED**ADEC**NAME MICHAEL J. EBELSIGNATURE *[Signature]*☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTEDEB-2-A**LAND MANAGER - USDA: FOREST SERVICE**NAME DON J. BREITINGERSIGNATURE *[Signature]*☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTEDEB-2 / A entire seg7/2515 of 33

SHORELINE OILING SUMMARY

REVISION NO. 08/23/98

ng Randy McBride USCG NoAA Gary Ott SEGMENT ST/ EB-2
10 Lewis Sherman LAND REP U.S.E.S. Dan Brody SUBDIVISION A 121
JXON Leonard Herbst ADEC Mike Fkai TIME 12:07 to 14:45
 TEAM NO.: 12 TIDE LEVEL: 2.9' to 1.6' DATE 04/02/90
 EST. SUBDIVISION LENGTH: 2067 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: North to South
 SURFACE SEDIMENTS: R 20 % B 20 % C 30 % P 20 % G 5 % S 5 % M % V %
 SLOPE: Long 60 % Hang % Vert % WAVE EXPOSURE: ☒ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W m M m N m VL 192 m NO 1875 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES				
	C	B	P	R	~~1~~	~~2~~	~~3~~	~~4~~	~~5~~	SU	UI	M	U	
ASPHALT PAVEMENT														
POOLED														
COVER				X				X			X			
COAT		+0	X					7/8			7/8			
STAIN														
MOUSSE														
PATTIES														
TARBALLS														
FILM														
NO OIL											X		X	X

PAVEMENT: H F S sq. m by cmPATTIES / 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 #BAGS

Photographs:

Roll No. ST-12-2 and 3Frames 29-37 and 1-6

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	~~1C~~	~~1B~~	~~1P~~	~~1R~~	~~1S~~	SU	UI	MI	LI			
1	10					X	-	X							X							C
2	40					X	-	X							X							C, P, S
3	37					X	-	X								X						P, S
4	40					X	-	X							X							C, P
5	45					X	-	~~X~~								X						G, P
							-															

COMMENTS

A few blocky, patchy, and sporadic coats of very light oiling. No cleanup recommended.

10 of 33

REVISION 00/22/13

11 32

OG Randy McBride

SEGMENT EB-2

SUBDIVISION A

DATE 4/2/90

SKE MAP

EB-2-A

CHECKLIST

- ☒ Map
- ☒ Approx. Scale
- ☒ Log Sub Entry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ L.P. H.W.L./L.W.L.
- ☒ OSI
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Photo Location(s)

LEGEND

1 Δ
P# - No Subsurface Oil

2 Δ
P# - Subsurface Oil

CT/C
Continuous Distribution

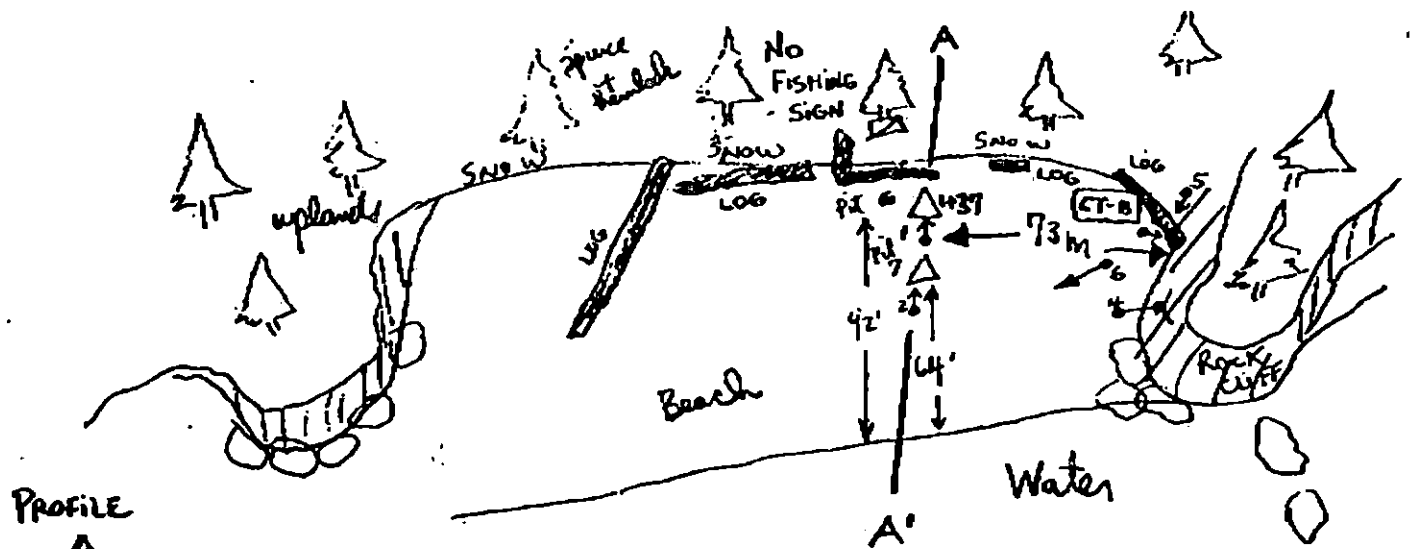
CT/B
Broken Distribution

CT/P
Patchy Distribution

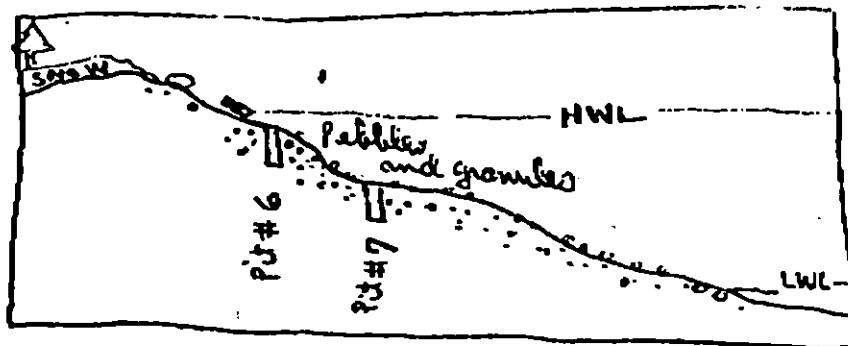
CT/S
Splashed Distribution

Other Vegetation

1 →
Photo location, direction,
and number



PROFILE
A



↑
NORTH

Oil Character Length (m): AP _____ PO _____ CV _____ CT 15 ST _____ MS _____ PT _____ TB _____ FL _____ NO 152

REVISION 02/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/9

Segment ST / EB-2 Subdivision A Date (mo / day / yr) 4/2/90

Time (24 hr) 1205-1445 Biologist SHARMA

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

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

(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-12-2
Roll No. ST-12-3
29-37
Frames 1-6

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 (ANGELLA, LITTORINA, LIMPETS)

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

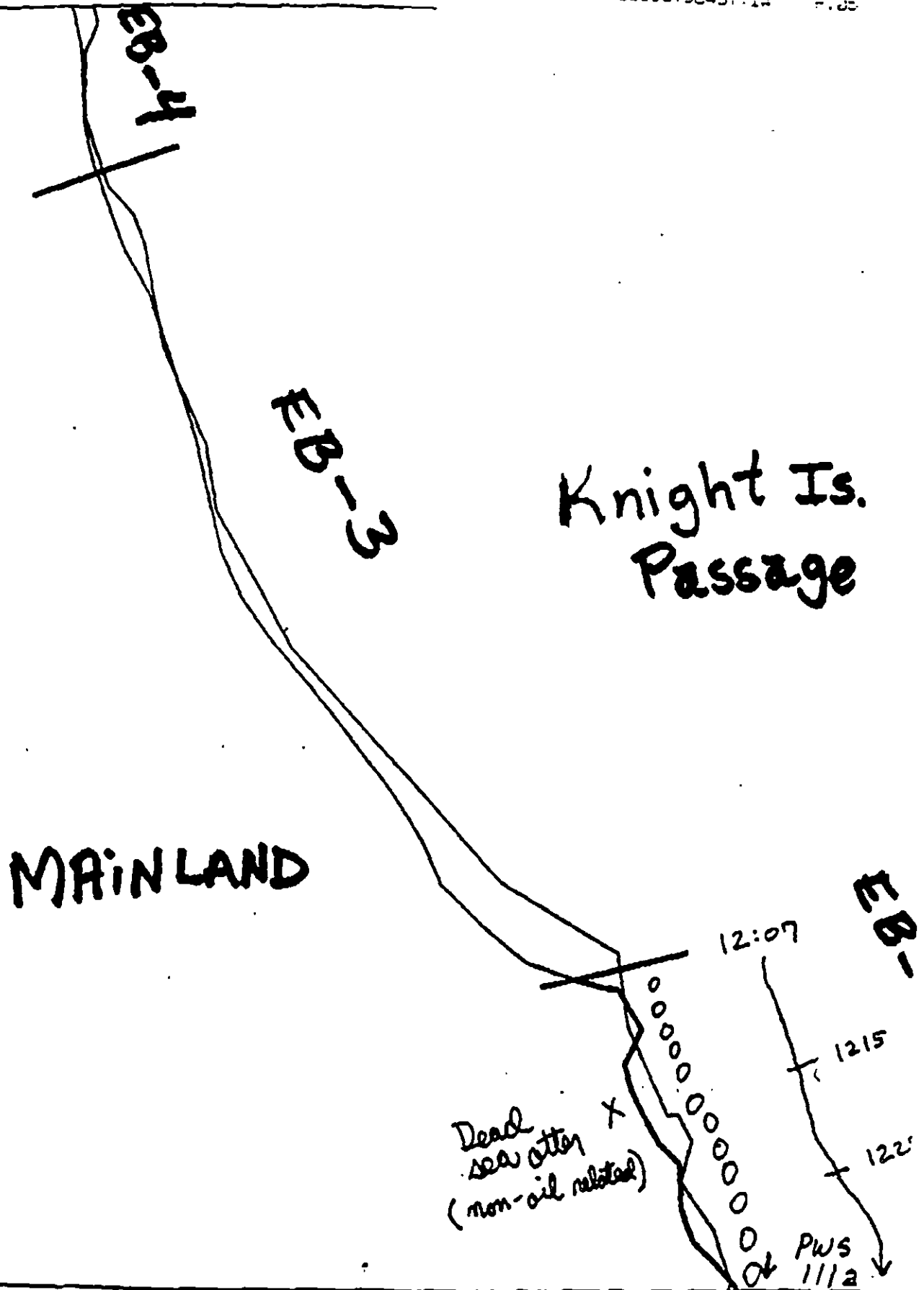
FUCUS

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 adult anglers, 2 Steller's jays, 1 river otter. 2 sea otter skeletons (≤ 1 yr. since death) in upper ITC - no oil. Dead sea otter carcass on snow in supratidal of small pocket beach bordered by rock walls - young adult, oriented, sex unknown but flat in bleeding condition. Cause of death unknown, no wounds, animal seems healthy - hours to days since death. Intertidal community appears normal and healthy.

Ecological Considerations: According to the Priorities and Windows table, this segment has an Environmental Priority of 1, with an open work window of 5/10 - 4/11. Identified sensitivity is the area's use as a Main Bay Hatching release site (Code 2 E), with time restriction 4/20 - 5/10 (constraints 1,2) and a treatment priority of 2. At the S. end of the segment is a salmon spawning stream (see computer map), which I believe is the stream referred to for segment EB-1 in the Priorities and Windows table. This stream is in EB-2, not EB-1. This is clearly a Priority 1 sensitivity. The stream must.



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 M - 011

EB-2

ADEC Segment Length: 2242m

0 100 200 300

Map Key: PWS-111b

Name: Randy McBrideDate: 4/2/90

Data Entered:

MAINLAND

EB-2

PWS
1116

1230
1247

LUNCH

Pt #4
Pit #5

CT/S

1252

1304

1333

1336

Knight Is.
Passage

anchorman stream

CT/S

CT/Band
CT/P

Washed
shore line
marker

1347

1355

1402

1409

1436

130633

Wide
Medium
Narrow
Very Light
No Oil

EB-2

ADEC Segment Length: 2242m



Map Key: PWS-111a

Name: Randy McBride

Date: 4/2/90

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ EB-03 SUBDIVISION A (1 OF 1) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

~~1E~~ Main Bay Hatchery release (4/29 to 5/10)

1L Set net sites (6/11 to 7/25)

6Y Recreation: Special use destination

Contact ADF&G for dates, locations, constraints for 1L. See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: *Paul E. Brown* DATE: 4/18/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 1035 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: 4/18/90.

ADEC *Art Weiner Art Weiner*

EXXON *Andy Gatz*

NOAA *Burt Wescott Burt Wescott*

USCG *G.A. Butler G.A. Butler*

FOSC: *Yh* DATE: 4-22-90

SHORELINE EVALUATION

SEGMENT ST/ EB-03 SUBDIVISION A (1 OF 1) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1E Main Bay Hatchery release (4/29 to 5/10)

1L Set net sites (6/11 to 7/25)

6Y Recreation: Special use destination

Contact ADF&G for dates, locations, constraints for 1L. See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: *Paul E. Brown* DATE: 4/18/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 1035 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: 4/18/90.

ADEC *Art Weiner* *Art Weiner*

EXXON *ANDY* *GR* *Real*

NOAA *Bull Weisheit* *Bull Weisheit*

USCG *G.A. Reiter* *G.A. Reiter*

FOSC: *h* 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 6/10)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 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 (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 ~~Recreation: Tent sites (8/1 to 9/15)~~
- 7Z Subistence 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

MENT ST / EB-3 SUBDIVISION: A (ENTIRE SEG.) DATE 4/2/90

USCG

NAME GARY OTT SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME MICHAEL J. EBEL SIGNATURE [Signature]

NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

EB-3-A

LAND MANAGER USDA: FOREST SERVICE

NAME DON J. BREITINGER SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

EB-3 - A entire seg.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/89

OG Randy McBride USCG NOAA Gay Off SEGMENT ST/ E B-3
 BIO Leah's Statman LAND REP USEs On Bklyng SUBDIVISION A (191)
 EXXON Leonard Herbst ADEC Mike Ebel TIME 11:35 to 12:06
 TEAM NO.: 12 TIDE LEVEL: 3.25' to 2.5' DATE 04/02/90
 EST. SUBDIVISION LENGTH: 1055 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: North to South
 SURFACE SEDIMENTS: R 20 % B 25 % C 30 % P 25 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 10 % Hang 75 % Vert 15 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 1055 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	K	B	P	R	1	2	3	4	5	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 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. ST-12-2Frames 26-28

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		UD	UC	1	2	3	4	5	SU	U	M	U		
1	35					X	---	X							X					C, P (Photo 26)
2	30					X	---	X								X				P, G, S (Photo 28)
							.													
							.													
							.													
							.													

COMMENTS

Bio: No oil observed anywhere along this segment; intertidal community appeared healthy and normal; no shoreline ecological summary completed for this segment so that trend could move on to other segments. ITS

OG: No oil found in the subsurface or along the surface of this segment.

SHORELINE ECOLOGICAL SUMMARY

REVISED: 02/23/90

Segment ST / ED-3 Subdivision A Date (mo / day / yr) 4/8/90Time (24 hr) 2010-2035 Biologist SHARMAN(A) Substrate type and % of segments: SANDY
(1) Bedrock 20 (2) Boulder 25 (3) Cobble 30 (4) Pebble 25 (5) Sand (6) Silt (B) Overall % cover of biota (% of segment): Dense Moderate Low X
SANDY

(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-12-2Frames 25-28

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 (ALICELLA, LITTORINA, LIMAEYS)

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

NOT PRESENT

FUCUS

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

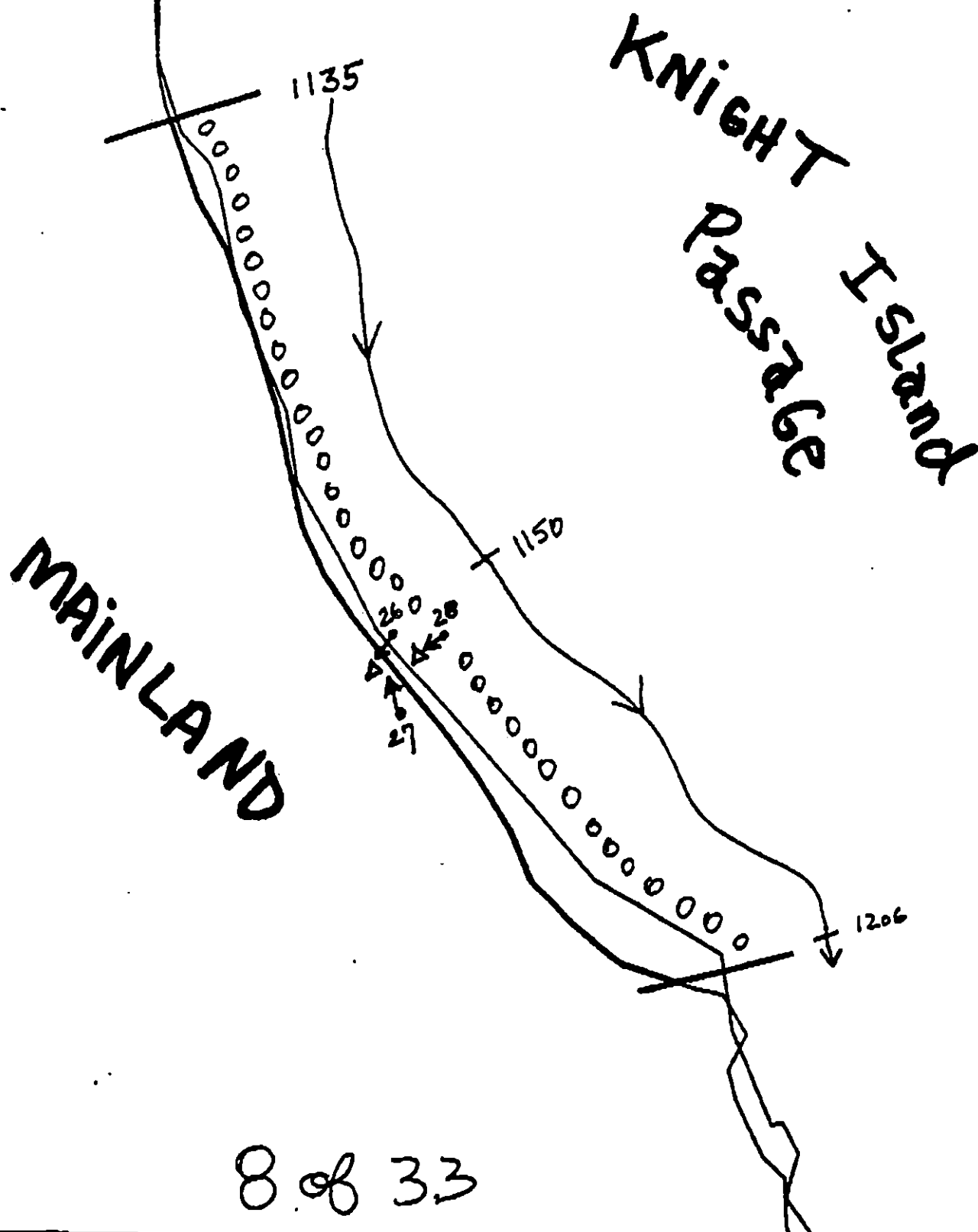
NOT PRESENT

Wildlife Observations/ General Comments: 1 sea otter, 2 pairs surf scoters. This beach is relatively high energy, mostly cobble, and as a moderately unstable substrate supports a diverse intertidal biota. Evidence of high wave and energy & cobble/boulder scouring is common. Even the sub-boulder community is minimal - amphipods, periwinkle barnacle spat. Good set of this year's barnacle spat on boulders and cobble.

Ecological Considerations:

This segment has no oil, no particular ecological sensitivities.

9/25



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

oooo " " " "

EB-3

AOEC Segment Length: 1036m

0 100 200 300



Map Key: PWS-112

Name: Randy McBrideDate: 4/3/90Date: 4/2/90

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

1L Set net sites (6/11 to 7/25)

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: [Signature]

DATE: 4/23/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 121 m: No Oil 780 m
Subsurface Oil Observed: Yes No X Maximum Depth

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)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommended treatment includes 1) manual pick up of pooled oil, 2) bioremediation of pooled oil in area shown on attached sketch map. Work should be conducted between 5/11 and 6/10 due to hatchery release and set net constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/23/90

ADEC Act Weirich

EXXON Arroyo Tech

NOAA Joseph T. Hatt

USCG Kenneth Keane

FOSC: [Signature]

DATE: 4-27-90

manually remove "pooled" oil before bioremediation.

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

JSCG

NAME

GARY OTT

SIGNATURE

[Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME

MICHAEL J. EBEL

SIGNATURE

[Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

EB-4-A

LAND MANAGER - USDA : FOREST SERVICE

NAME

DON J. BREITINGER

SIGNATURE

[Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Seg EB-4
A - entire seg.

(6)

SHORELINE OILING SUMMARY

REVISION NO. 03/22/80

OG Randy McBride NOAA USCG Gary Ott SEGMENT ST/ EB-4
 BIO Levitt Sharman LAND REP USFS Don Breitinger SUBDIVISION A
 EXXON Leonard Herbst ADEC Mike Ebel TIME 10:27 to 11:34
 TEAM NO.: 12 TIDE LEVEL: 6.75' to 3.75' DATE 4/12/90
 EST. SUBDIVISION LENGTH: 9.38 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: North to South
 SURFACE SEDIMENTS: R 25 % B 30 % C 25 % P 15 % G 5 % S 0 % M 0 % V 0 %
 SLOPE: Lang 25 % Hang 60 % Vert 15 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 162 m NO 779 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	IC	IS	IP	IR	SRL BR	DBL RW	GY SL	DBL TL	LEK	SU	U	M	U			
ASPHALT PAVEMENT																
POOLED				X				X		X						
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			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED

☐ YES ☒ NOTYPE 0#BAGS 0

Photographs:

Roll No. ST-12-2Frames 21-24

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	SRL BR	DBL RW	GY SL	DBL TL	LEK	SU	U	M	U		
1	27.5					X	---		X						X					CPG (Photo 22)
2	35					X	---		X						X					CPG (Photo 23)
							.													
							.													
							.													
							.													

COMMENTS

The northern segment of EB-4 consists of a rocky headland w/ sporadic pooled and sporadic coated very light oiling. Due to the high wave exposure, most of this area will be continuously washed by wave action. Also, this area poses no environmental threat from further contamination. No cleanup is recommended.

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/93

Segment ST / EB-4 Subdivision A Date (mo / day / yr) 4/2/90

Time (24 hr) 1015-1130 Biologist SHARMAN

(A) Substrate type and % of segments: SUBDIV.
(1) Bedrock 25 (2) Boulder 30 (3) Cobble 25 (4) Pebble 20 (5) Sand (6) Silt

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

(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 (⊙)

Photographs: Roll No. ST-12-2

Frames 21-24

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 (*Nucella*, *Littorina*, *Limpeta*)

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: 2 harbor seals, 2 sea otters, 1 adult eagle, 2 deer in intertidal zone (appear healthy), 10 pairs harlequin ducks, sea otter scat on exposed bedrock point at end of segment abundant deer scat in supratidal at edge of snow. Abundant wrack line - avoided. See next page for assessment of intertidal community.

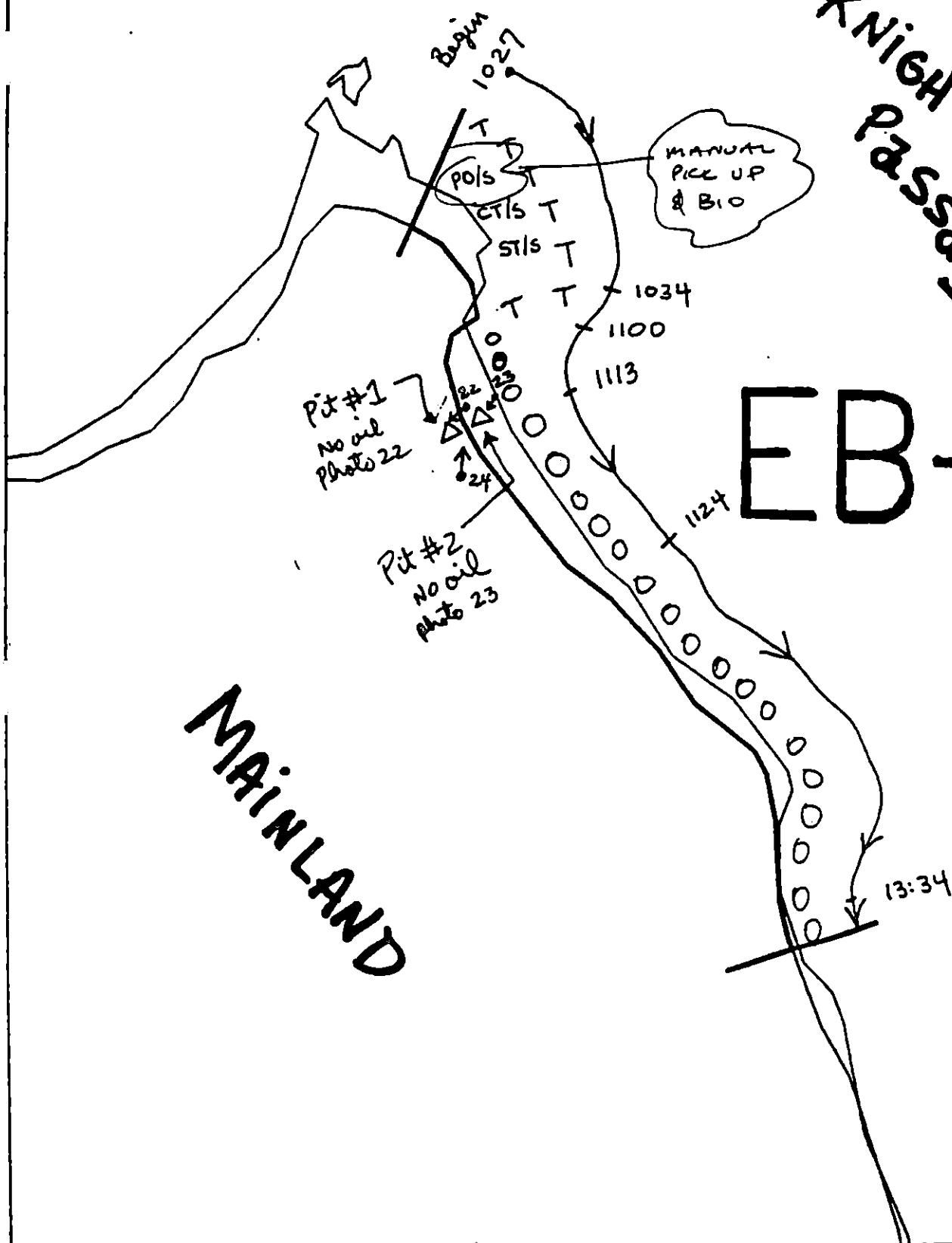
Ecological Considerations: According to the Priorities and Windows table, this segment has an Environmental Priority of 1, with an open work window of 5/10-6/11. Ecological sensitivities (identified) include primarily the area's use as a Main Bay Hatchery release site, with time restriction 4/20-5/10 (constraints 1, 2) and a treatment priority of 2. Sensitivity Code = 1E.

General Comments: Intertidal Community - this is a normal and healthy assemblage of rocky intertidal biota in this segment, across a variety of habitats. The exposed bedrock point at the N. end is particularly rich and diverse. Small tidepools harbor coralline algae (Lithothamnion crusts and articulated forms), Anthopleura, and tidepool sculpins. An area $\approx 25\text{m}^2$ of previously-oiled Fucus has been weathered free of oil, but the affected plants still look a bit "sickly" - however, it appears the stand will recover. Moderate recruitment of what appears to be Rhodomena larix in Fucus zone and below, along with rare discontinuous patches of Fucus recruitment - both these species recruiting only on bedrock.

KNIGHT Island
Passage

EB-4

MAINLAND



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

EB-4

ADEC Segment Length: 901m



Map Key: PWS-113

Name: Randy McBride

Date: 4/2/90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EB-4 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	CLOSED
Bioremediation	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1E	Main Bay Hatchery Release	No constraint to manual pickup. Subdivision open to bioremediation 6/4 to 6/8 per verbal authorization from Larry Peltz/ADF&G to Tom Monihan/Exxon on 5/24/90. No constraint to bioremediation after 6/15.
1I	Gill Net Area	No constraint to manual pickup; closed to bioremediation after 6/7.
1L	Set Net Sites	No constraint to manual pickup; closed to bioremediation from 6/11 to 7/25.
5T	Bald Eagle Nest	Closed to manual pickup and bioremediation. USFWS bald eagle impact assessment completed on 5/22/90 by Mike Lockhart indicates an active nest within 400m of the work area.

OTHER ECOLOGICAL CONSIDERATIONS

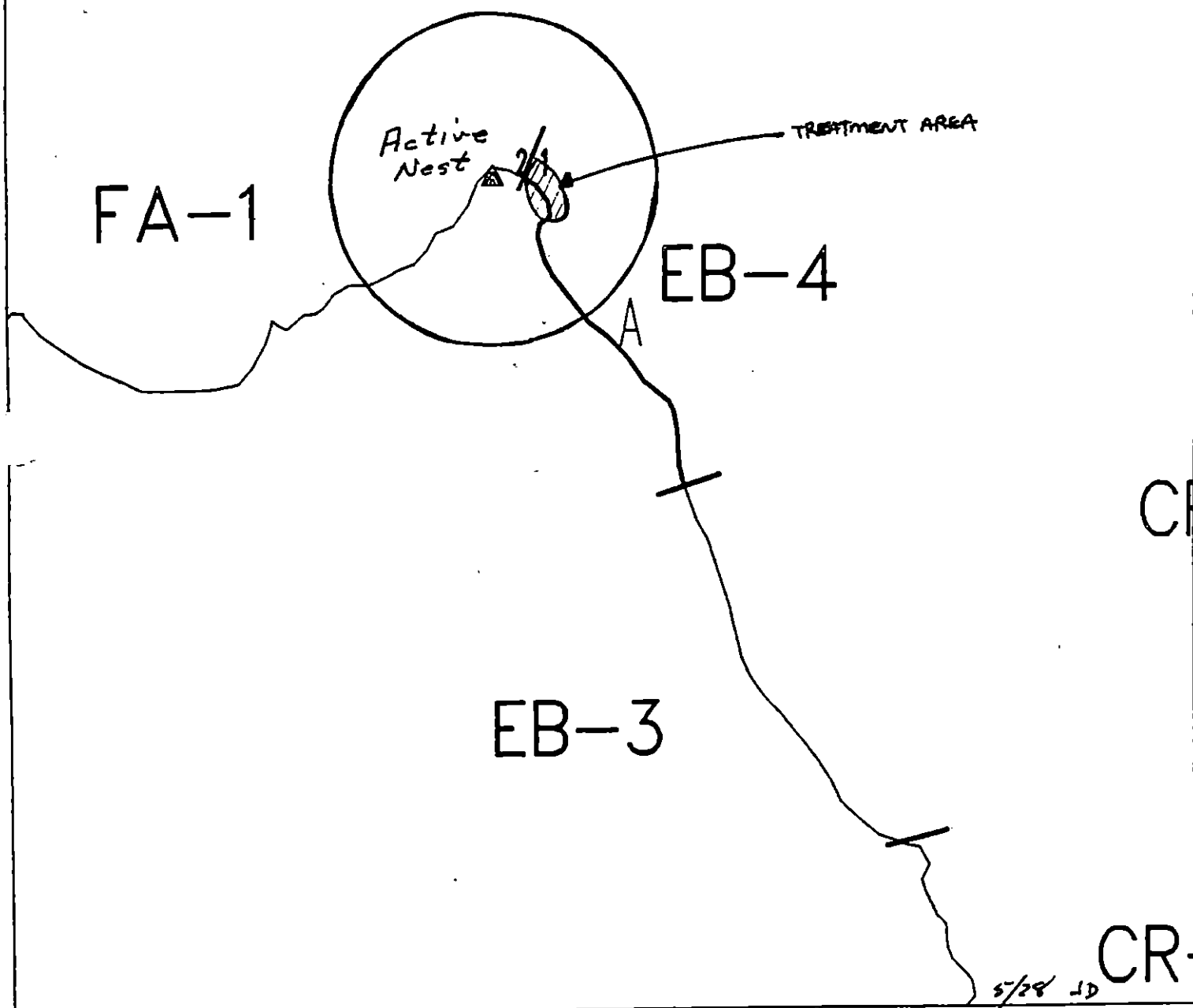
If eagle nest constraint is removed, other ecological constraints will apply.

TAG ADDENDUM DATE 6/04/90
ADEC Ray Morris
EXXON Andy Teal
NOAA Joseph Talbott
USCG G.A. Reiter
FOSC [Signature] DATE 6/9/90

Prepared by: Andy Teal PP

Date: 6/21/90

Incorporates information from
USFWS Eagle Survey 5/22/90



Exxon Company, USA
Map Key: PMS-EB-4
May 11, 1990



ECOLOGY MAP 5/28
SEGMENT EB-4
SUBDIVISION A (L of L)
METERS

0 372 745

★ Seabird Colony
▲ Eagle Nest

1 inch = 1222 feet

SHORELINE EVALUATION

SEGMENT ST/ EB-05 SUBDIVISION A (1 OF 1) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Bald eagle nest (5T) - 3/1 to 6/1; Main Bay hatchery release area (1E) - 4/20 to 5/10; Set net sites (1I) - 6/1 to 7/25 (contact ADF&G for dates and locations); Anchorages (6V) - 6/1 to 9/15. Special use designation (6Y) - 6/1 to 9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Restrict air and boat traffic to minimum essential. Air approach and takeoff from and to seaward only. Contact USFWS re: eagle nests. Avoid unnecessary disturbance/damage to unoiled substrate and biota.

SHPO SIGNATURE: Charles Z. Hodman DATE: April 14, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 621 m: No Oil 793 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: 4/13/90.
ADEC JOHN BAUER John Bauer
EXXON ANDY TER Andy Ter FOSC: DATE: 4-20-90
NOAA Bruce Wescott Bruce Wescott
USCG G.A. BEITER G.A. Beiter

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EB-5 SUBDIVISION: A (ENTIRE SEGMENT) DATE 4/2/90

SCG

NAME GARY OTT

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME MICHAEL J. EBEL

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

EB-5-A

LAND MANAGER - USDA FOREST SERVICE

NAME DON J. BREITINGER

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

EB-5 subdivision A

27 of 33

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG Randy McBride ~~NOAA~~ NOAA Gary O'H SEGMENT ST/ EB-5
 BIO Lewis Shatman LAND REP USFS Don Bratton SUBDIVISION A
 TXN Leonard Herbst ADEC Mike Ebel TIME 16:34 to 17:10
 TEAM NO.: 12 TIDE LEVEL: 3.9' to 4.8' DATE 04/02/90
 EST. SUBDIVISION LENGTH: 1309 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: North to South
 SURFACE SEDIMENTS: R 30 % B 20 % C 30 % P 15 % G 2 % S 3 % M % V %
 SLOPE: Long 15 % Hang 45 % Vert 40 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W m M m N m VL 655 m NO 654 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	N	E	S	W	1	2	3	4	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 sq. m by 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 #BAGS

Photographs:

Roll No. ST-12Frames 10-11

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm-0.01)	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	1	2	3	4	SU	U	M	U		
1	20					X	.	X						X					C, G
2	25					X	.	X						X					C, G, S
3	55					X	.	X						X	X				C, G Photo 10
4	54					X	.	X								X			P, G, S Photo 11
5	25					X	.	X						X					P, G, S
							.												

COMMENTS

only a few sporadic coats of very light oiling found.

24 of 33

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/91

Segment ST / ED-5 Subdivision A Date (mo / day / yr) 4/2/90Time (24 hr) 1630-1700 Biologist SHARMA

(A) Substrate type and % of segments:

(1) Bedrock 30 (2) Boulder 20 (3) Cobble 30 (4) Pebble 15 (5) Sand 5 (6) Silt 5(B) Overall % cover of biota (% of segment): Dense 30 Moderate X 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-12-3Frames 10, 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 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 (ALACELLA, LITTORINA, L. IMPACTA)

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

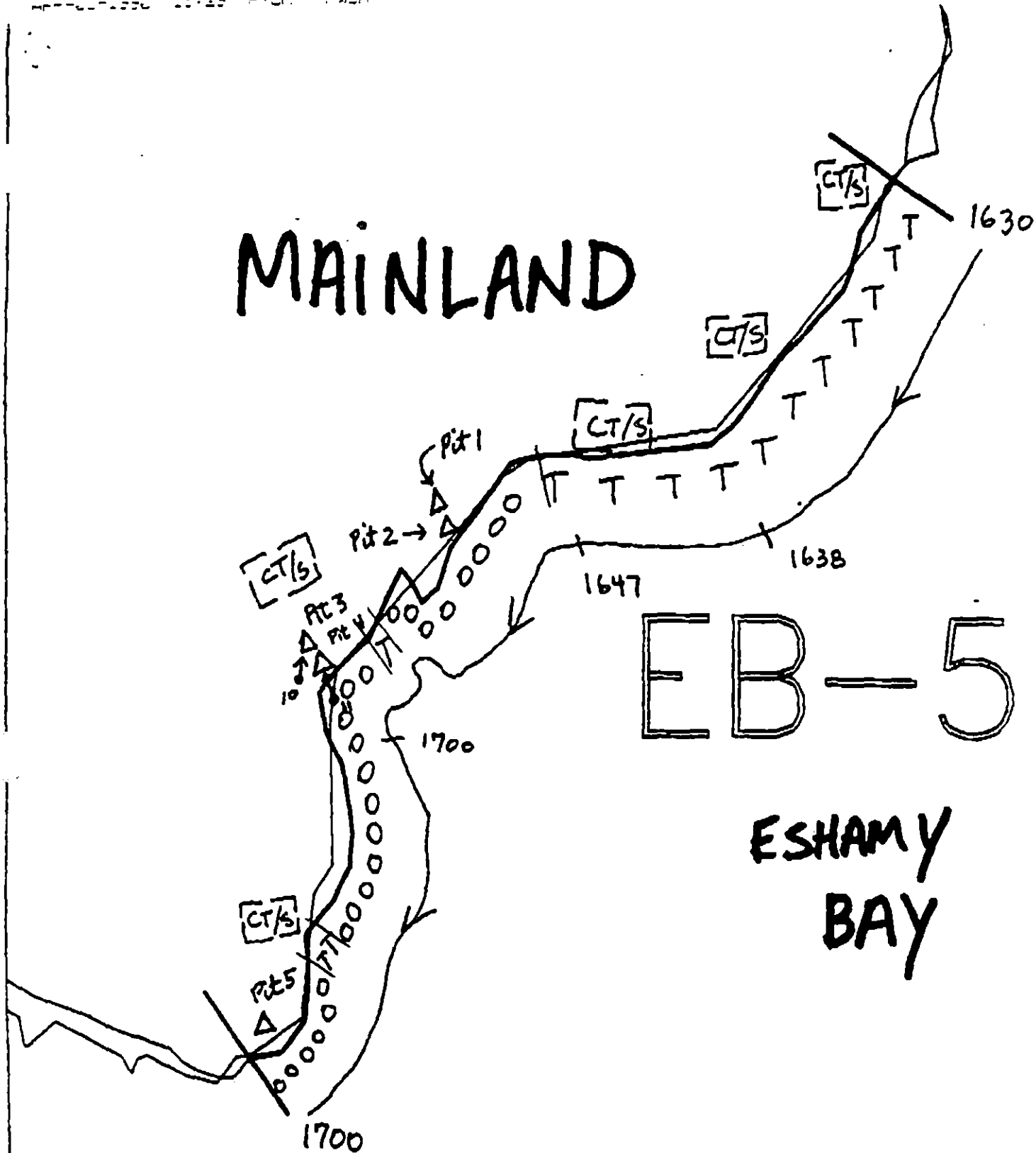
Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

Wildlife Observations/ General Comments: Did not observe LIZ. Otherwise, intertidal community is typical of the segment to the N. with similar combinations of beach types / exposures. Community appears normal and healthy. 1 pair goldeneye, 1 pair Redpoll, 1 adult eagle.

Ecological Considerations: According to the Priorities and Windows table, this segment is environmentally ranked Priority 1, with an open work window 6/1 - 6/11 (possibly extended later - USFWS). Identified ecological sensitivities include use as a Main Bay Patchery release site (code 1E) and presence of active bald eagle nests (code 5T). The former carries a constraint 1-2 with treatment priority 2; the latter carries a constraint of 5 with treatment priority 2. We observed no eagle nests on our survey.

MAINLAND



25 of 33

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EB-5

ADEC Segment Length: 1309m



Map Key: PWS-158

Name: Randy McBride

Date: 4/3/90

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ EB-06 SUBDIVISION A (1 OF 1) DATE 4/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

1L Set net sites (6/11 to 7/25)

6Y Recreation: Special use destination (6/1 to 9/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: J. Paul McMahon

DATE: 4/23/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 621 m: No Oil 210 m

Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:

No Treatment Recommended

X Treatment Recommended

X Manual Pickup

 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:

REMOVE TARBALLS AND ASPHALT INDICATED ON SKETCH.
BIOREMEDIATION TO BE APPLIED TO THE TOP OF ISLAND AS INDICATED
ON THE SKETCH.

TAG COMMENTS:

HIGH HUMAN USE + SET NET FISHERIES AREA.

TAG APPROVAL DATE: 4/18/90

ADEC Art Weiner Art Weiner

EXXON Andy Tse Andy Tse

NOAA Burl Wescott Burl Wescott

USCG G.A. Pfeiffer G.A. Pfeiffer

FOSC: [Signature]

DATE: 4-27-90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EB-6 SUBDIVISION: A (ENTIRE SEGMENT) DATE 4/2/90

USCG

NAME GARY OTT

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC

NAME MICHAEL J. EBEL

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

EB-6-A The scattered tar splashes and drips found on the cobbles at intermittent locations posed no threat to the salmon stream in the nearby segment. No practical treatment could remove them (for aesthetics) without far more harm than gain. Very little total tar here.

LAND MANAGER - USDA FOREST SERVICE

NAME DON J. BREITINGER

SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

EB-6 subdivision A

SHORELINE OILING SUMMARY

REVISION NO. 03/23/90

OG Randy Mc Bride USCG NOAA Gary Ott SEGMENT ST/ EB-6
 BIO Lewis Sharnon LAND REP USPS Don Brethig SUBDIVISION A
 EXXON Leonard Harbat ADEC Nike Ebel TIME 17:15 to 19:00
 TEAM NO.: 12 TIDE LEVEL: 4.5' to 7.5' DATE 04/08/90
 EST. SUBDIVISION LENGTH: 829 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: north to south
 SURFACE SEDIMENTS: R 20 % B 30 % C 30 % P 10 % G 6 % S 4 % M 0 % V 0 %
 SLOPE: Long 15 % Hang 60 % Vert 25 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 120 m NO 709 m

SURFACE OIL

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

PAVEMENT: H (F) (S) 9 sq. m by 4 cmPATTIES / TARBALLS 3 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

Roll No. ST-12-3Frames 12-14

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	SU	U	M	L		
1	40					X	—	X						X					P, G, S (photo 13)
2	23					X	—	X						X					G, S
3	30					X	—	X						X					P, G
4	27					X	—	X						X					P, G
5	22					X	—	X						X					C, P (photo 14)

COMMENTS

Overall, EB-6 is characterized by broken coats, sporadic tarballs, and sporadic film. The oiling is categorized as very light ($\leq 10\%$ covering). No environmental threat from further oiling. ~~No cleanup recommended.~~

28 of 33

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / EB-6 Subdivision A Date (mo / day / yr) 4/2/90Time (24 hr) 1715-1900 Biologist SHARMAN

(A) Substrate type and % of segments:

(1) Bedrock 20 (2) Boulder 30 (3) Cobble 30 (4) Pebble 10 (5) Sand 10 (6) Silt 0 ^{+ gravel}(B) Overall % cover of biota (% of segment): Dense 0 Moderate X Low X

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

Photographs:

Roll No. ST-12-3Frames 12, 13, 14

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

(ALGELLA, LITTORINA, LIMPETS)

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

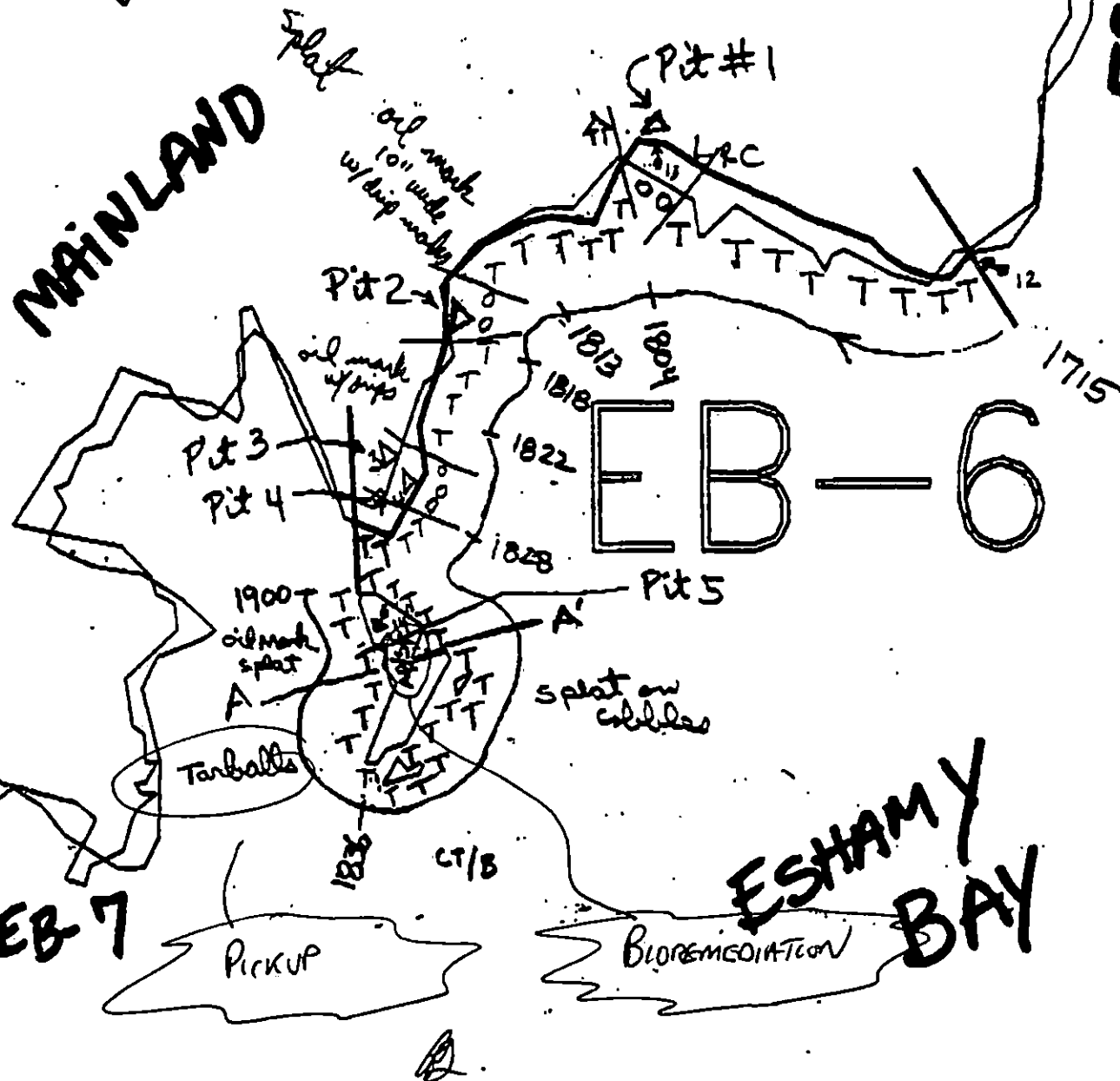
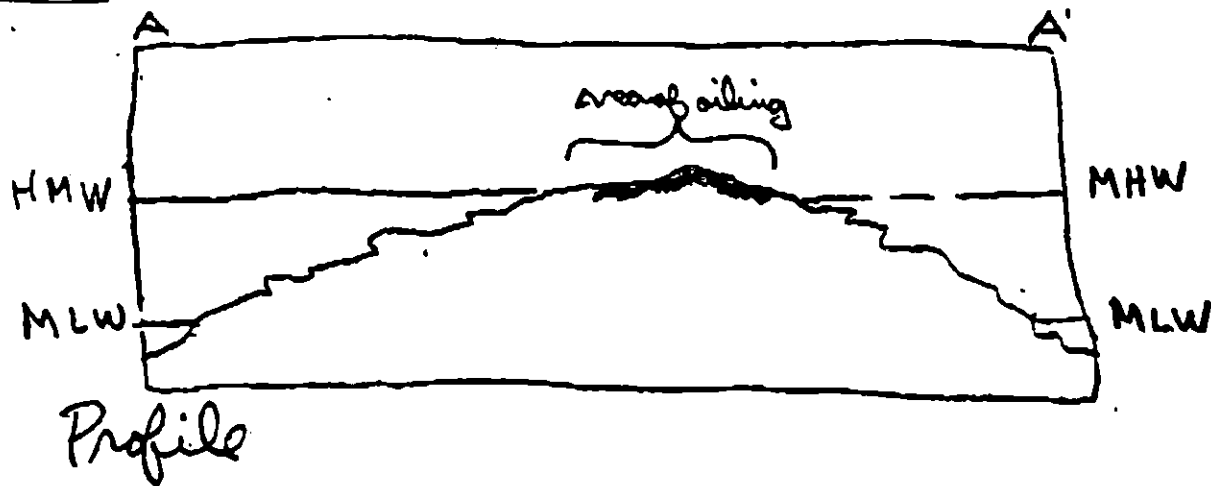
FUCUS

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: Did not observe LTB. 30cm wide tar band on west rock surface in UTE across top of barnacle zone, with some littorines (from last spring/summer) caught in tar. 1 adult eagle, 1 sea otter, deer tracks of recent origin (lined high tide) on fine-grained beach. Intertidal community appears normal and healthy. No living littorines observed on UTE tar band (or above).

Ecological Considerations: According to the Priorities and Windows table, this segment is environmentally ranked Priority 1, with an open work window 5/10-4/11. The identified ecological sensitivity is due to a Main Bay Habitat release site (Code 2E) - Constraints 1, 2 and treatment priority 2. This is a generally biologically/geomorphologically rich and diverse shoreline region, probably reasonably sensitive (relative to most other areas) to oil-recovery-type forms of human disturbance.



XXXX Wide

//// Medium

--- Narrow

TTTT Very tight

0000 No Oil

EB-6

ADEC Segment Length: 831m



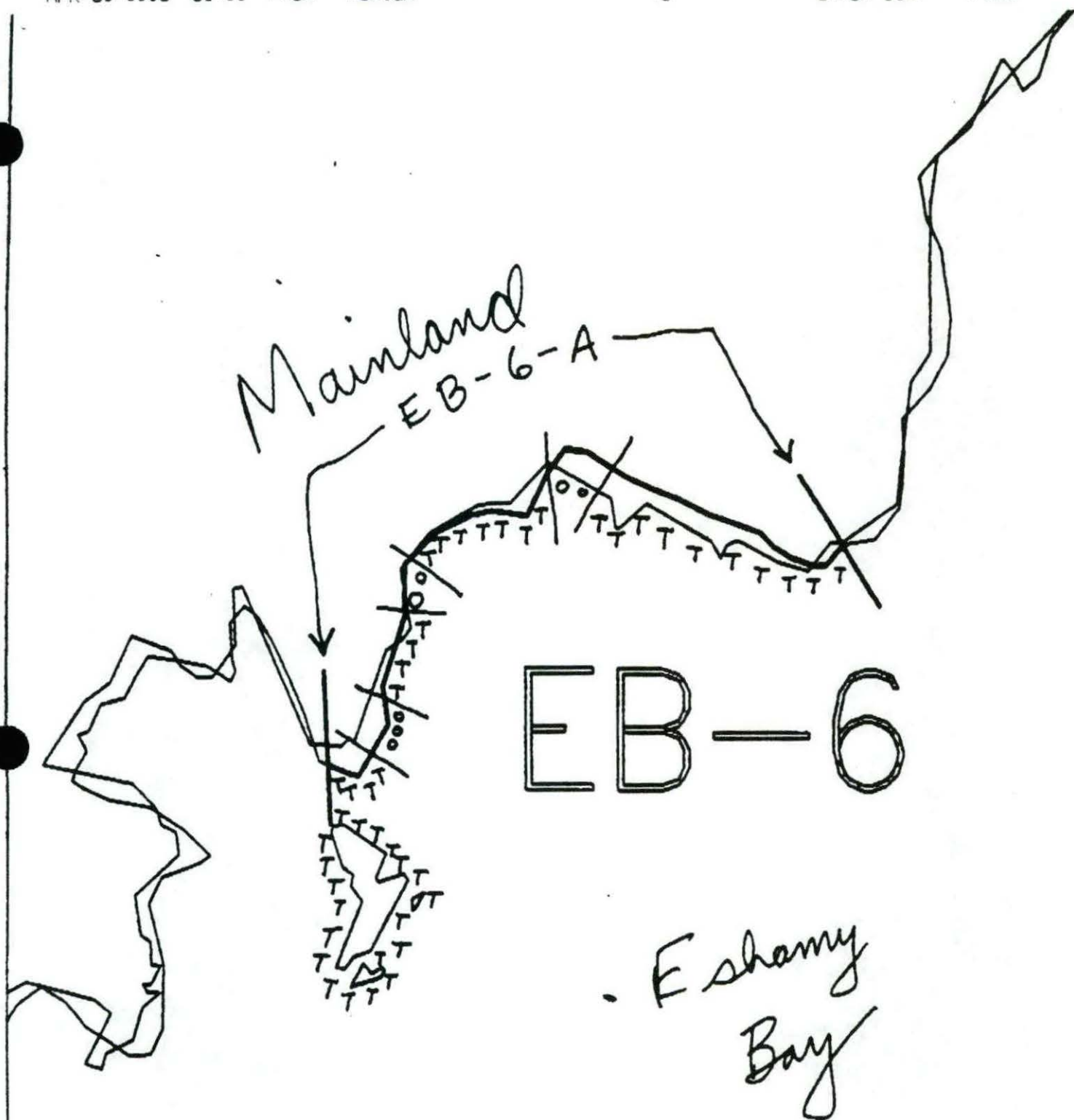
Map Key: PWS-115

Name: Randy McBride

Date: 4/2/90

Date Entered:

11/15/90



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EB-6

ADEC Segment Length: 831m



Map Key: PWS-115

Name: Randy McBride

Date: 4/2/90

Date Entered:

10/25

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EB-6 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarnat Removal	OPEN
Bioremediation	WORK 6/4 TO 6/8 OR AFTER 7/25

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1E Main Bay Hatchery Release

Subdivision open to bioremediation 6/4 to 6/8 per verbal authorization from Larry Peltz/ADF&G to Tom Monihan/Exxon on 5/24/90. No constraint to bioremediation after 6/15.

1L Set Net Site

No constraint to manual pickup and tarnat removal. Subdivision closed to bioremediation 6/11 to 7/25.

OTHER ECOLOGICAL CONSIDERATIONS

From 6/11 to 7/25 restrict boat and air traffic and beach operation to essential minimum when set net sites are present. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

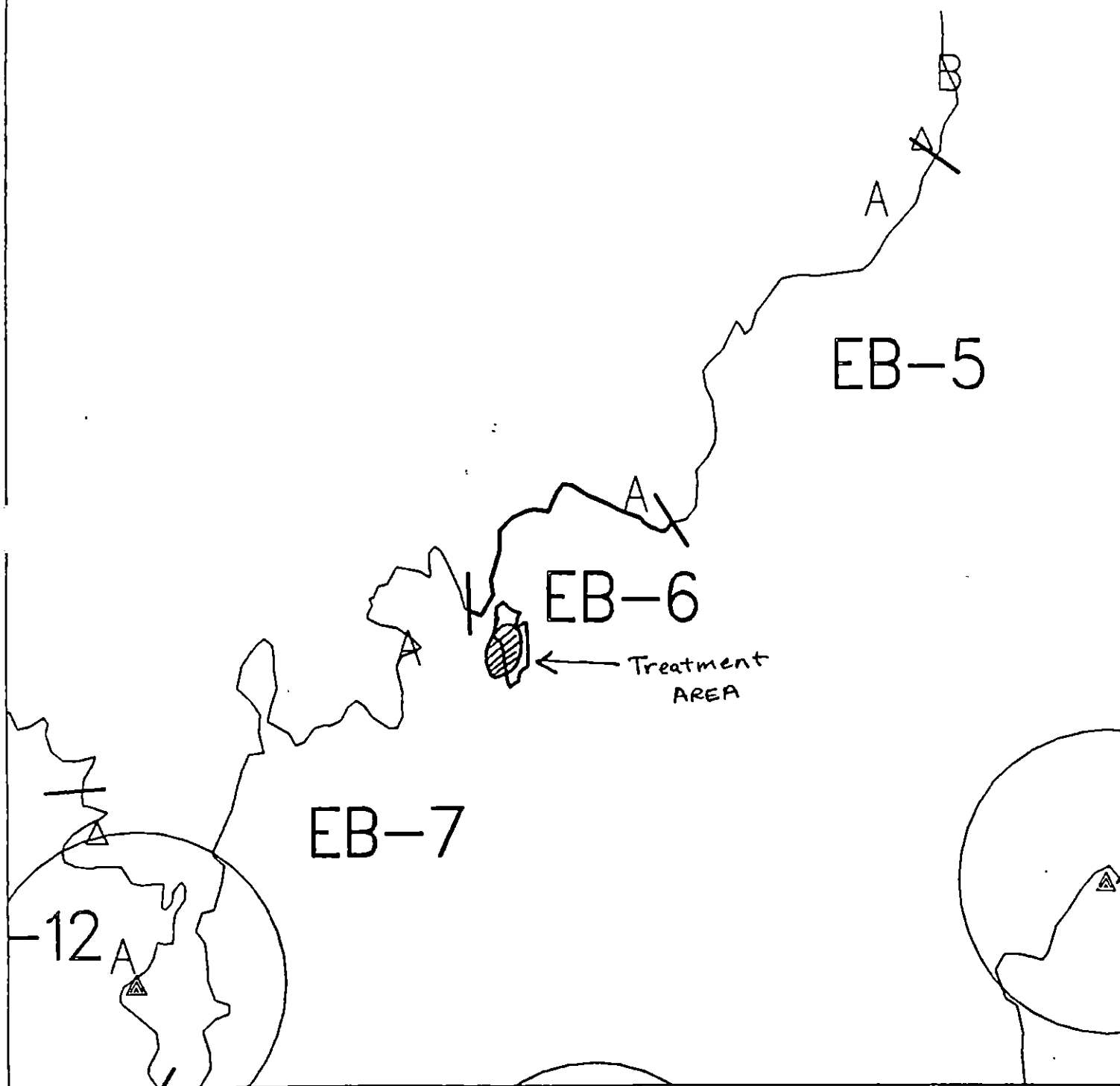
TAG APPROVAL DATE _____
ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC

DATE 7 June 1990

Prepared By: WPK

Date 6/1/90

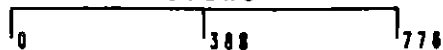


Exxon Company, USA
Map Key: PMS-EB-6
June 04, 1990



ECOLOGY MAP
SEGMENT EB-6
SUBDIVISION A (1 of 1)

METERS



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

1 inch = 1273 feet

SHORELINE EVALUATION

SEGMENT ST/ EB-07 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 225-30-15070

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

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

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

1L Set net sites (6/11 to 7/25)

6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 224 m: No Oil 2964 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: 4/20/90
ADEC ART WENGER
EXXON ANDY GALT
NOAA BILL WESCOTT
USCG KENNETH KEANE

FOSC: DATE: 4-26-90

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 (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 / EB-7 SUBDIVISION: A (ENTIRE SEGMENT) DATE 4/4/90

USCG
NAME GARY OTT SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ADEC
NAME MICHAEL J. EBEL SIGNATURE [Signature]

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

EB-7-A a VL intermittent wet was found with no subsurface oil.
The segment was mostly un-oiled. as with many of the
areas we have done thus far, any treatment would be far
more impacting than effective (salmon streams nearby, and shore-
bird habitat)

LAND MANAGER - U.S.D.A. FOREST SERVICE
NAME DON J. BREITINGER SIGNATURE [Signature] 4/4/90

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

SHORELINE OILING SUMMARY

REVISION NO. 000000

OG Randy McBride ~~0000~~ NOAA: Gary O'H SEGMENT ST/ EB-7
 BIO Lewis Sherman LAND REP USES: Deh Brttinger SUBDIVISION A 1 of 1
 EXXON Leonard Herbst ADEC Mike Ebel TIME 12:09 to 14:30
 TEAM NO.: 12 TIDE LEVEL: 7.8' to 3.8' DATE 4/14/90
 EST. SUBDIVISION LENGTH: 3617 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☒ Snow 42° F
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: North to South
 SURFACE SEDIMENTS: R 60 % B 10 % C 25 % P 3 % G 1 % S 1 % M 0 % V 0 %
 SLOPE: Long 5 % Hang 75 % Vert 20 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 145 m NO 3472 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	C	B	P	R	W	M	N	VL	NO	SU	U	M	L
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT													
STAIN													
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL													

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash	X		
Debris			

DEBRIS COLLECTED
☒ YES ☐ NOTYPE Plastic Bottles#BAGS 0

Photographs:

Roll No. ST-12-3Frames 15

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW	OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		CC	OR	OL	OF	NO			W	M	N	VL	NO	SU	U	M	L		
1	20																		C, B
2	15																		C, P
3	20																		C, P, G
4	30																		P, G, S
5	35																		C, P, G
6	35																		C, P, G, S

COMMENTS

EB-7-A is dominated by no oiling w/ a very small amount of very light oiling. No subsurface oil was found. Due to a combination of no oiling / very light oiling and environmental sensitivities (salmon streams / spawning and shorebird habitat), no cleanup is recommended.

SHORELINE OILING SUMMARY (PAGE 2 of 2)

REVISION 03/22/90

SEGMENT ST/ EB-7 SUBDIVISION A

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-OM)	BELOW		OIL / FILM COLOR							PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UC	1	2	3	4	5	6	7	BU	LM	MB	U		
7	37					X	---		X								X					C, P, G, S
							.															
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COMMENTS

14/25

REVIEWED 7W DATE 4/13/90

Segment ST / EA-7 Subdivision A Date (mo / day / yr) 4/4/90

Time (24 hr) 1200-1400 Biologist SHARMAN

(A) Substrate type and % of segments: SUBDIV.
 (1) Bedrock 50 (2) Boulder 10 (3) Cobble 25 (4) Pebble 3 (5) Sand 2 (6) Silt 10 + gravel

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

(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-12-3

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 (NACELLA, LITTORINA, LIMPETS)

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

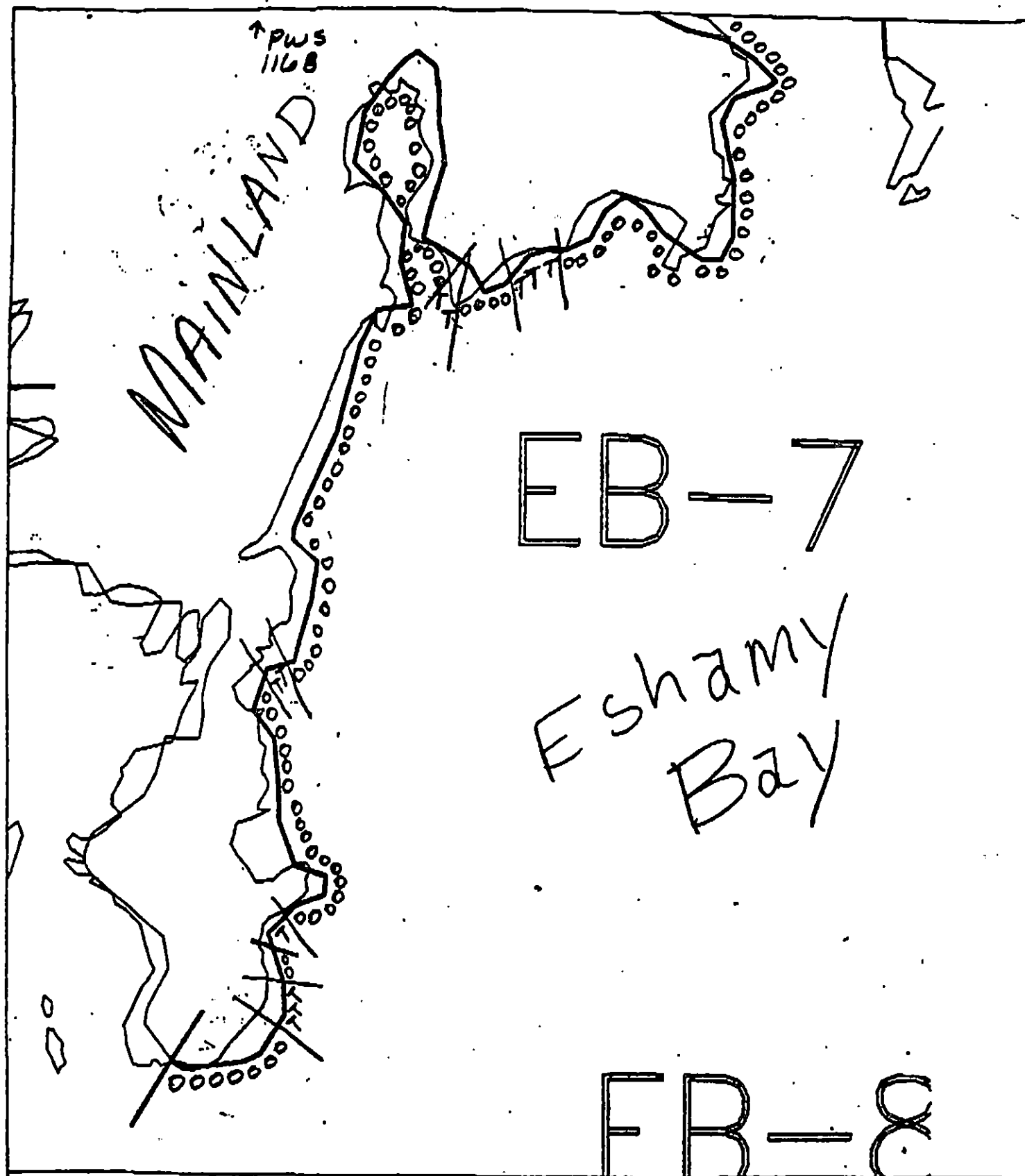
FUCUS

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: 12 pairs surf scoters, 12 pairs goldeneyes, mink tracks in snow, see other bare, 1 pair black oystercatchers at segment end point at neck of entrance to Exxon lagoon. Shoreline vegetation scarred by porcupines the winter, also common. Very rich area (see below) - fortunately, no oil. Did not observe LT on early portion of segment. Lots of drift from oystercatchers - avoided. Some Rhodospirillum (near water) Ecological Considerations: and bivalves, scattered communities.

The Priority and Windows table assigns this segment an environmentally ranked priority of 1 (week window 5/10-6/11), primarily because of the area's use as a Main Bay Hatchery release site (Code 2E). Constraints are ranked 2, 2 and treatment priority is 2. There is a major lake-ocean stream that appears likely to be anadromous (salmonids?) - see map. Further S. and W. is a protected lagoon with high environmental sensitivity due to its importance to shorebirds and ducks. Although no large streams drain into this tidal lagoon, it is possible that it supports significant intertidal spawning by pink salmon. This entire segment is ecologically biologically productive and should be protected to the greatest possible extent from heavy-handed treatment activities.

19725



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EB-7

ADEC Segment Length: 3188m

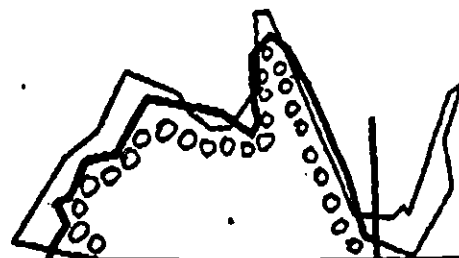
0 100 200 300
METERS

Map Key: PWS-1168

Name: Randy McBrideDate: 4/9/90Data Entered: 1575

MAINLAND
EB-7-A

↓ PWS 116A



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EB-7

ADEC Segment Length: 3188m

0 100 200 300
METERS

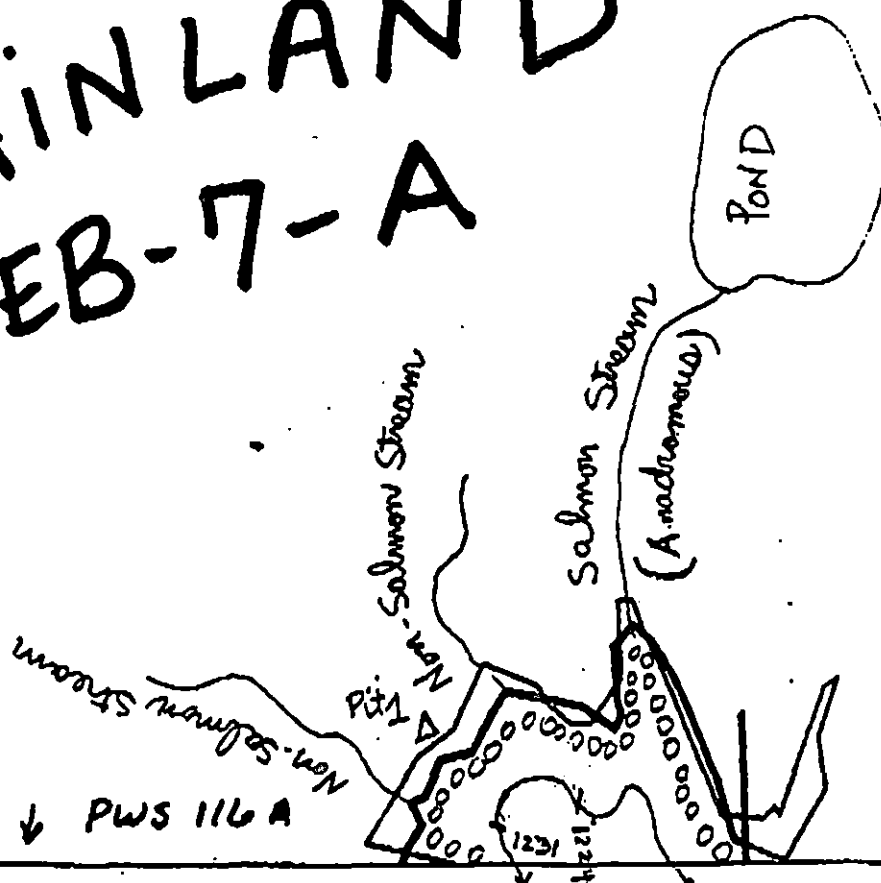
Map Key: PWS-116b

Name: Randy M. Biele

Date: 4/4/90

Date Entered:

MAINLAND EB-7-A



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EB-7

ADEC Segment Length: 3188m



Map Key: PWS-116b
Name: Randy McBride
Date: 4/4/90
Data Entered:

PWS
11683 small
streamsPit #2
No oilFish Camp
& dockPit #4
No oilPit #3
No oil

1306

1334

1335

1343

1357

1406

1408

1421

1429
END

EB-7

Eshamy
BayOil MHW mark
10-15 cm wide
on upper portion of upper intertidal on Barnacles

EB-8

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

EB-7

ADEC Segment Length: 3188m



METERS

Map Key: PWS-1168

Name: Randy McBride

Date: 4/4/90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ EB-08 SUBDIVISION A (1 OF 1) DATE 4/25/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Salmon stream no. 225-30-15130 (Ps CHs, 2/90)

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

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

1E Main Bay Hatchery release (4/20 to 6/15)

1L Set net sites (6/11 to 7/25)

6V Recreation: Anchorages (6/1 to 9/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: J. David McMan DATE: 5/9/90

OILING CATEGORIZATION:

Wide 0 m: Medium 44 m: Narrow 10 m: V.Light 569 m: No Oil 1561 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 Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: Recommended treatment includes 1) manual pickup of mousse
patties in 2 areas indicated on sketch maps, and 2) manual removal of
tarmats in 2 areas indicated on sketch maps. Work should be conducted
between 6/15 and 7/10 with approval of ADF&G due to set net site con-
straint.

TAG COMMENTS:

TAG APPROVAL DATE: 5/9/90
ADEC Art Weger
EXXON Art Weger
NOAA Burt Wescott
USCG D.D. Rome

FOSC: DATE: 5-12-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inpol 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 Inpol 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 Inpol 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 (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)
 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 Inpol 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 Inpol 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
- IN, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 O, 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. No application of Inpol 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 267-2206
- 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 (5/1 to 9/15)
 6W Anchorage (5/1 to 9/15)
 6X Forest Service cabins (5/1 to 9/15)
 6Y Lodge (5/1 to 9/15)
 Special use destination
- Subsistence area: Salmon harvesting (5/1 to 9/30)
 Finfish harvesting
 Deer harvesting (5/15 to 2/25)
 Invertebrate harvesting
- 7J 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 Inpol 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

11/17

SEGMENT ST/ EB 008 SUBDIVISION: _____ DATE 25 APR 90NAME Robert Jensen SIGNATURE Robert Jensen☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTEDCOMMENTS
Special considerations would be the salmon streams located near the hard pavement (AP/P) shown on the sketch map.DEC NAME Rowann T. Hudnall SIGNATURE Rowann T. Hudnall☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTEDCOMMENTS
Oil tends to form patties in UITS w/ pine needles. Manual removal of pavement, patties, tarballs would effectively clean most of this segment. There is a higher concentration of patties around the salmon streams these could be removed w/ shovels w/o disturbing the stream structure.AND MANAGER NAME LARRY EVANOFF SIGNATURE Larry Evanoff☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTEDCOMMENTS
MANUAL REMOVAL OF TAR BALLS/PATTIES/ASPHALT PAVEMENT.
NO BIOREMEDIATION RECOMMENDED.

SHORELINE OILING SUMMARY

REVISION NO. 06/12/90

OG HARPER USCG R. VAN DEN SEGMENT ST/ EB-008
 BIO V. DIXON LAND REP LARRY EVANOFF SUBDIVISION A (1 OF 1)
 EXXON J. ELISON ADEC R. HUONALL TIME 0650 to 1009:30
 TEAM NO. 2 TIDE LEVEL -1.03 to -3.2 DATE 4/25/90
 EST. SUBDIVISION LENGTH: 2,099 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 20 % C 30 % P 20 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 50 % Hang 45 % Vert 5 % WAVE EXPOSURE: ☒ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 30 m N 5 m VL 582 m NO 182 m

SURFACE OIL

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

PAVEMENT H S 45 sq. m by 5 cmPATTIES / TARBALLS 10 BAGSNEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☒ NO ☐TYPE POM POMS, DIAP.#BAGS 1.5

Photographs:

Roll No. ST-2-202Frames 35, 36

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		UO	UC	1	2	3	4	5	SW	U	M	U						
1	10					X	.	X							X							N		P, G/G, V
2	20					X	.	X							X							N		P
							.																	
							.																	
							.																	
							.																	

COMMENTS

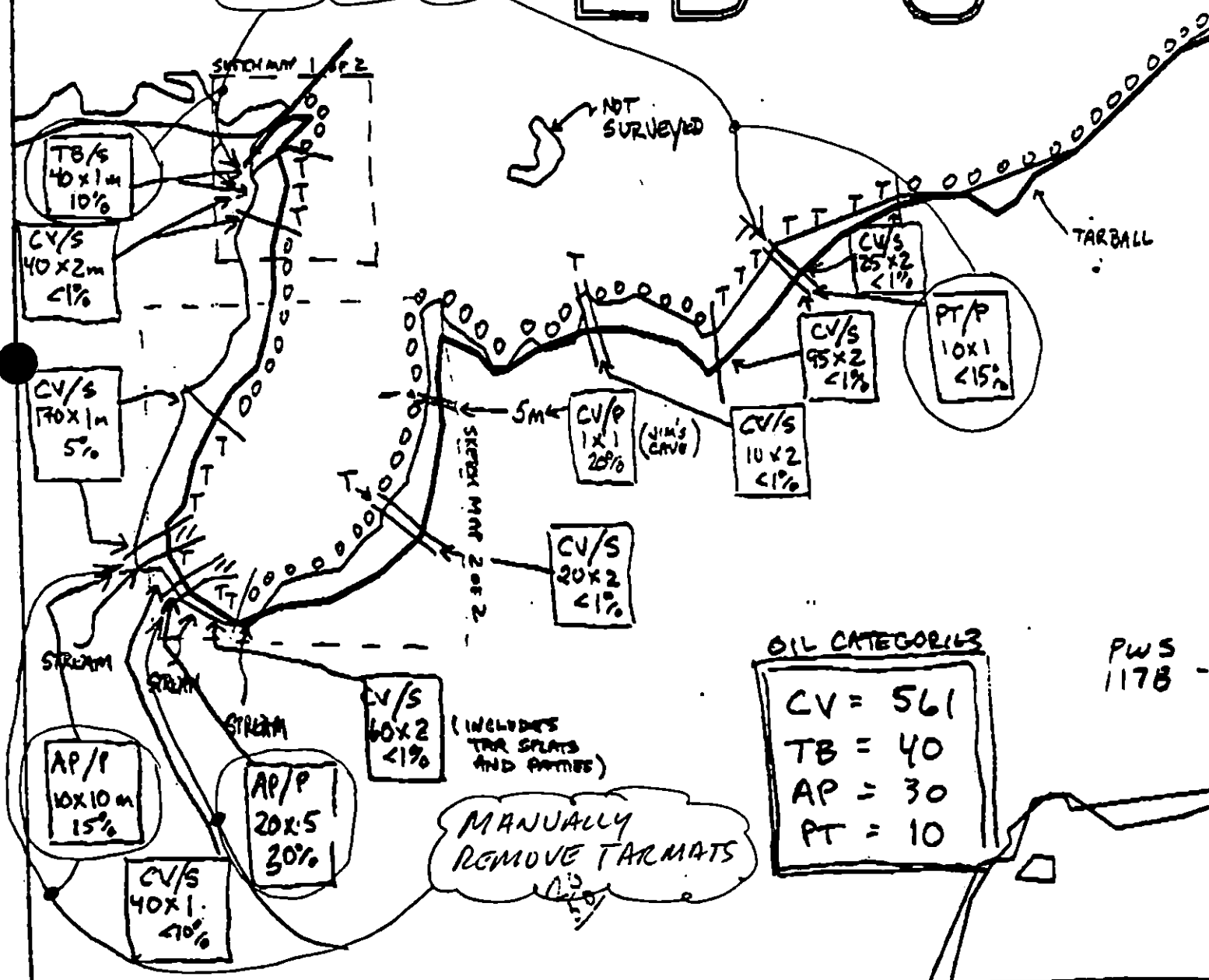
see separate sheetsREVIEWED LYHDATE 4-26-90

M = 30
 N = 5
 U.L. = 540
 NO = 1362

OILING CATEGORY MAP

EB-8

MANUALLY PICKUP
MOUSSE PATTIES



OILING CATEGORY

CV	= 561
TB	= 40
AP	= 30
PT	= 10

PWS 1178 -

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

ST-EB-8A

ADEC Segment Length: 2185m



Map Key: PWS-1170
 Name: HARPER
 Date: 25 APRIL 90
 Date Entered:

YL = 42

YD = 120

OIL CHARACTER

CV = 40

TB = 10

CV/S

40x1

<1%

TB/S

10x1m

<1%

← PWS
117A

EB-9

XXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ST-EB-8A

ADEC Segment Length: 2185m

0 100 200 300

Map Key: PWS-117b

Name: HARPER

Date: 25 APRIL 90

00 _____) 1111111111

SEGMENT ST/ ED-008

SUBDIVISION A

DATE 4 125/90

CHECKLIST

- ☐ H Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Boundary
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. FOR/LA/VL
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PR Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ No Subsurface Oil

2 Δ Subsurface Oil

CT/C Continuous Distribution

CT/D Broken Distribution

CT/P Patchy Distribution

CT/S Streaked Distribution

eee Oil Vegetation

1 → Photo location, direction, and number

SH MAP 1/2

0650
SEGMENT BOUNDARY



MANUALLY REMOVE MOUSSE PATTIES

R	70.
B	25
C	5

TD/S
x 1m
10%

CV/S
x 2m
1%

(BOULDER/COBBLE)

BOULDER/RUBBLE



50m

← 0715
Δ 1 0-10 P, C/G, V N.O.

4/14

Oil Character Length (m): AP 30 PO CV 60 CT ST MS PT 10 TB 40 FL NO 1482

REVISION: 000000

SEGMENT ST 3-08

SUBDIVISION A

DATE 4/25/90

CHECKLIST

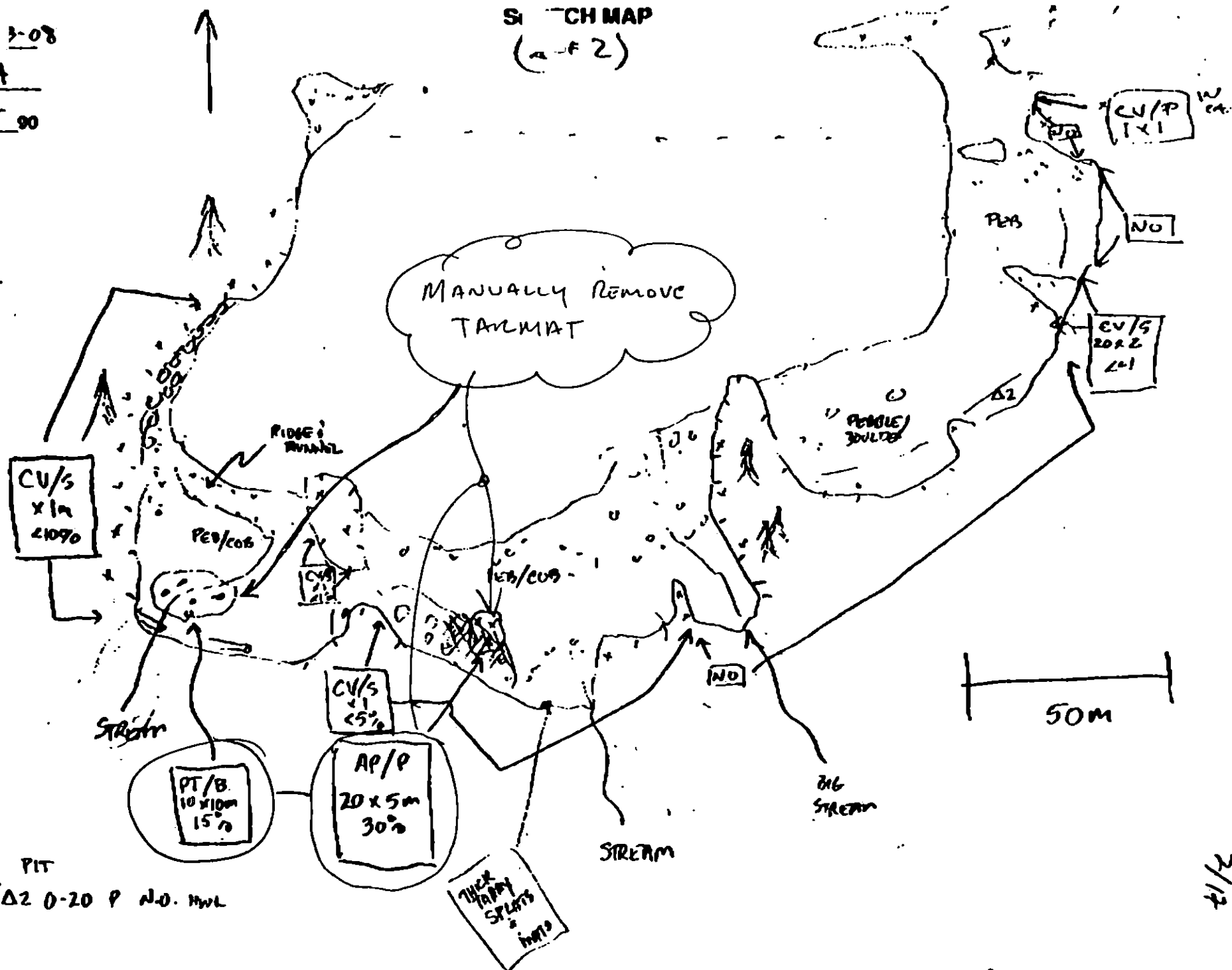
- ☒ H Area
- ☒ Approx. Scale
- ☒ Seg/Sub Study
- ☒ C/D Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HWA/LWA
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Pit Location(s)
- ☒ Photo Location(s)

LEGEND

- 1 Δ
Pit - No Substrate C/D
- 2 Δ
Pit - Substrate C/D
- CT/C
Continuous Distribution
- CT/B
Broken Distribution
- CT/P
Patchy Distribution
- CT/S
Splashed Distribution
- lll
Obed Vegetation
- 1 ●
PIT
Photo location, direction, and number

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

SITE MAP
(A-F 2)



2/2

SUMMARY OF OILING OBSERVATIONS

for EB-008A

This segment is located within Eshamy Bay and immediately to the east of the mouth of Eshamy Lagoon.

A wide variety of shoreline types occur within the segment, including: rock cliffs, rock ramps, boulder/cobble pocket beaches and pebble pocket beaches with well-rounded pebbles. Wave exposure increases from low in the protected southwestern portion of the segment to moderate at the eastern end. Most of the sediment appears to be isolated within the pocket beaches by rock headlands, but some material may be transported to the southwest. Several small streams discharge into the embayment at the southwestern part of the segment.

The oil appeared to have been well weathered by the time it reached this segment. Predominant oiling was tar splate mixed with spruce needles near the high water line (this form of oiling occurred within about 30% of the segment). Mousse patties accumulated at two locations at the head of the bay in the southwest - these accumulations have formed patchy, hard pavements (total estimated area of about 45 sq. m) in the upper 5cm of pebble/granule material in the UITZ. Other than the oiling associated with the pavement, no subsurface oiling was noted.

SHORELINE ECOLOGICAL SUMMARY

12/13

REVISION: 03/22/90

Segment ST / EB-08 Subdivision A Date (mo / day / yr) 04 / 25 / 90

Time (24 hr) 0645-0945 Biologist John Dixon

- (A) Substrate type and % of segments:
 (1) Bedrock 30 (2) Boulder 20 (3) Cobble 30 (4) Pebble 20 (5) Sand 0 (6) Silt 0
- (B) Overall % cover of biota (% of segment): Dense 13 Moderate 28 Low 59
- (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-2-

Frames _____

BARNACLES

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

MYTILUS

Dense			Moderate			Sparse			Rare			NOT PRESENT
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	X	X	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

GASTROPODS

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

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	X	X	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	X	X	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

Wildlife Observations/ General Comments: Waterline during survey: -0.8' - -3.2'
OTTERS offshore. Mink in intertidal. Skollers Lays.

Ecological Considerations: Listed Sensitive Areas: 1RB(275-80-15130); 1E; 1L; 6V; 5T.

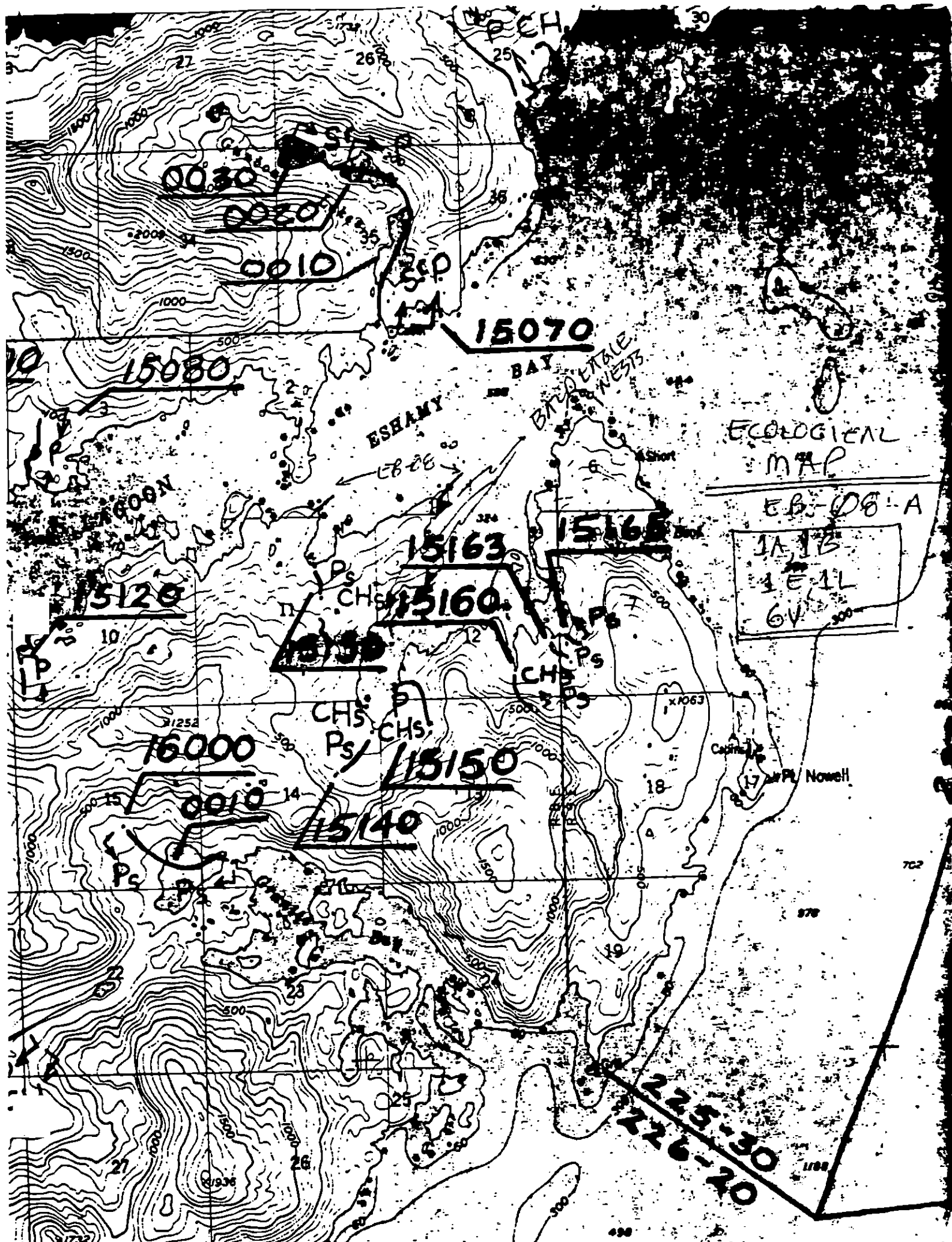
Vertical Rock Faces & hummocky platforms interspersed with
cobble benches. Sparse biota on cobble benches.
Outcrops & talus blocks with ~100% algal cover in
L.I. Fucus, Bgla.dola, & Littorina main species higher.

Wednesday 04/25/90 0855-0945 -0.8 - -3.2 ft
Biologist: John Dixon

EB-08 "A"

This 2,099-m long segment includes several different habitats. A series of bedrock cliffs or ramps form small headlands which bound pocket beaches containing various mixes of boulders, cobbles and pebbles. Most of the pocket beaches contain angular material, but the pebbles and cobbles on the eastern beaches of the embayment at the southern end of the segment are well-rounded. As one proceeds from the head of the embayment to the point defining the northeast boundary of the segment, the substrate becomes coarser and wave exposure appears higher.

Neither the cover of sessile organisms nor the number of species present was remarkably high on any given section of beach. However, overall the segment was quite diverse as a result of the variety of habitats. As one would expect, the bedrock cliffs and platforms supported the greatest cover of sessile organisms. The lower shore was nearly 100% covered with macro-algae. *Fucus*, *Ulva*, *Rhodomenia*, *Palmaria*, *Laminaria saccharina*, and red and green filamentous algae were abundant. Higher on the shore, *Fucus*, *Halosaccion*, *Endocladia*, *Enteromorpha*, *Rhodomela*, *larix*, *Scytosiphon*, and *Ulva* were the principal algal species. Sea stars were notably abundant in the lower and middle intertidal. *Pycnopodia*, *Pisaster ochraceus*, *Evasteria*, and *Leptasterias hexactis* were abundant. *Dermasterias* was common. About 40 % of the *Leptasterias* were brooding eggs. *Nucella lamellosa* and *Searlesia dira* were the most common predaceous snails. Among the most common crevice fauna were *Leptasterias hexactis*, *Notoacmea scutum*, amphipods, pricklebacks, *Littorina sitkana* (and eggmasses), *Katherina tunicata*, and the sea cucumber, *Eupentacta*. Green sea urchins, *Strongylocentrotus droebachiensis*, were present at a density of about 3 / sq m in the lower intertidal among boulders and cobbles. Both *L. sitkana* and *L. scutulata* were common on middle and upper intertidal rocks. The density of littorines increased toward the northeast end of the segment.



ECOLOGICAL
MAP

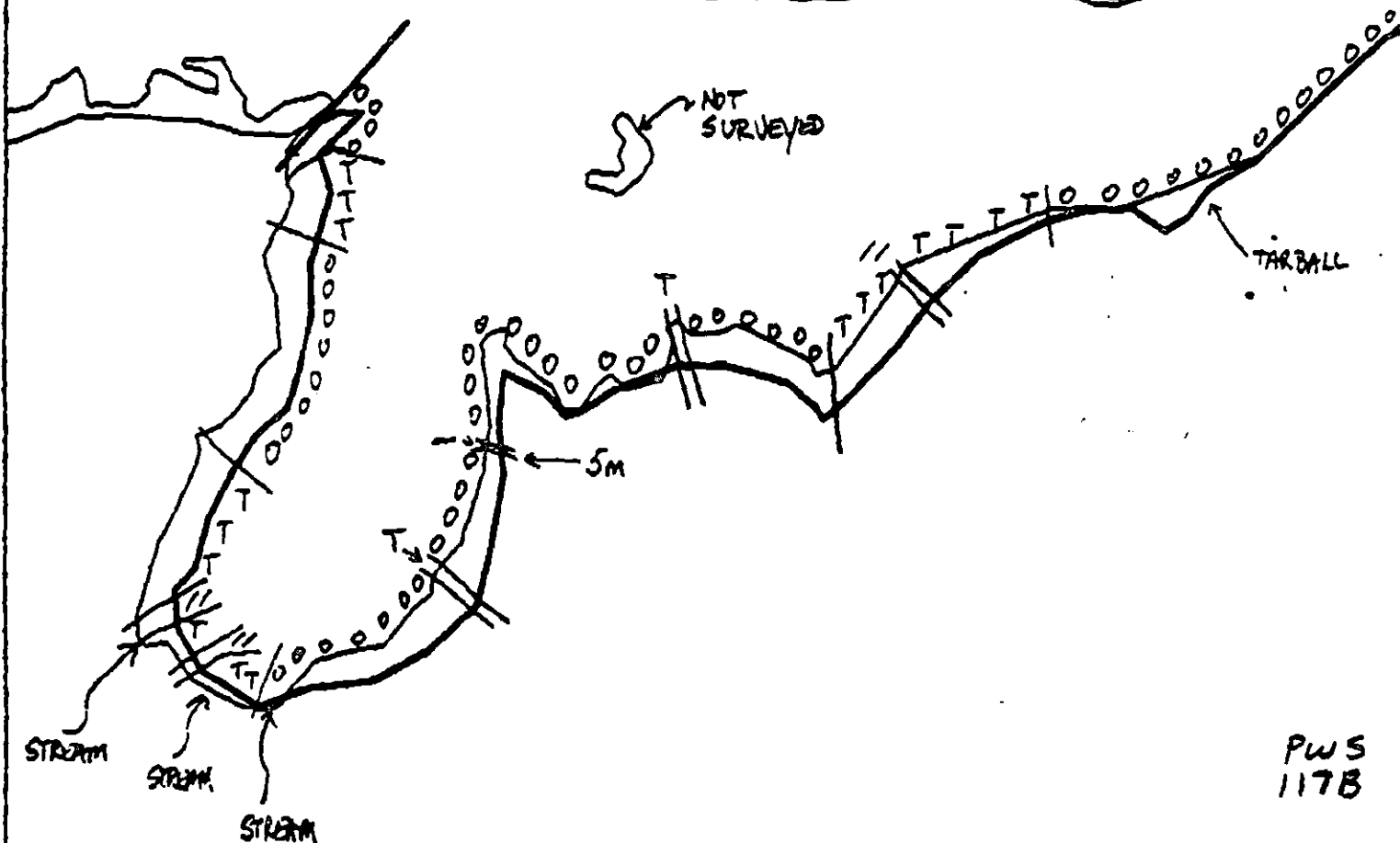
EB-08-A

1A, 1B
1E, 1L
6V

ANNEX-20

M = 30
N = 5
V.L. = 540
NO = 1362

EB-8



PWS
117B

XXXX Wide

//// Medium

--- Narrow

TTTT Very light

EB-8

ADEC Segment Length: 2185m

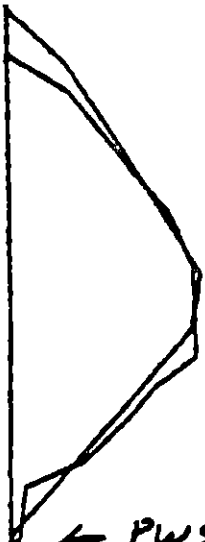
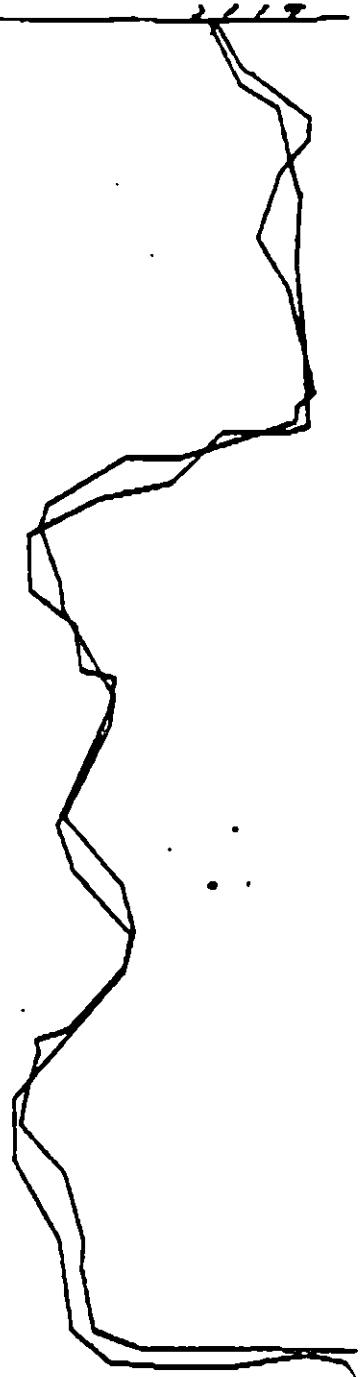
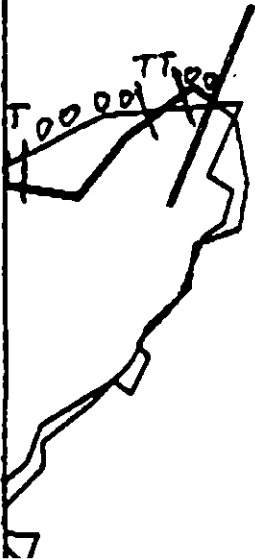
Map Key: PWS-117a

Name: HARPER

Date: 25 APRIL 90

YL = 42

NO = 20



← PWS
117A

EB-9

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

EB-8

ADEC Segment Length: 2185m

Map Key: PWS-117b

Name: HARPER

Date: 25 APRIL 90



SHORELINE EVALUATION

SEGMENT ST/ EB-09 SUBDIVISION A (1 OF 1) DATE 4/10/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 225-30-15070, 15130, 15140, 15165, 15163, 15150, and 15160.

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
1E Main Bay Hatchery release (4/20 to 5/10)
1L Set net sites (6/11 to 7/25)
5T-3 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide_0_m: Medium_0_m: Narrow_0_m: V.Light_87_m: No Oil_1031_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> <u> </u> Beach Cleaner
<u> </u> <u> </u> Removal	<u> </u> Other (see comments)

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 4/26/20.
ADEC JOHN BAUER [Signature]
EXXON KNOX TAYLOR [Signature]
NOAA GARY PETER [Signature]
USCG KATHLEEN HENNESSY [Signature]

FOSC: ML DATE: 5-5-90

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 (8/1 to 9/15)
6V	Anchorage (8/1 to 9/15)
6W	Forest Service cabins (6/1 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
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

(8)

MENT ST / EB - 029 SUBDIVISION: A DATE 4-10-90

USCG

NAME Kenwin L. Dreho SIGNATURE CWO2 K. L. Dreho☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

ADEC

NAME PATRICK ENDRES SIGNATURE Patrick J. Endres☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

Because of very little oil, no treatment is suggested.

LAND MANAGER

NAME LARRY M. EVANOFF SIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

RECOMMEND PICK UP TAR BALLS.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/98

OG N. BIGGAR USCG K. DREHER SEGMENT STI ES-009
 BIO K. COATES LAND REP L. EVANOFF SUBDIVISION A
 EXXON G. STILES ADEC P. ENDRES TIME 7:50 to 9:00
 TEAM NO.: 14 TIDE LEVEL: -1 to -0.5 DATE 4/10/90
 EST. SUBDIVISION LENGTH: 1325 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 85 % B 0 % C 15 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 15 % Hang 65 % Vert 20 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 7 m NO 1318 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	IC	IS	IP	IS	SL BL	DL RW	OL SL	DL TL	DL LR	SU	U	M	LI			
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT				X		X					X					
STAIN																
MOUSSE																
PATTIES																
TARBALLS				X		X					X					
FILM																
NO OIL										S		X	X			

SHOW - COVERED

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	X		

DEBRIS COLLECTED
☒ YES ☐ NOTYPE pom pom*BAGS 21

Photographs:

Roll No. —Frames —

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW	OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO			SL	BR	DL	RW	OL	SL	DL	TL	LR	SU	U	M	U	
							-															
							-															
							-															
							-															
							-															
							-															

COMMENTS

Virtually no oil was observed in this subdivision of the segment. Fewer than a dozen tarballs were seen, as well as thin, discontinuous deep lines (about 5cm wide) over about a 7-m distance. These occurred in the U1T2; feces also grows up to the U1T2. Area very protected from wave action, with some fresh water streamers.

OG N. BIGGAR

SEGMENT ST/ EB-009

SUBDIVISION A

DATE 4 1 10 90

CHECKLIST

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

LEGEND

1 ▲

Pit - No Subsurface Oil

2 ▲

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

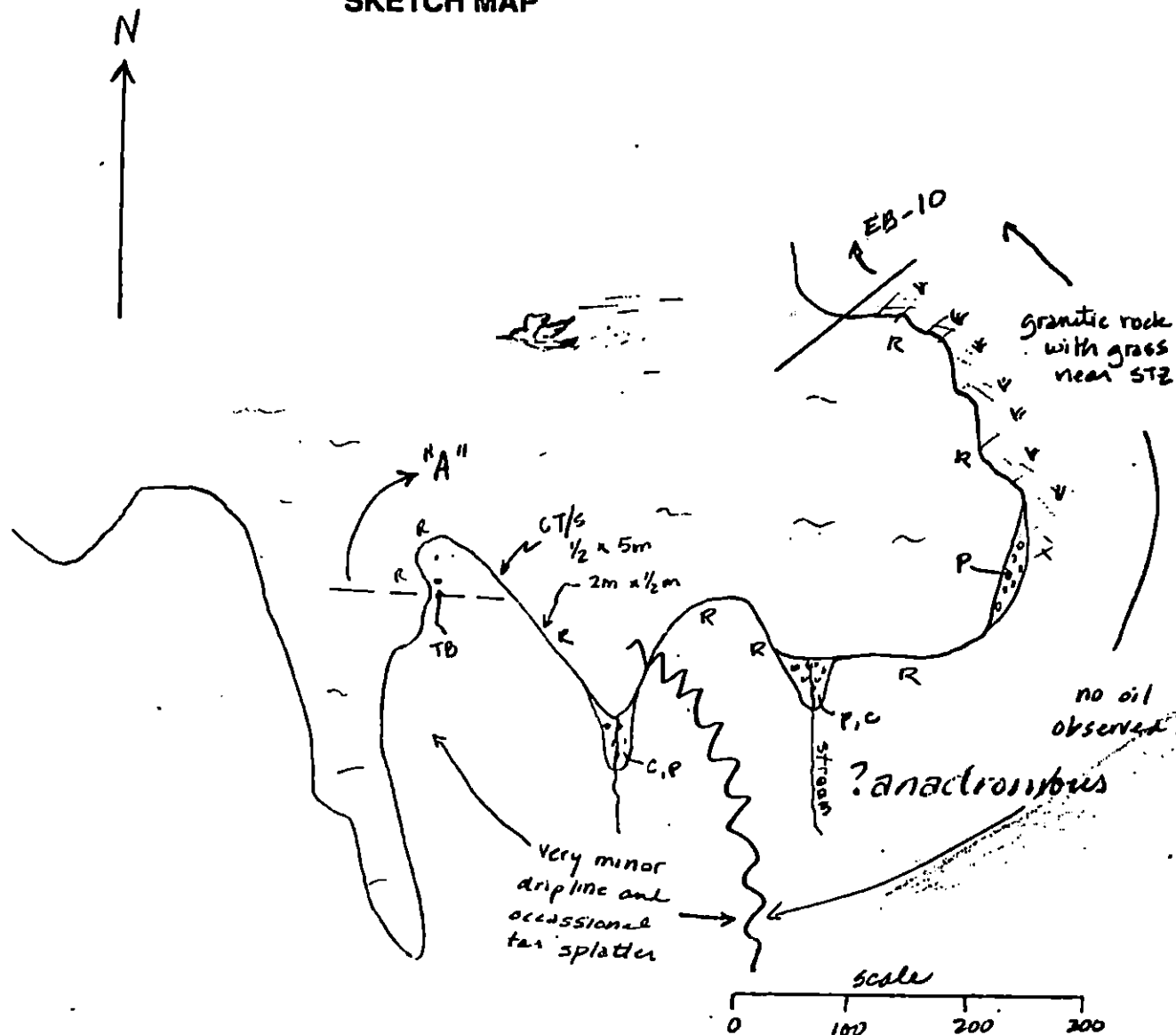
Splashed Distribution

Oiled Vegetation

1 ●→

Photo location, direction,
and number

SKETCH MAP



Oil Character Length (m): AP 0 PO 0 CV 0 CT 7 ST 0 MS 1 PT 0 TB 1 FL 0 NO 1317

REVISION: 03/24/90

1st 3 (3)
REVISION 07/20/90

SHORELINE ECOLOGICAL SUMMARY

Segment ST/ EB009 Subdivision A Date (mo / day / yr) 04.10.90no (24 hr) 0750-0853 Biologist KA CoatesLower int. + below water

- (A) Substrate type and % of segments:
 (1) Bedrock 10 (2) Boulder 0 (3) Cobble 15 (4) Pebble 5 (5) Sand 5 (6) SL 5
- (B) Overall % cover of biota (% of segment): Dense 50 Moderate 30 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-19-2Frames —

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: Known sensitivities: eagles; not net sites; Main Bay hatchery; recreation - special destination. Observed sea otters in bay and obviously feeding frequently in low intertidal clam beds. 20-30 ducks nearshore. Eagle nest not seen on 10 April 1990.

Ecological Considerations:

Stream in northeast bay on EB009 with 3 or 4 channels 35 ft deep running 10-15 cm deep at low tide - not a logged non anadromous stream. Clam and mussel beds throughout lower intertidal of embayed area with overgrowing surf grass are apparently heavily used for feeding by sea otters.

(7)

3 of 3

Sent: ST-EB009 Subdiv: A Date: 04.10.90
Time: 0750-0853 Biologist: KA Coates

Notes: (cont'd)

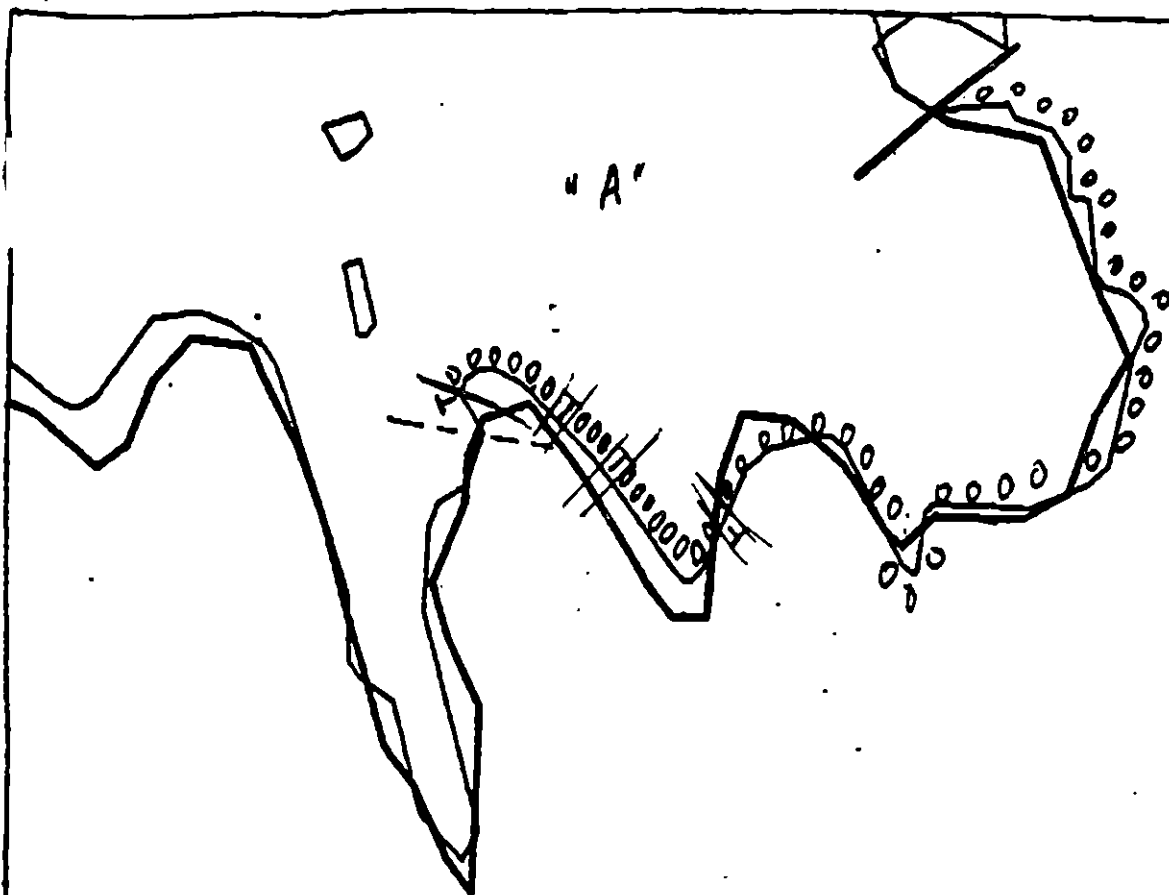
7. Barnacle settlement in area of 1-2 mm size but at a later stage than attached cyprid.

8. Additional lower intertidal animals:
Pycnopodia and (10-15 cm grey - 5 arms.) *

9. ? Stream - too small for ^{Salmon} spawning; ADF:G regulatory marker at northeast point of bay - in EB010.
- closed bay in 1987 - on PWS Salmon Closed water Map - unofficial.

THE
ADF

④



← PWS
118A

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

EB-9A

ADEC Segment Length: 6717m



Map Key: PWS-118b

Name: N. BIGGAR

Date: 4/10/90

FILE
ADEC

SHORELINE EVALUATION

SEGMENT ST/ EB-10 SUBDIVISION A (1 OF 1) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1E Main Bay Hatchery release (4/20 to 5/10)
1L Set net sites (6/11 to 7/25)
5T-2 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 30 m: V.Light 638 m: No Oil 1830 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 bioremediation of oil cover and coat areas. Work should be conducted after 6/1 with USFWS permission due to eagle nest constraint.

MANUAL PICKUP OF OIL PRIOR TO BIOREMEDIATION AVOID OILY MUSSEL BEDS

TAG COMMENTS:

TAG APPROVAL DATE: 4/23/90

ADEC ART WEINER Art Weiner

EXXON ROY TEE Roy TEE

FOSC: [Signature] DATE: 5-18-90

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.

FIELD SHORELINE COMMENT SHEET

(15)

SEGMENT ST 1, EB-010 SUBDIVISION: A DATE 4/9/90

USCG

NAME Kerwin L. Dreher SIGNATURE CWO2 K. L. Dreher☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

On eastern edge of segment is a quantity of oiled surface material that should be removed manually. The remainder of the subsection would not necessitate any organized clean up effort. There are a minimum of tar like splatters perhaps 4-6 mm thick and 7-10 cm diameter that should not pose a problem to the ecosys.

DEC

NAME PATRICK J. ENDRES SIGNATURE Patrick J. Endres☐ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED☒ PERHAPS

COMMENTS

Overall, oiling is very light with tar bands and splatters in discontinuous fashion along headlands. On the Eastern most portion of the segment on a pocket beach, there is oiling in the form of soft asphalt and fine sediment saturation of the initial 1-4 cm. It exists in the upper mite to Hitz sporadically (see map for details). If this is removed concerns should be given to the mussel beds and other biota in the Lita - that they are not damaged by human traffic. A crew of a few people could effectively remove this oil with growls or small shovels. I have some hesitations about recommending treatment primarily centered around the more harm than good issue?

LAND MANAGER

NAME LARRY M. EVANOFF SIGNATURE LM☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

RECOMMEND MANUAL REMOVAL, NO BIOREMEDIATION

SHORELINE OILING SUMMARY

REVISION NO. 001/00

OG N. BIGGAR USCG K. DRYER SEGMENT ST/ EB-10
 BIO: K. GATES LAND REP L. EVANOFF (CUC) SUBDIVISION A (1041)
 EXXON G. STILES ADEC P. ENRES TIME 16:45 to 18:00
 TEAM NO.: 14 TIDE LEVEL: +5.0' to 0.0' S.L. DATE 4/9/90 4/10:
 EST. SUBDIVISION LENGTH: 2024 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow 9:00-11:30
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 70 % B 15 % C 15 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 30 % Hang 30 % Vert 4.0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 30 m VL 648 m NO 2146 m

SURFACE OIL

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

PAVEMENT: H F S 0 sq. m by 0 cmPATTIES / TARBALLS 4 BAGSNEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris	X		

DEBRIS COLLECTED
☒ YES ☐ NOTYPE plastic#BAGS <1

Photographs:

Roll No. 2Frames 24, 25, 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		UO	UC	1	2	3	4	SU	U	M	U		
1	20	X					0-2	X	X	X				X					S.P.C.
2	20					X	-	X						X					S.P.C.
3	20					X	-	X						X					C.P.
4	20					X	-	X						X					S.C.P.
							-												
							-												

COMMENTS

Oiling was concentrated on N end of point. The only evidence of oil observed along S 1/2 of segment was a tar ball at the extreme S end. Coastline is protected and consists in large part of granite exposures with few cobbles and boulder beaches. *Tuarea* grows up into UITE, the low sand dune. UITE is located about 4 feet

ADDC
PDE

SHORELINE ECOLOGICAL SUMMARY

1 of 2 (B)
REVISION: 03/22/90Segment ST/EB010 Subdivision A Date (mo/day/yr) 04.09.90Time (24 hr) 0900-1015-1025 1640-1802 Biologist KA Coates 04.10.90

(A) Substrate type and % of segments:

(1) Bedrock 70 (2) Boulder 15 (3) Cobble 15 (4) Pebble + (5) Sand + (6) Silt +

Lowest intertidal & just subtidal

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

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

Photographs:

Roll No. ST-14-2Frames 24-26

BARNACLES

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

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

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

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

NOT PRESENT

MYTILUS

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

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

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

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

NOT PRESENT

GASTROPODS

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

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

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

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

NOT PRESENT

FUCUS

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

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

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

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

NOT PRESENT

Wildlife Observations/ General Comments: Known sensitivities: recreation - special destination; Main Bay hatchery; set net sites; pair mature eagles roosting at northeast point + juvenile; seal just offshore; 3 pairs harlequins; sea otter in area.

Ecological Considerations: Sea otter "clamming" area in south bay; productive surf grass pools with mussels in northeast. Complex, productive subhabitat and lower intertidal zone should not be disturbed.

AOC
PTE

(14)

2 of 2

Segment: ST-EB010 Subdivision: A Date: 04.09.90 Time: 1015-1025
1640-1802

Biologist: KA Coates 04.10.90 0855-1025

Notes:

1. Northeast beach and outcrop - Littorines, limpets and oligochaetes moderate to abundant on lower surface and under upper intertidal boulders over oiled sediments. In adjacent, lower mid intertidal shallow pools with Phyllospadix, mussels moderately abundant as well as around cobbles in gravel and sand adjacent to pool.
2. Other moderate to dense organisms in pool: hermit crabs and sculpins, Littorina; shells of Saxidomus, small Macoma, rare Modiolus; branching stage of Lithothamnium, Endocladia, wash Laminaria saccharina, Ulva and higher over saturated sediments. Littorina scutulata laying communal egg masses at lower intertidal, on underside of cobbles.
3. Notacmea and hermit crabs moderate under cobble into mid intertidal. On low energy beach with small cobbles, barnacles sparse to moderate into upper intertidal.
4. Bedrock community more or less "usual" with relatively denser Fucus and fewer barnacles barnacles although with moderate to dense new settlement of metamorphosed but only 1-2 mm. Nucella lamellosa moderate up to upper mid intertidal.
5. Mussel-sand tombolo in southeast with Hiatella, Clinocardium; Protothaca shells; live Nucella lamellosa.
6. Pycnopodia and (5-armed grey seastar)* just subtidal. unid'd.

RISK

OG N. BIGGAR

SEGMENT ST/ EB-010

SUBDIVISION A

DATE 4/9/10

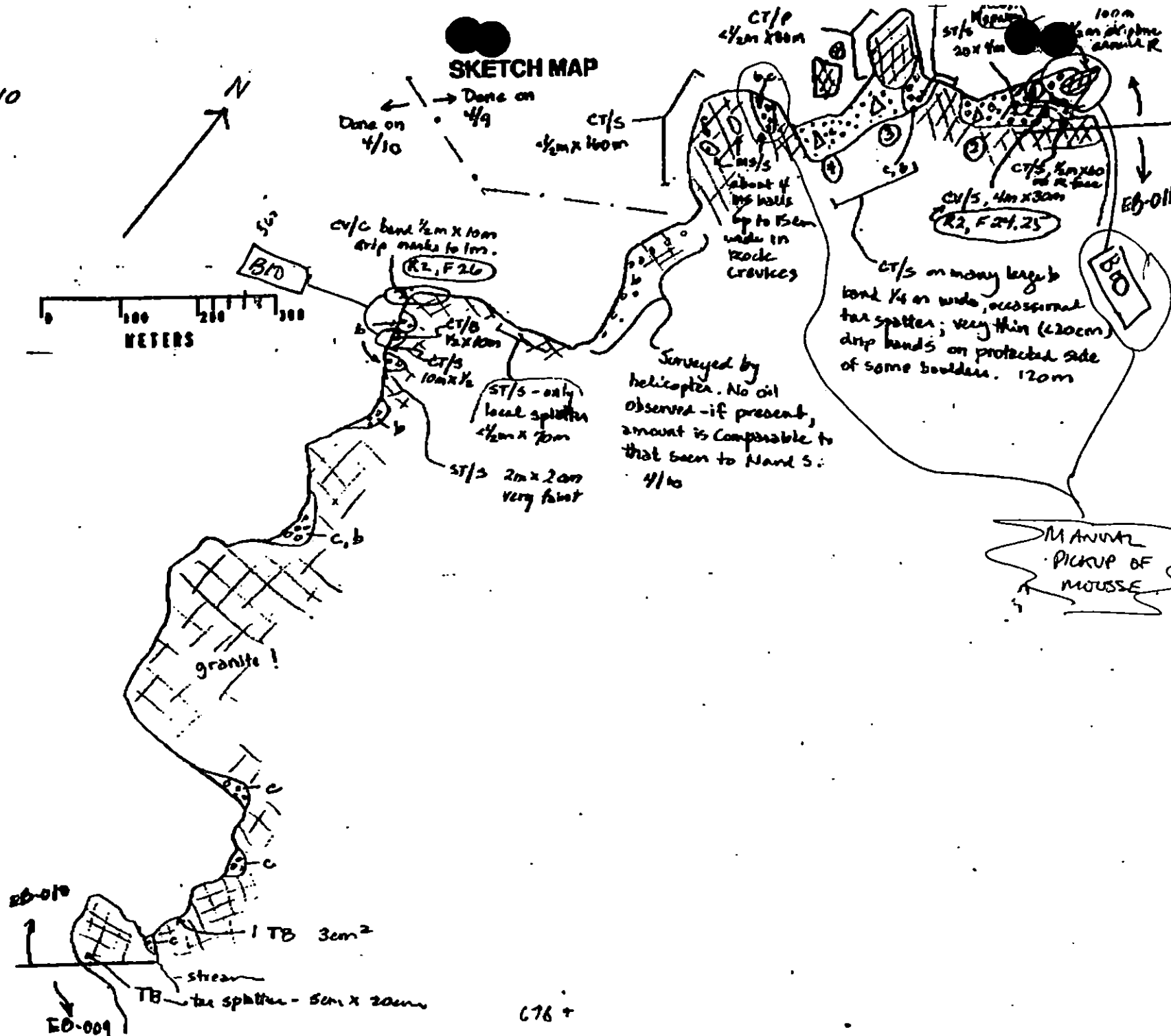
CHECKLIST

- ☒ N Area
- ☒ Approx. Scale
- ☒ Seg/Sub Entry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HWA/LVL
- ☒ SST
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Pit Location(s)
- ☒ Photo Location(s)

LEGEND

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

SKETCH MAP

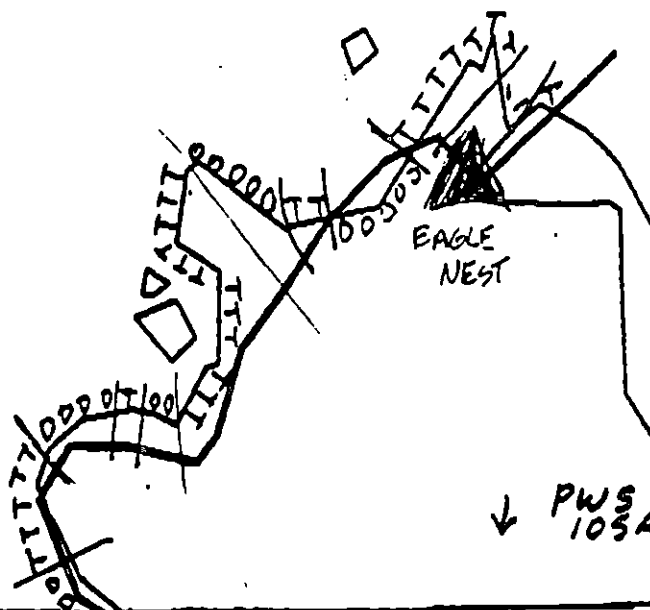


Oil Character Length (m): AP 0 PO 0 CV 40 CT 544 ST 92 NS <1 PT 0 TB <1 FL 0 NO 2146

REVISION: 0000

BIC-MAP

EB-10 pg. 1



XXXX Wide

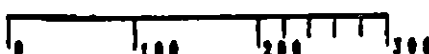
//// Medium

--- Narrow

TTTT Very Light

EB-10

ADEC Segment Length: 2498m



Map Key: PWS-105b

Name: N. BIGGAR

Date: 4/9/10/90

PWS
105 B

(12)

SIC-MAP

Surveyed by
Hellingsten
no visible oil

EB-10

pg. 2



Eagle Nest



ADEC
PWS

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

EB-10

ADEC Segment Length: 2498m



Map Key: PWS-1050

Name: N. BIGGAR

Date: 4/9/10/90

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EB-10 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Less Than 400m From Nest	CLOSED
Manual Pickup More Than 400m From Nest	OPEN
Bioremediation Less Than 400m From Nest	CLOSED
Bioremediation More Than 400m from Nest	WORK 6/4 - 6/7

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1E	Main Bay Hatchery Release	No constraint to manual pickup. Subdivision open to bioremediation 6/4 to 6/8 per verbal authorization from Larry Peltz/ADF&G to Tom Monihan/Exxon on 5/24/90. No constraint to bioremediation after 6/15.
1L	Set Net Sites	No constraint to manual pickup. Closed to bioremediation from 6/11 to 7/25.
5T	Bald Eagle Nest	USFWS bald eagle impact assessment completed on 5/15/90 by Mike Lockhart Indicates an active bald eagle nest in Subdivision A. Subdivision is closed to manual pickup and bioremediation within 400m of active nest.
1I	Gill Net Area	No constraint to manual pickup. Closed to bioremediation after 6/7.

OTHER ECOLOGICAL CONSIDERATIONS

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 uncoiled blots and substrate. Avoid dense mussel beds.

400m
diam 43

TAG APPROVAL DATE 6/04/90
ADEC Ran Morris R. 7/4/90
EXXON Amey 7/4/90
NOAA Joseph J. 7/4/90
USCG G.A. 7/4/90

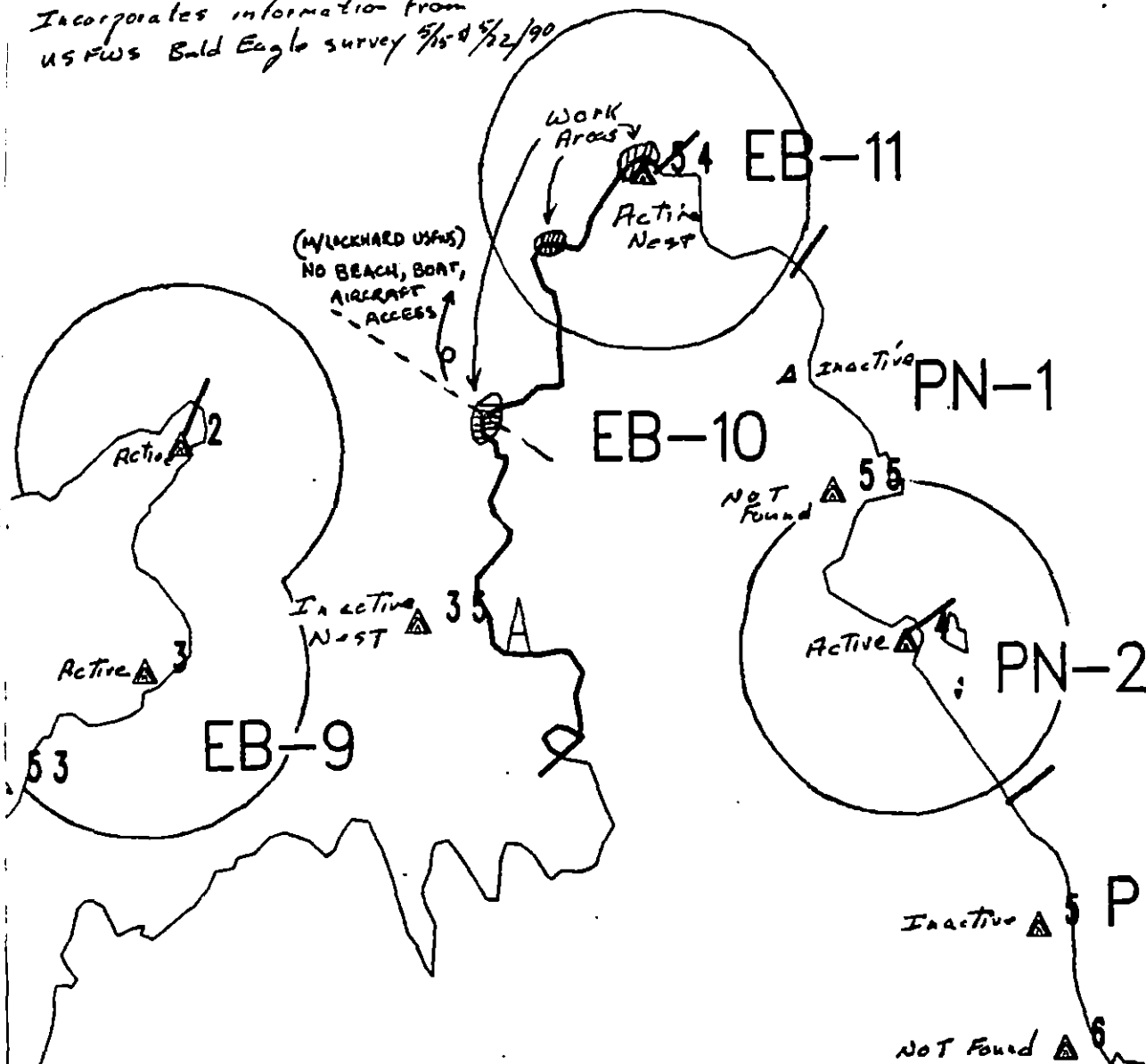
FOSC [Signature] Date 6/5/90

Prepared by Anda Meyer PP Date 6/3/90

EB-5

EB-6

Incorporates information from
USFWS Bald Eagle survey 5/15 & 5/22/90

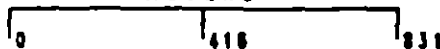


Exxon Company, USA
Map Key: PMS-EB-10
May 11, 1990

ECOLOGY MAP 5/28 SEGMENT EB-10

SUBDIVISION A (1 of 1)

METERS



- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1364 feet

SHORELINE EVALUATION

SEGMENT ST/ EB-11 SUBDIVISION A (1 OF 1) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

1L Set net sites (6/11 to 7/25)

6V Recreation: Anchorages (6/1 to 9/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 395 m: V.Light 64 m: No Oil 125 m
Subsurface Oil Observed: Yes X No Maximum Depth 10 cm

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u>X</u> Treatment Recommended	<u> </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> X Removal	<u> </u> Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of tarmat,
2) manual pick up of oiled debris (pom poms), 3) bioremediation of sur-
face and sub-surface oil in areas shown on attached sketch map. Work
should be conducted between 5/10 and 6/1 based on hatchery release and
set net constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: 4/23/90
ADEC [Signature]
EXXON [Signature]
NOAA [Signature]
FOSC: [Signature] DATE: 5-18-90

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 (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 unopened intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (6/1 to 9/15)
 6V Anchorages (6/1 to 9/15)
 6W Forest Service cabins (6/1 to 9/15)
 6X Lodge (6/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7HH Finfish harvesting
 7H Deer harvesting (8/15 to 2/28)
 7JJ Invertebrate harvesting
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

(21)

SEGMENT ST / EB-11 ~~EB-001~~ SUBDIVISION: A DATE 4-9-90

USCG

NAME Kevin L. Dreher SIGNATURE CWO2 K. L. Dreher☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

Due to minuteness of any appreciable oil I suggest no clean up necessary.
 Natural weathering will remove and clean the area without man cleanup.

DEC

NAME PATRICK J. ENDRES SIGNATURE Patrick J. Endres☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED - pending biological considerations

COMMENTS

(Note: Location of seg. is near mouth of Eshamy Bay)

The degree of oiling varied on EB-011. The dominant characteristic was a tar coat/cover on headlands, widening on gradual sloping pocket beaches. One pocket beach had areas of soft asphalt of primarily finer sediments that surrounded boulders and cobbles. This was sporadic and mostly in the Hitz where little intertidal life existed. A few isolated areas of pooled black oil existed in the first 5cm of pebble substrate. Other areas had shiny black oil retained in the first 2cm of fine textured substrate. Manual removal is possible and could be accomplished at an +8 or 9 ft. tidal height. Natural remediation seems to be cleaning the other areas of this segment, but this particular pocket beach is protected by offshore islands. If cleaning occurs, I suggest a (small crew) If bioremediation is proven effective I think this site would be a candidate.

LAND MANAGER

NAME LARRY M. EVANOFF SIGNATURE LM☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

RECOMMEND MANUAL PICK-UP, TRAWL/SCAPE OIL SURFACES AND WASH.

POM NEEDS TO BE PICKED UP, TILL AND WASH IN SOME AREAS.

NO BIOREMEDIATION RECOMMENDED.

SHORELINE OILING SUMMARY

REVISION NO. 02/28/90

OG K. Biggar USCG K. Drake SEGMENT ST/ EB-011
 BIO K. Collier LAND REP L. Evonoff (CVC) SUBDIVISION A (1041)
 EXXON G. Skiles ADEC P. Andres TIME 10:10 to 13:10
 TEAM NO.: AL TIDE LEVEL: +2 to +4.5 DATE 4/9/90
 EST. SUBDIVISION LENGTH: 600 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 25 % B 40 % C 35 % 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 0 m M 0 m N 300 m VL 94 m NO 206 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	R	B	P	S	1	2	3	4	SU	U	M	L
ASPHALT PAVEMENT				X	X					X		
POOLED												
COVER	+	X	0		X							
COAT				X	X					X		
STAIN				X	X					X		
MOUSSE												
PATTIES												
TARBALLS												
FILM												
NO OIL									S		X	X

PAVEMENT: H F (S) 2 sq. m by 4 cmPATTIES / TARBALLS n/a 0 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris	X		

DEBRIS COLLECTED
☐ YES ☒ NOTYPE 0#BAGS 0Photographs: pumpRoll No. ST-14-2Frames 22-23SUBSURFACE OIL * Pit 3 oil interval < 5cm 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
		OP	OR	OL	OS	NO		UO	UO	1	2	3	4	SU	U	M	L		
1	8				X		-	X											C, P
2	8		X				0-1	X		X					X				
3	5		X				0-2	X		X							X		P, G
4	7		X				0-3	X		X							X		
5	12		X				2-5	X			X						X		b, p, g, c
6	10	X					0-10	X	X								X		b, p, c

COMMENTS

Due to very shallow beach, oil appears in exposed areas from beach in cobbles / boulder beach. There's a considerable band of surface oil (CV) in about a 2-m wide band in center of spatter zone. Oil penetrated to 5cm in subsurface (fine material beneath cobbles beach) on S. end of Regimens, oil covering is concentrated in protected side of granite.

1012 (19)
REVISION: 000000

SHORELINE ECOLOGICAL SUMMARY

Segment ST/ EB011 Subdivision 4 Date (mo/day/yr) 04.09.90Time (24 hr) 1025-1140 Biologist KA Coates

(A) Substrate type and % of segments:

(1) Bedrock 25 (2) Boulder 40 (3) Cobble 35 (4) Pebble + (5) Sand + (6) Silt +little s l - mixed sediments.(B) Overall % cover of biota (% of segment): Dense 15% Moderate 65% Low 20%

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

Photographs:

Roll No. ST-14-2

*** juveniles / adults (X), new settlement (3)

Frames 22-23

major note ← sent to Fred Wehrenberg

BARNACLES

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

Moderate		
1U	1M	1L
2	X	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	X	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: Most of lower intertidal not observed - superficial observations through water. 3 seals just offshore; oyster catchers on small islets; white-winged scoter pair; arctic loon offshore; small brown wren in upper fucus; juvenile eel; nest not seen.
 Biological Considerations: recreation-spread; eagle's nest; Main Bay hatchery; set net sites.

Remaining oil coat in upper intertidal with sparse, live adult barnacles. Some patches already overgrown with filamentous green algae, with live littorines in this area. Bedrock areas contiguous with remaining oiled sections are densely and diversely populated. Mussel beds are moderate.

2 of 2

(30)

Segment: E8011 Subdivision: A Date: 04.09.90
Time: 1025-1140 Biologist: K. Coates

Notes:

1. Upper intertidal pools in bedrock with Endocladia, dense mussels around and dense Littorina scutulata and L. sitkana on alga. Balanus cariosus moderately abundant at mid to lower intertidal on bedrock. Palmeria also sparse but common at mid intertidal in pools.
1. On cobble-pebble-boulder beaches, serpulids abundant at lower-mid to lower intertidal on undersides of cobbles. Mussels moderately abundant in pebbles between cobbles; at southeast end of beach mussel bed dense in pebble-sand-silt at mid tide. Amphipods moderate under rocks at water line. Hermit crabs, Littorina spp and Notacmea spp, including persona and scutum moderately abundant from mid to lower-upper intertidal. From upshore or longshore, at a distance, major cobble beach appeared very sparsely populated, however invertebrate community inhabiting interstices among boulders and pebbles and undersides of cobbles is dense to moderately abundant as well as diverse.
1. Moderate amounts of wash algae on beach includes Nereocystis, Laminaria saccharina, Agarum cribrosum and other Laminarians, Palmeria, F. ? Enodomenella, flattened leafy red and Fucus

RIF
AOEL

1. BIGLAK

ENT ST/ EB-011

VISION A

4, 9 90

KLIST

row
ex. Scale
Scale Entry
Rel.
ph
over
write Character
HAWAII

Location(s)
to (a)
Location(s)
to Location(s)

END

Subsurface OS

Surface OS

TC
US Distribution

FB

Distribution

TP

Distribution

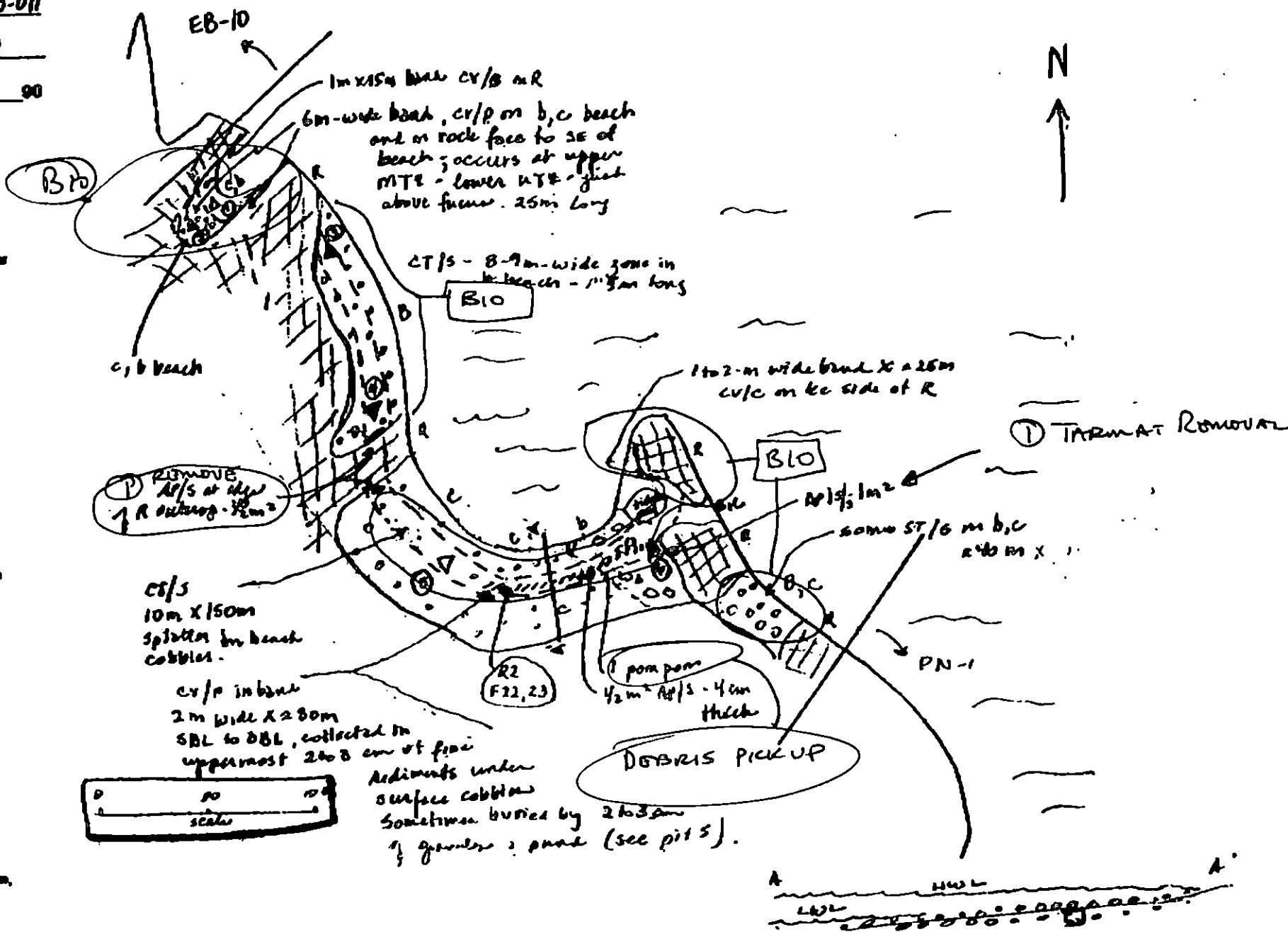
TS

Distribution

gation

cation, direction,
bar

SKETCH



APR-10-1990 23:28 FROM EXXON CMD CORDOBA

TO

SCAT TEAM

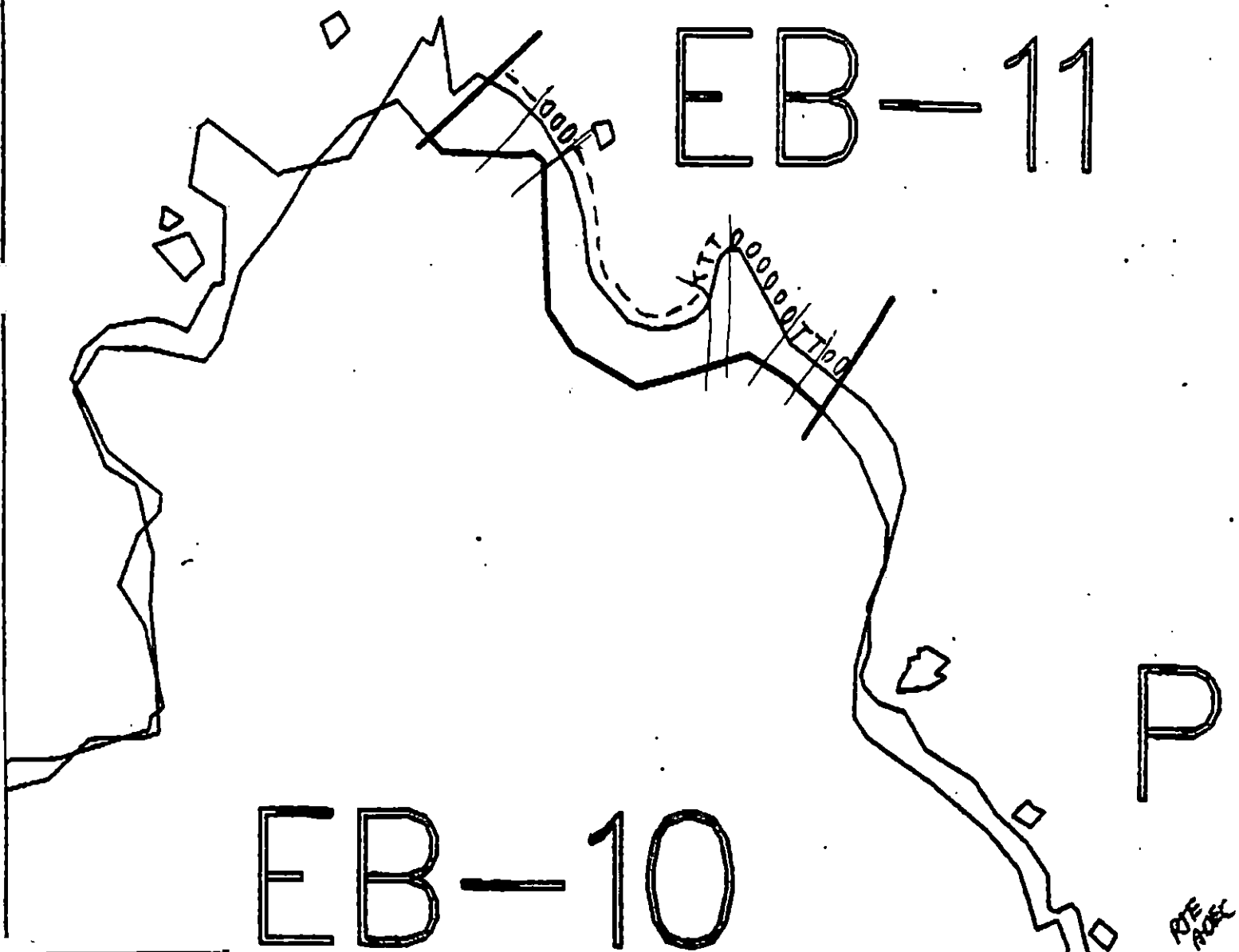
P.14

acter Length (m): AP 2 PO 0 CV 135 CT 260 ST 40 MS 0 PT 0 TB 0 FL 0 NO 173

REVISION: 000000

111

18



XXXX Wide
 //// Medium
 ---- Narrow
 Very narrow

EB-11

ADEC Segment Length: 585m

Map Key: PWS-106

Name: N. Biggs

Date: 4/9/90

RTE
 ADEC

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EB-11 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup and Tarmat Removal Less Than 400m From Nest	CLOSED
Manual Pickup and Tarmat Removal More Than 400m From Nest	OPEN
Bioremediation Less Than 400m From Nest	CLOSED
Bioremediation More Than 400m From Nest	WORK 6/4 - 6/7

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1E	Main Bay Hatchery Release	No constraint to manual pickup and tarmat removal. Subdivision open to bioremediation 6/4 to 6/8 per verbal authorization from Larry Peltz/ADF&G to Tom Monihan/Exxon on 5/24/90. No constraint to bioremediation after 6/15.
1I	Gill Net Area	No constraint to manual pickup and tarmat removal. Closed to bioremediation after 6/7.
1L	Set Net Sites	No constraint to manual pickup and tarmat removal. Closed to bioremediation from 6/11 to 7/25.
5T	Bald Eagle Nest	Closed to manual pickup, tarmat removal, and bioremediation less than 400m from active nest. No constraint more than 400m from nest.

OTHER ECOLOGICAL CONSIDERATIONS

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 uncollected biota and substrate.

TAG APPROVAL DATE 6/04/90
ADEC Ray Morris
EXXON Amy Tsal
NOAA Joseph Tuller
USCG G.H. Butler

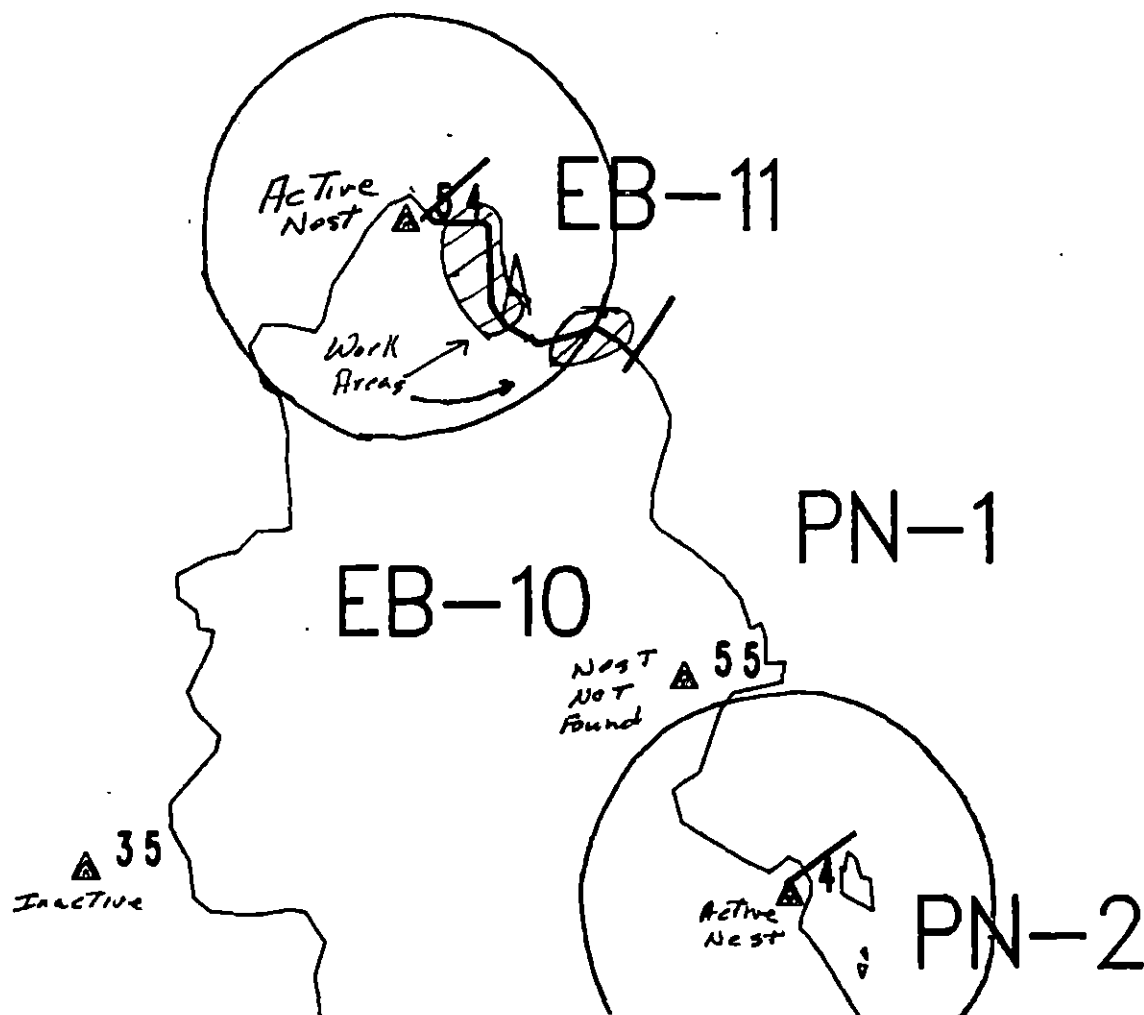
FOSC D. J. J. J.

Date 6/5/90

Prepared by Anders Munn

Date 5/31/90

Incorporates information from
USFWS Bald Eagle survey 5/24, 5/25/90



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



ECOLOGY MAP 5/28
SEGMENT EB-11
SUBDIVISION A (Lot 1)
METERS
0 300 735

★ Seabird Colony
▲ Eagle Nest

1 inch = 1206 feet

WORK PLAN MODIFICATION RECOMMENDATION

ASAP

SEGMENT EB-11SUBDIVISION A (up)DATED 8-3-90

MODIFICATION

1. REASON FOR MODIFICATION:

2 areas on EB-11 will require further treatment in 1990. Moving N→S, on second prominent point encountered is an area approx. 2.5x4.5m B weathered interstitial mounds, AP, and OP/OR subsurface oil (3-5cm penetration). Area 2 is North facing cone in middle of segment. From MITZ-HITZ the evidence indicates that bioremediation ^{new} removed clean surface layer of cobble/5m. boulder aside to expose tar mats. These tar mats/AP more than bioremediated. AP and subsurf. OP and OR oil still exist however and will require re-treatment in 1990.

2. SUGGESTED ADJUSTMENT TO WORK PLAN:

TAB should ^{assess segment} Determine potential effectiveness of mechanical treatment. A large number of clean cobbles and small boulders will need to be relocated to access AP and subsurface oil. A manual crew could accomplish this task, but would require a substantially longer period of time. The next step is to remove AP and subsurface oil prior to bioremediation (Both Snipe and Customizer).

3. TIMING ISSUES:

Treatment required in 1990

4. ADDITIONAL COMMENTS:

ADEC

Bob McCrea

EXXON

Randall K. Boyer

USCG

Don

LAND MANAGER

John (If field rep is on scene)

SEGMENT AS1 EB-11 SUBDIVISION: A SITE: 1 DATE 8/3/90**JSCG**NAME David A. NOAA SIGNATURE David A. NOAA
DON ORTEG (USCG)☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Oiling is widespread in these coves. 1990 treatment is recommended, as much oil is found between boulders + cobbles + will not be fully effected by winter waves. Definite 1991 reassessment recommended
concur DO

ADECNAME Bob McCreedy SIGNATURE Robert B. McCreedy☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: Work Order Mod. Recommendation has been submitted recommending cleanup to resume in 1990. North facing cove has fairly extensive tarballs/AP and OP/OR subsurface oil. Mechanical treatment is recommended to remove layer of clean cobbles/sm. boulders to expose AP and subsurface oil. Manual b/c can then remove oiled sediments which could be followed by the application of Snigel or Customblen
Priority reassessment for '91 following treatment in '90

LAND MANAGERNAME Steve Lano CUC SIGNATURE Steve Lano☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: needs more 90 work. check for Sub Surface again
 needs Re Bio.

EXXONNAME RANDALL E. BRYCE SIGNATURE Randall E. Bryce☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

THIS AREA APPEARED TO HAVE BEEN BIOD BEFORE MANUAL TREATMENT WAS INITIATED OR COMPLETED. A WORK MODIFICATION HAS BEEN FILED FOR PICKUP AND Re-BIO. THE AP/P AND M5/P WOULD JUSTIFY ANOTHER LOOK IN 1991.

CG M. B16
 SEGMENT STU EB-04
 SUBDIVISION A
 DATE 4/9/00

SKL H MAP

W1000
 B16

CHECKLIST

- ☒ N Area
- ☒ Approx. Scale
- ☒ Symbols Only
- ☒ On Map
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. MSL/LAL
- ☒ SBL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ P/L Location(s)
- ☒ Photo Location(s)

LEGEND

1 A
 PB - No Substrate Ch

2 A
 PB - Substrate Ch

CT/C
 Coarsest Distribution

CT/B
 Coarse Distribution

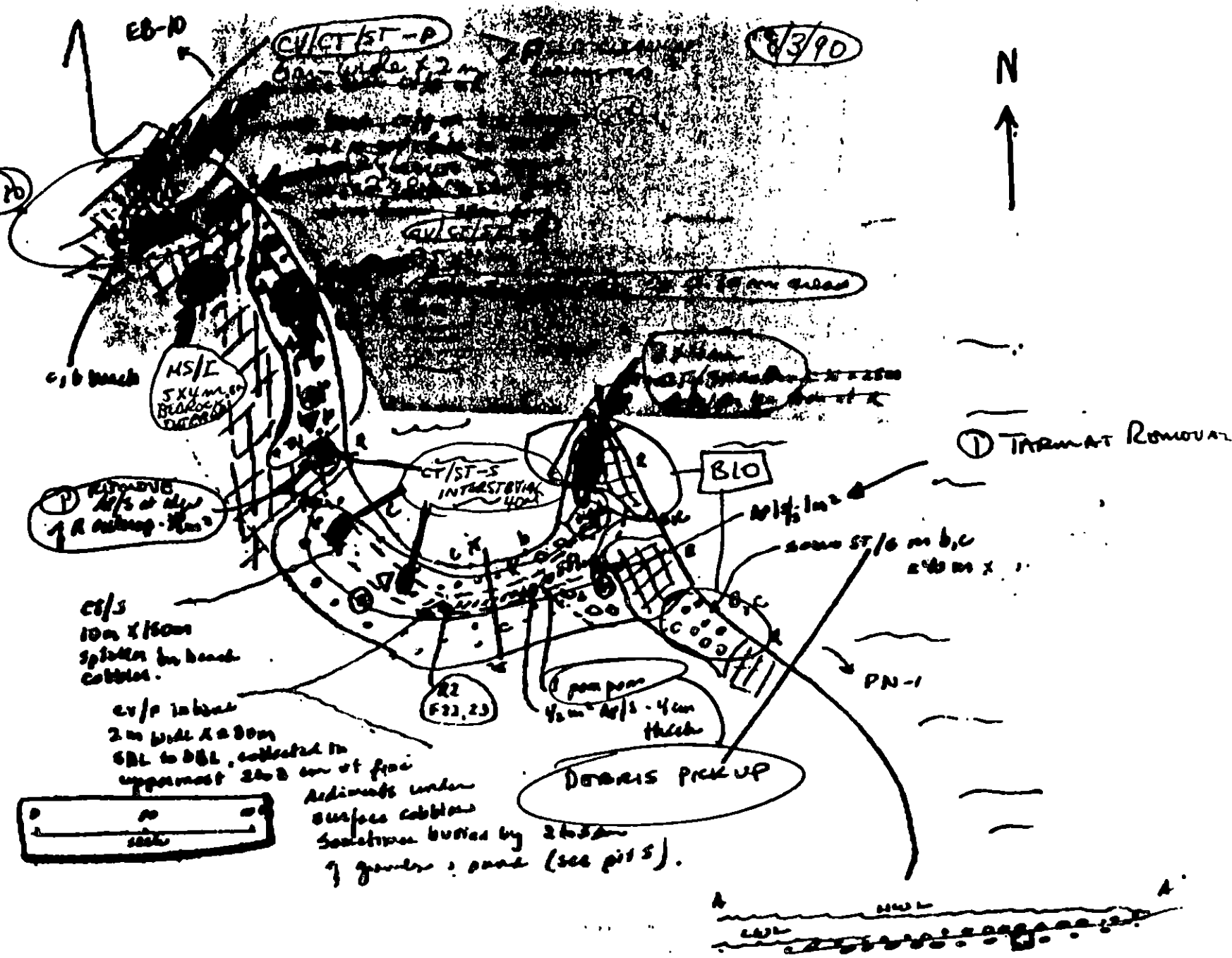
ST/E
 Finest Distribution

ST/E
 Finest Distribution

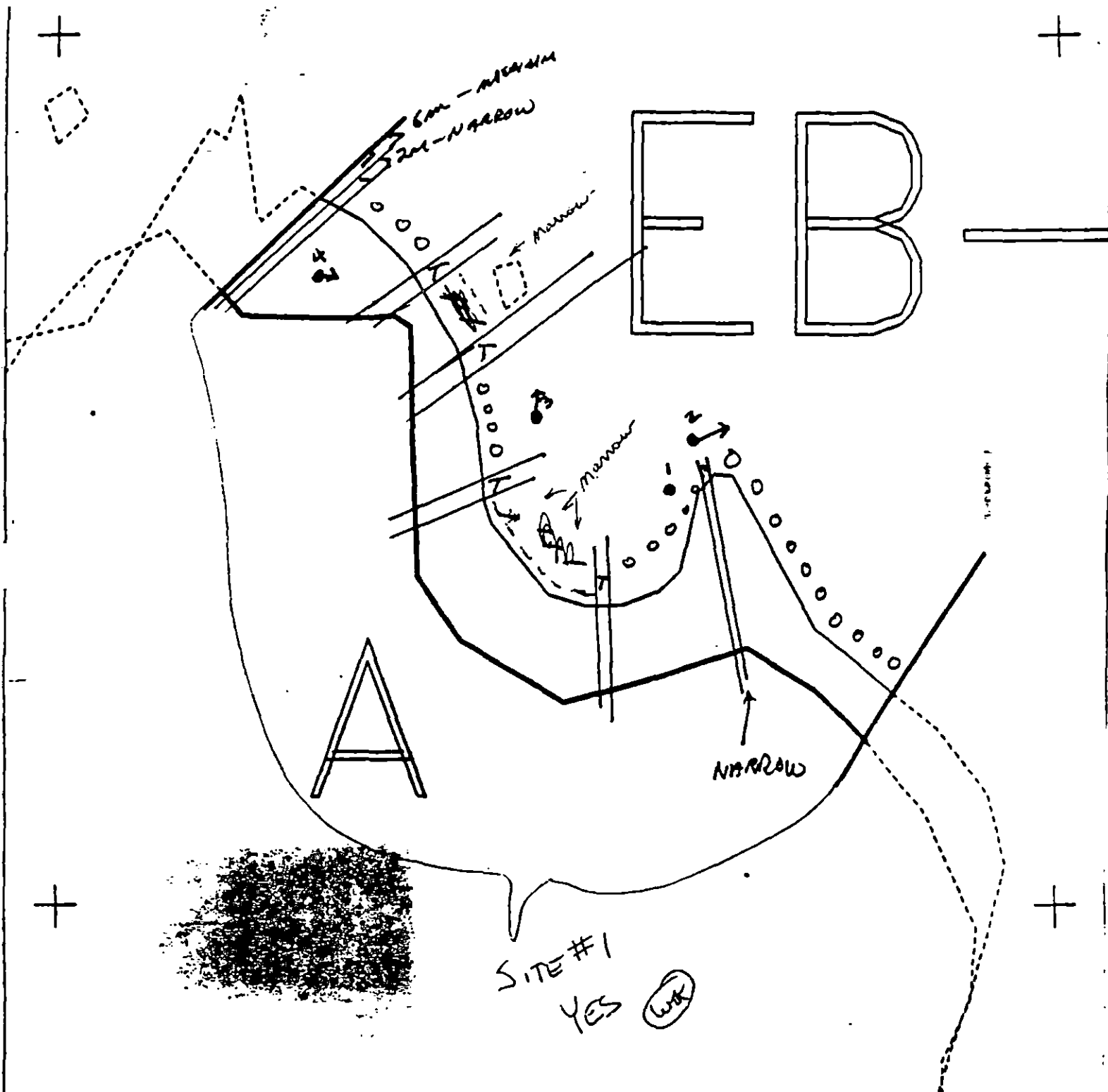
ST/E
 Finest Distribution

Other Vegetation

1 00
 Photo location, direction,
 and number



OS Character Length (m): AP 2 PO 0 CV 135 CT 260 ST 40 MB 0 PT 0 TR 0 FL 0 NO 173



XXX
///

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

EB-11 A

ADEC Subsegment Length: 583m
METERS

0 51 103
AK State Plane Zone 4 1:3200
pub-11a



Subdivision Field Map
Map Key: PWSEB-11A
Name: NAKASHIMA
Date: 8/3/90
Date Entered:

yes-91-
 YES-1491 KLB
 YES-141 DOW
 YES-191 DOW
 YES-191 DOW

EB

A

NARROW

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

EB-11 A

ADEC Subsegment Length: 583m
 METERS

0 101 103

AK State Plane Zone 4 1:3200
 pub-11a



Subdivision Field Map
 Map Key: PWSEB-11A
 Name: NAKASHIMA
 Date: 8/3/90
 Date Entered:

GENERAL DATA

SEG ID: EB-11 SBOV: A SITE: 1 TEAM: 3 DATE: 8-3-90
SITE LGTH 563 OIL CATEGORIES: W - M 6 N 218 VL 40 NO 331 U -
1991 REASSESSMENT: USCG: Y ADEC: Y LONGR: Y EXXON: Y

SURFACE DATA

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

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

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

CHAR #: 6 OIL CHAR: NO OIL DIST: CONT - BRKN - PTCH - SPLH -
TIDAL ZONE: SU X UI - MI X LI X

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

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

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

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

ASAP DATA ENTRY FORM

SUBSURFACE DATA

PAGE 2 OF 2SEGMENT ID: EB-11 SUBOIV: A SITE: 1

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

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

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

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

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

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

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

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

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

SHORELINE EVALUATION

SEGMENT ST/ EB-12 SUBDIVISION A (1 OF 1) DATE 4/24/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1E Main Bay Hatchery release (4/20 to 6/15)
5T-2 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
Note eagle nest in adjacent segment EB-13.
6Y Recreation: Special use destination
6V Recreation: Anchorages (6/1 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles J. Jones DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 64 m: No Oil 1391 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: MONITORS TO ASSESS SIGNIFICANCE + ACCESSABILITY
OF OIL + NEED FOR REMEDIAL

TAG APPROVAL DATE: 5/4/90
ADEC ART WEINER Art Weiner
EXXON AMY TEAC Amy Teac FOSC: my l DATE: 5-18-90

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 (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)
 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
- M** 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 Roth 267-2206
- 5T** All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U** Recreation: Tent sites (6/1 to 9/15)
6V Anchorages (6/1 to 9/15)
6W Forest Service cabins (6/1 to 9/15)
6X Lodge (6/1 to 9/15)
6Y Special use destination
- 7Z** Subsistence area: Salmon harvesting (5/1 to 9/30)
7HH Finfish harvesting
7H Deer harvesting (8/15 to 2/28)
7JJ Invertebrate harvesting
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.

FIELD SHORELINE COMMENT SHEET

MENT ST / EG-12 SUBDIVISION: NO DATE 24 April

USCG
NAME James C. Gambill SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS
This AREA is pretty much uninvited effect for one small AREA at the North end, consisting of mousse mixed with fine needles located in the hull. The size is 1-3 cm. The density of mousse is 1 every 5 to 8 meters. (manually). see Effon sketch map.

ADEC
NAME Brian K. FitzSimons SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS
Only very light oiling of widely seperated mousse splashes at HIT 2..
NO Treatment.

LAND MANAGER
NAME Steve L. WRO - CUC SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS
manuul clean up Recommended

SHORELINE OILING SUMMARY

REVISION NO. 04/13/88

OG B. Berglund USCG J. Gambill SEGMENT ST/ EB-12
 BIO S. Selvester LAND REP S. Ward (C.V.) SUBDIVISION A (1 OF 1)
 EXXON C. Levine ADEC B. Fritzeimans TIME 6:35 to 8:00
 TEAM NO. 1 TIDE LEVEL -1.5 to -2 DATE 4/24/90
 EST. SUBDIVISION LENGTH: 1695 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 60 % B 25 % C 10 % P 3 % G 2 % S — % M — % V — %
 SLOPE: Long 30 % Hang 60 % Vert 10 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W — m M — m N — m VL 65 m NO 1630 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	R	B	P	N	SW	W	M	U	SW	W	M	U
ASPHALT PAVEMENT												
POOLED												
COVER												
COAT												
STAIN												
MOUSSE												
PATTIES												
TARBALLS												
FILM												
NO OIL									X		X	X

PAVEMENT H F S NB sq. m by — cmPATTIES / TARBALLS 1 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>—</u>
				#BAGS <u>—</u>

Photographs:

Roll No. ST-1-5Frames 1-41

SUBSURFACE OIL

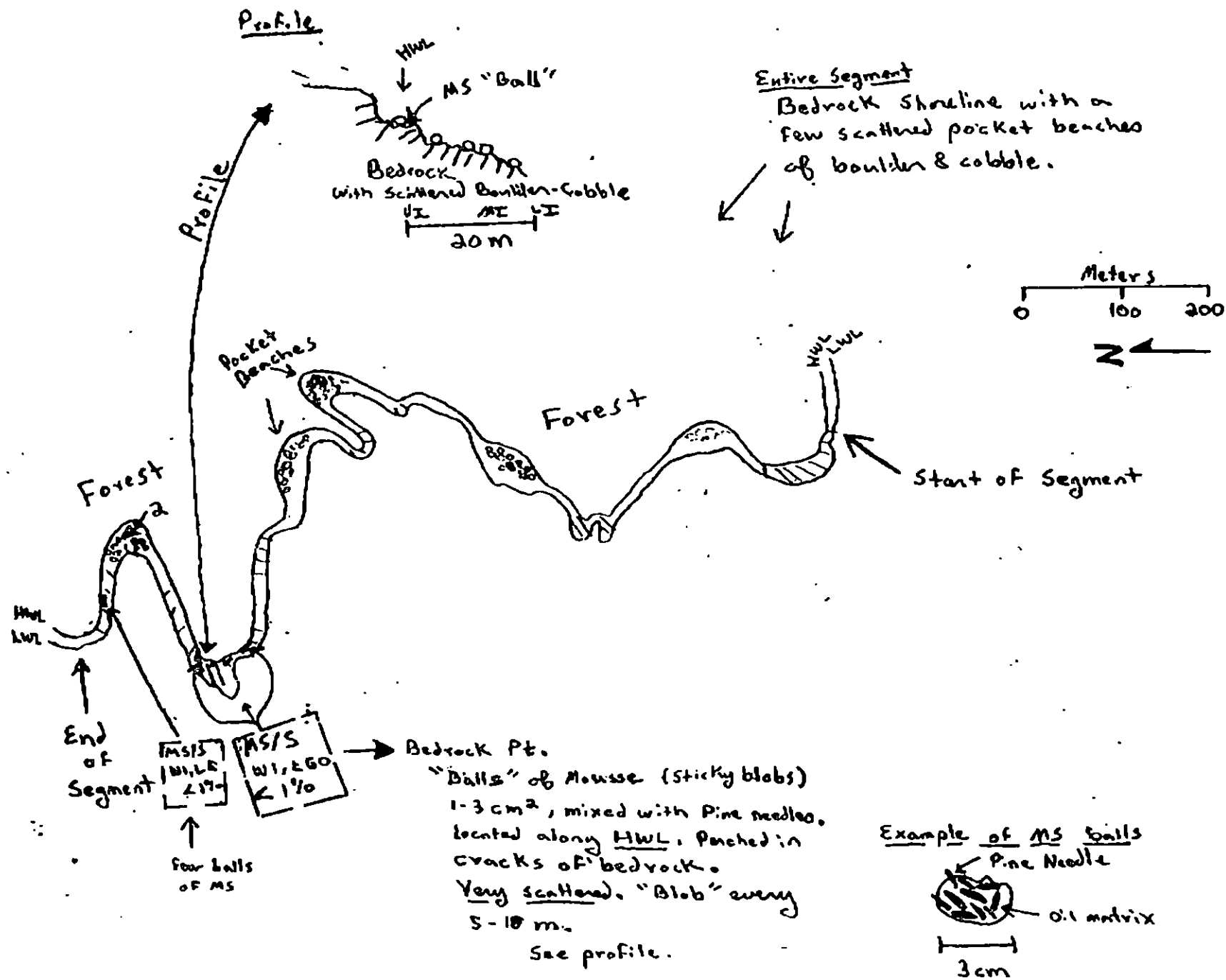
PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	SHEEN (Y/N)	↓	SURFACE SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SW	W	M	U	SW	W	M	U				
1	25					/	.	/						/					N		E/G
2	30					/	.	/						/							C/G
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COMMENTS

The segment consists of a bedrock shoreline (high angle slope) with a few scattered pocket benches. The segment is unoiled except for a small area at the North end. The oiling consists of very scattered "blobs" of Mousse mixed with pine needles, located along the HWL. The density of "blobs" is low (one or two per meter).

ENT ST/ E8-
 VISION A
 4/24/90
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SKETCH MAP



SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/90

Segment ST / EB-12 Subdivision A Date (mo / day / yr) 4/24/90

Time (24 hr) 0635-0800 Biologist S. Schroeter

Tide: START: -1.5
END: -1.9
Low: -1.9

(A) Substrate type and % of segments:
(1) Bedrock 53 (2) Boulder 15 (3) Cobble 10 (4) Pebble 10 (5) Sand 5 (6) Silt 5

(B) Overall % cover of biota (% of segment): Dense 22 Moderate 23 Low 55

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

Photographs: Roll No. ST-1-5
Frames 1-4

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: ST-2C No bald angles seen in segment; 1E 10j6Y

Ecological Considerations: ① Dense algal populations LITZ including Alaria, Laminaria saccharina, Costaria, Palmaria. ② Zostera along much of segment in subtidal. ③ Colonial diatom mats cover much of substrate & biota in LITZ: for high densities of Dormaster.

ECOLOGICAL MAP

ST(2)
1E
6Y, 6V

E

EB-12

BALD EAGLE NESTS



XX Wide
 /// Medium
 --- Narrow
 TTTT Very thin

ADEC Segment Length: 1454m

EB-12

Map Key: PWS-107
 Name: B. Berglund
 Date: 4/24/02

Segment:EB-12	Subdivision:A	Date:April 24, 1990
	Time	Tide
Schroeter		Biologist: S.
Start	0635	-1.5
Segment Length:		
meters		1695m
End	0800	-1.9
Low	0800	-1.9

The segment consisted of 3 kinds of shorelines: predominantly steep bedrock cliffs (29%), (2) boulder, cobble, and pebble pocket beaches (29%) and (3) pocket beaches with boulder, cobble, and pebble in the LITZ and MITZ and bedrock in the UITZ (42%). Shorelines on the segment are sheltered from wave energy.

Salient ecological observations include: (1) no bald eagles observed, despite previous observations of a nesting site; (2) 2 sea otters observed offshore and numerous sites with otter scat. A river otter was also observed. (3) Dense *Zostera* beds lie offshore along the entire segment. (4) ~~*Alaria marginata*~~ and ~~*Laminaria saccharina*~~ are dense in the LITZ along the bedrock shorelines and extend into the subtidal; (5) Barnacles, mussels, gastropods, and ~~*Eucus*~~ are abundant along most of the segment. (6) Gastropods are comprised primarily of littorines, ~~*N. persona*~~, and ~~*N. scutum*~~. ~~*Littorina scutulata*~~ and ~~*N. persona*~~ dominate in the upper MITZ and UITZ, whereas ~~*L. scutulata*~~, ~~*N. scutum*~~ and ~~*N. pelta*~~ dominate in the middle and lower MITZ and upper LITZ. (7) Barnacle spat (probably *B. glandula*) were abundant in the

throughout the segment. (8) Two species of sea stars, *Dermasterias imbricata* and *Pycnopodia helianthoides*, were remarkably abundant in the low MITZ and LITZ both under and on top of boulders. *Pycnopodia*-excavated pits were abundant in the LITZ in several of the boulder/cobble/pebble pocket beaches. The large numbers of small individuals of both species suggests high recruitment over the past several years. *Leptasterias hexactis* and *Evasterias trochellii* were present, but rare in the MITZ and LITZ. (8) Clams and an echiuroid (*Urechis* spp. as a guess) was abundant in the LITZ in many of the boulder/cobble/pebble pocket beaches. (9) Filamentous greens (*Ulva* and *Enteromorpha*) were abundant in tidepools in the UITZ and MITZ, and on boulders and cobbles in the lower MITZ and LITZ. (10) Small green urchins (*Strongylocentrotus drobachiensis*) were common under boulders and cobbles in the LITZ.

EB-12

E

XXX Wide
/// Medium
--- Narrow

EB-12

ADEC Segment Length: 1454m

Map Key: PWS-107

Name: B. Beralund

SHORELINE EVALUATION

SEGMENT ST/ EB-13 SUBDIVISION A (1 OF 1) DATE 4/24/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 225-30-15080 (2/90, P)
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
1E Main Bay Hatchery release (4/20 to 6/15)
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
Also two eagle nests in adjacent segment (1 within 400M)
6Y Recreation: Special use destination
6V Recreation: Anchorages (6/1 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Holmes DATE: 5/5/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 41 m: V.Light 1749 m: No Oil 2902 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 Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: Recommend manual pickup of mousse tarballs. Work should be conducted after 6/1 with USFWS approval based on eagle nest constraints.

TAG COMMENTS: MONITORING TO ASSESS WESTERN END OF SUBD. - ICE PRESENT DURING SURVEY

TAG APPROVAL DATE: 5/4/90

ADEC ART WENGER Det Weimer

EXXON ANDY TEAL

NOAA GARY PETROS

USCG G.A. REITER

FOSC: W L DATE: 5-18-90

NOTIFY CVC 24 HRS. IN ADVANCE OF WORK

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

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

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

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

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

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

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

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

1E Main Bay Hatchery release (4/20 to 6/15)

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

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

1H Remote release site

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

AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214

1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511

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

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

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

1L Set net sites (8/11 to 7/25)

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

AGENCY CONTACT PERSON: ADF&G James Brady 424-3212

2M Herring spawning (4/1 to 6/15)

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

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

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

3Q Harbor seal and sea lion molting (8/15 to 9/15)

Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235

ADF&G Don Calkins 267-2403

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

ADF&G Tom Roth 267-2206

5T All Bald Eagle nests (3/1 to 6/1)

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

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

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U Recreation:

Tent sites (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)

7H Finfish harvesting

7I Deer harvesting (8/15 to 2/28)

7J Invertebrate harvesting

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

AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / ~~FB-13A~~ FB-13A SUBDIVISION: NO DATE 24 APR 80

JOG
NAME James S. Gorbill SIGNATURE James S. Gorbill

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

A band of mousse on east side of segment towards western end of segment. Manually. Due to the fact the bay is a salmon fishery. Part of the segment was unobserved because there was ice on water unable to get through and snow on shore. Mousse was in hull. See Exxon sketch map.

ADDEC
NAME Brian X. Fitz-Simone SIGNATURE Brian X. Fitz-Simone

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

I concur with OG sketch maps and comments. Concentrated narrow band of mousse on east side of peninsula towards western end of segment. Hand removal of oiled sediments - necessary due to salmon fishery.

Inspect remainder of western end of segment following breakup - unobserved due to bay ice and snow on shore.

AND MANAGER
NAME Steve L. Hays - CUC SIGNATURE Steve L. Hays

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

Manual - clean up

SHORELINE OILING SUMMARY



REVISION NO. 04/12/90

OG B. Bavaland USCG J. Gambill SEGMENT ST/ EB-13
 BIO S. Schreder LAND REP S. Ward. (C.V.) SUBDIVISION A (1 OF 1)
 EXXON C. Levine ADEC B. Fritasimon TIME 8:00 10:11 00
 TEAM NO. 1 TIDE LEVEL -2 to +6 DATE 4/24/90
 EST. SUBDIVISION LENGTH: 4120 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: W to
 SURFACE SEDIMENTS: R 25 % B 60 % C 10 % P 5 % G % S % M % V %
 SLOPE: Long 25 % Hang 55 % Vert 20 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W m M m N 30 m VL 1620 m NO 270 m

SURFACE OIL

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

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DID YOU COLLECT DEBRIS?

YES ☐ NO ☒TYPE #BAGS

Photographs:

Roll No. ST-1-5Frames 5

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		VO	UC	1	2	3	4	SW	U	M	U				
1	10					/	.		/						1						C/G
2	15					/	.		/						1						C/G
3	20					/	.		/						1						B/C/G
							.														
							.														
							.														

COMMENTS Most of this segment consists of a high angle boulder and cobble beach face with shallow or exposed bedrock. There are a scattered pocket beaches. The segment has one 30 length of concentrated oiling (CV/broken) as indicated on the sketch map. The other lightly oiled sectors of the segment have a very sporadic occurrence of sticky mousse balls located along the HWL (Approx. 1 ball every 50 to 100 m). Over half the segment is uniled. A short section at the west end was not surveyed due to ice blocking the bay.

REVIEWED ME DATE 4-25-90

W 120 120 120 120 120
 SEGMENT ST/ ED-13

SUBDIVISION A

DATE 4/24/90

CHECKLIST

- ☐ H Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Study
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HAWAII
- ☐ SCL
- ☐ Profile Location(s)
- ☐ Photo(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
 PH - No Substrate Oil

2 Δ
 PH - Substrate Oil

$\square$ CT/C
 Concentrated Distribution

$\square$ CT/B
 Broken Distribution

$\square$ CT/P
 Patchy Distribution
 * See GIS map for location of sketch map.

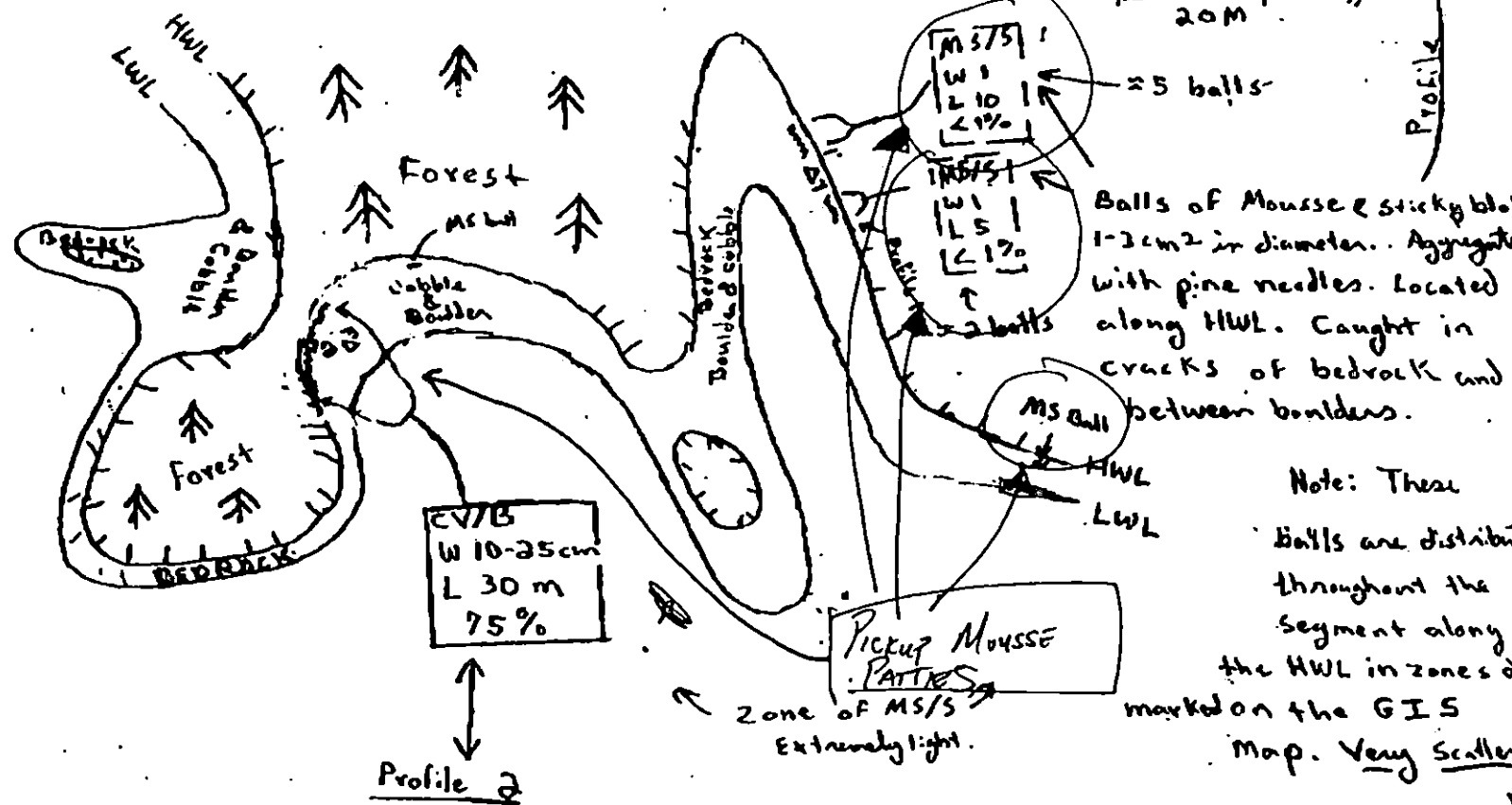
$\square$ CT/S
 Splashed Distribution

$\lll$
 Old Vegetation

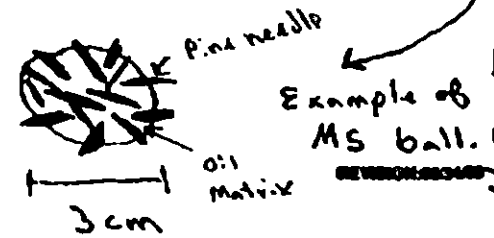
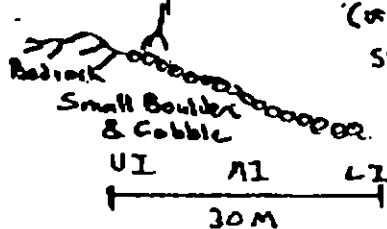
$\circ$
 Photo location, direction, and number

ω = Oil Zone

SKETCH MAP



CV/B $\leftarrow$ Mix of oil and pine needles (or matted)
 Similar to mouse "balls" along other portions of segment. However, it forms a broken band along the HWL rather than discrete balls.



Oil Character Length (m): AP PO CV 30 CT ST MS 336 PT TB FL NO 240

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/22/90

Segment ST / EB-13 Subdivision A Date (mo / day / yr) 4/24/90Time (24 hr) 0800-1000 Biologist S. Schroeter Tide: Start: -2
END: +6
Low: -2(A) Substrate type and % of segments:
(1) Bedrock 25 (2) Boulder 5 (3) Cobble 10 (4) Pebble 5 (5) Sand 5 (6) Silt 5(B) Overall % cover of biota (% of segment): Dense 22 Moderate 18 Low 60

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

Photographs: ST-1-5
Roll No. ST-1-5Frames N/A

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments: 1 A, B-1; ST-1 (2 bald eagles seen on seg
1 E; 6 Y, V; 3 sea otters + 1 Cant. M. seen; other 5 cat abundant
in bed rock areas.Ecological Considerations: (1) 2 dense sigal populations LITZ, including Alaria
Laminaria saccharum; (2) Eostrea subtidally along much of segment
(3) colonial diatom and covers much of subtidal + biota MITZ; (4)
High densities of Dermasterias imbricata + Pycnopodia low-MITZ + LITZ
Lepidostreus present but rare. (5) B. glandula sppt noted on
DDK/B/C/G in low-MITZ + MITZ along most of segment, dense in patches
(6) Dense, clean + pol. free. D. LITZ in 2/10 in bed rock

Segment: EB-13

Subdivision: A

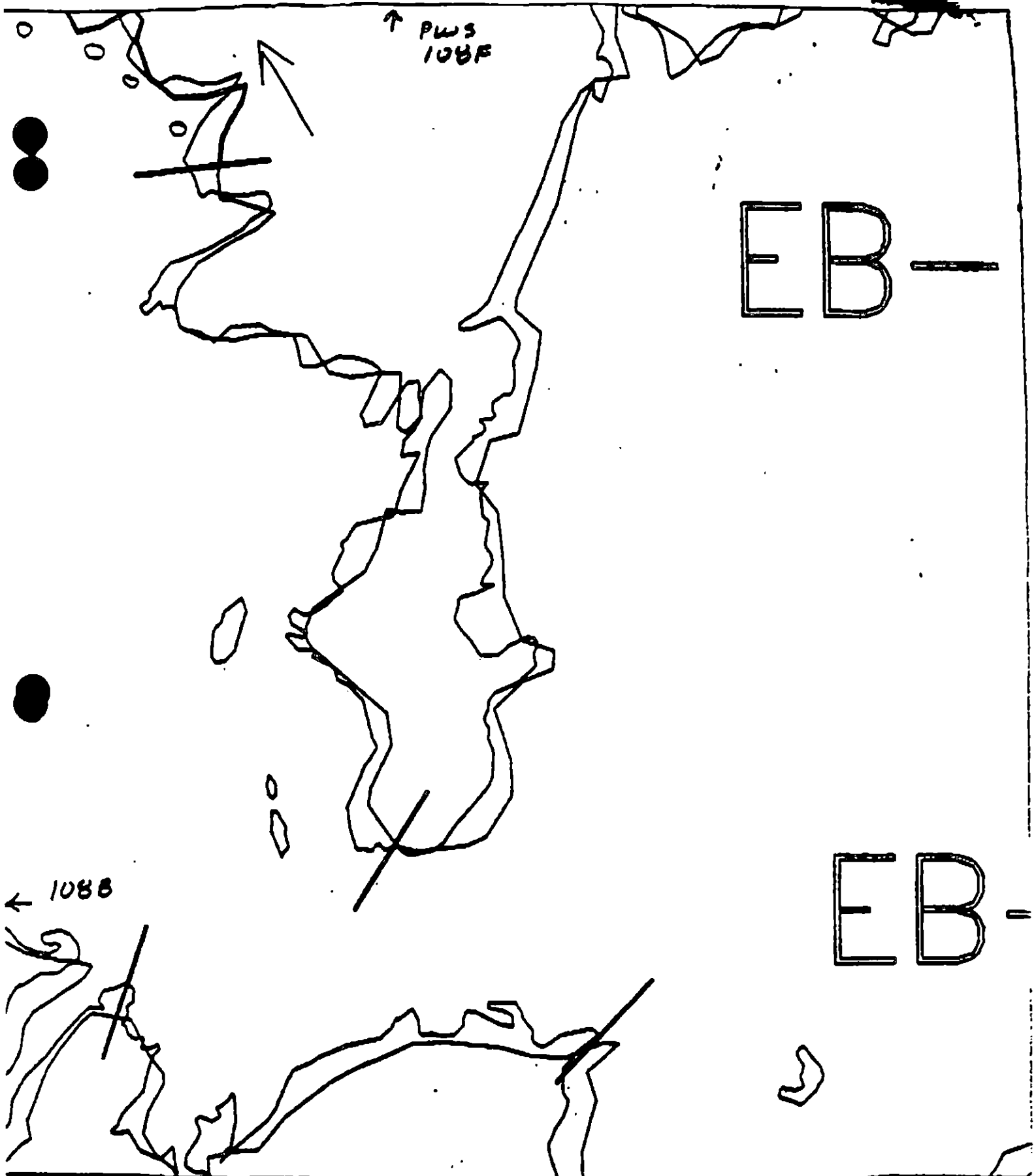
Date: April 24, 1990

	Time	Tide	Biologist: B. Schroeter
Start	0800	-2.0	Segment Length: 4420 m
End	1050	+6.0	
Low	0800	-2.0	

The segment is very similar with regard to substrate and biota to EB-12A. It consisted of 4 kinds of shorelines: predominantly steep bedrock cliffs (27%), (2) boulder, cobble, and pebble pocket beaches without freshwater (28%); beaches similar to type (2), but with fresh water running through them (31%), and (4) pocket beaches with boulder, cobble, and pebble in the LITZ and MITZ and bedrock in the UITZ (15%). Shorelines on the segment are sheltered from wave energy.

Salient ecological observations include: (1) 2 bald eagles observed; (2) 1 sea otter observed offshore and numerous sites with otter scat. A river otter was also observed. (3) Dense *Zostera* beds lie offshore along the entire segment. (4) ~~*Alaria marginata*~~ and ~~*Laminaria saccharina*~~ are dense in the LITZ along the bedrock shorelines and extend into the subtidal; (5) Barnacles, mussels, gastropods, and *Eucus* are abundant along most of the segment, but particularly so on the pocket beaches with freshwater running over them. (6) Gastropods are comprised primarily of littorines, *N. persona*, and *N. scutum*. *Littorina scutulata* and *N. persona* dominate in the upper MITZ and UITZ, whereas *L. scutulata*, *N. scutum* and *N. palis* dominate in the middle and lower MITZ and upper LITZ. (7) Barnacle spat (probably *B. glandula*) were abundant in the MITZ and lower UITZ on bedrock, boulders and cobbles throughout the segment. This segment and segment EB-12A had the highest density of barnacle spat seen by me during both phases. (8) Two species of sea stars, ~~*Dennasterias fabricata*~~ and ~~*Pycnopodia helianthoides*~~, were remarkably abundant in the low MITZ and LITZ both

under and on top of boulders. ~~Echinopodia~~-excavated pits were abundant in the LITZ in several of the boulder/cobble/pebble pocket beaches. The large numbers of small individuals of both species suggests high recruitment over the past several years. No other species of sea stars were seen on the segment (8) Clams and an echiuroid (~~Urechis~~ spp. as a guess) was abundant in the LITZ in many of the boulder/cobble/pebble pocket beaches. (9) Filamentous greens (~~Ulva~~ and ~~Enteromorpha~~) were abundant in tidepools in the UITZ and MITZ, and on boulders and cobbles in the lower MITZ and LITZ. (10) ~~Mopalia lignosa~~ and ~~M. ciliata~~ were common beneath boulders and cobbles in the low MITZ and upper LITZ.



XXXX Wide

/// Medium

-- Narrow

TTTT Very Light

0000 No Oil

EB-13 (pg. A)

ADEC Segment Length: 4286m



Map Key: PWS-1088

Name: B. Benglund

Date: 4/04/90

Data Entered:

P5015

↓ PWS 108C

XXXX Wide

●/// Medium

●--- Narrow

TTTT Very Light

0000 No Oil

EB-13 (pg 6)

ADEC Segment Length: 4966m



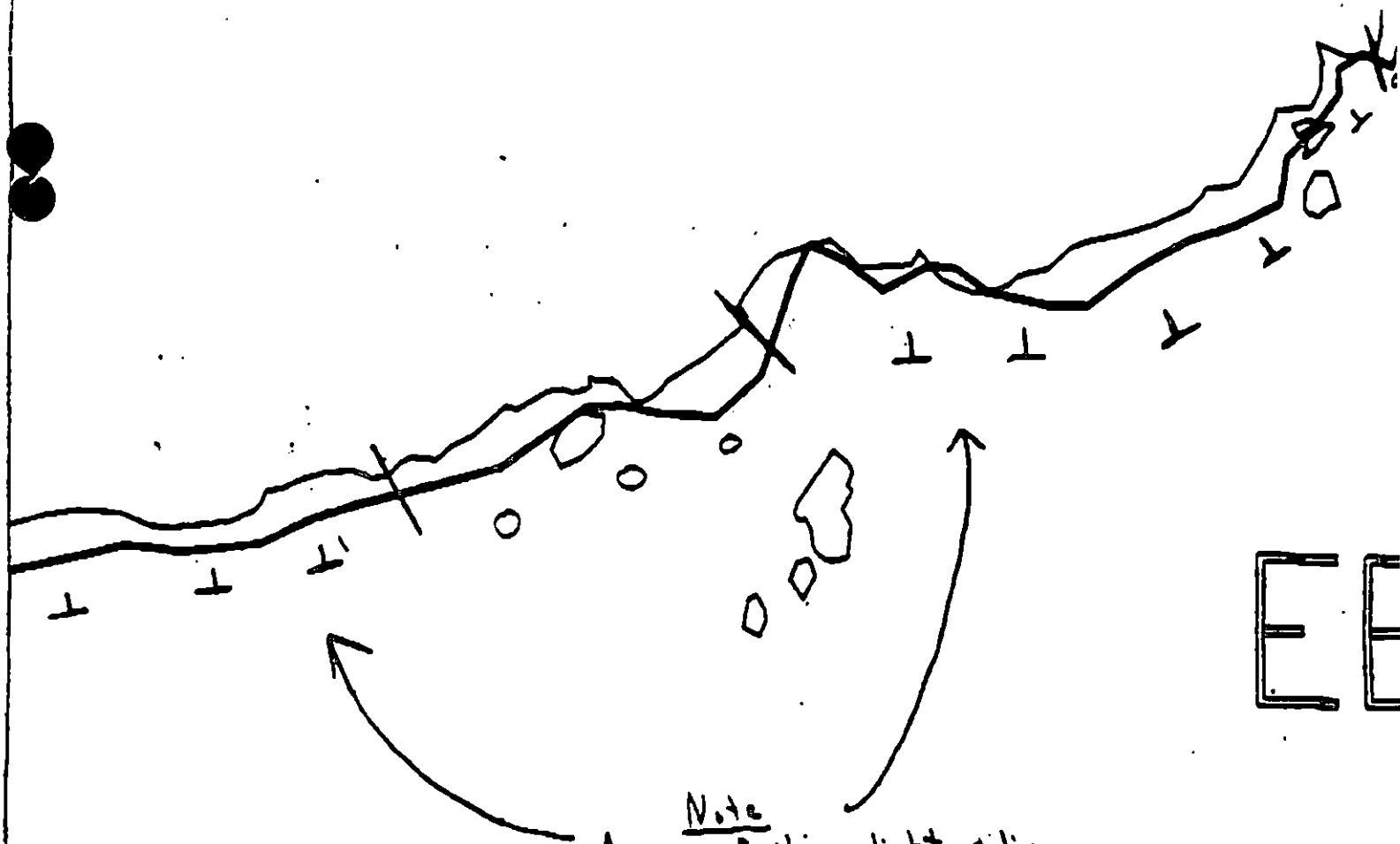
Map Key: PWS-1081

Name: D. Dinglund

Date: 4/24/90

Date Entered:

060615



Note
Areas of Very light oiling.

These areas have extremely light oiling consisting of Mousse balls - (see sketch map for description) which are sporadically distributed, approximately 1 every 30 to 150 meters. All the balls are located along the H/WL in the cracks of bedrock or in between boulders.

← PWS
108A

PWS
108C →



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No. Oil

EB-13 (pg 2)

ADEC Segment Length: 4966m



Map Key: PWS-108B

Name: B. Beagland

Date: 4/24/90

Date Entered:

070815

E

See note on
area of very light oil
pg. C.

Area of Sketch Map.
See comments.

Narrow

Not surveyed
due to bay
being iced in.

Boat
Surveyed

PWS
108B

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EB-13 (13D)

ADEC Segment Length: 4966m



METERS



Map Key: PWS-108a

Name: B. Beagland

Date: 4/24/90

Date Entered:

08212

↑ PWS
108F

ECOLOGICAL V. 4
(Still LT 3064)

EB-

BIRD EAGLE
NESTS
(ADJACENT
SEGMENT)

EB-

← 108B

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EB-13 (pg. A)

ADEC Segment Length: 4966m

0 100 200 300
METERS

Map Key: PWS-108c

Name: B. Berglund

Date: 4/04/90

Date Entered:

P5015

↓ PWS 108C

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EB.-13 (pg 6)

ADEC Segment Length: 4966m



METERS

Map Key: PWS-1081

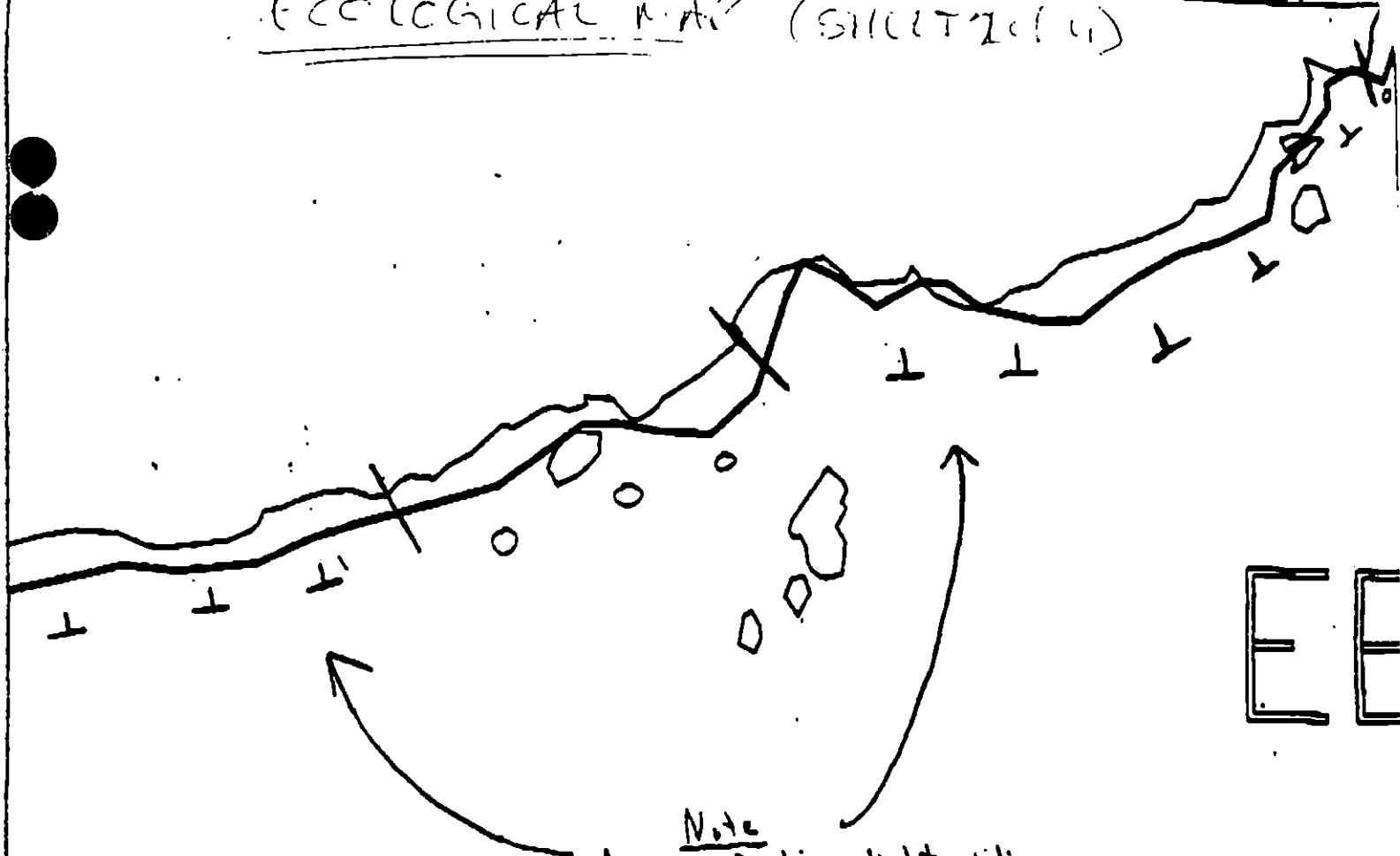
Name: D. England

Date: 4/24/90

Data Entered:

P 6 615

ECCOLOGICAL MAP (Sketch)



Note
Areas of Very light oiling.

These areas have extremely light oiling consisting of Mousse balls - (see sketch map for description) which are sporadically distributed, approximately 1 every 50 to 150 meters. All the balls are located along the HWH in the cracks of bedrock or in between boulders.

← PWS
108A

PWS
108C

XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EB-13 (pg 2)

ADEC Segment Length: 4966m



Map Key: PWS-108b

Name: B. Bengtson

Date: 4/24/90

Date Entered:

P 7 of 15

ECOLOGICAL MAP (Sketch 1-64)

1, A	ST-1
1, B	1C 6Y, EV

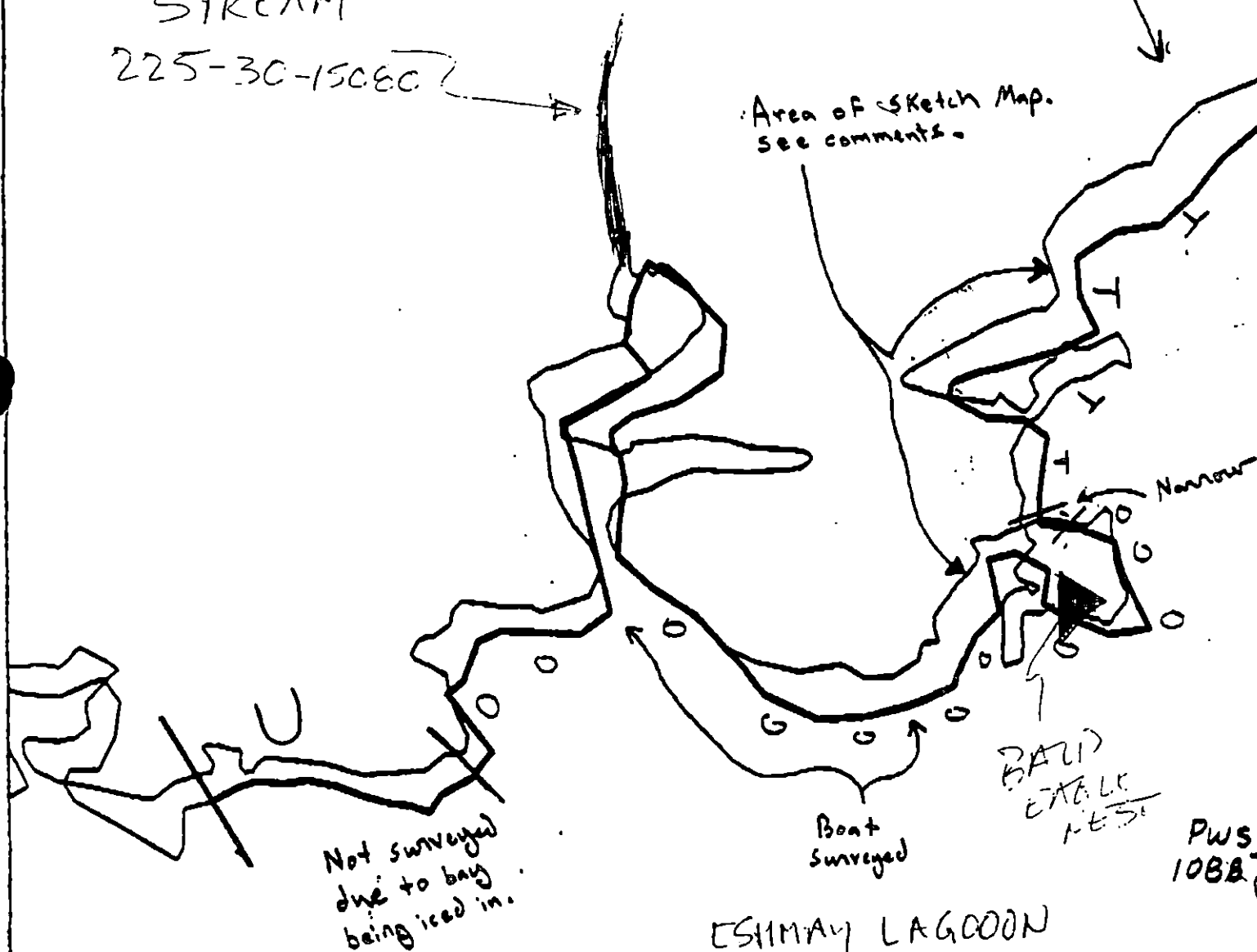
E

See note on
area of very light oil:
Pg. C.

ANADROMOUS
STREAM

225-30-15000

Area of Sketch Map.
See comments.



PWS
108A

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EB-13 (Pg D)

ADEC Segment Length: 4960m



METERS



Map Key: PWS-108a

Name: B. Bengtson

Date: 4/24/90

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EB-13 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

NO CONSTRAINT. ADF&G catalogued stream (225-30-15080) is more than 100m from work area.

1E Main Bay Hatchery Release

No constraint to manual pickup.

5T Bald Eagle Nest

NO CONSTRAINT. USFWS bald eagle impact assessment completed on 5/22/90 by Mike Lockhart indicates no active nests within 400m of the work area.

OTHER ECOLOGICAL CONSIDERATIONS

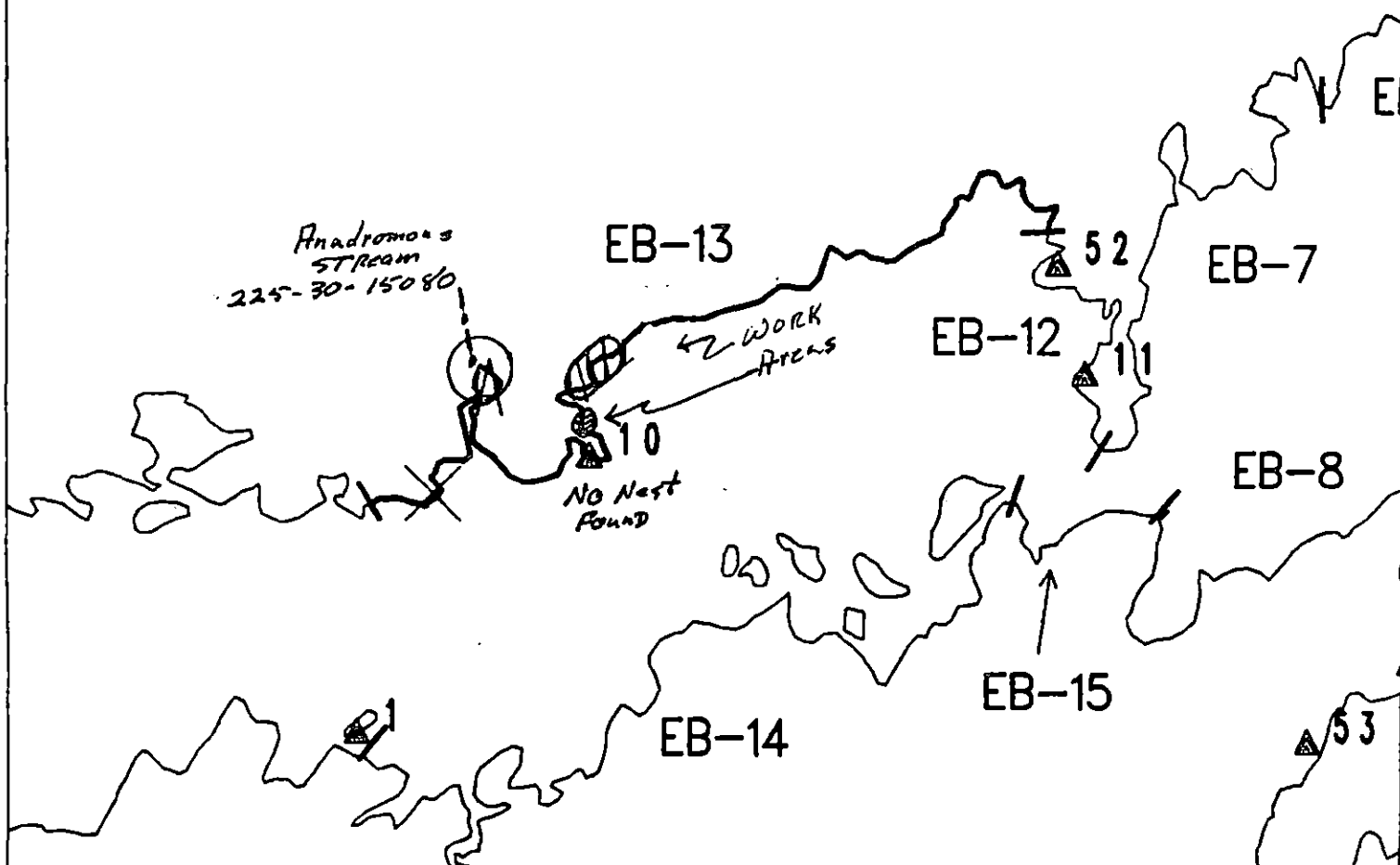
Avoid any unnecessary disturbance or damage to uncollected biota and substrate.

TAG APPROVAL DATE 5/29/90
ADEC Art Weiner
EXXON Art Weiner
NOAA B. Wescott
USCG G.A. Reiter

FOSC [Signature] Date 7/29/90

Prepared by Anders Meyer Date 5/20/90

Incorporates information from
USFWS Bald Eagle 5/22/90.

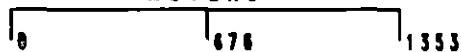


Exxon Company, USA
Map Key: PMS-EB-13
May 11, 1990



ECOLOGY MAP ^{5/28}
SEGMENT EB-13
SUBDIVISION *A* (1 of 1)

METERS



Seabird Colony



Eagle Nest

1 inch = 2219 feet

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EB-15 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

NO CONSTRAINT. The stream in this subdivision is not an ADF&G catalogued anadromous stream.

1E Main Bay Hatchery Release

No constraint to manual pickup.

5T Bald Eagle Nest

NO CONSTRAINT. USFWS Bald Eagle Survey was completed on 5/22/90 by Mike Lockhart. The work areas are outside the buffer zone established by USFWS.

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 5/29/90.

ADEC Art Weiner Art Weiner

EXXON ANDY TATE

NOAA B. Wescott B. Wescott

USCG G.A. Heiter G.A. Heiter

FOSC

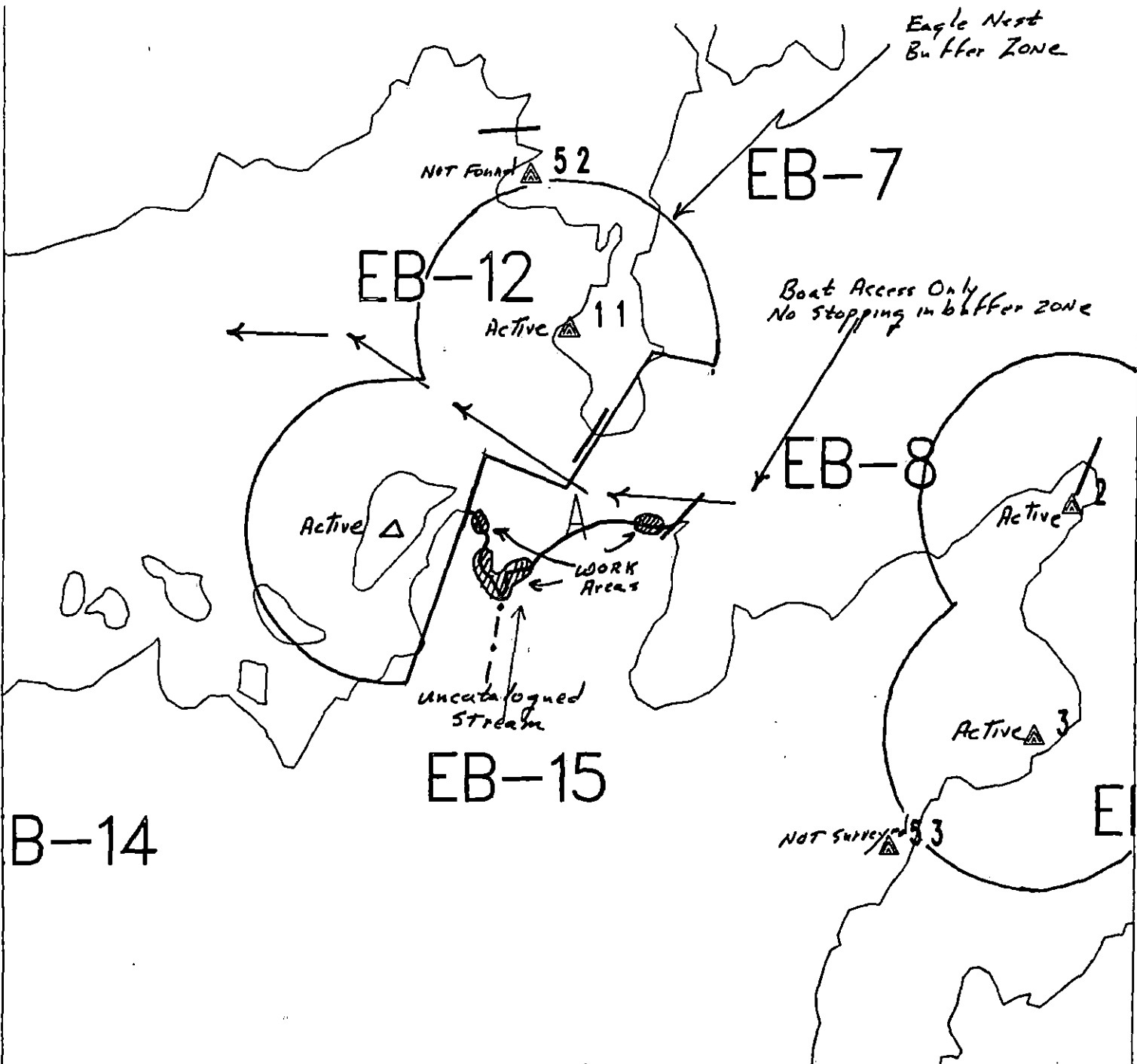
DATE

Prepared By: Anders Meyer WTS

Date

5/28/90

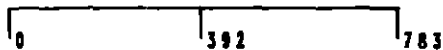
Incorporates information from
USFWS Bald Eagle survey 5/22/90



Exxon Company, USA
Map Key: PWS-EB-15
May 11, 1990



ECOLOGY MAP 5/28
SEGMENT EB-15
SUBDIVISION A (1 of 1)
METERS



- ★ Seabird Colony
- △ Eagle Nest

1 inch = 1285 feet

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EI-1 SUBDIVISION A (1 of 1)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,B	Salmon Stream	ADF&G catalogued anadromous stream (242-10-10210) is in Subdivision A. No constraint to manual pickup and tarmat removal.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Avoid any unnecessary disturbance or damage to unloiled biota and substrate.

FOSC

R. Zanochi

Date

7/3/90

Prepared by

Roy R. Coulter

Date

7-3-90

EI-01

ANAD
STREAM
242-10-102.0

WORK
AREAS

ECOLOGY MAP
SEGMENT EI-1

SUBDIVISION A (1 of 1)

METERS

★	Seabird Colony
▲	Active Eagle Nest
△	Inactive Eagle Nest

Exxon Company, USA
Map Key: KEN-EI-1



ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ EI-001 STREAM NO: 242-10-10270 DATE 4/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-1 All bald eagle nests (3/1 to 6/1)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Stream is located within subdivision A (1 of 1). No additional ecological constraints.

SHPO SIGNATURE: Rachel Jan One DATE: 5/22/90

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

COMMENTS: Recommend manual removal of tarballs and oiled vegetation.
Work from 6/2 to 7/10 with approval of USFWS regarding eagle nest.

TAG COMMENTS: NO ~~TA~~ WORK TO BE CONDUCTED WITHIN THE STREAM
CHANNEL PRIOR TO JUNE 1

TAG APPROVAL DATE: 5/18/90

ADEC Art Weiner Art Weiner

EXXON Andy Blair Andy Blair

NOAA Gary Petras Gary Petras

USCG G.A. REITER G.A. Reiter

FOSC: [Signature] DATE: MAY 25 1990

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 uniled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 3P** Harbor seal and sea lion pupping (5/15 to 7/1)
3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R** Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S** Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom Roth 267-2206
- 5T** All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 6U** Recreation: Tent sites (6/1 to 9/15)
6V Anchorages (6/1 to 9/15)
6W Forest Service cabins (6/1 to 9/15)
6X Lodge (6/1 to 9/15)
6Y Special use destination
- 7Z** Subsistence area: Salmon harvesting (5/1 to 9/30)
7HH Finfish harvesting
7II Deer harvesting (8/15 to 2/28)
7JJ Invertebrate harvesting
 Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
 AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EX-001 SUBDIVISION: 242-10-10270 DATE 29 APR 90 ^{ASC #}

SCG
NAME Kerwin L. Dreher SIGNATURE K. L. Dreher

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

Type A manual removal

~~ADEC~~ → ADF&G
NAME LEE GLENN SIGNATURE Lee Glenn

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS Type A - manual removal

1. Clean oil from sandy streamline on both sides of stream.
2. Manually remove mosses from the bottom of the stream.
3. Clean oil from rocky/cobble shoreline on both sides of the stream and lake including beneath vegetation overhang.
4. Prior to work contact Lee Glenn so A.D.F.&G. can place

an observer on site. The attached A.D.F.&G. assessment completed on 4-18-90 has not changed since.

~~LAND MANAGER~~ → NONE 4-29-90 ADF&G survey
NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

SHORELINE OILING SUMMARY (ANAD)

REVISED NO. 2

OG CAL LARSON USCG DREHER, CWE SEGMENT ST/ E. L. OI
 BIO KEN CRITCHLOW LAND REP STREAM 2A2-10-112.01 OF 1
 EXXON DARRELL YOGES ADFG LEE GLEN TIME 12:00 TO 1:00
 TEAM NO. 14 TIDE LEVEL -2.2 FT DATE 4/29/90
 EST. SUBDIVISION LENGTH: 220 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo
 SURFACE SEDIMENTS: R 5 % B 5 % C 5 % P 5 % G 5 % S 50 % M 20 % V 5
 SLOPE: Long 100 % Hang 5 % Vert 5 % WAVE EXPOSURE: ☒ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 5 m M 5 m N 214 m VL 6 m NO 5

SURFACE OIL

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

PAVEMENT H F S 5 sq. m by 5PATTIES / TARBALLS 4 B.1

NEAR SHORE SHEEN? NO BR RW (SL) T

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

Did you COLL
DEBRIS
☐ YES ☒ NO

TYPE 5#BAGS 5

Photographs:

Roll No. 5Frames 5

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 SUBSURF. SEDIMENT
		OP	OR	OL	OF	NO		UO	UC	1	2	3	4	5	SU	U	M	V			
1	22					✓	•								✓					N	SP/SPR
							•														
							•														
							•														
							•														
							•														
							•														

COMMENTS SMALL FLEETS OF SHEEN WERE NOTED IN LARGE MUD NEXT TO - A
 IN STREAM BED IN MARKED AREA ON SKETCH 11112.
 BROKEN BAN OF TARRY OIL CUMUL ALONG GRASS/UPPER TIDAL BANK
 DEAD GRASS HIDING OIL UNDERNEATH.

REVIEWED 7/10DATE 5/3/90

OG CAI - ARSOL

SEGMENT SITE 101

STREAM 242-10-10270

DATE 4/29/90

CHECKLIST

- ☐ N Across
- ☐ Approx. Scale
- ☐ Ego/Sab Binky
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HMT/LM
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PI Location(s)
- ☐ Profile Location(s)

LEGEND

1 Δ

PI - No Substrate Oil

2 Δ

PI - Substrate Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

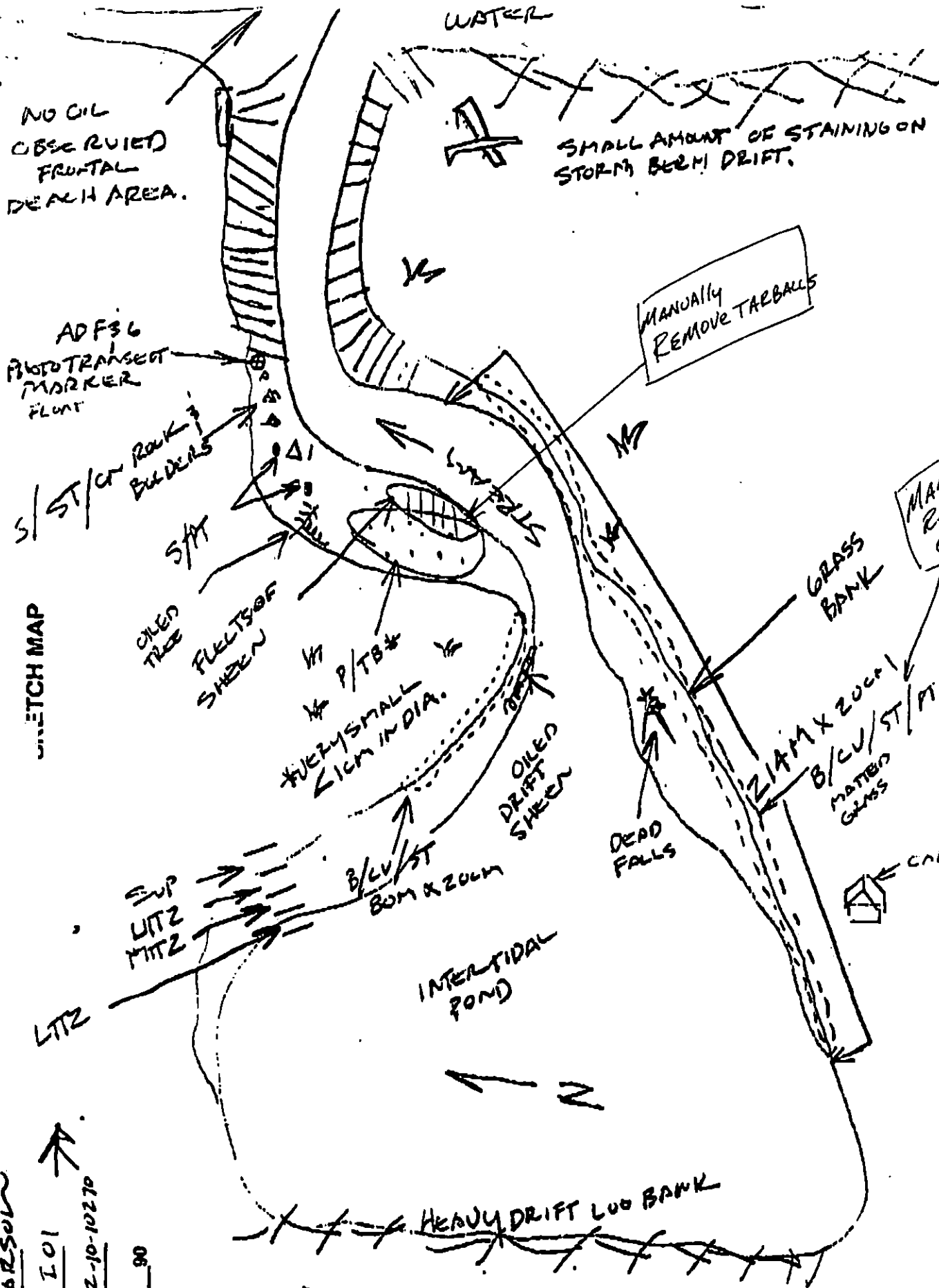
Spotted Distribution

RRR

Dead Vegetation

1 ●

Photo location, direction, and number



Character Length (m): AP PO CV/LB CT ST 147 MS PT 25 TB 25 FL NO

DATE 4, 29, 80

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Off Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. Hgt/Lng.
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

1 
 P1 - No Subsurface Oil
 2 
 P1 - Subsurface Oil

CT/C
Continuous Distribution

CT/D
Discrete Distribution

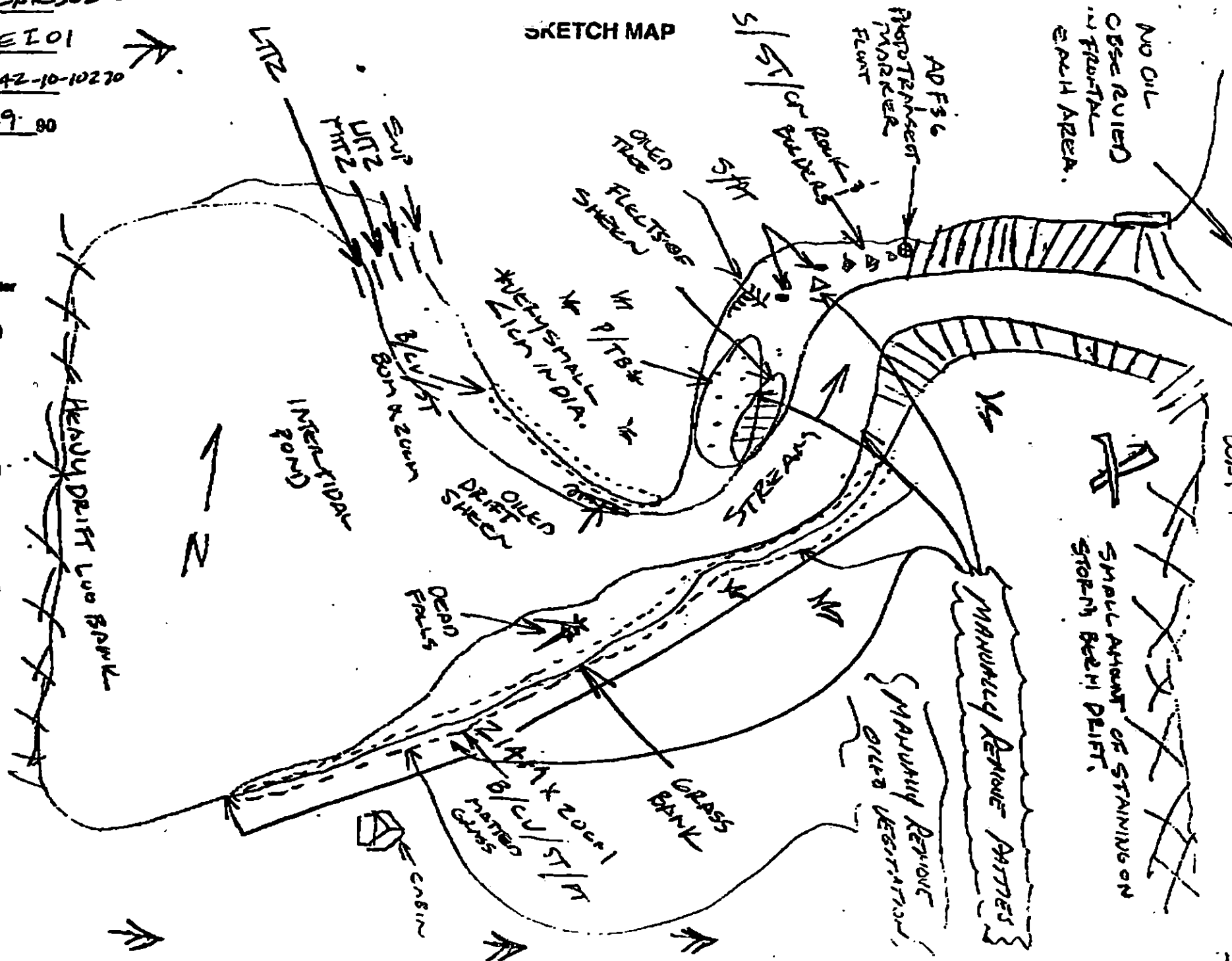
CT/P
Peachy Distribution

CT/3
Specialized Distribution

see
Med Vegetation

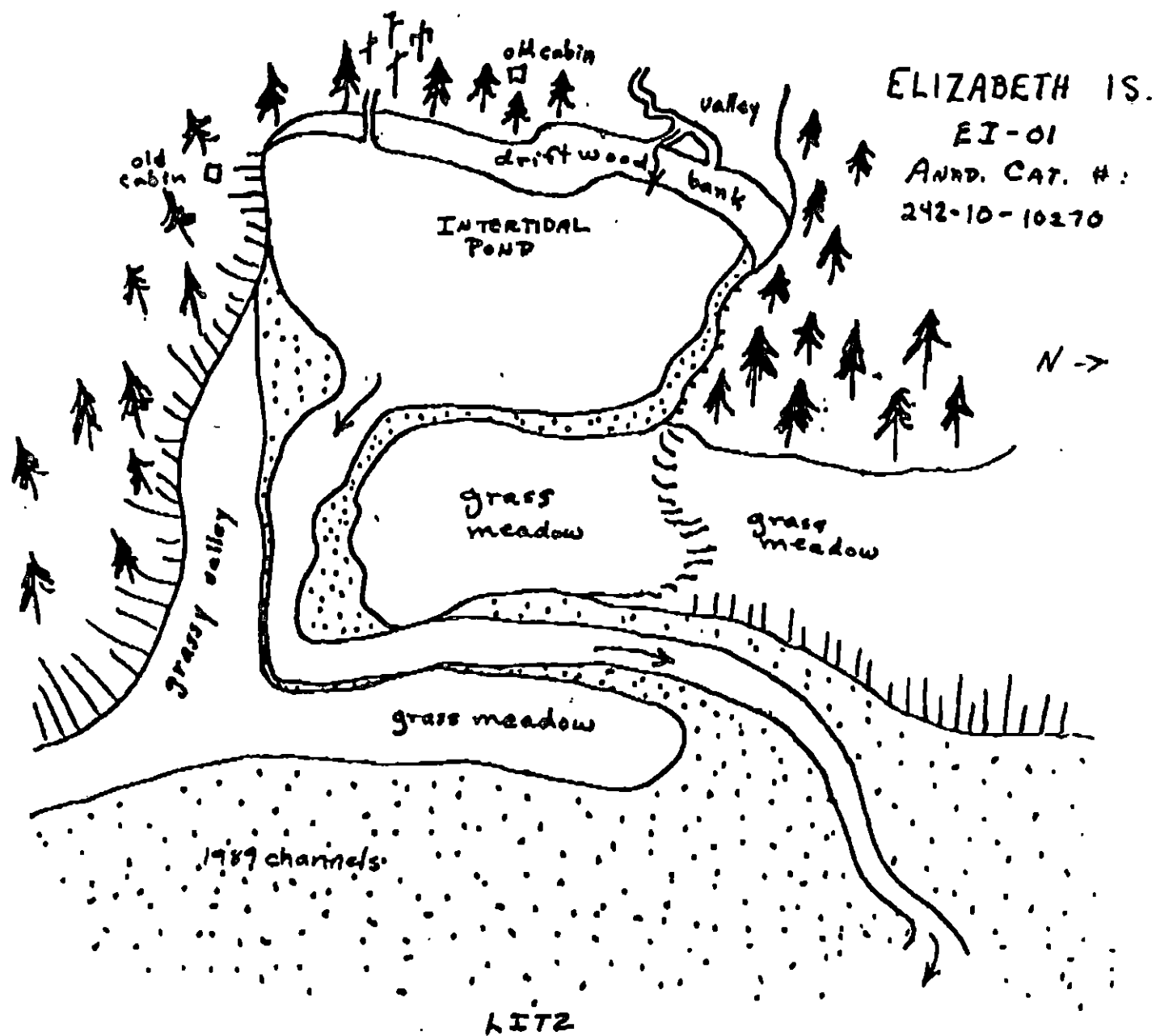
1. **help location, direction, and number**

SKETCH MAP



Character Length (m): AP _____ PO _____ CV 148 CT _____ ST 147 MS _____ PT 25 TB 25 FL _____ NO _____

PRE VERSION 10/24/04



Group A

11/20/90

Pre-screening

ADF&G MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: BS SR DS TS AVS SCHM HHS PTA

2 REGION: PWS KP, CI K, AP

METHOD: Aerial Ground Boat

Seldovia Tides

3 DATE: 4-18-90

15 HIGH TIDE TIMES: 0820

21 TEAM RECORDER: Doug Hill

4 START TIME: 1333

16 HIGH TIDE HTS: 13.1

22 OBSERVERS: Sue McDONNELL

5 STOP TIME: 1428

17 LOW TIDE TIMES: 1457

23 AGENCY: ADF&G

6 SEGMENT #: EI-1

18 LOW TIDE HTS: 3.9

24 PHOTOS TAKEN: 0

7 STATION #:

19 TIDE HT AT SURVEY: Low

Roll # DDH-101 From: 1819, 20

8 K-UNIT:

Ebb Slack Flood Slack

25 VIDEO TAKEN: Y N TAPE:

9 STAT AREA: 242-10

20 USCG QUAD: Seldovia A-5

Starts: Ends:

10 LAT: 59° 09' 1

11 LONG: W 151° 44' 6

26 SAMPLES TAKEN: Y N Number

12 SOURCE: Map Loren

011 DDH/LRA-4/4/90

13 LOCATION: Elizabeth Island AFS# 242-10-10276

Sediment

14 DESCRIPTION:

Biological

EXTENT OF OIL

Water

	SHORELINE				STREAM			
	L	W	H	S	L	W	H	S
27 SURFACE COVERAGE								
28 SURFACE THICKNESS								
29 PENETRATION								

35 CATALOGED ANAD. FISH SPECIES? Y N

37 CATALOG #: 242-10-10276

38 STREAM NAME: Eliz. Is. Stream

39 OIL IN STREAM BED? Y N

40 OIL ON STREAM BANKS? Y N

30 OVERALL OIL IMPACT: N VL L M H

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

31 OIL TYPE: Pooled Mouse Tar Asphalt Sticky Stain

42 OIL WITHIN 1 MILE OF STREAM? Y N

32 OILED DEBRIS? Y N

Where: At head of Lagoon

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

43 ANADROMOUS FISH PRESENT? Y N

34 WAVE EXPOSURE: High Moderate Low

44 ANADROMOUS FISH OBSERVATION
Species Aerial Ground

35 SUBSTRATE TYPE: Bedrock Boulder Cobble
Gravel 10% Sand 90% Mud/silt

Species	Aerial	Ground

COMMENTS: Observed less oil on this trip than was observed on 4/3/90. Bulk of
mud and sand cemented by oil found throughout outlet stream. Oil coverings
still exist on banks of stream above beach. A few tar patties in lake.
Morphology of outlet stream changed significantly over winter - but bank is now on
the south shore. No sign of a subsurface band of oil visible where stream cuts the
beach.

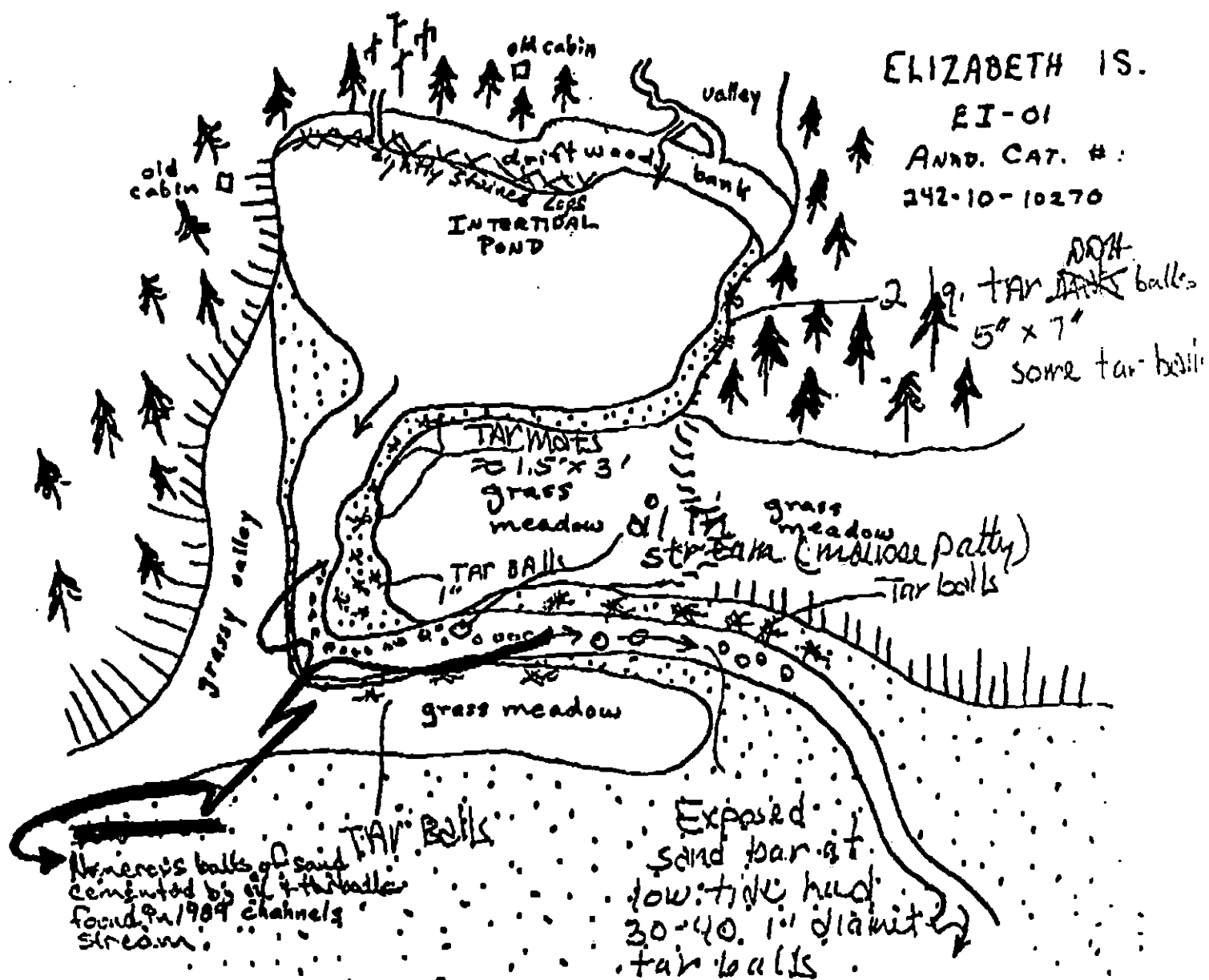
FRAME(S)

DESCRIPTION

18, 19, 20

Depositing of debris in morphology of stream
outlet in 1990 vs 1981. Cut bank is on S.W. bank.

46 OIL DISTRIBUTION DIAGRAM



- Sample taken
- Photo frame # and shot direction.

10/2/90

Seg ID: EI-001 Subdiv: 242-10-10270
Survey Date: 4/29/90
Comments by: Ken Critchlow

The portion of the stream that was surveyed was upstream of the storm berm of the beach. Oil was observed mainly at the edge of the UITZ and overhanging dead grass in the STZ along the left or west side of the stream. This oil was in the form of stain and patties; a few tarballs were also seen in this area. On the opposite side of the stream numerous very small tarballs were observed partially buried in fine sediments on the bank and on bars in the channel.

I recommend that oil on the left bank be removed by shovel. This may necessitate trimming dead overhanging grass to clearly observe and remove oil. Tarballs in the sediments could be removed by shovel; the upper surface of the sediment can be raked to uncover tarballs for removal.

KR Critchlow

ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 242-10-10270

SEGMENT EI-1 SUBDIVISION A

WORK WINDOW	
Manual Pickup	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 (224-10-10270) is in Subdivision A. No constraint to manual pickup.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

SEE SUBDIVISION CONSTRAINT ADDENDUM EI-1A
FOR ADDITIONAL CONSTRAINT INFORMATION.

FOSC

[Signature]

Date

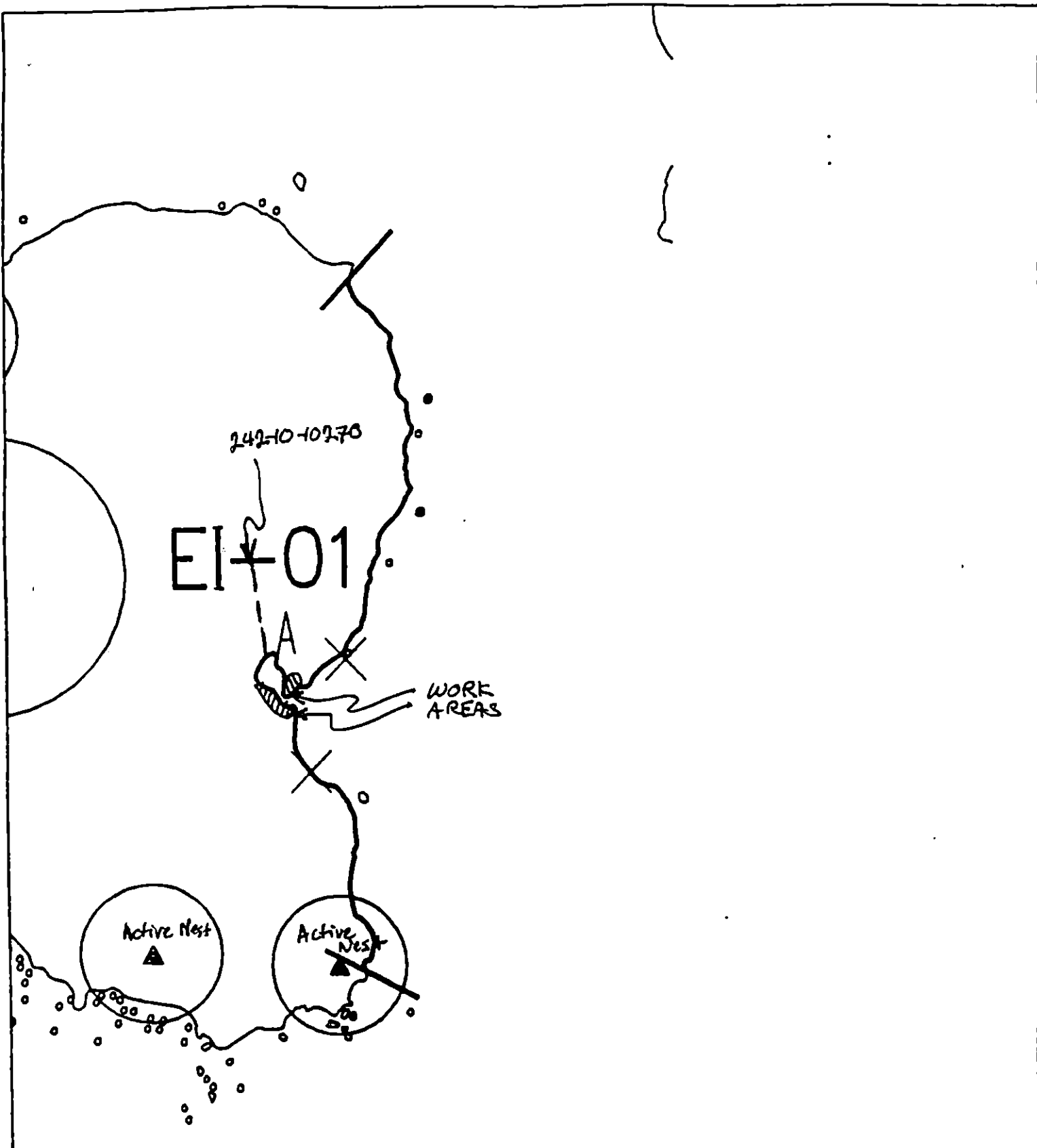
6/16/90

Prepared by

[Signature]

Date

6/14/90



ECOLOGY MAP SEGMENT EI-1

CURRICULUM A / 1.1.1.1



Seabird Colony



Active Nest

SHORELINE EVALUATION

SEGMENT ST/ EL-10 SUBDIVISION A (1 OF 1) DATE 4/6/90

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: M. S. H. M. DATE: 4/20/20

OILING CATEGORIZATION:

Wide 114 m: Medium 120 m: Narrow 0 m: V.Light 95 m: No Oil 114 m
Subsurface Oil Observed: Yes X No Maximum Depth 45+ 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) manual removal of tarmat, 2) manual pick up of pooled oil, 3) bioremediation of surface and sub-surface oil in areas shown on attached sketch map. Work should be conducted before 8/15 due to deer harvesting constraints.

SPOT WASH AS REQUIRED. MANUAL TILLING/RANKING OF SURFACE TO ACCESS
SUBSURFACE OILING CONDITIONS IN AREA INDICATED ON SKETCH

TAG COMMENTS: _____

TAG APPROVAL DATE: 4/20/90.

ADEC Art Wein Mr. Weiner

EXXON Amity East Refined

NOAA Burt Wescott Burt Wescott

USCG KENNETH KEANE

FOSC: 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.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EL-10SUBDIVISION: ADATE 1/8/90

USCG

NAME CMDR J. H. MASONSIGNATURE [Signature]☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

1. Areas near pit 8 and west (near fuel site) are recommended for manual removal and bioremediation.
2. Other area in segment do not warrant treatment w/ to weather, not efficient for clean-up, low human use.
3. Some pooling of oil at end of segment, needs to be manually removed.

ADEC

NAME D. VinkSIGNATURE GREG WINTER☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

WEST SIDE OF ELOVO HAS BROKEN BARS OF POOLED OIL AND SATURATED SURFACE SEDIMENT THAT SHOULD BE REMOVED AND ROCKS WIRED. THE BEACH NEAR THE FUEL DEPOT HAS A LAYER OF OIL THAT OCCURS JUST BENEATH THE SURFACE AND ANOTHER LAYER OR 15-25 CM THE OIL OCCURS ABOVE AND WITHIN A WELL MIXED HARDPAN. WHILE I RECOMMEND TREATMENT, ~~I DO NOT RECOMMEND TREATMENT~~ I WILL LEAVE THE TECHNIQUE OPEN AND LET A STAG TEAM DECIDE. LOW LYING ROCKY AREA EAST OF ELOVO CONTAINS SURFACE MUDS BETWEEN BOULDERS. THIS SHOULD BE REMOVED. THE BEACH EAST OF FUEL DEPOT BEACH CONTAINS A LAYER OF SUBSURFACE OIL AT A DEPTH OF 12 CM. TILLING TO EXPOSE THE OIL FOLLOWED BY BIOREMEDIATION MAY BE AN OPTION.

LAND MANAGER

NAME Mike BennettSIGNATURE Mike Bennett

ADDR

☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

EL-10 treatment suggested on pocket beach adjacent to fuel site on entire pocket. Recommend manual pickup followed by bioremediation. Also suggest same treatment for ~~area between~~ area between pocket beach near fuel site to the boulder / cobble area lying up to 50 meters east of pit no. 9. The oiling in the remainder of the segment was minimal & weathered and could cause more harm than good to treat. Area uses consist of low impact human use, spawning, den hunting & marine mammal / seabird presence. Recommend manual removal of pooled oil on 10x12 metr. area on western end of segment.

SECTION NO. 62-0000

SURFACE OIL

Frames 8-36.

COMMENTS

Priority 1

- This segment still contains appreciable oil which occurs along most of the shoreline but is concentrated along the Northwestern shoreline or pools betw. boulders and cobbles, as soft pavement, and as subsurface oil.
- Along the pebble-cobble beach, non-related debris was found in the supratidal zone.
- The beach at the Northwestern end of the segment has been highly modified by a bulldozer in the construction of berm around the fuel containers. In much of this area a thin sand and pebble layer covers the surface oil. JW 4/12/90

SHORELINE OILING SUMMARY (PAGE 2 of 2)

REVISION 03/23/90

SEGMENT ST/ EL-10 SUBDIVISION A

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-ORG)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	VO	~~W~~	~~B~~	~~G~~	~~P~~	~~R~~	~~S~~	SU	U	M	L		
7	35					X	.													X	Sand / Peb / Cob
8	40					X	.										X				Green / Peb / Sn. Cob.
9	45		X				25 - 45	X				X	X					X			Sand / Peb / Green
10	35		X				15 - 20		X	X	X								X		Peb / Sand / Green
11	25		X				6 - 25	X		X								X			Peb / Sand / Cob / Green
12	30					X	surface		X	X							X				Green / Sand / Cob
13	25		X				6 - 10		X				X				X				Sand / Green / Peb.
							.														
							.														
							.														
							.														
							.														
							.														
							.														
							.														

COMMENTS

Pit #10 organic material (peat) and oil is mixed together at a depth of 15cm
 Pit #11 oil is concentrated betw 6-15 cm

REVIEWED

7W

DATE

4/12/90

OG FitzSEGMENT ST. -10SUBDIVISION ADATE 6-7 Apr 90

CHECKLIST

- ☐ Name
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWM/LWM
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
PR - No Subsurface Oil2 Δ
PR - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

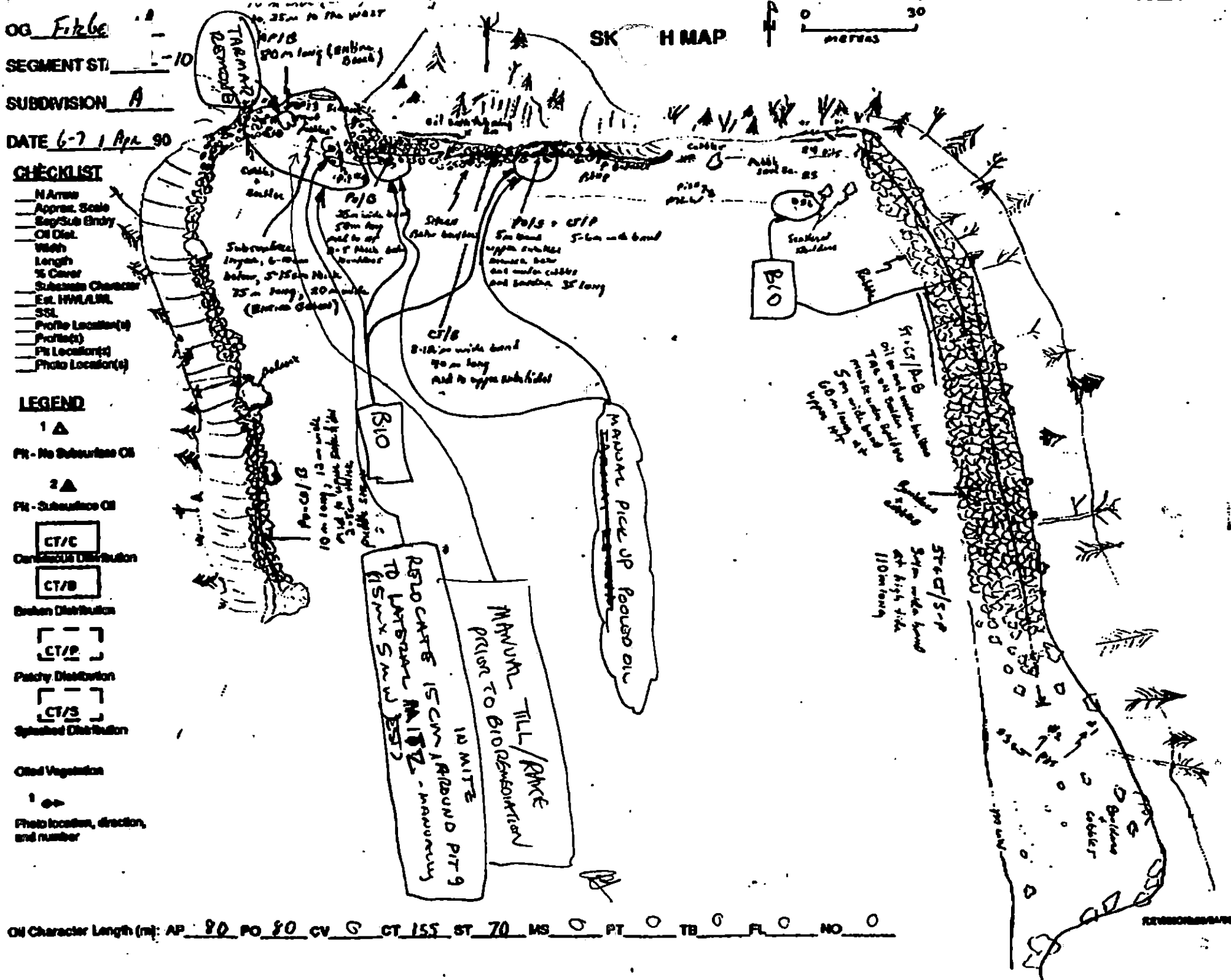
CT/S

Splashed Distribution

Cited Vegetation

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

SK H MAP

0 30
METERSOil Character Length (m): AP 80 PO 80 CV 0 CT 155 ST 70 MS 0 PT 0 TB 0 FL 0 NO 0

EL-10

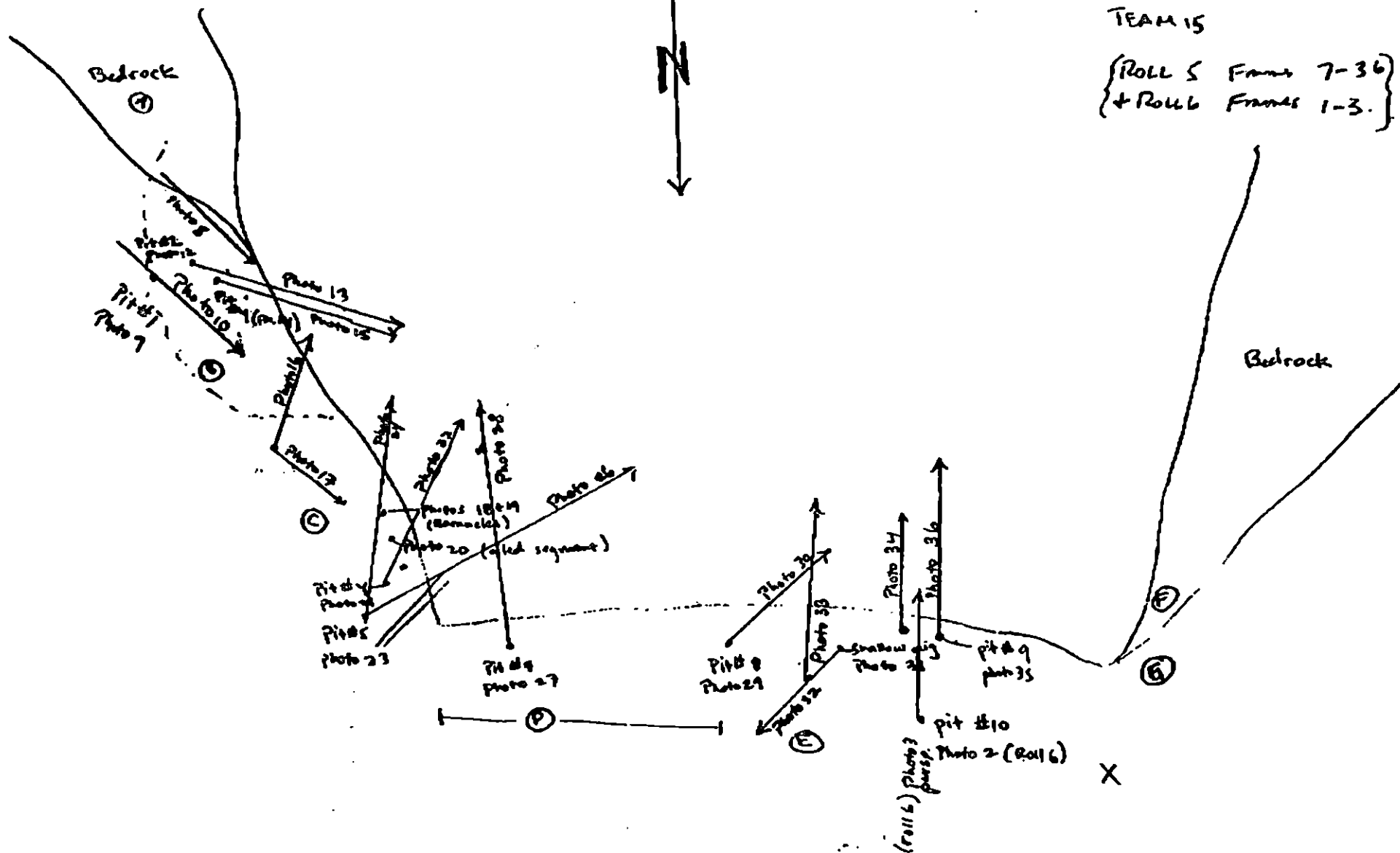
Roll 5 (1-36) and Roll 6 (1-3)

BIO-SKETCH

6 APRIL 1990

TEAM 15

{Roll 5 Frames 7-36}
+ Roll 6 Frames 1-3.}



SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/20/90

Segment ST / EL-10 Subdivision A Date (mo / day / yr) 4 / 6 / 90

Time (24 hr) 16:40 Biologist DANIEL RAIBER

(A) Substrate type and % of segments:
(1) Bedrock 10 (2) Boulder 45 (3) Cobble 20 (4) Pebble 15 (5) Sand 10 (6) Silt

(B) Overall % cover of biota (% of segment): Dense 30 Moderate 25 Low 45
UP TO NONE

(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. 5

Frames 8-36

BARNACLES

↓ Roll 26

Frames 1-3

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

ITROPODS

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:

- Bald eagle (smelled by helicopter). This area has a great deal of air traffic which surely will affect the relatively very sensitive area which contains a marsh/ lagoon area which serves as a great source of food for animals. Air traffic also means foot traffic and

Ecological Considerations:

landing of helo's in sensitive (typically flat) areas.

Priority 3

6Y - Special Use Designation

7II - Deer Harvesting

SECTION A DEFINED BY ATTACHED MAP

EL-10

6 APRIL 1990

TEAM 15

BIOLOGICAL COMMENTS

(A)

- Bedrock w/ dense *Littorina scutulata*
- *Saxidomus giganteus* in MITZ (clim)
- dense green filamentous algae & fucus in UITZ
- dense barnacle spot on Bedrock in UITZ at Southern end of Segment
- dense ulva + red algae in Mid-MITZ
- *Pycnopodia helianthoides* (2 found) on Bedrock at Southern end in Upper Mid-Intertidal Zone
- Dense barnacle, red (spaghetti-like algae) from fresh stream in U.I.T.Z
- Signs of profuse dead Barnacles in UITZ

(B)

Fresh water course feeding into Upper + Upper MITZ

- dense red algae
- dense barnacles (adult)
- moderately dense fucus in Mid + Upper Mid Intertidal Zone; sparse fucus in UITZ
- *Littorina scutulata*; moderate in Mid-MITZ
- Barnacles (adult/juvenile) dense in UITZ on boulders

(C) - Many dead barnacles in UITZ on boulders which are coated in oil

- Much live red algae as in "A"
- moderate barnacles in UITZ
- evidence of dead adult barnacles in UITZ
 - dense colonies dead, not necessarily where oil coat is heaviest

④ Cont.

- Tree covered in oil - profuse dead barnacles + some still alive covered in Oil; mostly dead where oil is located
- dense *Mytilus edulis* colony (adult / juvenile + spat) on underside of oiled log.
- moderate recruitment of barnacles in VITZ
- dense adult/juv. barnacles in Upper MITZ

⑤ Sandy - pebble beach

- dug 30 cm; no clams found, but no sign of clam shells on beach
- dead sparse barnacles in upper VITZ; bedrock
- dense barnacles / *Mytilus edulis* (adult / juv.) in VITZ on bedrock

⑥ Cobble boulder beach

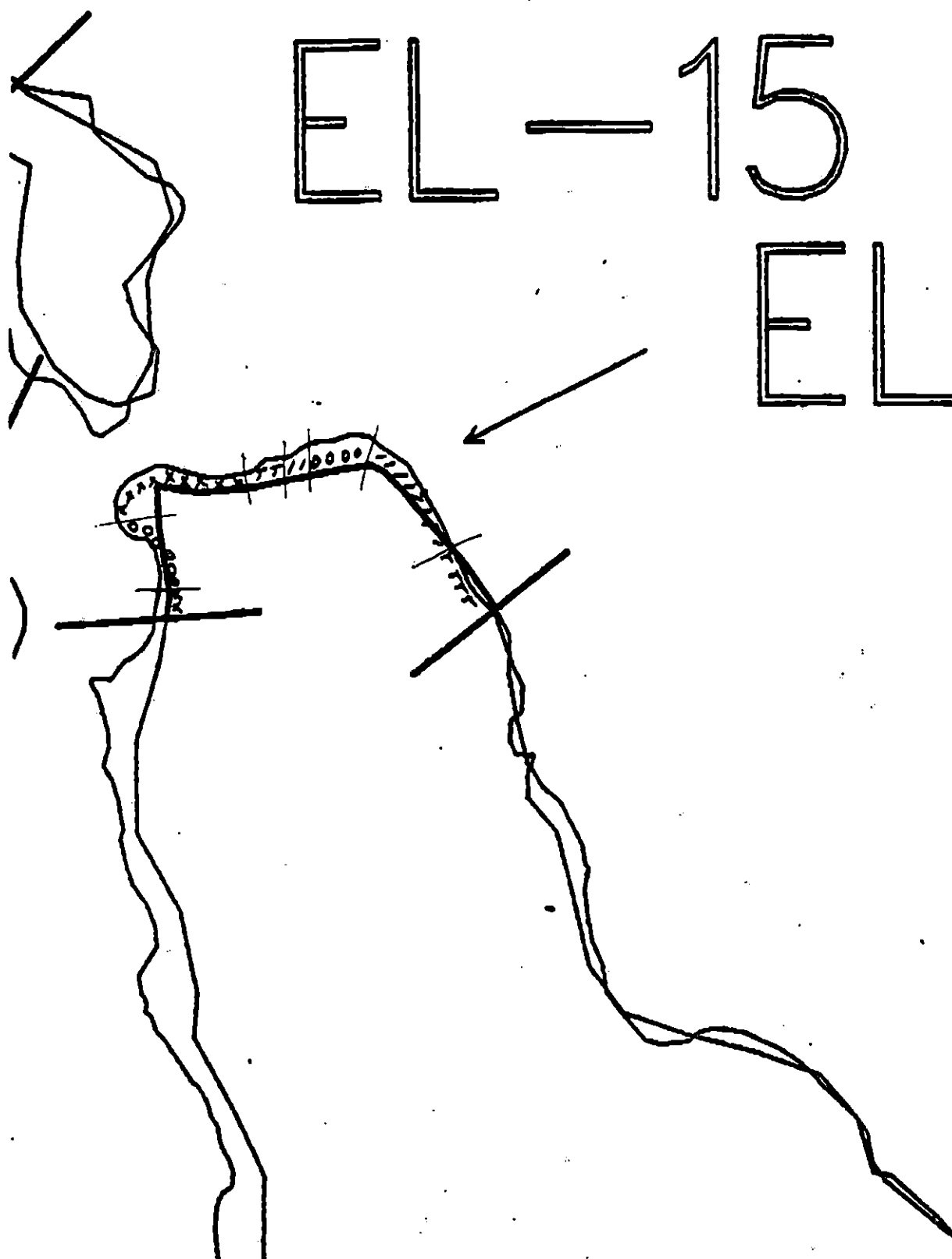
- moderate fucus + red algae in MITZ
- moderate fucus + red algae in L.I.TZ

⑦ Red rock with moderate fucus (adult / juv. + spat)

- profuse red algae
- many dead "volcano" barnacles on bed in UZTZ; oiled
- Dense barnacles on bedrock
 - " $\frac{1}{2}$ dead + covered w/ oil
- Crab; *Chionoecetes barndi* in LITZ

⑧ - *Katharina tunicata* + Eel Blenny

- Many starfish (Genus? - 5 legged + Quarter-size) in MITZ and UZTZ



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

EL-10

ADEC Segment Length: 10478m

0 100 200 300

Map Key: PWS-491c

Name: D. Fitzgerald

Date: 6 Apr 1990

SHORELINE EVALUATION

SEGMENT ST/ EL-11 SUBDIVISION A (1 OF 1) DATE 4/7/90

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: 4/28/90

OILING CATEGORIZATION:

Wide 0 m: Medium 232 m: Narrow 126 m: V.Light 44 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 80+ cm

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X Manual Pickup

X Bioremediation

X Tarmat: X Removal

X Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

X Spot Washing: X Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommended treatment includes 1) manual tarmat removal, 2) manual pick up of pooled oil, oiled debris, 3) manual relocation of storm berm to MITZ using hand tools and snare boom to control sheen in area shown on attached sketch map, 4) bioremediation of surface and subsurface oil in areas shown on attached sketch map. Work should be conducted before 8/15 due to deer harvesting constraints.

TAG COMMENTS: SPOT WASH AS REQUIRED IN AREA OF POOLED OIL

TAG APPROVAL DATE: 4/26

ADEC John Bauer

EXXON Andy

NOAA Gary Peterson

USCG Kevin

FOSC: ML

DATE: 5-9-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

USCG

NAME WOE J. McMath SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

1. There are three areas for treatment:
 - a) pooled oil at northern end of segment.
 - b) pooled oil at jet #10 area
 - c) pooled oil at southern end of segment.
- d) also oily debris is moderate (see notes)
2. recommend let a, b & c be bioremediation and debris be manually removed
3. All other areas do not warrant clean-up, weathered oil in most areas.

ADEC

NAME GREG WINTER SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

GRAVEL REMOVAL/WASH AND REPLACE IS RECOMMENDED FOR THE TWO NORTHEAST BEACHES. THE POOLED OIL, COVER, AND ASPHALT SHOULD BE MANUALLY REMOVED W/ BOULDERS W/ TURNED OVER AND WIPED. THERE IS ALOT OF OILED DEBRIS VISIBLE ON THE TWO NORTHEAST BEACHES - THIS SHOULD BE REMOVED. WORK CREWS SHOULD BE ESPECIALLY CAREFUL AROUND OF THE TIDAL FLAT THAT IS IN FRONT OF THE SOUTHERN BEACH

LAND MANAGER

NAME Mike Bennett SIGNATURE [Signature]

ADNR

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Concur with USCG treatment recommendation as above for manual removal and bioremediation. Note that this is a priority segment with presence of marine mammals, waterfowl & eagles. Human use appears to be minimal with no campsites noted, although beaches are generally mixtures of cobble, pebbles & boulders. No active nest sites for eagles referenced but noted a pairs presence in the area.

SHORELINE OILING SUMMARY

REVISION NO. 002899

OGD Fitzgerald USCG J. McMahon SEGMENT ST/ EL-11
 BIO D. Rader LAND REP M. Bennett SUBDIVISION A
 EXXON S. Nouman ADEC 6. Winters TIME 16:55 to 19:00
 TEAM NO.: 415 TIDE LEVEL: 10 to 20 m DATE Apr 17 / 1990
 EST. SUBDIVISION LENGTH: 573 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☐ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Halo WORKING DIRECTION: Southwest to northeast
 SURFACE SEDIMENTS: R 10 % B 30 % C 40 % P 10 % G 5 % S 5 % M 0 % V 0 %
 SLOPE: Long 10 % Hang 60 % Vert 30 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 24 m M 165 m N 75 m VL 145 m NO 94 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	E	R	R	R	1	2	3	4	SU	U	M	U
ASPHALT PAVEMENT			X					X		X		
POOLED		X	X		X		X		X	X		
COVER			X		X				X			
COAT		X	X		X				X	X		
STAIN			X		X				X			
MOUSSE												
PATTIES												
TARBALLS												
FILM				X	X		X			X	X	
NO OIL									X			V

PAVEMENT: H (F) 15 sq. m by 3 or

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 0

Photographs:

Roll No. 7

Frames 1-7

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			1	2	3	4	5	SU	U	M	U		
1	25		X				5-25	X	X		X						X		Cob / Peb / Boulder
2	25					X	.									X			Cob / Peb / Grn
3	35				X		5-35	X		X				X					Peb / Cob / Grn
4	20				X		5-20	X	X		X			X					Cob / Peb
5	80		X				5-80	X			X			X					Peb / Grn / Cob
6	25					X	.								X				Peb / Cob / Grn

COMMENTS

Priority 1

- This segment is oiled along most of its length and subsurface oil was found at the first pocket beach at the southwest end.
- Most of the cobbles, boulders and bedrock are stained or coated with oil (patchy coverage) along the upper high tide zone with greater concentrations occurring as pools behind boulders and in crevices of bedrock, as asphalt pavement and as small caverns.
- Pit #4 had oil residue on upper pebbles, Pit #5 oil concentrated at 30cm
- Much of the exposed oil under snow

ADEC
60

JRH 16 Apr 90

SEGMENT ST/ EL-11 SUBDIVISION 17

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		UO	DO	~~1~~	~~2~~	~~3~~	~~4~~	~~5~~	~~6~~	SU	U	W	L		
7	20					X	.												X		Red Green Cbk
8	25	X					5-15	X				X/2							X		Red/Green
9	30	X					7-15	X				X						X			Red/Cbk/Sand
10	40	X					5-8	X				X					X				Red/Cbk./Green/Sand
							.														
							.														
							.														
							.														
							.														
							.														
							.														
							.														
							.														
							.														
							.														
							.														

COMMENTS

ADEC
(w)

REVIEWED

JRH

DATE

16 Apr 90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 09/22/88

Segment ST/EL-11 Subdivision A Date (mo/day/yr) 4/7/90

Time (24 hr) 15:15 Biologist DANIEL RAISER

(A) Substrate type and % of segments:
(1) Bedrock 10 (2) Boulder 30 (3) Cobble 40 (4) Pebble 15 (5) Sand 5 (6) Silt

(B) Overall % cover of biota (% of segment): Dense 15 Moderate 10 Low 75

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

Photographs:
Roll No. 7

Frames 1-7

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:

- Eagle (started by helicopter, 2)

Ecological Considerations: PRIORITY 3

- 6Y 6/1 - 7/15 Special Use Designation

- 7II 8/15 - 3/1 Deer Harvesting

EL-11, 7 APRIL

TEAM 15

PH-COMMENTS

DANIEL RARDEN

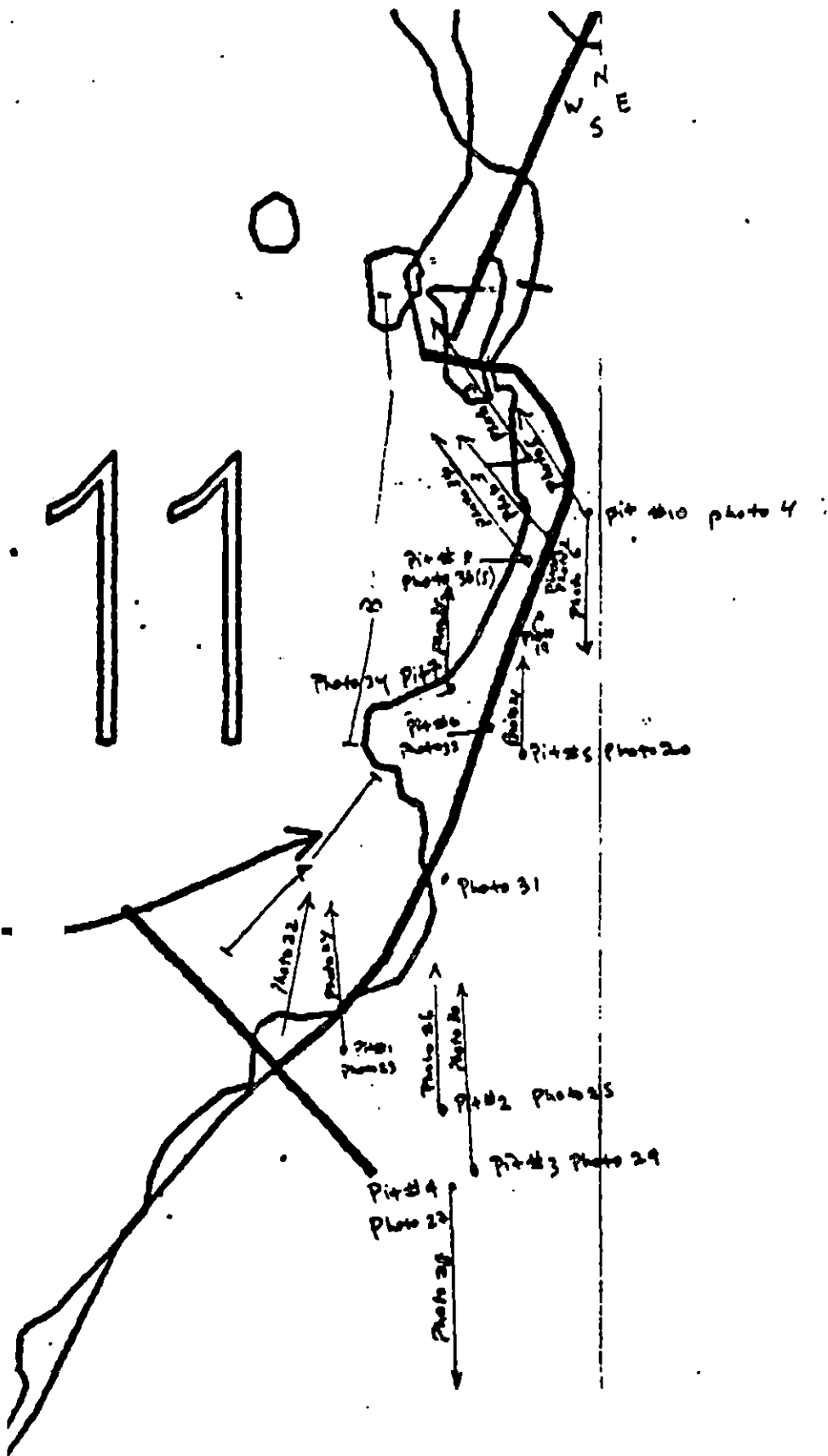
A) - DENSE RED ALGAE ON BEDROCK

- DENSE GREEN FILAMENTOUS ALGAE IN U.I.T.2 AND M.I.2 ON CORALS / REEFS & Boulders
- MUCH GREEN FILAMENTOUS ALGAE IN OILED AREA
- SPARSE BARNACLES U.I.T.2 ON Boulders, ALTHOUGH COVERED WITH OIL
- PORTRIPID

B) - DENSE RED & GREEN ALGAE ON BEDROCK IN LOWER M.I.T.2

- DENSE MYTILUS BOWLES IN U.I.T.2 ON BEDROCK, ALIVE THOUGH COVERED WITH OIL
- EVIDENCE OF MUCH DEAD BARNACLES IN U.I.T.2, ALTHOUGH NOT COVERED IN OIL.
- MOSS (DANISO) ON BEDROCK ABOVE U.I.T.2

EL-11, 7 APRIL 1990
 DANIEL RABO
 BIOLOGY SKETCH



03 Fitch

SEGMENT ST/ EL-11

SUBDIVISION A

DATE Apr 17 90

CHECKLIST

- ☐ M Area
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HPA/LASAL
- ☐ SBL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PB Location(s)
- ☐ Photo Location(s)

LEGEND

▲
PB - In Substrate Oil

▲
PB - Substrate Oil

CT/C
Continuous Distribution

CT/D
Broken Distribution

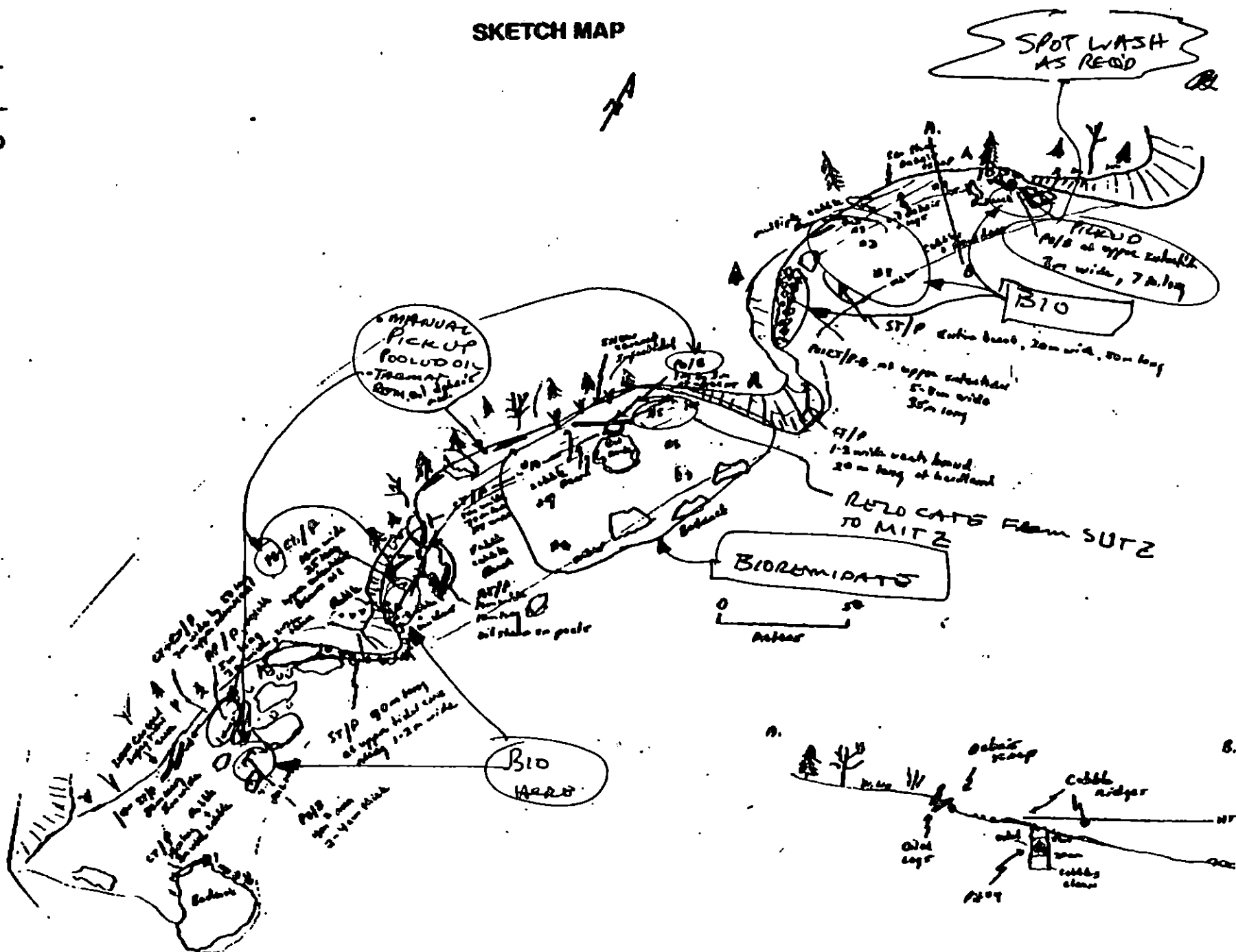
CT/P
Patchy Distribution

CT/S
Splotched Distribution

Old Vegetation

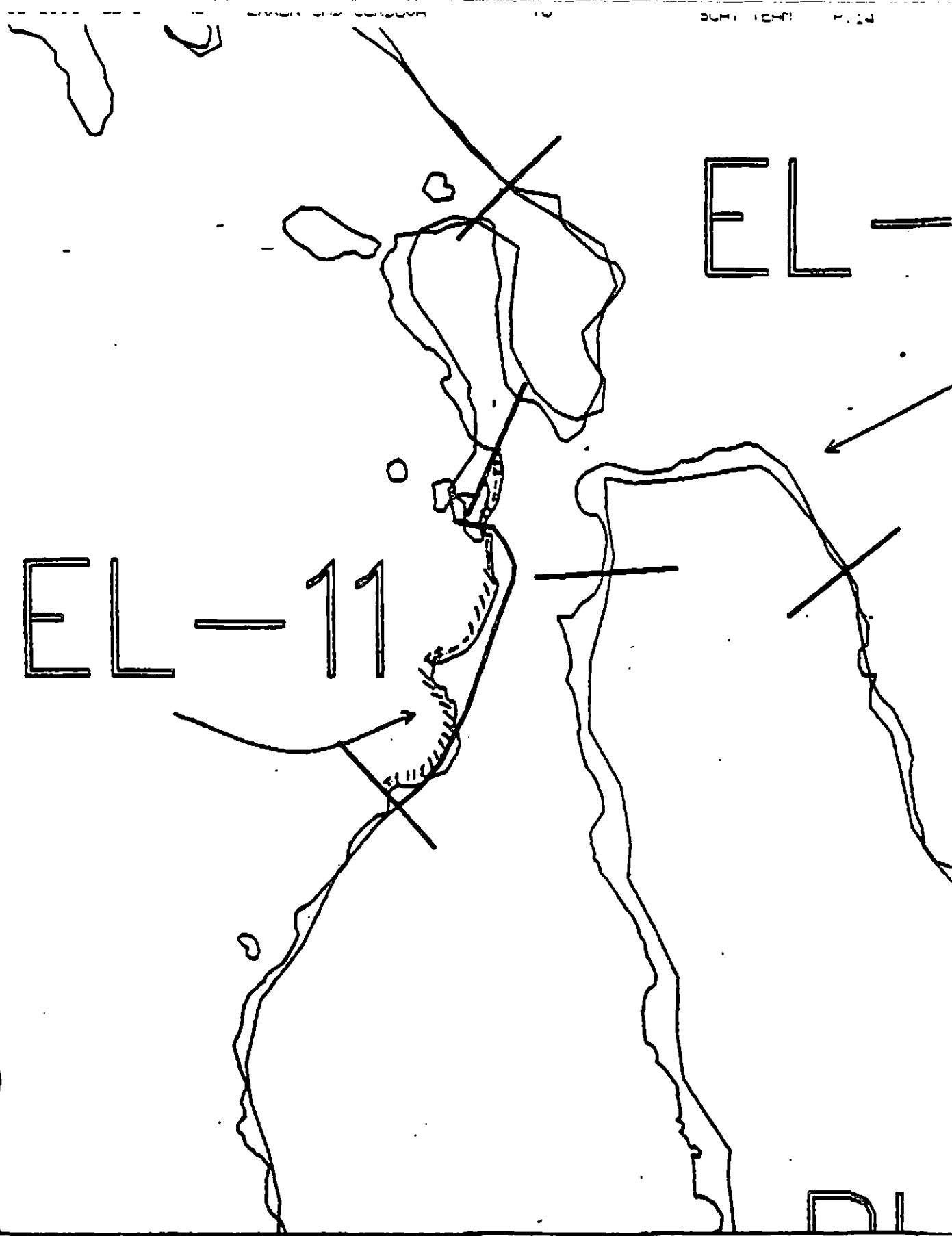
●
Photo location, direction, and number

SKETCH MAP



Oil Character Length (m): AP 5 PO 44 CV 25 CT 90 ST 290 MS PT TB FL NO 59

REC
REVISED



ADEC

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

EL-11

ADEC Segment Length: 402m



Map Key: PWS-130

Name: Fitzgerald

Date: 7 Apr 1990

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-11 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup
Tarmat Removal

OPEN

Bioremediation
Spot Washing
Manual Relocation
Other Approved treatment

WORK PRIOR TO 8/15

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

7II Subsistence: Deer Harvesting

Closed to bioremediation, spot washing, manual relocation and other approved treatment after 8/15. No constraint to manual pickup and tarmat removal.

5T Bald Eagle Nests

NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

Date

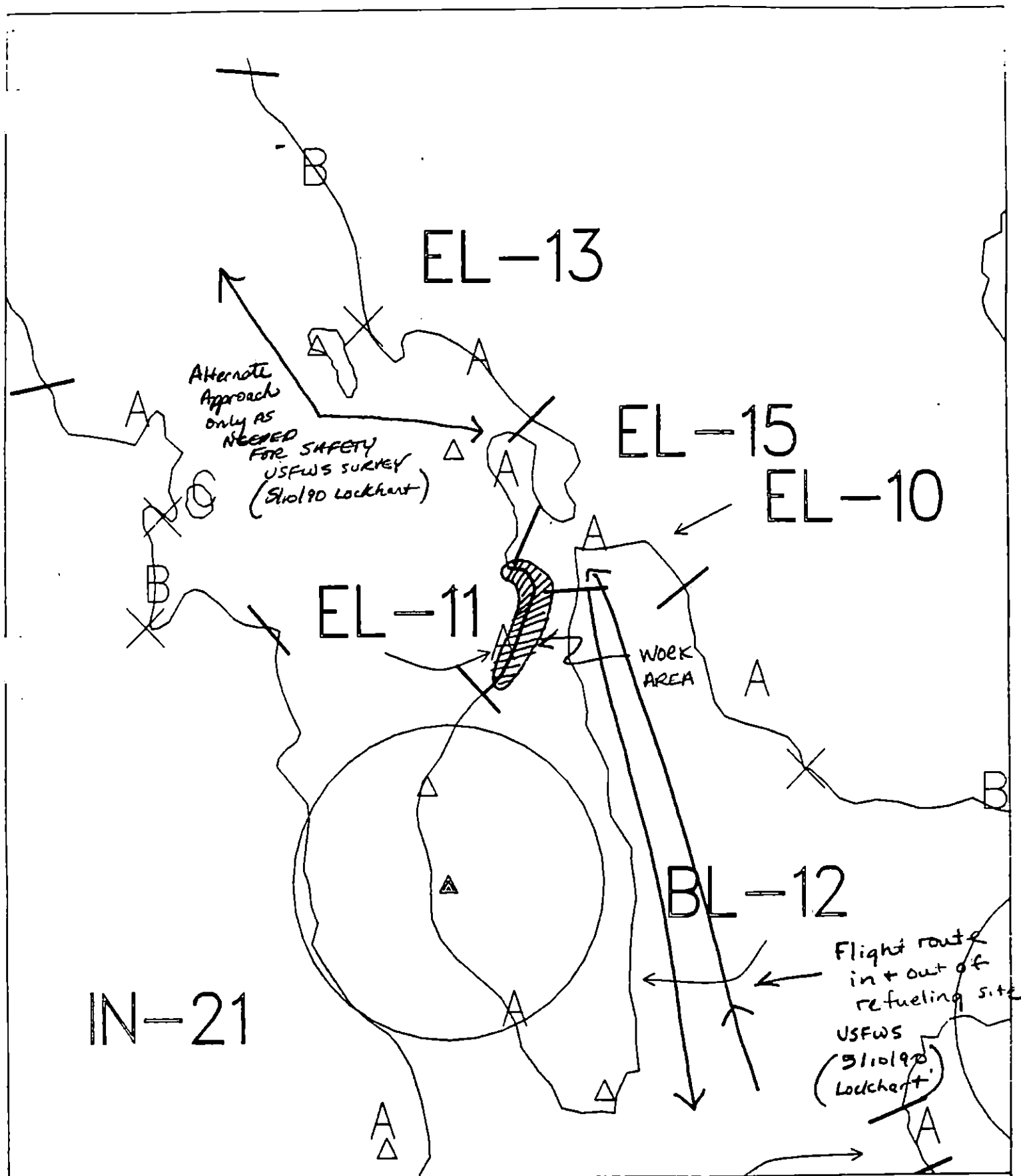
6-10-90

Prepared by

W. Kellen

Date

6/9/90



Exxon Company, USA

Map Key: PWS-EL-11

ECOLOGY MAP

SEGMENT EL-11

SUBDIVISION A (1 of 1)

METERS

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

SHORELINE EVALUATION

SEGMENT ST/ EL-13 SUBDIVISION A (1 OF 2) DATE 4/8/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6U Recreation: Tent sites (6/1 to 9/15)
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. 2 eagle nests on small islands just offshore of Subdivision (see map). Do not damage mussel bed. Small stream shown on sketch is not identified as an anadromous fish stream.

SHPO SIGNATURE: Lucie Dan Dan DATE: 5/25/90

OILING CATEGORIZATION:

Wide 0 m: Medium 23 m: Narrow 0 m: V.Light 604 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 15 cm

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u>X</u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u>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: Recommended treatment includes 1) manual removal of tarmat and pooled oil, 2) bioremediation of area shown on attached sketch map. Treatment should be conducted in such a way as to avoid treatment or damage to mussel bed. Work should be conducted after 6/1 and with approval of USFWS due to eagle nest constraint.

TAG COMMENTS: Avoid mussel beds

TAG APPROVAL DATE: 4/25/90
ADEC Art Weimer Dan Deen
EXXON Amey Katz Reed FOSC: My L DATE: 1-17-90
NOAA Joseph Talbott Fleming
USCG Kenneth Keane Amey Katz

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EL-13 SUBDIVISION: A DATE 9/8/90

USCG

NAME CWO2 J. Mc MAHON SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

1. THERE IS A GROWING CONFLICT WITH THE MUSSEL BED ON TO TREAT OR NOT.
2. AREA OF CONCERN IS WEST OF PIT 5 AND BETWEEN PIT 6.
3. TREATMENT OF THIS SENSITIVE AREA CAN BE DONE EITHER:
 - a) PROTECTING MUSSEL BED AND TREAT POLLUTED AREA (b.c.)
 - OR
 - b) LET THE TREATMENT HAPPEN - AREA LOOKS STRONG + HEALTHY.

ADEC

NAME GREG WINTER SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

REMOVE SMALL AREA OF BROKEN OIL COVER (MAP A).
ON MAP B SHOWS A TOMBOLA, VISIBLE @ LOW TIDE, THAT HAS A RICH MUSSEL BED ESP. ON WEST SIDE, THERE IS CONSIDERABLE SURFACE AND SUBSURFACE OIL IN THE FORM OF A FRIABLE ASPHALT. THIS OCCURS JUST BELOW THE SURFACE.
DUE TO THE SENSITIVITY AND DEGREE OF OILING - I RECOMMEND STAG AGW TEAM VISIT.

LAND MANAGER

NAME Mike Bennett SIGNATURE [Signature]
ADNR

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Treatment suggested on that portion of the saddle beach located on sketch map B that does not include the mussel bed. The existing bed should be protected - appears to be highly productive, and any treatment too close to the bed could cause more harm than good. If bioremediation can be used, its application should be selective ensuring a buffer between the bed. If bio would destroy the adjoining bed, then would recommend to perform no treatment i.e. harm vs. good. Saw marine mammals, w/ watchful + cages in immediate area.

SHORELINE OILING SUMMARY

REVISION NO. 007299

OG D. Fitzgerald USCG J. McMahon SEGMENT STI EL-13
 BIO D. Raiden LAND REP M. Barnett SUBDIVISION A
 EXXON S. Nauman ADEC G. Winter TIME 9:00 to 10:30
 TEAM NO.: B15 TIDE LEVEL: sp DATE Apr 18 / 80
 EST. SUBDIVISION LENGTH: 750 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 20 % G 5 % S 5 % M - % V - %
 SLOPE: Long 20 % Hang 60 % Vert 20 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 4 m M 48 m N 5 m VL 495 m NO 214 m
702 700 0

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	R	B	C	P	Gr	Gr	Gr	Gr	Gr	Gr	Gr	Gr	SU	M	M	U
ASPHALT PAVEMENT				X									X			
POOLED				X									X			
COVER	X	X			X								X			
COAT			X	X	X								X			
STAIN																
MOUSSE																
PATTIES																
TARBALLS				X	X								X			
FILM																
NO OIL													X		X	X

PAVEMENT: H (F) S 800 sq. m by 3 cm

PATTIES / TARBALLS < 1/4 bag BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE _____

#BAGS 0

Photographs:

Roll No. 7

Frames 16-37

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OF	OR	OL	OF	NO		DO	UC	Gr	Gr	Gr	Gr	Gr	Gr	Gr	Gr	SU	M	M	U		
1	20					X	.											X					Grav / Peb / Cob
2	25					X	.											X					Grav / Peb / Cob / Sand
3	25		X				5-7	X		X								X					Peb / Grav / Cob / Sand
4	25		X				5-7	X		X								X					Cob / Peb / Grav / Sand
5	25		X				5-15	X		X									X				Grav / Peb / Sand
6	40					X	.												X				Peb / Grav / Sand

COMMENTS

Priority 1.

- Most of the oiling of this beach occurs along the upper intertidal zone and consists of splashed coats and tar balls on boulders and beach.
- An exception to this trend is the asphalt pavement that occurs on the eastern portion of the beach area consisting of friable asphalt 2cm thick. Beneath the asphalt is sub-surface oil residue from 7-15cm.

GM 4/18/80

ADEC
 60

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/90

Segment ST / EL 13 Subdivision A Date (mo / day / yr) 4 / 8 / 90

Time (24 hr) 8:45 Biologist DANIEL BAIDEA

(A) Substrate type and % of segments:
(1) Bedrock 10 (2) Boulder 30 (3) Cobble 30 (4) Pebble 25 (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. 7

Frames 16-33

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:

- Dense coverage of vegetation around the lagoon leads it to be quite sensitive; there are sections with a great amount of oil, especially near those mytilus adults beds in upper eastern part of lagoon which should be cleaned up carefully. Larvae stages must be given to the public with caution for the lagoon and acting as a food source for the ocean side area just beyond the lagoon.

Ecological Considerations:

Priority 1

6U Tent Site 6/1 - 9/15

7II Deer Harvesting 8/15 - 3/1

1B Stream mouth spawning (salmon) 7/10 - 9/1

ADDC

OG Fitzgerald

SKETCH MAP A.

SEGMENT ST/ FL-13

SUBDIVISION A

DATE Apr 18 90

CHECKLIST

- ☐ M Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil 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

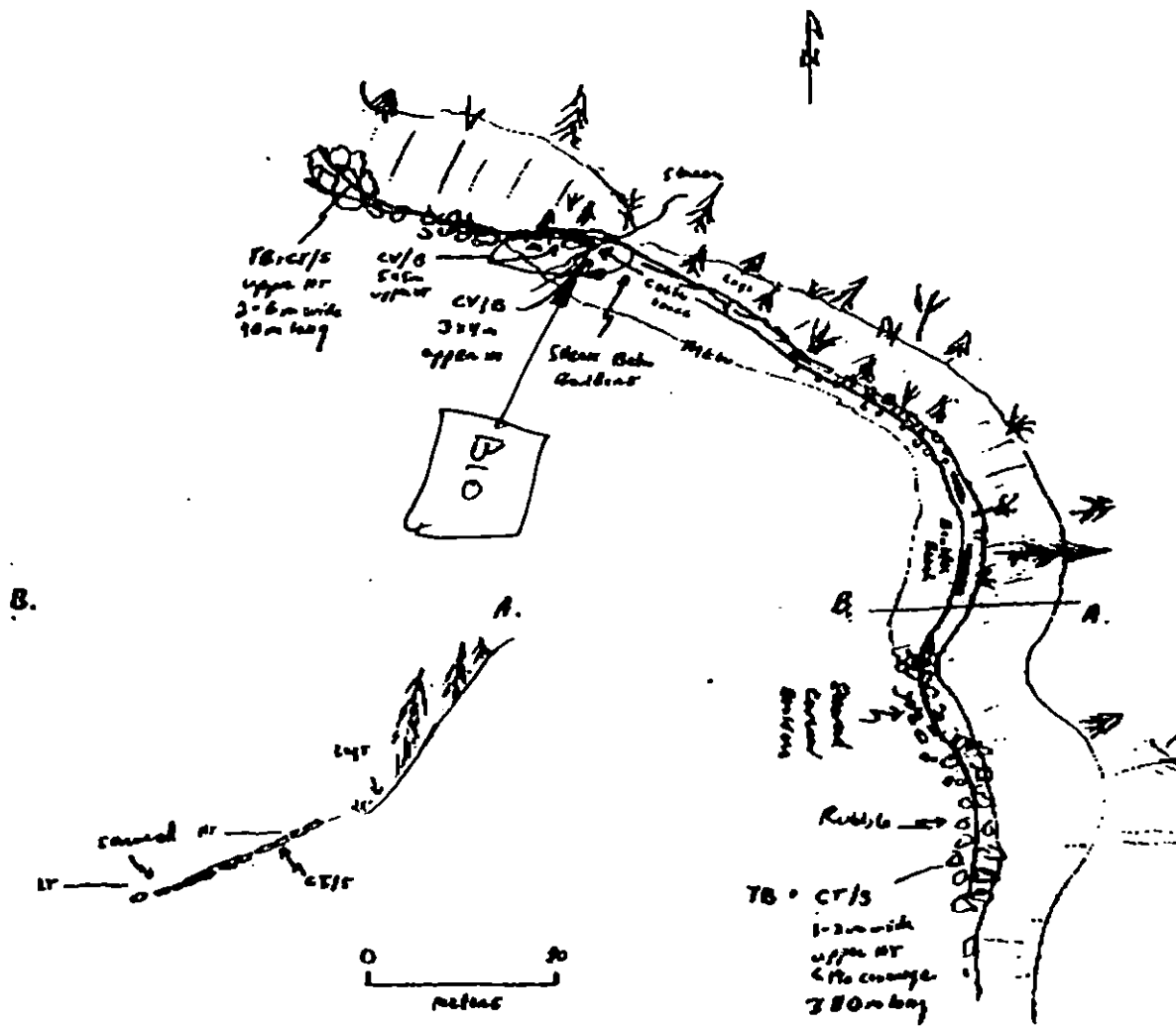
CT/S

Splashed Distribution

Cited Vegetation

1 →

Photo location, direction, and number



Oil Character Length (m): AP _____ PO _____ CV 8 CT 280 ST _____ MS _____ PT _____ TB 140 FL _____ NO 102

ADDC GW
REVISED 03/90

DATE APR 18 90

SKETCH MAP B.

CHECKLIST

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

LEGEND

1 Δ
Fig - No Subsurface Oil

2 ▲
PM - Subsurface Oil

CT/C
Confidential Distribution

CT/0
Broken Distribution

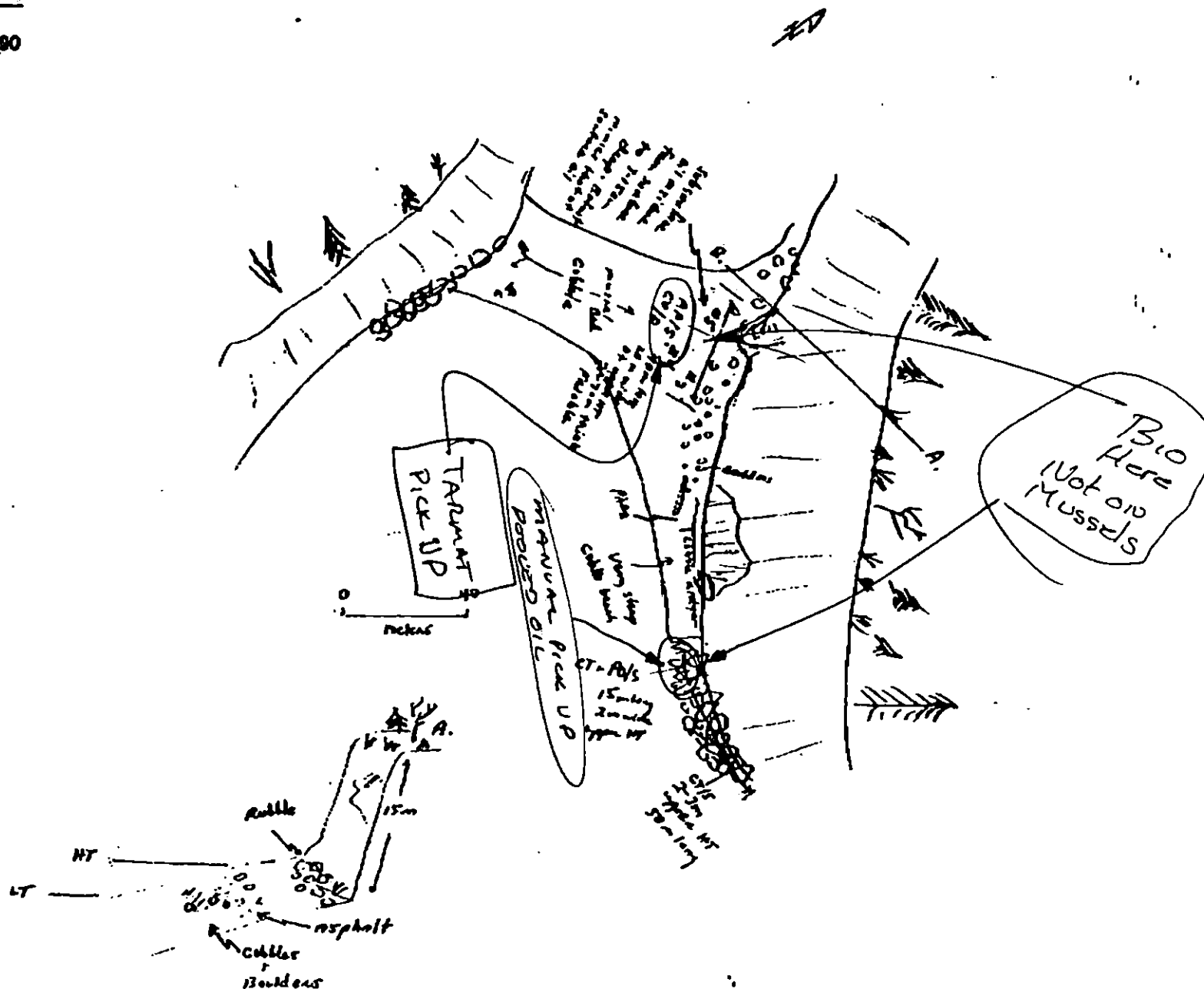
CT/P

Patchy Distribution

CT/S
Excluded Distribution

Cold Vegetables

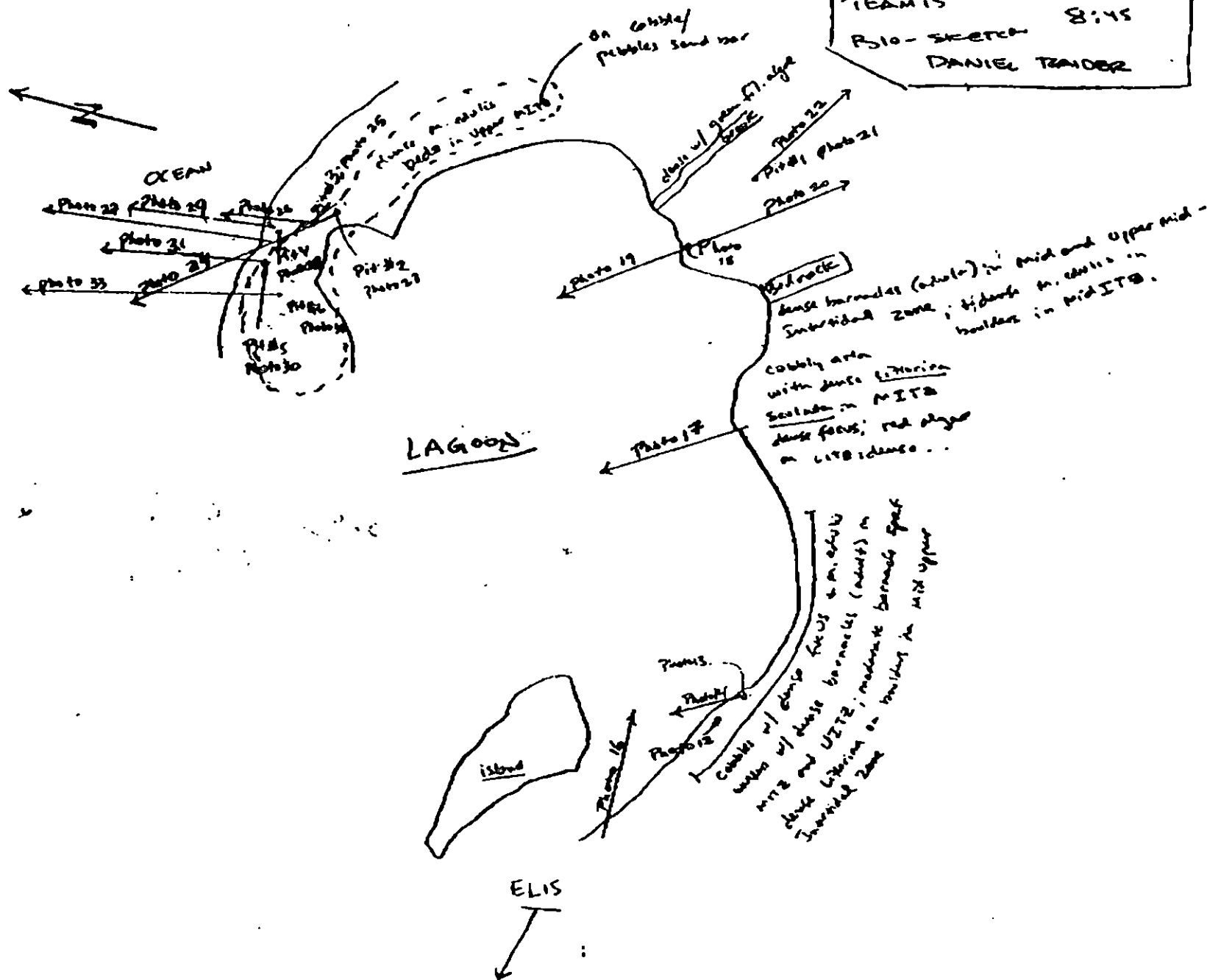
Photo location, direction,
and number



Oil Character Length (in): AP 30 PO 10 CV 10 CT 55 ST MS PT TB FL NO 15

Keywords: child sexual abuse; disclosure; help-seeking; mental health

DANIEL TRAUBER



ECOLOGY MAP

Eagle
- Nest
(SWR)

b

EL-13

Eagle
Nest
(545)

A

Eagle Nest
(SWS)

877
" 877A 90

XXXX Wide

//// Medium

----- Narrow

TTTT Very Light

0000 No 011

EL-13

ADEC Segment Length: 1359m



Map Key: PWS-132

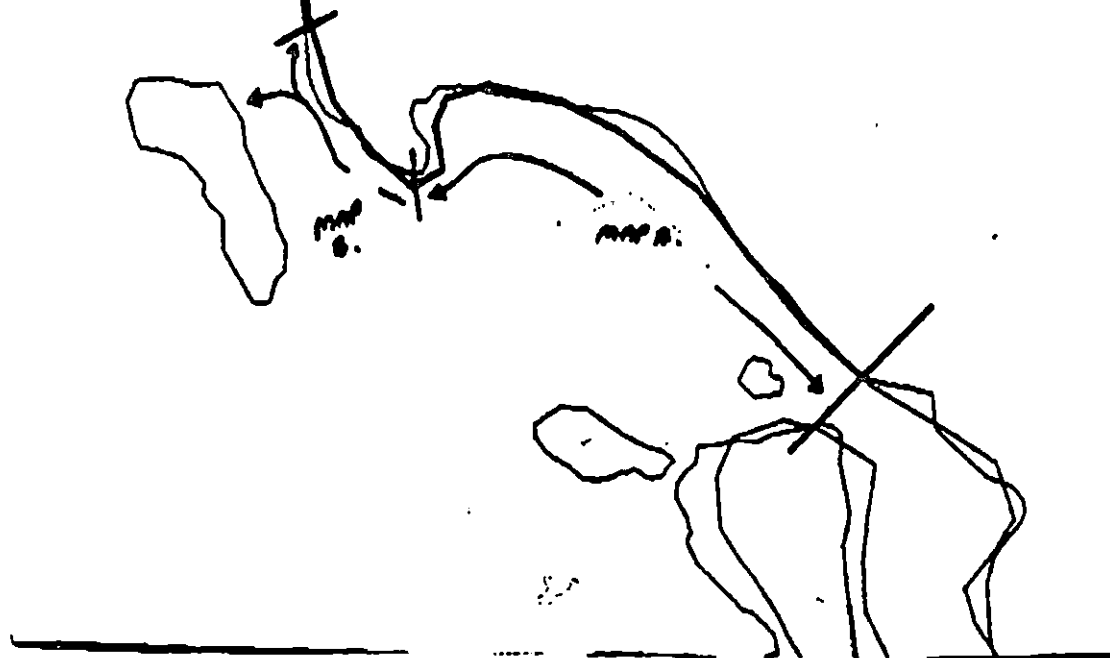
Name: Fitzgerald

Date: 8 Apr 1990

Data Entered:

MAP LOCATIONS FOR EL-13-A

EL-13



EL-13

ADEC Segment Length: 1359m



ADEL
62

EL-13

ADIC
GN

872
"BPA 90"

XXXX Wide

//// Medium

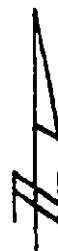
--- Narrow

TTTT Very Light

OOOO No Oil

EL-13

ADEC Segment Length: 1359m



Map Key: PWS-132

Name: FitzGerald

Date: 8 Apr 1990

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-13 SUBDIVISION A (1 of 2)

WORK WINDOW	
Manual Pickup Tarmat Removal	OPEN
Bioremediation	WORK PRIOR TO 8/15

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

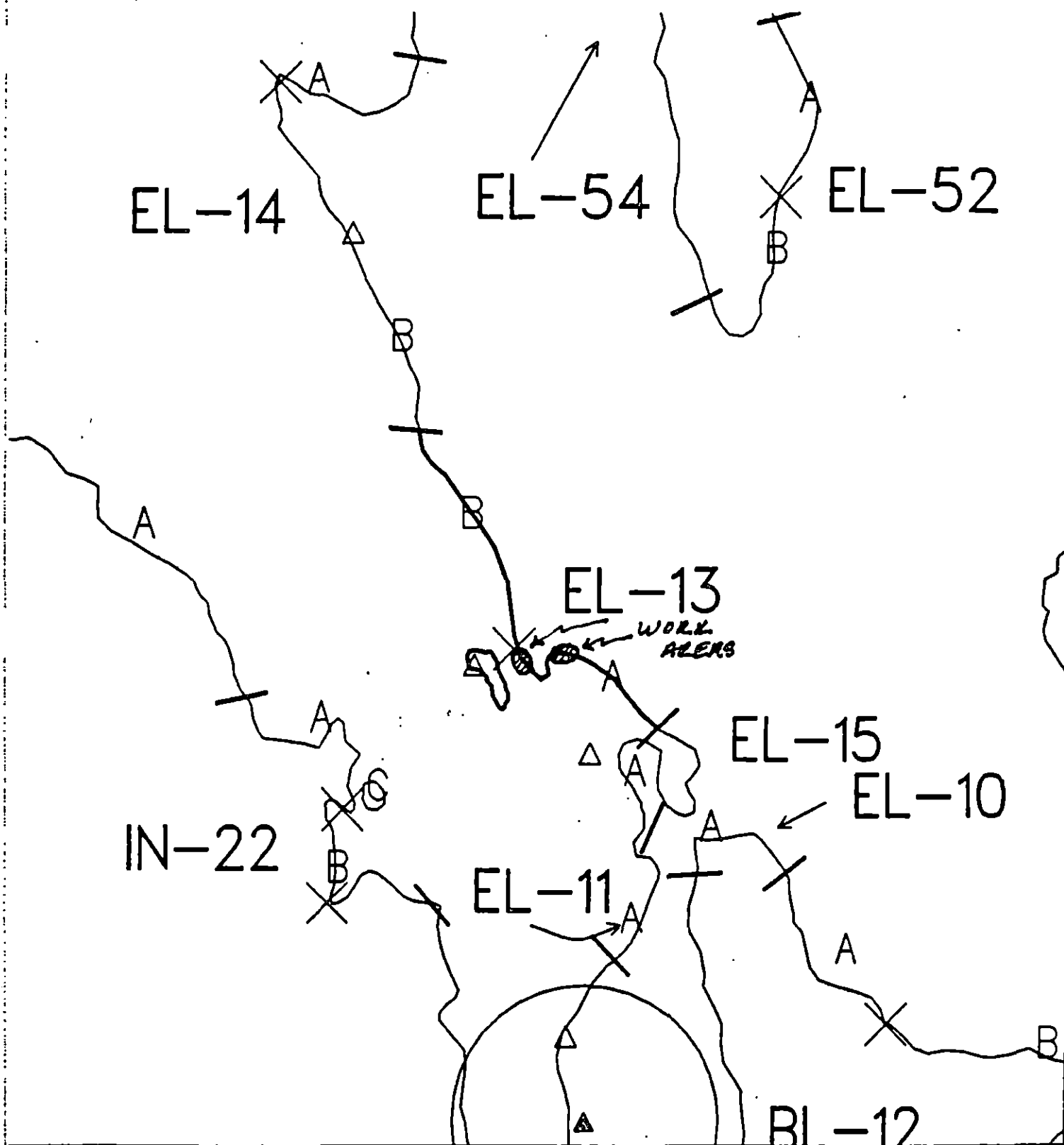
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.
7II	Subsistence: Deer Harvesting	Closed to bioremediation after 8/15. No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC Date 7-11-90

Prepared by Date 7/10/90



Exxon Company, USA
Map Key: PWS-EL-13
June 08, 1990



ECOLOGY MAP
SEGMENT EL-13
SUBDIVISION A (1 of 2)
METERS
0 417 834

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

1 inch = 1368 feet

SHORELINE EVALUATION

SEGMENT ST/ EL-13 SUBDIVISION B (2 OF 2) DATE 4/8/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6U Recreation: Tent sites (6/1 to 9/15)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
Eagle nest on or near border with EL-14. 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: Rick Don Don DATE: 5/25/90

OILING CATEGORIZATION:

Wide 24 m: Medium 709 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: Recommend manual pick up of tarballs, oiled logs, and mousse
in areas indicated on sketch map. Bioremediation of surface oil in area
shown on attached sketch map. Work should be conducted after 6/1 and
with permission of USFWS due to eagle nesting constraint.

TAG COMMENTS: MONITORING TO EVALUATE LOGS

TAG APPROVAL DATE: 4/25/90
ADEC Art Weiner
EXXON Andi Teal
NOAA John Talbot
USCG Ken With Keane

FOSC: W L DATE: 6-17-90

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
 ✓ 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

(Helicopter did section A)

SEGMENT ST 1 ELO13 SUBDIVISION: B DATE 04-08-90

USCG

NAME

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

I suggest manual pick up ^{of} mousse patties and asphalt patches along sub B. I observed enough patties & patches along entire sub. that they should be removed.

ADEC

NAME

Michelle Baer SIGNATURE M Baer☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

Most of sub-segment-B is B beaches with a B,C,P beach at the South end. Manually remove the TB's, AP patches, and MS patties, in areas behind B's that have cover a CV on the pebbles or in underneath ps. spray fertilizer. To remove the CT's off the B's use hot water wash, also remove the oiled logs. The pits revealed NO and the area is low energy.

LAND MANAGER

NAME

DAN LOGAN

SIGNATURE

Dan Logan☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

I RECOMMEND MANUALLY REMOVING THE TB'S AND ASPHALT PATCHES INDICATED ON SKETCH MAP. FERTILIZER SHOULD BE APPLIED TO THE PROBLEMS/COBBLES UNDERLYING THE ROCKS AND BOULDERS ON THE SM BAND.

SHORELINE OILING SUMMARY

REVISION NO. 08/23/98

OG J. Springer USCG R. Vandepels SEGMENT ST/ EL-13
 BIO P. Crank LAND REP D. Logan SUBDIVISION B (2 of 2) *
 EXXON T. Tamblin ADEC M. Baer TIME 17:20 to 18:45
 TEAM NO.: T TIDE LEVEL: +3 to +1 DATE 04/08/90
 EST. SUBDIVISION LENGTH: 742m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock Pillow lava & aa lava.
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: SE to NW
 SURFACE SEDIMENTS: R 5 % B 70 % C 15 % P 10 % G % S % M % V %
 SLOPE: Lang 60 % Hang 40 % Vert % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 40 m M 700 m N 1 m VL 0 m NO 0 m

SURFACE OIL

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

PAVEMENT: H F S 0 sq. m by 0 cmPATTIES / TARBALLS 15 BAGSNEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs	X		
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE #BAGS

Photographs:

Roll No. Frames

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR							PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		CP	OR	OL	OP	NO		UO	UC	1	2	3	4	5	6	7	SU	U	M	L		
1	20					X	.		X										X			CPG
2	15					X	.		X									X				P
3	20					X	.		X									X				PG
4	40					X	.		X									X				P
5	15					X	.		X										X			CP
6	30					X	.		X									X				P

COMMENTS * EL-13/A was done by the Helo team on 4/7/90.

SEGMENT ST/ EL-13 SUBDIVISION B

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-06)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OP	NO		UC	UC	BT	BT	BT	BT	BT	BT	BT	BT	SU	U	M	U		
7	30					X	-		X										X				P
							.																
							.																
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COMMENTS

REVIEWED _____ DATE _____

SHORELINE ECOLOGICAL SUMMARY

pg 1 of 3

REVISION: 03/22/90

Segment ST / EL/3 Subdivision B Date (mo/day/yr) 4/8/90Time (24 hr) 1730-1845 Biologist Crank Length 740 m
Tide Height +3 to +1 ft(A) Substrate type and % of segments:
(1) Bedrock 5 (2) Boulder 70 (3) Cobble 15 (4) Pebble 10 (5) Sand (6) Silt (B) Overall % cover of biota (% of segment): Dense 20 Moderate 30 Low 50

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

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

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

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

GASTROPODS

Dense			Moderate			Sparse			Rare			NOT PRESENT
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
2	2	2	X	X	X	X	X	X	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	

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	X	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:

Observations from Lewis Bay to EL13:
 8 Glaucous-winged Gulls - 4000
 2 Mergansers
 7 Cormorants
 3 Masked Boobies
 7 Crows
 Bear Tracks - a snowtp hpd is

Ecological Considerations:

711 - Deer Harvesting

(64 - Tent sites; 16 - Salmon streams are in EL13A)

Observations at EL13:

3 Tufted Puffins
 1 Salmon Jumping
 1 Bald Eagle - Adult
 1 Harbor Seal

Observations from EL13 to Lewis Bay:

3 Glaucous-winged Gulls
 2 Mergansers
 1 Cormorant
 2 Bald Eagles - Adults over forest
 1 Harbor Seal

SEGMENT: ST/EL 13 SUBDIVISION 8 LENGTH _____ BIOLOGIST Crank

pg 2 of 3

DATE 4/8/90 TIME 1730-1845

TIDE HEIGHT.

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

FLORA:

[illegible]

FAUNA:

SKETCH MAP

DATE 08 / 1 / 90

☒ Superior, Grade
☒ Sub Entry
☒ On Date

1. Length
 2. Cover
 3. Species Character
 4. SRA, HWA, LWA
 5. SRA
 6. North Location(s)
 7. North(s)
 8. In Location(s)
 9. In Location(s)

3

Part 1: No Subsurface Data

2

III - Subsurface Drilling

cr/c

Continuous Improvement

CT/8

Brother Davidson

1

Policy Distribution

CT/S

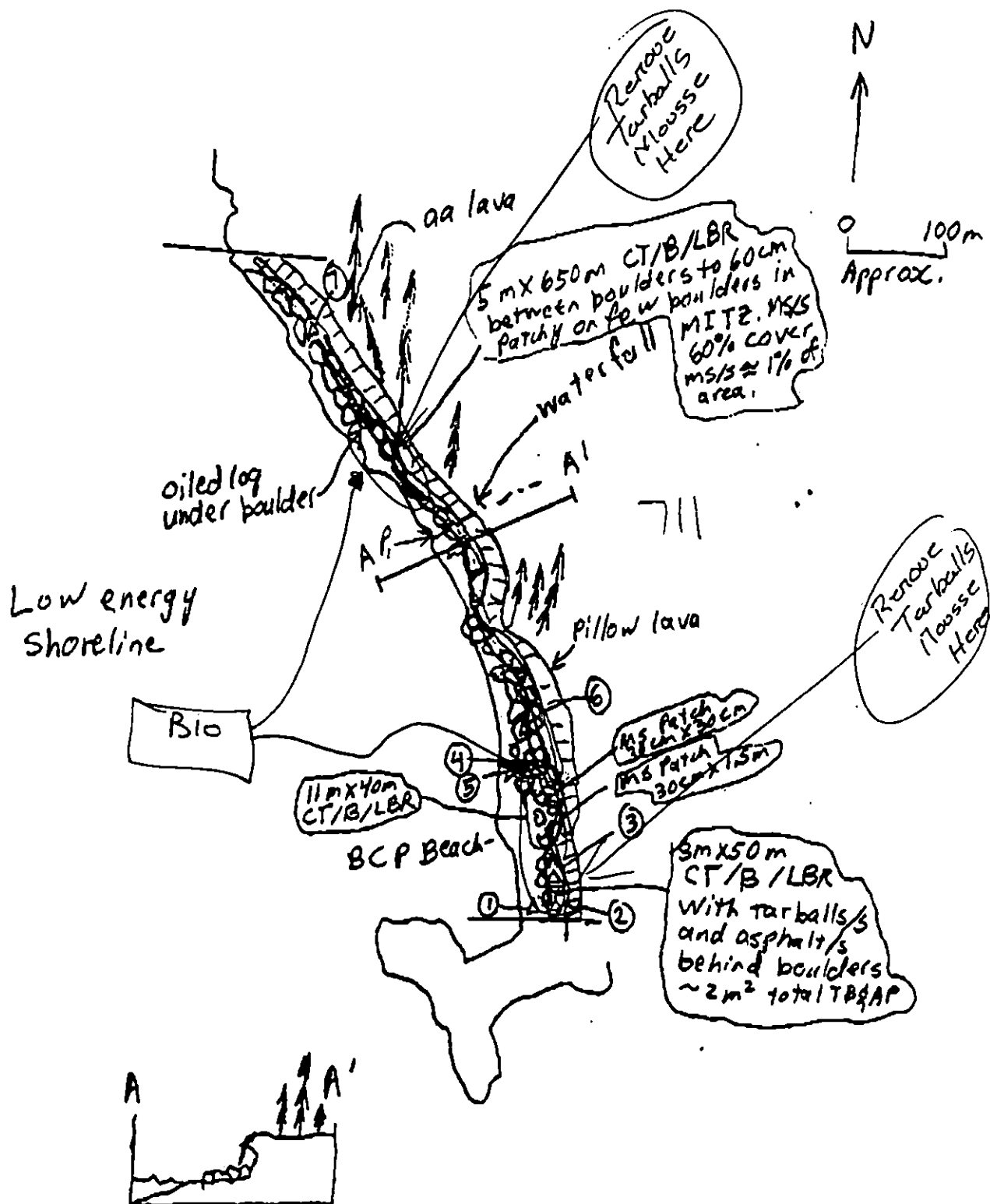
Estimated One-Way

Other Vegetables

1

**Place location, direction,
and number**

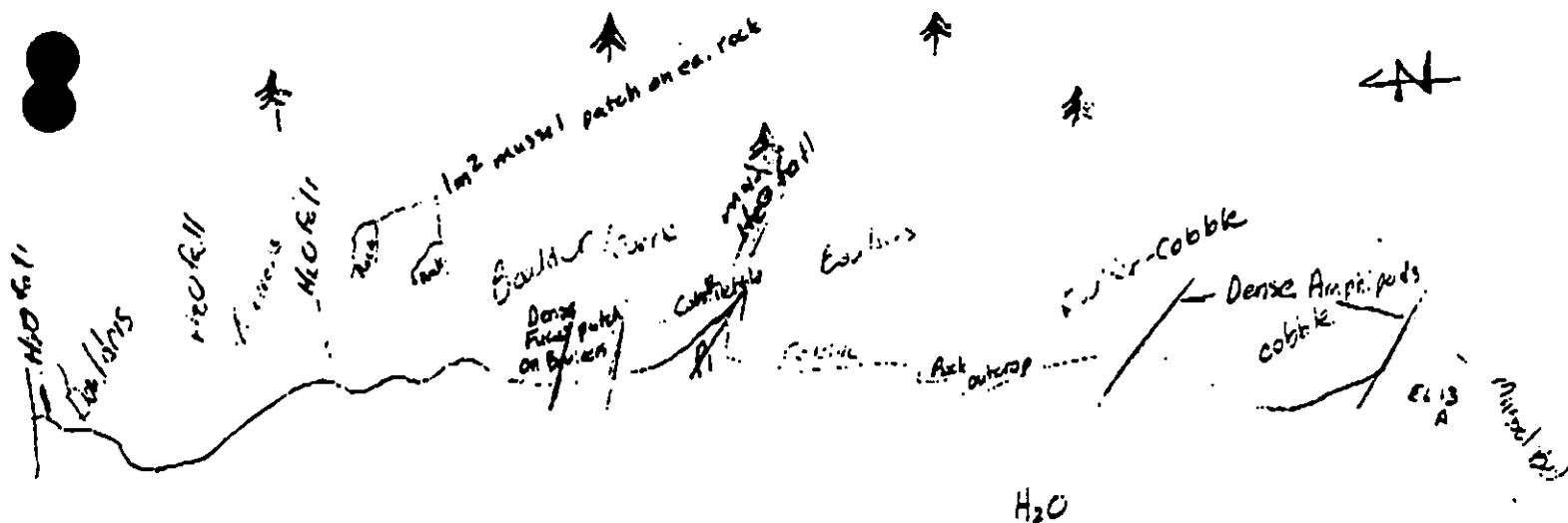
On Character Length (m): AP _____ PO _____ CV _____ CT $\sqrt{10}$ ST _____ MS _____ PT _____ TB _____ FL _____ MO _____



Segment: ST/EL 13 B Length:
Date: 4/8/90 Time: 1730-1845

Bidologist: Crank
Tide Height:

Pg 3 of 3

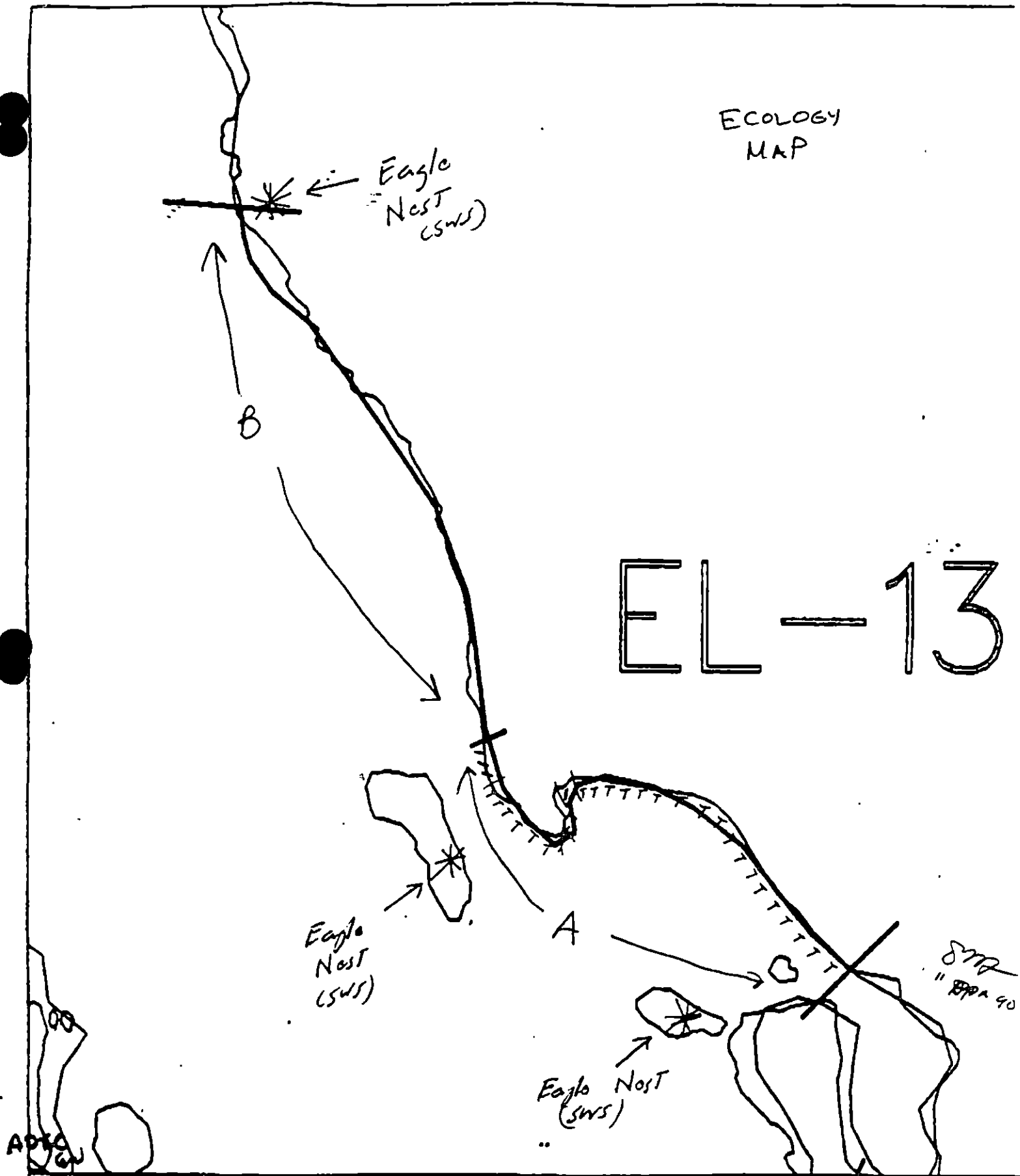


Comments -

- MITZ cobbles on the southern end of subdivision, filamentous green algae and diatoms cover the substrate. Under the cobbles are dense concentrations of amphipods. Fucus, Chitonia and limpets are sparse; Anomia and Mytilus are rare. There were no visible barnacles.
- In MITZ southern end cobbles, filamentous green still dominant, gastropods are moderate; no barnacles. On boulders, Mytilus and Fucus are sparse; gastropods moderate. On bedrock barnacles are rare. Barnacle scanning is present. Miton barnacle are also present in rare concentration - on MITZ rock, however spat is dense.
- MITZ remained unexposed; through H2O use, Knosomenia pulvinata, filamentous green and sparse barnacles are present.
- Throughout the rest of the subdivision, filamentous green are present at moderate concentrations, amphipods are moderate with sparse amphipods. Barnacle concentrations increase with barnacle spat, the most abundant faunal species.
- There is a small, dense Fucus bed on the boulders north of major waterfall. (~15m x 3m)
- Mussels are sparse throughout the segment. There are two 1m² patches on separate boulders, the remaining mussels are found exclusively on the underside of boulders and rarely under cobbles.
- Recruitment for subdivision is low, except for barnacles which is high.

ECOLOGY
MAP

EL-13



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

EL-13

ADEC Segment Length: 1359m

0 100 200 300

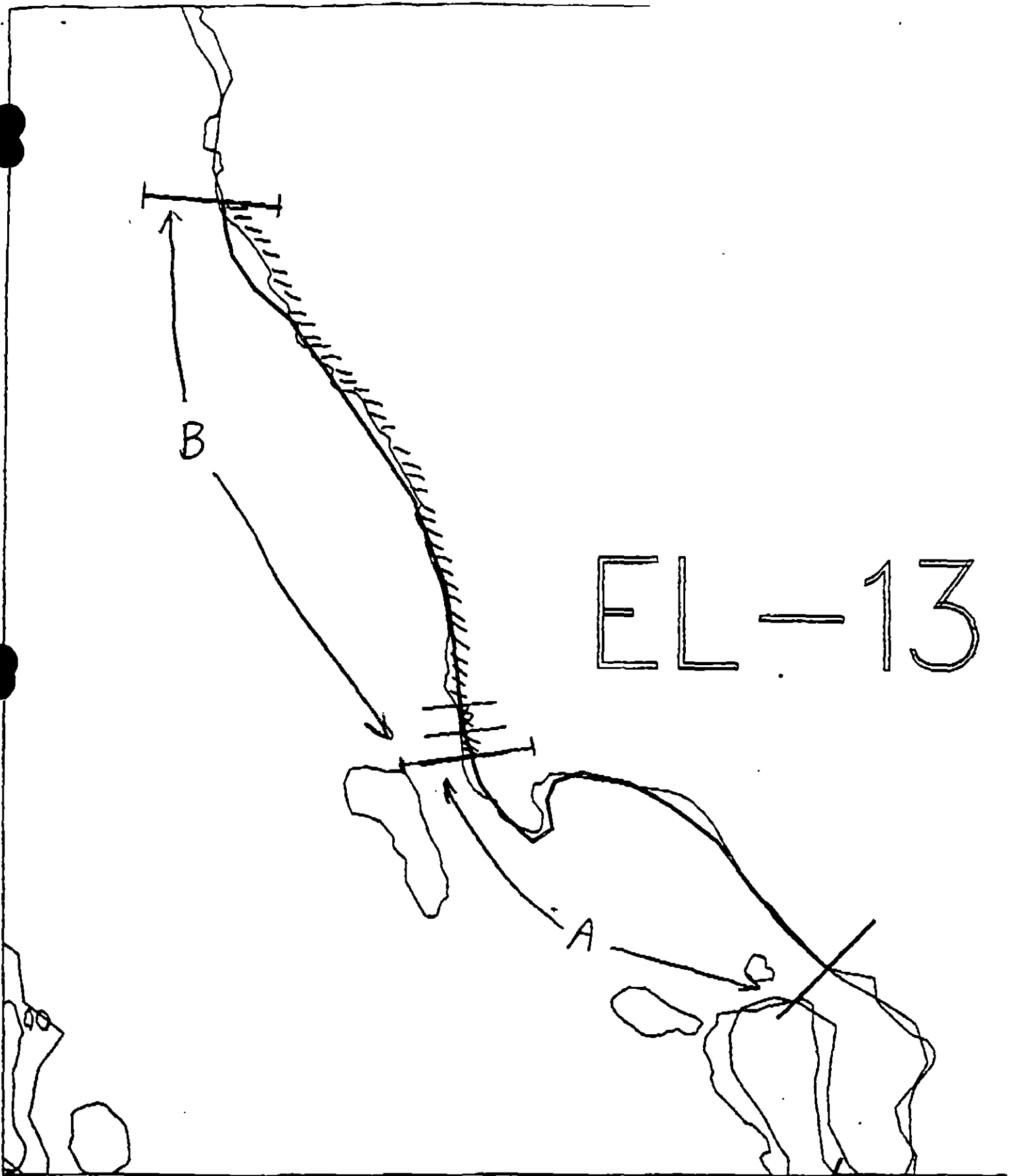
Map Key: PWS-132

Name: FitzGerald

Date: 8 Apr 1990

Date Entered:

EL-13



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EL-13

ADEC Segment Length: 1359m



Map Key: PWS-132

Name: James Springs

Date: 4/8/90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-13 SUBDIVISION B (2 of 2)

WORK WINDOW	
Manual Pickup	OPEN
Bioremediation	WORK PRIOR TO 8/15

ARCHAEOLOGICAL MONITOR REQUIRED ON SITE.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T Bald Eagle Nest

NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision B work site.

7II Subsistence: Deer Harvesting

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

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic and beach disturbance to essential minimum. Restrict boat and air traffic and beach disturbance to essential minimum.

FOSC

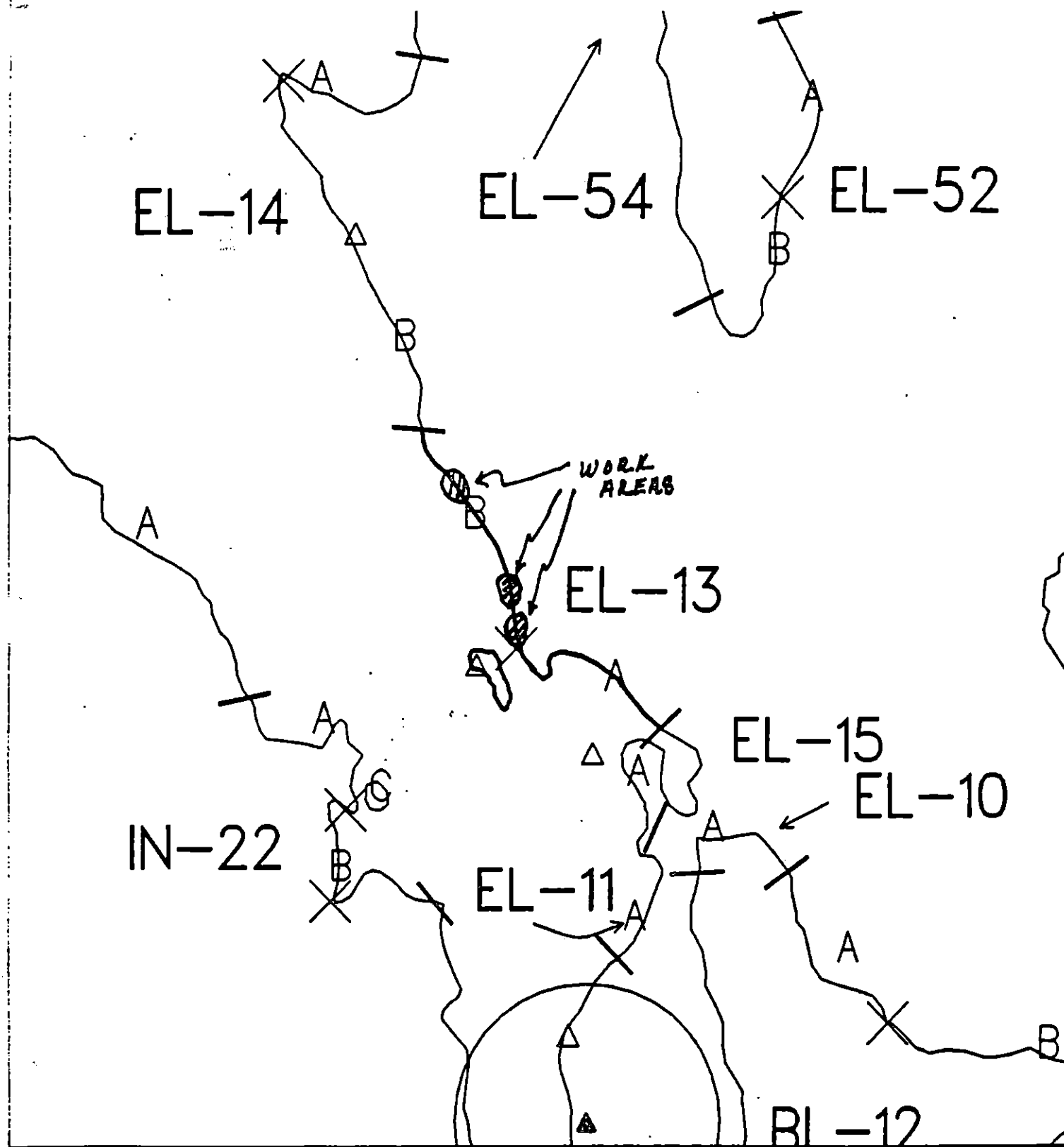
Date

7-11-90

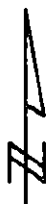
Prepared by

Date

7/10/90



Exxon Company, USA
Map Key: PWS-EL-13
June 08, 1990



ECOLOGY MAP
SEGMENT EL-13
SUBDIVISION 2 (2 of 2)
METERS
0 417 834

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

1 inch = 1368 feet

SHORELINE EVALUATION

SEGMENT ST/ EL-15 SUBDIVISION A (1 OF 1) DATE 4/8/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 226-10-16906.

- 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)
- 6V Recreation: Anchorages (6/1 to 9/15)
- 7II Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. NOTE: very fragile area - use extreme caution during treatment (see biologist report).

SHPO SIGNATURE: Wm. J. Hume DATE: 5/3/90

OILING CATEGORIZATION:

Wide 144 m: Medium 0 m: Narrow 244 m: V. Light 530 m: No Oil 169 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> Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: Recommend manual removal of asphalt, tarmats and patties.
Work should be conducted after 6/1 and with permission of USFWS due to
eagle nest constraint.

TAG COMMENTS:

TAG APPROVAL DATE: 4/26/90.
ADEC John P. ...
EXXON Andy ...
NOAA Gary ...
USCG Kenneth ...

FOSC: DATE: 5-8-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

SEGMENT ST1 EL-15 SUBDIVISION: A DATE 4/8/90

USCG

NAME CWO 2 J. MC NATHAN SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

1. There are three (3) areas on map B that warrant treatment
 - a). 100-150 feet from mussel bed (from bolo)
 - b). plus 100" from int a)
 - c). plus 50" from int b)
2. All three sites require manual removal and bioaugmentation.
3. All other sections of EL-15 do not warrant treatment

ADEC

NAME GREG WINTER SIGNATURE [Signature]

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

PAVEMENT AND COVER IN NORTHEAST LAGOON SHOULD BE REMOVED (MAP A). MAP B SHOWS EXTENSIVE ASPHALT AREAS THAT SHOULD BE REMOVED FROM SITE. THE AREA ON THE TOMBOLO WITH SOFT ASPHALT JUST BELOW THE SURFACE NEEDS SPECIAL ATTENTION AND SHOULD BE LOOKED AT BY STAG TEAM WHEN THEY LOOK AT THE TOMBOLO W/ SIMILAR CONDITIONS ON EL-15 THEY ARE BEING CLOSE TO EACH OTHER W/ EASY ACCESS BY HELICOPTER. ALSO THERE WAS SOME BULLDOZER ACTIVITY @ SOUTH END OF LAGOON - IT APPEARS TO ME NOT UNNECESSARY AND FUTURE USE OF SUCH EQUIPMENT SHOULD BE LIMITED TO THE BEACH AT EL010.

LAND MANAGER

NAME MIKE BENNETT SIGNATURE [Signature]
ADDR

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Recommend bioremediation with Interpol on pooled oil in pocket beaches where pooled oily was noted on form. Recommend no treatment on boulders & headlands with stain. As referenced, confine treatment to pocket beaches where human use is plausible. Resource use for the area consist of recreation, camping, marine mammal/seabird use. Noticed numerous eagles, seabirds & others in immediate area. Any treatment beyond the pocket beaches would cause more harm than good due to weathering & wave exposure on headlands & large boulders.

SHORELINE OILING SUMMARY

REVISION NO. 02/29/90

OG D. Fitz Gerald USCG J. McMahon SEGMENT ST/ EL-15
 BIO D. Rader LAND REP M. Bennett (ADUR) SUBDIVISION A (1 of 1)
 EXXON S. Newman ADEC G. Winter TIME 16:00 to 17:45
 TEAM NO.: 815 TIDE LEVEL: 180 to 70 DATE 8 Apr 1990
 EST. SUBDIVISION LENGTH: 1407 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☐ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: Clockwise
 SURFACE SEDIMENTS: R 10 % B 45 % C 30 % P 5 % G 5 % S 5 % M 0 % V 0 %
 SLOPE: Long 45 % Hang 35 % Vert 20 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 85 m M 0 m N 300 m VL 420 m NO 302 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	10	15	20	25	30	35	40	45	SU	U	M	V
ASPHALT PAVEMENT		X	X			X		X		X	X	
POOLED												
COVER			X			X				X		
COAT			X	X		X			X	X		
STAIN				X		X				X		
MOUSSE												
PATTIES				X		X				X		
TARBALLS				X		X				X		
FILM				X			X	X	X	X	X	X
NO OIL												

PAVEMENT: (H) (F) (S) 431 sq. m by 3 cmPATTIES / TARBALLS 0 BAGSNEAR SHORE SHEEN? NO BR (RW) SL (TL)

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

DEBRIS COLLECTED
☐ YES ☒ NOTYPE 0#BAGS 0

Photographs:

Roll No. 7Frames 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														
1	20					X	.								X					Red / Sand / Green
							.													
							.													
							.													
							.													
							.													

COMMENTS

Priority 1

- Much of this shoreline is oiled, particularly the northwest section where extensive pavement is found at the mid and high tide zones
- The western shore is composed of rubble and is steep with oil coats and stains
- The lagoon portion of the segment has occasional mouse patties and more extensive coverings on the northeast corner

ADEC

7u

4/19/90

Segment ST/ EL-15 Subdivision A Date (mo / day / yr) 4/2/90

Time (24 hr) 8:20 Biologist DANIEL RAIDER

(A) Substrate type and % of segments:
 (1) Bedrock 10 (2) Boulder 45 (3) Cobble 30 (4) Pebble 10 (5) Sand 5 (6) Silt 0

(B) Overall % cover of biota (% of segment): Dense 30 Moderate 20 Low 50
 ↳ to none

(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. 7
 Frames 8-11

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 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:

- Eagle

- This entire area is extremely ecologically sensitive and an effective oil clean-up would include taking care to not simply wash it, from an ecological stand point.

Ecological Considerations: Priority 3

64 Anchorages 6/1 - 7/15

711 Deer Harvesting 5/15 - 3/1

EL-15

No - comments

DANIEL RAIDER

THIS ENTIRE AREA IS AN EXTREMELY ECOLOGICALLY SENSITIVE AREA. CLEAN-UP OF THE EXCESSIVE AMOUNTS OF OIL FOUND IN THIS AREA SHOULD BE DONE ON A VERY SITE SPECIFIC BASIS WITH ACTUAL PICK UP AND EVALUATION OF THE MATERIAL; TO SIMPLY WASH THE MATERIAL DOWN THE BEACH WOULD SIMPLY MOBILIZE THE OIL AND HAVE IT RE-ENTER THE NUMEROUS MYRTLE EGGUS BEG PRESENT IN THE AREA.

THE LAGOON IS FILLED WITH AN ABUNDANT AMOUNT OF DECOMPOSING ORGANIC MATERIAL - ESSENTIAL FOR THE PLANT AND ANIMAL LIFE SURROUNDING THE LAGOON. IN ADDITION, THE MATERIAL PROVIDES NUTRIENT FOR THE DENISE ZOSTERA & FULVI BEDS ON THE WESTERN EDGE OF THE SITE; THIS AREA MAY SUPPORT MUCH FISH AND BIRD LIFE, BOTH COMMERCIAL AND NON-COMMERCIAL.

→ I PROPOSE THAT A MUCH MORE EXTENSIVE BIOLOGICAL STUDY SHOULD TAKE PLACE INVOLVING WATER SPECIALISTS AND WETLAND SPECIALISTS IN ORDER TO TAKE A MUCH MORE DETAILED ANALYSIS OF THE AREA.

IN ADDITION THE LANDING OF HELOS AND A LARGE AMOUNT OF WORKMEN (INVOLVING FOOT TRAFFIC) WILL BE DEVASTATING FOR THE ECOLOGY AND SHOULD BE AVOIDED AT ALL COSTS. THE BENEFIT WILL NOT OUTWEIGH THE COSTS IF A LARGE GROUP OF PEOPLE USE HIGH POWERED ^{WATER} PRESSURE MACHINERY ARE LOCATED HERE.

THIS DEMANDS FURTHER BIOLOGICAL ANALYSIS THAN THAT VERY CURSORY BIOLOGY REVIEW THAT WAS PERFORMED FOR THE SPRING SHORELINE ASSESSMENT.

- - - - - RAIDER

OG Fitz

SEGMENT ST/ EL-15

SUBDIVISION A

DATE Apr 18 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HMLAVE
- ☐ SSI
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ FR Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ

FR - No Substrate Oil

2 Δ

FR - Substrate Oil

CT/C

Continuous Distribution

CT/D

Broken Distribution

CT/P

Patchy Distribution

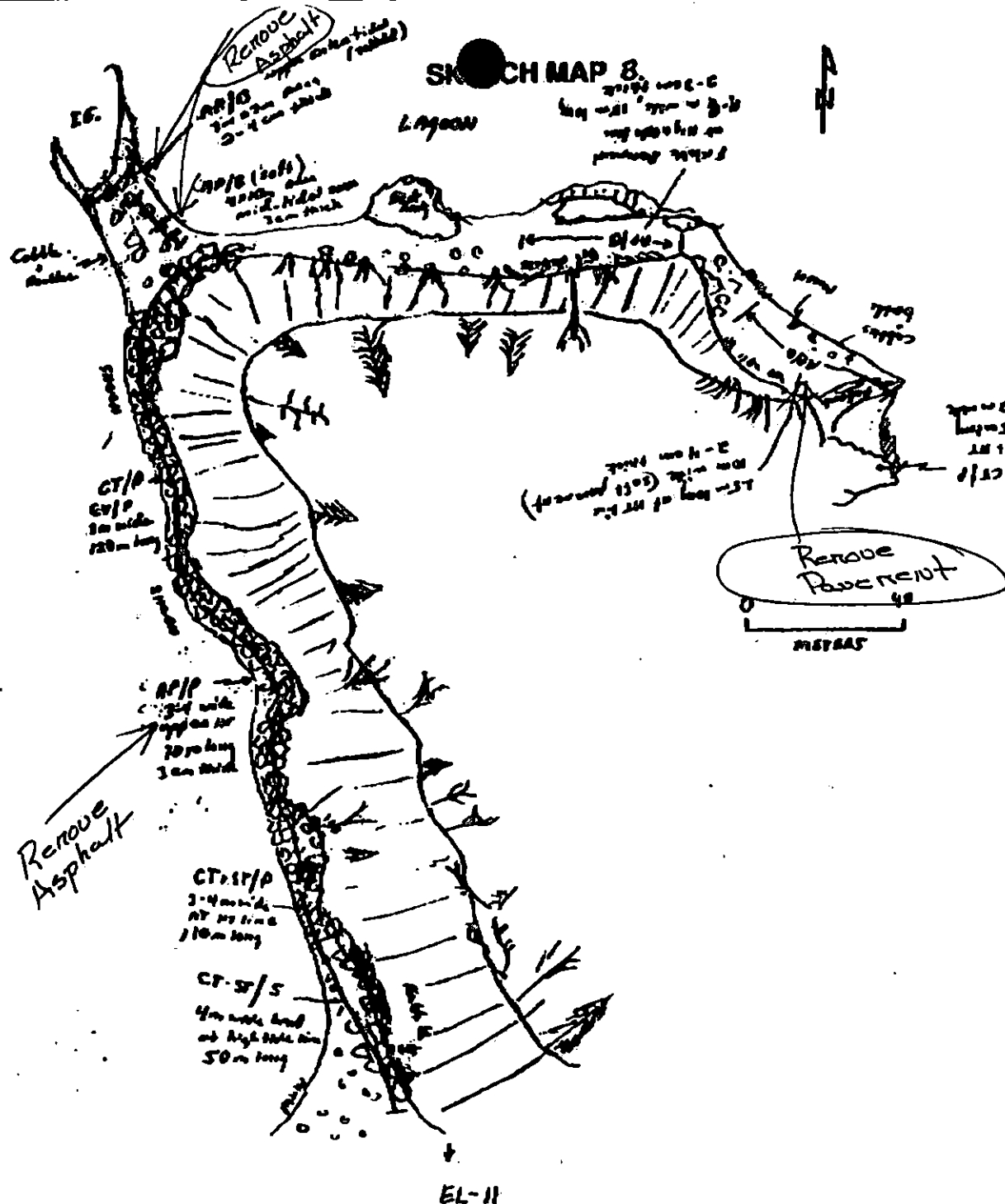
CT/S

Splashed Distribution

Oil Vegetation

1 ●

Photo location, direction, and number



DEC 67

Oil Character Length (m): AP 67 PO CV CT 265 ST 80 MS PT TB FL NO 10

SECTION 4030400

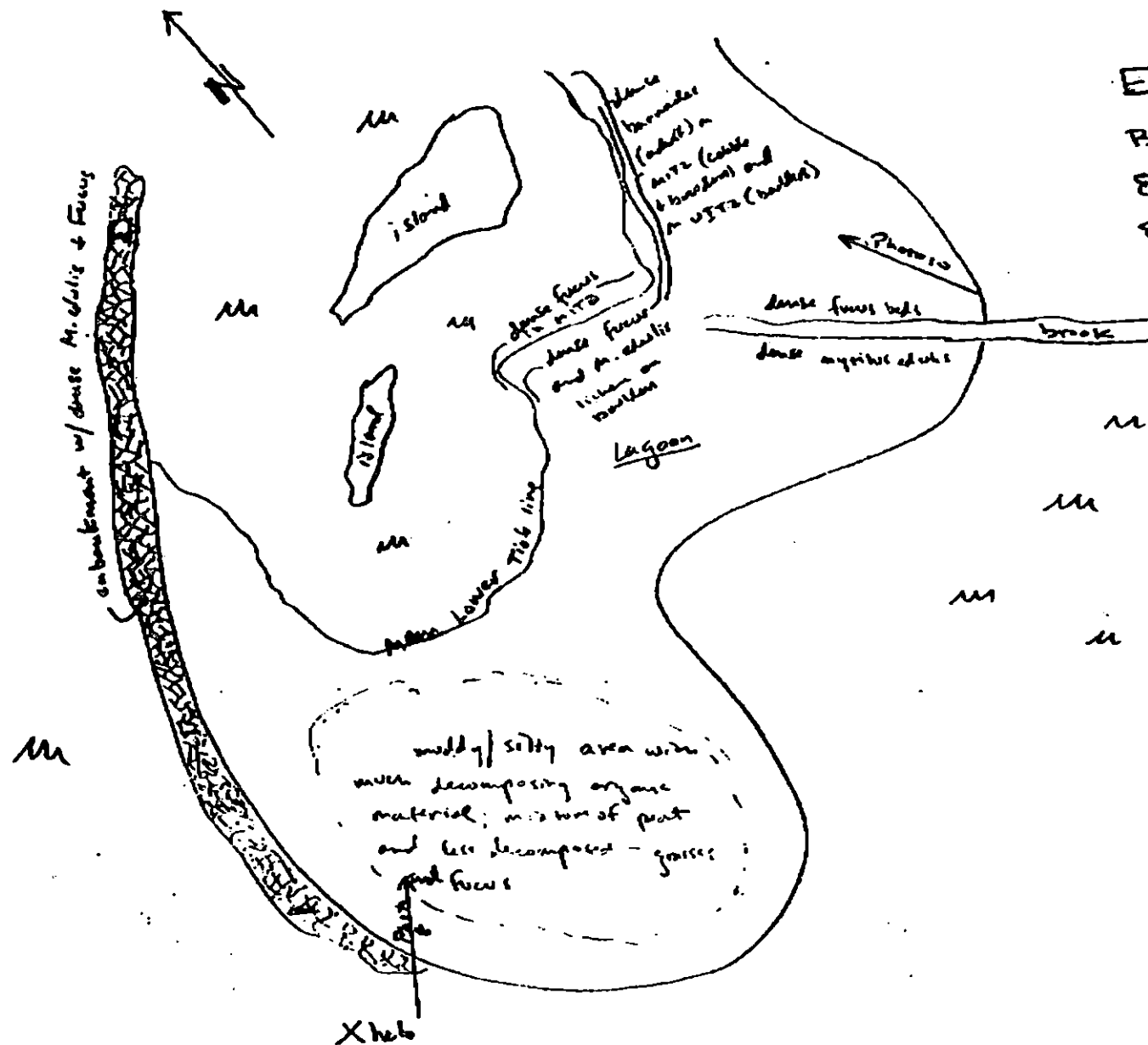
REVIEWS, 03-01-00

EL-15

Bio - SKETCH

8 APRIL 1990

8:20



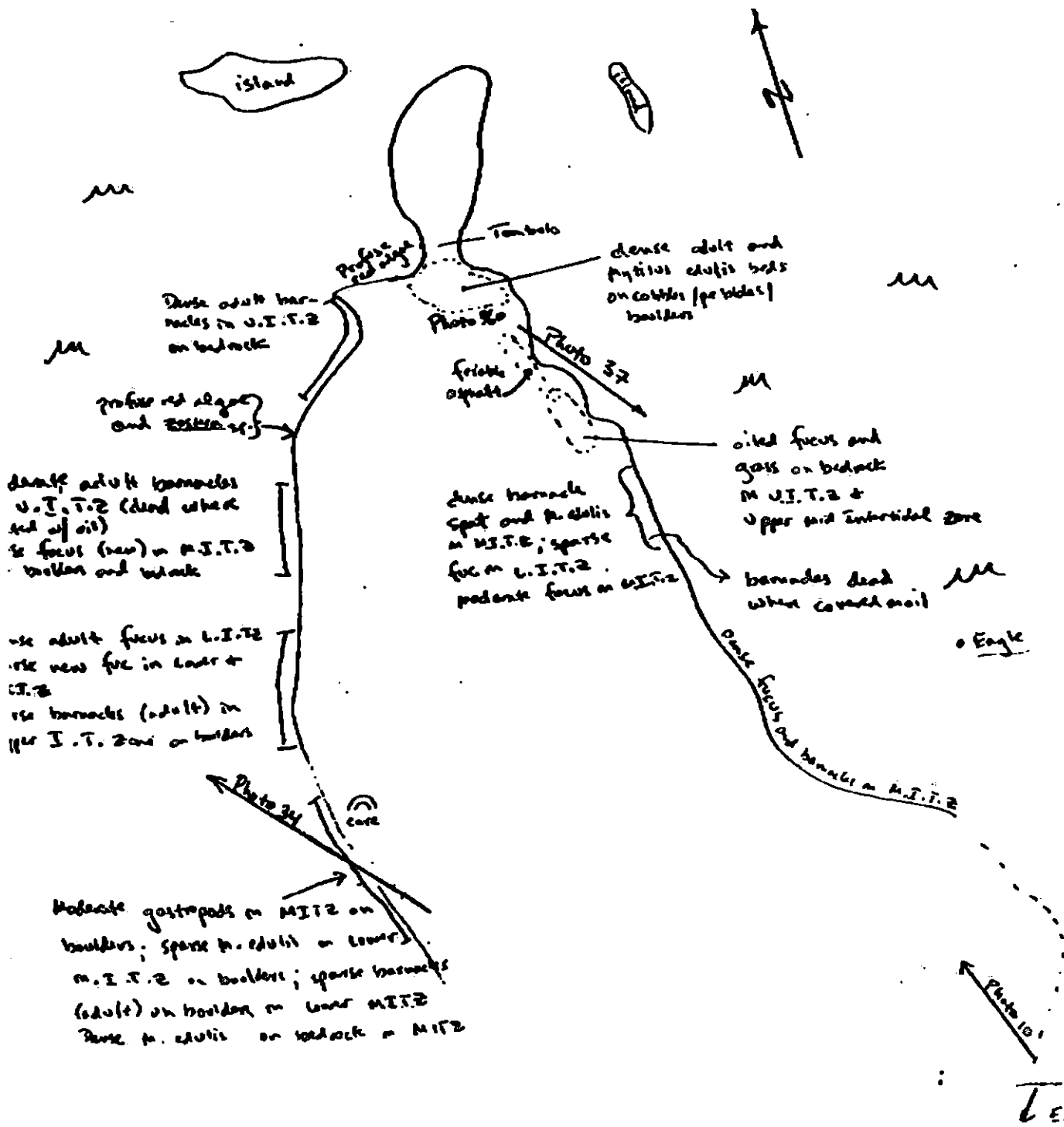
EL-15 (CONTINUATION FROM PREVIOUS)

BIO-SKETCH

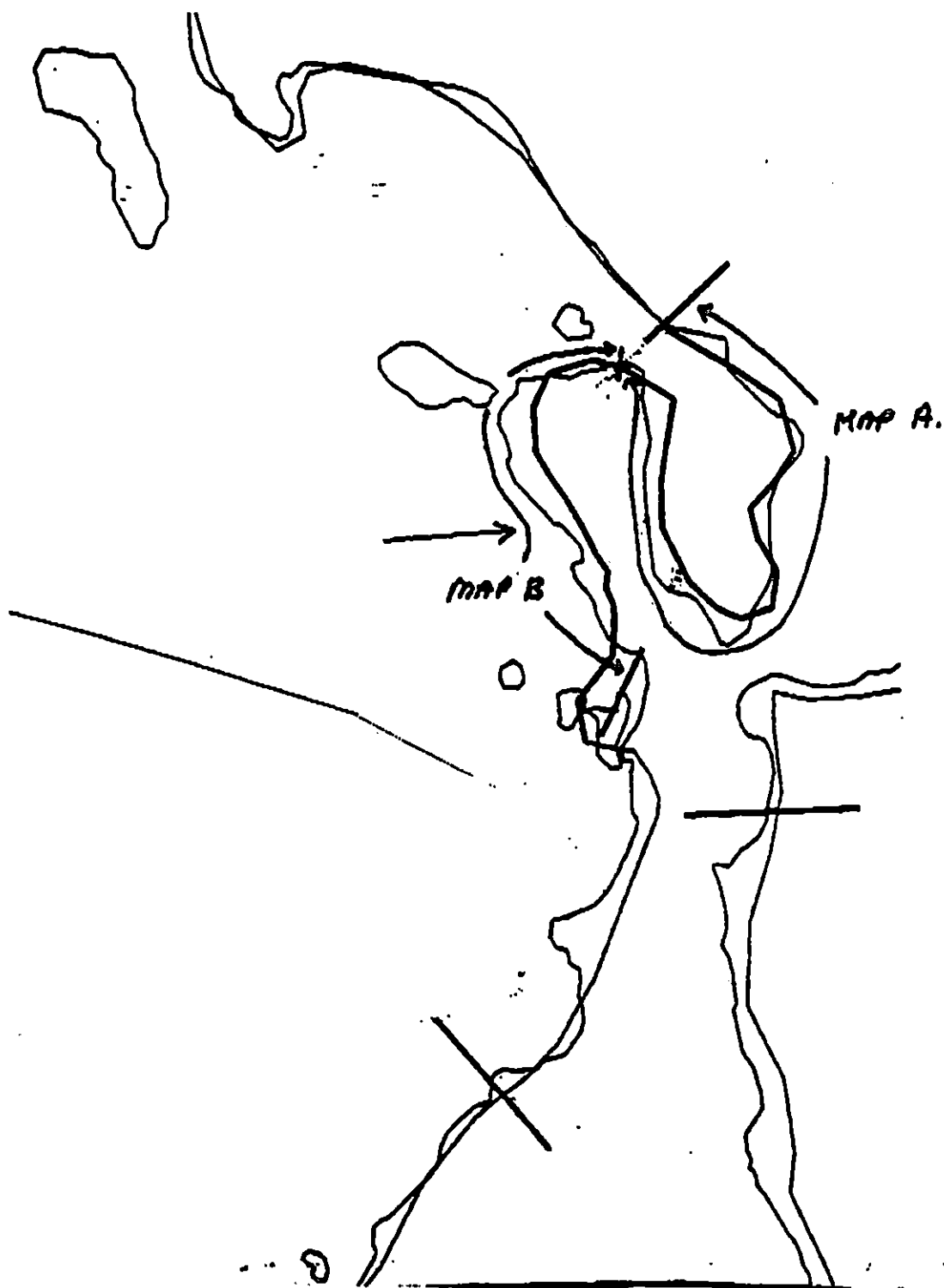
8 APRIL 1990

16:30

DANIEL RAIDER



LOCATION OF MAPS FOR EL-15-A



EL-15

ADEC Segment Length: 1086m



ADEC
64

EL-13

EL-1

EL-11

EL-15

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Data

ADEC Segment Length: 1086m

0 100 200 300

Map Key: PWS-134

Name: Fitzgerald

Date: 8 Apr 1970

Note: Continued.

ADEC

REVISION 1
6/23/90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-15 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup
Tarmat Removal

OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 584-3274.

ARCHAEOLOGICAL INSPECTION/
CONSULTATION REQUIRED
Phone: 584-3274 (Anchorage) JPP
6/23

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

ADF&G catalogued anadromous stream (226-10-16906) is in this subdivision. No constraint to manual pickup and tarmat removal.

7II Subsistence: Deer Harvesting

No constraint to manual pickup and tarmat removal.

5T Bald Eagle Nest

NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. 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. Avoid damaging mussel beds in MITZ. Fragile area. Use extreme caution during treatment.

SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM (STREAM NO. 226-10-16906)
FOR ADDITIONAL CONSTRAINT INFORMATION

FOSC

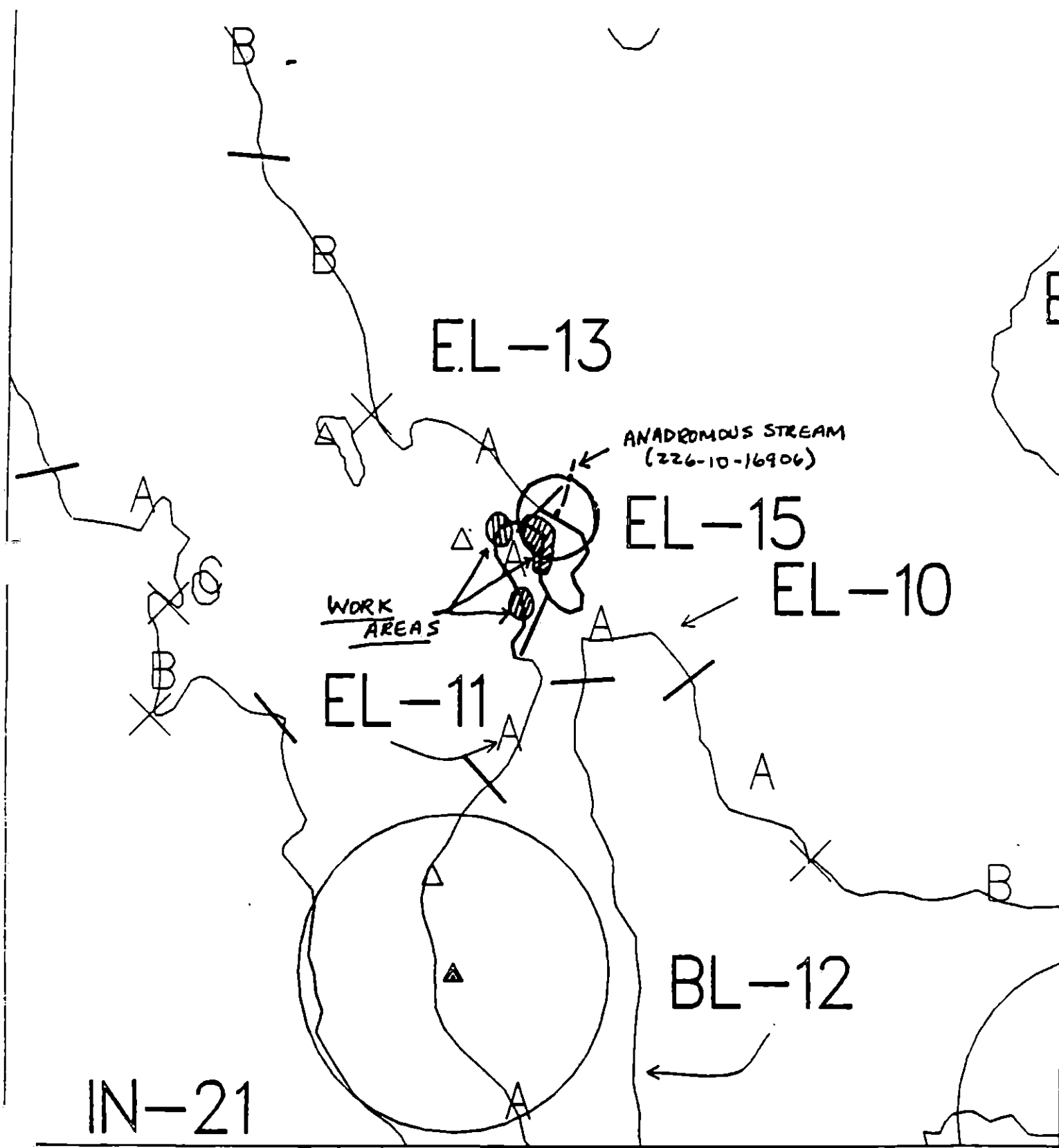
DATE

6-10-90

Prepared By:

Date

6/9/90



Exxon Company, USA
Map Key: PMS-EL-15



ECOLOGY MAP
SEGMENT EL-15
SUBDIVISION A (L of L)
METERS

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

ANADROMOUS FISH STREAM EVALUATION

15A

SEGMENT ST/ EL-13 STREAM NO: 226-10-16906 DATE 4/23/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5T-1 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to unoiled biota and substrate. Subject stream exists at boundary of EL-13 and EL-15. [EL-13; Subdivision A (1 of 2)].

SHPO SIGNATURE: [Signature] DATE: 5/9/90

Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual pickup of oiled vegetation and cleanup debris, and 2) manual removal of tarmats in areas indicated on sketch maps. Work should be conducted between 6/1 and 7/10 with USFWS approval regarding eagle nest constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: 5/9/90.
ADEC ART WENGER
EXXON ANDY TGA
NOAA Burl Wescott
USCG D. D. Rome

FOSC: [Signature] DATE: 5-18-90

Assess need for customblend following
treatment removal. Notify CVC 24 Hrs prior
to work.

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G Habitat Division prior to treatment for consultation and/or permit application.
 AGENCY CONTACT PERSON: ADF&G John Morison 267-2324
- 1C Salmon fry nursery area (4/31 to 7/31)
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to July 31 unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
 AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214
- 1D Esther Hatchery release (4/15 to 6/15)
 1E Main Bay Hatchery release (4/20 to 6/15)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, prior to at least July 1 unless authorized by ADF&G and/or PWS Aquaculture Association. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G or PWS Aquaculture Association for confirmation and authorization.
 AGENCY CONTACT PERSON: 1E ADF&G Larry Peltz 424-3214
 1D 1F 1G PWS Aquaculture Association John McMillan or Bruce Suzumoto 424-7511
- 1I Gill net area (8/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (8/11 to 7/25)
 Contact ADF&G for specific dates, locations and constraints. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G James Brady 424-3212
- 2M Herring spawning (4/1 to 6/15)
 Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unopened intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
 AGENCY CONTACT PERSON: ADF&G Evelyn Biggs 424-3235
- 30, 3Q Harbor seal and sea lion pupping (5/15 to 7/1)
 Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31).
 Contact ADF&G and USFWS prior to treatment for confirmation.
 AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
 ADF&G Don Calkins 267-2403
- 5R Seabird colony (5/1 to 9/1)
 Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
 AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
 ADF&G Tom 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 (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 Subistence area: Salmon harvesting (5/1 to 9/30)
 7H 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 267-2350

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EL-01 ^{NAS} SUBDIVISION: 236-10-16906 ^{ASC#} DATE 23 APR 90

USCG NAME Kerwin L. Dreher SIGNATURE CWO 2 K. L. Dreher

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Agree.

~~ADFG~~ ^{ADFG}
NAME Aimee Weseman SIGNATURE Aimee Weseman

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

North side of stream - manual removal of intermittent tar patties
in the UITZ

South side of stream - manual removal of intermittent tar patties
removal of oiled organic debris - including spruce needles, grass
and log in supra ITZ.

Removal of oiled sausage boom on North side in supra ITZ

~~LAND MANAGER~~ ^{NONE}
NAME _____ SIGNATURE _____

☐ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

ONE-UP MAP

10906

10906

•

—

1

—

1.

8

10



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1/2

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[illegible]

Seg. ID: EL-013 Subdiv: 226-10-16906

Survey Date: 4/23/90

Comments of: Ken Critchlow

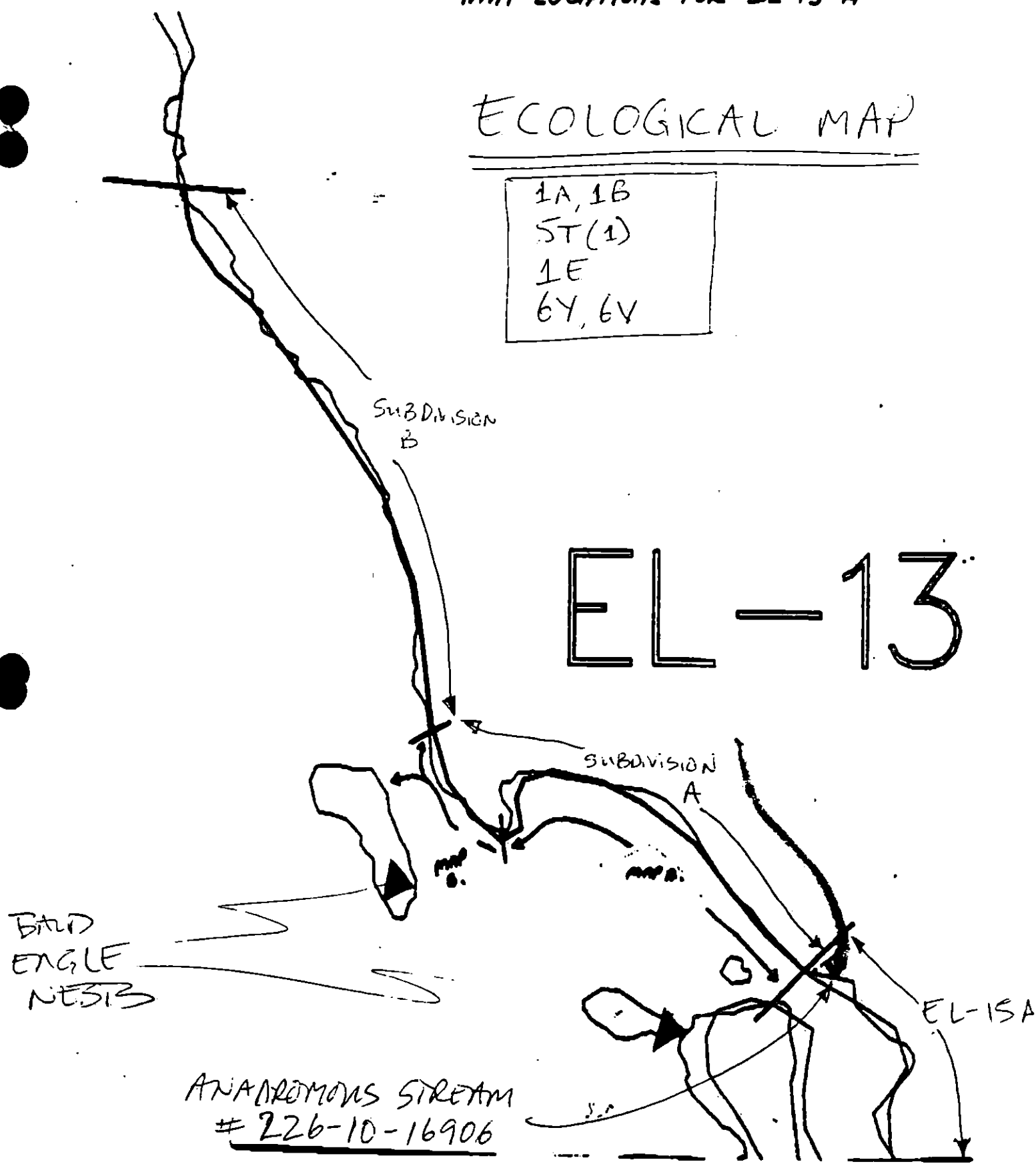
The UITZ on each side of this stream was coated, covered or had asphalt pavement. Exploratory scraping of surface sediments failed to reveal penetration of oil into sub-surface sediments.

This stream site can be cleaned by a small crew using shovels to remove asphalt pavement in the UITZ. Oiled debris in the UITZ can be picked-up and bagged. Oiled logs on east side may need to be removed or burned on-site. Oiled log across stream is best left in place and oiled surface scraped to remove coat/cover.

KR Critchlow

ECOLOGICAL MAP

1A, 1B
ST(1)
1E
6Y, 6V



EL-13

ADEC Segment Length: 1359m



ADEL
62

ADFG MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: ES (35) DS TS AVS SCH MMH PTA 2 REGION: PR CP CI KAP

METHOD: Aerial Ground Boat

3 DATE: 4-23-90 15 HIGH TIDE TIMES: 1 21 TEAM RECORDER: Aimee Wesemo

4 START TIME: 1800 16 HIGH TIDE HTS: 1 22 OBSERVERS: Pick Gustin

5 STOP TIME: 1830 17 LOW TIDE TIMES: 1 23 AGENCY: ADFG

6 SEQUENCE #: EL013 18 LOW TIDE HTS: 1 24 PHOTOS TAKEN: Y (N)

7 STATION #1: _____ 19 TIDE HT AT SURVEY: _____ Roll #: _____ Frame: _____

8 K-UNIT: _____ 20 USGS QUAD: _____ 25 VIDEO TAKEN: (Y) N Tapes: 90AJW00

9 STAT AREA: _____ 26 SAMPLE TAKEN Y (N) INDEX

10 LAT: _____ 11 LONG: _____

12 SOURCE: Map Loran

13 LOCATION: Eleanor Island

14 DESCRIPTION: SW side near Black I

Oil
Sediment
Biological
Water

EXTENT OF OIL

	SHORELINE				STREAM			
	L	V	M	N	L	V	M	N
27 SURFACE COVERAGE		1m						
28 SURFACE THICKNESS	1cm	2cm						
29 PENETRATION								
30 OVERALL OIL IMPACT: <u>N</u> <u>VL</u> <u>(C)</u> <u>N</u> <u>N</u>								
31 OIL TYPE: Pooled Mousse Tar <u>Asphalt</u> Sticky Slain								
32 OILED DEBRIS <u>(B)</u> <u>N</u>								
33 SHORELINE TYPE: Headland Low-lying Rocks Beach <u>Cave</u> Lagoon Marsh								
34 WAVE EXPOSURE: High Moderate Low								
35 SUBSTRATE TYPE: Bedrock Boulder Cobble <u>✓</u> Gravel <u>✓</u> Sand <u>✓</u> Mud/silt <u>✓</u>								
36 CATALOGED ANNO. FISH STREAM <u>(C)</u> <u>N</u>								
37 CATALOG #1 <u>226-10-16906</u>								
38 STREAM NAME: _____								
39 OIL IN STREAM BED? <u>Y</u> <u>(N)</u>								
40 OIL ON STREAM BANKS? <u>(Y)</u> <u>N</u>								
41 OIL ON BEACH ADJACENT TO MOUTH (within 50 meters) <u>(Y)</u> <u>N</u>								
42 OIL WITHIN 1 MILE OF STREAM <u>(Y)</u> <u>N</u>								
Where: _____								
43 ANADROMOUS FISH PRESENT? <u>Y</u> <u>N</u>								
44 ANADROMOUS FISH OBSERVATION Species Aerial Ground								

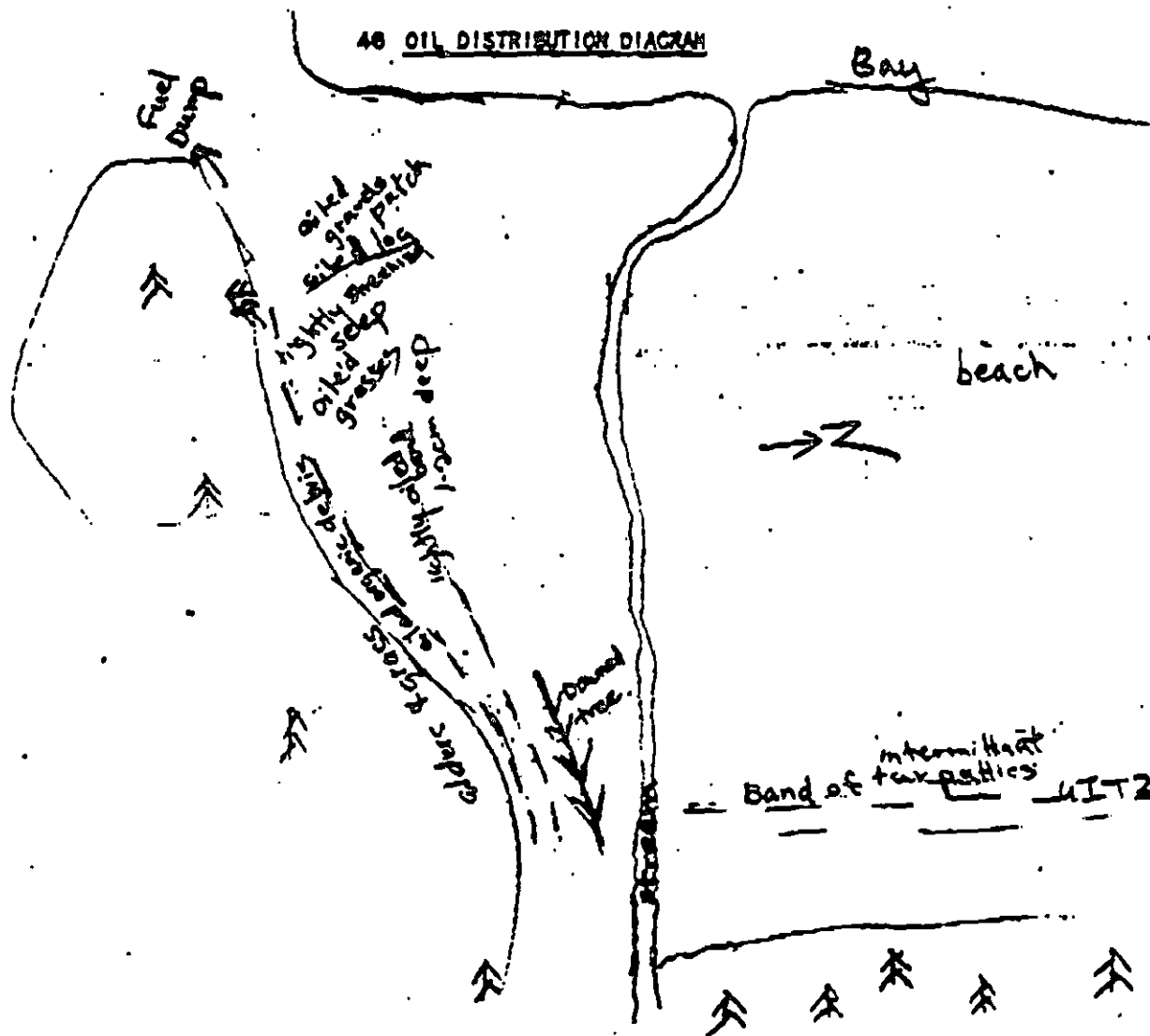
oil present includes
comments: a 100m x 1 meter wide band of intermittent tar patches running
the length of the UT TZ on North side of stream
a 2m wide lightly oiled band in m+u TZ on south side of stream
oiled organic debris on south side in wash zone, oiled log

48 PHOTOLOG

FRAME(S)

DESCRIPTION

48 OIL DISTRIBUTION DIAGRAM



treatment recommendations

- Manual removal of intermittent tar patties in UITZ on north side of stream
- RSFOS and on south side of stream in mtUITZ
- Removal of oiled organic debris including spruce needles & oiled log in swash zone on south bank and oiled grasses
- Removal of oiled sausage boom on north side of stream in swash zone

Series taken

Photo frame 8 and

ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-10-16906

SEGMENT EL-15 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 (226-10-16906) is in Subdivision A. No constraint to manual pickup and tarmat removal.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.
7II	Subsistence: Deer Harvesting	No constraint to manual pickup and tarmat removal.

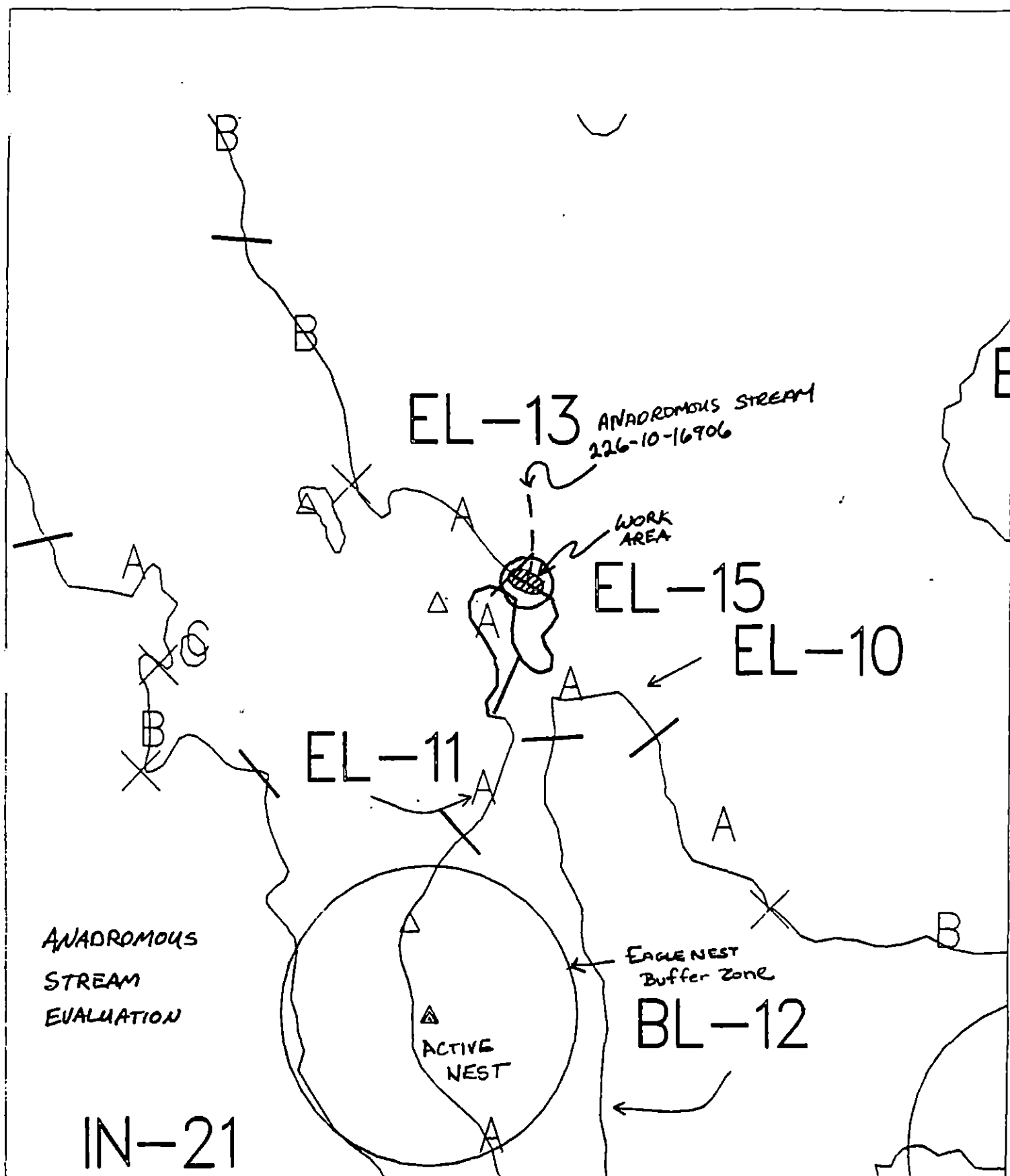
OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Restrict boat and air traffic and beach disturbance to essential minimum after 8/15.

SEE SUBDIVISION CONSTRAINT ADDENDUM EL-15A
FOR ADDITIONAL CONSTRAINT INFORMATION.

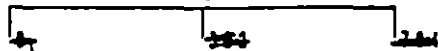
FOSC W L Date 6-10-90

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



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

ECOLOGY MAP
SEGMENT EL-15
SUBDIVISION A (1 of 1)
METERS



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

SHORELINE EVALUATION

SEGMENT ST/ EL-52 SUBDIVISION A (1 OF 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Salmon stream mouth (ADF&G catalogue no. 226-10-16902 Rev. 12/89) - fry outmigration (1A) - 3/1 to 5/15 and spawning (1B) - 7/10 to 8/31; Recreation tent sites (6U) - anchorages (6V) and special use destination (6Y) - 6/1 to 9/15; Subsistence area for deer harvesting (7II) - 8/15 to 2/28).

SUBDIVISION ECOLOGICAL CONSTRAINTS:

(1A)(1B) No disturbance of stream bed or banks unless authorized by ADF&G. Contact ADF&G Habitat Division prior to treatment for permits.

SHPO SIGNATURE: Charles E. Adams

DATE: 4/12/90

OILING CATEGORIZATION:

Wide 0 m: Medium 100 m: Narrow 37 m: V.Light 451 m: No Oil 9 m
Subsurface Oil Observed: Yes X No Maximum Depth 15 cm

RECOMMENDATIONS:

<u> </u> No Treatment Recommended	<u> </u> Snare/Absorbent Booms
<u>X</u> Treatment Recommended	<u> </u> Oil Snares (pom poms)
<u>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 manual pick up of tar balls. ~~and oiled logs if oiled more than splash and 10% coverage~~, and bioremediate coat and stain and subsurface oil as shown on attached sketch map. Work should be conducted between 5/16 and 7/9 based on above salmon constraints.

RAKE IN AREA OF TEST PITS AS SHOWN ON SKETCH.

TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90.

ADEC Art Weiner
EXXON Andy Tate
NOAA Burl Wescott
USCG Kenneth K. K. K.

FOSC: Y L

DATE: 4-22-90

12/01/90
4/4/90SEGMENT ST / 52.A
EL-53-B SUBDIVISION: B A DATE 4/1/90

JSCG

NAME DAVID A. SCHNEIDER SIGNATURE David A. Schneider

783/USCG

☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

MANUAL TREATMENT APPROPRIATE FOR THIS SUBDIVISION. TAR SPLATTERS, SPLOTT AND OIL COATING ON EXPOSED Boulders & ROCK FACES AND IN BOULDER SHADOWS SHOULD BE WIRE BRUSHED AND SCRUBBED BY MANUAL WORK CREW. BEACH AT SOUTH END OF SUBDIV WARRANTS CONSIDERATION AS A POTENTIAL SITE FOR RECREATION. LARGE TIDE POOLS ALONG LITE TIDAL FLATS SHOULD NOT BE DISRUPTED. ~~WATER~~ EFFORT SHOULD BE MADE BY WORKERS TO AVOID MUSSEL BEDS AND EELGRASS BEDS ALONG THESE FLATS DUE TO THEIR BEING POTENTIAL SPAWNING AREAS FOR HERRING.

ADEC

NAME Peter Montesano SIGNATURE Peter Montesano☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS The central area of "B" has an extended rich intertidal community which should be considered/protected relative to treatment. This area showed stringy sheens at low tide. Brown oil droplets appeared in the Penetration pits. The "Boulder Shadow Oiling" and penetration type makes Bioremediation not practical, except on the S beach of "B". This beach has 5cm Penetration, OR, under the clean ~~sediments~~ sediments at the extreme surface. Hand Scraping, removal ~~practical~~ practical along "B" of trapped coating and random tar splatters. Additionally, the oiled, felled tree ~~at~~ toward the S end and oiled debris (nets) should be removed.

LAND MANAGER

NAME Janeita Pritchard SIGNATURE Janeita Pritchard☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Concur with USCG and ADEC. I'd like to reemphasize the need to protect the tidal flats during the clean up.

OG C. DILLON USCG D. SCHNEIDER SEGMENT STI EL-5352
 BIO J. BARRY LAND REP J. PRITCHARD SUBDIVISION B A (1 of 2)
 EXXON A. SNOOK ADEC P. MONTESANO TIME 10:00 to 13:45
 TEAM NO.: 6 TIDE LEVEL: -1 to +3 DATE 03/31/90
 EST. SUBDIVISION LENGTH: 160 m 690 ☐ 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 50 % C 25 % P 10 % G 0 % S 0 % M 0 % V 0
 SLOPE: Lang 80 % Hang 20 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 70 m N 15 m VL 40 m NO 5 m
600

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	C	R	P	B	W	Y	OR	BL	SU	M	U	U
ASPHALT PAVEMENT												
POOLED												
COVER												
COAT		X	X	X				X		X	X	
STAIN			X	X				X		X		
MOUSSE												
PATTIES												
TARBALLS				X	X					X		
FILM				X	X			X				X
NO OIL	Snow on S'most beach								S			

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		X	
Vegetation			
Trash	X		
Debris			

DEBRIS COLLECTED ☒ YES ☐ NO

TYPE Small trash

#BAGS < 1

Photographs:

Roll No. ST-6-2

Frames 15-16

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	W	Y	OR	BL	SU	M	U	U		
1	10					X	0-0							X					P/G/S
1	10	X					5-10	X			X			X					S/M
2	15	X					5-10					X		X					P/G/S
2	15				X		10-15	X	X					X					P/G/S
							.												
							.												

COMMENTS N'most PORTION BEGINS WITH HANG B/C/R SLOPE GRADING INTO A
 LANG, WIDE B/C/P BEACH AND TIDAL POOL IN THE CENTER, THEN TO A
 LANG C/P/B BEACH AT THE SOUTH END OF THE SUBDIVISION. THE N'mos
 15m HAS A PATCHY STAIN AND COAT WITH SPORADIC TAR SPOTS ALONG THE LITZ
 WIDENING TO 56m WIDE INTO THE MITZ AND A SPORADIC FILM AT THE TOP OF THE LITZ
 FOR 60m. SUBSURFACE OILING VARIES HERE BETWEEN 5 AND 15 CM. THE R/B OF
 THE LITZ ALONG THE CENTER 125m OF SUBDIV. HAS A VL SPORADIC AND PATCHY
 COAT AND STAIN. S'most C/P/B BEACH HAS 6m WIDE X 10m LONG BROWN AND
 TRANSLUCENT FILM ON TOP 5cm OF MITZ. REVIEWED MH DATE 4-7-90
 BROKEN COAT

SHORELINE ECOLOGICAL SUMMARY

1250
4/14/90

REVISION 02/28/88

Segment ST/ ELQ55 Subdivision B A Date (mo/day/yr) March 31, 1990

Time (24 hr) 1010-1330 Biologist Jim Barry

160 m length
690

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

Photographs: Roll No. ST-6-2

Frames 12, 13, 17

BARNACLES

Dense 11-100%			26-60 Moderate			5-25 Sparse			2-5 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: TIDE WINDOW -1.0 → +5

Ecological Considerations: LV, 711, 5-T2, 2M

See attached pages

ELOS3-B
52-A

MARCH 31, 1990

1/6
4/4/90

1/6

START TIME: 1010
STOP TIME: 1330

TIDE WINDOW - -1.0 → +5.0

ADDITIONAL COMMENTS

MAJOR SPECIES

I BARNACLES - same comments as ELOS3-A

II MYTILUS -

A. Generally the same comments as ELOS3-B, ~~except~~.

B. Mussel beds are present on 2 or 3 sand/cobble flats. Important characteristics are:

1) Beds contain large numbers of dead mussels, many with small holes indicating that predatory gastropods contribute a large portion of their mortality.

2) Beds are discontinuous & "broken", with large & small gaps between ~~flat~~ groups.

3) Juveniles are abundant and spat are dense ~~on~~ at the base of juveniles & adults.

C. Mussel beds appear to be developing ~~to~~ in a cobble beach where recruiting mussels (dense spat & moderate juveniles) are consolidating the rock ~~as they~~ & filling in gaps.

III Gastropods - same comment as ELOS3-A, plus

1) Nucella lamellosa appear to prey heavily on mussels.

IV Fucus - same as ELOS3-A

V Other species.

Most or all of the species listed in ELOS3-A are present, plus several species found on the sand flat detailed below

VI SAND/COBBLE FLAT.

1) This subdivision included a sand/cobble flat ~ 100 m long x 30, containing a mussel bed, eel grass bed, and sand/pebble flat.

2) Important characteristics

a) Mussel Bed - described above

b) Eel grass bed (*Zostera marina*) - This plant forms a small "marsh-like" plant association containing clams, worms & other sediment-dwelling species.

Eel grass is an important plant on which herring deposit eggs during spawning. This small isolated bed should not be heavily disturbed.

c) Sand Flat Community.

Several species of clams & other worms are present, including.

- * Benthic Clams (*Macoma* spp.)
- * Steamer Clams (*Protothaca staminea*)
- * *Hiatella* pretiosa
- ? Butter Clams (*Saxidomus giganteus*)
- * Moontrails (*Natica clausa*)
- ? Cockles (*Limacandium nuttallii*)

* indicates juveniles or eggs present

? " probably present.

Worms (*Echiura echiura*)

Nereidae

VII WILDLIFE

River Otter - on bank adjacent to sand flat

- dropping adjacent to beach - contain clamshells.

Barrow's Goldeneye - 2

Bald Eagle

Seal - 2

Raven

Pelagic Cormorant - 1

White winged Scoter - 1

Ecological Considerations

- 1) Eel grass community may be important (locally) for herring spawn & should not be destroyed.
- 2) Mussel beds show evidence of disturbance on sand flat & cobble bar this disturbance appears to be recovering, as indicated by dense or moderate recruitment of new individuals
- 3) Sand/cobble flat appears to be recovering (see above)

EL053-B
52-A

EL053-B
52-A

PU. TO 15 pt on Beach 1
PIT 1

low zone under rock
to ruling Community

75% Spirorbide

7 Bryozoan

Small sponges

Jussula Grapoda ~ 25cm

NO Barnacles

WITHERED FUCUS STORM

a little regrowth

+ lots of acantharia in

High zone

Can find Mithras

Barnacles recruits + juveniles

in mid to high

Gastropods sparse in mid

to Scallops

In

LITTORINAE moderate to high

crustaceans sparse to rare in

mid to low

high to low in present no juveniles

+ sparse in upper zone
crustaceans

BALANUS density - mod (T)
- mod (S)

Rubus

Sandier beach

ROCKS

small to large

> Littorinae under rocks moderate
moderate numbers to sparse
few to no adults

0 FUCUS

mid zone

moderate to high

Small Balanus - not too

much in sand - 0

24/4/90

EL 53-A

CUCUS regrowth

tidal zone sand under rock

TIME 1110

Macoma 2 live in sand

SAND ROBBIE FLAT

near outlet stream

ZOSTERA BED -

ERUPTIVE BED in flat

Macoma { NO large - ~ 2cm
? Chem 7 ~ 3cm

Mussel beds patchy & broken
but has dense settlement
of Mytilus - Dead (A)

- also Littorina, Lygia, Modiolus
in bed

Headlands missing - Muscels mostly
Dead (A)

Emmace, two (8, 9 = 5)

EL 53-A

Eastern at about

same level as nearby
Fucus bed

Mid flat has many small eggs
Casey ~ 5-10/50m

PHOTO 7B? Recruitment
of Mytilus on headland

PHOTO 12 - Recruitment of STARS
columns on underside
of rock to on sand
pitted flat

STILL near outlet Stream
Fucus A

Upper to mid Macoma
Boulders of Mussels/Barnacles

River often tracks, SEAT = C/aim
shells

Dead tracks on beach

MACOMA 3 and live

DECEMBER 14/190

ELOS-B
52-A

6 pricklybacks under
1 sec 0.5m dense rock
P. ant. water

Not a new section
PHOTO TAKEN OF ROCK:

BUILDINGS AT EDGE OF
BEACH

- Dense Barnacles
- SPAT, juveniles (Ad.)

Mytilus Spat sov
Limpets moderate
L. Horrea dense

Fucus regrowth, slight

NOT TOO MUCH FUCUS regrowing
on Beach Flat cobbles.

LUNCH

ELOS-B
52-A

FLAT - Mussels dead

Mostly 4 drilled - 8/18

Beach P 5 and 11 segment
(small core 1 beach)

> Mussels & JUV - spat Moderate
Beach Community back

> Mussels

> Pyrosoma

> Pyrosoma

> Barnacles

Upper -
Barnacles

> Fucus adults

Dense spat (Mytilus)

Hindmost juveniles

Dense Limpets

new Dense L. Horrea Spat JUV.

Boulder/Cobble

> Fucus sporophytes on cobbles

> Limpet spat

> Barnacles (35)

SANDY BEACH

EPIACTIS-7

CLAM - 10 Ant. 11

Revised 4/1/18

OG C.I DN

SEGMENT ST/ EL-5352

SUBDIVISION BA

DATE 31 Apr 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWA/LVL
- ☐ SSI
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PR Location(s)
- ☐ Photo Location(s)

LEGEND

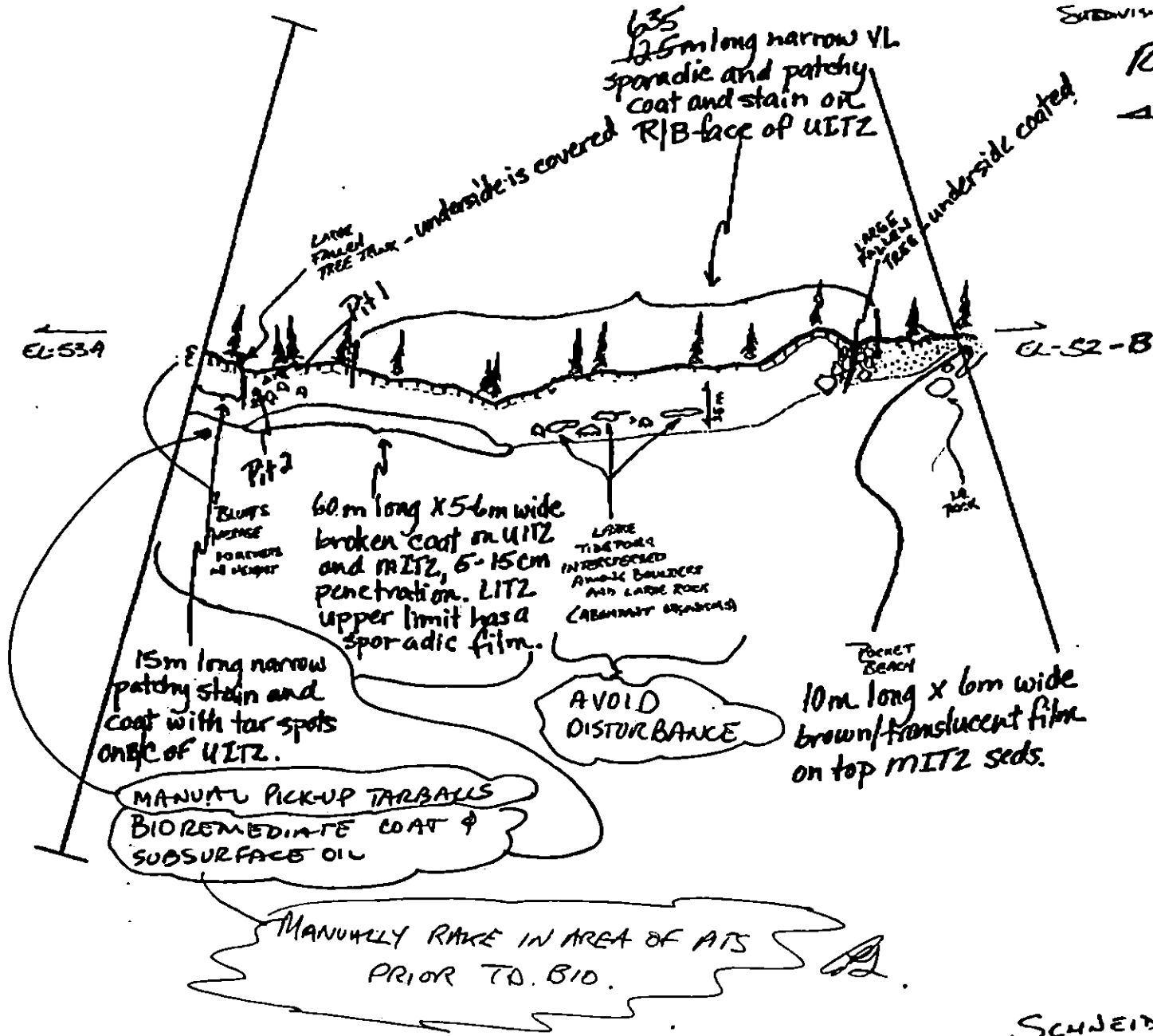
- 1 Δ
- PH - No Subsurface Oil
- 2 Δ
- PR - Subsurface Oil
- CT/C
- Continuous Distribution
- CT/B
- Broken Distribution
- CT/P
- Patchy Distribution
- CT/S
- Splashed Distribution
- Oil Vegetation
- 1 $\bullet$
- Photo location, direction, and number

ETCH MAP

SEGMENT EL-5352
SUBDIVISION BA
Subdivided Length 1.60m

Revised 4/4/90

N

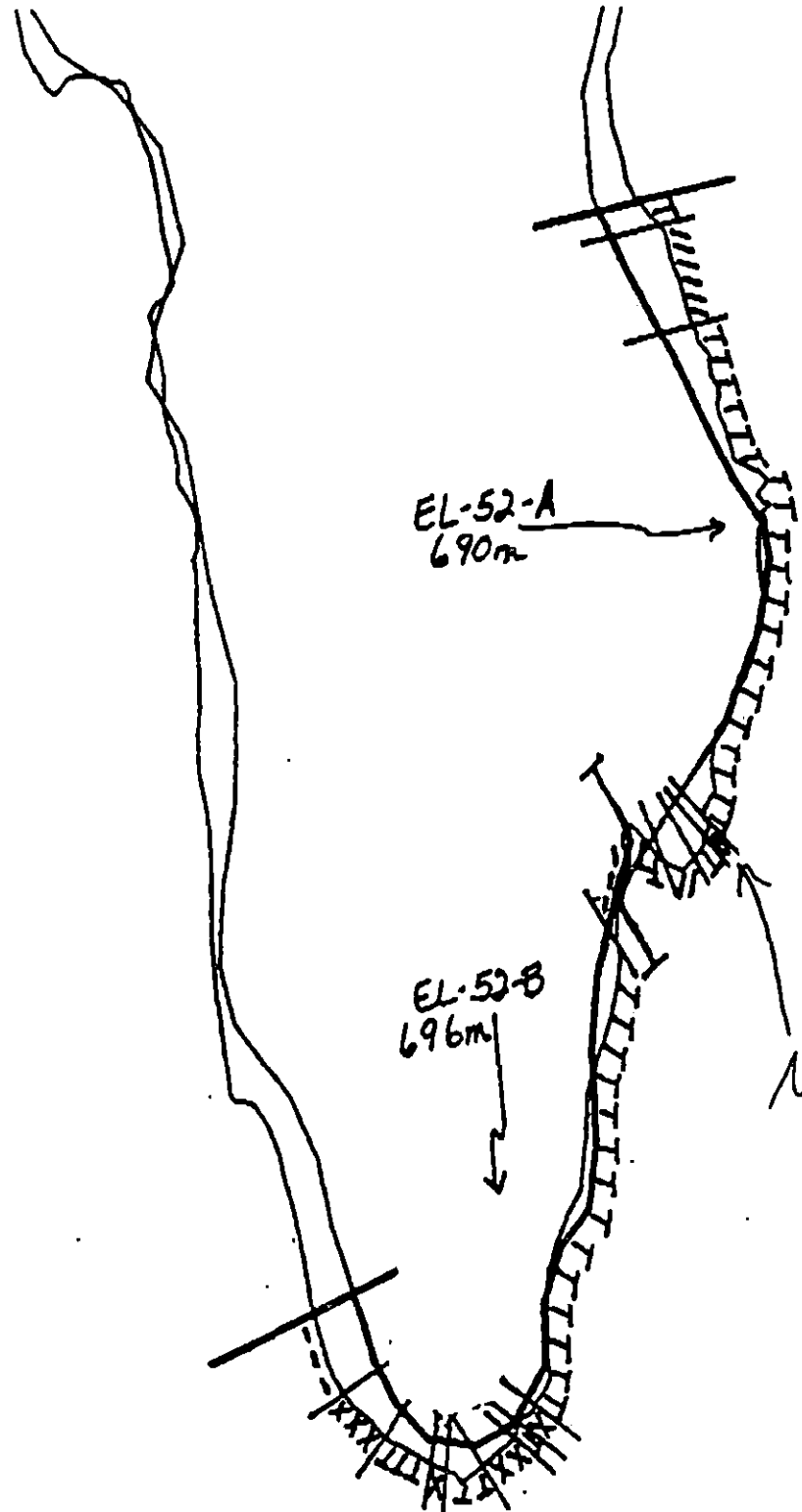


Oil Character Length (m): AP 130 PO 635 CV MS PT 3 TB 10 NO 5

REVISION: 230000

Pg. 6 of 4

EL -



EL -

No oil ~5m

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

EL-52

ADEC Segment Length: 1224m



Map Key: PWS-135
Name: C. DILLON
Date: EL-52-A 3/31/90
EL-52-B 4/4/90
Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

- SEGMENT EL-52 SUBDIVISION A (1 of 2)

WORK WINDOW	
Manual Pickup	OPEN
Bioremediation Manual Raking	WORK PRIOR TO 8/15

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

NO CONSTRAINT. ADF&G catalogued anadromous stream (226-10-16902) is located in adjacent Subdivision B more than 100m from work area.

5T Bald Eagle Nest

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

7II Subsistence: Deer Harvesting

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

OTHER ECOLOGICAL CONSIDERATIONS

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

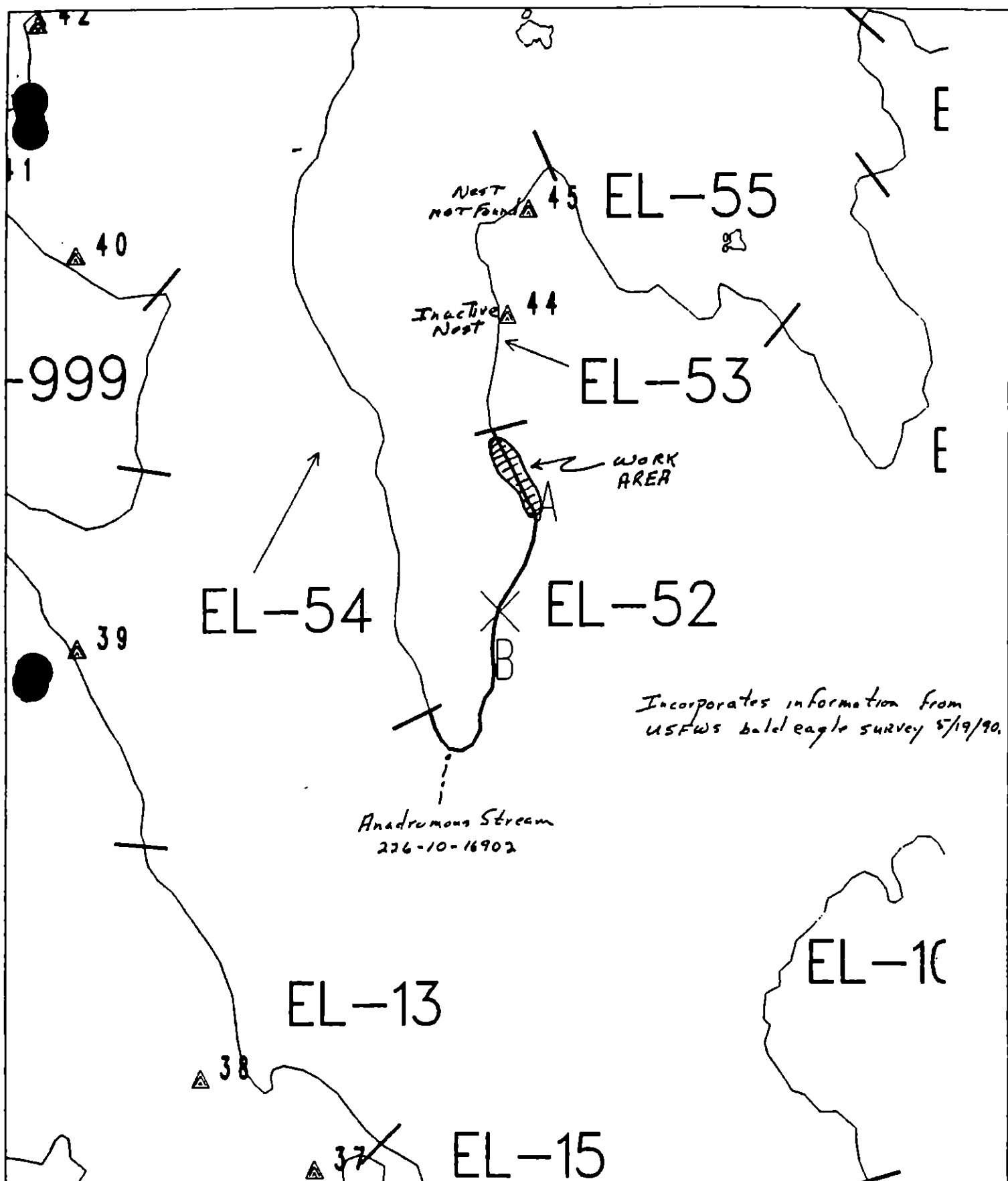
FOSC

DATE 6-10-90

Prepared By:

Date

6/9/90



Exxon Company, USA

Map Key: KNI-EL-52

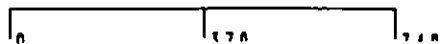
May 11, 1991



ECOLOGY MAP 5/30
SEGMENT EL-52

SUBDIVISION A (1 of 2)

METERS



Seabird Colony



Eagle Nest

SHORELINE EVALUATION

SEGMENT ST/ EL-52 SUBDIVISION B (2 OF 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

ADF&G anadromous stream no. 226-10-16902

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

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

6U Recreation: Tent sites (6/1 to 9/15)

6V Anchorages (6/1 to 9/15)

6Y Special use destination

7II Subsistence area: Deer harvesting

See attached Ecological Constraint Sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 98 m: Medium 16 m: Narrow 59 m: V.Light 454 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 20 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> </u> Other (see comments)

COMMENTS: Recommend break up and removal of tarmat, pick up of tar balls, and Bioremediation of areas shown on sketch map, ~~but not within 100m of stream~~. Work should be conducted from 5/16 to 7/9 based on above salmon constraints.

BIOREMEDIATION UP TO THE STREAM BANK. SUBJECT TO ADF&G CLARIFICATION.
TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90.

ADEC Art Weiner Art Weiner

EXXON AMT TEL Paul

NOAA Bruce Wescott Bruce Wescott

USCG KENNETH KERR Kenneth Kerr

FOSC: Daryl L 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 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
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-52-B SUBDIVISION: B DATE 4/6/90

USCG NAME David A. Schneider SIGNATURE David A. Schneider

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED 783/USCGP

~~Manual~~ breakup and removal of tar/asphalt mat in UITE.
Manual scrapping and removal of tar spots and coat in MITE and UITE along eastern stretch of subdivision and in MITE & UITE along south western corner of subdivision. SITE reassessed after snowmelt.

DS

ADEC NAME Peter Montesano SIGNATURE Peter / Montesano

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS OF CONCERN to ADFG is a 2x8m patch of Asphalt to west side of the small drainage in the South East corner of B. This should be manually removed. See map.

There is some additional Asphaltting to the North (on map) and some cementing which appears to be oil related. These should be broken and/or removed.

The Rock outcrop at the Southern has oil in cracks to be wiped & removed.

The area is not bro'able due to the primary clean surface sediments. I recommend that ADFG examine the stream at the Southern end, ~~and~~ to check the Supratidal, snow covered grasses and if necessary dig additional pits by stream.

LAND MANAGER

NAME JANETTA PRITCHARD SIGNATURE Janetta Pritchard

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Nice recreational beach. Overall treatment recommendation is manual clean up of tar & asphalt, hand wiping of oiled crevices. Possible removal of some cobbles adjacent to stream. Care needs to be taken to not disturb the mouth of the stream used by spawning salmon. Reassess the SUPRA after the snow melt.

OG C. DILLON USCG D. SCHNEIDER SEGMENT ST/ EL-52
 BIO ST. BARRY LAND REP J. RITCHARD SUBDIVISION B (2 of 2)
 EXXON A. SNOOK ADEC P. MONTESANO TIME 15:45 to 17:00
 TEAM NO.: 6 TIDE LEVEL: +1.75 to +1.5 DATE 04/1/04 190
 EST. SUBDIVISION LENGTH: 696 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 30 % C 40 % P 20 % G 5 % S 0 % M 0 % V 0
 SLOPE: Long 100 % Hang 0 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 75 m M 0 m N 150 m VL 261 m NO 210

SURFACE OIL

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

PAVEMENT: H (F) 3 sq. m by 2

PATTIES TARBALLS 1 BAC

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECT ☐ YES ☒ NO

TYPE 0

#BAGS 0

Photographs:

Roll No. ST-64

Frames 12

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		VO	UC	1	2	3	4	5	SU	U	M	V		
1	30	X					0-12							X	X					C/P/G
1	30	X					12-20	X					X		X					P/G
							.													
							.													
							.													
							.													

COMMENTS

SHORELINE ECOLOGICAL SUMMARY

REVISION: 05/22/91

Segment ST / EL052 Subdivision B Date (mo/day/yr) April 4 1990Time (24 hr) 1445 Biologist JIM BARRY Length 696(A) Substrate type and % of segments:
(1) Bedrock 5 (2) Boulder 30 (3) Cobble 40 (4) Pebble 20 (5) Sand 5 (6) Silt(B) Overall % cover of biota (% of segment): Dense 20 Moderate 70 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:
Roll No. ST-6-4Frames 13-17

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

BIRD EAGLES
PLAGIC CORMORANT
BROWN GOLDENROE
RAVENS

DEAD SEA OTTER ON BEACH - NO OIL, HEAVY DECOMPOSED.

Ecological Considerations: 1B, 644V 711

- 1) Salmon Spawning Stream mouth (1B). Clean up activities should avoid this area stream mouth due to salmon spawning.
- 2) SANDY/PEBBLE BEACH HAS AREAS WITH RECOVERING MUSSEL BEDS - AVOID HEAVY foot traffic or machinery.

START : 10:00 AM STOP

TIDAL WINDOW

I GENERAL COMMENTS.

THIS subdivision has 2 major features, 1) a stream mouth/beach and 2) a cobble/boulder flat.

1) The stream mouth/beach has important biological features. First this is a spawning stream for salmon (designated by special restrictions). As such care should be taken to avoid disturbance to the stream bed outlet area during and after the salmon spawn. In addition, the pebble beach has a patchy cover of mussels; some areas appear to be forming mussel beds. Heavy foot traffic or machinery traffic could disrupt this recovery and should be avoided.

2) The Cobble/Boulder flat, a low angle beach, has a large proportion of sands and pebbles used by infaunal species such as clams and worms. Several species of clam shells are found on this beach, but I was unable to find live individuals of each species.

Clam Shells	LIVE Clams
Scallop (<i>Chlamys</i> spp.)	NO
Vinger (<i>Pododesmus</i> spp)	YES (juveniles)
Cockle (<i>Clinocardium</i> spp)	NO
Clam (<i>Macoma</i> spp)	YES (juveniles)
Steamer Clam (<i>Protothaca</i>)	yes (juveniles)
Butter Clam (<i>Saxidomus</i>)	NO
? Clam (<i>Hiatella</i>)	yes - juveniles

The "missing species" may have been present, but undetected, or may live in slightly deeper water and wash ashore as empty shells, or may have been killed by oil and have yet to recover.

Other species found on the flat that are typical and important in sand flat habitats are the weenie worm (*Eteone* spp.), large infaunal worms (*Nephtyidae*, *Urechidae*), and crabs (*Hemigrapsus oregonensis*). Overall, this a cobble/sand flat appears to be healthy, or

3) Red Algae (cont)

Lithothamnion R1

MEMBRANOPTERA S12

CRYPTOSIPHONIA S12

MICROCLADIA/PTEROCADIA (S12)

MASTOCARPUS S1

4) BROWN ALGAE - PHAEOPHYTA

FUCUS DISTICHUS - D12

LAMINARIA spp - S12

HILDEBRANDIA - S1

RUEFIA S1

COSTARIA S1

ALARIA S12

SYTOSIPHON S12

B ANIMALS

A. BARNACLES

SEMIBALANUS CARIOSUS * S1

BALANUS GLANDULA * M12

ONTHAMALUS DALLI * M12

2) Crabs

PAGURIDAE - Hermit Crabs - * M123

HEMIGRAPSIUS OREGONENSIS * M123

HAPLOGASTER R23

3) Amphipoda

ORCHESTRA? spp. M.D 23

ANONYX spp.? R2

4) BEACH HOPPERS - ISOPODA - S12

5) MUSSELS - MYTILUS EDULES M12 *

6) SNAILS

LITTORINA SCUTULATA M123 *

L. SITKANA * M123

NUCELLA LAMELLOSA S12 *

N. EMARGINATA S12

SCARLESIA DIRA S12 *

7) Limpets

TECTURA SCUTUM S123 *

T. PERSANA S12

SIPHONARIA R12

7) Centinurus - Linguals

LOTTIA PERSANA S12 *

L. DIGITALIS S12 *

8) CHITONS

KATHARINA TUNICATA R12 *

9) Sea Stars

PYRENOPADA spp. S12 *

LEPTOSOMAS M123 *

ORTHASTERIAS S12

10) Scallops / Clams

PADOESOMUS S123 *

HATHELLA spp S123 *

PROTOHELLA spp S23 *

MACOMA spp S23

11) WORMS

ECHINURAN WORMS

ECHINURUS ECHINURUS M3

SIPUNCULIOS

PHASCOLOSOMA spp. M3 *

POLYCHAETES

NEREIDAE S34

NEPTHYDEAE S34

OTHERS

SPICERIBIDAE M23 *

12) Anemones

ANTHOPLURA spp R12

13) FISH

PHOLIDAE M123 *

COTTIDAE R23

II MAJOR SPECIES

- A. BARNACLES - MODERATE densities were found overall, as would be expected in this habitat. *Balanus glandula* was the primary species.
- B. MYTILUS - Mussels were moderate to sparse overall, but were very patchy, with occasionally high densities. Boulders and cobble on the flat frequently had patches of mussels. Spat or small juveniles also were found in most areas. On the beach (pebbles), mussels were scarce overall, but were dense in patches where mussel beds were developing.
- C. GASTROPODS - Rare or occasionally dense on the pebbly beach, and otherwise moderate.
- D. FUCUS - Except on the pebbly beach, where fucus was absent, fucus was dense on cobble & boulders in the mid to low zones.

I Species List.

A. MARINE PLANTS

1) DIATOMS / BLUE GREEN ALGAE

2) GREEN ALGAE - CHLOROPHYTES

SPERMATOPHYTES / ACROSSIPHONIA D12

ULVA M12

ULOSPORA M12

CLADOPHORA S12

STYTEROMORPHA S12

3) RED ALGAE - RHODOPHYTES

PORPHYRA S12

PETROCELIS S1

RHODOMELA LARIX S1

RHODYMENIA palmata M12

BOSSIELLA spp R1

CALLIANTHUS R1

CORALLINA R1

EUDOCLOA R1

HALOSACCUS S12 *

IRIDARIA S12

* SPAT OR JUVENILES PRESENT

D DENSE

M MODERATE

S SPARSE

R RARE

1 BEDROCK

2 BOULDER

3 COBBLE

4 PEBBLE

5 SAND

ELOSZ - B

See index
next page

APRIL 6 1990

4/6

III SPECIES LIST

A. MARINE PLANTS

- 1) DIATOMS / BLUE GREEN ALGAE
- 2) GREEN ALGAE - CHLOROPHYTA
 - SPONGOMORPHA / ACROSIPHONIA M123
 - ULVA S123
 - CLADOPHORA S12
 - ENTEROMORPHA S23

3) RED ALGAE

- PORPHYRA M12
- PETROCELIS S12
- RHODOMELA LARII M12
- RHODYMENIA PALMATA D12
- BOSSIELLA SPP. S12
- CALLIANTHUS S12
- CORALLINA S12
- ENDOCLODIA S12
- HALOSACCION M123
- IRIDACEA S12
- CRYPTOSIPHONIA M12
- MEMBRANOPTERA M12
- MASTOCARPUS S12
- MICROCLADIA (PTEROCLADIA) M123
- LITHOTHAMNION S12

4) BROWN ALGAE - PHAEOPHYTA

- FULUS DISTICHUS M123
- LAMINARIA D12
- HILDEBRANDIA M12
- RALFSA M12
- COSTARIA M12
- ALARIA M123
- SYTOSIPHON S12

B. ANIMALS

1) BIVALVES

- SEMIBALANUS EMIOSUS M123
- BRANUS GLANDULA M123
- CHITANUS DILLI M123

2) PEGURIDAE - HAMMUS CARDS M123

- HEMIGRYPUS OREGANENSIS S23
- HAPLOGASTER R23
- PLUETTIA SPP. R23

3) AMPHIPODS -

Orchestra spp. M23

4) MYRIDS - MYRIDACEA. RUALA

5) BEACH HOPPERS - HOPODA S23

6) MUSSELS - MYTILUS EDULIS M12

Modiolus spp. R12

7) LITTORINA PISCICOLA M123

L. siliqua M123

Nucella lamellosa S23

N. emarginata S23

Scapharca diaphana M23

Tachysphinctus S23

8) LIMPETS

Tectaria scutellum M23

T. emarginata S12

T. pumila

Lottia digitalis S12

L. pumila S12

Acmaea mitra R12

Siphonaria ditherea M123

9) CRUSTACEANS

Tunicella lineata R12

Mopalia spp. R12

Katharina tunicata R12

10) SEA STARS

Pygospio helianthoides M23

Dermasterias M12

Leptasterias M12

Orthasterias R123

Pisaster ochraceus M12

11) SCALLOPS / CLAMS

Pododemus S12

Hyatella S12

Protothaca S12

Macoma spp. S12

12) ANEMONES

Anthopleura elegantissima S12

A. adenocoma R123

A. kumagaii R123

Tealici crassicornis R123

Epiastra R123

EL052-B

ANIMALS (cont)

APRIL 7 1990

5/6

13) WORMS

ECHINURAN WORMS - ECHINURUS ECHINURUS
DIPOMPHOS - PHASOLOSONIA spp.

POLYCHAETES -

NEREIDAE M123

NOTHODAE M123

OTHERS

SERPULIDAE R123

SERPULA

CRUCIGERA

SPIRORBIDAE M-D123

SPIRORBIS spp.

A Juveniles present

D Dense

M Moderate

S Sparse

R RARE

1 On Bedrock

2 Boulder

3 Corals

4 Pebble/Sand

14) FISH -

Cottidae - 3 spp. M123

PHOLIDAE - 1-2 spp. M123

~~15) Hydroids - Styliola perfrons~~

16) OTHERS

Natica Clausa - occasional - R23A

Amphissa columbiana R23A

Lanellidors fusca? M123

Guerinotaphrona oregonensis S123

Other isopods - 2 spp

~~Lebbeus spp. R23A~~

Schreoporella spp? M123A

~~Strongylocentrotus drobachianus R23A~~

00 C.D.11 J

SEGMENT ST/ EL-52

SUBDIVISION B

DATE 04 APRIL 90

CHECKLIST

- ☐ M Area
- ☐ Apprx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HMA/LVA
- ☐ 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
Splashed Distribution

Cold Vegetation

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

S CH MAP

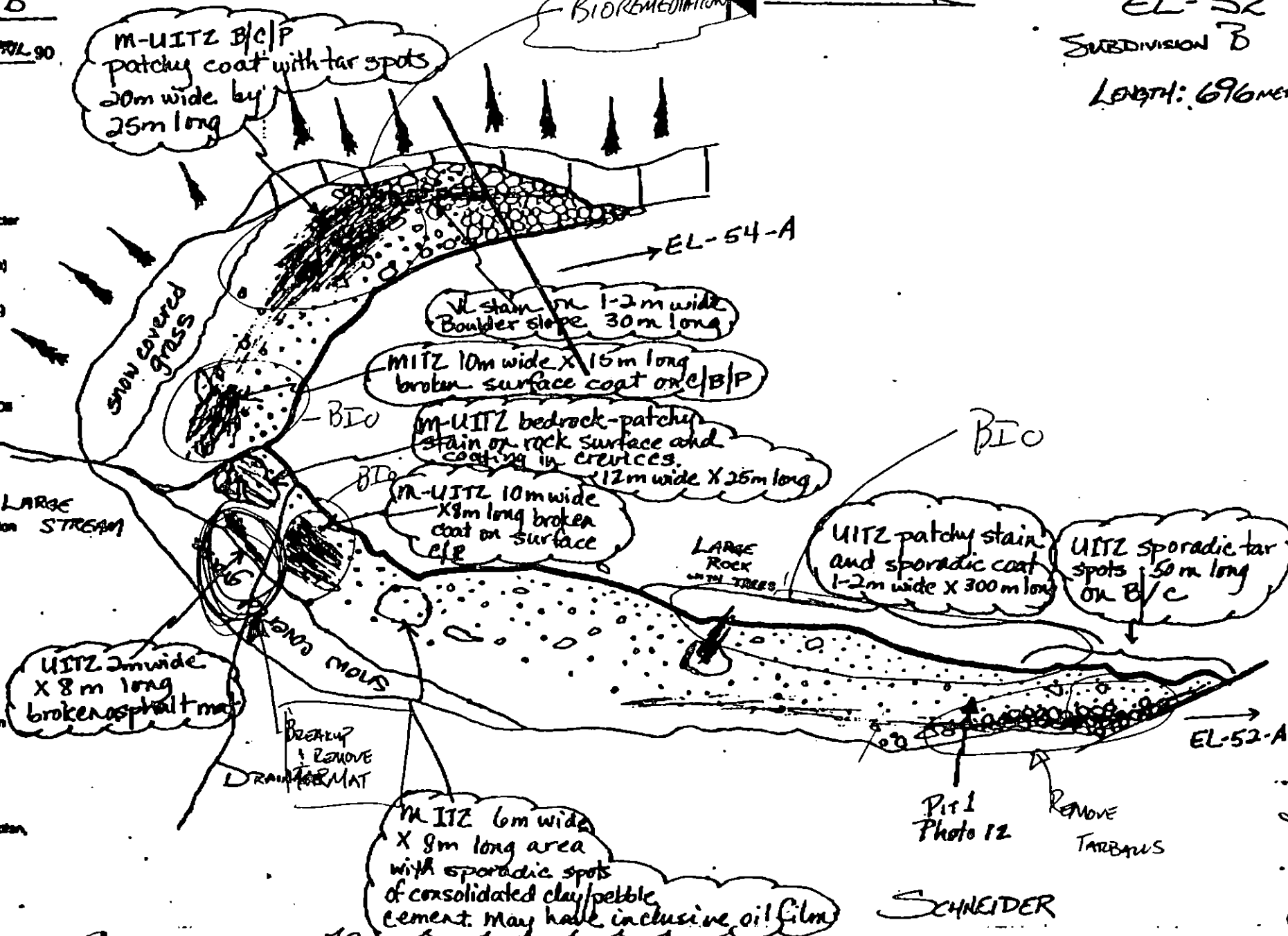
BIOREMEDIATION

SEGMENT

EL-52

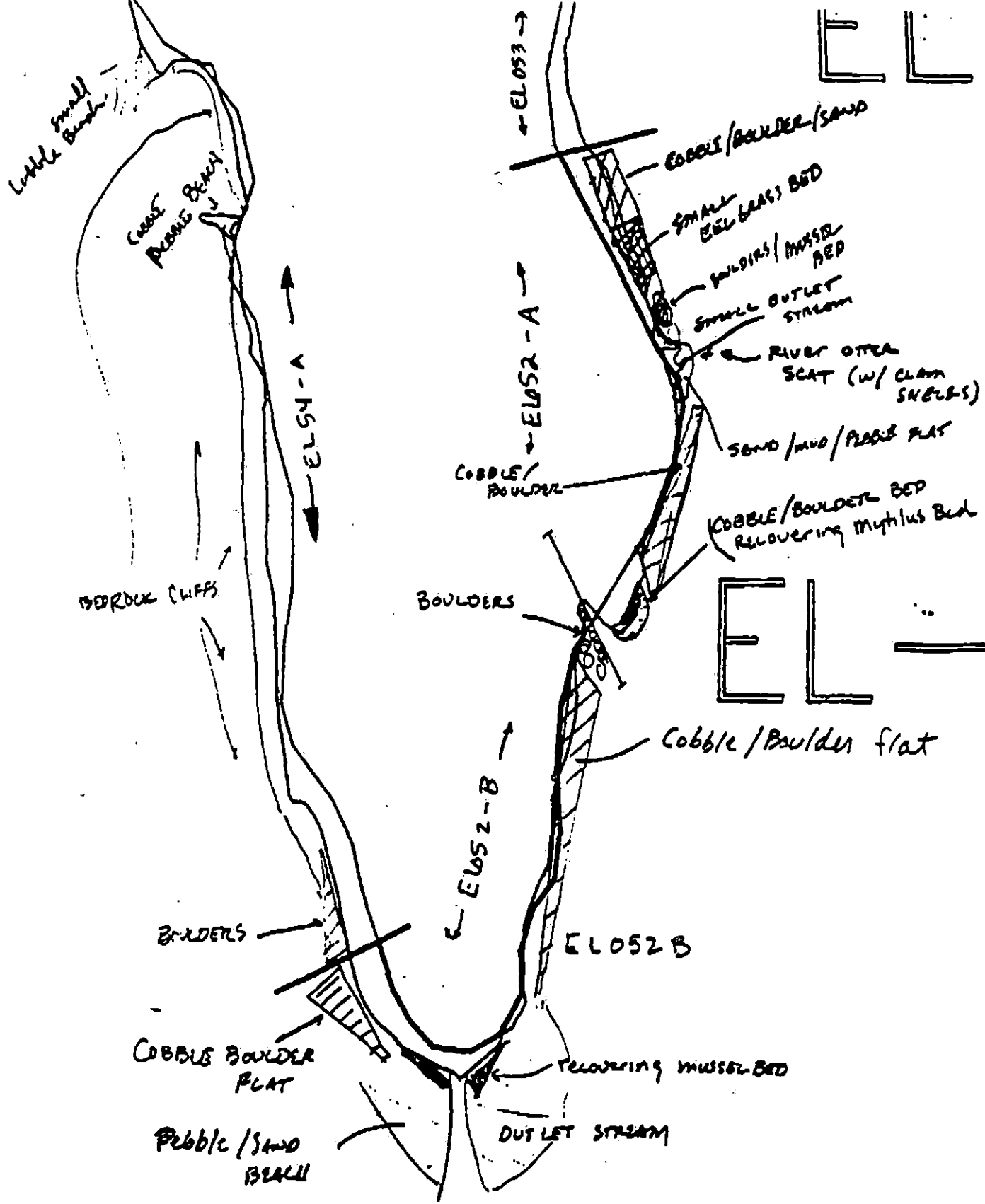
SUBDIVISION B

Length: 696 meters



Oil Character Length (m): AP 8 PO 0 CV 0 CT 73 ST 365 MS 0 PT 0 TB 50 FL 0 NO 210

REVISION: 000000



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

EL-52

ADEC Segment Length: 1224m

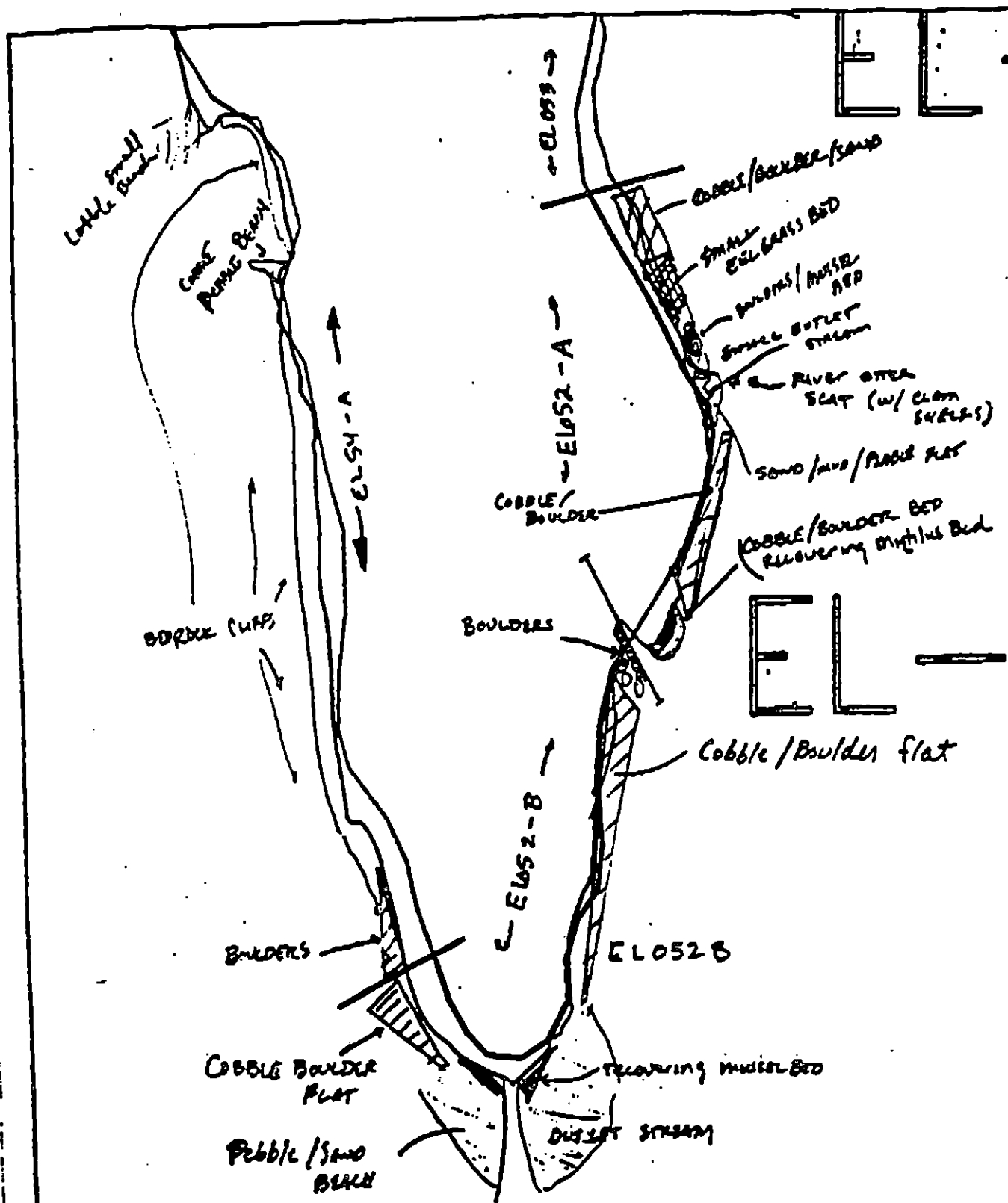


Map Key: PWS-135

Name: _____

Date: _____

Date Entered: _____



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

EL-52

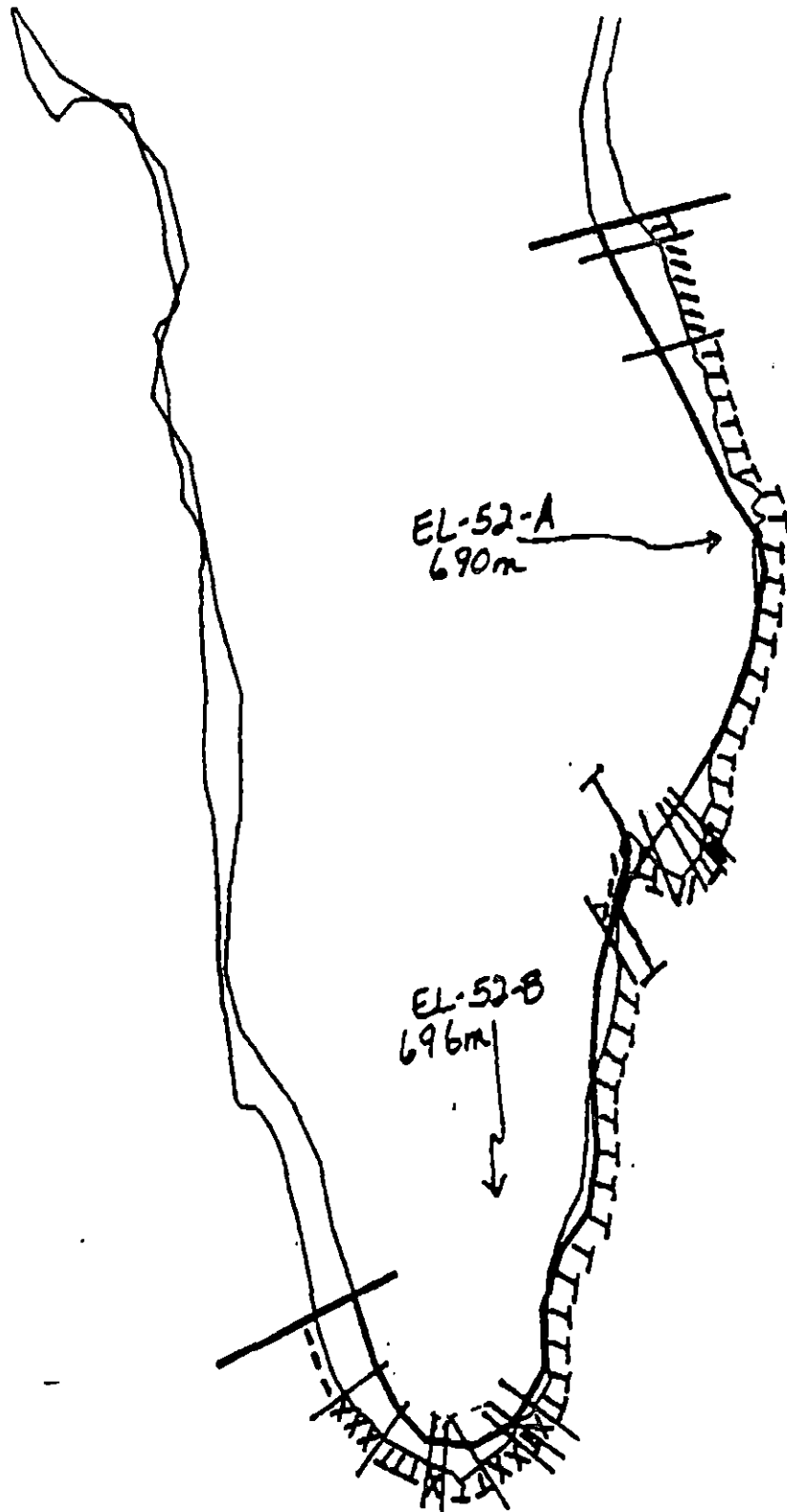
AVOC Segment Length: 1226m



Map Key: PWS-135
 Name: L.D. Jones
 Date: 1/1/80
 Date Entered: .

EL-

page 3 of 3



EL-

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EL-52

ADEC Segment Length: 1224m



Map Key: PWS-135

Name: C. DILLON

Date: EL-52-A 3/31/90

Date: EL-52-B 4/4/90

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS**SEGMENT EL-52 SUBDIVISION B (2 of 2)**

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

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS**1A,1B Salmon stream**

ADF&G catalogued anadromous stream is present in Subdivision (226-10-16902). 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.

**7II Subsistence: Deer
Harvesting**

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

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance of stream bed or banks. No flushing of pollutants or sediments into stream drainage. Restrict boat and air traffic to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unrolled substrate and biota.

**SEE ANADROMOUS FISH STREAM EVALUATION ADDENDUM (STREAM NO. 226-10-16902)
FOR ADDITIONAL CONSTRAINT INFORMATION**

TAG ADDENDUM DATE 6/04/90
 ADEC Ron Mearns
 EXXON Andy Galt
 NOAA Joseph Kilgore
 USCG G. H. Reister

FOSC B. Janoff DATE 6/7/90

Prepared by: David Meyer

Date: 6/4/90

999

40

39

EL-54

38

EL-13

37

EL-15

45

EL-55

44

EL-53

EL-52

EL-10

400M EAGLE NEST ZONE

Work Area

ANADROMOUS STREAM 100m ZONE
226-10-16902

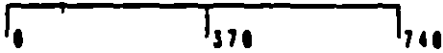


Exxon Company, USA
Map Key: KNI-EL-52
May 11, 1990

ECOLOGY MAP SEGMENT EL-52

SUBDIVISION B (2 of 2)

METERS



- ★ Seabird Colony
- ▲ Eagle Nest

1 inch = 1214 feet

ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 226-10-16902

SEGMENT EL-52 SUBDIVISION B

WORK WINDOW

Bioremediation and Manual Raking
Less Than 100m From Stream

WORK PRIOR TO 7/10
(ADF&G MONITOR REQ.)

Bioremediation and Manual Raking
More Than 100m From Stream

WORK PRIOR TO 8/15

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream

ADF&G catalogued anadromous stream (226-10-16902) is in Subdivision B. This subdivision is closed to bioremediation and manual raking less than 100m from stream 7/10 to 8/31. Before 7/10, bioremediation and manual raking are permitted less than 100m from stream with on-site ADF&G monitor or ADEC alternate present. No constraint to bioremediation and manual raking more than 100m from stream.

7II Subsistence: Deer
Harvesting

Closed to manual raking and 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 Inpol to enter stream flow. On-site examination and consultation by ADF&G monitor is required prior to bioremediation in order to authorize a setback distance from the stream during chemical application; if ADF&G monitor's presence is impossible, authorization may be given by the ADEC monitor. Restrict boat and air traffic and beach disturbance to essential minimum after 8/15. Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

SEE SUBDIVISION CONSTRAINT ADDENDUM EL-52B
FOR ADDITIONAL CONSTRAINT INFORMATION.

FOSC

[Signature]

Date

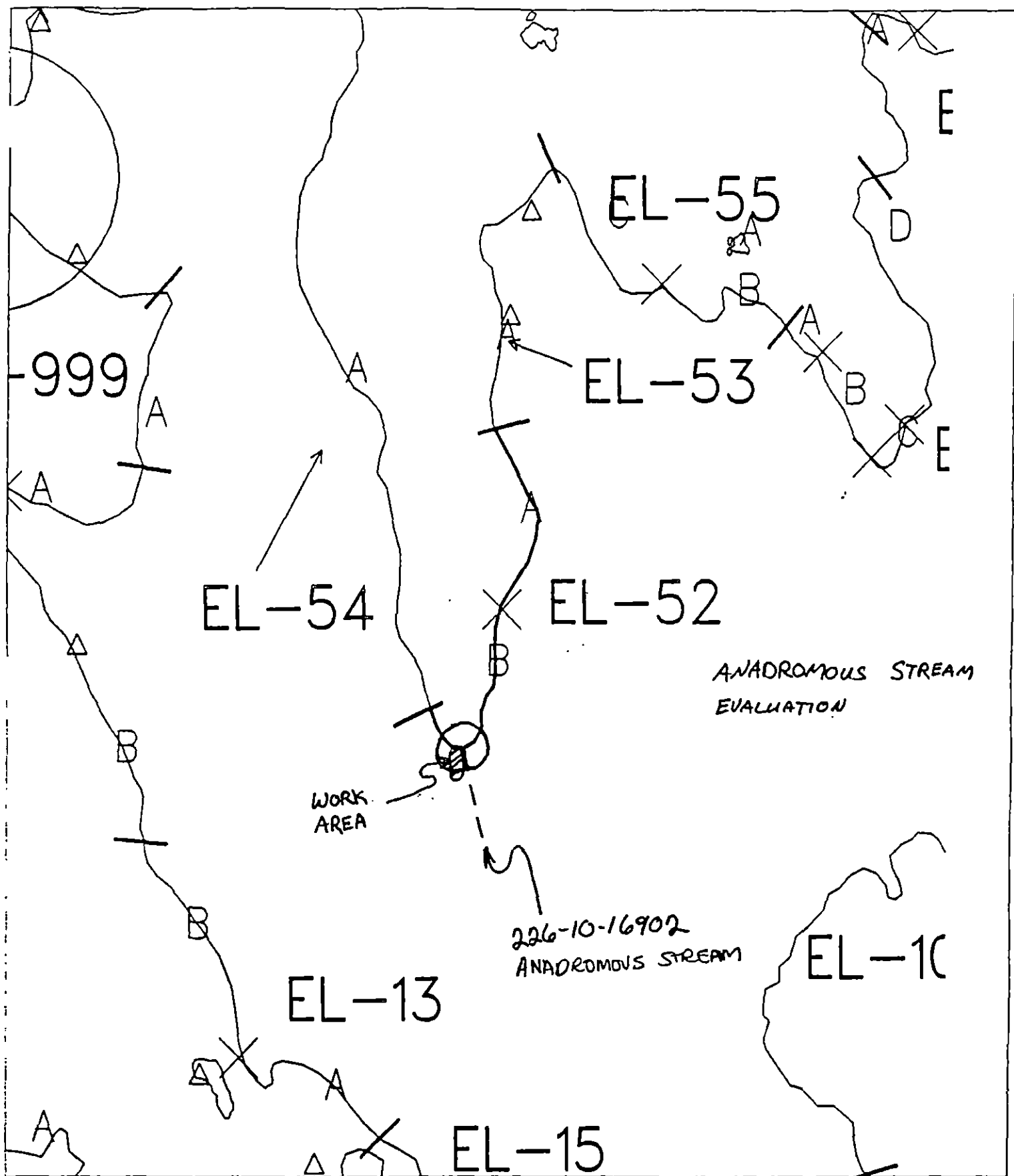
6-16-90

Prepared by

[Signature]

Date

6/15/90



Exxon Company, USA

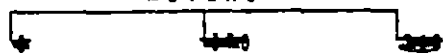
Map Key: PWS-EL-52

June 04, 1990



ECOLOGY MAP SEGMENT EL-52 SUBDIVISION B (2 of 2)

METERS



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

ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/ EL-52 Subd.: B Site: 1 Date: 8/8 1990

Also includes AWAD Stream # 226-10-16902

Conditions Observed: Pooled oil Present at the Litz along boulder/cobble beach on the East Side of bay. Subsurface oil extends up to 500m
Continuous at the Litz. SBR Sediments present in Stream area
SNEENING OBSERVED.

Followup Recommendations: Pooled oil present thru-out Litz should be
manually removed. Work will have to be delayed at either minus
tide or very low tide due to the location of the oil. Strong shore boom along
inter shore to contain oil. Remove SBR Sediments from Stream
area, manually till and custom blend. Remove oiled log around
Stream. No evidence of custom blend is present in work site

Completed by Pickup
 Crew:

☐ YES ☒ NO

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

ADBC

Wesley Gihormley

Wesley Gihormley

Comments: I totally agree with above recommendation. Most important
is shore boom must be used due to the condition of the oil.

BCOA

REY SOTELO

Rey Sotel

Comments: I don't agree with these recommendations, instead I suggest
the area be exposed by raising and applying custom blend. This should
be a low priority problem for 90.

USCG

PSI Leo Bersalona

Leo Bersalona

NOAA

Art WEINER

Art Weiner

Comments: AGREE W Recommendations

This is a low priority problem for 1990.

Lead Rep.

John Ebel

John Ebel

Comments: Shore boom along traverse. Salmon spawning & fertilization windows & open
for work plans. Skin off top armor (thin coat 90). Remove oiled sediments
minus tide. Operational schedule. Recommended mechanical ^{not} manual removal
of site due to tide zone.

ASAP TAG REVIEW SHEET

Segment: EL52 Subd: B Site: 1 Date PRE-Review 11 AUG 90

Priority For Addressing In 1990

HIGH

MEDIUM

LOW

~~NTR~~

Treatment Recommended:

~~NTR~~ based on OG & SKETCH

ec. sheet indicates high

Recommendation / Comments Sheets do not agree with OG & SKETCH. which indicates Pooled Oil / SOR (high) ANAD. STREAM present.

Priority Site For Reassessment In 1991

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

TAG 13 AUG

Manual Rake and BIO after Removal of Pooled oil.

Remove HIGH SOR, & LOW ITZ. in VICINITY OF ANAD STREAM.

see sketch

FIELD SHORELINE COMMENT SHEET

SEGMENT AS/EL 52B SUBDIVISION: 8 SITE: 1 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:

PROPOSED WORK, AS SPECIFIED IN THE ASAP FOLLOWUP RECOMMENDATIONS,
SHOULD REMOVE ALL OIL.

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley ☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

- Due to the area containing Anad Stream #.
226-10-16902 I believe a reassessment is in
order to ~~be~~ determine if any oil remains.

LAND MANAGER

NAME John Ebel SIGNATURE John Ebel☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

To evaluate effectiveness of treatment.

EXXON

NAME Ray Sotelo SIGNATURE Ray Sotelo☐ YES☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

This site should not be a priority for reassessment in '91, my
recommendation is that it not be assessed at all.

ASAP SHORELINE OILING SUMMARY

PAGE 02

TEAM NO. ASAP #2 EXXON SOTELO SEGMENT AS/ EL 52
 OG CHAVEZ USCG WEINER/OPSALONA SUBDIVISION B
 ADEC G HORMLEY LAND REP ERCL, JOHN (DNR) TOTAL NO. SITES 1
 DATE Aug 18 1990 TIME 07:35 to 08:55 TIDE LEVEL 2.5 to -0.3
 TOTAL EST LENGTH OF SHORELINE SURVEYED: 627 m
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WEATHER: ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 OIL CATEGORY LENGTH: W 15 m M 100 m N - m VL 512 m NO - m US 0 m

SURFACE OIL

SITE 1

CHARACTER	DISTRIBUTION				OILED ZONES			
	IC	IB	IP	IS	SU	UI	MI	LI
ASPHALT								
S.O.R.		X	X			X	X	
POOLED								
COVER				X		X		
COAT			X	X		X		
STAIN			X	X		X	X	
MOUSSE								
PATTIES/T.B.								
FILM				X		X		
NO OIL					X			X
EST. SITE LENGTH					<u>627</u>			

SITE 2

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

SITE 3

CHARACTER	DISTRIBUTION				OILED ZONES			
	IC	IB	IP	IS	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	30				X	.	Y			X		GPM-GPM
1	2	25	X	X			0-10	Y			X		GPM-GPM
1	3	20		X	X		0-10	Y			X		GPM-GPM
1	4	30			X		5-10	Y		X			GP-GP
1	5	15				X	.	Y			X		GP-GP
1	6	15		X			0-10	Y		X			BPG-BPG
1	7	20		X	X		5-10	Y			X		BPG-BPG
1	8	20		X			0-20	N		X			GP-GPB
							.						
							.						
							.						
							.						

Photographs:

Roll No. NONE

Frames _____

Dark Sheen w/ Brown Oil Drops

COMMENTS The region within 200 meters of the stream retained most of the surface oil however the low angle beach on the subdivision's NE side holds the majority of the region's mobile subsurface oil. Black oil sheen to at

00 C. DILLON

SEGMENT 871 EL-52

SUBDIVISION B

DATE OF 1 APRIL 90

CHECKLIST

- Area
- Approx. Size
- Seg/Sub
- Oil Dist.
- Wind
- Length
- % Cover
- Substrate
- Est. 1984/85
- S.S.
- Photo Location
- Photo
- Photo Location
- Photo Location

LEGEND

1 A

2 A

3 A

4 A

5 A

6 A

7 A

8 A

9 A

10 A

11 A

12 A

13 A

14 A

15 A

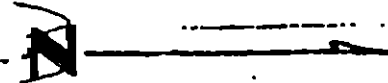
16 A

17 A

18 A

STILL VALID, NO MODIFICATION WAS MADE

SKETCH MAP



SITE 1
WHOLE
BEACH

ASAP #2
AUG 8 1990
FROM SSAT
MAP
CHANEY

M-UITZ B/C/P
patchy coat with tar spots
20m wide by
25m long

Less Than 1%
Splattered
& CT/S/U

DAMES
& MOORE

CUSTOM BLEND

MITZ 10m wide X 10m long
surface coat on C/B/P
patchy
M-UITZ bedrock-patchy
stain on rock surface and
seeping in crevices.

M-UITZ 10m wide
X 8m long broken
coat on surface
12m wide X 25m long

MANUAL
REMOVAL
HAS TAKEN
PLACE

UITZ patchy stain
and spots on
1-2m wide X 200m long

UITZ sporadic
spots
on B/C

NOAA
STUDY
#14

UITZ 2m wide
X 8m long
broken coat on surface

NOT OBSERVED

CUSTOM BLEND
IN AREA

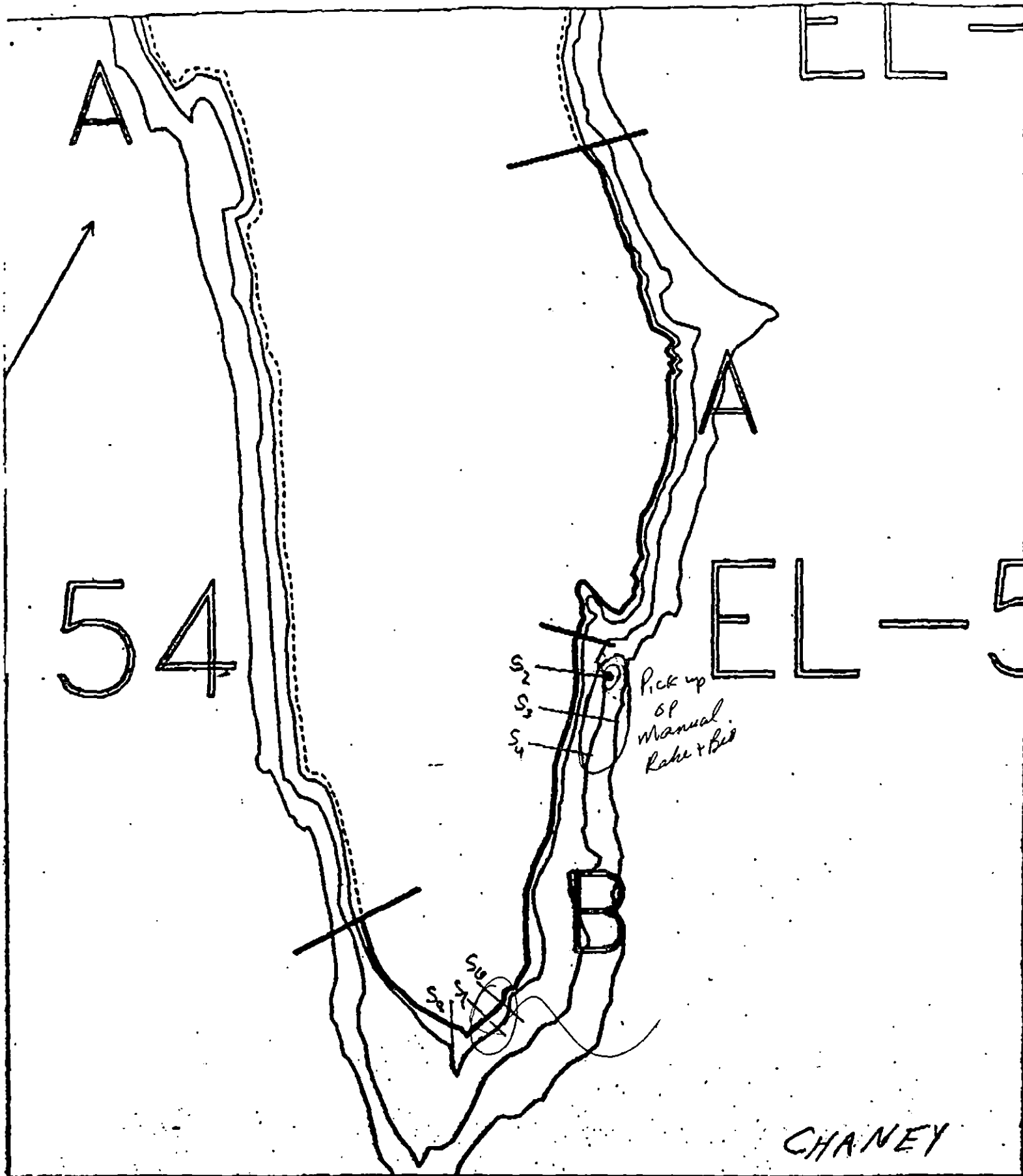
MITZ 6m wide
X 8m long area
with sporadic spots
of consolidated clay/petite
cement. May have inclusive oil film

No customblen over majority
of area. Rainbow sheen
on MITZ flats. Black oil
film up to 10cm deep

SHEEN TAPERS OUT

CT/P
& SVP
4m²

SCHNEIDER



SEGMENT EL-52

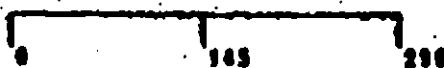
Segment Location Map

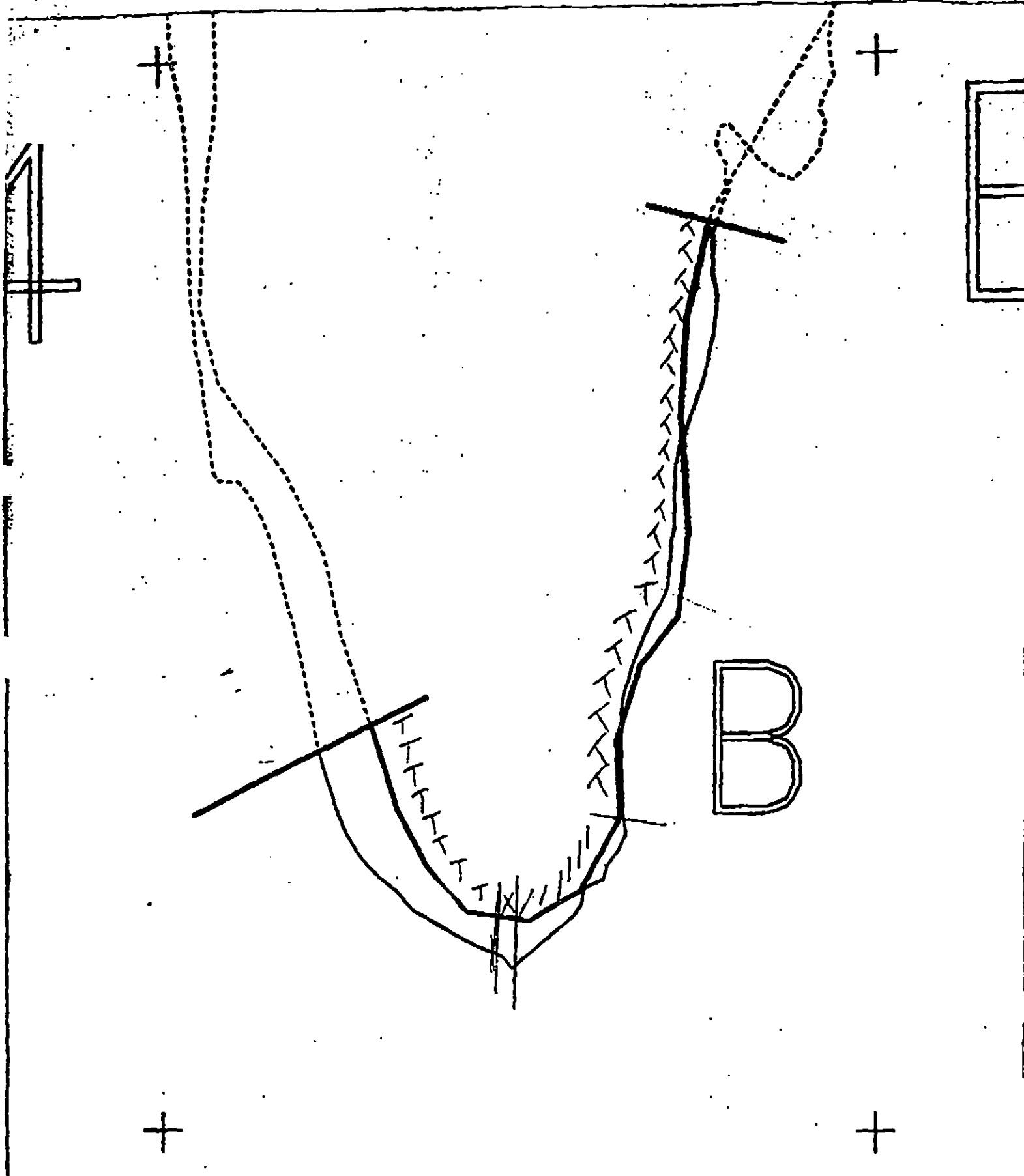
Map Key: KNIEL-52

July 19, 1990

1:5707

METERS





XXXX	Wide	EL-52 B ADEC Subsegment Length: 627m METERS 0 50 100 AK State Plane Zone 4 1:5103	Subdivision Field Map Map Key: KMIEL-52B Name: <u>CHANEY</u> Date: <u>AUG 8 1990</u>
////	Medium		
---	Narrow		
TTTT	Very Light		
AAAA	Water		



SHORELINE EVALUATION

SEGMENT ST/ EL-53 SUBDIVISION A (1 OF 1) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
5T All bald eagle nests (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)
6V Recreation: Anchorages (6/1 to 9/15)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint Sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid damage to unoiled intertidal and subtidal algae and seagrass.

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

OILING CATEGORIZATION:

Wide 0 m: Medium 71 m: Narrow 119 m: V.Light 518 m: No Oil 214 m
Subsurface Oil Observed: Yes X No Maximum Depth 45+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 subsurface oil and coatings as shown on attached sketch map. *Top 15cm should be raked off in area of pit #1 prior to bioremediation as shown on map. Work should be conducted between 6/15 and 8/14 based on above 2M and 7II constraints and with approval from USFWS and ADF&G concerning (5T).

TAG COMMENTS:

AT THE TIME OF TREATMENT, ON-SITE MONITORS TO ASSESS SUITZ.
MONITORS TO ASSESS FEASIBILITY (MANUALLY) TO RAKE AREA INDICATED.

TAG APPROVAL DATE: 4/12/90

ADEC JOHN BAUER John Bauer

EXXON ANDY TET Andy Tet

NOAA Bruce Westcott Bruce Westcott

USCG KENNETH KATZ Kenneth Katz

FOSC: DE 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 uncoiled intertidal and subtidal algae and seagrass's. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 8/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (6/1 to 9/15)
 6V Anchorages (6/1 to 9/15)
 6W Forest Service cabins (6/1 to 9/15)
 6X Lodge (6/1 to 9/15)
 6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
 7HH Finfish harvesting
 7II Deer harvesting (8/15 to 2/28)
 7JJ Invertebrate harvesting
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EL-53-A SUBDIVISION: A DATE 4/1/90ISCG
NAME DAVID A. SCHNEIDER SIGNATURE David A. Schneider
FSS/USCG☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

MANUAL TREATMENT IS APPROPRIATE FOR THIS SUBDIVISION. TREATMENT SHOULD INCLUDE THE FOLLOWING: 1) WIRE BRUSHING OF SCATTERED AREAS OF COATINGS ON BOULDERS & ROCK FACES IN MITE AND LITE, AND 2) FURTHER SURVEY OF SUPRA TIDAL AFTER SNOW ^{COVER} MELT OFF FOR DEBRIS COLLECTION WHERE NECESSARY.

~~DK~~ * ADEC'S COMMENT CONCERNING BOULDER SHADOW OILING PERTINENT EMPHASIS ON THESE SHADOW AREAS BY WORKERS. ~~DK~~
SHOULD BE PLACED

ADEC
NAME Peter Montesano SIGNATURE Peter J. Montesano☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS Subdivision A's oiling is primarily Boulder shadow oiling with the silt under and around large Rocks and crevices. The areas of penetration are under these boulders, and all of the oil is difficult to reach. Hand Scrubbing & localized removal is ~~not~~ appropriate for "A", whereas bio-remediation is NOT.

LAND MANAGER
NAME JANETA PRITCHARD SIGNATURE Janeta Pritchard☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

I concur with the USCG and ADEC. The high recreational values were noted in this subdivision.

SHORELINE OILING SUMMARY

REVISED
4/4/90

REVISION NO. 02/23

OG C. DILLON USCG D. SCHNEIDER SEGMENT ST/ EL-53
 BIO J. BARRY LAND REP J. PRITCHARD SUBDIVISION A
 EXXON A. SNOOK ADEC P. MONTESANO TIME 09:45 to 10:00
 TEAM NO.: 6 TIDE LEVEL: +3.5 to -1 DATE 03/31/90
 EST. SUBDIVISION LENGTH: 600 m +60 ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock ☒ Subdiv. is primarily vert/hang rock & boulder
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 55 % B 40 % C 4 % P 1 % G 0 % S 0 % M 0 % V
 SLOPE: Long 0 % Hang 75 % Vert 25 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 52 m N 100 m VL 298 m NO 150 m
458

SURFACE OIL

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

PAVEMENT: H F S 0 sq. m by 0PATTIES / 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. 0Frames NONE

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			1	2	3	4	SU	M	N	U		
1	45	X					0-45	X			X		X					C/P
2	30					X	0-30	X					X					C/P
3	17	X					5-15	X			X			X				G/S
4	10	X					5-10	X			X		X					P/G
5	25	X					0-25	X			X		X					C/B

COMMENTS SUBDIVISION CONSISTS OF MOSTLY VERT/HANG ROCK AND BOULDER SLOPES WITH 3 SMALL AREAS OF HANG BOULDER/COBBLE/ROCK SLOPES. THE VERT/HANG R/B HAS A DISCONTINUOUS DK BROWN STAIN/COAT ≤ 1m WIDE AT THE HIGH TIDE LEVEL AND SOME UNOILED SECTIONS. THE 3 B/C/H AREAS ARE A SLIGHTLY LOWER ANGLE AND CONTAIN MEDIUM WIDTH COATS AND SOME SUBSURFACE PENETRATION. ACCESS TO PENETRATED SUBSTRATE IS DIFFICULT DUE TO LARGE SIZE OF SURFACE BOULDERS/COBBLE.

SHORELINE ECOLOGICAL SUMMARY ¹⁰⁰⁻¹¹⁰ 4/4/90

REVISION 02/28/94

Segment ST/ EL053 Subdivision A Date (mo/day/yr) MARCH 31, 1990
 Time (24 hr) 0745-1010 Biologist Jim Barry 760-600 m length

- (A) Substrate type and % of segments:
 (1) Bedrock 55 (2) Boulder 40 (3) Cobble 4 (4) Pebble 1 (5) Sand (6) Silt
- (B) Overall % cover of biota (% of segment): Dense 50 Moderate 40 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 (⊙)

Photographs: ST-6-2
 Roll No.

Frames 18-20

BARNACLES

Dense			Moderate			Sparse			Rare		
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
4	4		4	4	4	4	4	4	4	4	4
5	5		5	5	5	5	5	5	5	5	5
6	6		6	6	6	6	6	6	6	6	6

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: TIDE WINDOW +5 -> +1

Barnous Goldeneye - 4

Sea Otter - 2

Bald Eagle - 1

1/2 or more of transect surveyed from boat - low zones less well studied from boat.

Ecological Considerations: 6V, 7H, 5-T2, 2M

IMPACTS TO SENSITIVITIES:

Herring Spawning Success may be inhibited by frequent or heavy boat traffic.

ADDITIONAL COMMENTS

TIME 0745 - 1010
TIDE +5 → +1

MAJOR SPECIES

I. BARNACLES - Balanus pacificus?

- DISTRIBUTION PATTERN CONSISTENT BETWEEN PATCHES OF SEDIMENT?
eg. All Cobble beaches had moderate Adult/juvenile + spat cover, with low zones having sparse cover.
- BARNACLES Present in open bare rock in all tide zones
 - THICK ALGAL cover in lower zones inhibits recruitment, especially on bedrock + boulders.

II. MYTILUS

- Settlement of new individuals greatest in crevices + on Adult + juvenile mussels at the mid to high tide levels.
- Boulder + cobble fields have some cover at the surface, but sparse to moderate cover below the surface.

III. GASTROPODS

A. Periwinkles (Littorina) are by far the most abundant.

1. DISTRIBUTION is PATCHY, but are generally moderate to dense overall. Greatest densities tended to occur in some cobble areas and crevice habitats of bedrock + boulders.
2. Spat commonly found in crevices of bedrock.
3. Egg masses found only under cobbles or boulders in unexposed ~~sub~~ microhabitats.

B. Whelks - Scarlesia dirca and Nucella lamellosa are the dominant whelks. Both are present throughout the intertidal. Scarlesia is most abundant in cobble areas.

C. Limpets.

1. Limpets were found on bedrock, boulders, and under cobble.
Upper zone limpets are mostly on boulder and bedrock.
Lower zone " " " under " " " cobble.

2. Major species: Tectura scutum (common under cobble)
Tectura pinnata (common in mid to upper tidal zone boulders)

IV. FUCUS

1. Sites where intertidal was heat-treated have a high proportion of withered plants in the upper zone. Many have started to regrow, many appear dead.
2. Sporlings are mixed in with adults throughout the intertidal, but are

OTHER SPECIES

I ANIMALS

SEA STARS

- Several species were found under cobble & boulders in the mid low
- Several species
- Pycnopodia, Orthasterias, Dermasterias, Leptasterias, Pisaster
 - Leptasterias, Pycnopodia are present as juveniles

SEA CUCUMBER - Holothurica - 1 found under boulder in low zone

Bryozoans - (Crust forming animals) - Membranipora

Several others included in species list.

Species list - STARS INDICATE JUVENILES PRESENT

Sea Stars

- * Pycnopodia sp.
- Pisaster ochraceus
- * Leptasterias sp.
- Dermasterias
- Orthasterias sp.
- Sea cucumber - Cucumaria sp.
- * Bryozoans - Membranipora sp.

Tube worms

- * Spirotbis sp.
- * Serpula
- Unknown tubeworm

Other worms

- * Peanut worms - Phascolosoma
- * Polychaete worms - 2-3 spp.

Sea Urchin - Strongylocentrotus drobachiensis

BIVALVES

- * Balanus claudia

Snails

Periwinkles

- * Littorina scutulata, L. sitkana

Whelks

- * Scapharca dira, Nucella lamellosa

Limpets

- * Tectura personata, T. scutum

Nudibranchs

Chitons - Armina californica

Tunicates

- Stolidia tunicata
- Mopalia mucosa

- * Mussels - Mytilus edulis

Fish - Pholadidae

Crabs - Loxorhynchus? spp.

- * Pinnixidae?

Unknown?

PLANTS

Fucus distichus

Rhodospira palmata

Ulva

Petrocelis

Ralfsia

Rhodomela

Enteromorpha

Spongomorpha

Scytosiphon

Several unknown

Filamentous green alga

Filamentous red alga

WILDLIFE

Barrow's Goldeneye - 4 over water
Sea Otter - 2
Bald Eagle - 1

ECOLOGICAL CONSIDERATIONS / COMMENTS

- 1) Special Sensitivities 6V, 7 II, 5-T2, 2m will likely not be affected by a 10 man team (clean up)
- 2) Several species appear to be actively recruiting to this segment & indicating that if oil-related mortality occurred, recovery is progressing.
- 3) Oil covered sites or patches do not show as strong of recovery as do adjacent sites. (even within 1-2 inches for ~~near~~ barnacles, ~~anemones~~ Mytilus, Fucus).



ELOSS-B

~~From boat~~

~~Dense Fucus - A, J~~

~~Dense Balanus / A, J, S~~

~~Mytilus -~~

End of ELOSS-C

End of ELOSS

1390

ELOSS-A

0745-

START TO Beach 1

W 7 Fucus r

7 BARN r A

MANY GASTRO >

SPARSE Mytilus &

L. Scripeta JUV.

Comp. sp. sp.

Beach 1

Boulder / Cobble 7 FUCUS

MOD-Dense Gastros under boulders

L. Sitkana egg masses, Adults

Dense Barn sp (A, J, S)

7 FUCUS B

Proton spon.

4 Buflorida

Luplets - sparse

#22 - Boulder field

2 OTTER Eagle

#21 SUBSURFACE OILING 21

P. #4

Small beach along first pt of Beach

Juvenile stars

Cucumber

EL053-A

EL053-A

> ~~low~~ Fucus Juv
Dense young Barnacles, Fucus (S, A)
↳ (S, A)

Dense to moderate Balthosia
Some (moderate) - Lingula

> Green Slime

LITER

Wospura

Spongymeria

Bryozoans on rocks

Moderate Haloscion

Beach #2

#20 Young Sponge below
Rock on Low zone

72 BARN, FUCUS

72 Spat ✓

226

High zone - moderate dead
Adult Fucus

MID → Dense Fucus

W -
> Red - moderate Fucus
Calliophyllis

Low

Jan 20-30 cm

Pycnopsid - along shore below
surface - many 2 m

Mytilus - No Adults

Few juveniles

Moderate spat

Littorina - Ss masses

Dense mat in crevices

Along Rock Cliff

Thin on rock w/ THICK

M. edulis juveniles

PHOTO #15, 18

Sparse Mytilus on adjacent
rocks

Low Clathrospira - ca 2-3 m

THICK WEA - MID zone on some rocks
Most w/ Fucus on bed of zone

OTHER

Engel Station

Reach 3 Low zone

> PUCUS

> GZUA

> Spirobis

> Calliophyllis

> Ichthyopis

PIT ~ 3m²

26 Phaeocystis

2 Vochys

2 ? worms

1 Polydora

3 Loxorhynchus type of crabs

1 fish

Rest of reach similar to last
Gross Stone WUA on middle of

Boulder Beach

> FUCUS 1 in upper

L " " in mid DEON

> FUCUS A in mid towards

upper

END OF ELO53A

ELO53-B 10/10/80

NEXT PITOTO IF? SOLASTER

OR PUCUS

in Low zone

#16 SAND, COAT OF
OIL IN UPPER ZONE

BOULDER/CORBBLE BEACH

Pebbles

Rock over sand

clam in sand

covered - 2

> FUCUS adults in high - northward

> " " in MID

FERT

Brown beam

Sq & Bannellia

OG C. DILLON

SKETCH MAP

DATE 3/31/90

- Δ₁ Pit with subsurface oil
Δ₂ Pit with no subsurface oil

[CT/B] Broken distribution
[CT/P] Patchy distribution

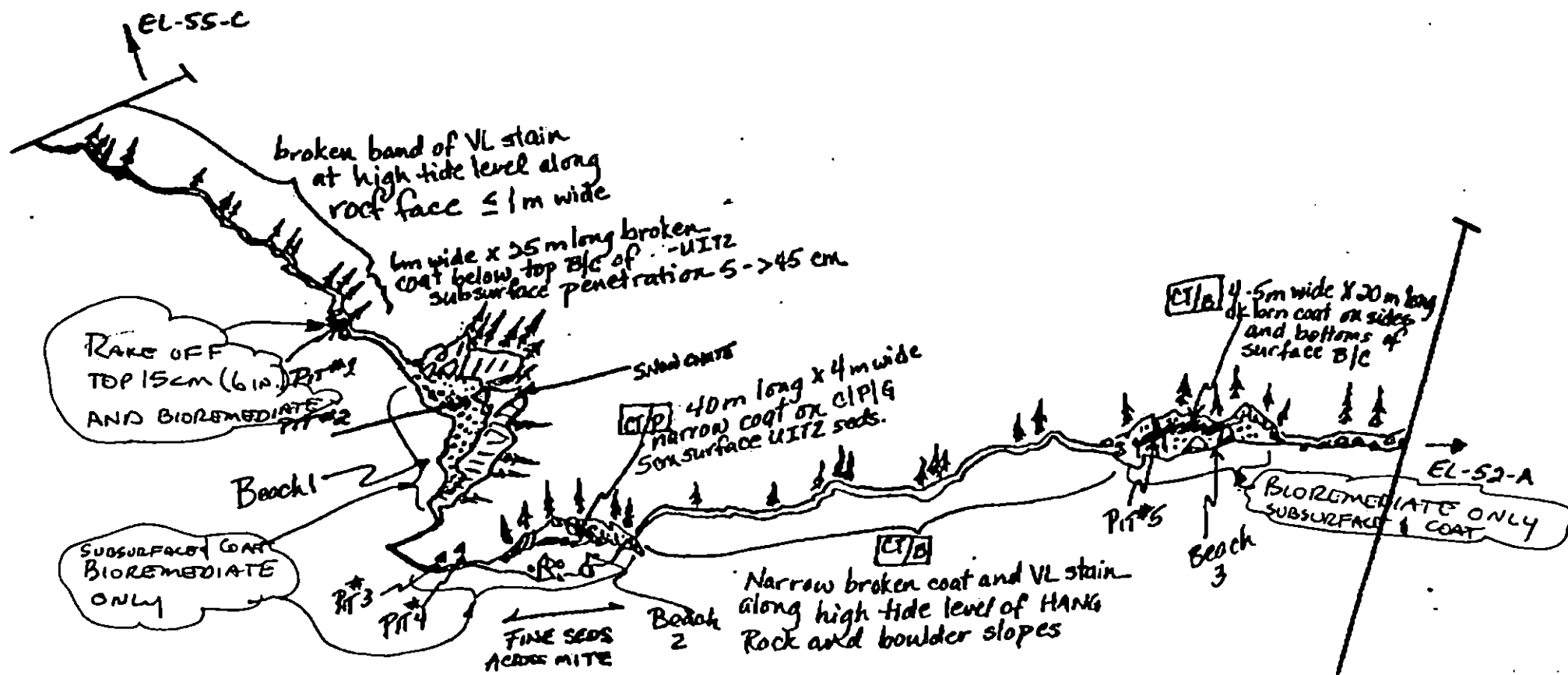
Oil character length (m) CT 125 ST $\frac{485}{300}$ NO 150

Revision 4/1/90

SEGMENT EL-53

SUBDIVISION A

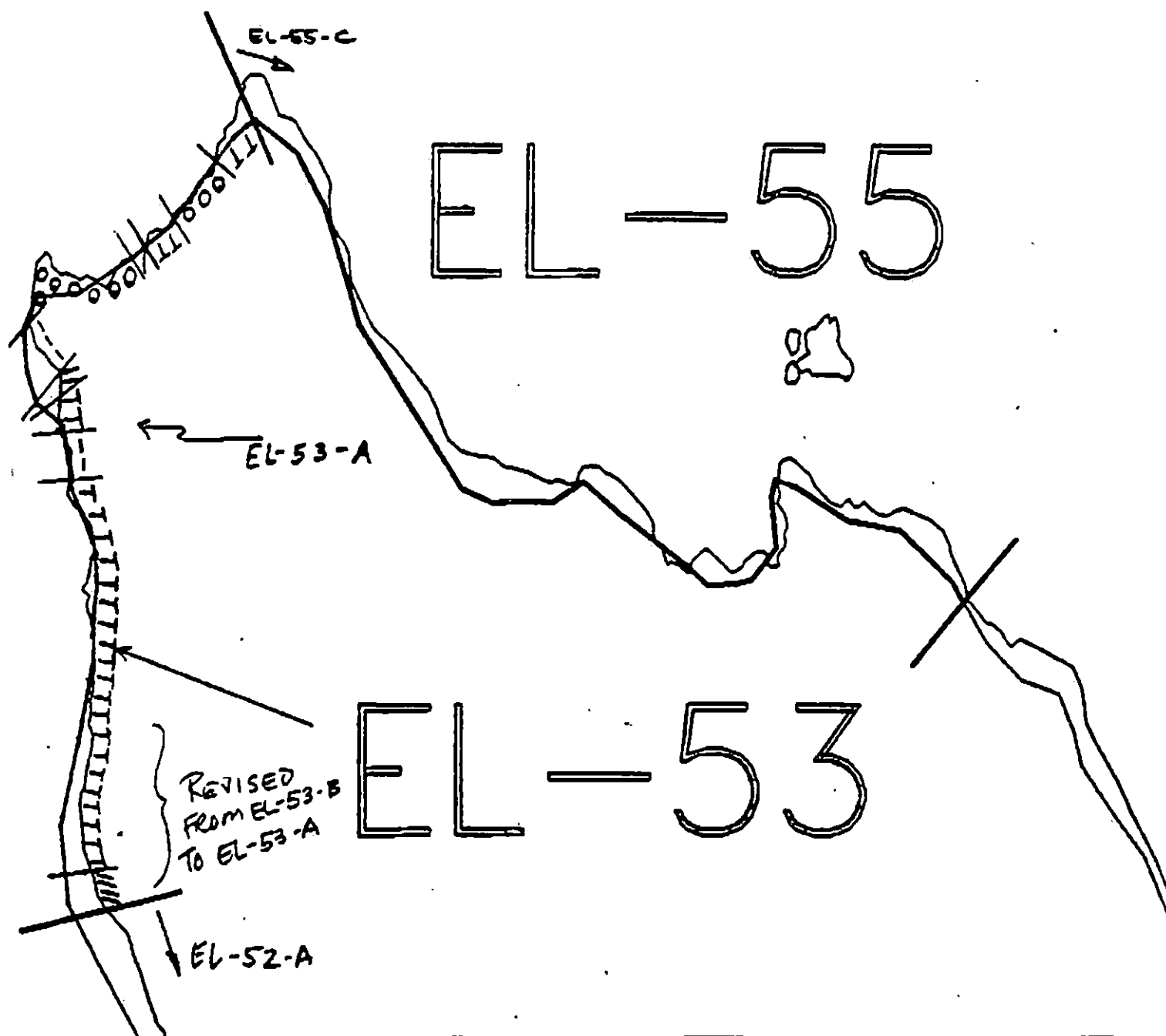
SUBDIVISION LENGTH = 600 MET.
760m





EL-53-X B

REVISED on 4/4/9



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EL-53

ADEC Segment Length: 922m



Map Key: PWS-138

Name: C. DILLON

Date: 03/31/90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

- SEGMENT EL-53 SUBDIVISION A (1 of 1)

WORK WINDOW

Bioremediation
Manual Raking

WORK PRIOR TO 8/15

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M Herring Spawning

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

5T Bald Eagle Nest

NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision A work site.

7II Subsistence: Deer Harvesting

Closed to bioremediation and manual raking after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

DATE

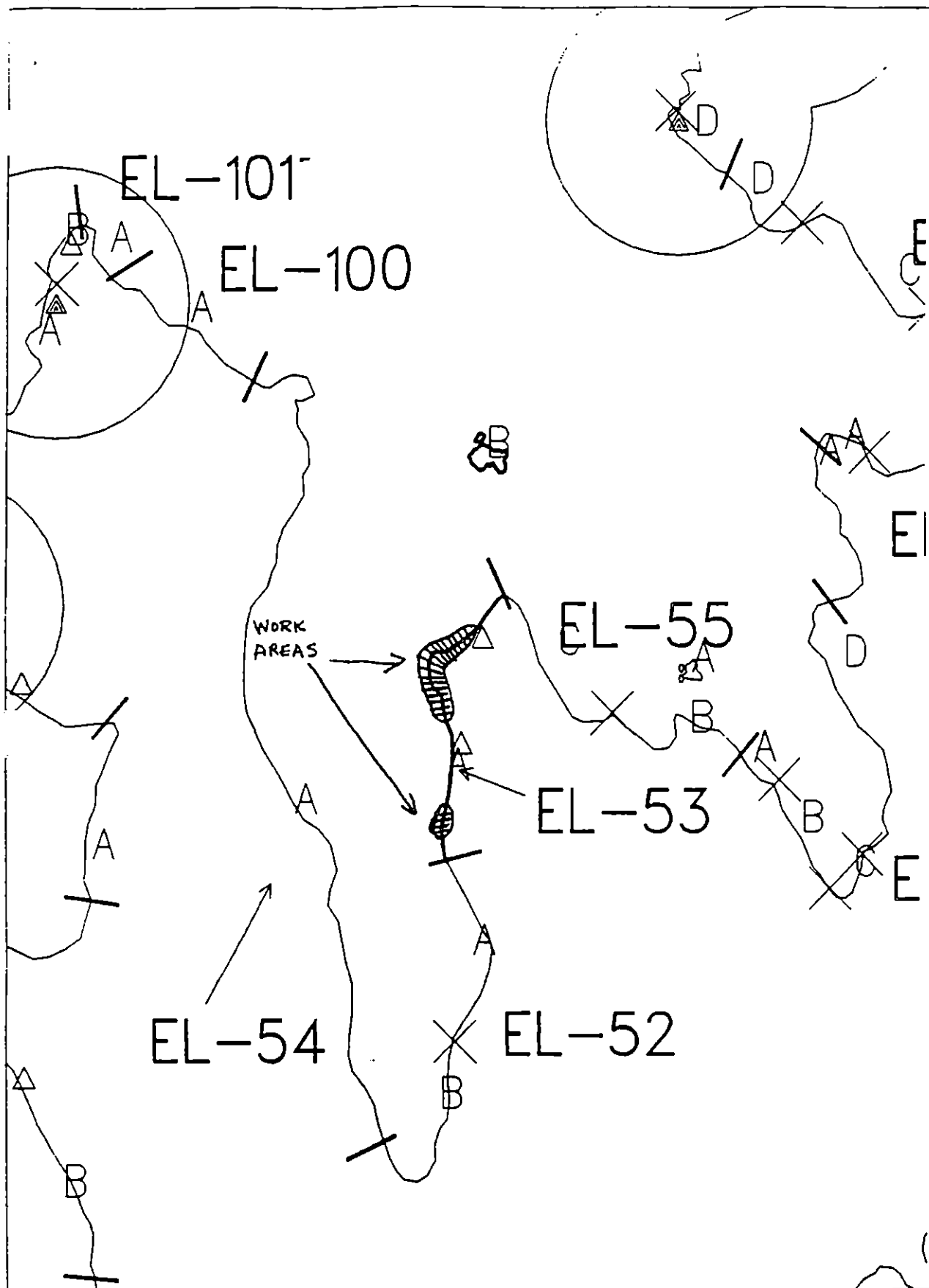
6-10-90

Prepared By:

WIK

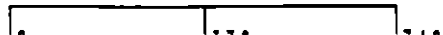
Date

6/8/90



Exxon Company, USA
Map Key: PWS-EL-53

ECOLOGY MAP
SEGMENT EL-53
SUBDIVISION A (1 of 1)
METERS



★	Seabird Colony
▲	Active Eagle Nest
△	Inactive Eagle Nest

ASAP FOLLOWUP RECOMMENDATIONS

Project: AS/EL 53A Subd.: A Site: 1 Date: 8/7/90 1990

Conditions Observed: MITZ pitior 15 to 40 cm @, compacted pebble substrate
Armor coating consisting of Cobble/bottom w/ distinct storm berm deposit in 5 ft. E.
with 2M, 5T, 6V, 7H. Sheen not observed in tide water during ASAP survey; over
sheen history is not available. Insufficient data to assess Ecological / human health
hazards. ASAP Survey did not have sufficient time to determine extent of
oil

Followup Recommendations: Mechanical investigation to determine extent of
oil (recommend 4" hand auger w/ 4ft. auger extension gasoline powered). Depending
on extent of deposit, i.e. MITZ extending to 5 ft. E. and the character of the oil.
a decision could be made on techniques appropriate to restore site

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

ADEC Wesley Ghormley Wesley Ghormley
(name) (signature)

Comments: ADEC is very concerned about subsurface oil. Substrate is very
compacted sediment so Custine blend will not penetrate. I highly recommend
mechanical excavation removal and Hot H₂O flooding to remove oil.

ERCON Ray Sotelo Ray Sotelo
(name) (signature)

Comments: This site is a definite candidate for re-exploration of custom-
blend in '90 and should be re-assessed in '91. The following recommendation
that is written for this site is to continue for the control of oiling observed.
(name)

USCG Art Weiner Art Weiner
(name) (signature)

Comments: AGREE TO RECOMMENDATION TO ACCURATELY DEFINE EXTENT OF SUBSURFACE OIL
RESERVOIR. IF OILING PERSISTS, THE SUBSURFACE
RESERVOIR SHOULD BE MECHANICALLY TILLED + TREATED W/ CUSTYBLEND OR REMOVED

Land Rep. John Ebel John Ebel
(name) (signature)

Comments: North end view same. Large patch, small beach length. Mid to Low grade beach
beach headlands, small beach cove, headland accretion. Intriguing site to stop.

ASAP TAG REVIEW SHEET

Segment: EL33 A Subd: A Site: 1

Date
PRE-Review 14 Aug 90

Priority For Addressing In 1990

☒ HIGH

☐ MEDIUM

☐ LOW

☒ NTR

Treatment
Recommended:

NTR

COAT only

Priority Site For Reassessment In 1991

YES NO
☒ CG ☐

YES NO
☒ ADEC ☐

YES NO
☐ EXXON ☒

YES NO
☒ LAND MGR ☐

TAG-15AU90

Reapply Customblen

(already sched.)
for BIO

reassess 91

ASAP TAG REVIEW SHEET

Segment: EL53

Subd: A Site: 2

Date
PRE-Review 14 Aug

Priority For Addressing In 1990

 HIGH

 MEDIUM

 LOW

X NTR

Treatment
Recommended:

NTR

Priority Site For Reassessment In 1991

YES NO
X CG

YES NO
X ADEC

YES NO
 EXXON X

YES NO
X LAND MGR

ASAP TAG REVIEW SHEET

Segment: EL53 Subd: A Site: 3 Date
PRE-Review 14 Aug

Priority For Addressing In 1990

 HIGH MEDIUM LOW NTR

Treatment
Recommended:

NTR

Priority Site For Reassessment In 1991

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

FIELD SHORELINE COMMENT SHEET

SEGMENT AS / EL 53 SUBDIVISION: A SITE: 1 DATE 8-9-90

JSCG PSI Leo Beysalona Leo Bersader

NAME Art Weiner SIGNATURE Art Weiner

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Assess EFFECTIVENESS OF CUSTODIAN ON HIGH CONCENTRATION OF SUBSURFACE OIL [OR (15-40 cm+)].

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Reassessment is requested to determine the condition of Sub surface oil. (OR 40cm in very tight Sediment)
- IF high OR is still present then additional work will be requested.

LAND MANAGER

NAME Tolka Ebel SIGNATURE Tolka Ebel

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

To Evaluate the effectiveness of '90 treatment after winter conditions

EXXON

NAME Ray Sotelo SIGNATURE Ray Sotelo

☐ YES

☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

If reassessment is done on this site in '91 it should be treated as a low priority site.

FIELD SHORELINE COMMENT SHEET

SEGMENT AS/ EL 53 SUBDIVISION: A SITE: 2 DATE 8-7-90

USCG // NOAA PSI LEO Bersafma Les Bersafma

NAME Art Weiner SIGNATURE Art Weiner

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

ADEC
NAME Wesley Ghormley SIGNATURE Wesley Ghormley

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON: - No Further treatment at this time -

LAND MANAGER
NAME John Ebel SIGNATURE John Ebel

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON: No further treatment at this time

EXXON
NAME Ray Sotelo SIGNATURE Ray Sotelo

☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991
REASON: No assessment should be necessary in '91.

FIELD SHORELINE COMMENT SHEET

SEGMENT AS/EL 53 SUBDIVISION: A SITE: 3 DATE 8-7-90

ISCG // NOAA PSI Leo Bersalona Les Bersalona
NAME ART WEINER SIGNATURE Art Weiner

☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

NO EFFECTIVE TREATMENT AVAILABLE FOR EXISTING OILING CONDITION

ADEC

NAME Wesley Ghermley SIGNATURE Wesley Ghermley

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

A Band of cover & SOR sediment is present at the MITZ under boulders. Reassess and if condition remains roll boulders to expose oil and manually remove SOR sediments.

LAND MANAGER

NAME Lola Ebel SIGNATURE Lola Ebel

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

I concur w/ NOAA & ADEC.

EXXON

NAME Ray Sott SIGNATURE Ray Sott

☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

No reassessment should be necessary in '91.

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

60

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

70

SUBSURFACE OIL

[illegible]

Photographs: ASAP #2

Roll No. Roll #2

Frames 29 to 32

COMMENTS

COMMENTS This subdivision is made up 3 beaches but the southern beach is only distinctive at low tide.

Reviewed
(Fu)

OG C. TOLON
DATE 3/31/90

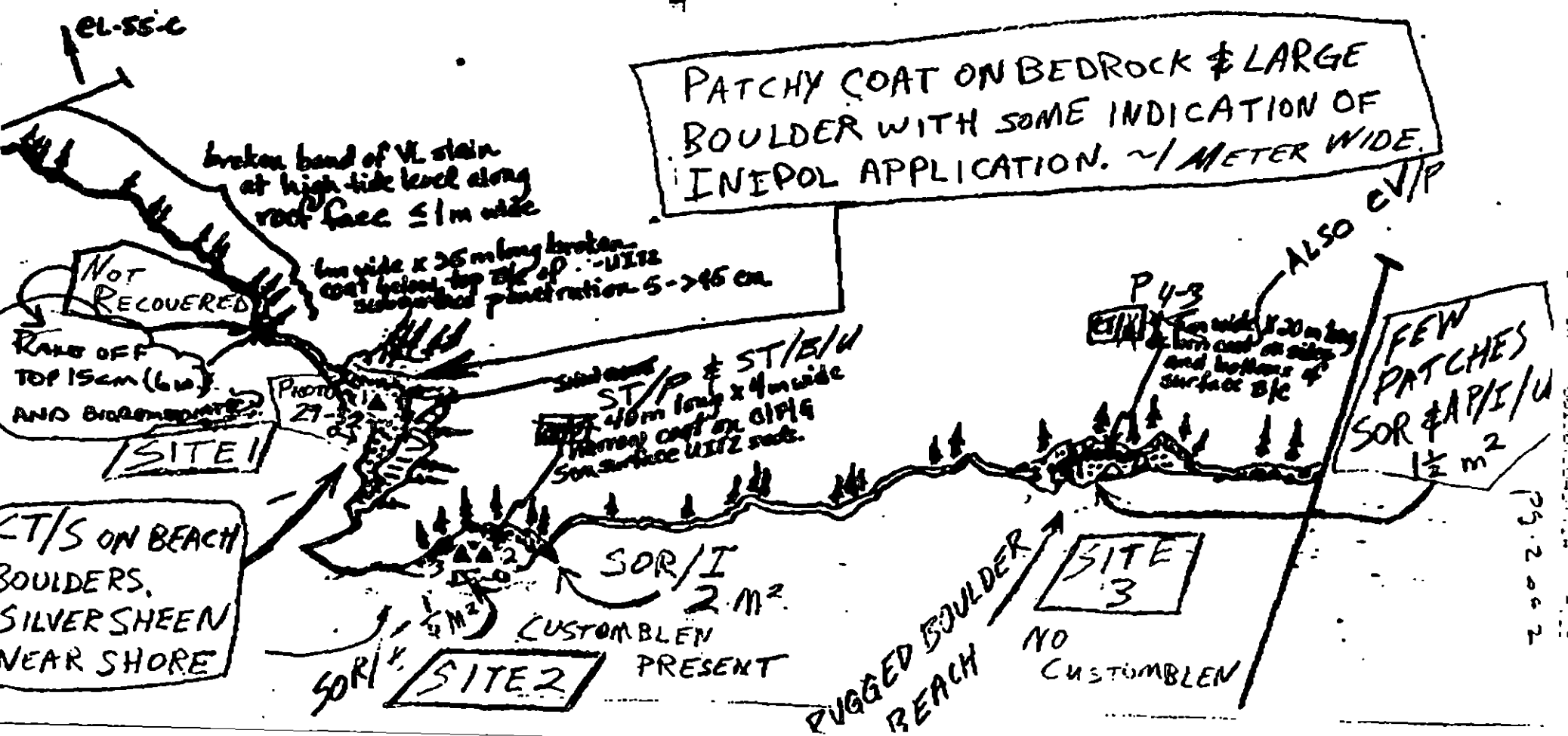
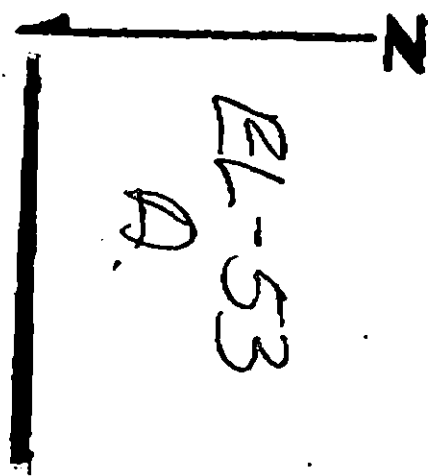
SKETCH MAP

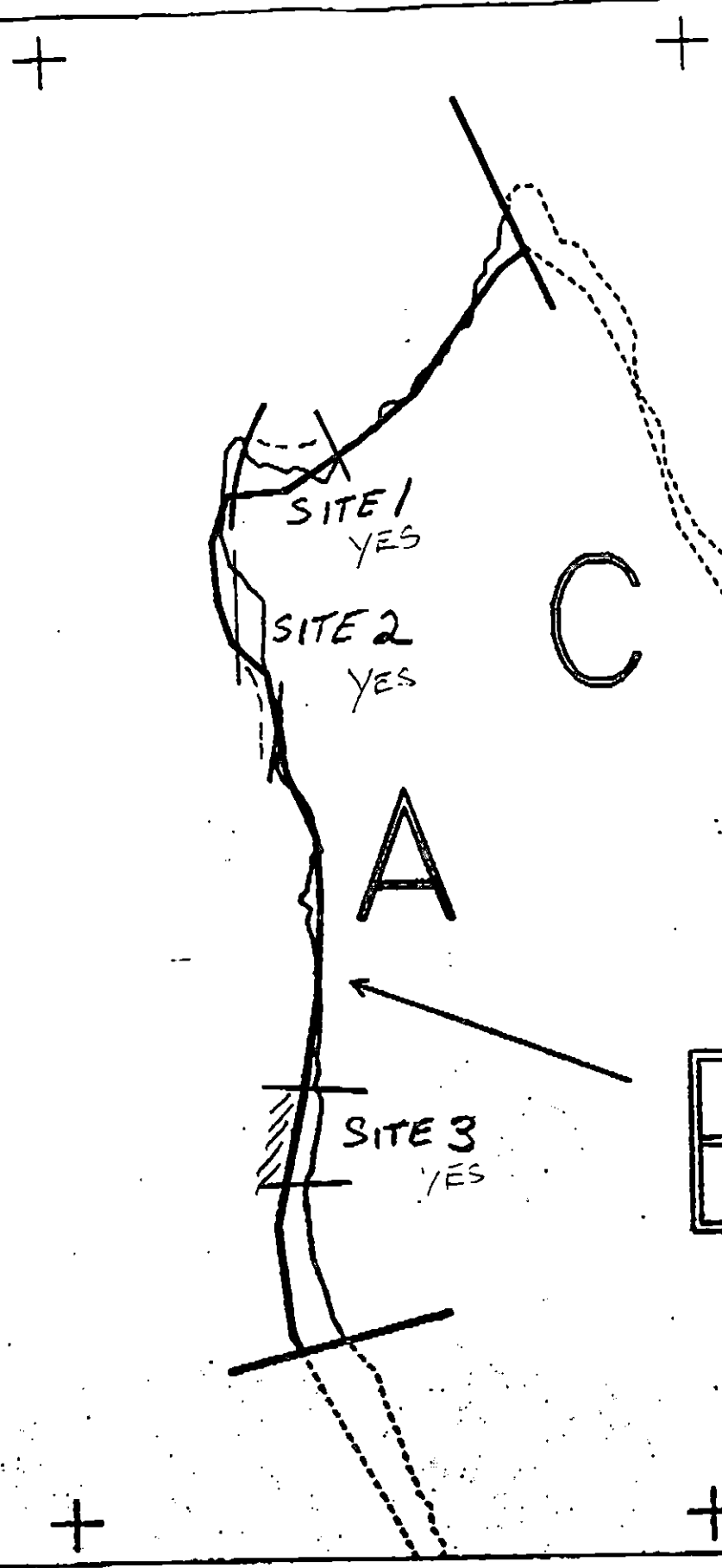
ASAP #2
AUG 7 1990
CHANEY
MAP FROM
SSAT MAP

SEGMENT EL-53
SUBDIVISION A

SUBDIVISION LENGTH 600m
760m

- A₁ Pit with subsurface oil
- A₂ Pit with no subsurface oil
- ☒ Broken distribution
- ☒ Patchy distribution





EL

C

A

EL-

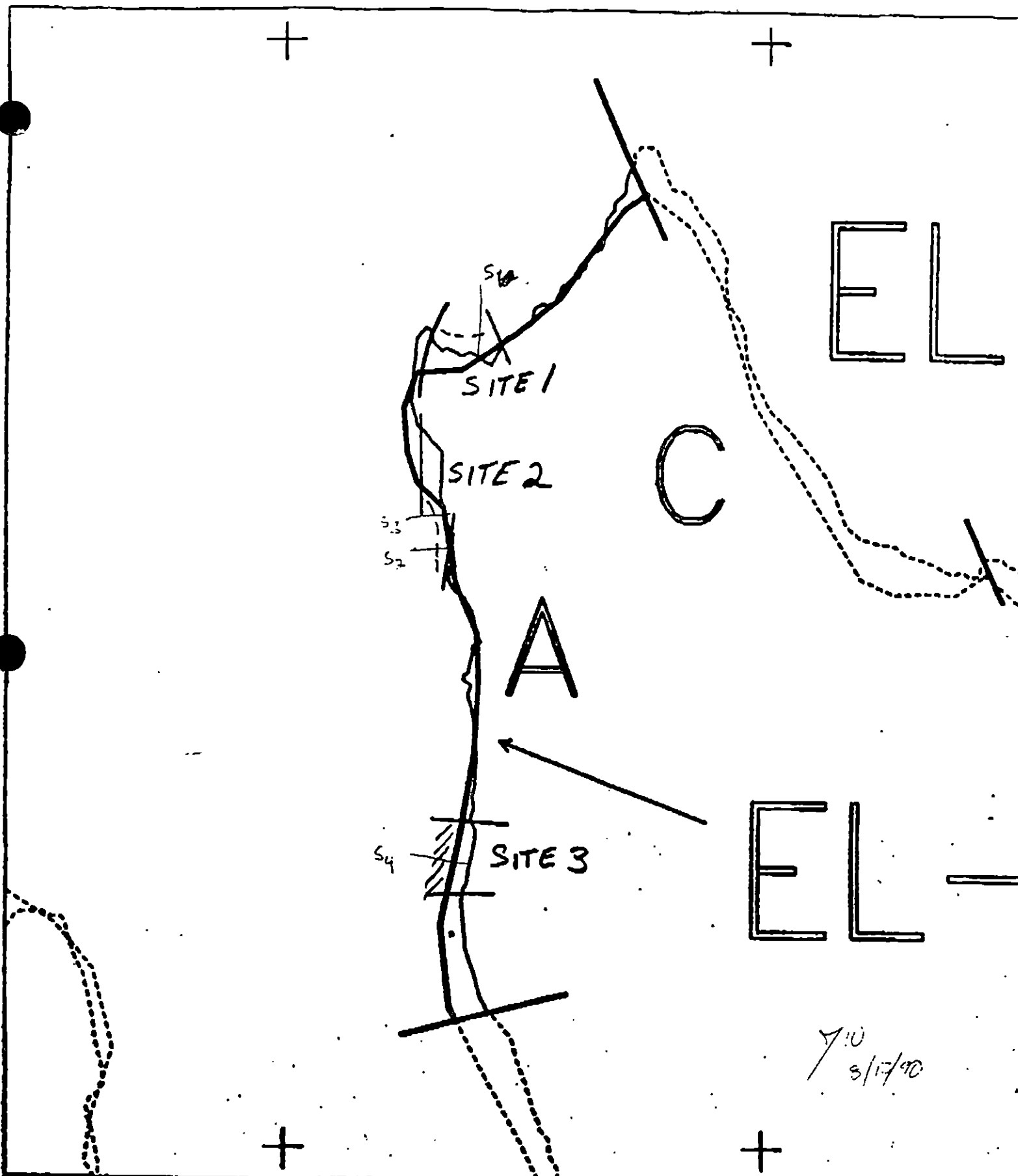
XXXX Wide
//// Medium
---- Narrow

EL-53 A
ADFC Subsegment Length: 922m
METERS

Subdivision Field Map
Map Key: KHIEL-53A
Name: CHANEY

1000 1000 1000

1.11 - 100



710
5/17/90

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

EL-53 A
 ADEC Subsegment Length: 922m
 METERS

0 30 60 120 240

Subdivision Field Map
 Map Key: KHIEL-53A
 Name: CHANEY
 Date: AUG 7 1990

SHORELINE EVALUATION

SEGMENT ST/ EL-53 SUBDIVISION B (2 OF 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
5T-2 All bald eagle nests (3/1 to 6/1)-Active eagle nest (3/1 to 9/1)
6V Recreation: Anchorages (6/1 to 9/15)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid damage to unoiled intertidal and subtidal algae and seagrass.

SHPO SIGNATURE: Rachel Jean Owen DATE: 6/1/90

OILING CATEGORIZATION:

Wide 0 m: Medium 71 m: Narrow 119 m: V.Light 518 m: No Oil 214 m
Subsurface Oil Observed: Yes X No Maximum Depth 20+ 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> </u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> Removal	<u> </u> Other (see comments)

COMMENTS: Recommend manual pick up of mousse, tar balls and oiled vegetation and bioremediation of coat, cover and subsurface oil areas. Areas should be treated between 6/16 and 8/14, based on above herring and deer constraints and with approval from ADF&G and USFWS regarding eagles.
MANUAL RAKE IN AREA OF PIT 1 PRIOR TO BIOREMEDIATION.

TAG COMMENTS:

TAG APPROVAL DATE: 4/21/90.
ADEC ACT WERNER
EXXON ANDY TATE
NOAA Bruce Wescott
USCG KENNETH KEANE

FOSC: WJL DATE: 6-8-90

- 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. 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 Bird Eggs~~
~~Restrict all activity to essential minimum, especially air traffic.~~
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 ~~Recreation: Campsites~~ (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-53-AB SUBDIVISION: AB DATE 4/1/90

USCG

NAME DAVID A. SCHNEIDER SIGNATURE David A. Schneider

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

703/USCGR

I CONCUR WITH BOTH THE LAND MANAGER'S AND ADEC'S COMMENTS BELOW.
 IN ADDITION, ^{THE} SMALL ISLET OFF NW CORNER OF ^{THIS} ISLAND SHOULD ^{NOT} BE DISTURBED AS IT
 SUPPORTS RICH MUSSEL BEDS & INTERTIDAL LIFE, AND THE VERY SMALL PATCH
 OF COATING PRESENT THERE IS HIGHLY EXPOSED TO WAVE ACTION.

DB

ADEC

NAME PETER MONTESANO SIGNATURE Peter Montesano

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

If this island were thoroughly cleaned, it would once again have recreational value.

The entire island is ringed by a coat of varying concern, most of which is ~~scrapable~~ scrape/scrubbable. Recoverable oil is trapped in crevices, illustrated on the map. The N/S island-wide crack contains saturated sediments as well as coatings on the rock surfaces. The slope and angles make this crack unwashable. The crack is not bioremediation appropriate, and should be addressed by hand-wiping and substrate removal. Pavement forming grasses on the supratidal of the South beach should be collected. The Beach on the W side of the Sand, N/S crack is a small area but likely to form pavement and is hot water washable.

LAND MANAGER

NAME JANETIA PRITCHARD SIGNATURE Janetia Pritchard

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

This island has high recreational value and should be cleaned. Pavement areas should be removed, by mowed grassy patches should be carefully removed leaving grasses behind to mow the area stripped. The water wash of the area coated is a possibility which should be explored.

crew of 16 could significantly improve the island with 5 days of hand work

OG C. DILLON USCG D. SCHNEIDER SEGMENT ST/ E1-53
 BIO T. BARRY LAND REP J. PRITCHARD SUBDIVISION 2-B
 EXXON A. SNOOK ADEC P. MONTESANO TIME 13:45 to 15:00
 TEAM NO.: 6 TIDE LEVEL: +5 to +7.5 DATE 03/31/90
 EST. SUBDIVISION LENGTH: 272 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock SUBDIVISION IS AN ISLAND
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 85 % B 8 % C 2 % P 1 % G 1 % S 1 % M 1 % V 1
 SLOPE: Long 5 % Hang 95 % Vert — % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 30 m M — m N 217 m VL 5 m NO 15

SURFACE OIL

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

PAVEMENT: H F S 7 sq. m by 0

PATTIES / TARBALLS 2 BAG

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation	X		
Trash			
Debris			

DEBRIS COLLECTE
☒ YES ☐ NO

TYPE Small wood

#BAGS 41

Photographs:

Roll No. SI-6-2

Frames 5, 6, 7, 10

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		BO	UC	SW	SE	NE	NW	SW	SE	NE	NW		
1	20	X	X				50-15					X		X					P/G
1	20				X		15-20	X	X					X					P/G/S

COMMENTS ISLAND HAS A BROKEN, NARROW COAT AND COVER AROUND THE HIGH TIDE LEVEL. THE N. SIDE HAS A CREVICE AT THE UTLZ CONTAINING A DARK BROWN 8cm DIAMETER X 2cm DEEP MOUSSE SPOT WITHIN A NARROW COAT AND COVER. THE W. SIDE HAS A FISSURE IN THE BEDROCK RUNNING N-S TO EACH SHORE. THE B/C/P AT THE S. END ARE COATED. THE CENTER OF THE FISSURE HAS A SHALLOW ACCUMULATION OF SMALL SEDS AND GRASSY VEGETATION PATCHES APPROX 2-3m WIDE BY 30m LONG. THE SEDS ARE PENETRATED UP TO AT LEAST 20cm. THERE IS A MOUSSED VEG PATCH
 Page 1 of 2 ON THE UTLZ JUST E. OF THE FISSURE REVIEWED 4/4 DATE 4-7-90
 AND A MOUSSED GRASSY PATCH ON THE SITZ W. OF THE FISSURE

OG C. DILLON

SEGMENT ST/EL-53

SUBDIVISION #B

DATE 31 April 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWA/LA/VL
- ☐ SCL
- ☐ Profile 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

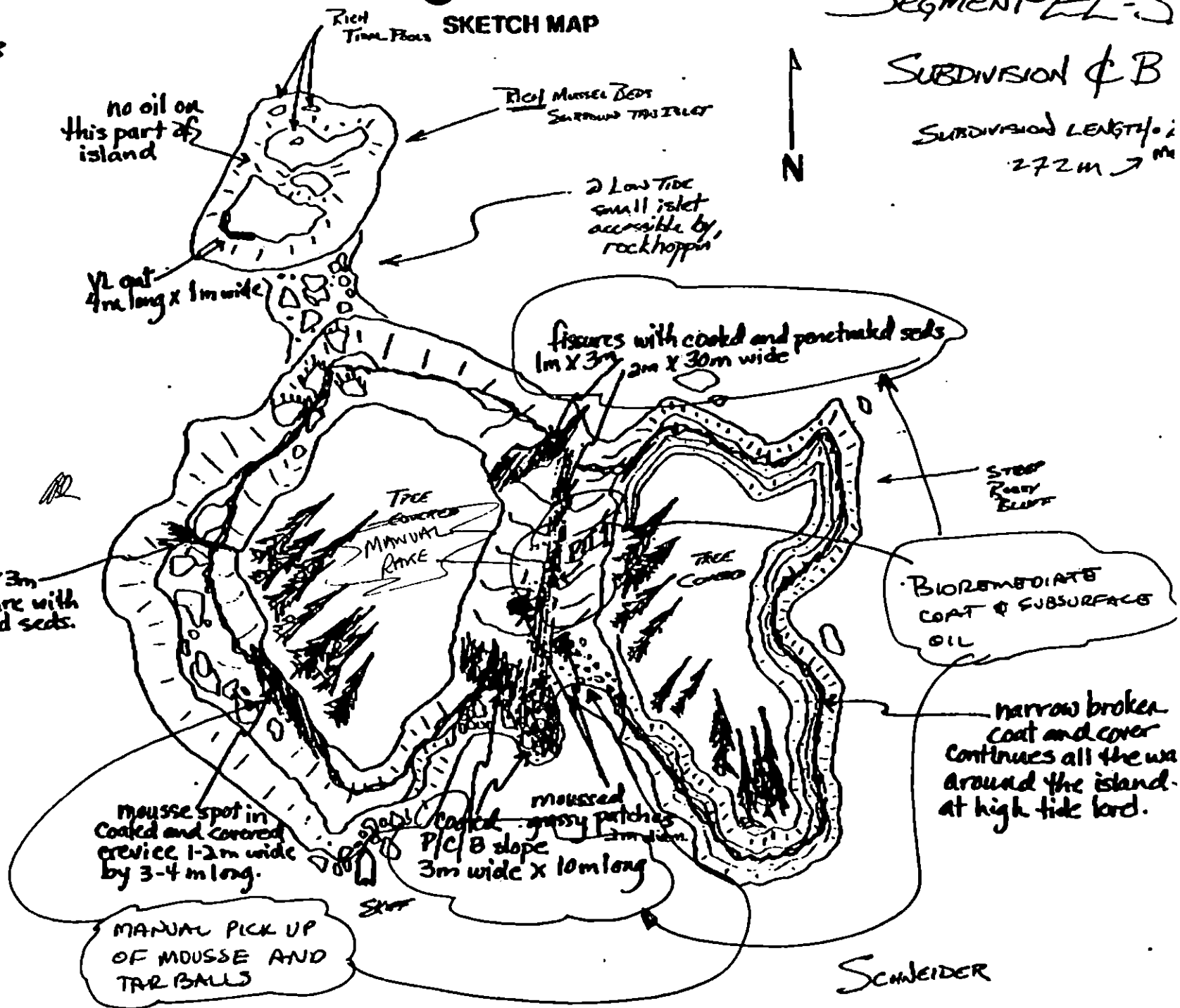
Splashed Distribution
- Oiled Vegetation
- 1 $\Rightarrow$
Photo location, direction, and number

SKETCH MAP

SEGMENT EL-5

SUBDIVISION #B

SUBDIVISION LENGTH: 272m $\rightarrow$ m



Oil Character Length (m): AP PO CV CT 40 ST 200 MS 2 PT TB 2 FL NO

REVISION: 000000

SHORELINE ECOLOGICAL SUMMARY

REVISED
4/4/90

REVISION: 02/22/90

Segment ST / ELOS Subdivision E B Date (mo/day/yr) MARCH 31 1990

Time (24 hr) 1400 - 1500 Biologist JIM BARRY 272 m

- (A) Substrate type and % of segments: see OB FORM FOR THESE
(1) Bedrock (2) Boulder (3) Cobble (4) Pebble (5) Sand (6) Silt
- (B) Overall % cover of biota (% of segment): Dense 70 Moderate 10 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: ST-6-2
Roll No. 8-10
Frames

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

MARPIE, SEA LION

TIDAL WINDOW +5 → +7

HIGH TO MID ZONE OBSERVED: FUCUS VISIBLE FROM SURFACE IN LOW ZONE

Ecological Considerations: 6V, 7II, 5-T2, 2M

- Mussel beds are increasing - avoid disturbances that would remove or destroy large portions of these beds
- Special sensitivities ~~are not~~ (designated) are not relevant to this subdivision

ADDITIONAL COMMENTS - LOW ZONE NOT OBSERVED DIRECTLYMAJOR SPECIES

BARNAICLES - MOST OF SUBDIVISION C IS CLIFF FACE, 2 OR 3 cobble beaches also are present

- Barnacle distributions have similar characteristics to ELOSS-A, but perhaps slightly denser.
- beaches (cobble) have moderate densities, except where oiled sediments are present.

II Mytilus -

Mytilus is present in high densities in exposed locations. Some other locations have lower densities, resulting in the general "moderate" density of adults and juveniles. Spat are dense in most crevice & mussel bed habitats.

III Gastropods - Dense in general over the middle and upper intertidal. Limpets are more abundant than on other subdivisions in ELOSS. Littorines too, are dense at most locations.

IV Fucus - Generally dense & shows denser recruitment of sporoblasts.

V Other species

1) Since the low intertidal and much of the middle zone were not accessible, I could not search for low zone species.

However, the fauna & flora appears to be recruiting heavily all around this island, with generally dense cover of biota.

➤ Mussel beds, and Fucus, in particular, are recruiting.

2) Algal cover is generally high. & species diversity also is likely to be high.

ER53-B

1330

~~Chick in mid ground north~~

~~Procerosia 1/2 in below - Sam~~

~~Benth. Mytilus bed recovery~~

~~3 mounds of SASF?~~

~~50 Littorines at foot of mound~~

~~Pelagic Cormorant~~

~~Wedge Winged Seals~~

~~Super~~

~~END OF ER53-B~~

1330 and

Revised
4/4/90

ER53-B

OFFSHORE ISLAND

Start 1400

#1 11-? cover of mussels

10 → LITTORINES

on Rhodomela? on upper

level pool.

#8 recovering mussels
on upper zone (Fucus too)

Walked around island

Tide pretty high

Some exposed beds have healthy
mussel beds & were not treated
last year.

Dense Mytilus recolonizing
all over

Fucus sparse, but dense adults;
especially in mid zone

> P. sinensis, w/ moderate recolonizing

macroalgae

4507
4/4/90

EL 053-8B

EL 053-8B

Branchiopsis alba in mid
to high

Dense Littorina

CHARTER 7 on coast in
beach cobbles

8 ~~PIT~~ matted organics

5 PIT

FUCUS

END 1500

MOST OF ISLAND SIMILAR

1) FUCUS ABUNDANT A, J, S

2) BARNACLE > BARNIS A, J, S
moderate in some spots

3) Mytilus moderate to dense

A, J, dense spot

- Uprights settled in spots

- Pecten in low zone

Less sp. fauna on oiled
fossil beach than on
adjacent clean
beach where Littorinae
& ~~large~~ Bivalves are moderate.

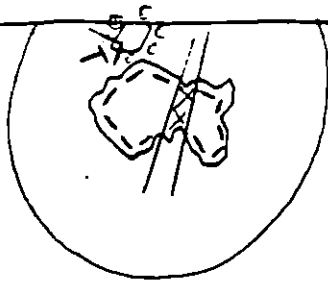
- Coralline algae (Calliastrea?)

> Ralfia

Couldnt see as much as due to
tide -

Most of island has steep cliff

End 1500



EL-53 & B

Transferred from map by C. Dillon
HH 4-5-90

Her way back to island cut off

EL-55



EL-53

XXXX Wide

//// Medium

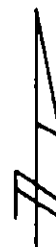
---- Narrow

TTTT Very Light

0000 No Oil

EL-55

ADEC Segment Length: 1103m

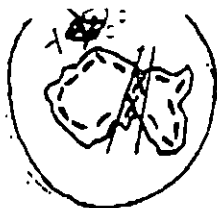


Map Key: PWS-138

Name: _____

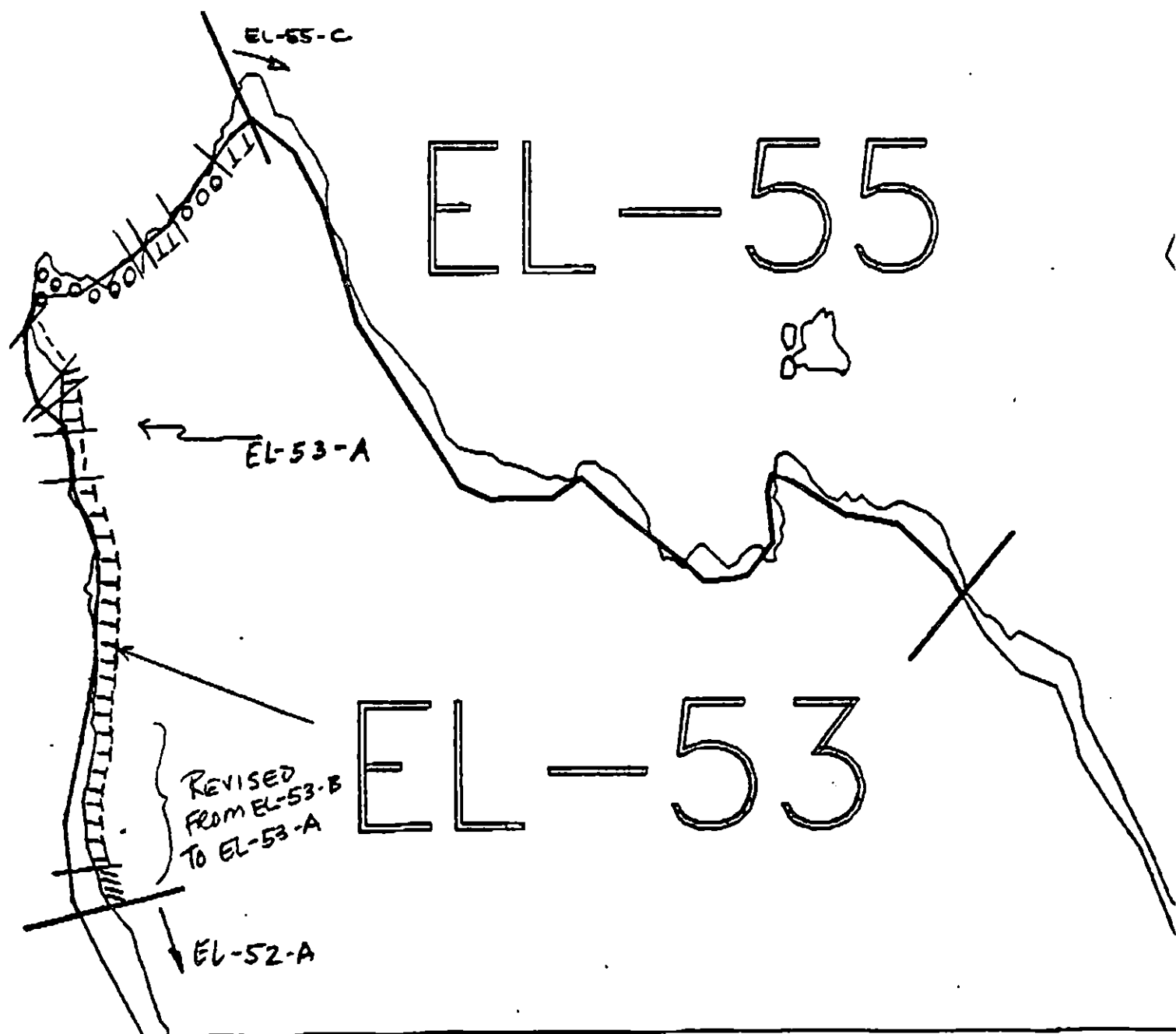
Date: _____

Data Entered: _____



EL-53-X B

REVISED on 4/4/90



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EL-53

ADEC Segment Length: 922m

0 100 200 300

METERS



Map Key: PWS-138

Name: C. DILLON

Date: 03/31/90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-53 SUBDIVISION B (2 of 2)

WORK WINDOW	
Manual Pickup	OPEN
Bioremediation Manual Raking	WORK PRIOR TO 8/15

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M	Herring Spawning	NO CONSTRAINT. Authorized by Claudia Slater/ADF&G on 5/10/90 to Exxon/Tom Kelley.
5T	Bald Eagle Nest	NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision B work site.
7II	Subsistence: Deer Harvesting	Closed to bioremediation and manual raking 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. Restrict boat traffic to essential minimum. Avoid any unnecessary disturbance or damage to unrolled substrate and biota especially intertidal and subtidal algae and seagrass.

FOSC

[Signature]

Date

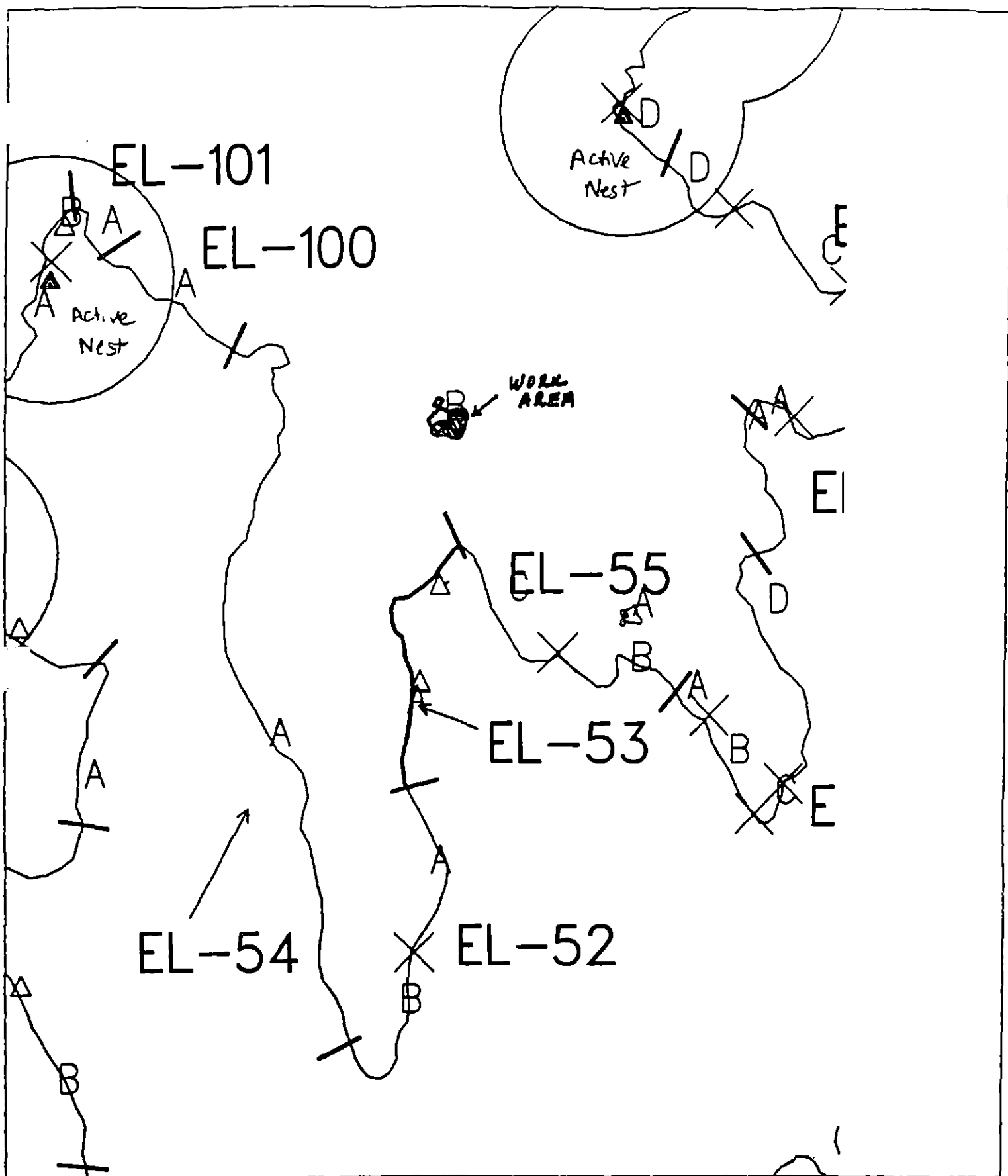
6/14/90

Prepared by

[Signature]

Date

6/14/90



Exxon Company, USA

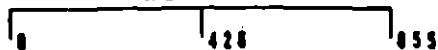
Map Key: PMS-EL-53

June 08, 1990



ECOLOGY MAP
 SEGMENT EL-53
 SUBDIVISION B (2 of 2)

METERS



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

1 inch = 1403 feet

ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/ EL53 Subd.: B Site: #1 Date: 8/7/90 1990

Conditions Observed: Custom Blend granules on surface (applied ~5-6 weeks past) with little degradation to individual granules, or little Penetration between sediments - SOR/H in HITE in B/C/M. CV/CT near base of B/C with 1st band around site. (SOR/H 1M x 8M) Shallow Pit on site w/ black viscous residue O.P. oil. Add'l SOR/H at 3M x 3M Site Southwrt of first site. Surface sheen in tide pools; sheen in tide water.

Followup Recommendations: Manual removal of SOR/H until ^{the} sediments are ≤ OR/M. Manual removal CV from all surfaces. Use wire brush to break up coats. Roll cobbles to expose heavy coats. Manual till to natural bypassing condition.

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

ADEC Wesley Ghormley Wesley Ghormley

Comments: Custom blend applied on 7/12/90. No difference in appearance is present. Highly recommend more manual removal of saturated sediments. Black PC also present in pit that was constructed. Remove coat/skin w/ HOT H2O and reapply custom blend when sediment oil mixture is ≤ SOR/M.

By: REV SOTELA By Sotela

Comments: Reassessment is necessary in '91 to follow up on extended application. The manual pick up on this segment was completed on original schedule, it is my recommendation that removal of more sediment + material is on new

USCG NOAA Art Weiner Art Weiner

Comments: AGREE TO MANUAL REMOVAL OF ACCESSIBLE SOR. CUSTOMBLEND SHOULD BE REAPPLIED IN AREAS WHERE PENETRATION. DO NOT AGREE TO MANUAL REMOVAL OF COATS + COVERS.

Lead Rep: John Ebel John Ebel

Comments: Wall Penetration columnar jointed basalt rocks. SOR/H exists at rift site between + Williamsburg Port travel world coast oil patch in Province. Multiple Viscous the North, South + East. Excellent Recession opportunities. Six Seals Oil Rock off tip of island.

ASAP TAG REVIEW SHEET

Segment: EL53 Subd: B Site: 1 Date PRE-Review 14 Aug 90

Priority For Addressing In 1990

☒ HIGH ☐ MEDIUM ☐ LOW ☒ NTR

Treatment
Recommended:

NTR

SOR - Patchy Not "H"

No Reassessment

This is a done deal

Priority Site For Reassessment In 1991

YES ☒ NO ☐ YES ☒ NO ☐ YES ☐ NO ☒ YES ☒ NO ☐
CG ADEC EXXON LAND MGR

TAG 15 AUG 90
no 90 treatment
Reassess 91

FIELD SHORELINE COMMENT SHEET

SEGMENT AS/EL 53 SUBDIVISION: B SITE: #1 DATE 8-9-90

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 CUSTOM BLEND ON
SUBSURFACE OIL [OR/OP].

ADEC
NAME Wesley Ghermley SIGNATURE Wesley Ghermley 

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

To evaluate the effects of custom blend.

Also to determine the presence of CT/CV's on bedrock, boulders
after winter activity.

- A determination of removal should be recommended
upon visual observation of CT/CV's after winter
storms. If still present they should be removed.

LAND MANAGER

NAME John Ebel SIGNATURE John Ebel

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

This oil condition presents a hazard to wildlife esp. Mammals.
Heavy coats stick and adhere to boots and clothes. Mammals
which come into contact of sticky oil will lick fur to clean
themselves & ingest oil.

EXXON

NAME Ray Sotelo SIGNATURE Ray Sotelo

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

This should not be a priority site for reassessment in '91. Most
all oil has been removed and customblend has been applied, so be
surprised to see more work done here.

TEAM NO. ASAP-2 EXCON SE-EL0 SEGMENT AS: EL 53
 OG CHANEY USCG WEINER/BERSALONA SUBDIVISION B
 ADEC GHORMLEY LAND REP EBEL, JOHN (PDR) TOTAL NO. SITES 1
 DATE AUG 17 190 TIME 10:20 to 11:10 TIDE LEVEL 1 to 4 ft
 TOTAL EST LENGTH OF SHORELINE SURVEYED: 55 m
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WEATHER: ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Sn
 OIL CATEGORY LENGTH: W — m M — m N 55 m VL — m NO — m US 4/2 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OILED ZONES			
	IC	IB	IP	IS	SU	UI	MI	LI
ASPHALT								
S.O.R.			X			X		
POOLED								
COVER	X		X	X	X	X		
COAT	U	U	X	X	X	X	X	
STAIN								
MOUSSE								
PATTIES/T.B.								
FILM								
NO OIL								X
EST. SITE LENGTH					55			

SITE 2

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

SITE 3

CHARACTER	DISTRIBUTION				OILED ZONES			
	IC	IB	IP	IS	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	20	X	X			5-20	N	X				PG-PGR
							.						
							.						
							.						
							.						
							.						
							.						
							.						
							.						

Photographs: ASAP

Roll No. Rob/ #2

Frames 28

REVIEWED
8/11/00

COMMENTS The fissure which divides the island in half retains the most oil. It is trapped by the bedrock and well protected from wave energy. Although manual removal has been conducted, SOR sediments remain. Just southwest of the fissure is a region of broken coat and patchy cover. Based on the pit information it's likely as much as 10% of the oil is located in the bottom of the fissure.

OG C. Wilson

SEGMENT STA EL-53

SUBDIVISION #B

DATE 31 May 90

CHECKLIST

- ☐ M Area
- ☐ Approx. Size
- ☐ Substrate
- ☐ CT Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HRA/LRA
- ☐ SSI
- ☐ Photo Location(s)
- ☐ Photo(s)
- ☐ Photo Location(s)
- ☐ Photo Location(s)

LEGEND

1 Δ
No. No Substrate CT

2 Δ
No. Substrate CT

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Sporadic Distribution

CT/B
Sporadic Distribution

CT/B
Sporadic Distribution

1 Δ

Photo location, direction,
and number

CUSTOMER HAD
BEEN APPLIED.

1m x 3m
figure with
cooked seeds.



SAME
figures with cooked and punctured seeds
1m x 3m 2m x 20m wide

SEGMENT EL-53

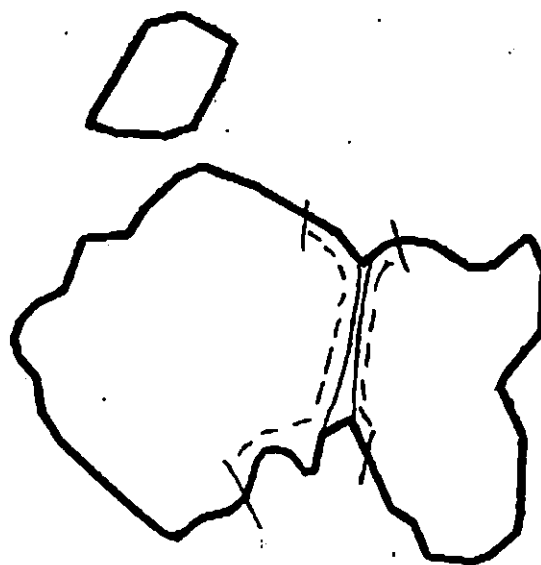
SUBDIVISION #B

SUBDIVISION LENGTH
272m 7m

OR Character Length (m): AP _____ PO _____

U MS 2 PT _____ TD 2 FL _____ NO _____

REVISION 000000



B

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

EL-53 B

ADEC Subsegment Length: 487m

METERS

0 62 88

AK State Plane Zone 4 1:1000



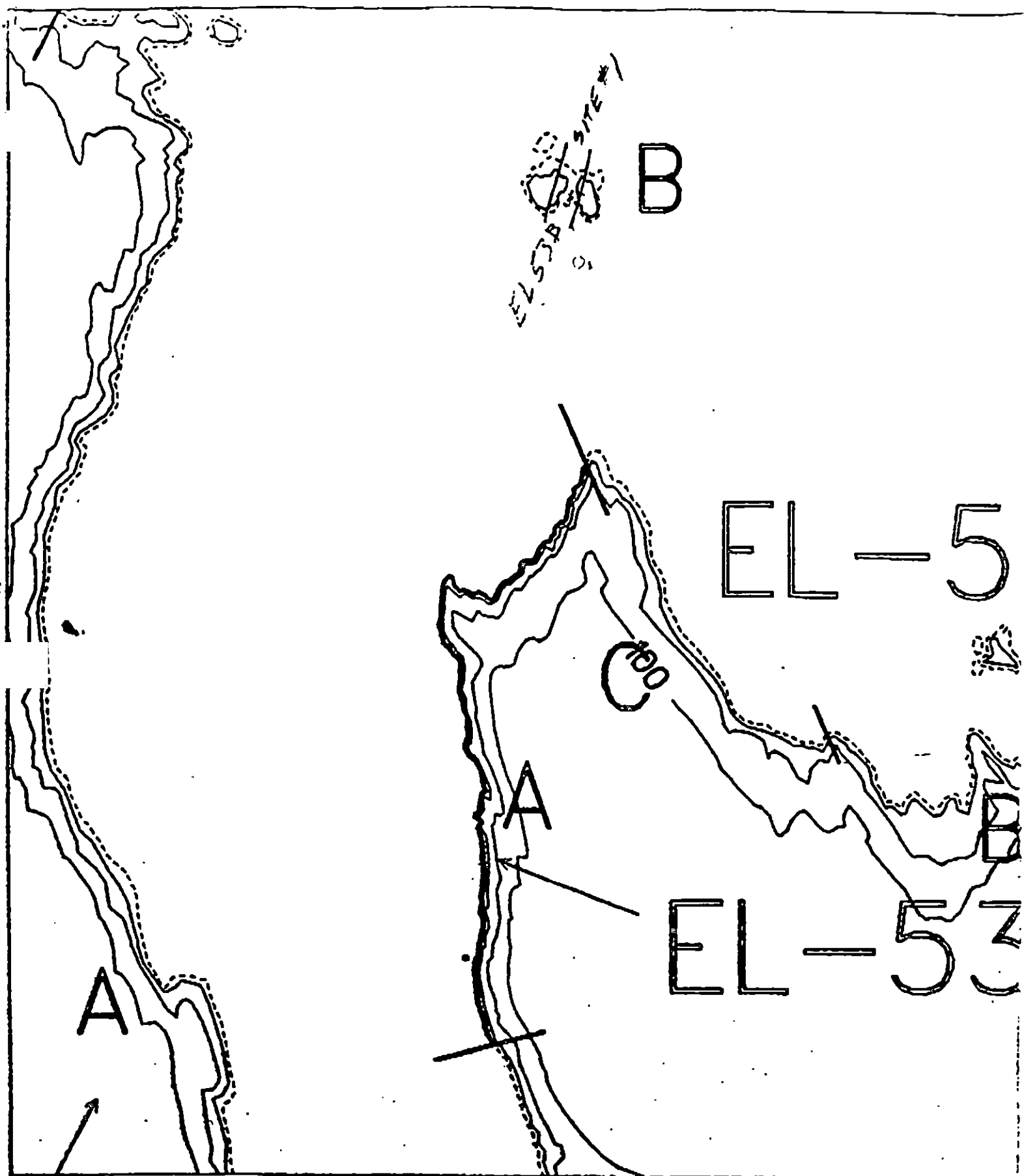
Subdivision Field Map

Map Key: KNIEL-53B

Name: CHANEY

Date: AUG 7 1990

AK State Plane Zone 4



SEGMENT EL-53

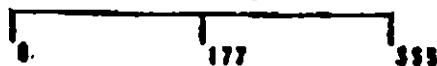
Segment Location Map

Map Key: KNIEL-53

July 19, 1990

1:6987

METERS



SHORELINE EVALUATION

SEGMENT ST/ EL-54 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
6U Recreation: Tent sites (6/1 to 9/15)
6V Anchorages (6/1 to 9/15)
6Y 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 substrate and biota.

SHPO SIGNATURE: Charles E. H. Jones DATE: 4/18/90

OILING CATEGORIZATION:

Wide 24 m: Medium 36 m: Narrow 428 m: V.Light 2107 m: No Oil 84 m
Subsurface Oil Observed: Yes X No Maximum Depth 50 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 areas shown on attached sketch map. Work should be conducted after 6/15 based on spawning constraints.

MANUAL RAKE PRIOR TO BIOREMEDIATION IN AREAS OF PITS 3, 4, +5.
AS INDICATED ON SKETCH.
TAG COMMENTS:

SUITZ SHOULD BE REASSESSED BY MONITORS DURING TREATMENT
SNOW PRESENT AT TIME OF SURVEY.

TAG APPROVAL DATE: 4/18/90

ADEC ART WEINER Art Weiner

EXXON ANDY TAYLOR Andy Taylor

IOAA Burt Wesscott Burt Wesscott

USCG G.A. REITER G.A. Reiter

FOSC: My L 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 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 Subistence 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-54-A SUBDIVISION: A DATE 4/6/90

USCG NAME DAVID A. SCHNEIDER SIGNATURE David A. Schneider

PSS/USCGR

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

BIOREMEDIATION SHOULD BE UTILIZED ON LARGE COBBLE/PEBBLE BEACH ADJACENT TO EL-100. SITE SHOULD BE REASSESSED AGAIN AFTER SNOWMELT TO DETERMINE IF TREATMENT IS NECESSARY THERE. TILLING THE BEACH AT THE UITE/SITE BOUNDARY WILL INCREASE THE EFFECTIVENESS OF THE BIOREMEDIATION AGENTS. REMAINDER OF SUBDIV REQUIRES NO FURTHER TREATMENT. ~~DBR~~

ADEC NAME Peter Montesano SIGNATURE Peter Montesano

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

locations of Pit 1, 2, +3 have surface oiling among ~~these~~ boulders, finer sediments, and rock crevices. These areas are not bioremediable but require some handwiping and removal of surface materials. The pit #3 filled with interstitial water with DBP oil on it.

The last beach is just shy of EL100 is well documented on the map except for a MITB pit which revealed OR/OF oiling. No oil was found. This beach should be tilled and bioremediable. The supratidal should be examined after snow melt to uncover the extent of oiling. more aggressive forms of treatment should be considered if the oiling is more extensive than noted here. The area by Pit 6 must be manually removed.

LAND MANAGER

NAME JANETTA PRITCHARD SIGNATURE Janetta Pritchard

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

The boulder slope does not require clean-up. Manual scraping of coast and pick up of oiled pebbles/gravel is recommended for the pocket beach across from the island. The beach adjacent to EL100 has a deeper penetration of oil and a higher recreational value than the other beach. Therefore, I recommend tilling and bioremediating the MIT UITE and SURFA. Because there is still oil on the majority of the

OG C. DILLON USCG D. SCHNEIDER SEGMENT ST/ EL-54
 BIO J. BARRY LAND REP J. FRITCHARD (FS) SUBDIVISION A (1 of 1)
 EXXON A. SNOOK ADEC P. MONTESANO TIME 13:00 to 15:40
 TEAM NO.: 6 TIDE LEVEL: +6 to +1.5 DATE 04/04/90
 EST. SUBDIVISION LENGTH: 2870 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☒ Grass ☒ Forest ☒ Rock grass at W'most beach
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 20 % B 10 % C 8 % P 2 % G 0 % S 0 % M 0 % V 0
 SLOPE: Long 10 % Hang 30 % Vert 20 % WAVE EXPOSURE: ☒ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 15 m M 20 m N 385 m VL 2250 m NO 200 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	N	E	S	W	1	2	3	4	5	6	7	8	SU	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT		X	X					X	X				X			
STAIN		X	X					X	X				X			
MOUSSE																
PATTIES																
TARBALLS																
FILM			X		X								X	X		
NO OIL	Snow on W'most 2 beaches												S			X

PAVEMENT: H F S C sq. m by C

PATTIES / TARBALLS C BAG:

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTE
☒ YES ☐ NO

TYPE oiled pump
 #BAGS 1

Photographs:

Roll No. ST-6-4

Frames 1, 2, 5, 6, 10, 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	CP	NO		NO	NO	1	2	3	4	5	6	7	8	SU	U	
1	10		X				0-10	X					X					X		P/G
2	12		X				0-6		X				X					X		P/G/S
3	25		X				0-6						X						X	P/G
3	25	X					6-10		X	X									X	P/G/S
4	15	X	X				0-14		X				X						X	C/P/G
5	50				X		4-40	X		X								X		C/P
5	50		X				40-50	X					X					X		P
6	24		X				0-20		X				X	X						P

* Oiled interval = 5cm does not constitute subsurface oil

OG C.D. 11

SI CH MAP

SEGMENT EL-5

SEGMENT ST/ EL-54

SUBDIVISION A

SUBDIVISION A

LENGTH = 2.876
METER

DATE 04 April 90

CHECKLIST

- ☐ M Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Obs
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWA/LM
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Photo(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

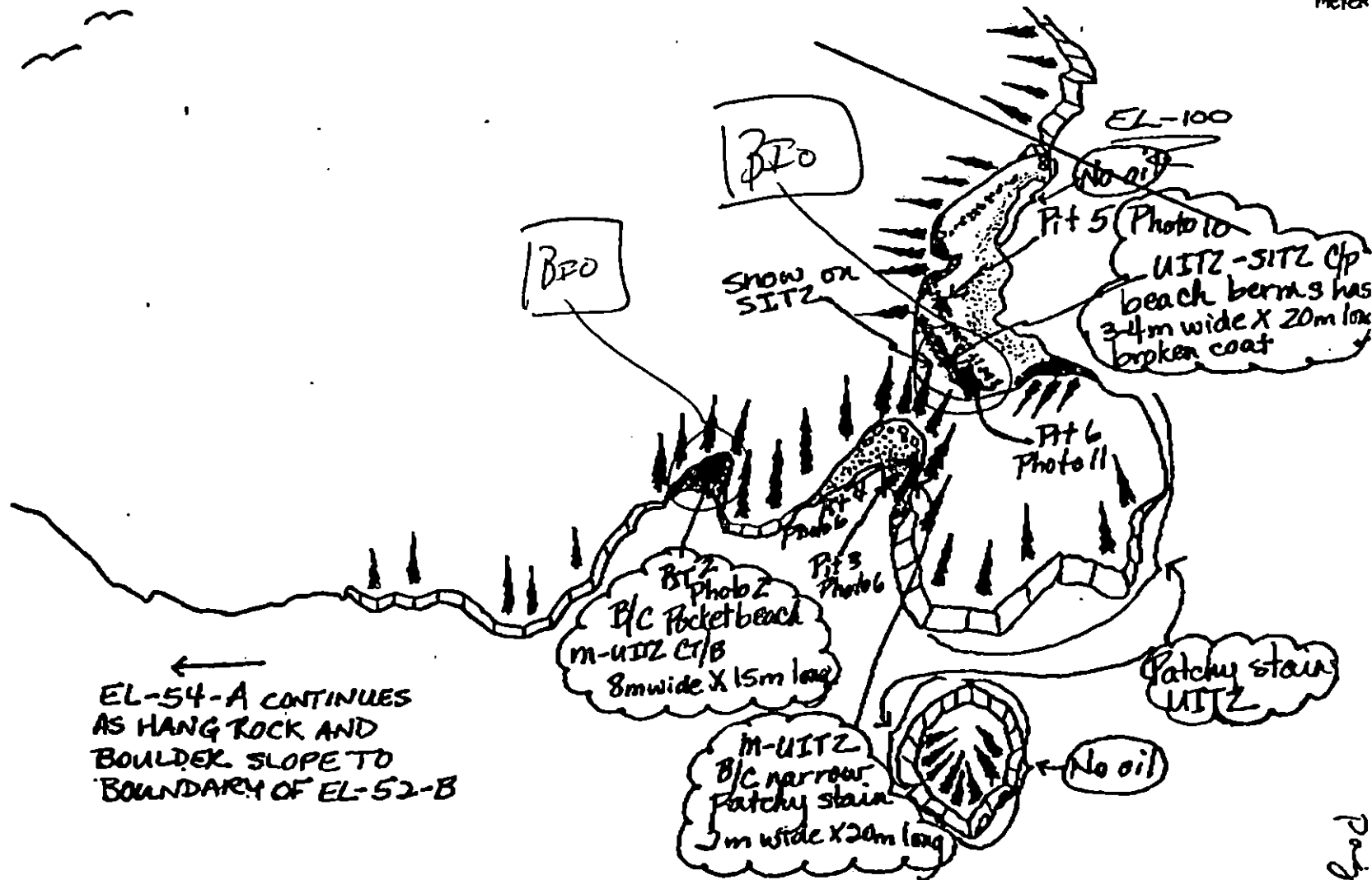
CT/S

Splashed Distribution

Oil on Vegetation

1 ●

Photo location, direction,
and number



Oil Character Length (m): AP 0 PO 0 CV 0 CT 65 ST 800 MS 0 PT 0 TB 0 FL 1808 NO 200

SCHNEIDER

REVISION 000000

Page 2 of 4

SHORELINE ECOLOGICAL SUMMARY

REVISION: 05/22-1

Segment ST/ ELOS Subdivision A Date (mo/day/yr) April 4 1990

Time (24 hr) 1300 - 1400 Biologist Jim BAREY Length = 2870 m

- (A) Substrate type and % of segments:
 (1) Bedrock 20 (2) Boulder 70 (3) Cobble 8 (4) Pebble 2 (5) Sand (6) Silt
- (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 (S)
- Photographs: ST-6-4
 Roll No.
 Frames 1-12

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

Bald Eagles - 3 Ravens - 3 Osprey Tracks - 1
 Goldeneye - 2 Crows - 1 Seal - 1
 Merganser - 1 Unknown Duck - 1 Glaucous Gull - 3

Ecological Considerations: 6YUV, 711, 2M

- EEL GRASS BEDS LIKELY ARE PRESENT ALONG PART OF THIS SUBDIVISION.
 HERRING SPAWNING IN THIS AREA MAY BE DISTURBED BY HEAVY BOAT TRAFFIC.
- DEER WILDLIFE PRESENT
- OTHER SENSITIVITIES NOT AFFECTED

EL054 - A

START 1300 TOC WINDOW
STOP 1440 +6 → +2

2/

I General Comments

- 1) MOST OF THE SUBDIVISION IS COMPRIZED BY HIGH ANGLE CLIFFS WITHIN THE WESTERN ARM OF NORTHWEST BAY. EXPOSURE TO SURF FOR THIS PORTION OF THE SEGMENT IS LOW. TOWARDS THE OUTER END OF THE BAY & OUTSIDE TOWARDS THE NW, THE EXPOSURE IS MODERATE TO HIGH, & BEACHES OF COBBLES & PEBBLES ARE FOUND ON THE SEGMENT
- 2) OVERALL, THE ABUNDANCES OF BIOTA WERE MODERATE, EXCEPT FOR FUCUS, WHICH GENERALLY WAS DENSE. THE DENSITIES OF INVERTEBRATES (MUSSLES, BARNACLES, GASTROPODS), VARIED BETWEEN EXPOSED & PROTECTED SITES BEING MODERATE ON PROTECTED SHORES AND MORE DENSE ON EXPOSED SITES. COBBLE/PEBBLE BEACHES, ESPECIALLY ON SHELTERED SHORES, HAD RARE OR NO BIOTA.

II MAJOR SPECIES

- A. BARNACLES - PROTECTED SHORES - MODERATE TO DENSE SPAT, WITH MODERATE JUVENILES AND ADULTS, MOSTLY BALANUS GLANDULA.
- B. MYTILUS - SPAT WERE OCCASSIONALLY DENSE IN PATCHES ALONG SHELTERED SHORES, BUT GENERALLY WERE MODERATE TO SPARSE. ON EXPOSED HEADLAND BEDROCK, SPAT, JUVENILES AND SMALL ADULTS WERE DENSE, PARTICULAR NEAR BEACH 3.
- C. GASTROPODS.
 - 1) PERIWINKLES - LITTORINA WAS MODERATELY ABUNDANT, BUT PATCHY
 - 2) WHELLS - MODERATE TO SPARSE ON MOST BEACHES
 - 3) LIMPKITS - MODERATE ON MOST BEACHES, OCCASSIONALLY DENSE
- D) FUCUS - Generally dense in the mid zone to low zone, especially along sheltered shores.

III SPECIES LIST.

MAJOR SPECIES

1) MARINE PLANTS

A. DIATOMS/BLUE GREEN ALGAE D12

B. GREEN ALGAE - CHLOROPHYTA

SPONGOMORPHA/ALGOSIPHONIA D12

ULVA M12

UROSPORA M23

C. RED ALGAE - RHODOPHYTA

PORPHYRA - S12

PETROCEUS - S12

RHODOMELARIA - M12

RHODYMENIA PALMATA - M123

D. BROWN ALGAE - PHAEOPHYTA

ALARIA PULCRA - M12

FUCUS DISTICHTUS - D123*

LAMINARIA SPP - M12

HILDENBRANDIA - M12

RALSIA SPP. - S12

2) ANIMALS

A. BARNACLES

CITHAMALUS PALLI * M12

BACALUS GLANDULA * M12

SEMIBACALUS CARIOSUS * M12

B. HERMIT CRABS - PAGURIDAE - * M23

C. AMPHIPODS - S-23

D. MUSSELS - MYTILUS EDULIS * M12

E. SNAILS

LITHOMUS SCUTULATA M123*

L. SITKANA - * M123

NUCCIA LAMELLOSA - S12

N. EMARGINATA - S12.

F. LIMPETS

LOTIA DIGITALIS - S12 *

T. SCUTUM - M23 *

G. SEA STARS

PYCNOPODIA - * S12 *

LEPTASTERIAS - M23 *

PIASTER CENRACEUS S12.

SPAT ON
* JUVENILES PRESENT

D DENSE

M MODERATE

S SPARSE

R RARE

1 Bedrock

2 BOULDERS

3 CORALS

DERMATASIAS S12

EL054-A

APRIL 4 1990

7/3/7

MINOR SPECIES

PLANTS

a) GREEN ALGAE - CHLOROPHYTA

CLADOPHORA M12

ENTEROMORPHA M123

b) RED ALGAE - RHODOPHYTA

BOSSIELLA S12

CALLIANTHUS S12

CORALLINA S12

ENDOCLADIA S12

HALOSACCION GLANDIFORME M12 &

IRIDARIA spp M12

LITHOTHAMNION - M12

MEMBRANOPTERA platyphylla? M12

MICROCLADIA / PTEROCADIA S12

MASTOCARPUS R12

CRYPTOSIPHONIA SP S12

c) BROWN ALGAE

COSTARIA M12

GLYTOSIPHON M123

2) ANIMALS

a) WORMS

NEMATODE spp S23

PLATYDORIS spp R23

POLYCHAETES

SPICOSPIS M23 &

SEPIA S12

CANCER R12

UREIDOR R12

b) MOLLUSCA

a) Snails / Limpets

Tachyrrhynchus spp S23 &

Litha perona S12

Tectarius perona S12

Siphonaria sp M123 &

c) CHITONS

Tonicella lineata S12

T. insignis S12

Katharina tunicata M12

SEE PAGE 1 FOR CODES

3. Sea Stars

Orthostromas R12

4. Scallops - Podokesmus spp S1.

5. Anemones

Anthopleura kankyoanica

A. artemesia R12 &

Epiaetis S12 &

Tealia crassirostris S12

6. Crabs

Hemigrapsus oregonensis R23

Acantho lithodes / Naplogaster S1

7. Bryozoans - Schizoporella? S23

8. Bechtoppen - Sigrella S12

9. FISH - PHOXODAE - M23 &

COTTIDAE S12 &

EL54-A

April 4 1990

5/7

- "Missing Species" ?

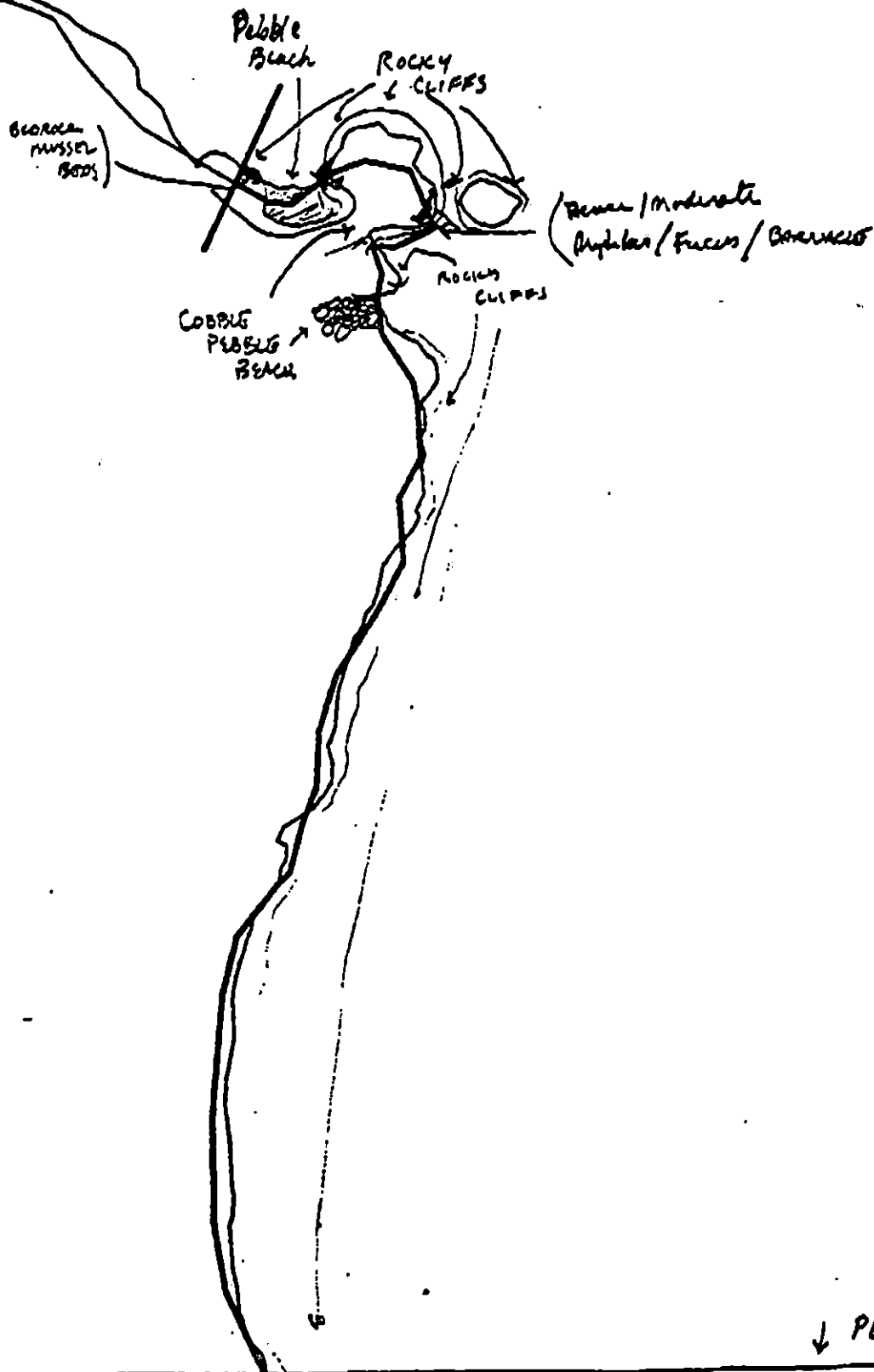
MOST OF THE BEACHES HAVE CLAM SHELLS ON THEM, INCLUDING
scallops (*Chlamys* spp.), cockles (*Clinocardium* spp.), *Macoma* spp., *Stearns Clams*
(*Protothaca* spp.), and Button Clams (*Saxidomus* sp.)

I found no juveniles or live adults on any of the beaches, although
juveniles of some (*Protothaca staminea*, *Heathella arctica*, *Macoma*
spp.) have been found on nearby beaches.

V Oil Effects on beaches -

Protected sites within the Bay are more oiled than those outside the bay.
Oil coatings was found under ~~the~~ boulders and cobble that sheered when
disturbed by turning rocks. Biotin was present under rocks, but less so
where oiling was heavier.

7/7



↓ PWS 137A

XXXX Wide

//// Medium

--- Narrow

TTTT

EL-54

ADEC Segment Length: 2679m

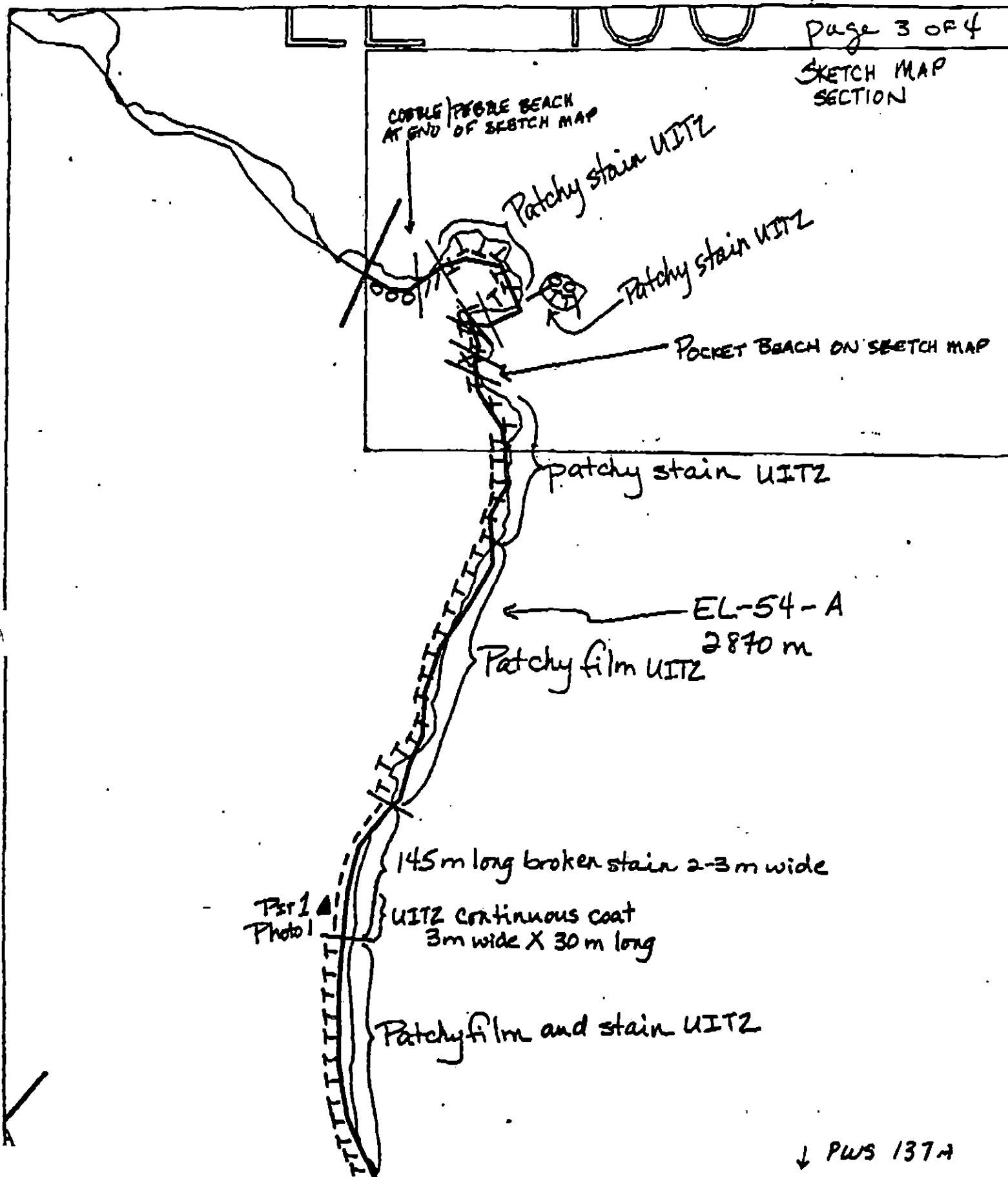
Map Key: PWS-137b

Name: C. DILLON

Date: 4/4/90



SKETCH MAP
SECTION



↓ PWS 137A

XXXX Wide

//// Medium

--- Narrow

TTTT

EL-54

Exam Segment Length: 2870m

ADEC Segment Length: 2879m

Map Key: PWS-137b

Name: C Dillon

Date: 4/4/90

EL-54

Patchy film UITZ

EL-54-A
2870 mUITZ 1-2m wide 220m long sta
m-UITZ 2-3m wide patchy film

patchy film UITZ

XXXX Wide

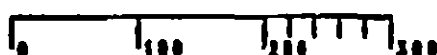
//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EL-54

Exxon Segment Length: 2870m
ADEC Segment Length: 2679m

 0 100 200 300
 METERS

Map Key: PWS-1376

Name: C. Dillon

Date: 4/4/90

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ EL-55 SUBDIVISION A (1 OF 3) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)

6U Recreation: Tent sites (6/1 to 9/15)

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance/damage to unoilied biota and substrate. Ensure that there is no disturbance of tide pools.

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

OILING CATEGORIZATION:

Wide m: Medium m: Narrow m: V.Light m: No Oil 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>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 cover and subsurface oil in areas shown on attached sketch map. Work should be conducted between 6/16 and 8/14 due to herring and deer constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/26/90
ADEC JOAN BAKER
EXXON ANN TATE
NOAA GARY PETRAE
USCG KENNETH KEANE

FOSC: [Signature] DATE: 5-12-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
 1D Esther Hatchery release (4/15 to 6/1)
 1E Main Bay Hatchery release (4/20 to 5/10)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 1I Gill net area (6/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (6/11 to 7/25)
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
 Restrict boat traffic to essential minimum. Avoid damage to 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-55-A SUBDIVISION: A DATE 3/31/90

USCG

NAME DAVID A. SCHNEIDER SIGNATURE David A. Schneider

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

I concur with both ~~parties~~ parties' comments below. The aesthet of this small island could be improved with a minimum expenditure of man hours by a small work crew. Impact/traffic in the intertidal zone should be minimized as much as possible by the work crew during clean up. PHS

ADEC

NAME Peter Madesave SIGNATURE Peter Madesave

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Subdivision A contains tide pools and other areas of rich/healthy intertidal life. The oiling is extremely stable with the exception of the SE corner where a light silver sheen was noted. In this area a small crew could effectively scrub, scrape, and remove contaminated beach materials. Additionally, coated rock scattered around the island is scrape/scrub-able. The island is a Dumas and Moore study site and should also be considered of high recreational value.

LAND MANAGER

NAME JANETTA PRITCHARD SIGNATURE Janetta Pritchard

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

I concur with ADEC and would stress the importance of maintaining the intertidal life by utilizing a small crew for manual clean-up.

OG C. DILLON USCG D. SCHNEIDER SEGMENT ST/ EL-55
 BIO J. BARRY LAND REP J. FRITCHARD SUBDIVISION A (10F3)
 EXXON A SNOOK ADEC P. MONTESANO TIME 07:30 to 09:00
 TEAM NO.: 6 TIDE LEVEL: +4 to 0 DATE 03/30/90
 ST. SUBDIVISION LENGTH: 261 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 PLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock SUBDIVISION IS AN ISLAND
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 70 % B 10 % C 5 % P 10 % G 5 % S 0 % M 2 % V 0 %
 SLOPE: Long 15 % Hang 85 % Vert 0 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 30 m VL 20 m NO 211 m

SURFACE OIL

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

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

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☒ YES ☐ NO

TYPE unfilled pump

#BAGS 1

Photographs:

Roll No. ST-6-1

Frames 26-32

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SP	BP	GP	ST	TL	SU	U	M	L		
1	20		X				0.5	X					X		X					P/G
2	7	X					0.7	X					X		X					C/P/R
							.													
							.													
							.													
							.													

COMMENTS SW quadrant of island has splatters of dark brown stain on bedrock on UITZ. P/G area at UITZ has VL stain and film to a 5cm depth. Rock face extending down toward shoreline has spotty coat and cover of dark brown oil on the underside of the outcrop and boulders at its base. The center of the island has a group of outcrops and boulders with cobble/pebble substrate on the UITZ. These have a patchy surface coat and penetrated substrate to 7cm (Pit 2). East side of island rock face has a broken coat and cover inside a crevice. All oiling is on interior of island.
 * Oiled interval at 0-4 cm. Diff. color not constitute subsurface oil.

REVIEWED 1/4/91 DATE 3/4/90

00 C. 10N

SEGMENT ST/EL-55

SUBDIVISION A

DATE 30 APR 90

SKETCH MAP

SEGMENT: EL-55
SUBDIVISION: A

SUBDIVISION LENGTH: 261m

CHECKLIST

- Area
- Approx. Scale
- Seg/Sub Entry
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. HAP/LA/VOL
- SSL
- 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

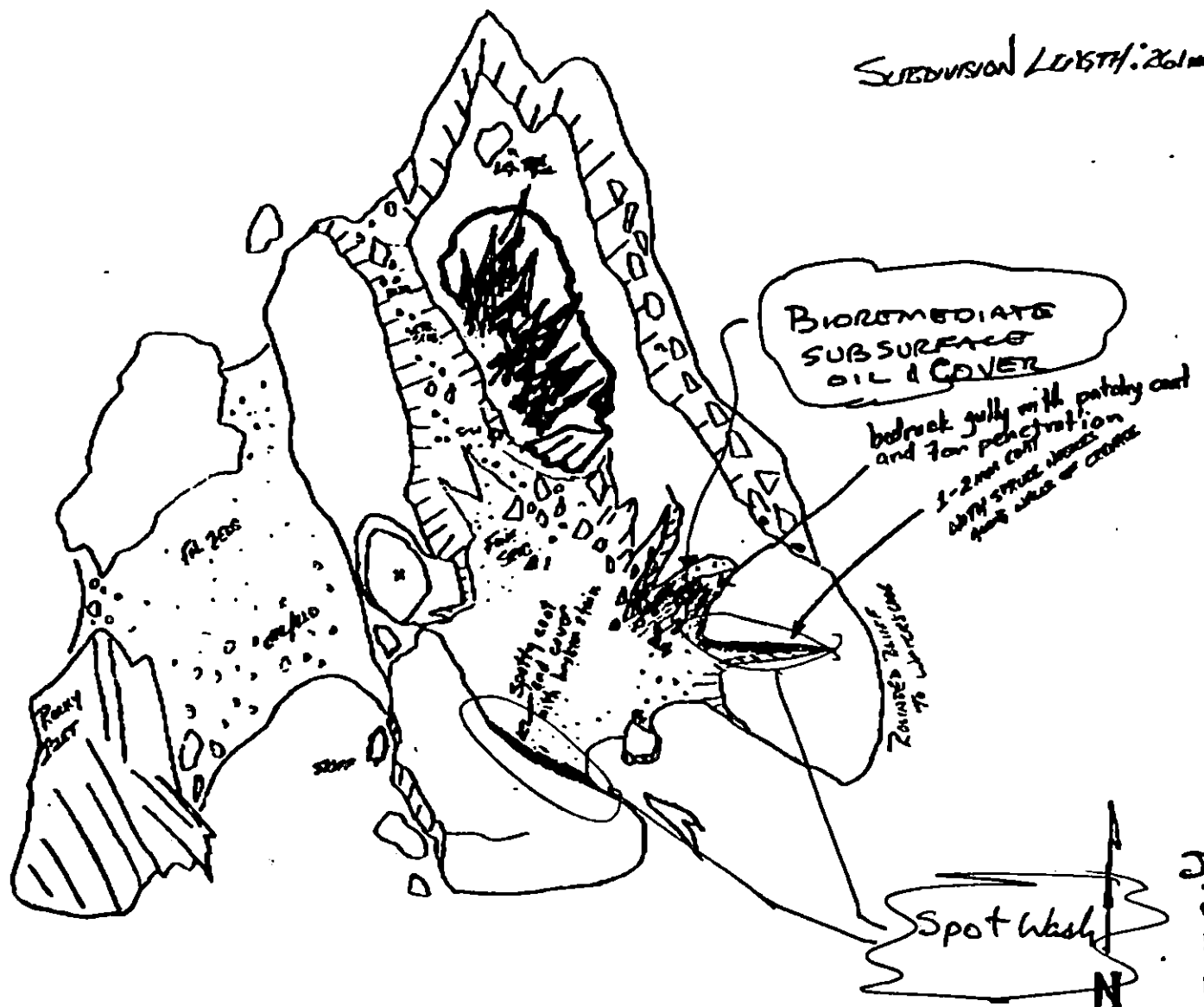
CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oil Vegetation

1 ●
Photo location, direction,
and number



Oil Character Length (m): AP PO CV 3A CT 3A ST 5A MS PT TB FL NO

REVISIONS

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/23/90

Segment ST / EL055 Subdivision A Date (mo/day/yr) 30 MAR 90

Time (24 hr) 0730 TO 0910 Biologist JIM BARRY Length 261 m

- A) Substrate type and % of segments:
 (1) Bedrock 70 (2) Boulder 10 (3) Cobble 5 (4) Pebble 15 (5) Sand (6) Silt
- B) Overall % cover of biota (% of segment): Dense 80 Moderate 20 Low 0
- 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-6-1
 Roll No.
 Frames 23-33

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:

SECTION - GERSHORE

SEA OTTER - "

BALD EAGLE - ADULT W/IN FOREST

Ecological Considerations: 7 U, 2 M, 6 L

1) recovery evident in area

2) MUSSELS, BARNACLES, SEA STARS, ALGAE PRESENT AS JUVENILES

1) INTERFERENCE W/ HERRING SPAWN POSSIBLE IF OVERLAPPED W/ HEAVY BOAT TRAFFIC

START 0730

STOP 0930

TIDE WINDOW +2 → -2

ISLAND ~ 950 m OFFSHORE

BARNACLES - *Balanus glandula*

Bedrock - steep cliffs

- Dense (All stages Adult (A) Juvenile (J), Spat (S))
most were small A, & J, & spat

- High zone - High Adult densities, (~15 mm diameter) on steep cliffs
- dense spat

mid - similar to high zone - $\frac{1}{2}$ dense juveniles & spat on open faces

low - less - sparse - moderate → due to high algal cover

Boulder - same as bedrock

Cobble - much lower densities.

Adults - rare to absent, juveniles - scarce, spat - sparse.

pebbles - all rare

Mytilus - *M. edulis* - saw no *M. californianus*

Bedrock -

High zone

Moderate abundance of juveniles & spat - but found on thick cover, but
common & ~~more~~ dense in some crevices, especially J, Spat

mid zone

same, but somewhat ~~more~~ more dense - still moderate relative to a well
developed mussel bed.

low zone

Few mussels

Boulder - same as bedrock - slightly lower density.

Cobble - sparse on some cobble in HIGH to mid - moderate overall

Pebbles - Generally low, except high (dense) on patchy
partially mussel bed on landing beach.

Fucus.

High zone

- Moderate Cover of Adults killed during treatment
or during winter.

- some individuals show evidence of regrowth from old thellus

- Juveniles present in Dense stands

- Sporlings dense in patches & moderate on others (moderate).

Mide to Low Zone - Densest the area for Fucus sporlings juveniles, adult
similar on Bedrock, Boulder, and sometimes on large cobble.

Fucus is rare or absent from pebbles to small cobble.

GASTROPODS

LITTORINES

Littorina scutulata, *L. sitkana*HABITAT LESS IMPORTANT FOR DIFFERENCES IN DENSITY, BUT Slightly
fewer on cobbles & pebbles

High - High densities of Littorines - A, J, S - on Bedrock, boulders
 Mid - Dense on all but pebbles, where they are moderate, due to
 Low - the presence of a ~~the~~ mussel bed.

Low - Moderate on all but pebbles

Nucella = Whelk

Patchy, but occasionally dense in pools - mid to low

Limpets - Variable

Present on mussels - moderate
 Rare on some rock faces
 Moderate on other

Highest densities in mid to upper tide level.

Other Species

TIDE POOLS - LOW ZONE (POTENTIAL POOLING AREA FOR OIL)

- Sea stars abundant

Pycnopodia (Sunflower Star)*Orthasterias**Dermasterias* (Leather Star)

These 2 abundant

Lots of juvenile Sunflower Stars

- Anemones

*Metridium senile**Tealia crassicornis**Epiactis* spp.*Anthopleura xanthogrammica**Anthopleura artemisia*

Occasionally present in pools

- Hermit Crabs - moderate to sparse under rocks

Peanut worms - occasional under rocks (*Phascolosoma* spp.)- Nudibranchs - *Armina californica*

- MOON SNAIL EGG CASE FOUND ON BEACH

Algae

HIGH ZONE

Petrocelis
Diatom films, Filamentous
Scytosiphon
Ulva
Unknown Filamentous
Cladophora?
Ralfsia

Hildenbrandia?
Urospora
Spongiomorpha

< Fucus

MID ZONE

Fucus distichus
Callophyllis / Rhodymenia?
Rhodomela
Scytosiphon
Ulva
Enteromorpha

Urospora
Spongiomorpha

LOW ZONE

Halosaccaria
Fucus
Ulva
Ralfsia

MISC. COMMENTS

THIS LITTLE ~~THE~~ ISLAND IS FAIRLY CLEAN: SEDIMENTS (under boulders and cobbles) have greater numbers of species and densities than E2056

WILDLIFE

SEA LION ... offshore

SEA OTTER

BAUD GABLE - 1 over forest

30 RCH 1990
Segment ~~EL092~~

EL055-A

Sensitivities ELOSS

EL055	7 II	Herring		
	2 m	Deer Harvest		
	6 u	Tentacle		
EL054	6PUV	Anchorage	Tad Sides	Special
	7 II	Herring		
	2 m	Deer Harvest		
EL053	6V	Anchorage		
	7 II	Deer Harvest		
	5 T-2	Blue tail warts	mod - mod	
	2 m	Herring Spine		
EL052	1 B	Stream mouth spm		
	6PUV	Anchorage, Tent, Special		
	7 II	Herring		

EL055-A - Small Island

0730 -

TIDE	OK FOR HIGH - MID		
	DENSE SPONGE AND (A, J, S)		
	HIGH - MID		
	MODERATE TO SPARSE LOW		
FOCUS	MODERATE HIGH (A)		
	SPARSE " (J)		
	Danby MID TO LOW	AJ	

EL055-A

4/5

(HYMILUS) moderate HI-MID
AJS

LITTORIALS Dense - Mod
HIGH - MID

Less on Cobble or low

NO RARE LIMPETS
D CRABS

SPARSE PAGURIDS

2 SP. Peanut worms

Dense Myxogodia

Less on Here

2 Healthy Adult Fucus

2 Scytosiphon, Ulva
ECTOCARPUS

2 Green Sponges

2 Brown Slime - Ralstonia

ELOSS-A

PHOTO

23

LOOK BACK A

FEW PAGES
(SAMS 24)

PHOTO 23

FOREGROUND

FUCUS A(J)

BACKGROUND

MUSILUS (3)

Non-treated FUCUS Adults

PHOTO 22

POOL w/ ANEMONES

PHOTO 26 -

Cover/coot w/ Pine
needles on rock ledge
overhang

Found here then

WSW West side

ELOSS-A

2/5

27

VICINITY OF PIT

28

PIT

29

VICINITY OF PIT

30

Crevice (oiled) Central S

~ 20 m ~ E of 27-29

31

Close up of oiled crevice

32

Vicinity of " "

Camera fried after 33

33 - FUCUS

OTHER

Beach rubble - Had

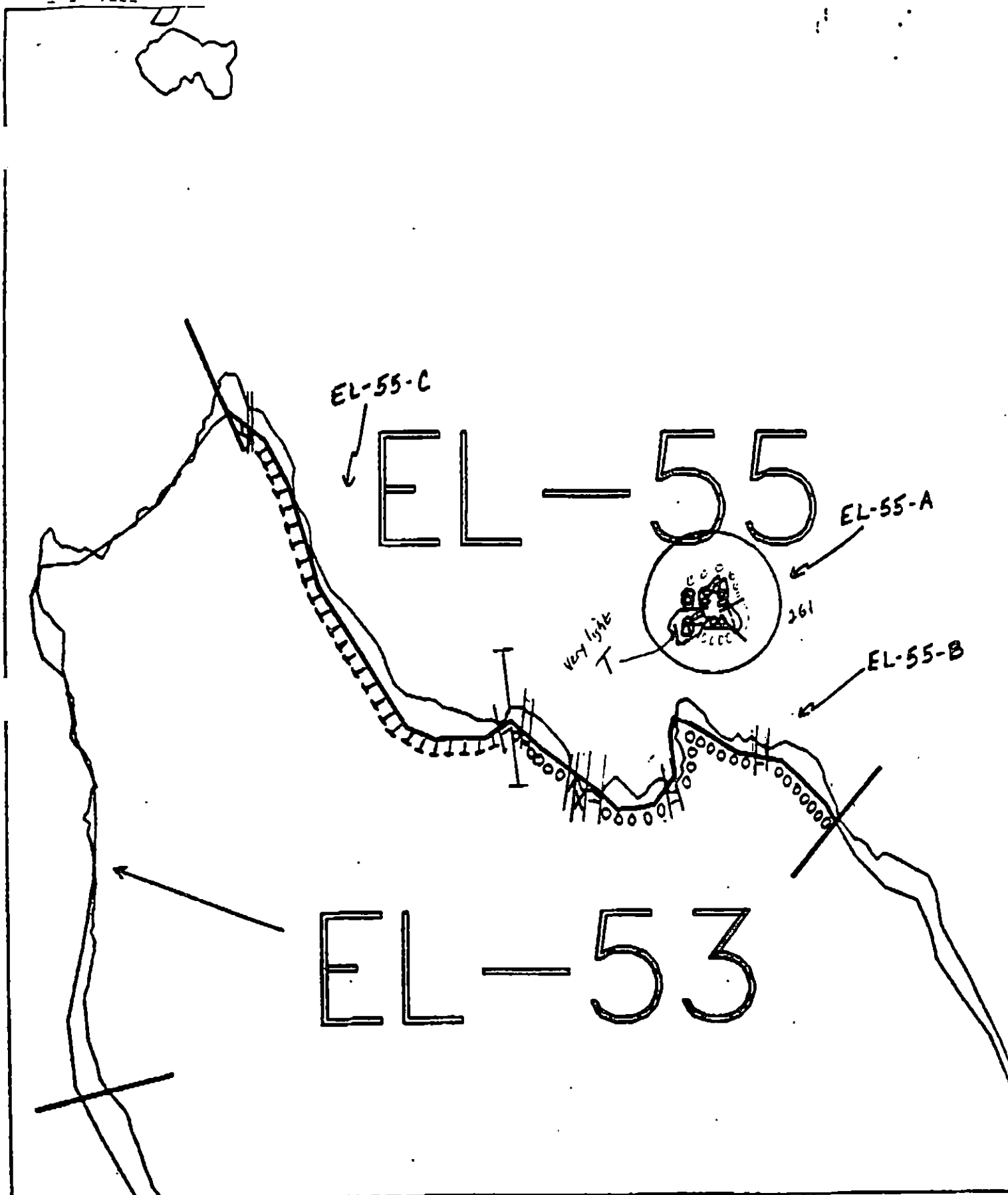
Dense - moderate Niptolus
as did many rock walls
seawater

Largest juveniles Sparrows

Moderate on rock walls
+ Niptolus

Littorina?

Nude branch in water



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EL-55

ADEC Segment Length: 1103m



Map Key: PWS-138

Name: C. DILLON

Date: 3/30/90

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-55 SUBDIVISION A (1 of 3)

WORK WINDOW

Bioremediation
Spot Washing

WORK BEFORE 8/15

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M Herring Spawning

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

7II Subsistence: Deer Harvesting

Closed to bioremediation and spot washing after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

Avoid any unnecessary disturbance or damage to uncolled biota and substrate. Do not disturb or flush pollutants into tide pools.

TAG APPROVAL DATE 5/29/90.
ADEC Art Weiner
EXXON Amy Bae
NOAA Buckley
USCG G.A. Peter

FOSC

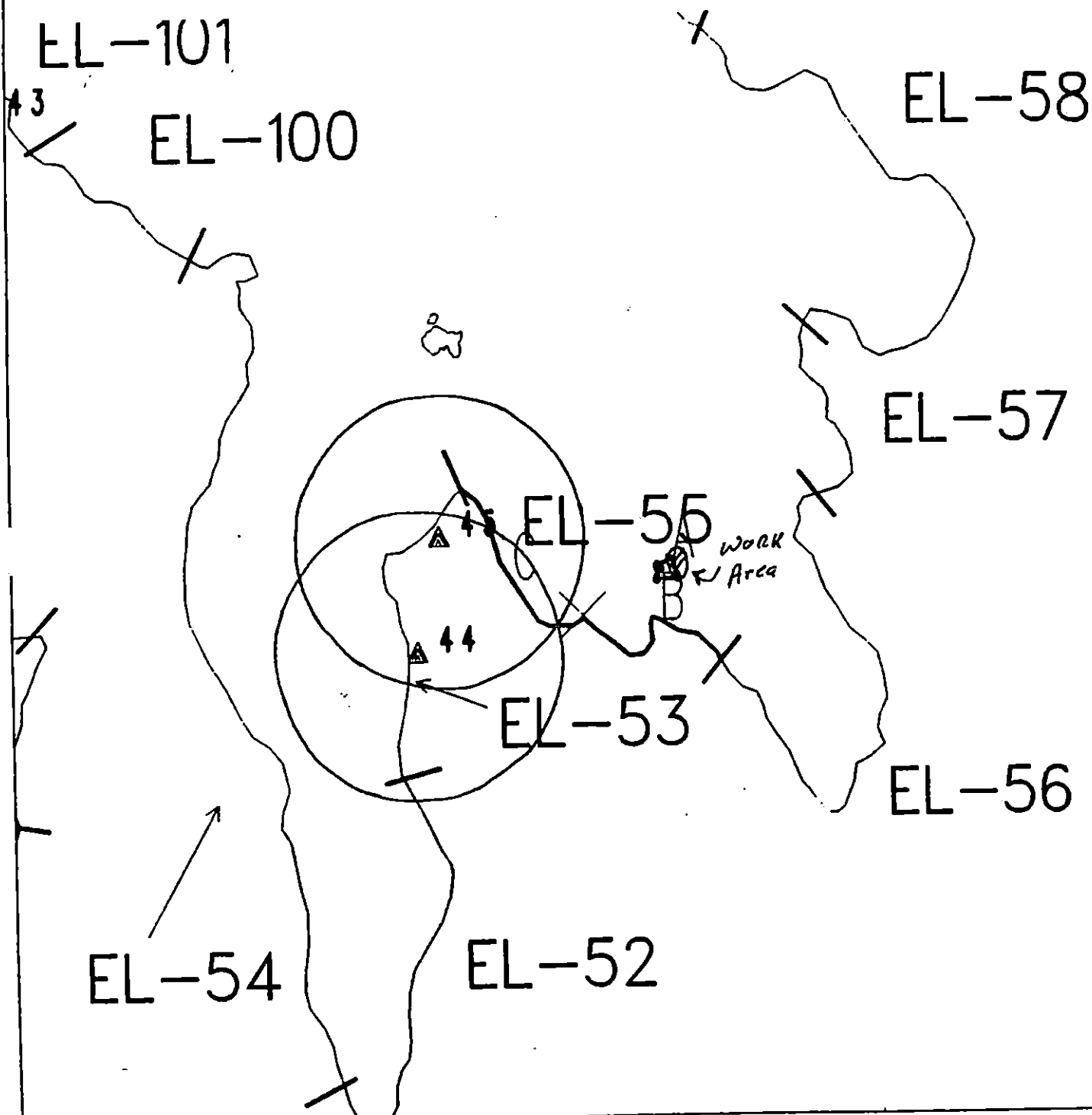
DATE

MAY 29 1990

Prepared By: Andrea Meyer

Date

5/28/90

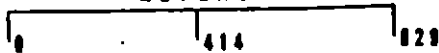


Exxon Company, USA
Map Key: KNI-EL-55
May 11, 1990



ECOLOGY MAP
SEGMENT EL-55
SUBDIVISION A (1 of 1)

METERS



Seabird Colony



Eagle Nest

1 inch = 1360 feet

ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/ EL-55 Subd.: A Site: 1 Date: 8/4/90 1990

Conditions Observed: Persistent bleeding of black mobile oil, Coats/
Covers on bedrock in sheltered areas

Followup Recommendations: AREA of subsurface oil needs to be
manually tilled and black mobile oil mopped up with pom-poms.
Coats/covers on bedrock in sheltered areas should be noted and if
present next year should be removed. After oil is removed Custom
blend needs to be applied.

Completed by Pickup ☐ YES ☒ NO
Crew:

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

ADEC

Wesley Shormley
(name)

Wesley Shormley
(signature) 

Comments: Areas where pits were dug filled with black mobile oil, Pom-poms
were used by ASAP to absorb oil in pits dug. Coats/covers are a concern
IF still present in 1991 Removal will be recommended.

Exxon

Ray Sotelo
(name)

Ray Sotelo
(signature)

Comments: Manually till/sake area shown on work order map and re-
apply custom blend.

USCG

PS1 Leo Bersalona
(name)

Leo Bersalona
(signature)

NOAA

Art Weiner

Art Weiner

Comments:

MOBILE OIL MUST BE TOTALLY REMOVED

This is an isolated incident and should be a low priority.

Land Rep.

John EBEL
(name)

John Ebel
(signature)

Comments: Due to rapid time constraints, ASpid Surveying failed to determine
the extent of OP oil. Pits should be excavated horizontally & vertically
across the tide zones to adequately locate oil for removal.

ASAP TAG REVIEW SHEET

Segment: EL55

Subd: A Site: 1

Date
PRE-Review 11 AUG 90

Priority For Addressing In 1990

 HIGH

 MEDIUM

 LOW

X NTR

Treatment
Recommended:

NTR

Recommendation
Sheet
calls for
- manual
till

Recommendation Sheet - ID's
isolated subsurface mobile oil.

Priority Site For Reassessment In 1991

YES NO
X CGG
NOAA

YES NO
X ADEC

YES NO
X EXXON

YES NO
X LAND MGR

TAG 13 AUG
- Manual till ~~stop~~ sponge up PO.

Low Priority

FIELD SHORELINE COMMENT SHEET

SEGMENT AS/ ^{FL} 55 SUBDIVISION: A SITE: 1 DATE 8-4-90
JSCG/NOAA PSI Leo Bersalona, USCG Leo Bersalona
 NAME ART WEINER SIGNATURE Art Weiner

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

TO EVALUATE CUSTOMBLEND TREATMENT.
 TO EVALUATE PERSISTENCE OF COATS ON VERTICAL SURFACES THAT HAVE NOT
 BEEN TREATED.

ADEC
 NAME Wesley Ghormley SIGNATURE Wesley Ghormley

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

To evaluate follow up treatment. Coats/covers with
 spruce needles are a concern. They are very noticeable
 in sheltered areas. If still present in 1991 Removal
 will be recommended.

LAND MANAGER

NAME John Ebel SIGNATURE John Ebel

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

I concur w/ NOAA, USCG and ADEC.

EXXON

NAME REY SOTELO SIGNATURE Rey Sotelo

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

The amount of oil remaining is questionable so this site should
 be reassessed in '91 but not as a ^{high} priority.

ASAP SHORELINE OILING SUMMARY

PAGE 01

TEAM NO ASAP #2 EXXON SOTELLO SEGMENT AS/ EL-55
 OG CHANEY USCG WEINER EBERSALOWA SUBDIVISION A
 ADEC GHORMLEY LAND REP EBEL TOTAL NO. SITES 1
 DATE AUG 4 1990 TIME 16:40 to 18:00 TIDE LEVEL 5.5 to 4.0 ft FOF
 TOTAL EST LENGTH OF SHORELINE SURVEYED: 6.5 m
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WEATHER: ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 OIL CATEGORY LENGTH: W — m M — m N 25 m VL 30 m NO — m US 272 m

SURFACE OIL

SITE 1

CHARACTER	DISTRIBUTION				OILED ZONES			
	/C	/B	/P	/S	SU	UI	MI	LI
ASPHALT								
S.O.R.								
POOLED								
COVER			X				X	
COAT			X			X	X	
STAIN								
MOUSSE								
PATTIES/T.B.								
FILM		X				X	X	X
NO OIL								
EST. SITE LENGTH					55			

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								

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	25		X			10-25	N			X		BC-BGR
1	2	25	X				5-15	Y			X		BCP-CMG
1	3	30		X			0-30	N			X		PG-PGB
1	4	30				X	.	Y		X			PG-PG
1	5	30			X		20-30	N		X	X		G-GC
1	6	25			X		0-25	N			X		P-PM
							.						
							.						
							.						
							.						
							.						
							.						
							.						

Photographs:

Roll No. ASAP #2

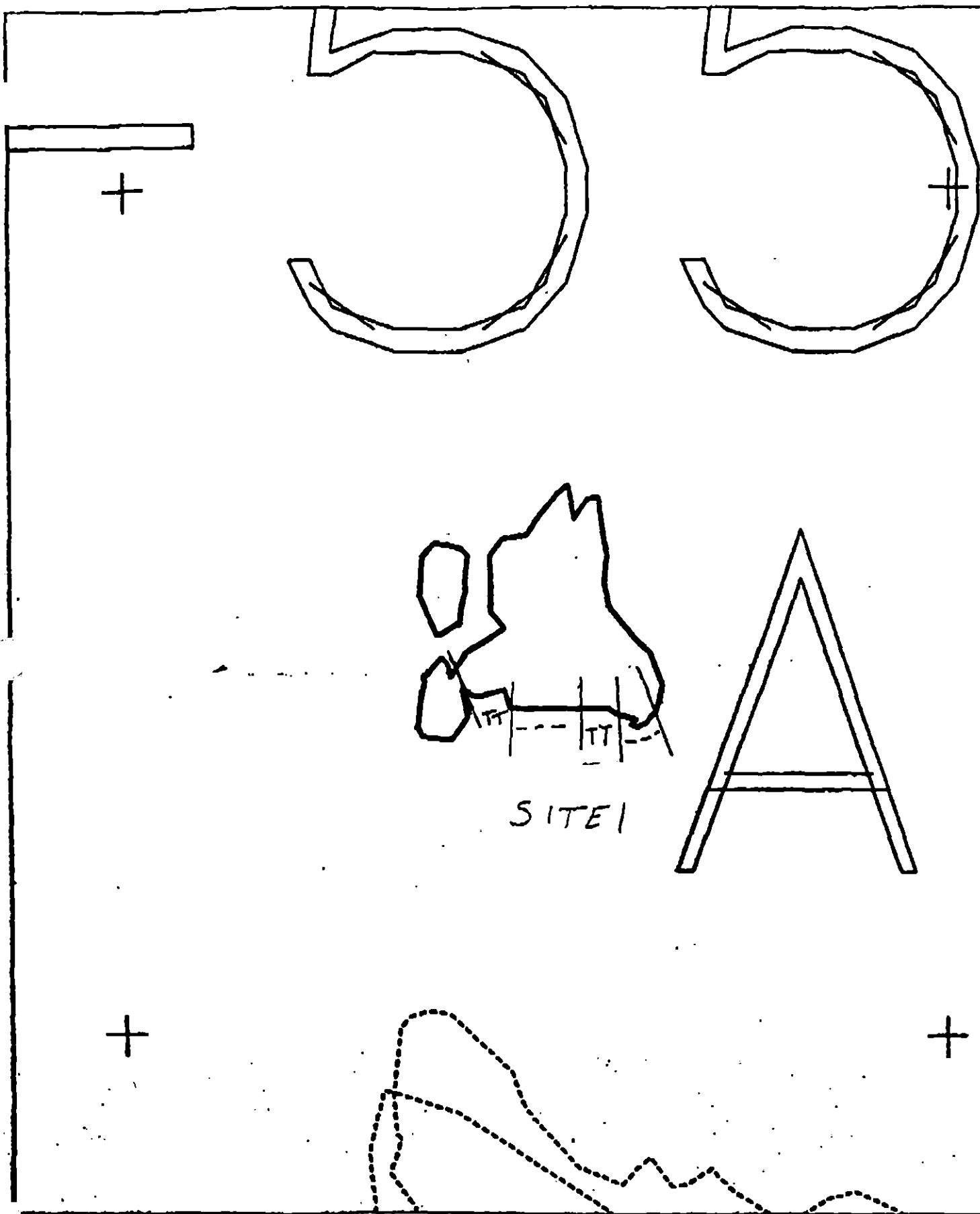
ROLL #2

Frames 8, 9, 10

Black Mobile Oil
Fresh Looking Black

Rainbow Sheen

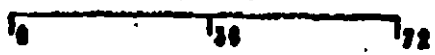
COMMENTS Area around pit 6 was originally listed as OP but ASAP only observed a rainbow film in the area. In the vicinity of pits 1 and 2, fresh looking black oil flowed into the pits along with ground water. Subsurface



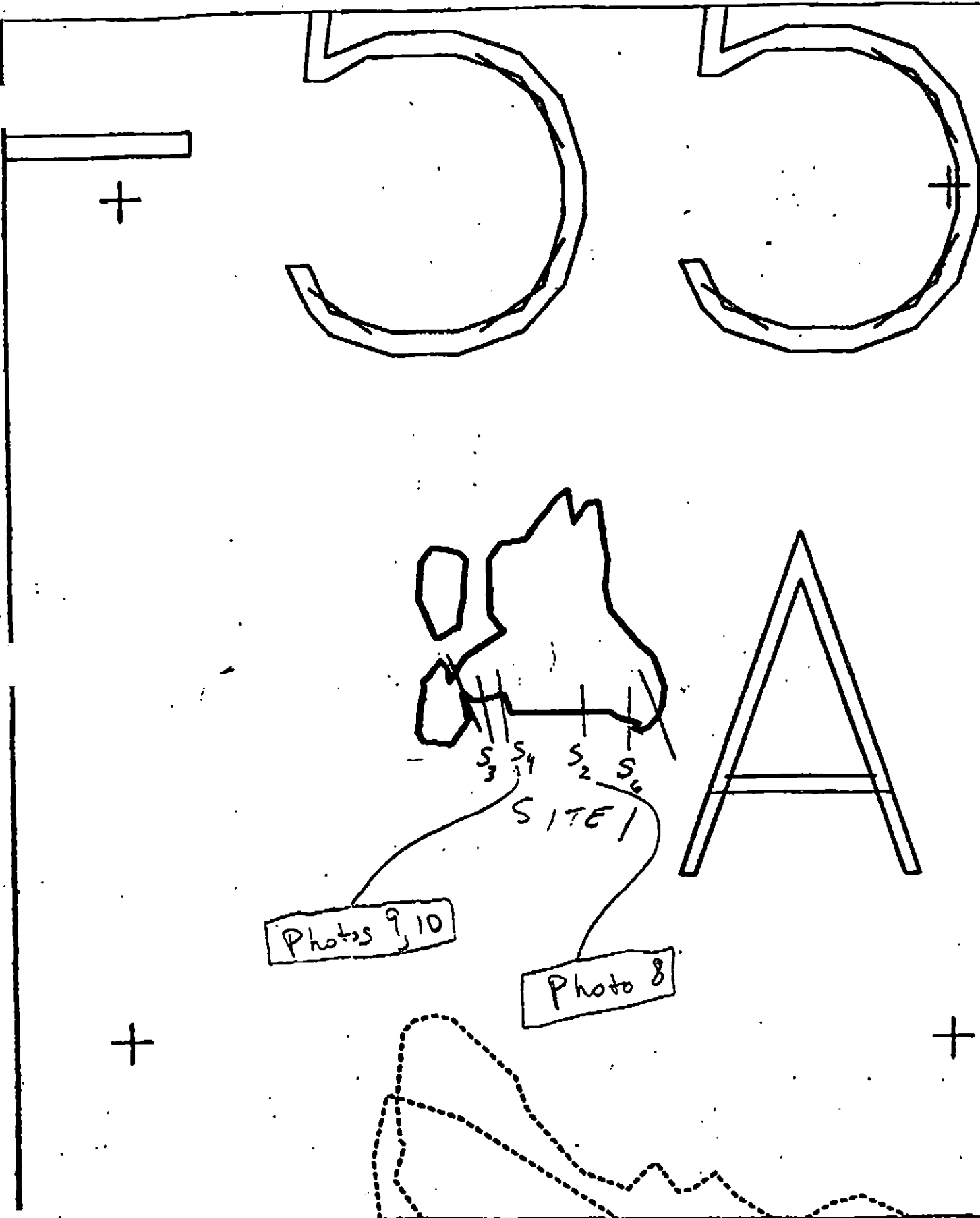
SITE 1

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

EL-55 A
 ADEC Subsegment Length: 332m
 METERS



Subdivision Field Map
 Map Key: KHEL-55A
 Name: CHANEY
 Date: AUG 5 1990



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

EL-55 A
 ADEC Subsegment Length: 332m
 METERS



Subdivision Field Map
 Map Key: KHEL-55A
 Name: CHANEY
 10-10-1960

SHORELINE EVALUATION

SEGMENT ST/ EL-55 SUBDIVISION B (2 OF 3) DATE 3/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
6U Recreation: Tent sites (6/1 to 9/15)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 14 m: V.Light 0 m: No Oil 110 m
Subsurface Oil Observed: Yes X No Maximum Depth 22+ 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> </u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> Removal	<u> </u> Other (see comments)

COMMENTS: Recommend manual pick up of oiled vegetation, tar balls and bioremediation of areas with coat, cover or subsurface oil. Work should be conducted between 6/16 and 8/14 due to ecological constraints.

TAG COMMENTS: RAKE RUN TO BIO IN AREAS OF TP 6, 7+8.

MONITORS TO ASSESS SUITZ DURING TREATMENT.

TAG APPROVAL DATE: 4/28/90.
ADEC [Signature]
EXXON [Signature] FOSC: [Signature] DATE: 5-9-90
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 (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.

Abstract

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 30, 3Q	Harbor seal and sea lion pupping (5/15 to 7/1) Harbor seal and sea lion molting (8/15 to 9/15) Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
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.

SECRET

6V	Anchorage (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
7H	Deer harvesting (8/15 to 2/28)
7JJ	Invertebrate harvesting
For Codes 7Z through 7JJ contact ADF&G and Chenega C	

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EL-55-B SUBDIVISION: B DATE 3/31/90

USCG

NAME DAVID A. SCHNEIDER SIGNATURE David A. Schneider

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

783/USCGR

I concur strongly with both ADEC's and the Land Manager's position on this Subdivision. The recreational potential of the beach sites along this shoreline would be well served by the employment of the methods listed in their comments below.

DS

ADEC

NAME Peter Montezuma SIGNATURE Peter Montezuma

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

The preceding report is an excellent depiction of Subdivision B, and I concur with the ADNR comments.

The various beaches of "B" require extremely labor intensive hand work to reach/remove the oiling. Hot water wands are locally appropriate for the E corner of Beach 3, which is in the most need of treatment. Bioremediate after consideration of other treatment methods.

LAND MANAGER

NAME Janetta Pritchard SIGNATURE Janetta Pritchard

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

The three pebble and rubble beaches are ideal for bioremediation. Beach 3 has a potential for high recreational value. This beach should be tilled, if possible, to remove subsurface oil and bioremediate. SUTZ was covered with straw and should be evaluated when it's gone. Any solid vegetation should be removed. Tar spots removed manually.

SHORELINE OILING SUMMARY

REVISION NO. 06/23/90

OG C. DILLON USCG D. SCHNEIDER SEGMENT ST/ EL-55
 BIO J. BARRY LAND REP J. PRITCHARD SUBDIVISION B (2 OF 3)
 EXXON A SNOOK ADEC P. MONTESANO TIME 09:00 to 12:45
 TEAM NO.: 6 TIDE LEVEL: 0 to +5 DATE 03/30/90
 EST. SUBDIVISION LENGTH: 515 m ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 40 % B 40 % C 15 % P 4 % G 1 % S 0 % M 0 % V 0 %
 SLOPE: Long 40 % Hang 50 % Vert 10 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 40 m M 10 m N 100 m VL 130 m NO 235 m

SURFACE OIL

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

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation	X		
Trash			
Debris			

DEBRIS COLLECTED
☒ YES ☐ NOTYPE united small tra#BAGS 41

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			SP	ST	SL	SV	SG	SB	SU	U	M	L		
1	10	X					5 - 6	X				X			X					P/C
2	6				X		5 - 6	X				X			X					P
3	15		X				5 - 15	X				X			X					P/G
4	20				X		5 - 12	X				X			X					P/G
5	15		X				5 - 15	X				X			X					P/G
6	17	X					5 - 17	X				X			X					P/G/S

COMMENTS: Beach 1 - 12m long x 30 wide. Base of overhanging face rock at W. end of beach and underside of B/C on U1T2 has a broken coating 23m wide x 5-6m long. Rock face has a narrow, VL stain swash 4-5m long. Pits 1 and 2 on U1T2. Pit 1 dug through 1m long x 2m wide coat on B/C surface sed. Pit 2 dug through same sed. 1m below pit 1.

Page 1 of 4REVIEWED DH DATE 4/1/90

SUBSURFACE OIL (CONTINUED)

[illegible]

COMMENTS: Beach 2 - 25m long X 35m wide. Broken coat 2-3m wide X 10m long across UITZ at W. corner. Pit 3 dug here. Base of outcrop on W. side of beach has 1-2m wide broken coat and cover with incorporated small vegetation (spruce needles) for length of 5m at high tide level. Pit 4 is 5m W. of Pit 3. Bedrock outcrops and boulders on W. half of Beach has 3m by 3m broken coat/cover on UITZ with 2-3cm penetration of pebble substrate. Steep B/C slope at extreme E. corner has 23m wide X 2m long coat/stain on UITZ; Pit 5 dug here. Beach 3 - 50m wide X 100m long C/B beach with HANG B/R at E + W ends terminating into headlands. E. face rock to headlands has 100 m long X 1-2m wide broken coat/cover at high tide level. Back sides of outcrop/Boulders on MITZ has broken cover/coat. Pit 6 here UITZ B/C (extends under snowline) has 10-12m wide X 20m long broken cover/coat on surface B/C and 4cm penetration of pebble substrate. Small amount of oiled vegetation on SITZ and UITZ.

REVIEWED 04/11 DATE 4/1/90

REVIEWED 04/14 DATE 4/1/90

00 C. LON

SEGMENT ST 2-55

SUBDIVISION 3

DATE 30 APR 90

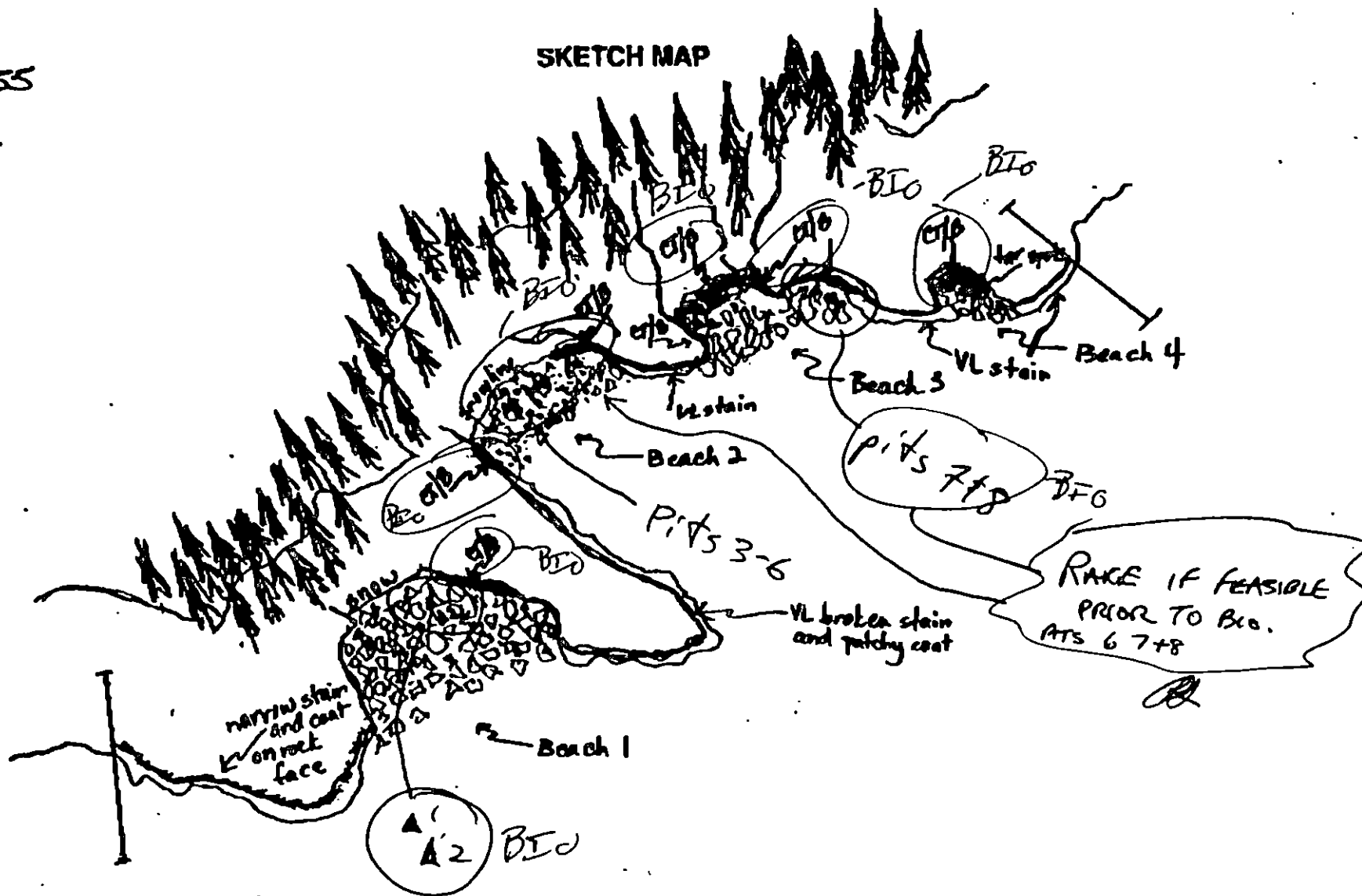
CHECKLIST

- ☐ H Area
- ☐ Approx. Size
- ☐ Seg/Sub Body
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HERRING
- ☐ SCL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PR Location(s)
- ☐ Photo Location(s)

LEGEND

- 1 Δ
- PR - No subsurface oil
- 2 Δ
- PR - Subsurface Oil
- CT/C
- Continuous Distribution
- CT/B
- Broken Distribution
- CT/P
- Patchy Distribution
- CT/S
- Spashed Distribution
- Oil Vegetation
- 1 Δ
- Photo location, direction, and number

SKETCH MAP



SENSITIVITIES:
Herring may spawn near beaches 1-4 (April-May)
Frequent boat traffic may interfere

Oil Character Length (m): AP 65 PO 65 CV 65 CT 65 MB 65 PT 65 TB 65 FL 65 NO 65

REVISION: 000000

100.4 of 4

COMMENTS: Beach 3 (cont'd) - W. corner of UITZ B/C/P has 3-4 m wide x 10 m long broken surface coat that possibly extends under snowline. Pits 7+8 dug here. Extreme E. corner face rock has <1 m wide x 15 m long broken coat of dull black and light brown oil on UITZ with VL film and silver sheering on surrounding B/C HANG slope.

Beach 4 - 25 m long x 30 m wide. UITZ has 8-10 m wide x 20 m long broken coat on surface and sides of B/C/R and patchy cover. 4 cm saturated pebbles in substrate. Boulder slope at base of W. face rock has broken coat 3 m wide x 10 m long at UITZ with up to 4 cm penetration of pebble substrate. Tar splashes underneath and behind large boulders at base of W. cliff face. Tar spots are within patchy stain and broken coat along boulders. Final 75 m of subdivision is VERT/HANG rock with a narrow coat and stain in a broken band at the high tide level.

00 C. Dillon

SEGMENT ST 2-55

SUBDIVISION B

DATE 30 April 90

CHECKLIST

☐ N Area
☐ Approx. Scale
☐ Key/Tab Entry
☐ Oil Dist.
☐ Width
☐ Length
☐ % Cover
☐ Substrate Character
☐ Est. MWL/LWL
☐ BSL
☐ Profile Location(s)
☐ Profile(s)
☐ Photo Location(s)
☐ Photo Location(s)

LEGEND

1 Δ
 Pt - No Subsurface Oil

2 Δ
 Pt - Subsurface Oil

$\boxed{CT/C}$
 Continuous Distribution

$\boxed{CT/B}$
 Broken Distribution

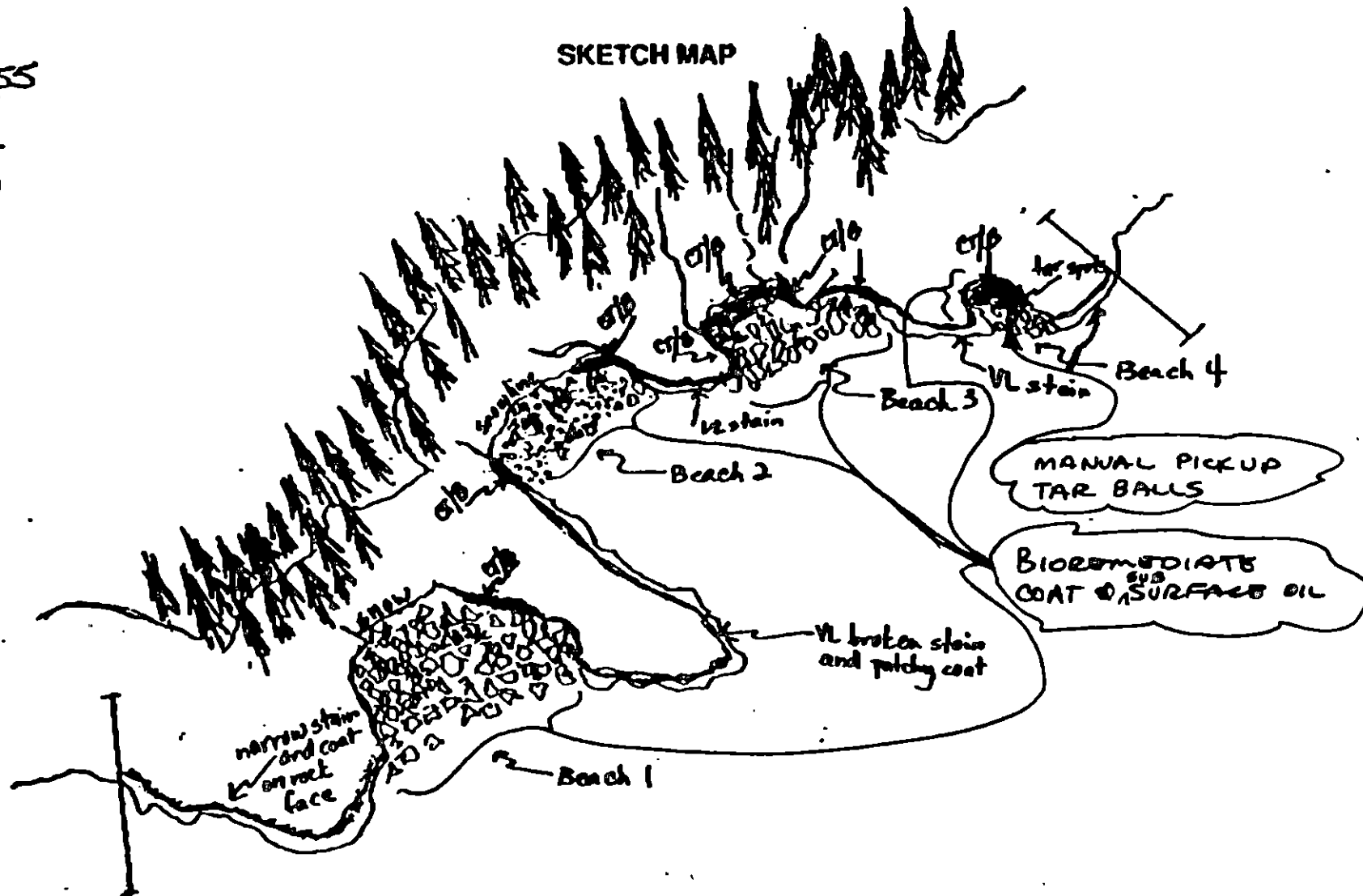
$\boxed{CT/P}$
 Patchy Distribution

$\boxed{CT/S}$
 Splashed Distribution

$\bullet$
 Oil on Vegetation

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

SKETCH MAP



SENSITIVITIES:
 Herring may spawn near beaches 1-4 (April-May)
 Frequent boat traffic may interfere

Oil Character Length (m): AP _____ PO _____ CV/9m CT 275 ST 250 WS _____ PT _____ CR 10 FI _____

SHORELINE ECOLOGICAL SUMMARY

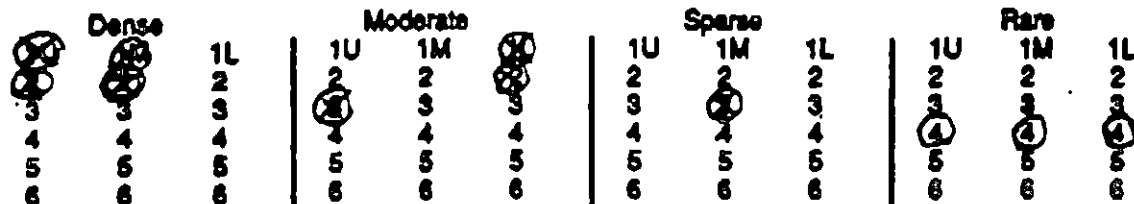
REVISION: 08-84

Segment ST / EL 055 Subdivision B Date (mo / day / yr) 30 Mar 1990Time (24 hr) 0915-1230 Biologist Barry 515 m length(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 30 Moderate 50 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)

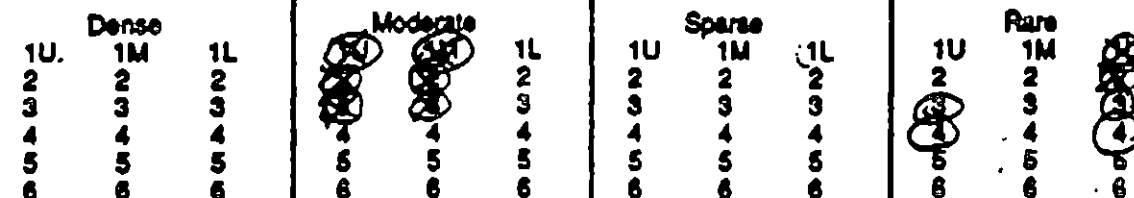
Photographs: ST-6-2
Roll No. Frames 28-36

BARNACLES



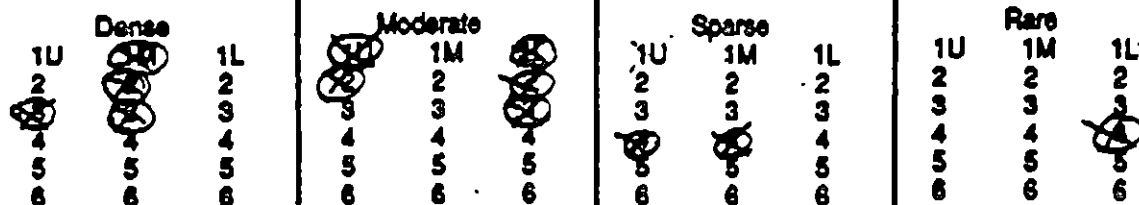
NOT PRESENT

MYTILUS



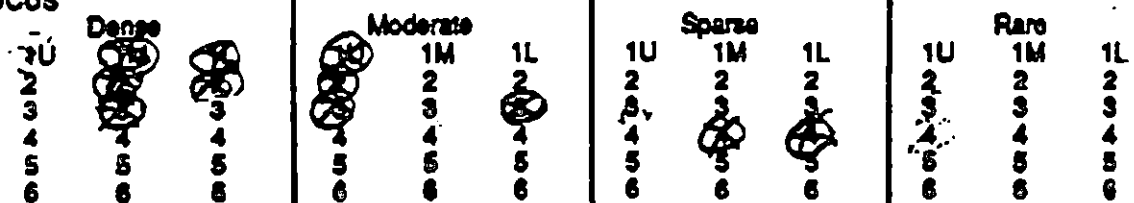
NOT PRESENT

GASTROPODS



NOT PRESENT

FUCUS



NOT PRESENT

Wildlife Observations/ General Comments:

RIVERS - 3 Sea Lion - 1
 GULL COAST GULL - 1
 RIVER OTTER - TRACKS
 BEAR - TRACKS
 Ecological Considerations: 7 11, 2 M, 6 U

USE CAUTION DURING HERRING SPAWNING - FREQUENT BOAT TRAFFIC
 MAY INTERFERE

START 0910
END 1230
TIDE -2 → +4

MAJOR SPECIES - comments in addition to data sheet

BARNACLES

Generally dense *Balanus glandula*

- MOST JUVENILES - FEW LARGE LIVE ADULTS
- Dense to moderate in some LOW ZONE SITES
WHERE SPAT & JUVENILES present on open space.
- OBVIOUS ON ~~B~~ BEDROCK
- UNDER SURFACE ON BOULDER AREAS.
- ~~FOR~~ OIL RELATED DISTRIBUTION

BARNACLES SEEM TO SETTLE & GROW ADJACENT TO,
BUT NOT ON, WEATHERED OIL (COAT)

MYTILUS - *M. edulis*

- THIS SUBDIVISION HAS MODERATE DENSITIES OVERALL, BUT
OCCASSIONALLY VERY DENSE STANDS OF ~~LOW~~ SMALL TO
MID-SIZED ~~AN~~ MUSSELS
- SPAT (MUSSELS < 5 mm) ARE OFTEN ABUNDANT (DENSE)
IN AGGREGATIONS OF JUVENILES/ADULTS.
- DISTRIBUTION MUCH PATCHIER THAN BARNACLE, FUCUS, OR
LITTORINES
- COBBLE BEACHES HAVE VERY FEW OR NO MYTILUS.

GASTROPODS

Generally includes LITTORINA spp (*L. scutulata*, *L. sitkana*),
LIMETS, ~~AND~~ WHELKS

- LITTORINES - Generally abundant throughout intertidal, somewhat
less in upper zone.
- Limpets were present mostly as juveniles, with sparse adults
- WHELKS (*Nucella* and a few minor spp.) were sparse to moderate
in general, and occasionally dense.
- Egg Cases were found for Littorina

FUCUS

- IN THE HIGH ZONE IN PARTICULAR, FUCUS SHOWS EVIDENCE OF MORTALITY, PROBABLY RELATED TO OIL CLEANING TREATMENTS & OIL CONTAMINATION.
 - THE BATH HOLDFAST "ROOTS" OF MANY PLANTS ARE WITHERED. SOME SHOW SIGNS OF REGROWTH
- MIDDLE TIDE FUCUS IS THE MOST DENSE & HAS THE GREATEST AMOUNT OF SETTLEMENT OR NEW INDIVIDUALS.

OTHER INTERTIDAL SPECIES

ALGAE

- General Algal Zonation was similar to ELOSS-A - see ITS LIST OF SPECIES
 - PARTIAL
- THE LOW TO MID ZONE: COBBLE BEACHES OFTEN ARE COVERED BY MICROSCOPIC GREEN ALGAE (DIATOMS, FILAMENTOUS CHLOROPHYTA)

ANIMALS

- Animal life in this subdivision was rich in the low zone compared to ELOSS6
- COBBLE BOULDER HABITATS IN LOW ZONES HAVE SEVERAL SPECIES OF CRABS, WORMS, SNAILS, ANEMONES, FISHES AND SEA STARS.
 - Groups not observed include brittlestars and clams

SPECIES

Crab spp A
" " B
" " C

Hermit Crab - PAGURIDAE

WORMS

• SPIRORBIS
• SERPILLA
• GLYCERIDAE?

★ FISH -

• PRICKLEBACK (PHOLIDAE?)

SEA STARS

- Pycnopodia
- Solaster
- Dermasterias
- Pisaster
- Orthasterias

MUST IN EXPOSED MICROHABITATS

ANEMONES -

Tealia sp
Anthopleura sp
Metridium spp
Epiactis

SNAILS

Nucella
Littorina

MUSSELS

Mytilus

BRACHIOPODS

SERANUS

CHITONS

TONICELLA ?

Pycnopodia & Dermasterias was dense (~1/m² in some areas) (All ~ 15-30 cm)

WILDLIFE OBSERVATIONS

RWENS - 2

GLAUCOUS GULL - 1 Adult flew over
? ALCID

RIVER OTTER TRACKS - ABOVE BEACH

SEA LION

DEER TRACKS

ECOLOGICAL COMMENTS

- 1) Several species, including focus species, show signs of recovery
BARNACLES, MUSSELS, SEA STARS, LITTORINE SNAILS, LIMPETS, FUCUS
(ROCKWEEED)
- 2) Some ADULT LIMPETS & CHITONS were FOUND IN THIS SECTOR
KATHARINA TUNICATA

EL055-B 28

Time 0910

~~Beach~~

LIFF FACE - 5 and

> ~~Amphipods~~ / Fucus (AJS)

< Mytilus

? Cystodonta

Cliff to S →

1/2 m oil on cover on boulders

Some recruitment marks

Generally heavy spat

Sparse - moderate Limpet

O Mytilus

Fucus - dense

Low Pool -

> crabs

> Sea Stars

>> Pycno

> Demasteria

< Cystodonta

EL055-B

~~Green~~ ~~Amphipods~~ ~~in pool~~

Moderate Fucus

Decapod crabs - Collected

Beach Cliff area

> Dead Treacher Fucus

> regrowth in mid zone

Moderate recruitment

Low zone

> Pycnoperdion (-20 cm dia)

> Demasteria

Moderate Fucus Sprouting

Base adults on boulders

My Canaan ST-6-2

35 Pycnoperdion on beach

Boulders

> Dead Adults - Canaliculus

>> Green / Brown Slims

O Mytilus

Sparse Fucus w/ regrowth

Moderate sprouting

TOWARDS N

ELOSS-B

Moderate Mytilus

> Eucos Recruits, Rejuvenation

35 → Fucus

36 → " recruitment

7 barnacles AJS

BIRDS

RAVEN

GLAUCOUS GULL

? ALCID

Moderate → Mytilus AD/SPA-1

> 7 Barnacles 1/5

Dense FUCUS

Little L. Juv. + Sp. - mod
ADULTS sparse

MID ZONE

Tons of Slime + Green/Brown
Cobbles community w/ Syndesmon

ELOSS-B

Small Pt to NW -

Green Slime

Dense BARNACLES

Pale patch of Green Crab

ZULLA

HIGH > Petrocoelus

NEXT Beach to N

COBBLE - 30m wide

Sand

TIME 1044

SHORNEY FACED 24 UNK

ROCKS - abundant

in low zone ~ 5-10/m²

Dense Symploca spirobide recruits

CHITONS (TONICELLA?)

ON ROCK

33 PHOTO OF CHITONS

LOW ZONE

> Callophylis

CLADOPHYTES?

ELOSS-B

Collected A couple Anemones
on wall
Same -

no mytilus though
in cave - except
on large boulders / bedrock

WROUPE

RAVEN

OTTER TRACKS

Deer Track

Sea Lion

31 Mytilus Recumbens in Cove on
ROCK

30 VICINITY OF 30

Low zone beach

Green Sam (Diatom?)
on rubble

ELOSS-B

Bedrock in Cove

? GILGIES J S
for Anemones A

Limpet Spine - med

> Cladophora / ? Annelid Spp B
Collected

mid zone

linked w/ FUCUS (AJR)

-NOTOACMEA scutum Adult
~ 20 mm

mid zone

Procs Tealies?

Striped Tentacles

Green / Brown body

Dense Mytilus J/S on outer edge
Dens. Li House

lots of Lysates on area

29 KATHARINA in COVE

28 METRIDIAN LIKE ANEMONE

ELOSS-B

28 Fucus adults/recruits /
Scyphosiphum
in cave

NEUT CAVE

HIGH recruitment of all
B, G, M, F

POULTS FU - SPARSE

TOON - L. SCUTULATA

Collected a Gastropod
killing a barnacle

Green Slime Above

BAULDER FIELD TO N
SLIME OR SCUM on TOP
BARNACLES, KALPISH,
MYTILUS, GASTROPODS
underneath

recruits = Mytilus, Balanus,
Littorina

NO FUCUS THIS TIME

ELOSS-B

BIRD TABLE seen 2x

POOL - MID - HIGH

> PABULUS

> Nucella

Xiphos

moderate Mytilus sp.

> L. Littorina

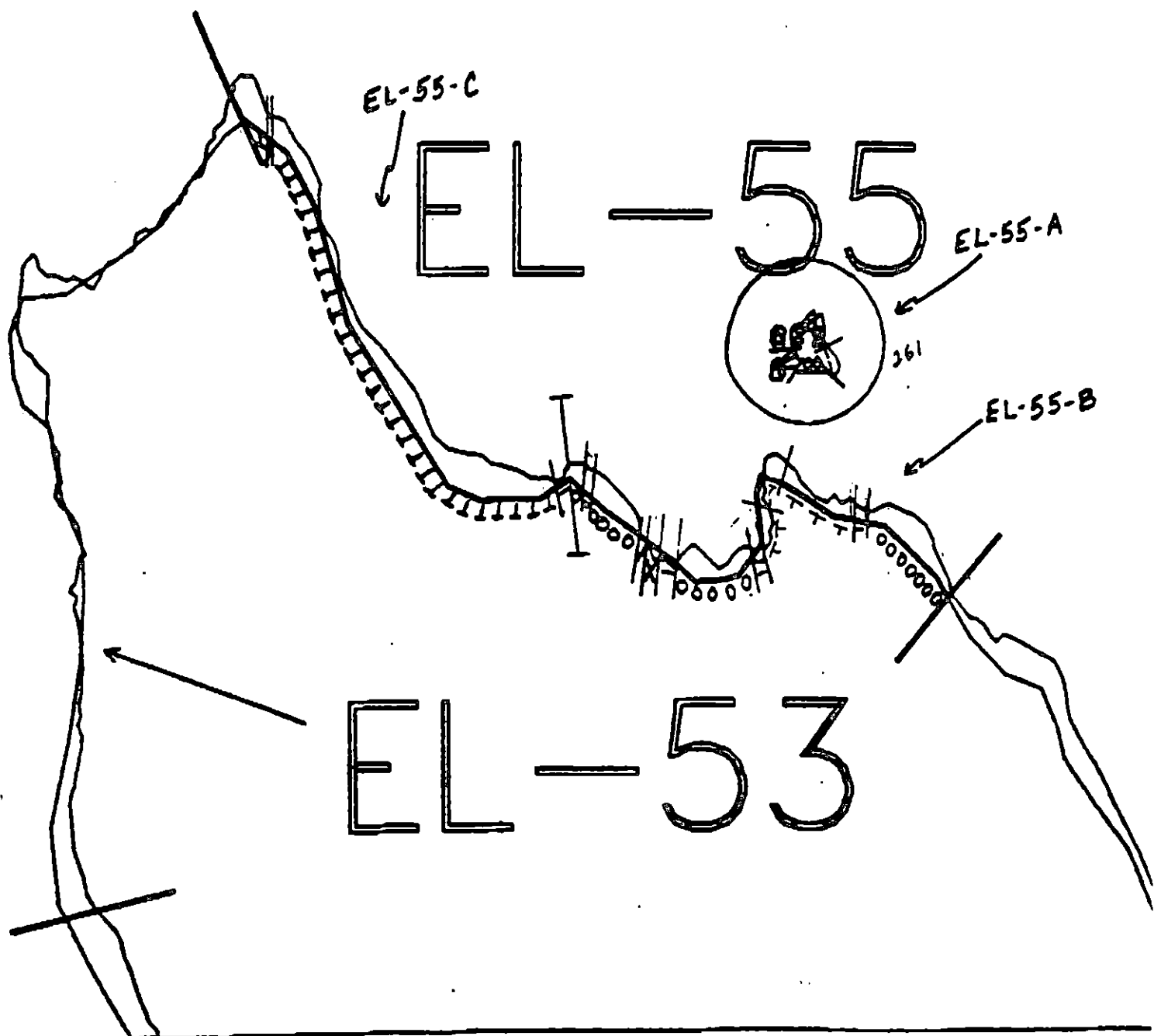
dense aggregation + egg masses

PHOTO 2

28 - pool in upper w/ Strombus

End of ELOSS-B

1230



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EL-55

ABEC Segment Length: 1103m



Map Key: PWS-138

Name: C. DILLON

Date: 3/30/90

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ EL-55 SUBDIVISION C (3 OF 3) DATE 4/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
6U Recreation: Tent sites (6/1 to 9/15)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: *Charles E. [Signature]* DATE: 4/28/90

OILING CATEGORIZATION:

Wide 0 m: Medium 20 m: Narrow 11 m: V.Light 524 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 15+ cm

RECOMMENDATIONS:

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

COMMENTS: Recommend bioremediation of coat area and subsurface oil. Work should be conducted after 6/15 based on herring constraints.

RACE PRIOR TO BIO IN AREA OF TP1 IF FEASIBLE.

TAG COMMENTS:

FIELD MONITORS TO ASSESS PRESENCE OF TARBALLS/SPOT AND NEED FOR PICKUP.

TAG APPROVAL DATE: 4/26/90.

ADEC JOHN BAUER
EXXON ANDY TEAL
NOAA GARY PETRAE
USCG KENNETH KEANE

FOSC: M L DATE: 5-9-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
 1D Esther Hatchery release (4/15 to 6/1)
 1E Main Bay Hatchery release (4/20 to 5/10)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 1I Gill net area (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 (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 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 (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 Deer 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 / EL-55-C SUBDIVISION: C DATE 3/31/90

USCG

NAME DAVID A. SCHNEIDER SIGNATURE David A. Schneider

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

90% OF THIS SUBDIVISION CONSISTS OF HIGH ANGLE TO VERTICAL ROCK CLIFF FACES WITH SEVERAL SMALL BOULDER/RUBBLE SLIDES THAT EXTEND INTO THE INTERTIDAL ZONE. DUE TO THE VERY LIGHT NATURE OF THE NARROW BAND OF OIL COAT/STAIN, ^{GENERATED} IT'S LIMITED DISTRIBUTION, AND ITS HIGH EXPOSURE TO STORM WAVE ACTION, I RECOMMEND THAT NO TREATMENT BE ATTEMPTED HERE. BIOREMEDIATION TECHNIQUES ARE INAPPROPRIATE IN THIS INSTANCE.

ADEC

NAME Peter Montesana SIGNATURE Peter Montesana

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS None of subdivision C is appropriate for bioremediation.

The oiling on the east, Boulder beach is not easily accessible, but should be considered worthy of treatment. The oiled pocket to the west end of "C" has oiled cobbles, gravel trapped on/between bedrock which could be removed by a crew of 4-5 in a days time.

LAND MANAGER

NAME JANETH PRITCHARD SIGNATURE Janeth Pritchard

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

The majority of this subdivision has a patchy stain / oil band. Some tar spots were found and could be manually removed. The boulders in this vicinity are not of high recreational value and do not warrant removal / clean up. Some skimming may take place without the benefit of additional cleaning.

SHORELINE OILING SUMMARY

REVISED 10. 88/92

OG C. DILLON USCG D. SCHNEIDER SEGMENT ST/ EL-55
 BIO J. BARRY LAND REP J. FEITCHARD SUBDIVISION 1 (3 of 3)
 EXXON A. SAMPK ADEC P. MONTESANO TIME 12:45 to 13:50
 TEAM NO.: 6 TIDE LEVEL: +4 to +8 DATE 03/30/90
 EST. SUBDIVISION LENGTH: 515 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 75 % B 20 % C 5 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Lang 10 % Hang 65 % Vert 25 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 3 m N 35 m VL 477 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	C	B	P	S	W	Y	OR	BL	SU	U	M	V
ASPHALT PAVEMENT												
POOLED												
COVER												
COAT			X	✓	✓	✓		X	X	X		
STAIN			X	✓				X	X	X	✓	
MOUSSE												
PATTIES												
TARBALLS				X		X				X		
FILM												
NO OIL									X			X

PAVEMENT: H F S 0 sq. m by 0 orPATTIES / TARBALLS ? BAGSNEAR SHORE SHEEN? ☒ 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		NO	UC	W	Y	OR	BL	TR	SU	U	M	V		
1	15	X					5 - 15	X					X		X					P/M
							.													
							.													
							.													
							.													
							.													

COMMENTS SUBDIVISION C begins with 75m long HANG headland rocks and HANG/LANG R/B slopes followed by a beach. The E corner of the beaches UITZ has a 1-2 m wide x 4m long localized patch of coat/stain containing Pit 1. The center of the beach has a B/C UITZ with 2m wide x 8m long patchy stain and tar spots. W. end of B/C UITZ has 2-3m wide x 20m long patchy stain/coat. Boulders at W. end of subdivision has a 4m wide x 3m long patchy coat with 4cm penetration.

OG C. DILLON

SKETCH MAP

SEGMENT ST/ EL-55

SUBDIVISION C

DATE 30 / March / 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. H/W/L/V/L
- ☐ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ PR Location(s)
- ☐ Photo Location(s)

LEGEND

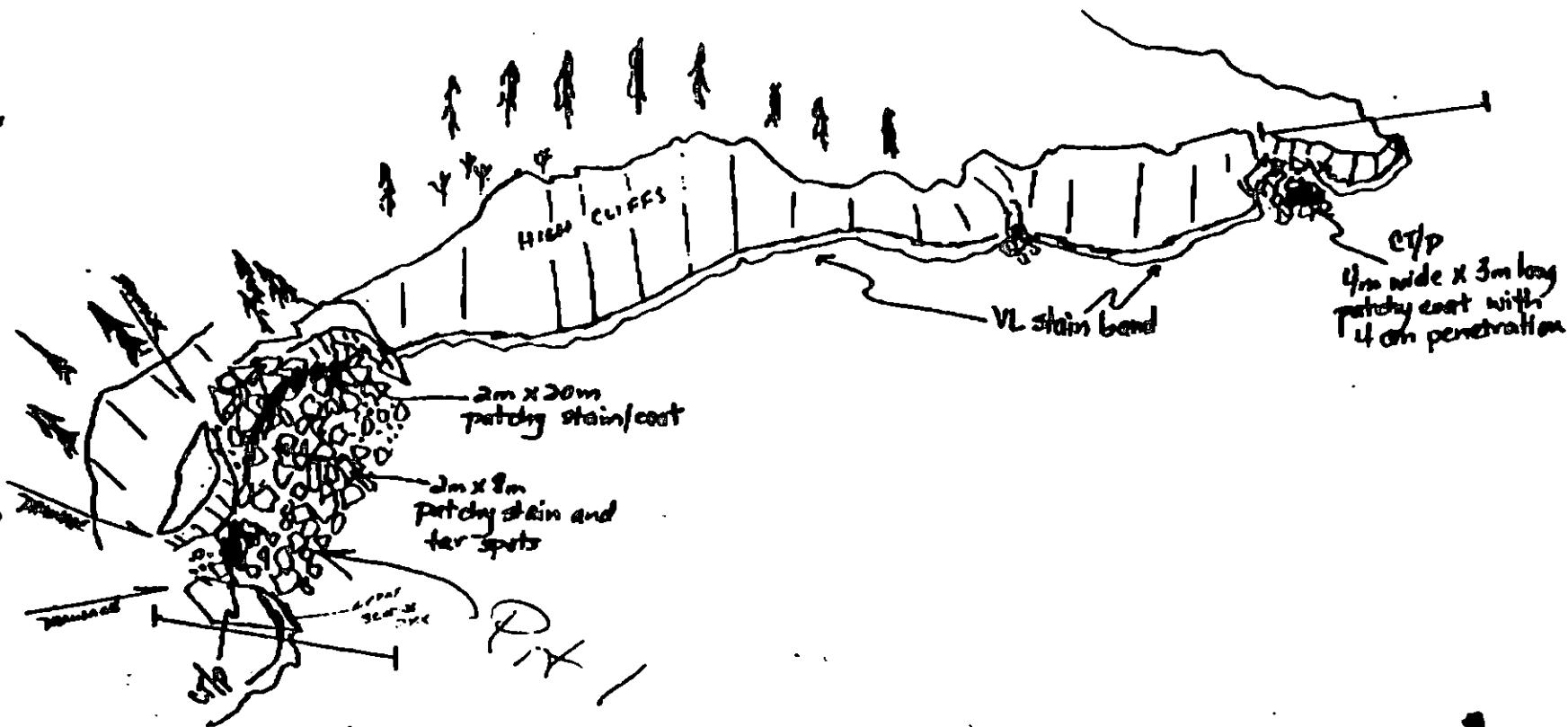
- 1 Δ
PR - No Subsurface Oil
- 2 Δ
PR - Subsurface Oil
- CT/C

Continuous Distribution
- CT/D

Broken Distribution
- CT/P

Patchy Distribution
- CT/S

Spotted Distribution
- ☐ Oil of Vegetation
- 1 $\Rightarrow$
Photo location, direction, and number



BARRY/SCHNEIDER

Oil Character Length (m): AP _____ PO _____ CV _____ CT 27m ST 450 MS _____ PT _____ TB 8m FL _____

NO

REVISIONS

03 C. DILLON

SEGMENT ST/ EL-55

SUBDIVISION C

DATE 30 1 MARCH 90

SKETCH MAP

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Det.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HWA/LVL
- ☐ SBL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ P/L Location(s)
- ☐ Photo Location(s)

LEGEND

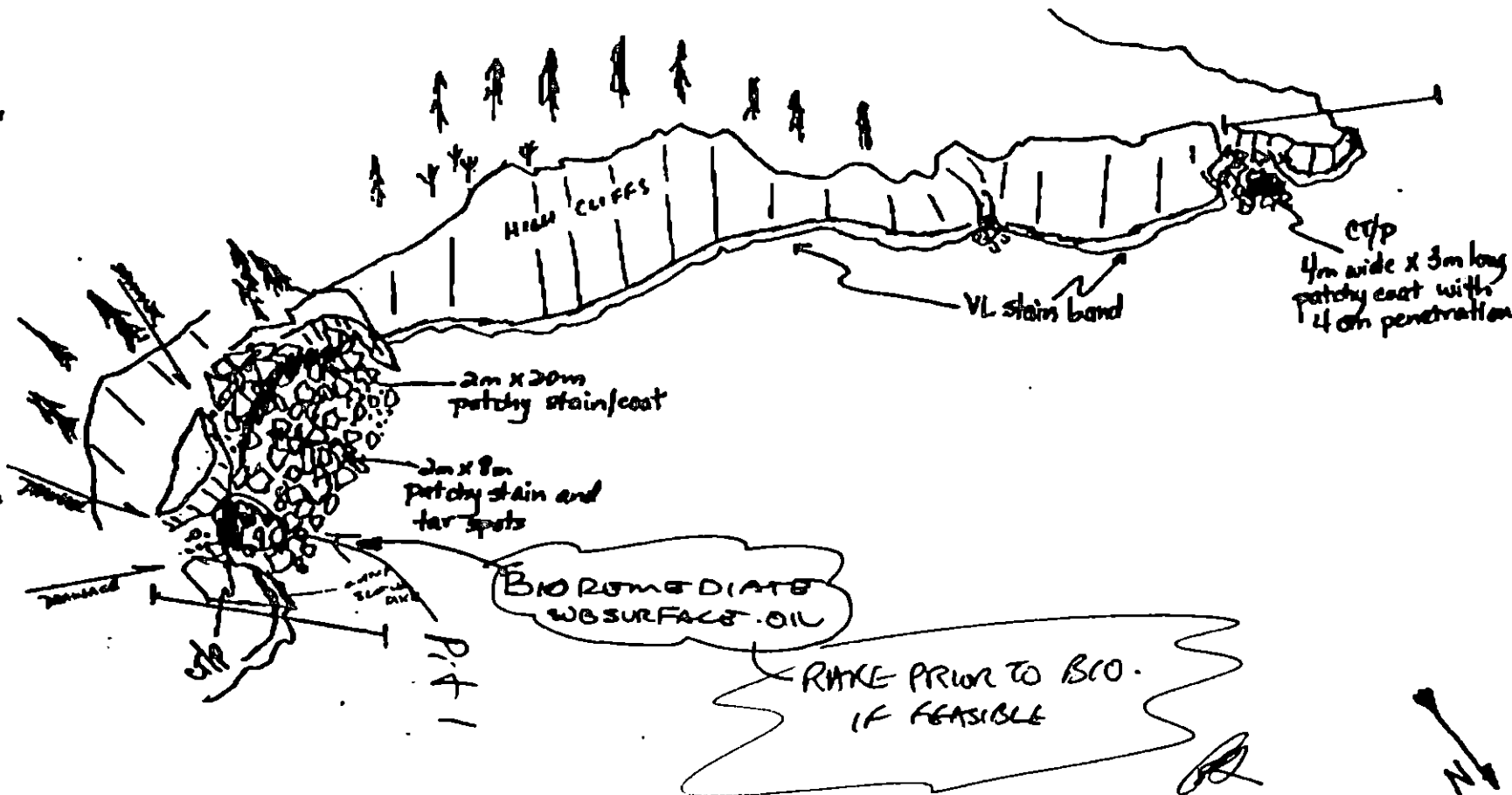
- 1 Δ
PH - No Subsurface Oil
- 2 Δ
PH - Subsurface Oil
- CT/C

Continuous Distribution
- CT/B

Broken Distribution
- CT/P

Patched Distribution
- CT/S

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



pg. 2 of 2

SHORELINE ECOLOGICAL SUMMARY

REVISION: 002

Segment ST / ELISS Subdivision C Date (mo / day / yr) MARCH 30 1990

Time (24 hr) 1230-1340 Biologist BARRY

(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 30 Moderate 60 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-6-2

Frames 25

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

TIDE WINDOW DURING SURVEY = +4 → +7 ft. - LOW - MID TIDE LEVELS.
MOST OF SUBDIVISION IS CLIFF FACE SURVEYED BY BOAT AT FAIRLY HIGH TIDE. DIFFICULT OR IMPOSSIBLE TO OBSERVE

Ecological Considerations: 7.11, 2M, 6U

1) INTERFERENCE w/ Herring spawn possible if heavy boat traffic exists

SEE 3 ATTACHED PAGES

ELUSS - C

MARCH 30, 1990

COMMENTS

START 1230 TIDE = +4 → +7 ft
STOP 1330

MAJOR SPECIES - comments augmenting data sheet

BARNACLES - BALANUS ~~patersoni~~ *

- SPAT FOUND ON MOST SURFACES WITH BARE ROCK.
- ADULTS ~~the~~ (> 1-1.5 cm) ~~as~~ DENSE ON MANY ROCK CLIFFS; MORE than ~~most other sites~~ EL066

MYTILUS

- BOULDER AREAS & CLIFFS AT SOUTH END HAVE HIGH DENSITIES OF MYTILUS IN CREVICES. MOST ARE SMALL ADULTS, JUVENILE AND SPAT. ~~Some (10-30%) in crevices~~
- UNDER BOULDERS, MYTILUS IS LESS DENSE, BUT PRESENT ~~some~~ THESE SITES HAVE HIGH % DEAD MUSSELS.
- EXPOSED BEDROCK CLIFF FACE HAS SPARSE COVER OF MYTILUS

GASTROPODS

- LITTORINIDS (PERIWINKLES) ~~common~~ ARE THE MOST ABUNDANT GASTROPOD
 - LITTORINA SCUTULATA, L. STYRAX = MOST ABUNDANT IN BOULDER & COBBLE PATCHES, UNDER ROCKS
 - EGG MASSES PRESENT
- LIMPETS -
 - ADULTS AND JUVENILES PRESENT, BUT SPARSE
- WHEELS
 - NUCULA, SPARSE

FUCUS

- MOST OF SUBDIVISION HAS DENSE COVER OF ADULTS AND SPORGLINGS.
- EVIDENCE OF REGROWTH FROM WITHERED INDIVIDUALS
- LOWER ZONES (under water) appear to have dense to moderate cover of FUCUS.

OTHER SPECIES

FEW DIRECT OBSERVATIONS WERE MADE OVER MOST OF
EXPOSED BEDROCK CLIFF: General Appearance similar
to ELOSS-B

ECOLOGICAL COMMENTS

- OIL DAMAGE APPEARS ~~TO~~ LOW RELATIVE TO OTHER SITES,
ESPECIALLY IN MIDDLE TO LOW ZONE
- ALTHOUGH MYTILUS HASN'T YET RECRUITED, ~~AND~~ DARNALLS
& FUCUS SHOW EVIDENCE OF RECOVERY
- I EXPECT LOWER ZONES TO RECOVER ~~RE~~ RAPIDLY,
AT LEAST FOR COMMON SPECIES

WILDLIFE

BARROW'S GOLDENEYE

SEA LION

BALD EAGLE

EL055-C

1230 -

TIDE?

Boulder Beach -

Sparsely ROCKS

Mystus in crevices on Bedrock

Green/Brown Slime on Spargel's

Recent growth of
FOCUS

#25 - FOCUS regrowth + recent growth
at beginning of B

BROWNALLES - dense, > spurt
NOT ST. DEAD

Boulder field

Dense L. siliqua under to
dense Barn.

Can't see how young

Looks like > FOCUS

EL055-C

Moderately to sparse
Mystus cover
> spurt

Lycopodium Green

Mystus undergrowth $\bar{x} = 25\text{m}$

Lots dead

Some dead large Adults

> L. thorn

> Balanus

> 25 Sparsely juv. Mystus

> LINA / Lathrix

Sparsely Fucus recruits

MID ZONE -

Sparsely Mystus adults $\bar{x} = 3\text{cm}$

Some dead

Dense L. thorn

Sparsely Digesta

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-55 SUBDIVISION C (3 of 3)

WORK WINDOW	
Bioremediation Manual Raking	WORK BEFORE 8/15

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M	Herring Spawning	NO CONSTRAINT. Authorized by Claudia Slater/ADF&G on 5/10/90 to Exxon/Tom Kelley.
5T	Bald Eagle Nests	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 manual raking after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE _____

ADEC

EXXON

NOAA

USCG

HANS O. JAHNS

FOSC

6/8/90

DATE 6-8-90

Prepared By: *WJK*

Date 6/7/90

EL-101

EL-100

EL-58

EL-57

EL-55

Nest Not Found

WORK AREA

Inactive Nest

EL-53

EL-56

EL-54

EL-52



Exxon Company, USA

Map Key: KNI-EL-55

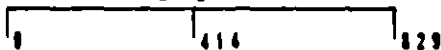
May 11, 1998 6/4/90

ECOLOGY MAP

SEGMENT EL-55

SUBDIVISION C (3013)

METERS



Seabird Colony



Eagle Nest

1 inch = 1360 feet

SHORELINE EVALUATION

SEGMENT ST/ EL-56 SUBDIVISION A (1 OF 4) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15; Deer harvesting (7II) - 8/15
to 3/1; Recreation area (6U,Y) - 6/1 to 9/15; Restrict disturbance
of dense to moderate uncoiled fucus, barnacles, and gastropods where
observed in the upper-lower intertidal zones.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Same as above.

SHPO SIGNATURE: Charles E. Homer DATE: April 9, 1990

OILING CATEGORIZATION:

Wide 18 m: Medium 0 m: Narrow 120m: 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> </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 surface coat on pocket beach.
(See Sketch map). Work recommended after 6/15/90 based on con-
straints.

TAG COMMENTS:

TAG APPROVAL DATE: 4/9/90
ADEC JOHN BAUER John Bauer
EXXON ANDY TEAL Andy Teal FOSC: DATE: 19 April 1990
NOAA Bruce Wasscott Bruce Wasscott
USCG G.A. RETER G.A. Reter

FIELD SHORELINE COMMENT SHEET

GMENT ST/ EL 56SUBDIVISION: ADATE 03/29/90

USCG

NAME PS3 SCHNEIDER/AEC VANDEREL SIGNATURE David A. Schneider☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

I SUGGEST A WORK CREW OF SMALL SIZE UTILIZE MANUAL CLEANUP METHODS THROUGHOUT THIS SUBDIVISION TO WIPE AND SCRAPE THE COATING OF OIL RESIDUE ALONG THE EXPOSED ROCK FACES AND BOULDERS. WIRE BRUSHES AND PAINT SCRAPERS WOULD BE EFFECTIVE TOOLS, WITH SCRAPED SURFACES ^{TO BE} WIPE WITH PADS FOLLOWING INITIAL TREATMENT. THIS COAT HAS INCORPORATED ORGANICS (STRUCE NEEDLES). REMOVAL WILL IMPROVE AESTHETICS. MAJORITY OF WORK TO BE CARRIED OUT IN LITE & MITE, WITH CARE TAKEN TO LIMIT INTRUSION INTO LITE. DB

AEC I suggest manual clean up by small crew with materials to wipe area.

ADEC

NAME Peter MontesanoNAME Michele BaerSIGNATURE Michele BaerSIGNATURE Peter Montesano☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS Subdivision A is a combination of Rock faces and boulders/cobbles over varying finer sediments. Hot water and/or manual scrubbing is appropriate for the faces. Bioremediation is locally appropriate, but only to follow other removal attempts. The oil is in and around the boulders/cobbles with shallow and spotty saturation in the finer sediments. Saturation is apparent in random patches with penetration found of 1-5cm. Occasional silver sheen formed on small pools trapped between boulders. An abundant band of fucus sporlings lies along the rock headlands and boulder fields of this segment.

LAND MANAGER

NAME DAN LOGAN/Peter PritchardSIGNATURE Dan LoganSIGNATURE Peter Pritchard☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

Concur with Coast Guard recommendation for treatment. Also recommend bioremediation of w boulder/cobble beach

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG J. Springer/C. Dillon USCG Schneider/Vandepels SEGMENT ST/ EL-56
 BIO Frank J. Barry LAND REP J. Pritchard/Lean SUBDIVISION A (1044)
 ON T. Temlin/A. Snook ADEC M. Baer/Vandepels TIME 08:10 to 11:30
 V NO.: 5/6 TIDE LEVEL: -2' to +3' DATE 03/29/90
 EST. SUBDIVISION LENGTH: 225 m / 150 ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 50 % B 30 % C 15 % P 5 % G % S % M % V %
 SLOPE: Lang % Hang 30 % Vert 30 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 25 m M m N 200 m VL m NO m
17 .133

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	FC	FB	FP	FS	BR	OR	OL	OF	NO	TL	LT	LB	SU	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER		X								X				X		
COAT		X								X				X	X	
STAIN			X							X				X		
MOUSSE																
PATTIES																
RBALLS																
M		X								X				X	X	X
NO OIL													X			

PAVEMENT: H F S sq. m by cmPATTIES / TARBALLS BAGSNEAR SHORE SHEEN? NO BR AW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE #BAGS

Photographs:

Roll No. 5T6-1Frames 6-7

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	BR	OR	OL	OF	NO	TL	LT	SU	U	M			LI	
1	10	X					0.5	X						X		X								PG
							.																	
							.																	
							.																	
							.																	
							.																	
							.																	

COMMENTS

Occasional stains on rock & occasional sheens on pools in crevices.

Oiled interval in pit of less than 5cm in Pit #1 does not constitute subsurface oil.

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST / ELOS6 Subdivision A Date (mo / day / yr) 3-29-90
 Time (24 hr) 810 - 1115 Biologist JIM BARRY / PATTY CRANK Length 225m 150m

- (A) Substrate type and % of segments:
 (1) Bedrock 50 (2) Boulder 30 (3) Cobble 20 (4) Pebble 0 (5) Sand 0 (6) Silt 0
- (B) Overall % cover of biota (% of segment): Dense 75 Moderate 25 Low 0
- (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-6-1
 Frames 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
 On bedrock:
 cobble Mytilus
 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:

SEA OTTER - ADULT
 BALD EAGLE - adult
 HARBOR SEAL - Adult
 RIVER OTTER - 1

1 - KITTIWAKE
 3 - GULL
 4 - PIGEON GUILLERMOT

RAVENS - 4
 PELAGIC CORMORANT - 2
 BUFFLEHEAD ? - 2
 WHITE WINGED SCOTER ? - 1

ALL ANIMALS IN
 NORTHWEST CORNER

Ecological Considerations:

7 11 Deer Harvesting
 2 m Herring Spawn
 6 u y Recreation

NO SPECIAL PROBLEMS
 Except potential impact to herring spawn

Algal Observations

Low Zone

Halosaccion - juveniles - sparse

Rhodymenia spp? - Adults, juveniles - dense

Ulva - moderate

Rhodomela lanix - moderate

Kruus - dense

Gloiopeltis? - Dense

m.

Opuntaria

MID ZONE - similar to low zone, but decreases in most of
and more of

Diatom / Blue green / Entomomorpha + other - green stromi

Ralfsia - dense

Lithothamnion (sparse)

High Zone - ~~Ralfsia~~

Petrocelis

Ralfsia

+ Others

Inverts

Lottia spp (Collisella) -

Pandalus spp. - 1 in low zone

Nucella lamellosa - dense in small mid zone pools

Other Comments

→ Heavy *Petrocelus* cover in high

2) Algae

14614
Petrocelus parva?
Ralfsia spp.
Syrtosiphon spp.

MITZ
Fucus distichus?
Rhodomela sp.
Monostroma

LITZ
Ulva

WILDLIFE OBSERVATIONS

BIRDS

BALD EAGLE - 1 ADULT FLYING OVER FOREST ABOVE SITE

KITTYWAKE - 1

PELAGIC CORMORANT - 1 DIVING NEARSHORE

GULL (Herring?) - 1 FLYBY

PIGEON GULLSKOT - 4 ON WATER / FLYBY

RAVENS - 4 FLYING BY

BUFFLEHEAD - 2 ON WATER

COMMON LOON - 1 DIVING

WHITE WINGED SCOTER - 1

OTHER

SEA OTTER - 1 ADULT DIVING NEARSHORE

RIVER OTTER - 1 - TRACKS

HARBOR SEAL - 1 - DIVING

MORE LOW INTERTIDAL COMPONENTS

- Dense (~1-3 m²) Pycnospidia and Dermasterias (sea stars)

in low zone. Pycnospidia are juveniles

- Several dead sea stars in low to upper zone (winter freeze?)

- Found 1 ~~at~~ *Orthosteras*? dead in ~~off~~ low zone.

- Limpets: Few adults observed - some boulders / bedrock with abundant juveniles - most w/ much lower densities

- Littorine egg cases and high densities *Ad. l. l.* in some

1st Assessment Attempt.

Arrival time 8:10 Low tide @ 136.22
 Departure 11:30

A. Procedure

- 1) cruised beachline w/ team 5 to identify general biological, geomorphological, oil characteristics
- 2) landed & inspected examples of oil characteristics
- 3) survey of intertidal zones

B. Results

1) Bedrock cliffs, boulder zone w/ dense vegetation

2) High Zone

- Greatest Concentration of oil
- BARNACLES
 - low density of adults - moderate cover dead shells
 - high " juveniles
 - " " spat
- FUCUS
 - Rare in upper zone
 - Dense in ~~upper~~ mid / low zone for adult / juvenile / spat
 - Appears to be lots of recent recruitment
 - Also fairly dense adults
 - Cobble beach has only moderate cover of Ad, ju, spat = A, J, S
- MYTILUS
 - I found only 2 small (<10 mm) Mytilus in Subdivision A. They were in high zone.
- GASTROPODS
 - Adults only moderate to sparse
 - Juveniles & spat much more abundant → dense
 - Cobble in section less

3) Mid Zone

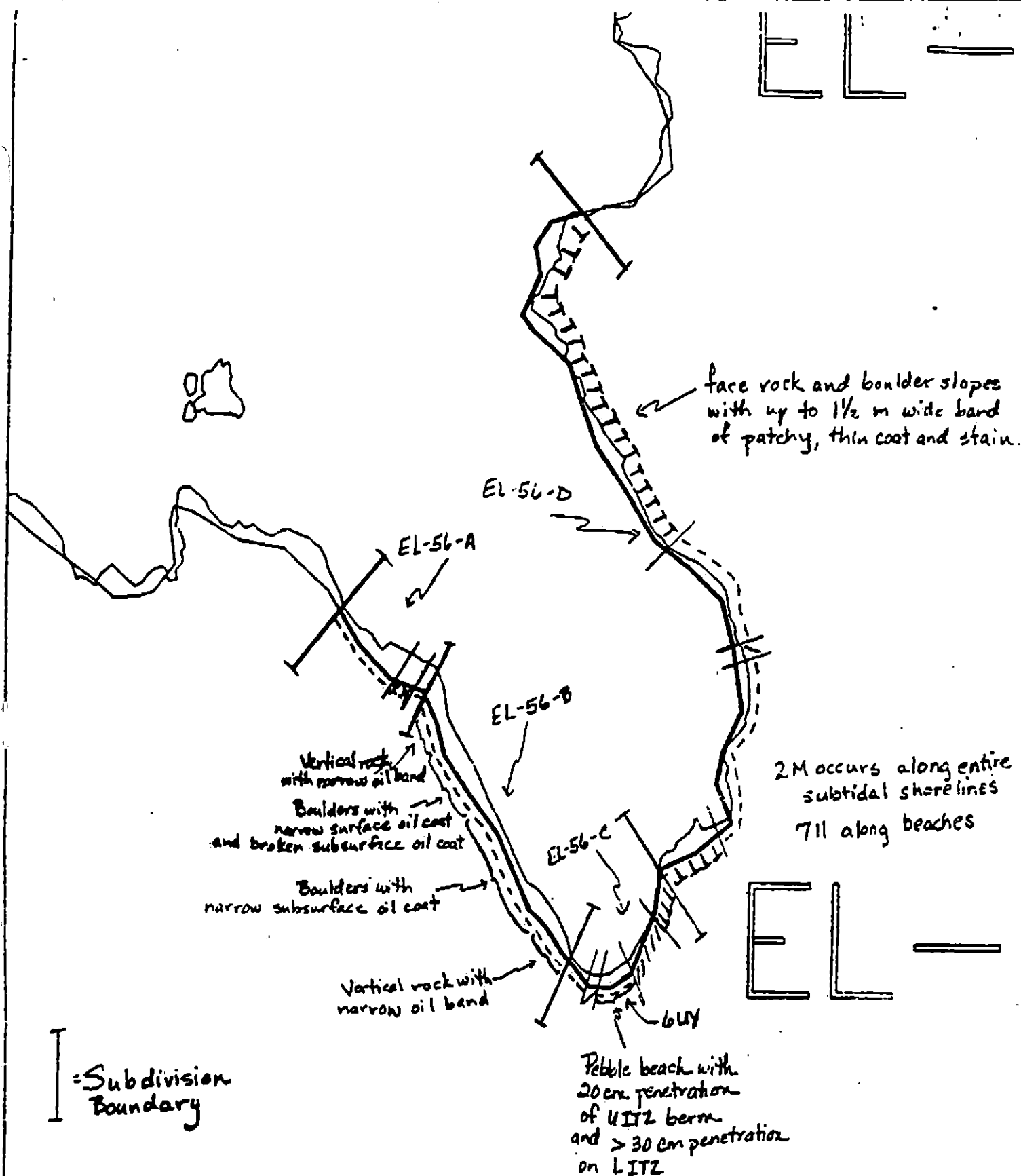
- BARNACLES
 - Dense A, S, J on all but cobble, where A, J, S were moderate
 - Lots of dead adults
- FUCUS - see High Zone
- MYTILUS - none in zone
- GASTROPODS - Littorina (saxatilis, sikamae) juveniles (J) and spat (S) fairly dense
- Adults only moderate
- Nucella lamellosa abundant (up to 10-20 m²)

4) Low zone

- BARNACLES
 - Abundant on bare spots (A, J, S)
- FUCUS
 - High in (A, J, S)
- MYTILUS - Abundant
- GASTROPODS - sparse-moderate Adults - some egg cases on mussels

THE UNIVERSITY OF CHICAGO

SCHNEIDER



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EL-56

ADEC Segment Length: 1613m



Map Key: PWS-139

Name: C. DILLON

Date: 3/29/90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ EL-56 SUBDIVISION B (2 OF 4) DATE 3/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15; Restrict disturbance of dense to moderate fucus in L and MITZ, and dense to moderate barnacles and gastropods in M and UITZ.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Same as above.

SHPO SIGNATURE: Mark Z. Hines

DATE: April 9, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 351m: V.Light 0 m: No Oil 0 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: <u>x</u> Wands
☐ Tarmat: ☐ Breakup	☐ Beach Cleaner
☐ Removal	☐ Other (see comments)

COMMENTS: Recommend restricted treatment in this subdivision as broken coating found on steep boulder beds is relatively inaccessible and placing crews on shoreline at this location would be hazardous. Please review Field Shoreline Comment Sheet. However those areas that are accessible should be spot washed as necessary, and bioremediated.

TAG COMMENTS: INIPOL NOT APPROPRIATE DUE TO CONCENTRATION OF FUNGA + FURA. CUSTOMBLEN/GRANULAR FERTILIZER RECOMMENDED.

TAG APPROVAL DATE: 4/9/90

ADEC JOHN BAUER ADW

EXXON ANDY GATE ADW

NOAA Burl Wesscott Burl Wesscott

USCG G.A. NEITER G.A. Neiter

FOSC: [Signature] DATE: 4-19-90

Complete with Land Manager
as soon as possible.

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EL56 SUBDIVISION: B DATE 03/29/90

USCG

NAME AEC Vandepels / P83 SCHNEIDER SIGNATURE AEC Vandepels / David A. Schneider
P83 / USCGR☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

~~AEC~~ Suggest small crew manually clean boulders + rock face with hand tools.

I concur with Land Manager's and ADEC's comments below.

C Peter Montesano
E Michelle Baer SIGNATURE M Baer Peter Montesano☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

Sub-segment B is primarily R Headland faces. Treatment recommended would be hot water wash combined w/ manual scrubbing. Areas with B fields have visible penetration to 45cm between boulders. Access is difficult. Whole boulders cannot be removed due to concerns by the geologists w/ erosion. Area is very steep. Bioremediation is inappropriate. Any attempt at treatment in these areas would be labor intensive and hazardous.

LAND MANAGER

NAME DAN LOGAN SIGNATURE Dan Logan
JANETTA PRITCHARD Janetta Pritchard☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

MANUALLY TREAT OIL COAT BY SCRAPING AND WIRE BRUSH

NOT NECESSARY FOR BIO-REMEDIATION

AREA COULD ALSO BE TREATED W/ HOT WATER WASH AT HIGH TIDE.

See Shoreline Oiling Summary.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

C. Dillon / J. Springer USCG Vanderparks / Schneider SEGMENT ST/ EL-56
 BIO P. Crank / J. Barry LAND REP J. Pithers / J. P. Montepino SUBDIVISION B (204)
 EXXON A. Snare / T. Terlin ADEC M. Baer / P. Montepino TIME 11:30 to 12:20
 TEAM NO.: 5/6 TIDE LEVEL: +2 to +6 DATE 03/29/90
 EST. SUBDIVISION LENGTH: 595 m 377 ☐ 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 60 % C 25 % P _____ % G _____ % S _____ % M _____ % V _____ %
 SLOPE: Lang _____ % Hang 90 % Vert 30 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 35 m M _____ m N 550 m VL _____ m NO _____ m
16 361

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	R	P	S	BR	OR	FW	GY	SL	DR	TL	LT	SU	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER				X					X				X			
COAT		X							X				X	X		
STAIN																
DUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL													X			X

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

PATTIES / TARBALLS _____ BAGS

NEAR SHORE SHEEN? NO BR RW (SL) TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash	X		
Debris			

DEBRIS COLLECTED ☒ YES ☐ NO

TYPE Crack debris

#BAGS 1

Photographs:

Roll No. ST6-1

Frames 9-12

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				
		UP	CR	CL	OF	NO			VO	VC	5R BR	10R RW	15 SL	20R TL	30R LRT	SU	U	M	LI							
1	7		X				0-5		X						X										BCP	
*2	-	X	X				0-40	X							X											B
2*	-		X				0-40	X							X											B
							.																			
							.																			
							.																			

COMMENTS Lower intertidal zone covered by incoming tide.

Up to 3 m band of

* Observed coating below large boulders.

Very slight nearshore sheen (may be biological).

Note from C. Dillon (3-31-90): Pit (*) was looking between large boulder not actually down TL. UN ...

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST/ E1056 Subdivision B Date (mo / day / yr) 3-29-90
Time (24 hr) 1130-1230 Biologist BARRY / CRANK Length = 575m 377m

- (A) Substrate type and % of segments:
(1) Bedrock 15 (2) Boulder 60 (3) Cobble 25 (4) Pebble (5) Sand (6) Silt
- (B) Overall % cover of biota (% of segment): Dense 25 Moderate 50 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: ST-6-1
Roll No.
Frames 9,10,11,12

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	COULDN'T SEE LOW ZONE 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	NO MYTILUS 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	LOW ZONE UNKNOWN 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:

LOW ZONE - 1 Low ZONE (LITZ) observed from boat - high tide prevented direct observation

Ecological Considerations:

7 11
2 M
6 U Y

EL:

B

25 March 70

START

11 30

STOP

on Beach Cliff

Sampled water distant to tag

1144

Barn(A)

> 0(3)

moderate - patches of dense

MAYLUS

0

BARNAB

moderate to sparse L. Hornies

F

> 300 no fruit

most has < juveniles sparse adults

Most of surface rocks w/ Ralghosa,
Petrocellus, diatom/blue green

Search didn't include low zone
+ only a little

(most of sub sand division) a boulder
straw cliff - 45' +

lots of barnacles under rocks

most adults, dead

Some downer
downer

Submerged (low level underwater)

-12

-4-

ELSOB

1110 - 7 Focus J, A > Calliphylis/mura

W under water

suspect > barnacles/gastropods

BALD EAGLE

over trees Adult

2

Pigeon guillemot

on water

Little or no algal drift

Slime!

No mytilus seen in core except last
sub division

EL 056-C

1230-1320

1730-0000

Cobble borders at either end of beach:

: Contained - covers of oil on most rocks

to sparse barnacles recumbent

in upper zone where oil

is thick, though some settled

1 grew adjacent to oiled
spots

Few - rare L. Hornies in upper

No Mytilus on this beach

EL056-D

27 (DATE YU

1/2

START 1130

STOP 1230

TIDE WINDOW +3' → +5'

to mid

HIGH ZONE

GREEN SLIME - (DIATOM / BLUE GREEN / ENTEROMORPHA / SCYTOSIPHON
RALESIA / OTHER?)

~~TH~~ Dense on mid to high zone

PETROCOELIS - dense in high zone

BARBACLES UNDERSIDE OF BOULDERS

OPEN SPACE w/ > SPAT, HEALTHY ADULTS

W ZONE - DIRECT OBSERVATIONS NOT POSSIBLE

~~AND ZONE~~

FUCUS VISIBLE FROM SURFACE

ADULTS / SPORULINAS

SPECIES LIST (INCOMPLETE)

FUCUS

RHODYMENIA SP

ENTEROMORPHA

ULVA

RALESIA

PETROCOELIS

RHODOMELA

BALANUS PATIFICUS

LOTIA SP

UTTORINA SCUTULATA

L. SIREANA

NUCELLA SP.

WILDLIFE

BALD EAGLE - 1 ADULT - FLYING OVER FOREST

PIGEON GUINOT - 2 OVER WATER

KITTAWAKE - 1 FLYING

Assessment Attempt.

Arrival time 8:10 Low tide @ 138.22
Departure 11:30

A. Procedure

- 1) cruised beachline of team 5 to identify general biological, geomorphological, oil characteristics
- 2) landed & inspected examples of oil characteristics
- 3) survey of intertidal zones

B. Results

1) Bedrock cliffs, boulder zone w/ dense vegetation

2) High Zone

- Greatest Concentration of oil
- BARNACLES
 - Low density of adults - moderate cover dead shells
 - High - juveniles
 - " " spat
- FUCUS
 - Rare in upper zone
 - Dense in ~~upper~~ mid / low zone for adult / juvenile / spat
 - Appears to be lots of recent recruitment
 - Also fairly dense adults
 - Cobble beach has only moderate cover of Ad, ju, spat = A, J, S
- MYTILUS
 - I found only 2 small (<10 mm) Mytilus in Subdivision A. They were in high zone.
- GASTROPODS
 - Adults only moderate to sparse
 - Juveniles & spats much more abundant - dense
 - Cobble & beach less

3) Mid Zone

- BARNACLES
 - Dense A, S, J on all but cobble, where A, J, S were moderate lots of dead adults
- FUCUS - see High Zone
- MYTILUS - none in zone
- GASTROPODS - Littorina (scutulata, sikama) juveniles (J) and spat (S) fairly dense Adults only moderate
Nucella lamellosa abundant (up to 10-20 m²)

4) Low zone

- BARNACLES
 - Abundant on bare spots (A, J, S)
- FUCUS

Other Comments

1) Heavy *Petrocelus* cover in high

2) Algae

Habit
Petrocelus parva?
Ralfsia spp.
Syrtosiphon spp.

MITZ
Fucus distichus?
Rhodomenella sp.
Monostroma

LITZ
Ulva

WILDLIFE OBSERVATIONS

BIRDS

BALD EAGLE - 1 ADULT FLYING OVER FOREST ABOVE SITE

KITTYWAKE - 1

PELAGIC CORMORANT - 1 DIVING NEARSHORE

GULL (Herring?) - 1 FLYBY

PIGEON GULLSKOT - 4 ON WATER / FLYBY

RAVENS - 4 FLYING BY

BUFFLEHEAD - 2 ON WATER

COMMON LOON - 1 DIVING

WHITE WINGED SCOTER - 1

OTHER

SEA OTTER - 1 ADULT DIVING NEARSHORE

RIVER OTTER - 1 - TRACKS

HARBOR SEAL - 1 - DIVING

MORE LOW INTERTIDAL COMPONENTS

- Dense (~1-3 m²) Pycnopodia and Dermasterias (sea stars)
 in low zone. *Pycnopodia* are juveniles

- Several dead sea stars in low to upper zone (winter freeze?)

- Found 1 ~~at~~ *Orthasterias*? dead in ~~upper~~ low zone.

- Limpets: Few adults observed - some boulders / bedrock with abundant

ALGAL OBSERVATIONS

Low Zone

- Halosaccion - juveniles - sparse
- Rhodomenia spp? - Adults, juveniles - dense
- Ulva - moderate
- Rhodormela lanix - moderate
- Fucus - dense
- Gloiopeltis? - Dense

Opuntaria

MID ZONE - similar to low zone, but decrease in most of
and more of
Diatom / Blue green / Entomomorpha & other - green flimsy
Ralfsia - dense
Lithothamnion (sparse)

High Zone - ~~Ralfsia~~
Petrocelis
Ralfsia
+ others

Inverts

- Lottia spp (Collisella) -
- Pandalus spp. - 1 in low zone
- Nucella lamellosa - dense in small mid zone pools

NT ST: EL50
 /ISION B
03/29/90

KLISI

row
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 h
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 over
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 HWLA WA
 cliff
 le Location(s)
 le(s)
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ND

Subsurface Oil

Surface Oil

/C
 us Distribution

/B
 Distribution

/P
 Distribution

/S
 Distribution

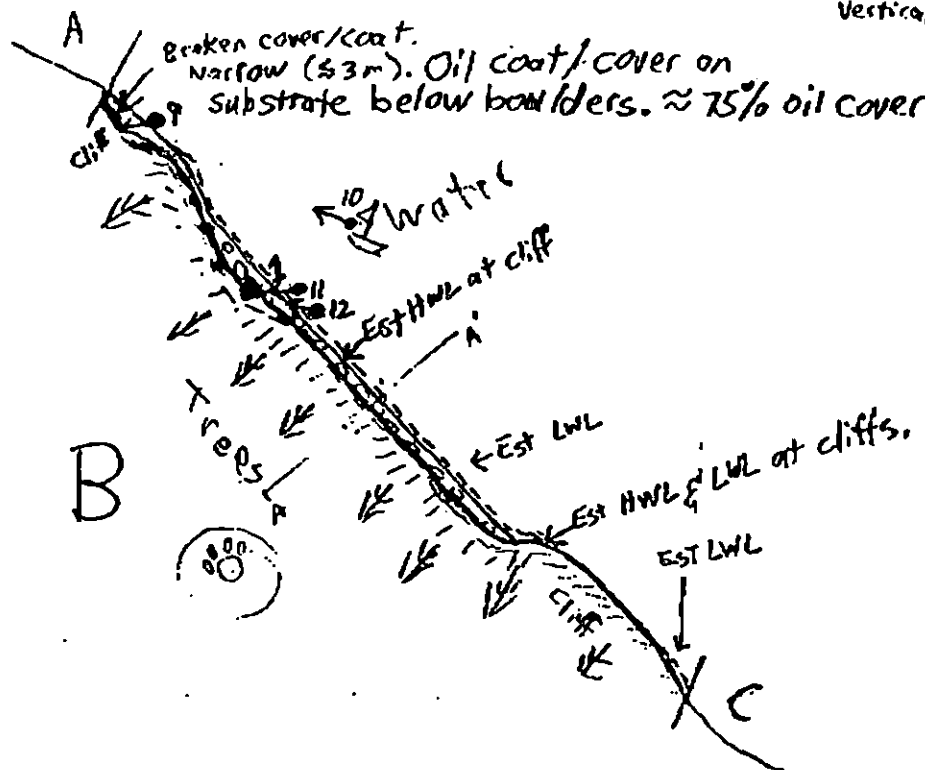
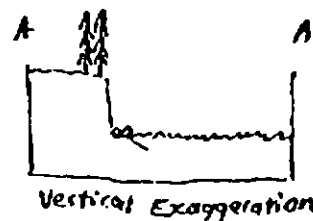
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ation, direction,
 ver

SKETCH MAP

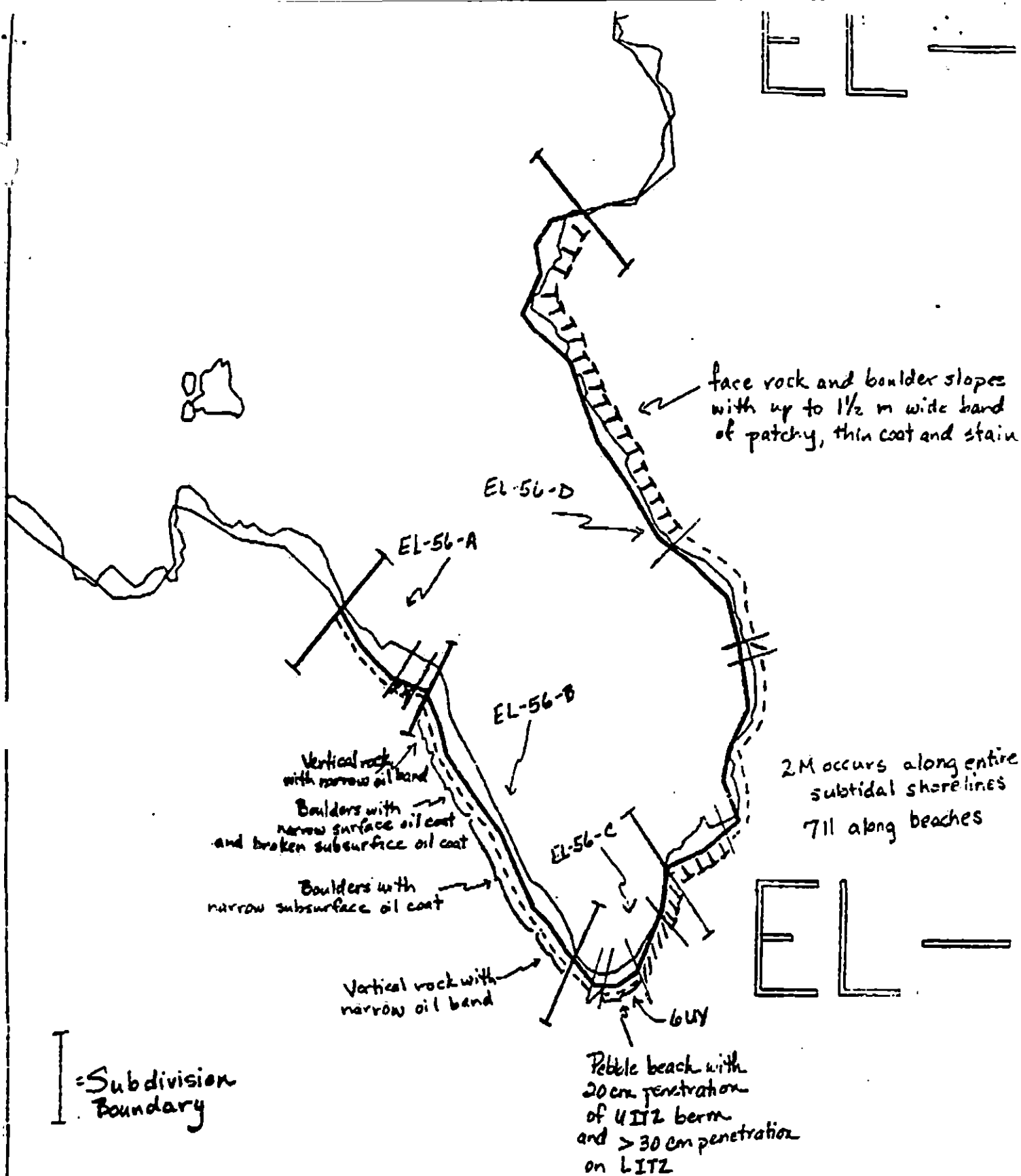


0 100m
 Approx.



Star Length (m): AP _____ PO _____ CV 15 CT 550 ST _____ MS _____ PT _____ TB _____ FL _____ NO _____

REVISION: 03/24/90



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EL-56

ADEC Segment Length: 1613m

0 100 200 300
METERS

Map Key: PWS-139

Name: C. Dillard

Date: 3/29/90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ EL-56 SUBDIVISION C (3 OF 4) DATE 3/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15; Deer harvesting (7II) - 8/15 to 3/1; Recreation area (6U, Y) - 6/1 to 9/15; Restrict disturbance of uniled moderate fucus and barnacles in L and MITZ.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Same as above.

SHPO SIGNATURE: [Signature] DATE: April 7, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 88 m: Narrow 77 m: V.Light 48 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 30 + cm

RECOMMENDATIONS:

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

COMMENTS: The recommended treatment activities are as follows: 1) Spot washing with wands and sorbents in areas with continuous and broken cover, 2) Manual pickup of tar balls, 3) Manual tilling with hand tools followed by bioremediation in areas shown on sketch map. All work should be conducted after 6/15 based on constraints listed above.

TAG COMMENTS: USE MANUAL AGGITATION IN CONJUNCTION WITH THE RISING TIDE TO REDUCE SHEAVING AND HELP IN REMOVAL OF SUBSURFACE OIL. SNARE BOOMS + ABSORBENTS SHOULD BE MAINTAINED AT THE WATER/SHORE INTERFACE. WORKING WITH THE RISING TIDE WILL HAVE TO BE EVALUATED ON SITE TO DETERMINE FEASIBILITY AND PRACTICALITY.
• LOGS TO BE RE-EVALUATED DURING TREATMENT ACTIVITY

TAG APPROVAL DATE: 4/9/90

ADEC JOHN BAUER EXXON ANDY TAC FOSC: [Signature] DATE: 4-19-90
NOAA Burt Wasscott USCG G.A. REITER

FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 EL 56 SUBDIVISION: C DATE 03/29/90

ISCG

NAME TB3 SCHNEIDER AEC Vandepelt SIGNATURE TB3 SCHNEIDER AEC Vandepelt
TB3/USCGR

☐ NO TREATMENT RECOMMENDED
 COMMENTS

☒ TREATMENT SUGGESTED

TREAT. TO SUBDIVISION C SHOULD INCLUDE MANUAL METHODS IN CONJUNCTION WITH BIOREMEDIATION IN SECTIONS INDICATED IN EXON'S OP NOTES. DEBRIS IN AND ABOVE LITE AT STRAN LINE SHOULD BE RAKED & ^{OILED} BASED. MANUAL WIPING AND COLLECTION OF OILED DEBRIS BENEATH COBBLES AND BOULDERS SHOULD BE AUGMENTED BY TILLING, WASHING AND FLUSHING TECHNIQUES AS APPROPRIATE. LARGE COBBLE/BOULDER AREA IN WESTERN PART OF SUBDIVISION ALONG DRAINAGE ZONE SHOULD ~~BE~~ HAVE ~~SEE~~ AFFECTED SURFACE SEDS REMOVED IF TREATMENT DOES NOT PRODUCE EFFECTIVE RESULTS. OK

AE Suggest cleaning 20m of western most area of subsection by manual wiping & washing of area.

ADEC Peter Montesano

NAME Nichole Paer SIGNATURE Peter Montesano Nichole Paer

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS Subdivision C contains an area frequented by hunters, Kayakers, etc. and is aesthetically unacceptable for recreation purposes.

The majority of the visible oil is hidden in Boulder/Cobble shade. The pebble/~~gravel~~ gravel beach in the center of C and the 20m. of Boulder, cobbles, and gravel to the west require the most extensive treatment. The pebble/gravel beach could be treated with a till, water flush, and bio remediation combination. The second beach is a candidate for possible removal of cobble to expose the finer sediments for hot wax to be followed by bio remediation.

LAND MANAGER

NAME DAN LOGAN/ANITA Pritchard SIGNATURE Dan Logan Anita Pritchard

☐ NO TREATMENT RECOMMENDED
 COMMENTS

☒ TREATMENT SUGGESTED

WE CONCUR W ADEC/USCG treatment recommendations.

A cabin is located on the uplands adjacent to the pebble/gravel beach in the center of this subdivision.

SHORELINE OILING SUMMARY

REVISION NO. 02/22/90

OG Springer / Dillon USCG Schneider / Vandepels SEGMENT ST/ EL-56
 BIO Cranks / Barry LAND REP Pritchard / Lean SUBDIVISION C (3 of 4)
 EXXON Temlin / Enock ADEC M. Beer / Montsarn TIME 12:20 to 13:35 and
 TEAM NO.: 015 TIDE LEVEL: +6 to +9 DATE 03/29/90 1715 to 18
 EST. SUBDIVISION LENGTH: 300 m 198 ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 50 % B 50 % C 20 % P 25 % G 5 % S 0 % M 0 % V 0 %
 SLOPE: Lang 50 % Hang 45 % Vert 5 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 86 m M 130 m N 110 m VL 60 m NO 0 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES					
	IC	IS	IP	IS	BR	OR	GY	SL	TL	LOH	SU	UI	ME	U	
ASPHALT PAVEMENT															
POOLED															
COVER	X							X				X			
COAT	X	X						X				X			
STAIN															
MOUSSE															
PATTIES															
TARBALLS				X	X							X			
FILM		X											X		
NO OIL	See Comments										S			X	

SEC Comments

S

PAVEMENT: H F S 0 sq. m by 0 cmPATTIES / TARBALLS 2 BAGSNEAR SHORE SHEEN? NO BR RW SL TL

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

DEBRIS COLLECTED
☒ YES ☐ NOTYPE Trash#BAGS 1

Photographs:

Roll No. ST6-1Frames 13-19

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CD)	BELOW	OIL / FILM COLOR							PIT ZONE				A N A	SUBSURFACE SEDIMENTS			
		OP	OR	OL	OF	NO			VO	UC	SOL	OR	OR	OF	SL	OR	SL	SU	U			M	U	
1	40		X				5-10	X						X		X								PG
1	40	X					15-25		X					X		X								PG
2	25		X				5-20	X						X		X								PG
3	40					X	.		X				X					X						CPGS
4	90*	X					70-90		X					X		X								Snow, Organics, P
5	30		X				0-30	X						X					X					PG

COMMENTS

Pit 1 - Layer of oiled peat at 15-25 cm.

Pit 2 - Oil ends at clean peat layer.

Pit 3 - Sheen in groundwater at 40 cm.

Pit 4 - 70 cm snow, 20 cm oiled organic debris.

Heavy oil near stream 1.

Returned to beach at 19:05. Dug pits 5 and 6 in lower intertidal.

REVIEWED DHDATE 3/31/90

00 C. D. ON

SEGMENT ST/EL-56

SUBDIVISION C

DATE 3/29/90

CHECKLIST

- ☐ N Area
- ☐ Approx. Scale
- ☐ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. HML/LVL
- ☐ SSZ
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ P/L Location(s)
- ☐ 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
Patched Distribution

CT/S
Splashed Distribution

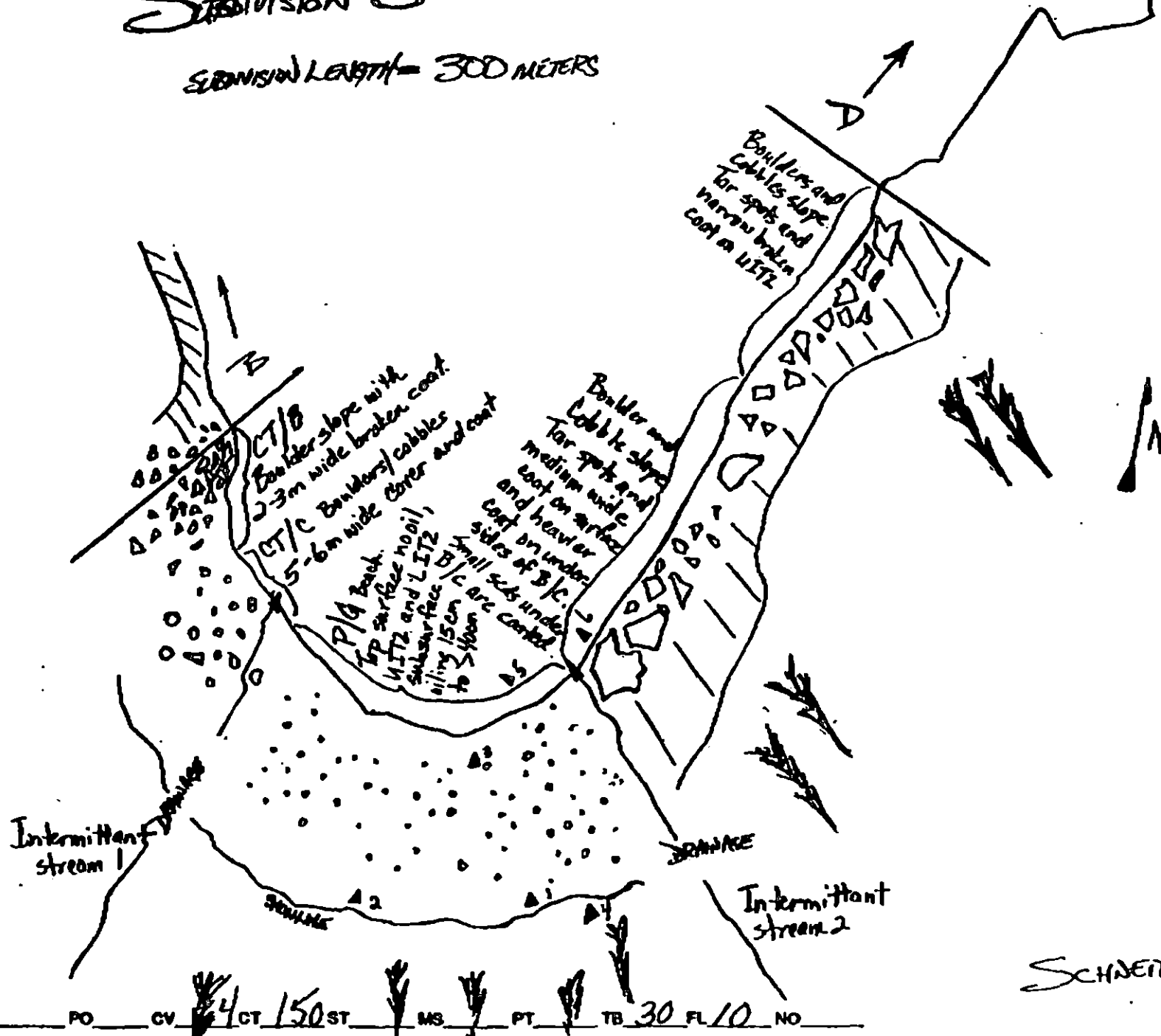
Oil Vegetation

1 ●
Photo location, direction, and number

SEGMENT EL-56
SUBDIVISION C

SKETCH MAP

SUBDIVISION LENGTH - 300 METERS



Oil Character Length (m): AP PO CV 4 CT 150 ST MS PT TB 30 FL 10 NO

SCHNEIDER

REVISION: 000000

OG C ILLON

SEGMENT ST/EL-56

SUBDIVISION C

DATE 3/29/90

SEGMENT EL-56

SKETCH MAP

SUBDIVISION C

SUBDIVISION LENGTH = 300 METERS

CHECKLIST

- N Arrow
- Approx. Scale
- Sep/Sub Bdry
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. HWL/AWL
- SSL
- Profile Location(s)
- Profile(s)
- PH 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

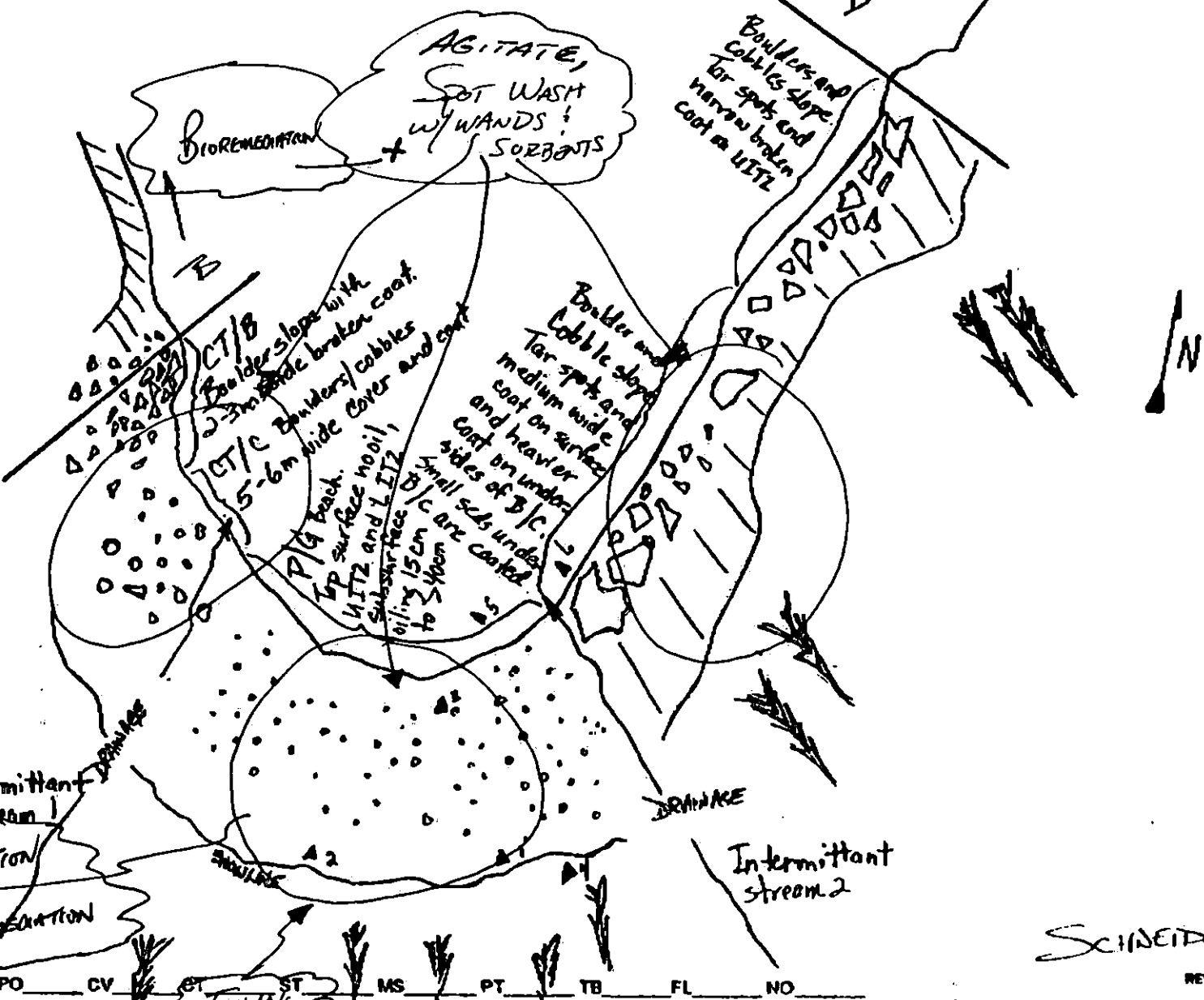
CT/S
Splashed Distribution

Oiled Vegetation

1 Δ
Photo location, direction,
and number

TILLING/AGGITATION
SPOT WASH
THEN BIOREMEDIATION

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



SCHNEIDER

REVISION 03/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/22/80

Segment ST / EL 056 Subdivision C Date (mo / day / yr) 3-29-90Time (24 hr) 1230-1330 Biologist BARRY / CRANIK Length 300m - 192m

- (A) Substrate type and % of segments:
 (1) Bedrock (2) Boulder 50 (3) Cobble 20 (4) Pebble 25 (5) Sand 5 (6) Silt
- (B) Overall % cover of biota (% of segment): Dense 15 Moderate 45 Low 40
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

Photographs:
Roll No. 57-6-1Frames 13, 14

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

RIVER OTTER TRACKS } STREAM BED
 DEER TRACKS
 BMD EAGLE
 PIGEON GUANO

Ecological Considerations: 7 11 CAUTION DURING HERRING SPAWN
 2 M
 6 U Y

Potential interference with herring spawn.

ELOS6 - C

29 MAR 1990

START 1230 - and 1730-1805
STEP 1330

TIDE WINDOW +6 → +9, +8 → +6

LOWEST EXPOSURE = $\frac{1}{2}$ TOP 1/2 of MID ZONE

Headland at S end

Moderate Barnacles (Adult, juv, spat)

Fucus - dense mid to low (A, J)

High zone - moderate Fucus L. sparse

LITTORINA - Sparse

> Green Slime (see ELOS6-B)

> Spp A - unknown Red (Rhodoglossum?)

WILD LIFE

RIVER OTTER - TRACKS } from high to super tidal zone
DEER ~~TR~~ - TRACKS }
BALD EAGLE - 1 - ABOVE FOREST
PIGEON GUILLEMOT - 1 ON WATER

OTHER

- > GREEN SLIME (see ELOS6 A) in high to mid
- TIDE LEVEL PREVENTED direct observation of low to mid zone. THESE ZONES observed from boat.
- 2 streams - both w/ low fish potential

Algal Observations

Low Zone

- Halosaccion - juveniles - sparse
- Rhodomenia spp? - Adults, juveniles - dense
- Ulva - moderate
- Rhodomela larix - moderate
- Fucus - dense
- Gloiopeltis? - Dense

m. Opuntaria

mid zone - similar to low zone, but decreases in most of
and more of
Diatom / Blue green / Entomomorpha + other - green flume
Ralfsia - dense
Lithothamnion (sparse)

High Zone - ~~Ralfsia~~
Petrocelis
Ralfsia
+ others

Inverts

- Lottia spp (Collisella) -
- Pandanus spp. - 1 in low zone
- Nucella lamellosa - dense in small mid zone pools

Other Comments

→ Heavy petrocilius cover in high

2) Algae

14614
Petrocilius parva?
Ralfsia spp
Syctosiphon spp.

MITZ
Fucus distichus
Rhodomela larix
Monostroma

LITZ
Ulva

WILDLIFE OBSERVATIONS

BIRDS

BALD EAGLE - 1 ADULT FLYING OVER FOREST ABOVE SITE

KITTAWAKE - 1

PELAGIC CORMORANT - 1 DIVING NEARSHORE

GULL (HERRING?) - 1 FLYBY

PIGEON GULLMOT - 4 ON WATER / FLYBY

RAVENS - 4 FLYING BY

BUFFLEHEAD - 2 ON WATER

COMMON LOON - 1 DIVING

WHITE WINGED SCOTER - 1

OTHER

SEA OTTER - 1 ADULT DIVING NEARSHORE

RIVER OTTER - 1 - TRACKS

HARBOR SEAL - 1 - DIVING

MORE LOW INTERTIDAL COMPONENTS

- Dense (~1-3 m²) Pycnopodia and Dermasterias (sea stars) in low zone. Pycnopodia are juveniles
- Several dead sea stars in low to upper zone (winter freeze?)
- Found 1 ~~at~~ Orthosterias? dead in ~~upper~~ low zone.
- Limpets: Few adults observed - some boulder / bedrock with abundant juvenile - most w/ much lower densities
- Littorine egg cases and high densities 1 adult, lost in some.

1st Assessment Attempt

Arrival time 8:10 Low tide @ 138.22
Departure 11:30

2 Procedure

- 1) cruised beachline of team 5 to identify general biological, geomorphological, oil characteristics
- 2) landed & inspected examples of oil characteristics
- 3) survey of intertidal zones

3. Results

1) Bedrock cliffs, boulder zone w/ dense vegetation

2) High zone

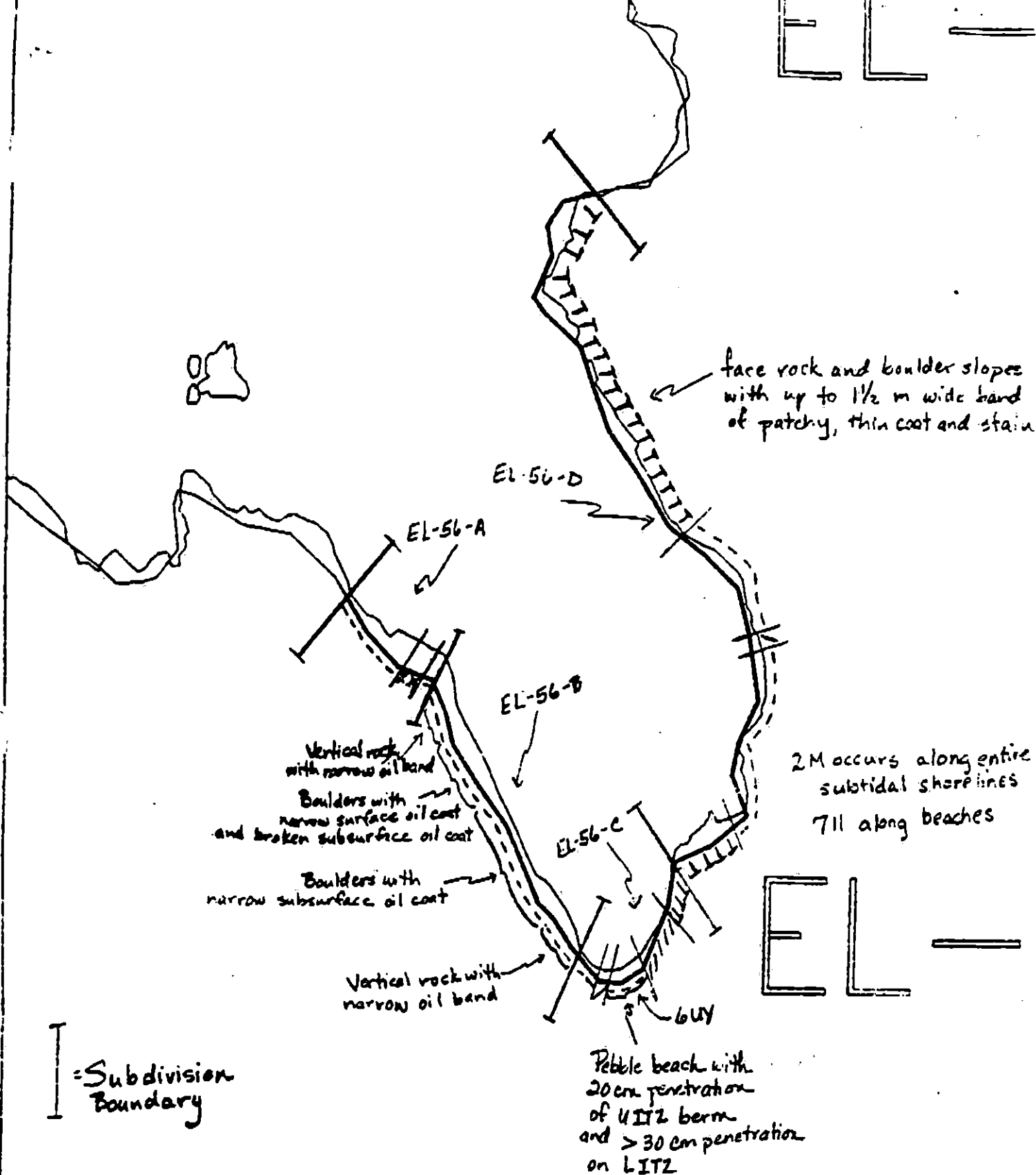
- Greatest Concentration of oil
- Barnacles
 - Low density of adults - moderate cover dead shells
 - High " - juveniles
 - " " - spat
- Fucus
 - Rare in upper zone
 - Dense in ~~upper~~ mid / low zone for adult / juvenile / spat
 - Appears to be lots of recent recruitment
 - Also fairly dense adults
 - Cobble beach has only moderate cover of Ad, ju, spat = A, J, S
- Mytilus
 - I found only 2 small (<10mm) Mytilus in Subdivision 1. They were in high zone.
- GASTROPODS
 - Adults only moderate to sparse
 - Juveniles & spat much more abundant → dense
 - Cobble in Section less

3) Mid zone

- Barnacles
 - Dense A, J, S on all but cobble, where A, J, S were moderate lots of dead adults
- Fucus - see High zone
- Mytilus - none in zone
- Gastropods - Littorina (scutellata, sikama) juveniles (J) and spat (S) fairly dense Adults only moderate
Puccella lamellata abundant (up to 10-20 m²)

4) Low zone

- Barnacles
 - Abundant in bare spots (A, J, S)
- Fucus
 - High in (A, J, S)
- Mytilus - abundant
- GASTROPODS - sparse-moderate Adults - some egg cases on mussels



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EL-56

ADEC Segment Length: 1613m



Map Key: PWS-139

Name: C. Dillon

Date: 3/29/90

Data Entered:

ASAP FOLLOWUP RECOMMENDATIONS

EL
Segment: AS/ 56 Subd.: C Site: _____ Date: 8/5 1990

Conditions Observed: STORMBERM IN SITE CONTAINS MODERATE TO HIGH LEVELS OF "OR". HEAVY "OR" DOWN TO 30cm - LIGHT "OR" FROM 30-55cm. PIT IN MITE RELEASED A SMALL AMOUNT OF OIL. ENTIRE AREA HAS BEEN TREATED W/ CUSTOMBLEND, BUT HAS NOT BEEN TILLED AS PER WORK ORDER. ADJACENT BOULDER FIELDS HAVE BROKEN COATS. BEACH AND UPLANDS HAVE EXCEPTIONALLY HIGH RECREATION POTENTIAL. FRESHWATER STREAM ON WEST SIDE OF BEACH CONTAINED SHEEN THAT ORIGINATED IN STORM BERM.

Followup Recommendations: OIL IN STORMBERM SHOULD BE ELIMINATED. THE BERM COULD BE RELOCATED TO THE MITE, WASHED + BIOREMEDIATED. REMAINING COATS ON BOULDERS SHOULD BE TREATED WITH INIPOL. ABSORBENT + CONTAINMENT BOOM SHOULD BE UTILIZED DURING RELOCATION + WASHING PROCEDURES.

Completed by Pickup Crew: ☐ YES ☒ NO

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

ADEC

Wesley G. H. B. M. L. e. y
(name)

Wesley G. H. B. M. L. e. y
(signature)

Comments: Storm berm needs to be relocated and possibly flushed retrieving oil with pump-pumps or shovels. Entire area is still heavily impacted with oil. It should be a high priority for remainder of 90 and also 91.

Exxon

Rev. S. S. S. S. S.
(name)

(signature)

Comments: THIS SITE NEEDS TAG EVALUATION.

NOAA/USCG

ART WEINER

(name) PSI Leo Bersalona

Art Weiner

(signature) Leo Bersalona

Comments: THE STORMBERM IS QUITE POROUS (POSSIBLE/GRANULE) AND COULD BE TILLED IN SITE TO THE EXTENT THAT ALL OILED SEDIMENTS WERE EXPOSED TO THE ACCOMPANYING INIPOL TREATMENT. CUSTOMBLEND SHOULD BE APPLIED AS THE FINAL TREATMENT.

Land Rep.

John Ebel
(name)

John Ebel
(signature)

Comments: Important Recreational designated site. Maintain highest standards & best treatment methods available. Consult w/ ADEC. Remove all Oiler debris.

ASAP TAG REVIEW SHEET

Segment: EL56 Subd: C Site: 1 Date
PRE-Review 11 AUG 90

Priority For Addressing In 1990

 HIGH MEDIUM LOW X NTR

Treatment
Recommended: NTR — BASED ON AVAIL INFO.

ONLY HAVE OG / ASAP RECOMMEND.
SHEET

Priority Site For Reassessment In 1991

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

NO COMMENT SHEET

13 TAG
AUG

— TAG SITE VISIT
Sched for 14 AUG

2000

EL 56

SUBDIVISION

TOTAL NO. SITES

TIDE LEVEL +2.0 to 45.0 ft

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

OIL CATEGORY LENGTH: W m M 6.5 m N 148 m VL m NO 11 m US m

SITE 1

Border line
storm berm

SITE 2

SITE 3

[illegible][illegible]

Roll No. Poll 2

Frames 12

STORM BERM

STORM BERM

HEAVY OR 0-30
MED OR 30-55

2 LIGHT RAINBOW
FILM ON SEDIMENT
DIFFICULT TO DE

COMMENTS Original SSAT survey still provides a working document. All conditions observed on original survey were located. In addition, new areas of oiling were located. Storm berm seems to retain the majority of the subsurface oil present.

REVISION NO. 7377

SHORELINE EVALUATION

SEGMENT ST/ EL-56 SUBDIVISION D (4 OF 4) DATE 3/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15; Restrict disturbing mytilus
beds, barnacles and gastropods in M or UITZ, or uncoiled fucus in
MITZ.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Same as above.

SHPO SIGNATURE: Charles E. Hohmer DATE: April 9, 1990

OILING CATEGORIZATION:

Wide 0 m: Medium 22 m: Narrow 339 m: V. Light 550 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 18 + 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> </u> Tarmat: <u> </u> Breakup	<u> </u> Beach Cleaner
<u> </u> Removal	<u> </u> Other (see comments)

COMMENTS: Recommend bioremediation in areas where broken coat
found on pocket beaches (see sketch map). Work should be done
after 6/15/90 based on constraints.

AVOID DENSE MUSSEL AREAS WHEN APPLYING BIOREMEDIANTS
PICKUP OILGO VEGETATION + TAR PATTIES
LOGS TO BE RE-EVALUATED AT TIME OF TREATMENT ACTIVITY

TAG COMMENTS:

TAG APPROVAL DATE: 4/9/90
ADEC JOHN BAUER
EXXON ANDY TEAL FOSC: D. E. Wyl DATE: 4-19-90
NOAA Burl Wescott, Burl Wescott
USCG G.A. Reiter, G.A. REITER

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EL 56 SUBDIVISION: D DATE 03/29/90

USCG

NAME: David Schneider

SIGNATURE: David A. Schneider

TB3/UBGR

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

I concur with suggested treatment described by ^{the} Land Managers below

Suggest manual cleaning of boulders + removal of debris. AEC

ADEC

NAME: Michelle Baer

SIGNATURE: Michelle Baer

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

Subdivision D is a combination of coated faces and B, C beaches with oiled shadows, similar to the other subdivisions. Bio-remediation is locally appropriate possibly to complement a labor intensive hot water flood. Hot water or manual scrubbing is appropriate for the oiled faces. Manual removal of TB is suggested on the beaches. A 2 m discontinuous band of mussels lies along most of the sub-segment. This is rare in the other sub-segments and should be considered in treatment recommendations.

LAND MANAGER

NAME: DAK LOGAN

SIGNATURE: Janetta Pritchard

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

1/3 OF SUBSECTION SHOULD BE TREATED WITH HOT H₂O WASH,
COBBLE AND BOULDER SECTIONS SHOULD BE MANUALLY TREATED WITH
WIRE BRUSHES AND SCRAPERS,
REMOVE TARBALLS ADJACENT TO BEACH AREAS.
OILED LOGS AND DEBRIS TO BE REMOVED
SEE DIAGRAM ON SHORELINE OILING SUMMARY

SHORELINE OILING SUMMARY

REVISION NO. 02/22/88

OG Dillon / Springer USCG Schneider / Vankop SEGMENT ST/ EL-56
 BIO Crank / Barry LAND REP Lynn / Prichard SUBDIVISION D (4 of 4)
 EXXON Tomlin / Snook ADEC M. Boer / Manicamp TIME 18:05 to 19:05
 TEAM NO.: 5/6 TIDE LEVEL: + 1 to + 4 DATE 03/29/90
 EST. SUBDIVISION LENGTH: 1400 m 924 ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 70 % B 20 % C 8 % P 2 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Lang 10 % Hang 40 % Vert 50 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 503 m N 550 m VL 200 m NO 0 m
363 528

SURFACE OIL

CHARACTER	DISTRIBUTION					OIL / FILM COLOR					IMPACTED ZONES			
	C	S	P	R	NO	OR	OL	OF	NO	NO	SU	U	M	U
ASPHALT PAVEMENT														
POOLED														
COVER														
COAT		X												
STAIN			X											
MOUSSE														
PATTIES														
TARBALLS				X										
FILM														
NO OIL											X	X	X	X

PAVEMENT: H F S 0 sq. m by 0 crPATTIES / TARBALLS 2 md.e. BAGSNEAR SHORE SHEEN? NO BR RW SL TL

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

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

Roll No. None (not enough light)

Frames _____

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM/CM)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UC	UC	OR	OL	OF	NO	NO	SU	U	M	U		
1	18	X					0-18	X					X		X					CPG
2	35					X	.		X						X					PGS
3	25	X					3-10	X					X		X					BCP
							.													
							.													
							.													

COMMENTS

SHORELINE ECOLOGICAL SUMMARY

Segment ST / ELOSE - Subdivision D Date (mo / day / yr) 29 MAR 90
 : (24 hr) 1905 - 1920 Biologist BARRY Length 430m 934m

- (A) Substrate type and % of segments:
 (1) Bedrock 70 (2) Boulder 20 (3) Cobble 8 (4) Pebble 2 (5) Sand 0 (6) Silt 0
- (B) Overall % cover of biota (% of segment): Dense 40 Moderate 40 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-6-1
 Frames 0

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:

Could not view mid or low zone directly: Observations from surface: can't see barnacles, gastropods, mussels
 Common Murre in Northwest Bay / White-winged Crossbill in trees
 Pigeon Guillemot - 24
 Ecological Considerations: 7 U, 2 M, 6 UY - Potential Problem w/ frequent traffic nearshore during Herring spawn.

SEE ATTACHED PAGES

EL 056-D

27 MAR 70

Time 1805-1920

> = Dense
~ = Moderate
L = Sparse
+ = None

	Beach		P Beach	
	A	B	C/P	R/B
1464	>B(AJS)	>B(AJS)	>m(JS)	~B(A)
	>B(AJS)	+m(JS)	~G(JS)	>B(L)
	?m	+G(AJS)	<F(AI)	~G(JS)
	<F(AJS)	>F(JS)	>B(AJS)	+m(JS)
			+F(	
				>G(AJS) eggs

could see a little of MITZ

F mud signs about the same on these

less here
some here
none

Signs
in
row

2nd Beach from South end of subdivision

MITZ → UITZ Moderate Mytilus (10-40 mm TL)

LITTORINIDS Sparse

Fucus Sparse dead adults, few juveniles.

collected Algae, some invertebrates

EL056-D

29 MAR 90

Comments

WILDLIFE OBSERVATIONS

COMMON MURRE - DINING IN NORTHWEST BAY

PIGEON GUILLEROT - 4 FLYING IN " "

OTHER BIOTA

Dense filamentous algae in mid to high intertidal

(Enteromorpha, blue green algae?, Spongomorpha, diatom film?)

Very low bio-pet densities throughout - likely related to ↑

Fucus killed by cutting, hot water, or other treatments are not showing evidence of regeneration by growth of some individuals: Many areas showing dense recruitment of juveniles

Oiled rock has no barnacle recruitment (adjacent rock does)
*(> 5 skin)

Mytilus juveniles present in some areas under ~~sea~~ cobble, boulders with some oil.

* Greatest recruitment of molluscs located near outlet streams on cobble/pebble beaches

High percentage of dead barnacles (Adults) in many sites

TIME: 1805 - 1920 29 MAR 90

TIDE WINDOW # + 6 → + 3 ft

COULD NOT DIRECTLY VIEW MOST OF MIDDLE INTERTIDAL
+ ALL OF LOW ZONE

Algal Observations

Low Zone

- Halosaccion - juveniles - sparse
- Rhodomena spp? - Adults, juveniles - dense
- Ulva - Moderate
- Rhodomenella lanix - Moderate
- Fucus - dense
- Gloiopeltis? - Dense
- Opuntaria

MID ZONE - similar to low zone, but decrease in most of
and more of
Diatom / Blue green / Entomomorpha + other - green flumi
Ralfsia - dense
Lithothamnion (sparse)

High Zone - ~~Ralfsia~~
Petrocelis
Ralfsia
+ others

Inverts

- Lottia spp (Collisella) -
- Pandanus spp. - 1 in low zone
- Nucella lamellosa - dense in small mid zone pools

Other Comments

~~Heavy~~ Petriculus cover in high

2) Algae

14614
Petriculus parva?
Ralfsia spp.
Syrtosiphon spp.

METZ
Fucus distichus?
Rhodomela sp.
Monostroma

LITZ
Ulva

WILDLIFE OBSERVATIONS

BIRDS

BALD EAGLE - 1 ADULT FLYING OVER FOREST ABOUT SITE

KITTYWAKE - 1

PELAGIC CORMORANT - 1 DIVING NEARSHORE

GULL (Herring?) - 1 FLYBY

PIGEON GULLMOT - 4 ON WATER / FLYBY

RAVENS - 4 FLYING BY

BUFFLEHEAD - 2 ON WATER

COMMON LOON - 1 DIVING

WHITE WINGED SCOTER - 1

OTHER

SEA OTTER - 1 ADULT DIVING NEARSHORE

RIVER OTTER - 1 - TRACKS

HARBOR SEAL - 1 - DIVING

MORE LOW INTERTIDAL COMPONENTS

- Dense (~1-3 m²) Pycnopodia and Dermasterias (sea stars)
 in low zone. Pycnopodia are juveniles

- Several dead sea stars in low to upper zone (winter freeze).

- Found 1 ~~at~~ *Orthosterias*? dead in ~~upper~~ low zone.

- Limpets: Few adults observed - some boulders/bedrock with abundant juvenile - most w/ much lower densities

- Littorine egg cases

ST Assessment Attempt.

Arrival time 8:10 Low tide @ 13:22
Departure 11:30

A. Objective

- 1) revised beachline of team 5 to identify general biological, geomorphological, oil characteristics
- 2) Landed & inspected examples of oil characteristics
- 3) Survey of intertidal zones

B. Results

1) Bedrock cliffs, bordering area w/ dense vegetation

2) High Zone

- Greatest Concentration of oil

- Barnacles

- Low density of adults - moderate cover dead shells
- high - juveniles
- - - spat

- Fucus

- Rare in upper zone
- Dense in ~~upper~~ mid / low zone for adult / juvenile / spat
- Appears to be lots of recent recruitment
- Also fairly dense adults
- Cobble beach has only moderate cover of Ad, ju, spat = A, J, S

- Mytilus

- I found only 2 small (<10mm) Mytilus in subdivision A. They were in high zone.

- GASTROPODS

- Adults only moderate to sparse
- Juveniles & spat much more abundant → dense
- Cobble & section less

3) Mid Zone

- Barnacles

- Dense A, J, S on all but cobble, where A, J, S were moderate
- lots of dead adults

- Fucus - see High Zone

- Mytilus - none in zone

- Gastropods - Littorina (serrulata, sikana) juveniles (J) and spat (S) fairly dense

Adults only moderate

Mucella lamellata abundant (up to 10-20 m²)

4) Low Zone

- Barnacles

- Abundant on bare spots (A, J, S)

- Fucus

High zone (A, J, S)

- Mytilus - abundant

3 J. SPRING

SKETCH MAP

SEGMENT ST/EL-56

BDIVISION 0

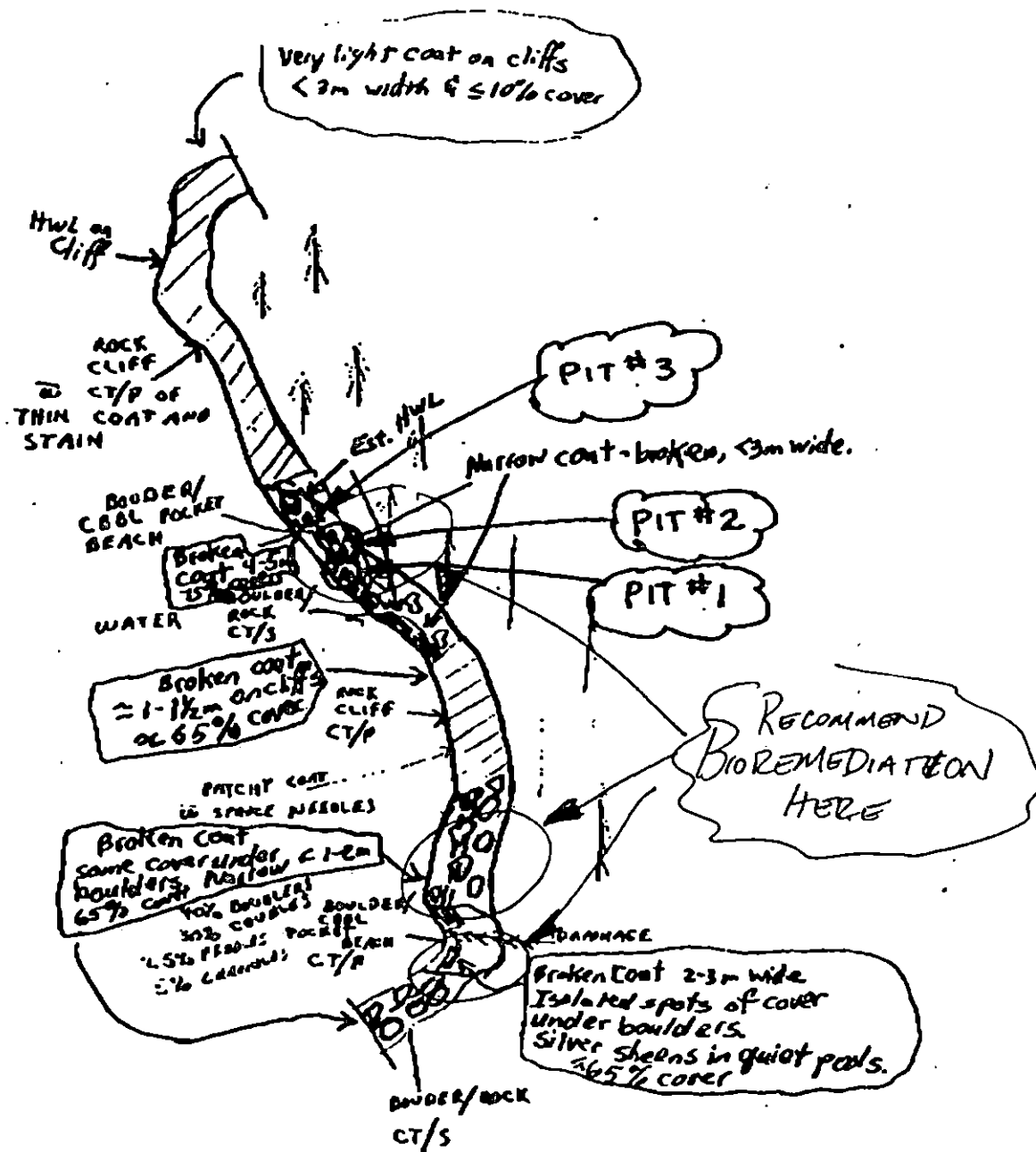
DATE 03/29/90

CHECKLIST

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

LEGEND

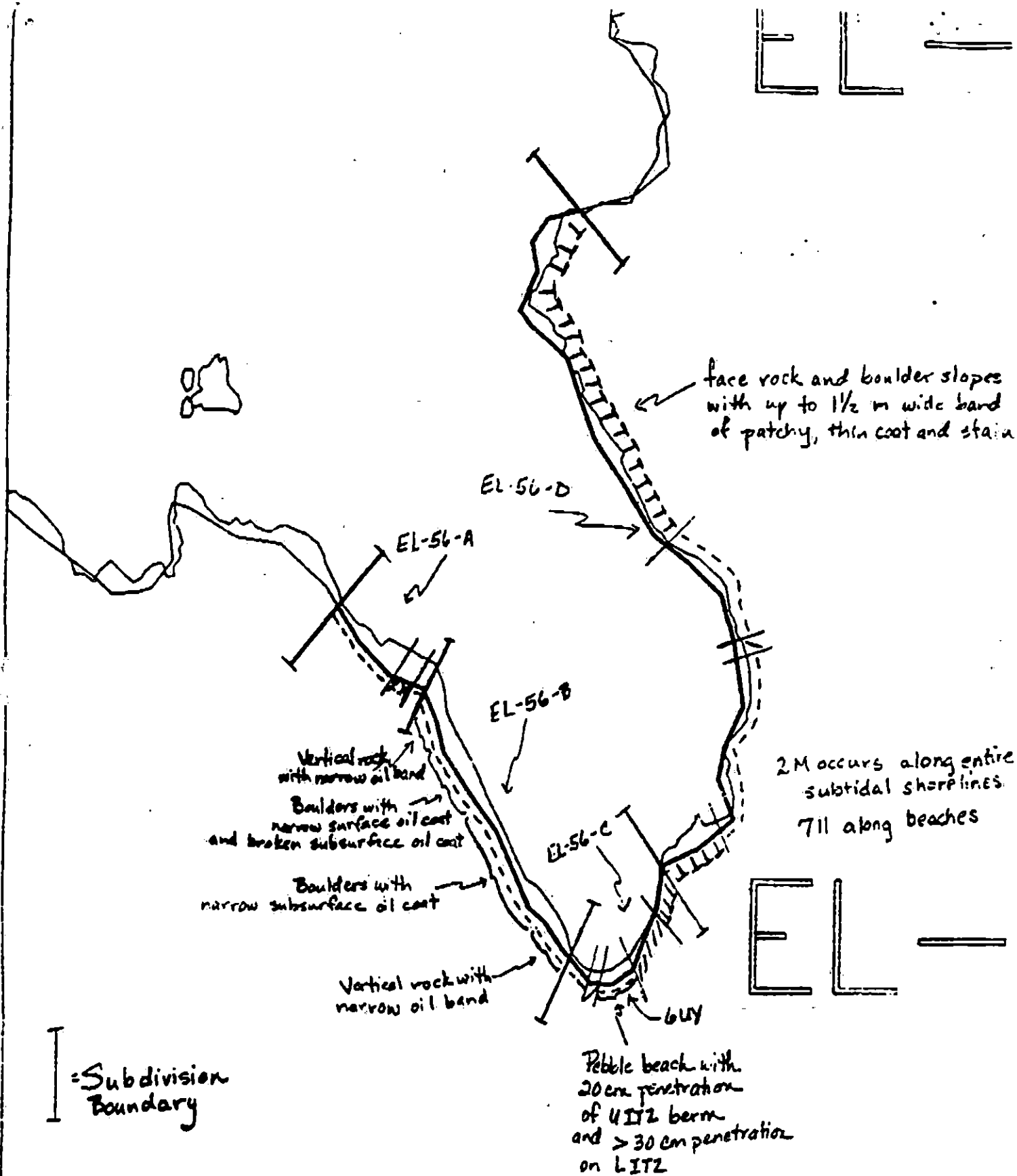
- 1 Δ
- 1 - No Subsurface Oil
- 2 Δ
- 1 - Subsurface Oil
- CT/C
- Continued Distribution
- CT/B
- Island Distribution
- CT/P
- Patchy Distribution
- CT/S
- Isolated Distribution
- Dead Vegetation
- 1 00
- Photo location, direction, and number



0 100m
Approx

REVISION 000000

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



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EL-56

ADEC Segment Length: 1613m



Map Key: PWS-139

Name: C. DILLON

Date: 3/29/90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ EL-57 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)

6U Recreation: Tent sites (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:

DATE:

OILING CATEGORIZATION:

Wide 94 m: Medium 111 m: Narrow 34 m: V.Light 0 m: No Oil 344 m

Subsurface Oil Observed: Yes X No **Maximum Depth** 60 cm

RECOMMENDATIONS:

No Treatment Recommended

X	Treatment Recommended
1	1
2	1
3	1
4	1
5	1
6	1
7	1
8	1
9	1
10	1
11	1
12	1
13	1
14	1
15	1
16	1
17	1
18	1
19	1
20	1
21	1
22	1
23	1
24	1
25	1
26	1
27	1
28	1
29	1
30	1
31	1
32	1
33	1
34	1
35	1
36	1
37	1
38	1
39	1
40	1
41	1
42	1
43	1
44	1
45	1
46	1
47	1
48	1
49	1
50	1
51	1
52	1
53	1
54	1
55	1
56	1
57	1
58	1
59	1
60	1
61	1
62	1
63	1
64	1
65	1
66	1
67	1
68	1
69	1
70	1
71	1
72	1
73	1
74	1
75	1
76	1
77	1
78	1
79	1
80	1
81	1
82	1
83	1
84	1
85	1
86	1
87	1
88	1
89	1
90	1
91	1
92	1
93	1
94	1
95	1
96	1
97	1
98	1
99	1
100	1

Manual Pickup

X Bioremediation

Tarmat: _____ Breakup

Removal

Snare/Absorbent Booms

X Oil Snares (pom poms)

X Absorbents (pads, rolls, etc)

X Spot Washing: X Wands

Beach Cleaner

X* Other (see comments)

COMMENTS: Recommend *hand tilling of areas shown on attached sketch map followed by bioremediation. Also recommend spot washing with wands and absorbents in areas shown on map. Work should be conducted after 6/1 based on above herring constraints.

MANUAL / MECHANICAL TILLING PRIOR TO BIOTRANSLOCATION AS INDICATED ON SKETCH.

TAG COMMENTS:

TAG APPROVAL DATE:

ADEC

EXXON

NOAA

USCG

FOSC:

DATE:

DATE: 4-26-20

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/EL-57

SUBDIVISION: A

DATE 04/04/90

USCG

NAME AEC Vanderpels

SIGNATURE

AEC Vanderpels

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

I suggest a hot water wash + bio. for the 30 x 70-80 M beach southern most in this section. The next beach section to the north needs bio.

ADEC

NAME

Michele Baer

SIGNATURE

MBaer

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Beginning at the southern end of the map, the 2 x 5 FL/P/L requires tilling, then applying bioremediation to the patch of C.P. Further north in this segment is a section with several areas of coat & cover on top of the rocks and underneath to 60cm. This area is the worst of the beaches we've seen and I would consider high priority. Between 30m x 30m and 30m x 20m, section the upper intertidal zone requires tilling to at least 60cm, the patch of coat and cover and the MITZ require hot water wash throughout. The next C.P. beach to the north also requires H.W. wash on the 20 x 1 and 80m x 4m sections. Refer to the pictures 21, 24, 25, 26 for a view of the 1st beach and pictures 18, 28, and 27 for a view of the 2nd beach. The areas are very accessible and low exposure.

LAND MANAGER

NAME DAN

LOEXN

SIGNATURE

D. Loexn

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

THIS SEGMENT HAS SEVERAL SITES OF CV THROUGHOUT. STARTING ON THE SOUTHEAN END OF THE SEGMENT THE FIRST 30M X 30M CV/D SHOULD BE TREATED WITH HOT WATER WASH. THE 2M X 5M FL/P SHOULD BE TREATED WITH FERTILIZER. THE 3 20M - 5M X 20M - 80M X 4M CV/D PATCHES SHOULD ALSO BE TREATED WITH HOT WATER WASH.

30

SHORELINE OILING SUMMARY

REVISION NO. 05/22/90

OG J. Springer USCG R. Vandepelt SEGMENT ST/ EL 57
 BIO P. Crook LAND REP D. Logan SUBDIVISION A (1081)
 EXXON T. Tomblin ADEC M. Baer TIME 17:15 to 18:45
 TEAM NO.: 5 TIDE LEVEL: 12 to +3.5 DATE 04/04/90
 EST. SUBDIVISION LENGTH: 654 m ☐ Sun ☐ Clouds ☐ Fog ☐ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock Pillow Lava
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 15 % B 60 % C 20 % P 5 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 40 % Hang 50 % Vert 10 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 90 m M 100 m N 59 m VL 0 m NO 405 m

SURFACE OIL

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

PAVEMENT: H F S _____ sq. m by _____ CT

PATTIES / TARBALLS _____ BAGS

NEAR SHORE SHEEN? NO BR RW (SL) TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

Roll No. ST-5-3Frames 17-28

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		BO	UC	1	2	3	4	SU	U	M	L		
1	45		X				20-45	X					X		X				CRGR
2	60		X				0-45	X					X	X					CPG
2	60	X					45-50	X		X				X					CPG
3	60			X			10-60	X				X		X					CP
4	60				X		15-60	X				X		X					CPG
5	40					X	.		X					X					P

COMMENTS Graffiti carved in oil coat.

25

Abstract

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/88

Segment ST/ FL57 Subdivision A Date (mo / day / yr) 4/4/90
 Time (24 hr) 1720-1845 Biologist Crunk Length 654m
 Tide Height +2 → +3.5

(A) Substrate type and % of segments:
 (1) Bedrock 15 (2) Boulder 60 (3) Cobble 20 (4) Pebble 5 (5) Sand 10 (6) Silt 0

(B) Overall % cover of biota (% of segment): Dense 30 Moderate 10 Low 60

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

Photographs:
 Roll No. ST-5-3

Frames 17, 18

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:

2 Bald Eagles - Adults, 1 flying : 1 in tree
 Heard Eagle screech in distance
 Most of LITZ unexposed.

Ecological Considerations:

711 - Deer Harvesting
 2M - Herring Spawning
 6U - Tent Sites
 1V - Snorlax Use Destination

- Seabach has low fauna in cobble
 - Northern Beach has mod. fauna in cobble
 - Although the overall biota on this subdivision
 is low on the rock outcrops recruitment
 is moderate as is the biotic concentrations

SEGMENT: ST/57 SUBDIVISION A LENGTH 654m BIOLOGIST Crank

DATE 4/1/90 TIME 1720-1845 TIDE HEIGHT +2 → +3.5

pg 2 of 2

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

FLORA:

SPECIES	UTZ	MTZ	LITZ	COMMENTS
BOSSIELLA/CORALLINA		1		T. deep 1
CALLIARTHRON/CORALLINA				
CLADOPHORA SPP		1		
OOSTARIA SPP				
ENDOCLADIA MURICATA				
FILAMENTOUS GREENS	123	123	123	
FILAMENTOUS REDS			123	
GLOIOPELTIS FURCATA		1		
BALOSACCION GLANDIFORME				
LAMINARIA SPP			1	
LITHOTHAMNION			1	
NEREOCYSTIS SPP				
PORPHYRA SPP		12	12	
RALPHISIA/HILDENBRANDIA		12	12	
RHODOMELA LAMIX		1		
RHODOMENIA PALMATA		1	1	
SCYTOSIPHON SPP		123	123	
ULVA SPP			12	
ZOSTERA MARINA				
Enteromorpha			1	

FAUNA:

ANTHOPELURA SPP				
(SEM) BALUNUS CARICUS		1	12	
B. GLANDULA	12	123	123	
BRYOZOANS				
CHITONS (OTHER THAN K. TUNICATU)				
CLAMS				
CRABS				
DERMASTERIAS IMBRICATA				
KATHARINA TUNICATA				
LEPTASTERIAS HEXACTIS				
LIMPETS		12	12	
LITTOZOA SPP	12	123		
NUCELLA SPP				
PAGURUS SPP			3	
PISASTER OCHRACEUS				
POLYCHAETES				
PYDNOPODIA HELIANTHOIDES				
SEARLESIA DIRA				
SERPULIDS				
SIPHONARIA THERSITES				
TEALIA				
2cm long Segmented Worm		3		Mod 2 Day concentrations

29

EL-5

27

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

EL-57

ADEC Segment Length: ~~1020~~ 654

0 100 200 300
METERS



Map Key: PWS-140
Name: J. Springer
Date: 04/04/90
Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ EL-58 SUBDIVISION A (1 OF 4) DATE 3/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)

6Y Recreation: Special use destination

7II Subsistence area: Deer harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled substrate and biota. Avoid dense mussel beds in intertidal zone.

SHPO SIGNATURE: Charles Z. Adams DATE: 4/13/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 184 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 manual pick up of tar balls and bioremediation as
shown on sketch map. Work should be conducted between 6/15 and 8/15 as
a result of constraints.

TAG COMMENTS:

MONITOR TO CHECK SUPRA ITZ. SNOW COVERED DURING
SURVEY.

TAG APPROVAL DATE:

ADEC JOHN BAUER John

EXXON ANDY TEAL Andy

NOAA Bud Wexler Bud Wexler

USCG G.A. REITER G.A. Reiter

FOSC: My L 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** 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 57⁸ 58 SUBDIVISION: A DATE 03/30/90

USCG

NAME AEC Vandepels SIGNATURE AEC Vandepels

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

I concur with Land Manager, use caution not to step on mussels during cleaning/removal of tar balls.

ADEC

NAME Michele Baer SIGNATURE MBaer

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

The beginning of this section is steep R headland and work must be performed in the skiff. A rich algae mat lies in a band along the face in the LITZ. Manual hand scrubbing of the rock face is recommended. Depending on the thickness of consistency of the coat in the band, Hot water washing should also be considered. The remaining segment is primarily R, B, & a small amount of cobble. Oil was minimal through this area and cleanup could be accomplished through manual scraping, and pickup of tarballs.

LAND MANAGER

NAME DAN LOSAN SIGNATURE Dan Losan

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED

COMMENTS

MANUALLY SCRAPE TAR BALLS OFF BOULDER AND ROCKS. SMALL PATCHES OF COAT COULD BE SCRAPED OFF ON ROCK FACE HOWEVER ROB IS STAIN. MOST TAR BALLS ARE LOCATED UNDER LARGE ROCKS, THE ROCK FACE IS A SLIPPERY HAZARDOUS A TO WORK, THE AREA SHOULD BE WORKED AT LOW TIDE AND THE CREW SHOULD BE BRIEFED ABOUT NOT WALKING ON MUSSELS.

SUPRA TIDAL LEVEL WAS NOT SURVEYED DUE TO SNOW

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

J. Springer USCG R. Vondelpels SEGMENT ST/ EL 5-8
 BIO P. Crank LAND REP D. Lobon SUBDIVISION A (1 of 4)
 EXXON T. Tomlin ADEC M. Baer TIME 07:30 to 08:40
 TEAM NO.: 5 TIDE LEVEL: +1' to -1' DATE 03/30/90
 EST. SUBDIVISION LENGTH: 5070 m 153 ☐ 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 60 % C 0 % P 0 % 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 5070 m VL 0 m NO 0 m
153

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	C	B	P	S	OR	GR	GL	GT	LT	LT	LT	LT	SU	UI	MI	LI
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT		X						X						X		
STAIN			X			X								X		
MOUSSE																
PATTIES																
TARBALLS				X										X		
FILM																
NO OIL													X		X	X

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash	X		
Debris			

DEBRIS COLLECTED
☒ YES ☐ NOTYPE Pom Pom#BAGS 1

Photographs:

Roll No. ST-5-1Frames 1, 25

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	UO	OR	GR	GL	GT	LT	LT	LT	LT	SU	UI	MI	LI		
							-																
							.																
							.																
							.																
							.																
							.																
							.																

COMMENTS No pits dug. - Too many large boulders and intact bedrock
Few oily patches under boulders. Rare tar balls.

OGT SPRINTER

SEGMENT SL-57

SUBDIVISION A

DATE 3/30/90

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Substrate Bndry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HYAL/VL
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Pit Location(s)
- ☒ Photo Location(s)

LEGEND

1 Δ
Pit - No Subsurface Oil

2 Δ₁
Pit - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

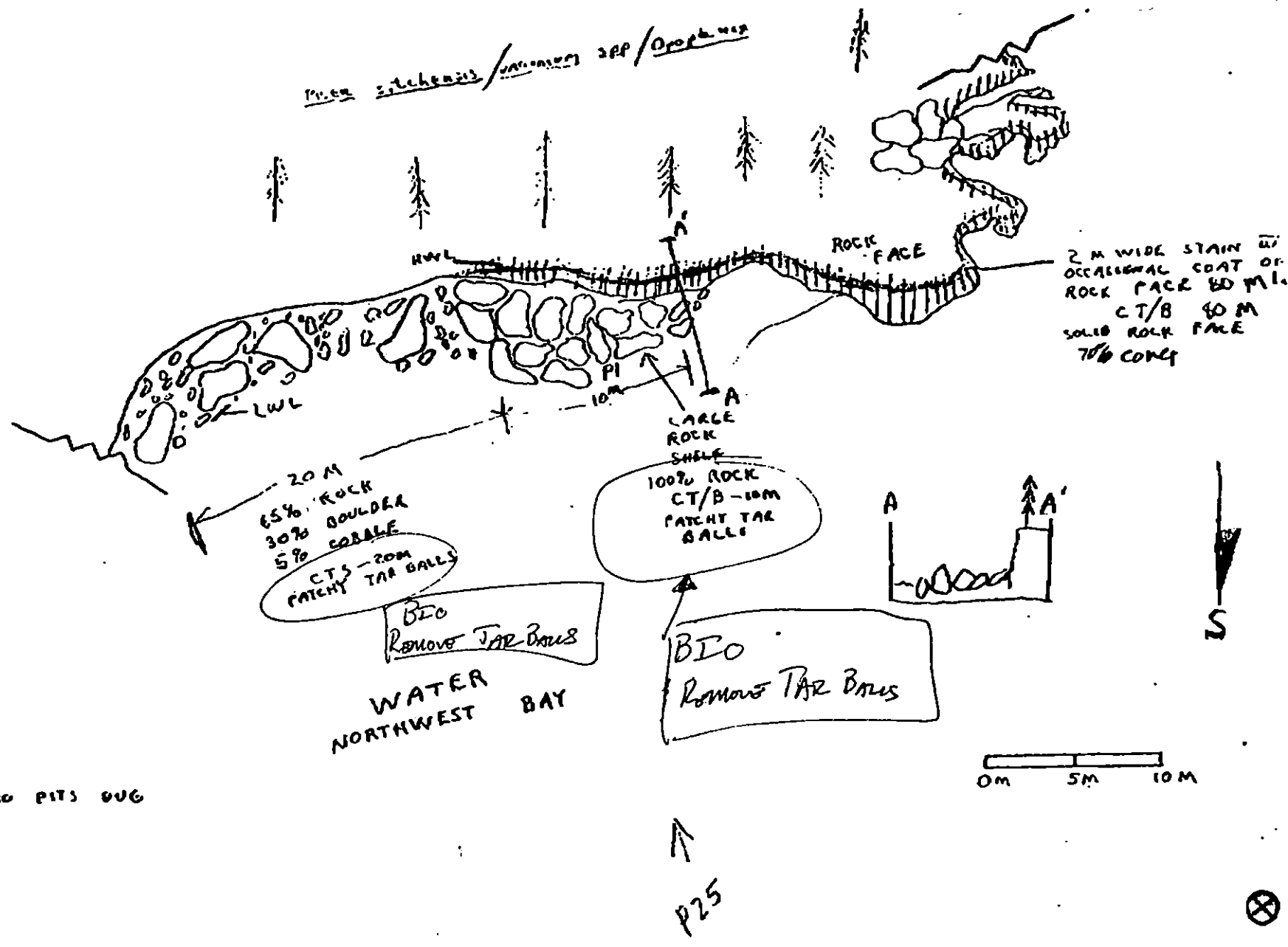
CT/P
Patched Distribution

CT/S
Scattered Distribution

Oiled Vegetation

1 →
Photo location, direction, and number

STITCH MAP



SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/22/90

Segment ST/EL 05A Subdivision A Date (mo/day/yr) 03/30/90Time (24 hr) 0725-0830 Biologist CrankTide Height: +2 to -1
Length - 50m

- (A) Substrate type and % of segments:
(1) Bedrock 40 (2) Boulder 40 (3) Cobble (4) Pebble (5) Sand (6) Silt
- (B) Overall % cover of biota (% of segment): Dense 50 Moderate 30 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. SS-5-1Frames 1, 25

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	X	1U	1M	1L	1U	1M	1L
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
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
in U12

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
in U12 boulders

Wildlife Observations/ General Comments:

1 Harbor Seal - Adult in water

2 Kittiwake - on water

1 Bald Eagle - Adult flying

1 Marbled Murrelet - on water, winter plumage

9 Crow - Flying

2 Magpie - in trees

See Attached Sheet

Ecological Considerations:

7 H - Deer harvesting

2 M - Herring Spawning

At: 3/30/90^B

Length ~ 50m

Time: 0725-0830

Lat: +2 to -1

Additional Present Biota:

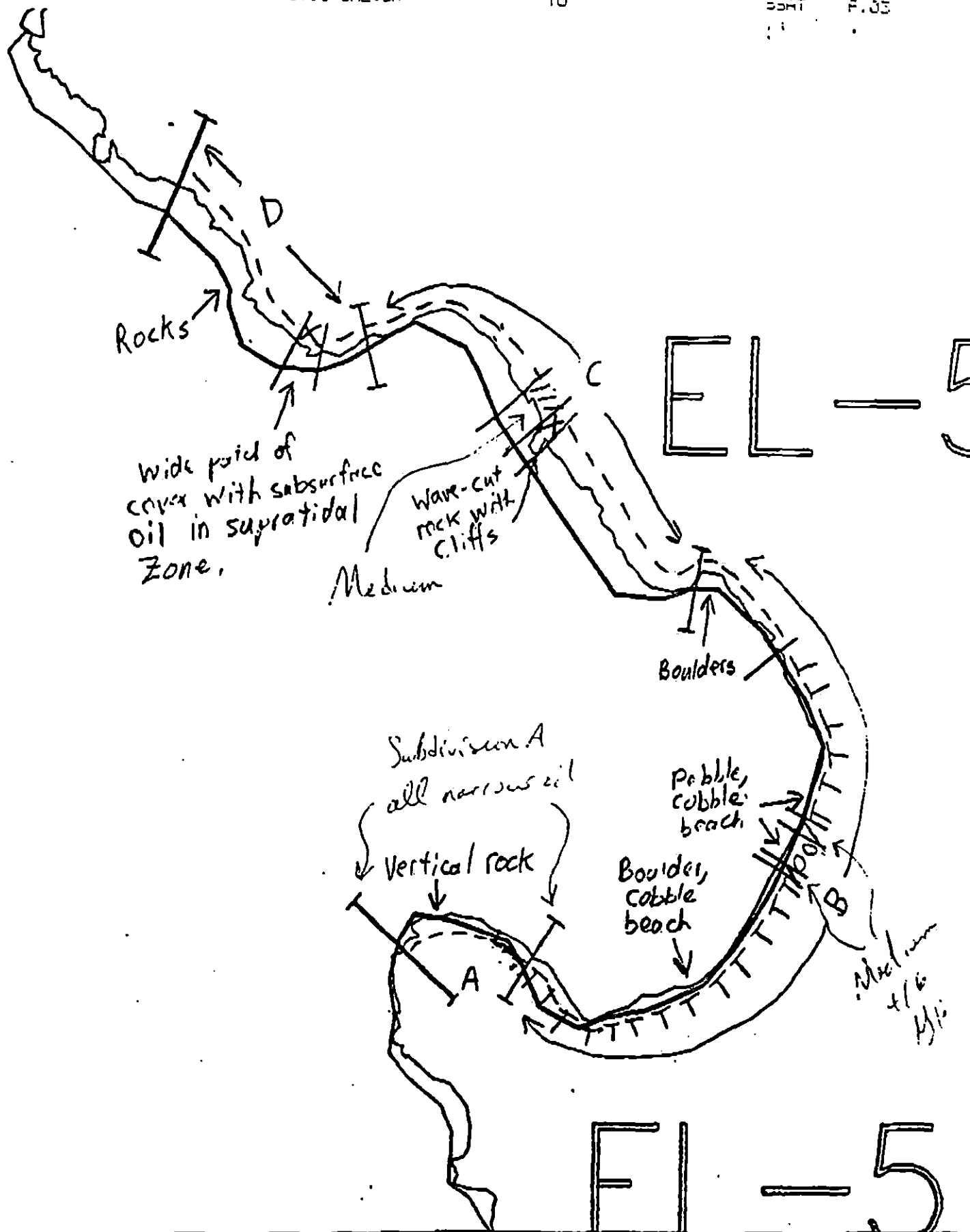
- MITZ - Filamentous Green Algae - possible combination of several species including Spongomorpha, Urospora
 - may also include Blue Greens and Diatoms
 - Pterosiphonia and/or Polysiphonia may also be present w/ this cover.

Gloiopeltis
 Enteromorpha
 Rhodomela larix
 Halosaccion

- LITZ - Several species of bladed reds; filamentous reds
 Enteromorpha
 Laminaria
 Pycnospodia sp.
 Dermasteria sp.
 Sepulid
 Encrusting sponge
 Encrusting coralline
 Unknown clam

General Comments:

- Vertical rock face with boulder beach shoulder - boat surveyed
- Rich LITZ and upper subtidal
- LITZ/MITZ covered w/ an algae mat consisting of filamentous reds; greens coating barnacles
- Approx. 30% barnacle mortality
- Low LITZ and upper subtidal dense bladed reds concentration.
- Herring spawn area, no spawning observed at this time.
- Gastropod concentration in LITZ may be low due to boat survey, unable to make visible confirmation in cracks.



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

EL-58

ADEC Segment Length: 1999 ~~1145~~m

0 100 200 300



Map Key: PWS-141

Name: James Spring

Date: 04/01/90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ EL-58 SUBDIVISION B (2 OF 4) DATE 3/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)

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 unoiled substrate and biota.

SHPO SIGNATURE: *Charles E. Hume*

DATE: 4/18/90

OILING CATEGORIZATION:

Wide 0 m: Medium 38 m: Narrow 124 m: V. Light 586 m: No Oil 34 m
Subsurface Oil Observed: Yes X No Maximum Depth 45 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)

 Spot Washing: Wands

 Beach Cleaner

 Other (see comments)

COMMENTS: Recommend manual pick up of tar balls and debris and biore-
mediation of areas shown on sketch map. Work should be conducted be-
tween 6/15 and 8/15 based on above herring and deer constraints.

TAG COMMENTS: MONITORS TO ASSES SUITZ DURING TREATMENT

TAG APPROVAL DATE: 4/18/90

ADEC JOHN BAUER

EXXON MOY

NOAA Burt W. Wright

USCG G.H. REITER

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 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 / EL5⁸ SUBDIVISION: B DATE 03/30/90

USCG

NAME AEC Vandepels SIGNATURE AEC Vandepels

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

*I suggest manual removal of tar balls and
tilling of upper inter tidal area. Then
bio.*

ADEC

NAME Michele Baer SIGNATURE M Baer

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

*The sub-segment is primarily exposed C & B beaches.
The natural clearing process and a high amount of
fresh-water runoff has taken care of the majority of the
sub-segment; ^{clearing} however there are a few pockets that
need additional attention. Suggested cleanup methods
are handwiping of the B, manual removal of saturate
C & P in pockets, and burning of oiled logs.*

LAND MANAGER

NAME DAN LOGAN SIGNATURE Dan Logan

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

*THIS BEACH HAS THE POTENTIAL FOR A CAMP/RECREATION SITE BUT DOES NOT
APPEAR TO BE USED FOR RECREATION AT THIS TIME. I RECOMMEND THAT THIS
BEACH BE TREATED BY A COMBINATION OF 2 TREATMENTS:*

1) TIE TAR BALLS MANUALLY

*2) TILL UPPER INTER-TIDAL AREAS WHERE DILING IS INDICATED ON SKETCH MAP WITH
LIGHT MACHINERY (4-WHEELER) TO AERATE TO A DEPTH OF ~ 30CM. THEN
APPLY FERTILIZER TO INCREASE BACTERIA GROWTH.*

3) TILLED SITES WILL REQUIRE ARCHEOLOGICAL SURVEY FIRST.

☒

SHORELINE OILING SUMMARY

J. Springer USCG R. Vandepels SEGMENT ST/ EL 57
 P. Crank LAND REP D. Logan SUBDIVISION B (2 of 4)
 EXXON T. Tomlin ADEC M. Boer TIME 07:30 to 10:35
 TEAM NO.: 5 TIDE LEVEL: +1 to -1 DATE 03/30/90
 EST. SUBDIVISION LENGTH: 22.3 km 771 ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R % B 20 % C 40 % P 30 % G 7 % S 3 % M % V %
 SLOPE: Long 95 % Hang 5 % Vert % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 70 m N 750 m VL 160 m NO 70 m
 30 78300 H5352 2989

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR						IMPACTED ZONES			
	C	B	P	S	OR BR	OW PW	OL YL	OB TL	LE	SU	UI	M	U	
ASPHALT PAVEMENT														
POOLED														
COVER														
COAT		X	V					X			X			
STAIN														
MOUSSE														
PATTIES														
TARBALLS				X		X					X			
FILM														
NO OIL										S		X	X	

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

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

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

DEBRIS COLLECTED
☒ YES ☐ NO

TYPE Pom-pom

#BAGS 1

Photographs:

Roll No. ST-5-1

Frames 2-3, 24

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	OR	OW	OL	OF	NO	SW	UI	M	U	SU	UI	M	U	
1	15					X	.		X							X							CPG
2	15					X	.		X							X							CPG
3	15					X	.		X								X						CPG
4	20					X	.		X								X						CPG
5	30	X					0-30	X				X			X				X				CP
6	45				X		25-45	X			X				X				X				CP

COMMENTS

Pebbles and boulders on beach are rounded.
 Storm berm covered with snow.

SHORELINE OILING SUMMARY (PAGE 2 of 2)

REVISION 03/22/90

SEGMENT ST/ EL57 SUBDIVISION B
8

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	SB	BR	BL	FW	GY	SL	OR	TL	LR	SU	U	M		
7	20					X	-		X											X			CP
8	60					X	-		X											X			CP
9	25					X	-		X									X					CPG
10	45					X	-		X											X			CPG
							-																
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COMMENTS

REVIEWED

BJH

DATE

4/30/90

OG J. Springer

SKETCH MAP

SEGMENT ST/ 178

SUBDIVISION B

DATE 03/30/90

CHECKLIST

- ☒ Arrow
- ☒ Approx. Scale
- ☒ Sub/Bedry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. H.W.L.W.
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Photo Location(s)
- ☒ Photo Location(s)

LEGEND

1 Δ
Pi - No Subsurface Oil

2 Δ
Pi - Subsurface Oil

$\square$ CT/C
Continuous Distribution

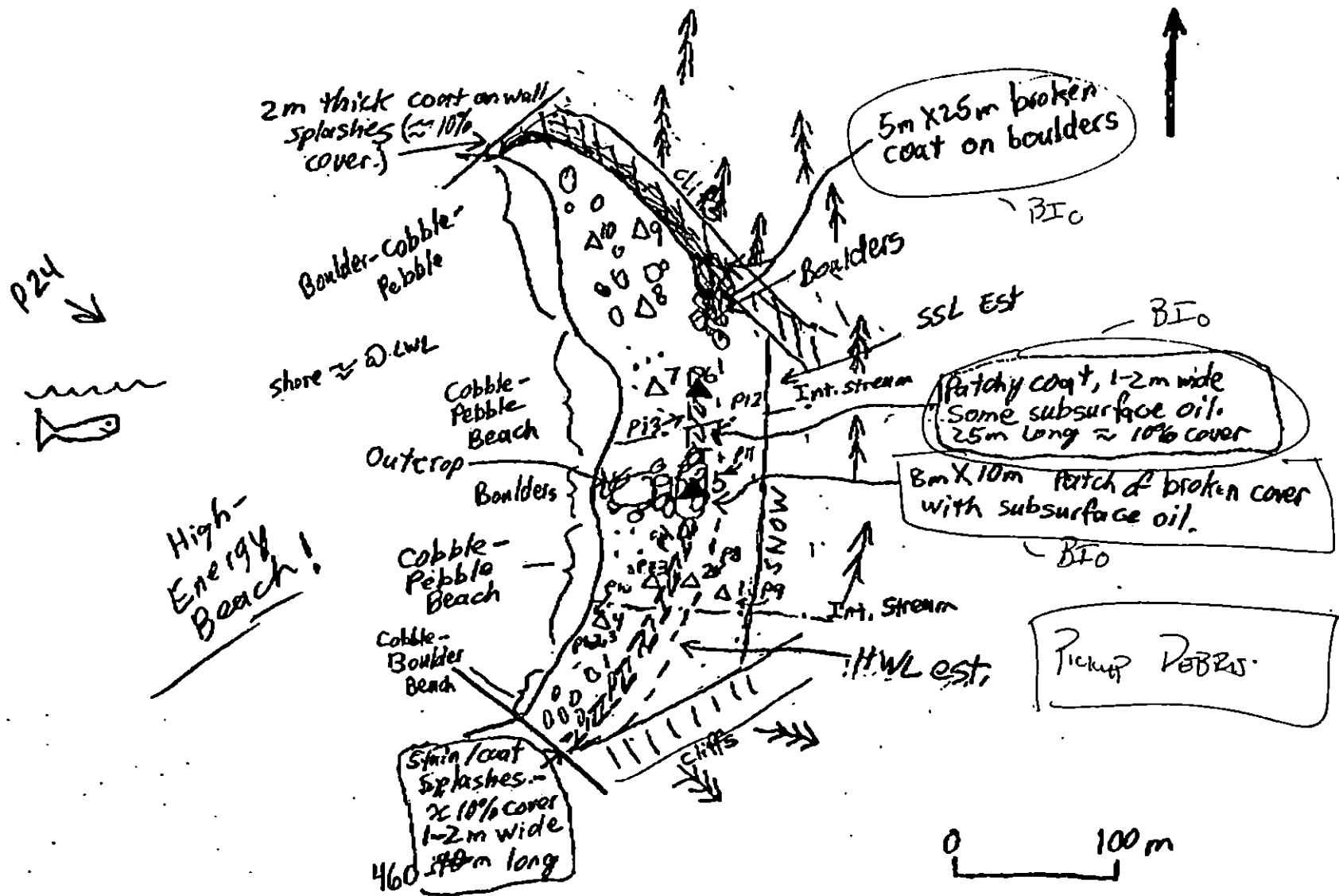
$\square$ CT/B
Broken Distribution

$\square$ CT/P
Patchy Distribution

$\square$ CT/S
Splashed Distribution

Oil Vegetation

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



Oil Character Length (m): AP PO CV CT 732 ST MS PT TB FL NO 39

REVISION: 03/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST/EL 57 Subdivision B Date (mo / day / yr) 03/30/90Time (24 hr) 0830 - 1035 Biologist CrankTide Height: -1 to -2 ft
Length - 252 m(A) Substrate type and % of segments:
(1) Bedrock 5 (2) Boulder 20 (3) Cobble 35 (4) Pebble 30 (5) Sand 10 (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 (3)

Photographs:

Roll No. SS-5-1Frames 2-6, 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
on pebble or s

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
in pebble
or sand

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
in sand

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
on pebble
or sand

Wildlife Observations/ General Comments:

Sitka deer femur

Deer and Bear tracks

Gull - Flying

Mandible of Deer in U1TZ

Raven - Flying

Rock outcrop only in MITZ; U1TZ
See attached sheet

Ecological Considerations:

711 - Deer harvesting

2M - Herring spawn

6U - Tent Sites

6Y - Special Area Destination

Date: 01/30/90

Length - 252 m

Time: 0830-1035

Tide Height: -1 to -2 ft

Additional Biota:

Rock Outcrop - Tidepools included

MITZ: Enteromorpha Nucella
 Cladophora Halosaccion
 Filamentous greens
 Fucus stipes in heavy concentrations
 Syctosiphon

LITZ: Encrusting corraline
 Opuntietta
 Articulating corraline
 Polychaete worm - unidentified
 Anemones
 Tidepool Sculpin
 Serpulid
 Urchin test
 Odonthalia?

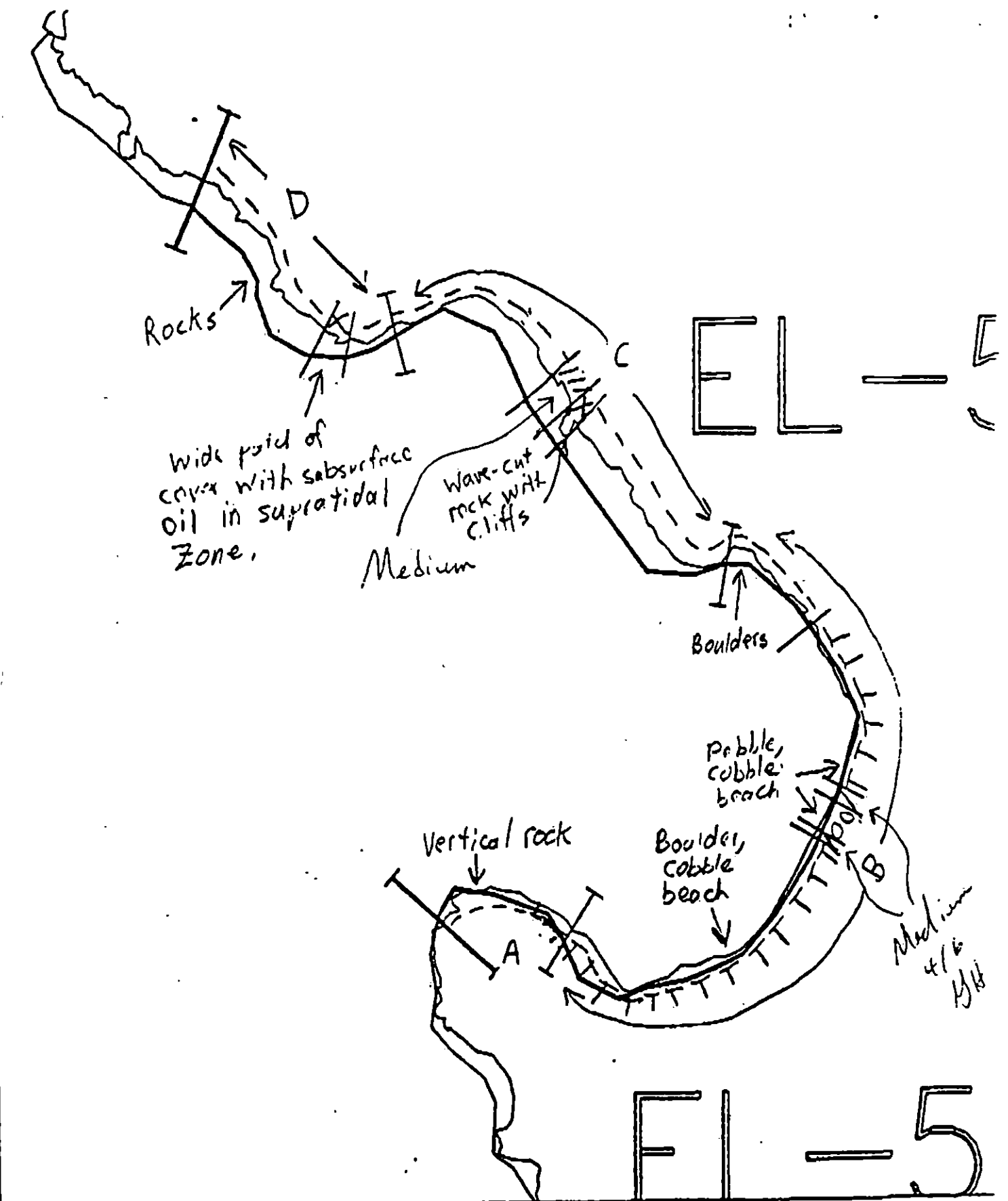
Cobble Beach -

LITZ - Drift Nereocystis with Lepas pacifica

MITZ - Clam shells
 Sepunculid worm
 Black-tip (?) Crab - juv.
 Pynopodia
 Salt H₂O Eel - juv.
 Urchin Test
 Sea Star Exoskeleton
 Nucella

General Comments:

- Subsection consists of cobble/pebble beach with 2 major rock outcroppings.
- Rock outcropping had several small tidepools.
- Tidepools had dense biota concentration
- Fucus stipes although sparse throughout segment were in heavy concentrations along outcrops.
- Recruitment is high on outcrops for Balanus; Mytilus; Moderate for Fucus.



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

EL-58

ADEC Segment Length: 1999 ~~445m~~



Map Key: PWS-141
 Name: James Springs
 Date: 04/01/90
 Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ EL-58 SUBDIVISION C (3 OF 4) DATE 3/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)

6Y Recreation: Special use destination

7II Subsistence area: Deer harvesting

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Andy Z. Farmer DATE: 4/18/90

OILING CATEGORIZATION:

Wide 32 m: Medium 38 m: Narrow 477 m: V. Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 30+ 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: Recommend manual pick up of tar balls and oil spill related debris. Recommend bioremediation of areas shown on sketch map. Work should be conducted after 6/15 based on constraints.

RAKE / MANUALLY TILL IN AREA OF ATS AS INDICATED ON SKETCH
PRIOR TO BIOREMEDIATION - WHERE FEASIBLE

TAG COMMENTS:

TAG APPROVAL DATE: 4/18/90

ADEC JOHN BAUER
EXXON ANDY TEAL
NOAA Burt Wescott
USCG G.A. REITER

FOSC:

DATE: 4-22-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
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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)
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1I Gill net area (6/7 to 8/31)
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For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
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- 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.
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6V Anchorages (6/1 to 9/15)
6W Forest Service cabins (6/1 to 9/15)
6X Lodge (6/1 to 9/15)
6Y Special use destination
- 7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
7-HH 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 5^B SUBDIVISION: C DATE 03/30/90

USCG

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

COMMENTS

I suggest cleaning 4m band on pebble/boulder beach by hand. ~~and~~ Wiping and turning rocks carefully due to large concentration of mussels.

ADEC

NAME Michelle Pau SIGNATURE M Pau☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

The A headlands can be cleaned by manual scrubbing/scraping from a skiff. Hot water washing may be used in combination with the scrubbing for areas of heavier coating (i.e. cracks & crevices). A wide band of fucus sportings inhabits the MIZ and should be considered in the selection process. On the B, C, & D beach the B should be hand wiped, the upper oiled layer removed and the underlying sediment bioremediated. Tilling is recommended, however the 30° incline of the beach may limit this option. Oiled logs should be burned.

LAND MANAGER

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

COMMENTS

- 1) MANUAL SCRAPE TAR FROM ROCK FACE WHERE INDICATED ON SKETCH MAP
- 2) PEBBLE BOULDER BEACH TREAT 4M WIDE OIL BAND BY TURNING/TILLING WITH HAND TOOLS (LARGE CONCENTRATION OF MUSSELS LIMIT MACHINERY) THEN APPLY FERTILIZER.

SUPRA TIDAL WAS NOT SURVEYED DUE TO SNOW

⊗

OG J. Springer USCG R. Vandepeels SEGMENT ST/ EL 57
 NO P. Crook LAND REP D. Logan SUBDIVISION C (3 of 4)
 XON T. Tomlin ADEC M. Baer TIME 10:35 to 11:35
 TEAM NO.: 5 TIDE LEVEL: -1' to +1' DATE 03/30/90
 EST. SUBDIVISION LENGTH: 240 m 529 ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 80 % B 15 % C 5 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 0 % Hang 75 % Vert 25 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 30 m N 240 m VL 0 m NO 0 m
92 143 437

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	IC	IB	IF	IS	BR	BL	FW	GL	GR	LT	LR	LU	SU	UI	MI	U
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT		X							X				X			
STAIN		X							X				X			
MOUSSE																
PATTIES																
TARBALLS			X			X									X	
FILM																
NO OIL													X			X

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

PATTIES / TARBALLS 2 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 Plastic bag

#BAGS 1

Photographs:

Roll No. S1-S-1

Frames 14, 15, 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		UD	UC	BR	BL	FW	GL	GR	LT	LR	LU			
1	25	X					0-25	X							X			X		CP
2	30	X					0-30	X							X			X		PGSM
							.													
							.													
							.													
							.													

COMMENTS Pit 1 - Brown Sheen on groundwater

REVIEWED MH DATE 4/3/90

OG T. SP ER

SEGMENT ST/ FL - 57

SUBDIVISION C

DATE 03 / 30 / 90

CHECKLIST

- ☒ N Answer
- ☒ Approx. Scale
- ☒ Seg/Sub Body
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. NWL/LWL
- ☒ SSI
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ PH Location(s)
- ☒ Photo Location(s)
- ☒ PH = PHOTO

LEGEND

1 Δ

PR - No Subsurface Oil

2 Δ

PH - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

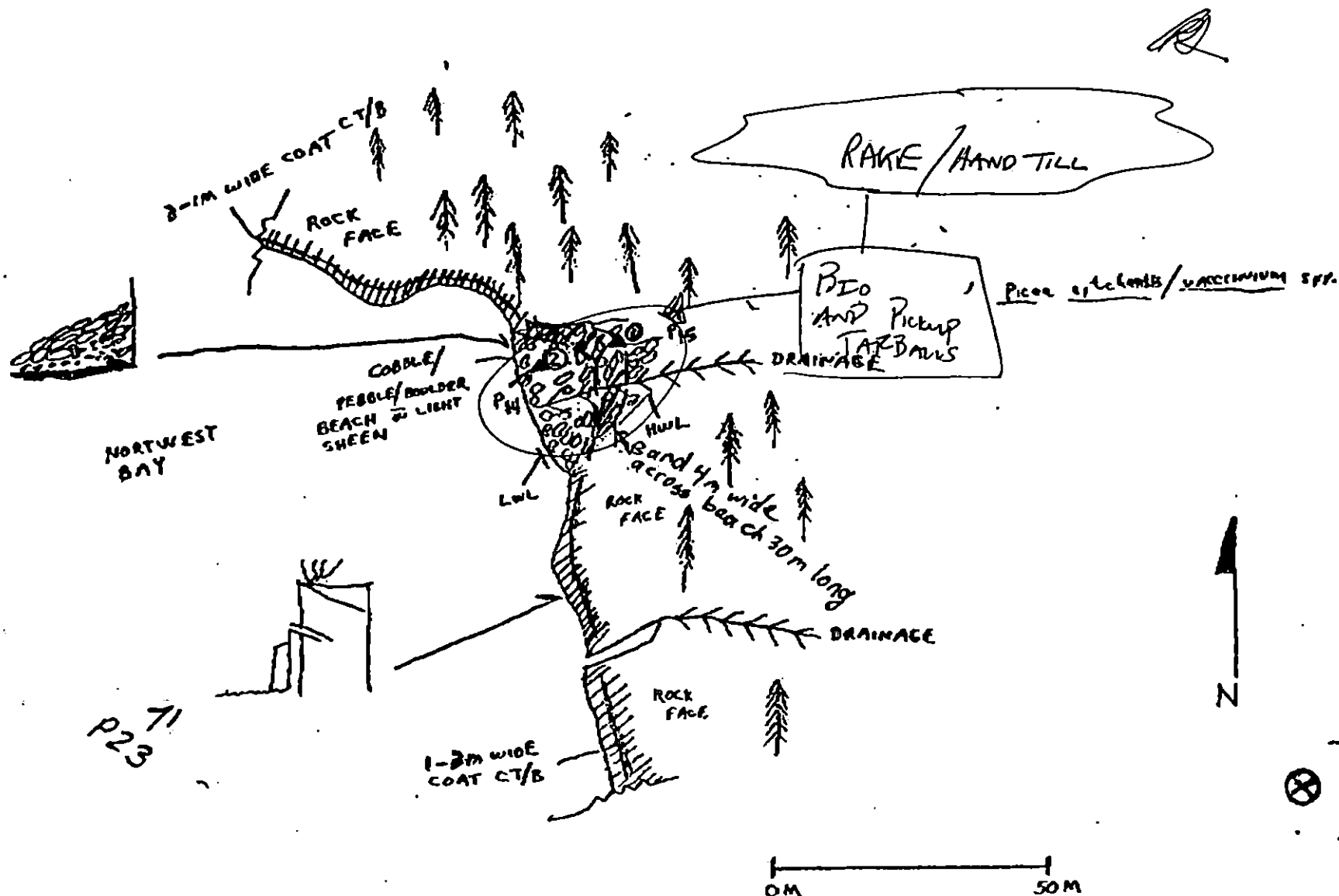
Splashed Distribution

Oil Vegetation

1 ●

Photo location, direction, and number

SCH MAP



Oil Character Length (m): AP 306 PO CV CT 106 ST MS PT TD FL NO 223

REVISION 3/90

SHORELINE ECOLOGICAL SUMMARY

Segment ST/EL 5⁸ Subdivision C Date (mo/day/yr) 3/30/90Time (24 hr) 1035-1130 Biologist CrankTide Height: -1.5 m to +1
Length: 173 m

(A) Substrate type and % of segments:

(1) Bedrock 80 (2) Boulder 15 (3) Cobble 5 (4) Pebble 0 (5) Sand 0 (6) Silt 0(B) Overall % cover of biota (% of segment): Dense 30 Moderate 50 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. SS-5-1Frames 23

BARNACLES

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

NOT PRESENT

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

NOT PRESENT

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:

Gull

Ecological Considerations:

711 - Deer Harvesting

2M - Herring spawn

6U - Tent Sites

6Y - Special Area Destination

Date: 3/30/90 Length: 173m

Time: 1035-1130

Tide Height: -1.5 to +1

Additional Biota

Rock.

MITZ - Filamentous Algae cover on barnacles
Sytosiphon

LITZ - Laminaria
Enteromorpha
Several bladed reds

Pycnopodia

Dermasteria

Sepulid

Evasteria

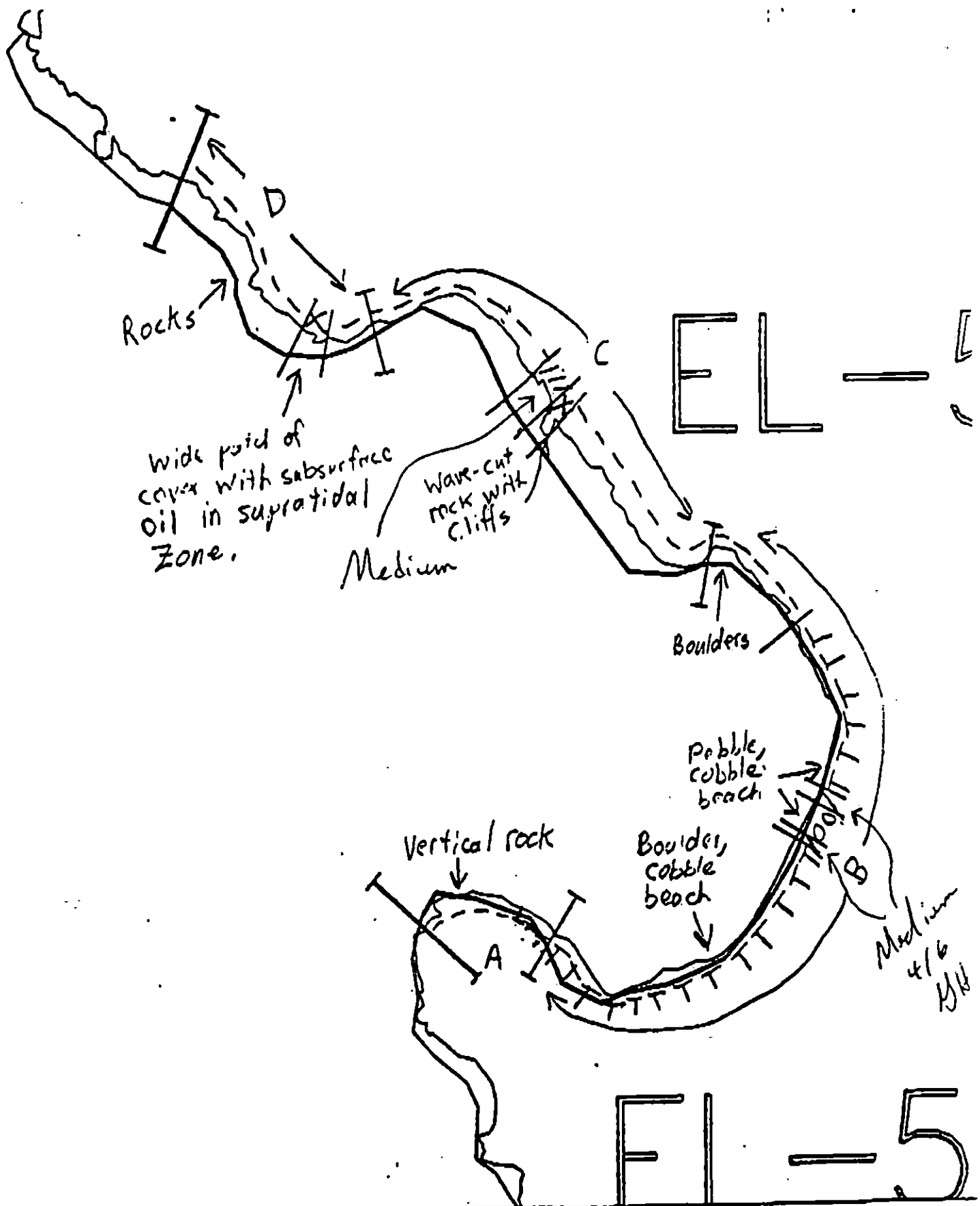
Boulder/Cobble Beach

MITZ - Nucella - Adults and egg cases
Littorina egg masses

LITZ - Pycnopodia Clam Shells
Dermasteria
Nucella
Reproductive filamentous red - Odonthalia?

General Comments -

- Greatest concentrations of mussels located near outlet stream
- High adult barnacle mortality
- Balanus scarring present
- Vertical Rock surveyed by boat - Gastropod concentrations may be reported lower than onshore.
- Cobble beach foot surveyed



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

EL-58

ADCC Segment Length: 1999 1845m

0 100 200 300
 METERS

Map Key: PWS-141

Name: James Sprin

Date: 04/01/90

Date Entered:

ASAP

ASAP FOLLOWUP RECOMMENDATIONS

Project: AS/EL 58 Subd.: C Site: 1 Date: 8-6 1990

Conditions Observed: ANAEROBIC SEDIMENTS DOWN TO 35CM+. SEDIMENT PROFILE INDICATES FINE-GRAINED MATERIAL PROTECTED BY HEAVY BOULDER ARMOR. SEVERAL PITS WERE DUG REVEALING HEAVY "OR" AND MOBILE "OP". IT APPEARS THAT THE BOULDER ARMOR, PROTECTED LOCATION AND FINE SEDIMENTS ARE INTERACTING TO MAINTAIN A RESERVOIR OF SUBSURFACE OIL THAT IS NOT WEATHERING. THIS OIL WOULD BE RESISTANT TO BIOREMEDIATION BECAUSE OF ITS CONCENTRATION AND LOW SUBSURFACE O₂ CONCENTRATION.

Followup Recommendations: ① DECISION TREE CALLS FOR TAG EVALUATION.

② DEFINE EXTENT AND DEPTH OF SUBSURFACE RESERVOIR.

③ STRIP AWAY ARMOR, EXCAVATE AND REMOVE OILED SEDIMENTS W/ ADEQUATE CONTAINMENT

④ TREAT AREA WITH CUSTOMBLEND.

⑤ REPLACE ARMOR.

Completed by Pickup Crew: ☐ YES ☒ NO

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

ADEC Wesley Ghormley
(name)

Wesley Ghormley
(signature)

Comments: Condition of sub-surface oil is of great concern to ADEC. Highly recommend excavation of beach in 1990. Location of beach protects it from being exposed to a high energy environment.

Exxon REV Sotelo
(name)

(signature)

Comments: If any work is to be done on this site, it should first be reviewed by TAG - keeping in mind the location of the area to be worked because of its inaccessibility - this should not be a high priority.

USCG PS1 Leo Bersalona
(name)

Leo Bersalona
(signature)

NOAA ART WEINER

Art Weiner
(signature)

Comments: ① SUBSTANTIAL AMOUNT OF SUBSURFACE OIL.

② DIFFICULT WORKING AREA

③ 1) The problem is localized at a cave besides a creek; it does not meet a high priority rating for 1990. The tide mark did not reveal a serious issue.

Land Rep. John Ebel
(name)

John Ebel
(signature)

Comments: Beach w/ high angle, water fill / stream. Limited excavation opportunity. I concur w/ removal by excavation.

ASAP TAG REVIEW SHEET

Segment: EL 58 Subd: C Site: 1 Date
PRE-Review 11 AUG 90

Priority For Addressing In 1990

 HIGH MEDIUM LOW X NTR

Treatment
Recommended: NTR — Based on Avail Info,

NO OG SHEET / NO SKETCH

Priority Site For Reassessment In 1991

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

TAG 13 AUG 90

NTR

4 m x 30 m
aromatic oil under
armor
High
reapers
next spring

FIELD SHORELINE COMMENT SHEET

SEGMENT AS / EL 58 SUBDIVISION: C SITE: 1 DATE 8-6-90

USCG / NOAA PSI Leo Bersalona Leo Bersalona
NAME Art WEINER SIGNATURE Art Weiner

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

SUBSTANTIAL AMOUNT OF SUBSURFACE OIL IN ANAEROBIC ENVIRONMENT.
PHYSICAL CONDITIONS CONDUCTIVE TO PERSISTENCE.

ADEC
NAME Wesley Ghormley SIGNATURE Wesley Ghormley

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

Excavation of sub surface anaerobic environment is recommended for 1990. Reassessment necessary to evaluate site after work is completed. Also heavy black band of oil/cv up to 3m in width is very noticeable thru-out bedrock to the Eastern portion of site. Reassess this area to observe conditions after winter storm activity.

LAND MANAGER
NAME John Ebel SIGNATURE John Ebel

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

Evaluate headland and beach profile & other restoration techniques to remove oil.

EXXON
NAME REY SOTEL SIGNATURE Rey Sotel

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

Recommend the reassessment of this site in '91.

SITE 3

[illegible][illegible]

Photographs: ASAP #2
Roll No. Roll 3
Frames 26

COMMENTS This pit had a pungent aroma. Several team members indicated that it was hydrogen sulfide and suspected anaerobic conditions. Several other "informal" pits were dug which did not have the same smell. It is probable that the condition is localized. No rustoumber was observed at this site.

REVISION NO. 7/27

SHORELINE EVALUATION

SEGMENT ST/ EL-58 SUBDIVISION D (4 OF 4) DATE 3/30/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)

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/damage to uncoiled biota and substrate.

SHPO SIGNATURE: Charles H. Dineen DATE: 4/18/90

OILING CATEGORIZATION:

Side 47 m: Medium 0 m: Narrow 284 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 30+ cm

RECOMMENDATIONS:

No Treatment Recommended

X Treatment Recommended

X Manual Pickup

X Bioremediation

Tarmat: Breakup

Removal

 Snare/Absorbent Booms

Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

Spot Washing: _____ Wands _____

Beach Cleaner

Other (see comments)

COMMENTS: Recommend manual pick up of tarballs and oil spill related debris. Bioremediate area shown on attached sketch map. Work should be conducted after 6/15 based on above herring constraints.

TAG COMMENTS:

MONITORS TO ASSESS SVITZ DURING TREATMENT

TAG APPROVAL DATE: 12/18/90

ADEC AL KAZUEN

EXXON ANDY TEAL

OAA Burl Wescott

JSCG G.A. BEITER

FOSC:

DATE: 4-22-60

EL-55 D

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

MENT ST / EL 58 SUBDIVISION: D DATE 03/30/90

USCG

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

COMMENTS

Suggest cleaning 15x25 m area around pit 3 by manually removing pebbles & wiping boulders.

ADEC

NAME Michelle Baer SIGNATURE M Baer☐ NO TREATMENT RECOMMENDED☒ TREATMENT SUGGESTED

COMMENTS

A narrow 1 m band of stain exists on the R headland. Most of the problem area lies on the plateau following the headland. In this area, I recommend manual pick-up of AP, TB, and PT's, hand-wiping of the B's, and removal of the heavily saturated surface lying adjacent to the supratidal region. The remaining layer of B is OF and should be bioremediated. During cleanup operations, caution should be used with the heavily populated band of fucus sporlings covering the front of plateau.

LAND MANAGER

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

COMMENTS

AT PIT 3 SITE REMOVE SMALL COBBLES AND SMALLER BY HAND THEN HAND WIPE BOULDERS AND LARGER LEFT BEHIND. ALL WORK SHOULD BE DONE BY SMALL (7-10) SIZE CREW. ACCESS SHOULD BE SOUTH POINT TO AVOID SPORLING IN IMMEDIATE AREA.

SUPRA TIPAL AREA NOT SURVEYED DUE TO SNOW



SHORELINE OILING SUMMARY

OG J. Springer USCG R. Vandepels SEGMENT ST/ EL 5X
 BIO P. Crank LAND REP D. Logan SUBDIVISION D (4 of 4)
 EXXON T. Tomlin ADEC M. Baer TIME 12:00 to 13:30
 EAM NO.: 5 TIDE LEVEL: +2' to +6' DATE 03/30/90
 ST. SUBDIVISION LENGTH: 250-100m 551 ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: _____ to _____
 SURFACE SEDIMENTS: R 60 % B 30 % C 7 % P 3 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Lang 15 % Hang 40 % Vert 45 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 78 m M 12 m N 240 m VL 0 m NO 0 m
721 173530

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	AC	AB	AP	AS	BR	BL	FW	GY	SL	TL	LR		SU	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER		X							X				X			
COAT		X		X					X				X			
STAIN			X						X				X			
MOUSSE																
PATTIES			X				X						X			
TARBALLS			X				X						X			
FILM																
NO OIL															X	X

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

PATTIES / TARBALLS 4 BAGS

NEAR SHORE SHEEN? ☒ NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED

☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

Roll No. ST-5-1

Frames 16-21, 22

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	BR	BL	FW	GY	SL	TL	LR		SU	U	M	U		
1	15		X				0-15	X							X			X					BCP
2	30	X					0-30	X							X	X							BCP
3	10				X		50-7		X						X			X					PGSM
5	8					X	.		X						X			X					BCP
4	20					X	.		X									X					B,C
							.																

COMMENTS

Pit 5 - Rainbow sheen on groundwater

OGT SPRING
SEGMENT ST/ EL-58
SUBDIVISION D

SKI MAP

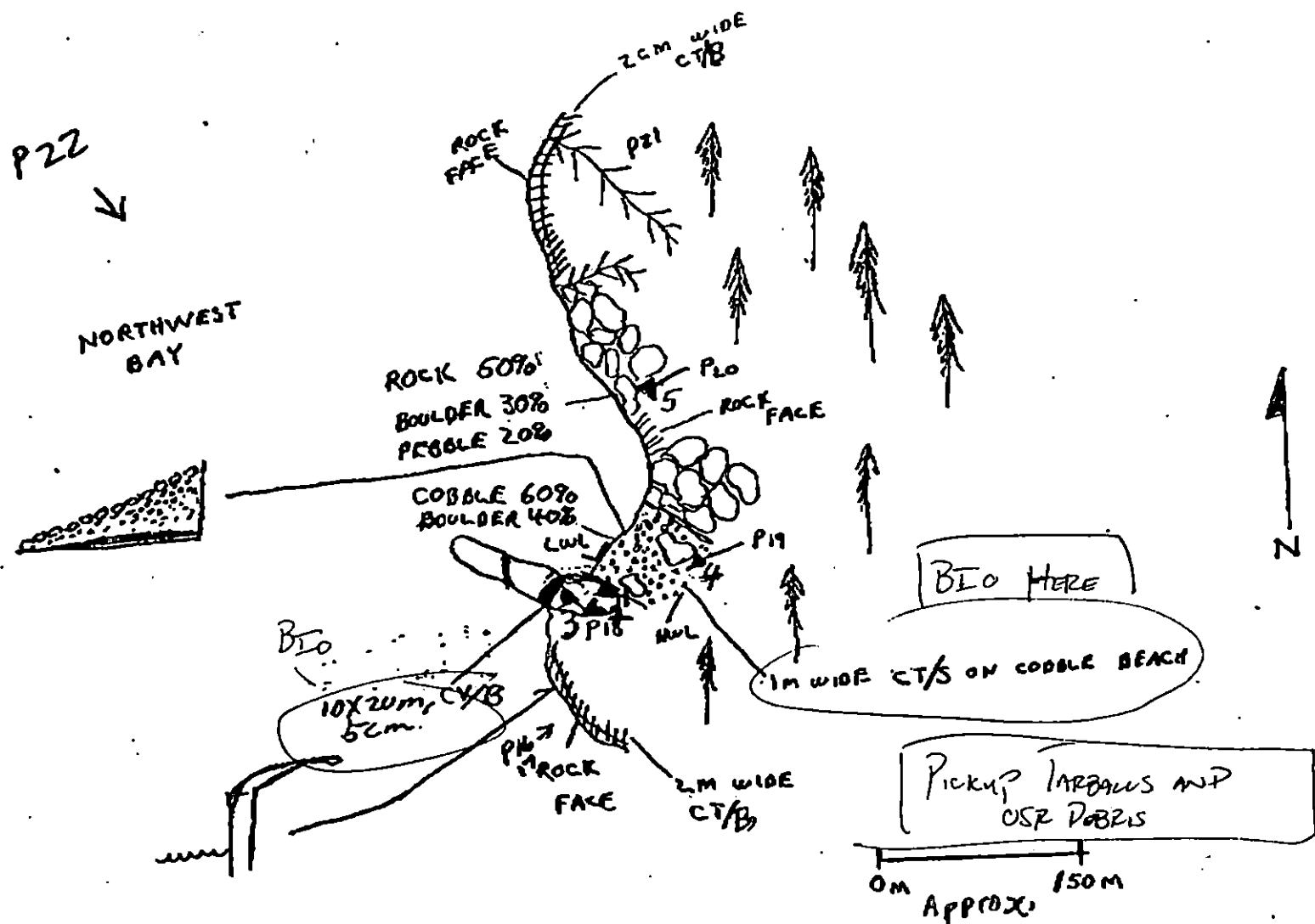
DATE 03/31/90

CHECKLIST

- ☒ Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Entry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. NW/SE
- ☒ SSI
- ☒ Profile Location(s)
- ☒ Photo Location(s)
- ☒ Photo Location(s)
- ☒ P = PHOTO #

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 Vegetation
- Photo location, direction, and number



Oil Character Length (m): AP _____ PO _____ CV 25 CT 376 ST _____ MS _____ PT _____ TB _____ FL _____ NO 150

REVISION 4/90

APR-10-1990 20:58 FROM ARCTIC SALVOR

TO

3587

P.02

Segment ST/EL 57 Subdivision D Date (mo/day/yr) 3/30/90

Time (24 hr) 1200-1330 Biologist Crank Tide Height: +2 to +7
 Length: 180 m

(A) Substrate type and % of segments:
 (1) Bedrock 10 (2) Boulder 30 (3) Cobble 7 (4) Pebble 3 (5) Sand (6) Silt

(B) Overall % cover of biota (% of segment): Dense 30 Moderate 30 Low 40

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

Photographs:
 Roll No. 55-5-1

Frames 16, 17, 21, 22

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

Blackcap Chickadee Harbor Seal - Adult
 Raven Fish fry - unidentified
 Bald Eagle - Adult Deer Skeleton in SUPRA
 Ecological Considerations:

LITZ covered by tide - observations
 made through H2O

7 11 - Deer harvesting
 2 M - Herring spawn
 6 U - Tent Sites
 6 Y - Special Area Destination

(X)

Date: 3/30/90

Length - 180m

Time: 1200 - 1330

Tide Height: +2 to +7

Additional Biota:

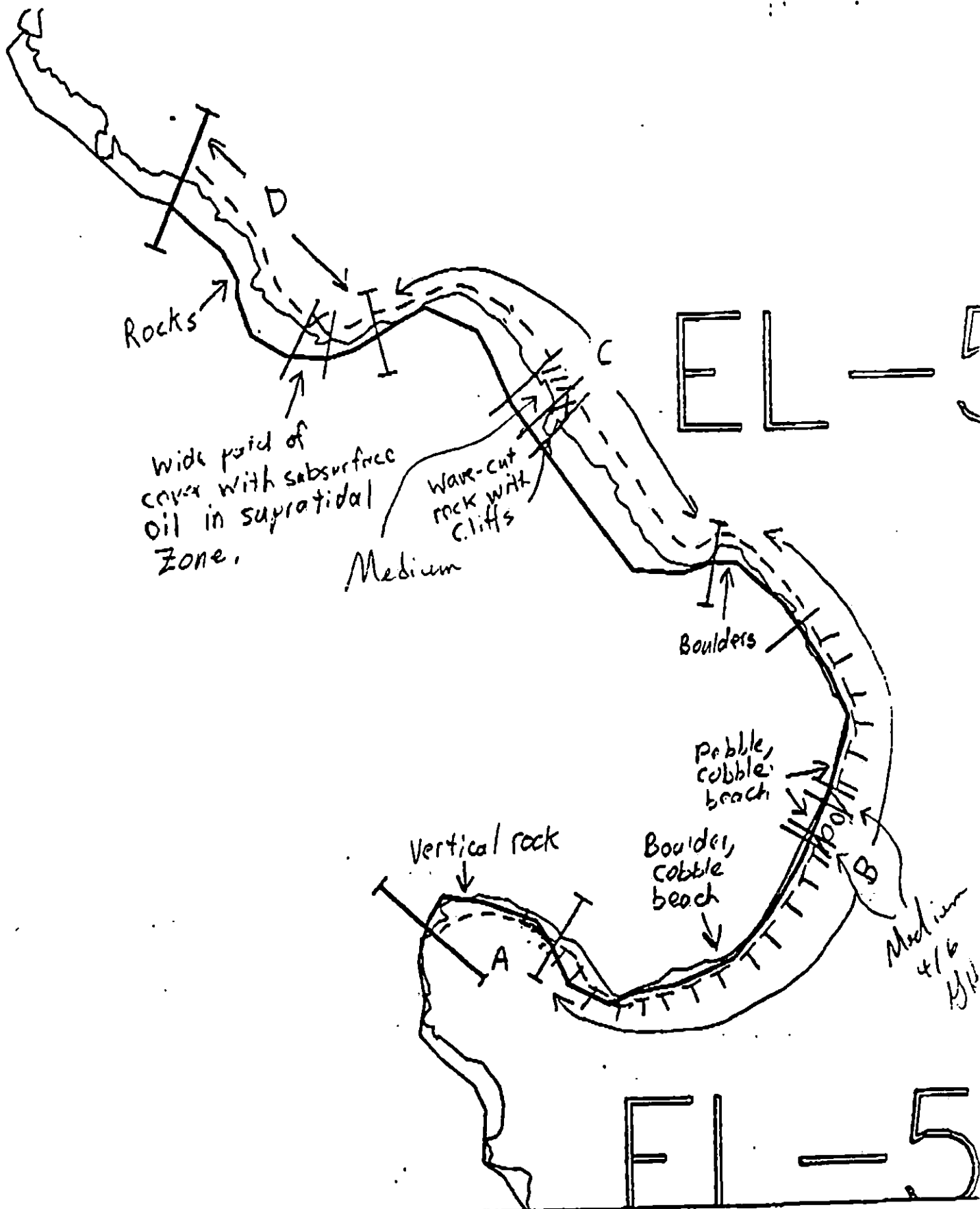
HITZ: Littorina
Limpets

MITZ: Dense cover of Filamentous Greens
Enteromorpha
Polychaete Worms

LITZ: Alaria
Laminaria
Costeria
Odontostella
Pyrosoma

Comments

- Filamentous greens can include several species including Spongomorpha, Dictyota, Blue-greens and/or other species
- On rock plateau in MITZ dense Fucus stipes and sporlings, sparse mature plants
- All of LITZ and most of MITZ on northernmost vertical rock wall to end of segment were covered by tide. Boat survey.



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

EL-58

ADEC Segment Length: 1999 ~~445~~ m

0 100 200 300
 METERS

Map Key: PWS-141
 Name: James Sprui
 Date: 04/01/90
 Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-58 SUBDIVISION D (4 of 4)

WORK WINDOW

Manual Pickup Inside Active Eagle Nest Buffer Zone	CLOSED
Manual Pickup Outside Active Eagle Nest Buffer Zone	OPEN
Bioremediation Inside Active Eagle Nest Buffer Zone	CLOSED
Bioremediation Outside Active Eagle Nest Buffer Zone	OPEN

ARCHAEOLOGICAL MONITOR REQUIRED ON SITE.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M	Herring Spawning	NO CONSTRAINT. Authorized by Claudia Slater/ADF&G on 5/10/90 to Exxon/Tom Kelley.
5T	Bald Eagle Nest	USFWS 6/1/90 map indicates an active nest in Subdivision D. Closed to bioremediation and manual pickup within 400m of active nest.
7II	Subsistence: Deer Harvesting	Closed to bioremediation after 8/15. No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

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 400m horizontal, 300m vertical distance from active nests. Avoid any unnecessary disturbance or damage to unloiled biota and substrate.

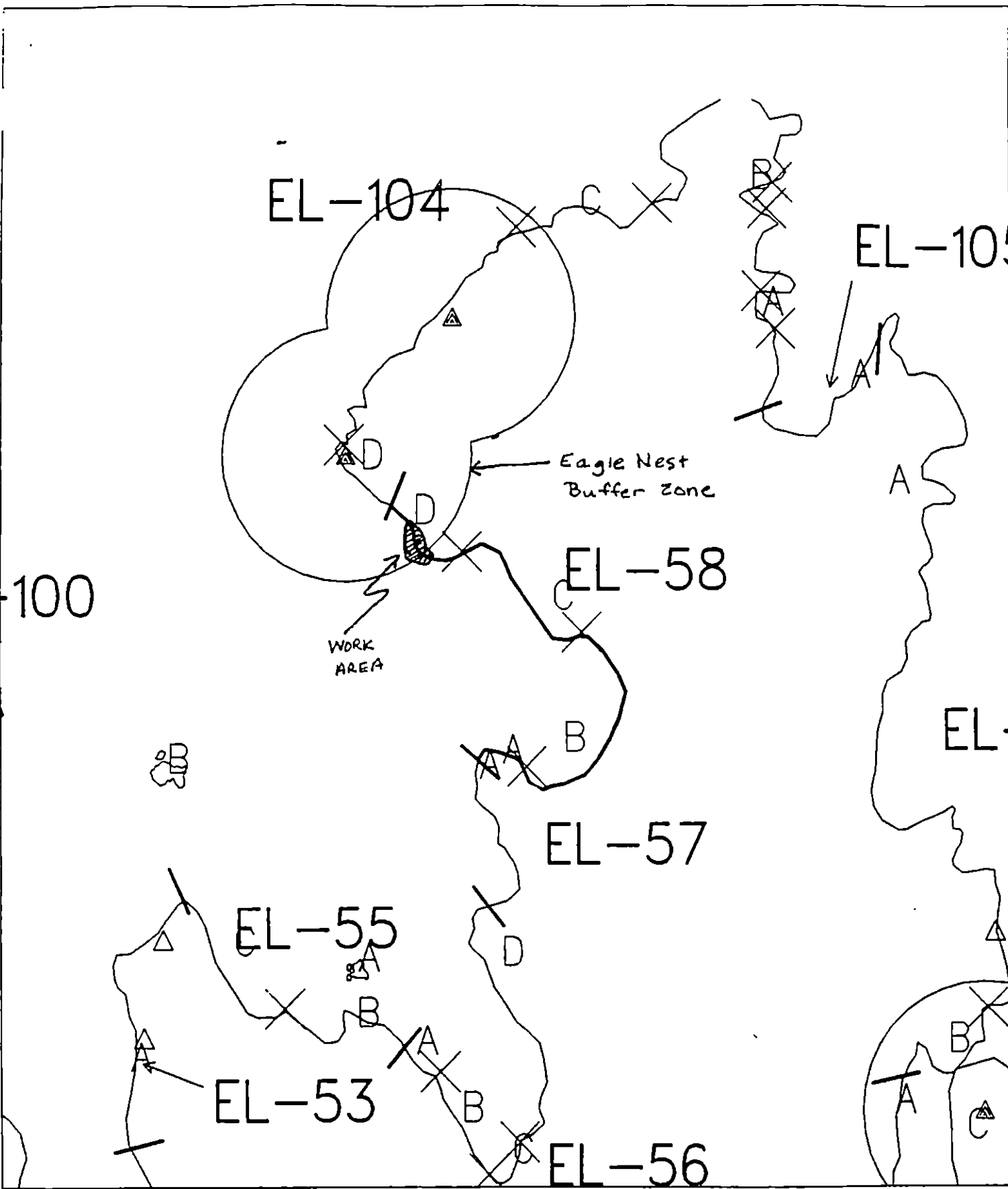
FOSC

DATE 6-10-90

Prepared By:

Date

6/9/90

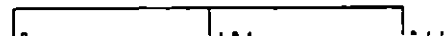


Exxon Company, USA
Map Key: PWS-EL-58

ECOLOGY MAP SEGMENT EL-58

SUBDIVISION D (4 of 4)

METERS



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

ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/EL 58 Subd.: D Site: 1 Date: 8/6 1990

Conditions Observed: "OP" OIL in SUBSURFACE FROM 20-25 CM in Porous SUBSTRATE.
SOR in WAVE SHADOW OF ROCK OUTCROP ADJACENT TO FRESHWATER DRAINAGE.
RAINBOW SHEEN in FRESHWATER DRAINAGE.

Followup Recommendations: APPLY CUSTOMERLED TO AREA AROUND PIT AND
AREA w/ SOR ADJACENT TO FRESHWATER DRAINAGE.

Completed by Pickup
Crew:

☐ YES ☒ NO

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

ADEC

Wesley Ghermley
(name)

Wesley Ghermley
(signature)

Comments: If sub-surface oil in the form of OP remains in 1991
then removal will be requested by ADEC.

Exxon

REY SOTELO
(name)

REY SOTELO
(signature)

Comments: Recommend the re-application of customerled on this site.

USCG

NOAA

ART WEILER
(name)

Art Weiler
(signature)

Comments:

Land Rep.

John Ebel
(name)

John Ebel
(signature)

Comments: North west bay area typically has bottom coatings (mud) protecting the
sediments saturated w/ oil.

ASAP TAG REVIEW SHEET

Segment: EL58 Subd: D Site: 1 Date
PRE-Review 11 AUG 90

Priority For Addressing In 1990

☒ HIGH ☐ MEDIUM ☐ LOW ☐ NTR

Treatment

Recommended: MANUAL REMOVE (Med/Heavy) SOR & BIO

Priority Site For Reassessment In 1991

YES NO YES NO YES NO YES NO
☒ CG ☐ ☒ ADEC ☐ ~~YES~~ EXXON ☒ ☐ LAND MGR ☐

13 AUG 90 TAG
Apply Custom Blen
reassess next year

FIELD SHORELINE COMMENT SHEET

SEGMENT AS / EL 58 SUBDIVISION: D SITE: 1 DATE 8-6-90
 USCG / NOAA PSI Leo Bersagone Leo Bersagone
 NAME Art Weiner SIGNATURE Art Weiner

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

ASSESS CUSTOMBLEND TREATMENT OF BOTH SURFACE + SUBSURFACE OIL.

ADEC NAME Wesley Ghormley SIGNATURE Wesley Ghormley

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

To Assess Condition of oiling after winter activities! observe the progress of bioremediation.

LAND MANAGER NAME John Bell SIGNATURE John Bell

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

To evaluate restoration and prescribe additional treatment if necessary.

EXXON NAME REY SOTELO SIGNATURE Rey Sotelo

☐ YES ☒ NO PRIORITY SITE FOR REASSESSMENT IN 1991

If this site is surveyed in '91 it should not be a priority site.

TEAM NO ASAP #2 EXXON SOTELLO SEGMENT AS: EL 58
 OG: CHANAY USCG WEINER/BERSALONA SUBDIVISION D
 ADEC GHORMLEY LAND REP EGEL, JOHN (PNR) TOTAL NO. SITES 1
 DATE AUG 16 1990 TIME 20:20 to 20:50 TIDE LEVEL 2.5 to 2.5 Ft
 TOTAL EST LENGTH OF SHORELINE SURVEYED: 150 m
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WEATHER: ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 OIL CATEGORY LENGTH: W 20 m M 0 m N 35 m VL - m NO - m US - m

SURFACE OIL

SITE 1

CHARACTER	DISTRIBUTION				OILED ZONES			
	IC	IB	IP	IS	SU	UI	MI	LI
ASPHALT								
S.O.R.	X					X		
POOLED								
COVER			X			X		
COAT		X	X	X		X	X	
STAIN								
MOUSSE								
PATTIES/T.B.								
FILM								
NO OIL					X			X
EST. SITE LENGTH							55	

SITE 2

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

SITE 3

CHARACTER	DISTRIBUTION				OILED ZONES			
	IC	IB	IP	IS	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	25	X				20-25	Y			X		PCB-PCB
1	2	15		X			1-15	N		X			BCP-BCP

Photographs: ASAP #2
 Roll No. Roll #2
 Frames 26

COMMENTS Manual removal was conducted at this location. Majority of oiled sediment may have been removed however SOR/MI pH were left in place. This location is behind a bedrock outcrop which seems to block most of the wave energy which would otherwise reach this oiled area. Cumbler was still evident.

ASAP #2
CHANEY
AUG 6 1990
MAP FROM SSAT

~~Village~~
~~Village~~
~~Village~~
LP = 10000
LEGEND

1. **Δ**
2. **No Substantive**

7A
FIG - Substrate CH

CT/C
Carpenter Union

CT/9
Special Classification

CT/P
Policy Classification

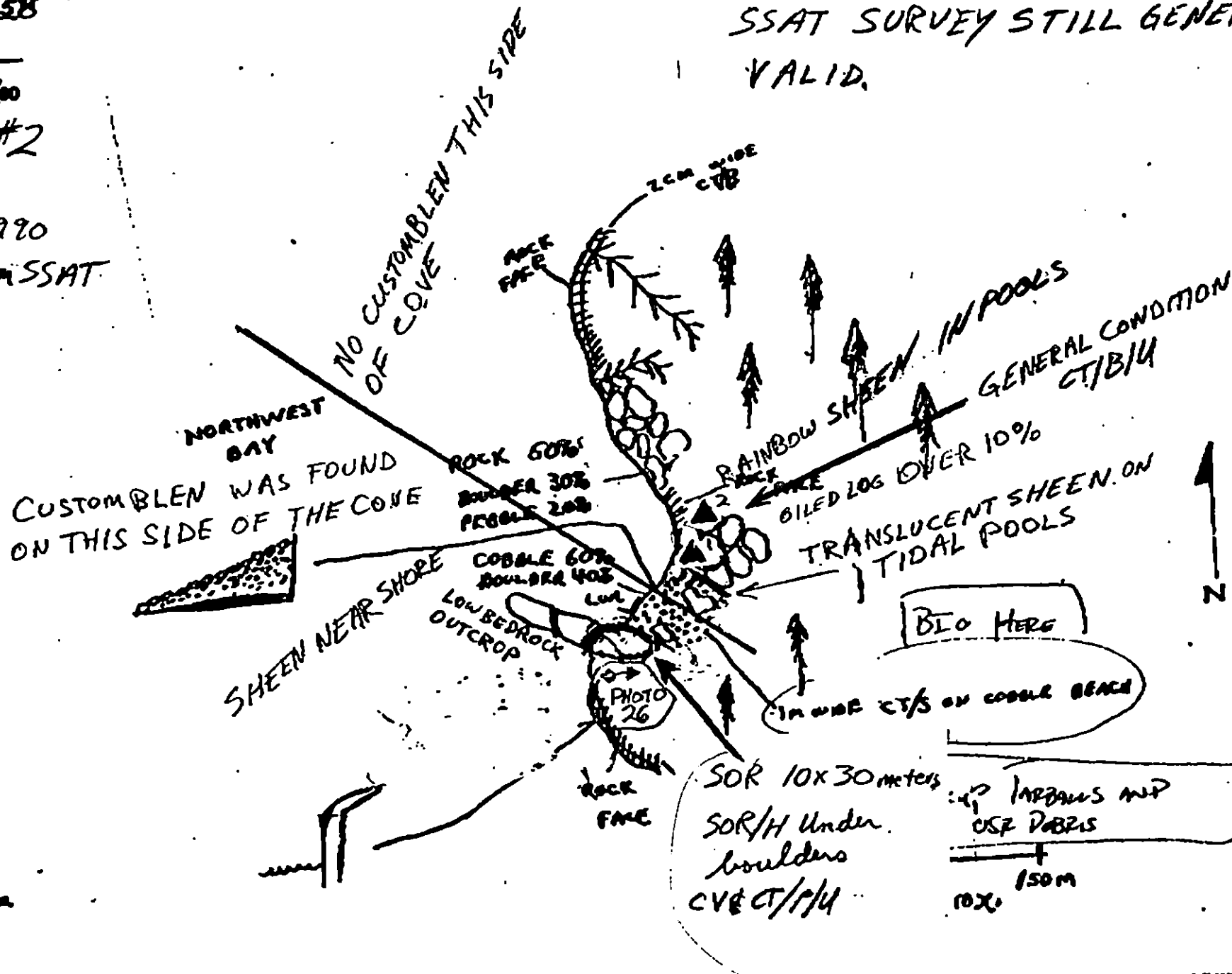
ST/S

Other Vegetables

From location, content,
and number

SKETCH MAP

GENERAL OILING TRENDS
INDICATED ON ORIGINAL
SSAT SURVEY STILL GENERALLY
VALID.



CV 25 CT. 376

149

T

FE

NO 150

ONCE SITES WERE LOCATED WHICH
CORRESPONDED TO SKETCH MAPS, NO FURTHER
ATTEMPT WAS MADE TO INVESTIGATE
SITES DENOTED ON COMPUTER MAP.

* IMPORTANT
NOTE:
ACTUAL SITE
LOCATIONS
WERE FOUND
TO BE DIFFERENT
THAN NOTED
ON THE
COMPUTER MAP

THESE LOCATIONS WERE
AGREED UPON BY ALL
ASAP TEAM MEMBERS
AND THE SKIFF DRIVER
BASED ON SKETCH MAPS.

ASAP #2
GREG CHANEY
AUG 6 1990

SEGMENT EL-58

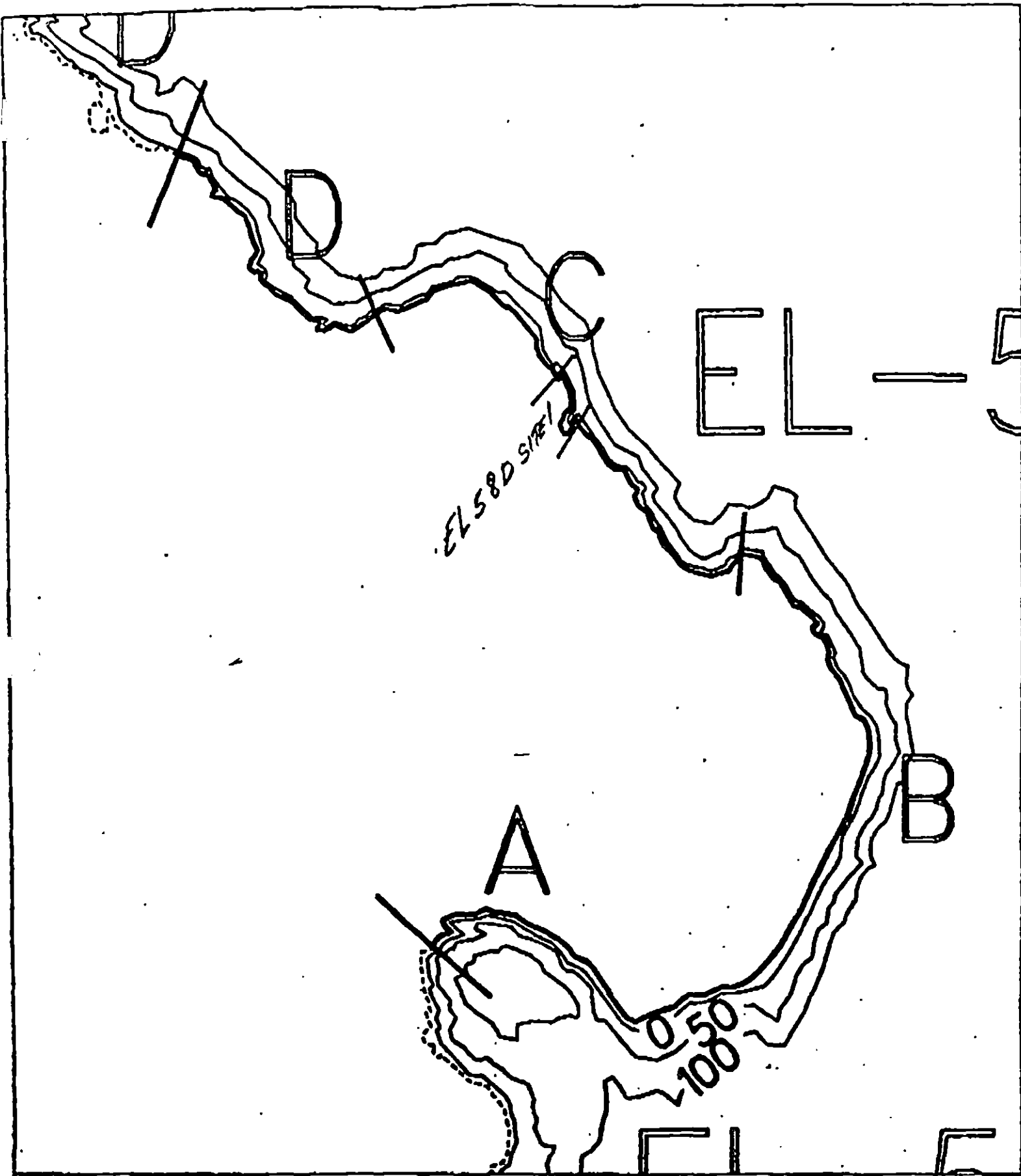
Segment Location Map
Map Key: KNIEL-58

METERS



July 19, 1990

1:5305

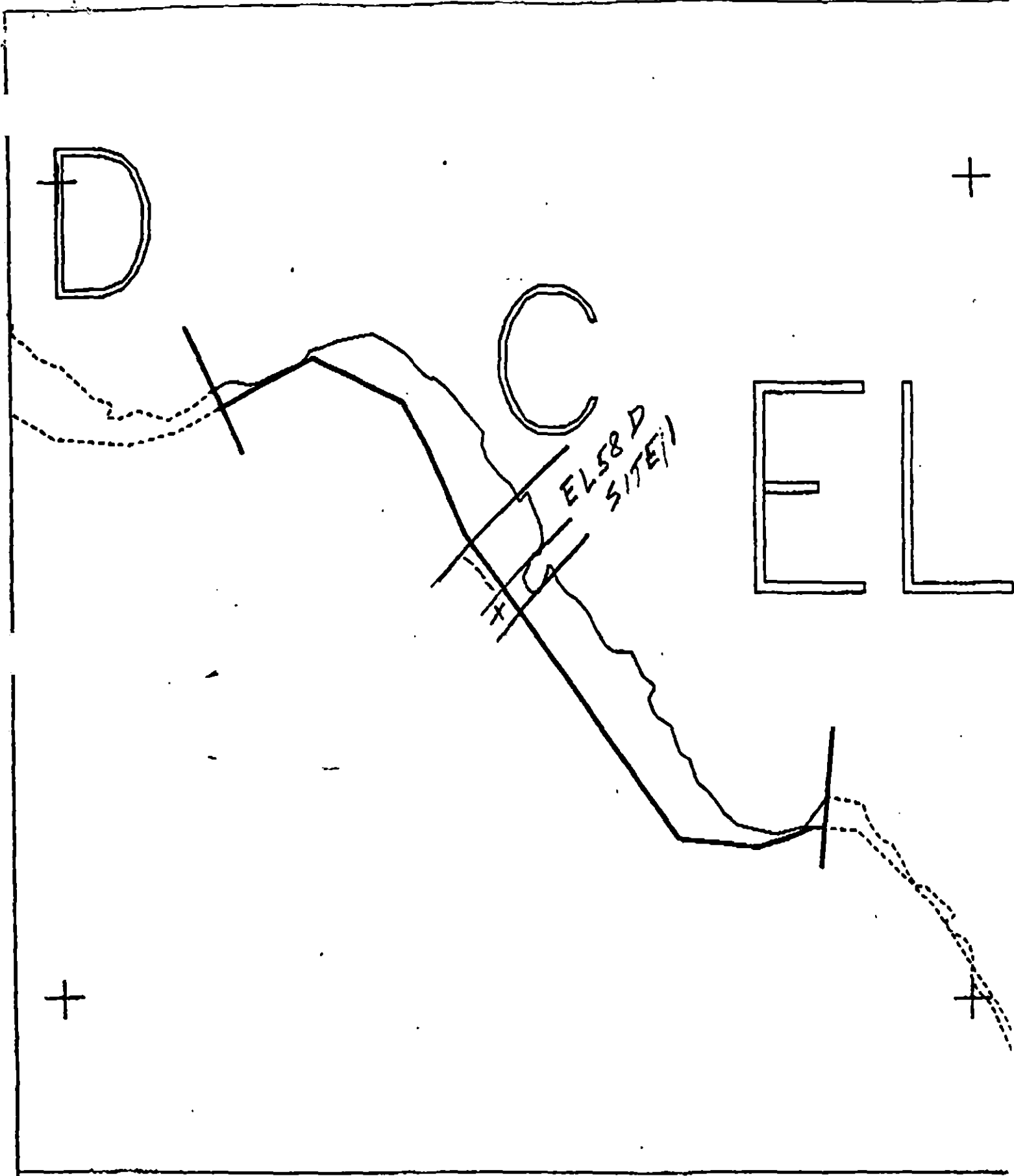


SEGMENT EL-58

Segment Location Map
Map Key: KMIEL-58

July 19, 1990

1-0125



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

EL-58 XD
 ADEC Subsegment Length: 547m
 METERS
 0 50 100
 AK State Plane Zone 4 1:3105



Subdivision Field Map
 Map Key: KHEL-58C
 Name: CHANEY
 Date: AUG 6 1990
 Data Entered:



SHORELINE EVALUATION

SEGMENT ST/ EL-100 SUBDIVISION A (1 OF 1) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)

6Y Recreation: Special use destination (6/1 to 9/15)

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: *Charles E. Adams*

DATE: 4/13/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 556 m
Subsurface Oil Observed: Yes X No Maximum Depth 40 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:

TAG APPROVAL DATE: 4/18/90

ADEC ART WENNER

XON ANDY TAY

AA Burl Wescott

USCG G.A. Reiter

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 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 (8/1 to 9/15)
 6V Anchorages (6/1 to 9/15)
 6W Forest Service cabins (6/1 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
 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 1 EL 100 SUBDIVISION: A (10 of 1) DATE 03/31/90

USCG

NAME

AFC Vandepels

SIGNATURE

AFC Vandepels☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

Lots (1000's x 10) of mussels + snails present on all areas.

ADEC

NAME

Michele Baer

SIGNATURE

M Baer☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

EL 100 was quite prolific in littorina, mytilus, balanus and fucus beds. Like segment 101, this area has high exposure and is a high energy beach. OF was found on the SE furthest SE beach (B,C) in the SUTZ beginning at 25 cm and extending below 40 cm. The LITZ of this beach showed no oil at 30 cm. An area of 1m x 1m ST lies in the back crevice of the beach. In addition a faint, broken b/d stain tapered from 2m to 3 cm line across the beach. Due to the low level of oiling + high exposure of this area, I would recommend leaving the treatment to the high wave line of the area.

LAND MANAGER

NAME DAN LOGAN

SIGNATURE

Dan Logan☒ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED

COMMENTS

I CONCUR WITH ADEC. THE TWO BEACHES HAVE POTENTIAL AS RECREATION CAMP SITES.

OG J. Springer USCG R. Vandeplas SEGMENT ST/ EL 100
 BIO P. Crank LAND REP D. Logan SUBDIVISION A (10FD)
 EXXON T. Tomblin ADEC M. Baer TIME 16:10 to 12:00
 TEAM NO.: 5 TIDE LEVEL: -1 to 0 DATE 03/31/90
 EST. SUBDIVISION LENGTH: 632 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 70 % B 15 % C 10 % P 5 % G % S % M % V
 SLOPE: Long 20 % Hang 45 % Vert 35 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W _____ m M _____ m N _____ m VL _____ m NO 632 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	CR	NR	PR	SR	BR	OR	GR	YR	BL	TR	DR	LR	SU	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL													X	X	X	X

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

PATTIES / TARBALLS _____ BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

Roll No. _____

Frames _____

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		VO	UC	BR	OR	GR	YR	BL	TR	DR	LR	SU	U	M	U		
1	40					X	.		X									X					CP
2	30					X	.		X									X					RCP
3	30					X	.		X										X				BC
4	40					X	.		X									X					CPG
5	40				X		5-40	X					X					X					CPGV
6	20					X	.		X											X			CPGS

COMMENTS

* Not consensus. May be OF or OR.

32.

OG J. Spr. 2
SEGMENT ST/ CL/00

SKE MAP

SUBDIVISION A

DATE 03/31/90

CHECKLIST

- ☒ M Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Bndry
- ☒ Oil Dia.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HWM/LWL
- ☒ SSL
- ☒ Profile Location(s)
- ☒ Photo(s)
- ☒ Pit Location(s)
- ☒ Photo Location(s)

LEGEND

1 Δ
No Subsurface Oil

2 Δ
Subsurface Oil

CT/C
Continuous Distribution

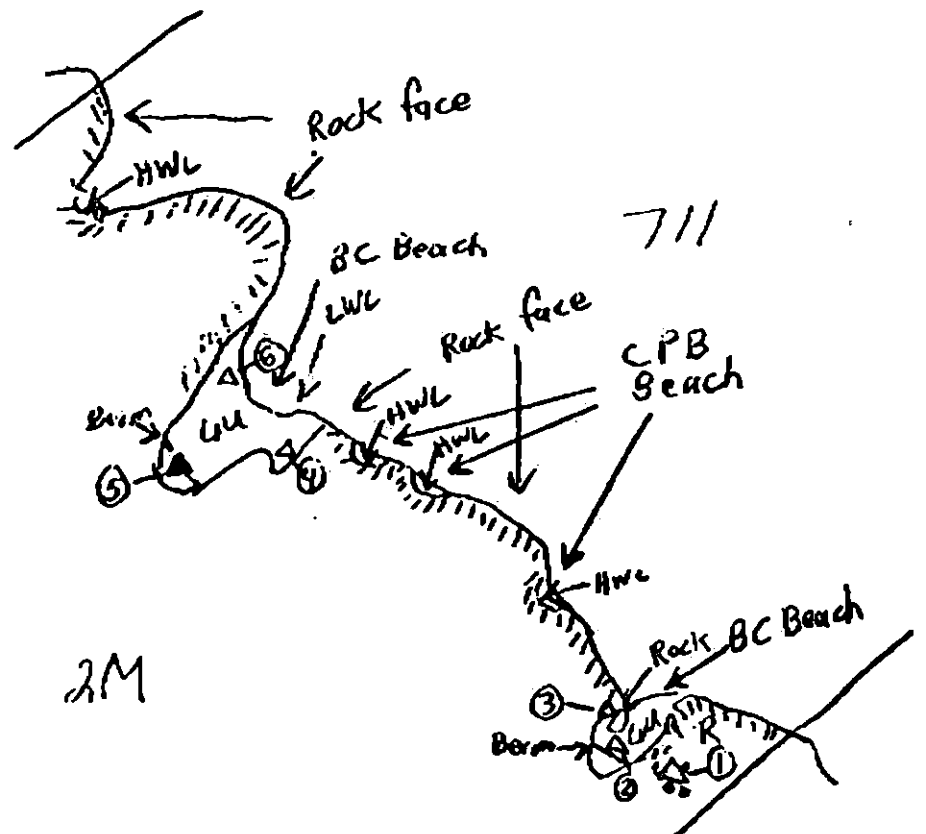
CT/B
Isolated Distribution

CT/P
Patchy Distribution

CT/S
Plashed Distribution

Used Vegetation

1 ●
Note location, direction,
and number



2M

0 100 m
Approx

Revised 4/6/90

Plot Length (m): AP _____ PO _____ CV _____ CT _____ ST _____ MS _____ PT _____ TB _____ FL _____ NO 632

REVISION: 03/24/90

SHORELINE ECOLOGICAL SUMMARY

Segment ST1 EL 100 Subdivision A Date (mo / day / yr) 3/31/90
 Time (24 hr) 1010-1200 Biologist C. rank Tide Height: -1 → +0.5 ft
 Segment Length: 632 m
 (A) Substrate type and % of segments:
 (1) Bedrock 70 (2) Boulder 15 (3) Cobble 10 (4) Pebble 5 (5) Sand (6) Silt
 (B) Overall % cover of biota (% of segment): Dense 70 Moderate 15 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: 57-5-1
 Roll No.
 Frames 38, 39

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 3,4
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 7,4
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 3,4
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 3,4
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:

2 Crow
 1 Sitka black-tail deer on beach
 1 Magpie

Ecological Considerations:

711 - Deer Harvesting
 2M - Herring Spawning
 6Y - Special Use Destination

Deer scat in drift line

Sog: EL 100A

Time: 1010-1200

Biologist: Crank

Length: 632m

Tide Height: -1 → +0.5 ft

Species List

Flora

Fauna

HITZ

Fucus
Enteromorpha
Furopia
Cladophora
Filamentous Red.

Nucella
Littorina
Limpets
Nereis
Littorina

MITZ

Heterocladia
Lithothamnion
Enteromorpha
Sargassum
Fucus

Tonicella
Littorina
Limpets
Anthopleura xantho
gramma
A. artemisa

LITZ

Bladed reds
Enteromorpha
Alaria
Heterocladia
Enteromorpha
Bosniella
Rhodomela larix
Ulva fenestrata
Filamentous reds

Plaster
Katharina tunicata
Serpulids
Bryozoan
Nucella
Littorina
Littorina

Comments

- Barnacle scarring in LITZ cobble
- Katharina tunicata $\approx 6/m^2$
- Dense Littorina spat in UITZ bedrock
- Drift Neurocystis in SUPRA
- Laminaria in drift line
- Dense biotic cover on bedrock and vertical faces
- Moderate → sparse biotic cover on boulders
- Sparse → none biotic cover on cobble/pebble/sand due to high exp

Sag. EL 100A

Time: 1010 - 1200

Height: -1 $\Rightarrow$ 40.5 ft

Longitude: 160.5

Latitude: 63.2m

73

Comments (cont)

- Vertical Rock faces were surveyed from shift.

- High recruitment areas.

- Tidepools in brook 147Z, 147Z.

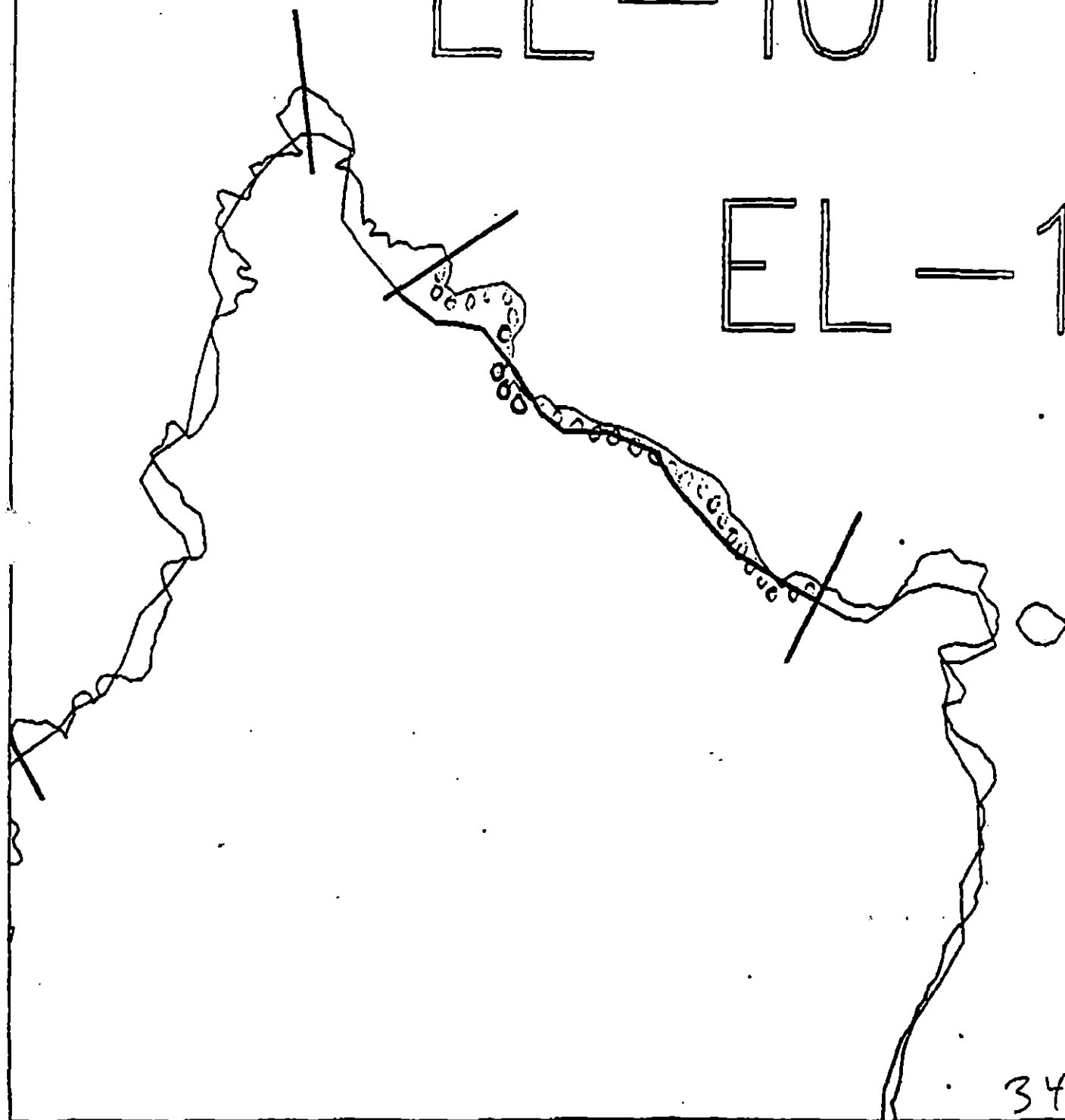
- Dense Fucus at 147Z, 147Z.

- Filamentous algae is abundant. Why filar springs are not in higher concentrations.

Revised 4/6/90

EL-101

EL-1C



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

OOOO No Oil

EL-100

ADEC Segment Length: ~~632~~



Map Key: PWS-120

Name: James Spring

Date: 03/31/90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ EL-101 SUBDIVISION A (1 OF 1) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
6Y Recreation: Special use destination
7II Deer harvesting (8/15 to 2/28)

SUBDIVISION ECOLOGICAL CONSTRAINTS:

(2M) Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

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

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V. Light 21 m: No Oil 187 m
Subsurface Oil Observed: Yes X No Maximum Depth 60+ 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> Beach Cleaner
<u> </u> Removal	<u> </u> Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90
ADEC JOHN BAUER
EXXON ANDY TATZ
NOAA Burt Wescott
USCG KENNETH KERR

FOSC: DEK DATE: 4-22-90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ E-L101 SUBDIVISION: A DATE 03-31-90

USCG

NAME AEC Vandepels SIGNATURE AEC Vandepels

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

I recommend no cleaning just due to the amounts of mussels, snails, fucus, barnicals and algee present.

ADEC

NAME Michelle Baer SIGNATURE M Baer

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

This high energy segment appears to have successfully benefitted from the natural cleaning process. A healthy band of mytilus and balanus exists throughout the segment on the R headlands. I would contain treatment to the NE, C, P, & G beach (approx. 50 M in length), by tilling in the LITZ to expose the underlying OF. This layer begins @ 45c and goes beyond 60 cm.

LAND MANAGER

NAME DAN LOGAN (NFS) ^{ml.} SIGNATURE Daniel Logan

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

I RECOMMEND TILLING BY HAND THE LOWER INTERTIDAL BAND TO EXPOSE OILED ZONE TO NATURAL CLEANING.

SHORELINE OILING SUMMARY

REVISION NO. 03/22/90

OG J. Springer USCG R. Vandepels SEGMENT ST/ EL 101
 BIO P. Crank LAND REP D. Logar SUBDIVISION A (1041)
 EXXON T. Tomblin ADEC M. Baer TIME 09:00 to 10:00
 TEAM NO.: 5 TIDE LEVEL: 0' to -1' DATE 03/31/90
 EST. SUBDIVISION LENGTH: 3/3 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 65 % B 10 % C 15 % P 8 % G 2 % S 0 % M 0 % V 0 %
 SLOPE: Lang 20 % Hang 40 % Ven 40 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 21 m NO 313 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR							IMPACTED ZONES			
	C	B	P	R	BR OR	OR RY	RY OL	OL TL	TL LR		SU	UI	MI	U	
ASPHALT PAVEMENT															
POOLED															
COVER															
COAT															
STAIN															
MOUSSE															
PATTIES															
TARBALLS															
FILM															
NO OIL												X	X	X	X

PAVEMENT: H F S 0 sq. m by 0 cmPATTIES / 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 spare battery
gas can,
bottle, inner#BAGS 1

Photographs:

Roll No. ST-5-1Frames 21-24

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	BR	OR	OL	OF	NO	BR	OR	OL			
1	45					X	-		X									X		PV
2	27					X	-		X									X		P
3	60				X		45-60	X					X						X	PG S
4	40					X	-		X										X	PG S
							-													
							-													

COMMENTS

*Oil noted in subsurface of lower intertidal zone.

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/76

Segment ST/ FL 101 Subdivision A Date (mo / day / yr) 3/31/90

Time (24 hr) 0900 Biologist Crank

Tide Height: 0 → -1 ft
Seg Length: 313m

(A) Substrate type and % of segments:
(1) Bedrock 65 (2) Boulder 10 (3) Cobble 15 (4) Pebble 8 (5) Sand 2 (6) Silt

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

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

Photographs:
Roll No. ST 51

Frames 30, 31

BARNACLES

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
~~2~~	~~2~~	<u>2</u>	~~2~~	2	2	2	~~2~~	~~2~~	2	~~2~~	2
3	3	3	3	3	3	3	3	3	3	X	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT
4, 5

MYTILUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
~~2~~	~~2~~	<u>2</u>	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	2
3	3	3	3	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
3U
4, 5

FUCUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	~~2~~	2	2	<u>2</u>	2	~~2~~	~~2~~	~~2~~	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT
on boulders in
4, 5

Wildlife Observations/General Comments:

2 Birds on H₂O - no ID
1 Raven flying
1 Pigeon - common - flying
1 Crow - flying

Ecological Considerations:

7 H - Deer Harvesting
2 M - Herring Spawning
6 Y - Special Use Destination

Time: 0900 - 1010

Length: 313 m

Tide Height: ϕ to -1 ft

Species List (Incomplete)

Flora

Fauna

HITZ

Sytosiphon
Green filamentous

Heavy barnacle S. ...
Balanus glandula
Mytilus

MITZ

Odonatalia sp.
Hyalosaccin
Rolphisia
Endocladia
Lithothamnium
Porphyra
Enteromorpha
Bosziella
Filamentous Greens
Filamentous reds
may include polysiphonia
Fucus and phaeosiphonia

Katharina tunicata
Searlesia alba
Fore barnacle zone
Siphonaria thersites
Limpets
Balanus glandula
Mytilus

LITZ

Enteromorpha
Ulva fenestrata
Small bladed reds
Lithothamnium
Alaria
Cladophora
Fucus

Katharina
Limpets
Siphonaria thersites
Balanus glandula
C. curiosus

Comments:

- Green filamentous algae may be impeding recruitment on boulders
- Many 'tidepools' in bedrock at MITZ and LITZ
- Dense *Katharina tunicata* ~ 6 m²
- Small bladed reds constitute major percentage of LITZ cover
- Flora and fauna in this segment appear healthy
- High energy cobble beach, low biota due to moving (rolling) cobble.
- Snowpack runoff following contour of southern headland

OGU, 11/1/91

SEGMENT

EL 101

SUBDIVISION

A

DATE 03/31/90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Sep/Sub Bndry
- ☒ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☒ Est. HWL/LWL
- ☒ VSEL
- ☐ Profile Location(s)
- ☒ Profile(s)
- ☒ Pht Location(s)
- ☐ Photo Location(s)
- ☐ Pht = PHOTO #

LEGEND

1 ▲
Pht - No Subsurface Oil

2 ▲
Pht - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

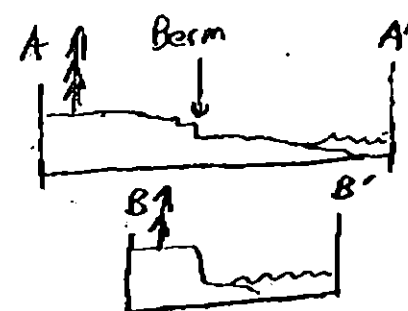
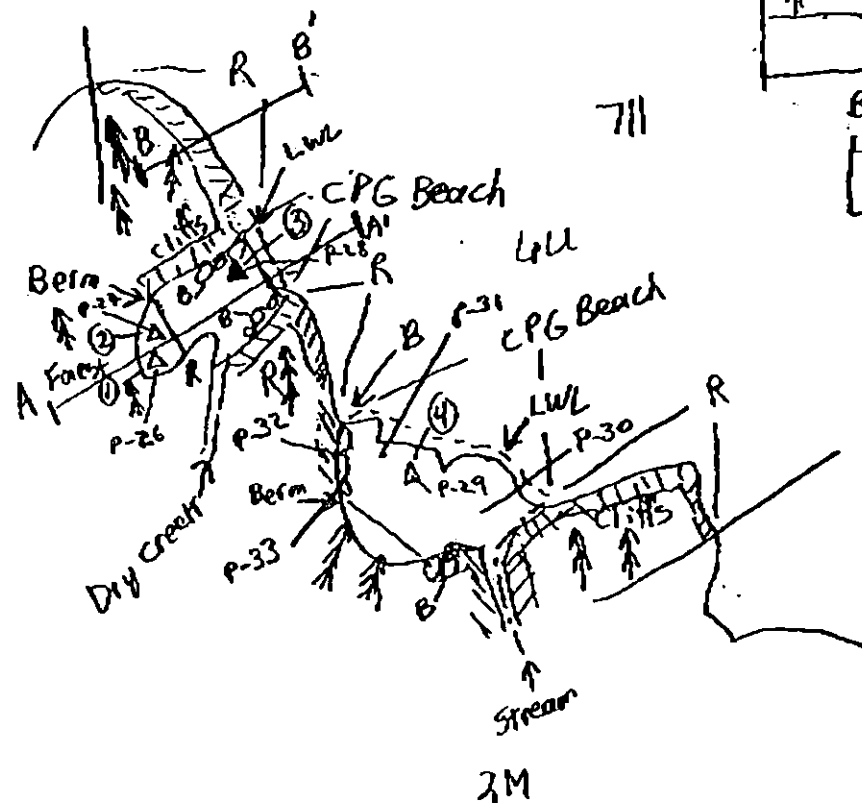
CT/P
Pachy Distribution

CT/S
Splashed Distribution

Oiled Vegetation

1 →
Photo location, direction,
and number

SKETCH MAP



0 100m
Approx

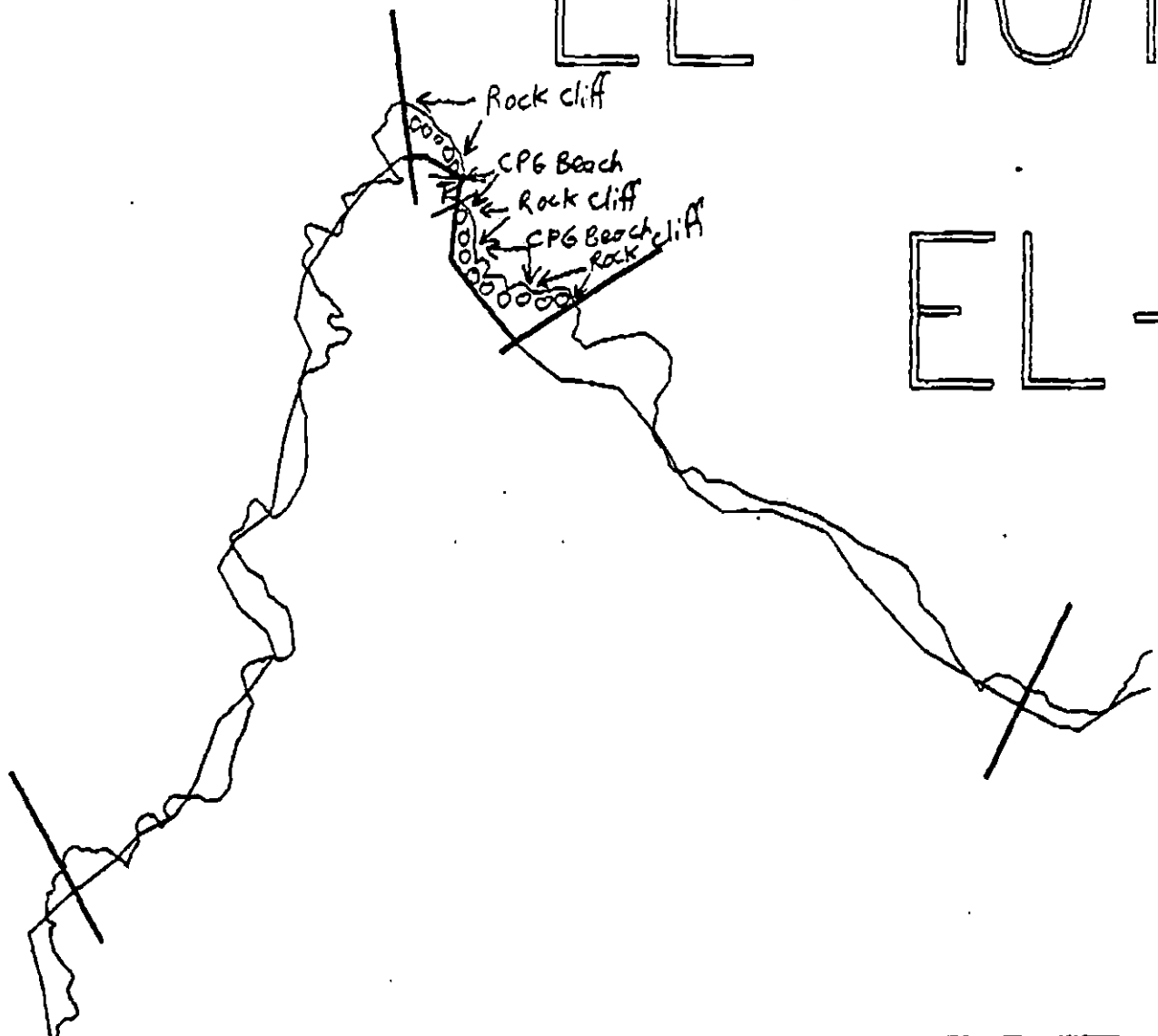
Oil Character Length (m): AP — PO — CV — CT — ST — MS — PT — TB — FL — NO 313

REVISION: 03/24/90

HFE-02-1950 00:42 FROM HRTIC SALVOR SSHT F.04 TU

EL-101

EL-



XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

EL-101

ADEC Segment Length: ³¹³~~200~~m

0 100 200 300
METERS

Map Key: PWS-121

Name: James Spring

Date: 03/31/90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ EL-102 SUBDIVISION A (1 OF 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
5T-3 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles J. Hume DATE: 4/23/90

OILING CATEGORIZATION:

Wide 0 m: Medium 40 m: Narrow 392 m: V.Light 0 m: No Oil 146 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 manual pick up of mousse as indicated on sketch
map. Work should be conducted between 6/16 and 8/14 with ADF&G and
USFWS approval regarding eagle nest constraint.

TAG COMMENTS:

TAG APPROVAL DATE: 4/21/90.
ADEC ART WERNER
EXXON AMY TEE
NOAA Burt Wescott
USCG KENNETH KEANE

FOSC: 4 L DATE: 4-27-90

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ EL 102 SUBDIVISION: A DATE 03/31/90

USCG

NAME AEC Vandepels SIGNATURE AEC Vandepels

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

I recommend no treatment for this area.

ADEC

NAME Michelle Baer SIGNATURE M Baer

☒ NO TREATMENT RECOMMENDED OR

☒ TREATMENT SUGGESTED

COMMENTS

Sub-segment A is a high energy beach with optimum conditions for natural cleaning to occur. a 1 m band of mytilus beds extends throughout the segment. There are patchy distributions of oil behind large b's w/ the oil lying in the upper 3 cm. This area is of such high energy, I would recommend either manual removal of the patches or no treatment. This ~~segment~~ should be considered low priority for treatment.

LAND MANAGER

NAME DAN LOGAN SIGNATURE Dan Logan

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

I recommend CONCUR WITH ADEC. I recommend manual removal of small boulders and smaller located between the large rocks referenced on sketch map as this area will ^{self}clean naturally. I consider this area medium-poor camping potential.

OG J. Springer USCG R. Vardopoulos SEGMENT ST/ EL 102
 BIO P. Clark LAND REP D. Logan SUBDIVISION A (1012)
 EXXON T. Tenkalin ADEC M. Bock TIME 12:35 to 14:30
 TEAM NO.: 5 TIDE LEVEL: 0 to +11 DATE 03/31/90
 EST. SUBDIVISION LENGTH: 835 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 80 % B 7 % C 10 % P 3 % G — % S — % M — % Y —
 SLOPE: Lang 15 % Hang 15 % Ven 70 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W — m M 8 m N 542 m VL — m NO 285 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	10	15	20	25	30	35	40	45	50	55	60	65	BU	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL																

PAVEMENT: H F S — sq. m by — 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. NC 4817-2

Frames 1-10

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
		OF	OR	OL	OF	NO		10	15	20	25	30	35	40	45	50	55	BU	U	M	U		
1	30					X	.																P
2	20					X	.																CPG
3*	10					X	.																CPG
4	30					X	.																CP
5	10					X	.																CPM
							.																

COMMENTS

* Pit 3 Surface (+5cm) mousse or soft asphalt.

35

OG I SP IER

Revised 4/1 '0

SEGMENT ST/102

SKETCH MAP

SUBDIVISION A

DATE 03/31/90

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Entry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Ext. HAT/LVL
- ☒ SCL
- ☒ 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

Patchy Distribution

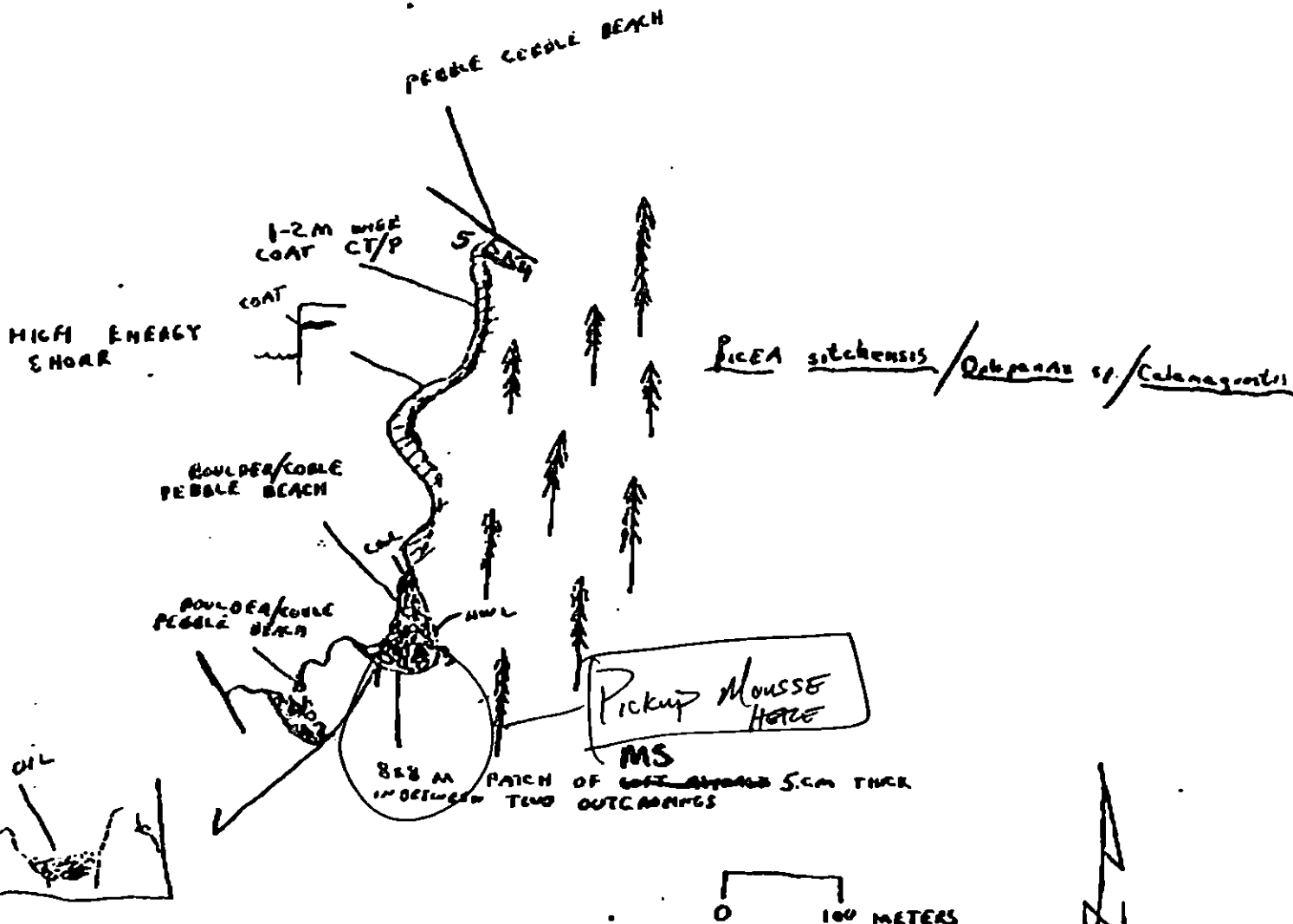
CT/S

Splashed Distribution

Cited Vegetation

1 →

Photo location, direction, and number



Water Length (m): AP _____ PO _____ CV _____ CT 542 ST _____ MS 8 PT _____ TB _____ FL _____ NW 285

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/22/90

Segment ST/EL102 Subdivision 1 Date (mo/day/yr) 3/31/90

Time (24 hr) 1230-1400 Biologist CRANIC Tide Height: +2 → +6

(A) Substrate type and % of segments:
(1) Bedrock 80 (2) Boulder 7 (3) Cobble 10 (4) Pebble 3 (5) Sand (6) Silt

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

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

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 4
~~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 34
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 4
~~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	3	
~~4~~	~~4~~	4	~~4~~	~~4~~	4	4	4	4	4	4	4	
~~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:

1 Harbor Seal - Adult 1-Bald Eagle - Mature

2 Seals - Adult

1 Scoter - on H₂O

Ecological Considerations:

711- Deer Harvesting

2 M - Herring spawning

ST-2: Bald Eagle Nest

Segment; EL 102 B

Biologist: Crank

Time: 1430-1530

Length: 278m

Tide Height: +6 → +8

Species List

Flora

Fauna

HITZ

Filamentous green
FucusBalanus
Littorina
Mytilus

MITZ

Enteromorpha
Filamentous Green
Filamentous Red
Gloiopeltis
Endocladia
FucusBalanus
Mytilus

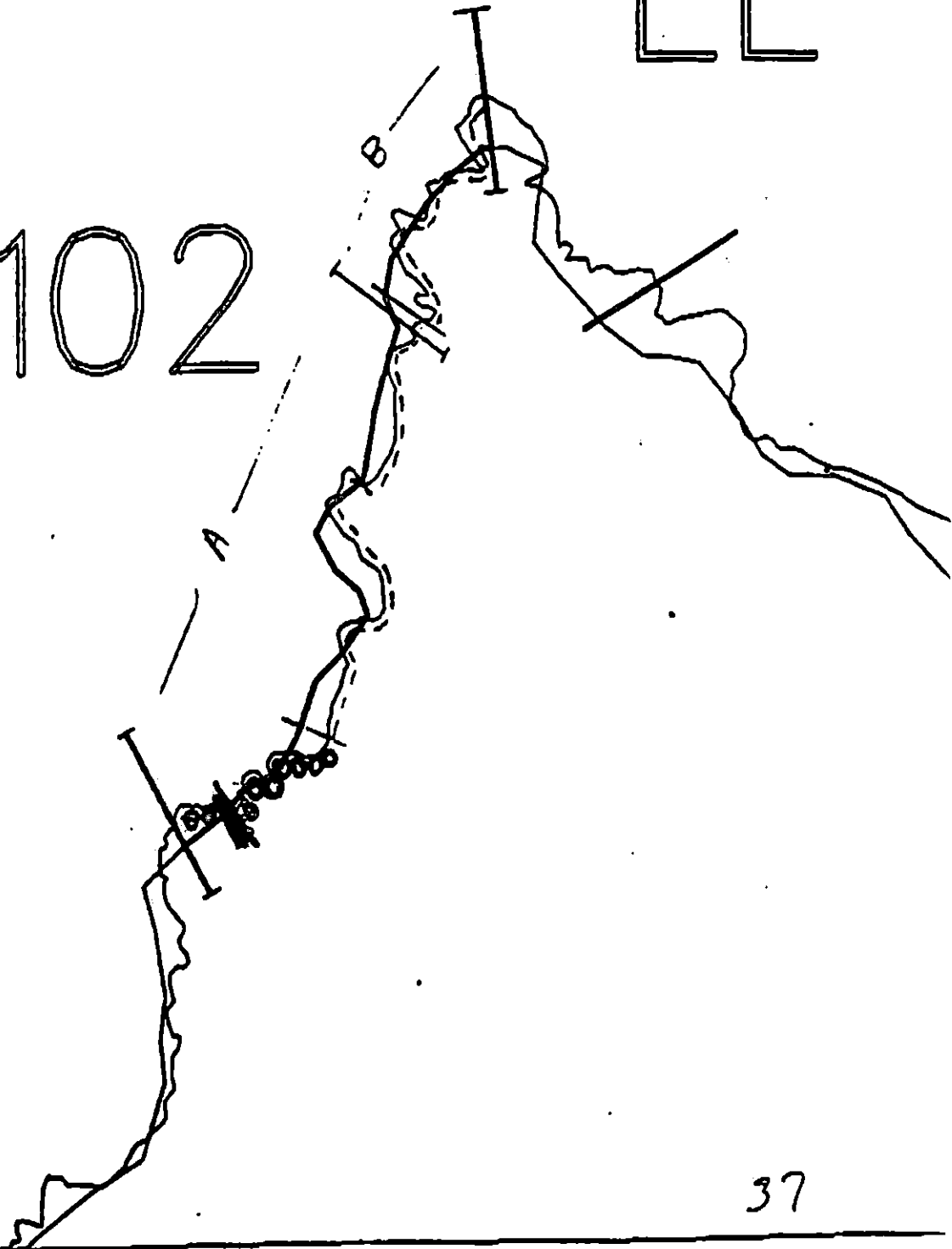
Comments

- LITZ not observed → covered by tide
- Most of MITZ not directly observed → covered by tide
- Runoff flowing under cobble
- Eagle Nests reported → did not see.
- Vertical rock face surveyed from skiff.
- Recruitment is high

Revised 4/6/90

EL-

EL-102



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EL-102

ADEC Segment Length: 1113

0 100 200 300
METERS



Map Key: PWS-122

Name: James Spring

Date: 03/31/90

Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-102 SUBDIVISION A (1 of 2)

WORK WINDOW	
Manual Pickup	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M	Herring Spawning	NO CONSTRAINT. Authorized by Claudia Slater/ADF&G on 5/10/90 to Exxon/Tom Kelley.
5T	Bald Eagle Nest	USFWS 6/1/90 map indicates an active nest in Subdivision B. Closed to manual pickup within 400m of active nest.
7II	Subsistence: Deer Harvesting	No time constraint.

OTHER ECOLOGICAL CONSIDERATIONS

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

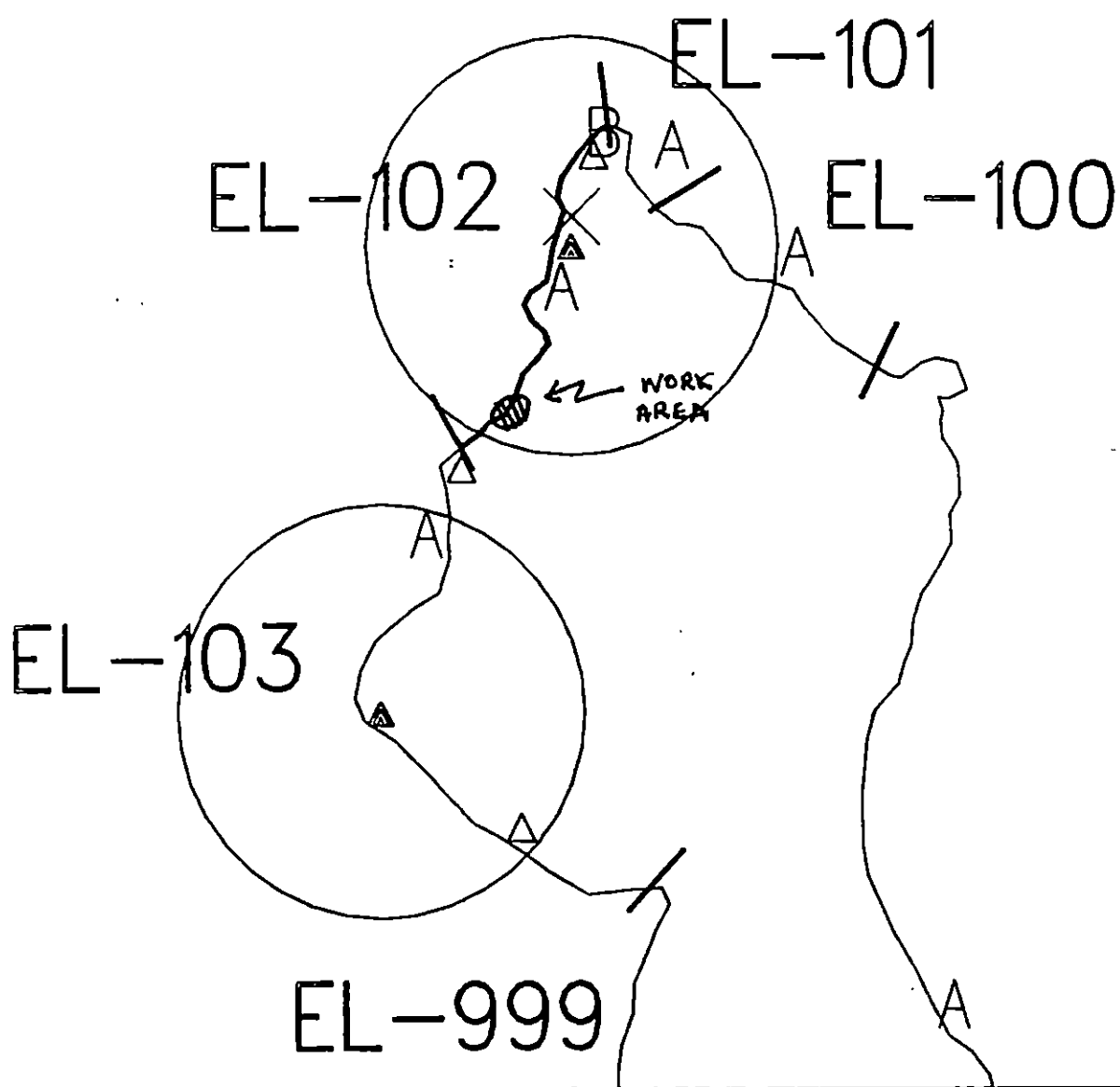
TAG APPROVAL DATE _____
ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC _____

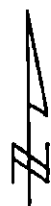
DATE 7 June 1990

Prepared By: WJK

Date 6/7/90

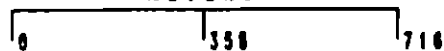


Exxon Company, USA
 Map Key: PWS-EL-102
 June 04, 1990 ✓



ECOLOGY MAP
 SEGMENT EL-102
 SUBDIVISION A (1 of 2)

METERS



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

1 inch = 1174 feet

SEGMENT ST/ EL-102 SUBDIVISION B (2 OF 2) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)

5T-3 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 21 m: Narrow 169 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes X No Maximum Depth 30+ cm

RECOMMENDATIONS:

 No Treatment Recommended

X	Treatment Recommended
1	1
2	1
3	1
4	1
5	1
6	1
7	1
8	1
9	1
10	1
11	1
12	1
13	1
14	1
15	1
16	1
17	1
18	1
19	1
20	1
21	1
22	1
23	1
24	1
25	1
26	1
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60	1
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65	1
66	1
67	1
68	1
69	1
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71	1
72	1
73	1
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76	1
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78	1
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82	1
83	1
84	1
85	1
86	1
87	1
88	1
89	1
90	1
91	1
92	1
93	1
94	1
95	1
96	1
97	1
98	1
99	1
100	1

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 tarmat removal and bioremediation of continuous cover and broken coat areas (see sketch map for location). Work should be conducted between 6/16 and 8/14 with approval of ADF&G and USFWS regarding eagle nest constraint. MANUAL RATE IN AREAS OF PITS 1-4 PRIOR TO BIOREMEDIATION.

TAG COMMENTS: _____

TAG APPROVAL DATE: 7/21/80

ADEC ~~Art~~ WEINER Art Weiners

EXXON *Andy [unclear]*

NOAA Ry. I. Wescoff Paul H. Hirsch

USCG KENNETH McHale *Kenneth McHale*

FOSC: W-5 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 6/31)
1J	Purse seine area (7/20 to 9/30)
1K	Purse seine hook-off (7/20 to 9/30)
1L	Set net sites (6/11 to 7/25) For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
2M	Herring spawning (4/1 to 6/15) Restrict boat traffic to essential minimum. Avoid damage to uncolled 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.
6T	All Bald Eagle nests (3/1 to 6/1) ~~Restrict air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.~~ 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 2/25)
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 ST1 EL102 SUBDIVISION: B DATE 3/31/90

USCG

NAME AEC Vandepels SIGNATURE AEC Vandepels

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

I suggest hand cleaning of 25 x 2 M band on south end of sub B. Till + bio. of 30 M cobble beach near south end of sub. B. Remove, by hand, pebbles among boulders and hand wipe boulders at North end of sub. B. Maybe bio.

ADEC

NAME Michelle Baer SIGNATURE M Baer

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

The first B,C beach requires manual removal of mousse patches and hand wiping/scrubbing of the B's. The second beach (B,C) requires more intensive cleaning. The patchy CT that can be seen 60 cm down between the B's on the far side of the beach require manual scrubbing, ~~Pits~~ and/or bioremediation utilizing the rain that hits the ~~area~~ ^{boulders} further the process. Pits all the way down the beach reveal a 5 cm layer of OP that begins at 8 cm and is clean underneath. To remove this layer, filling of the beach is required, then bioremediation, during high tide, allowing the fertilizer to migrate into the lower intertidal zone.

LAND MANAGER

NAME DAN LOGAN SIGNATURE D Logan

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

I RECOMMEND MANUAL SCRUBING OF ROCK FACE WHERE TAR EXISTS AS INDICATED ON SKETCH MAP. THE 4M X 30M PATCH SHOULD BE TREATED BY REMOVING BOULDERS/COBBLES/ROCKS AND MANUALLY CLEANING REMAINING ROCK. FERTILIZER COULD BE APPLIED TO THE PATCH

J. Springer USCG R. Verdepets SEGMENT ST/ EL 102
 BIO P. Crank LAND REP D. Leggin SUBDIVISION B (2 of 2)
 EXXON T. Tomblin ADEC M. Bahr TIME 14:30 to 15:30
 TEAM NO.: 5 TIDE LEVEL: +6 to +8 DATE 03/31/90
 ST. SUBDIVISION LENGTH: 278 m ☒ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 65 % B 15 % C 10 % P 10 % G — % S — % M — % V — %
 SLOPE: Long 10 % Hang 30 % Vert 60 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W — m M 30 m N 122 m VL — m NO 126 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	AC	FC	RC	SC	1	2	3	4	5	6	7	8	SU	U	M	U
ASPHALT PAVEMENT			X			X								X		
POOLED																
COVER	X	X						X	X				X			
COAT		X						X					X			
STAIN																
MOUSSE			X					X					X			
PATTIES																
TARBALLS																
FILM																
NO OIL													X		X	X

PAVEMENT: H (F) S 200 sq. m by 3 cm

PATTIES / TARBALLS BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE
#BAGS

Photographs:

Roll No. 37-5-1

Frames 36-36

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		UD	UC	1	2	3	4	5	6	7	8	SU	U	M	U		
1	15	X					8-13		X		X							X					PM
2	30	X					29-30+	X			X								X				CP
3	20		X				10-20	X				X							X				C
4	15	X					5-15	X				X						X					P
5	35					X	.		X										X				P
							.																

COMMENTS Lower intertidal zone is gone.

38

OG J. SP. GER

SEARCH MAP

Revised 4/6/90

SEGMENT ST/ 102

SUBDIVISION B

DATE 03 / 31 / 90

CHECKLIST

- ☒ N Area
- ☒ Approx. Scale
- ☒ Seg/Sub Entry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HRA/LVR
- ☒ SSL
- ☐ Profile Location(s)
- ☐ Profile(s)
- ☐ Pit Location(s)
- ☐ Photo Location(s)

LEGEND

1A
Pit - No Subsurface Oil

2A
Pit - Subsurface Oil

CT/C
Continuous Distribution

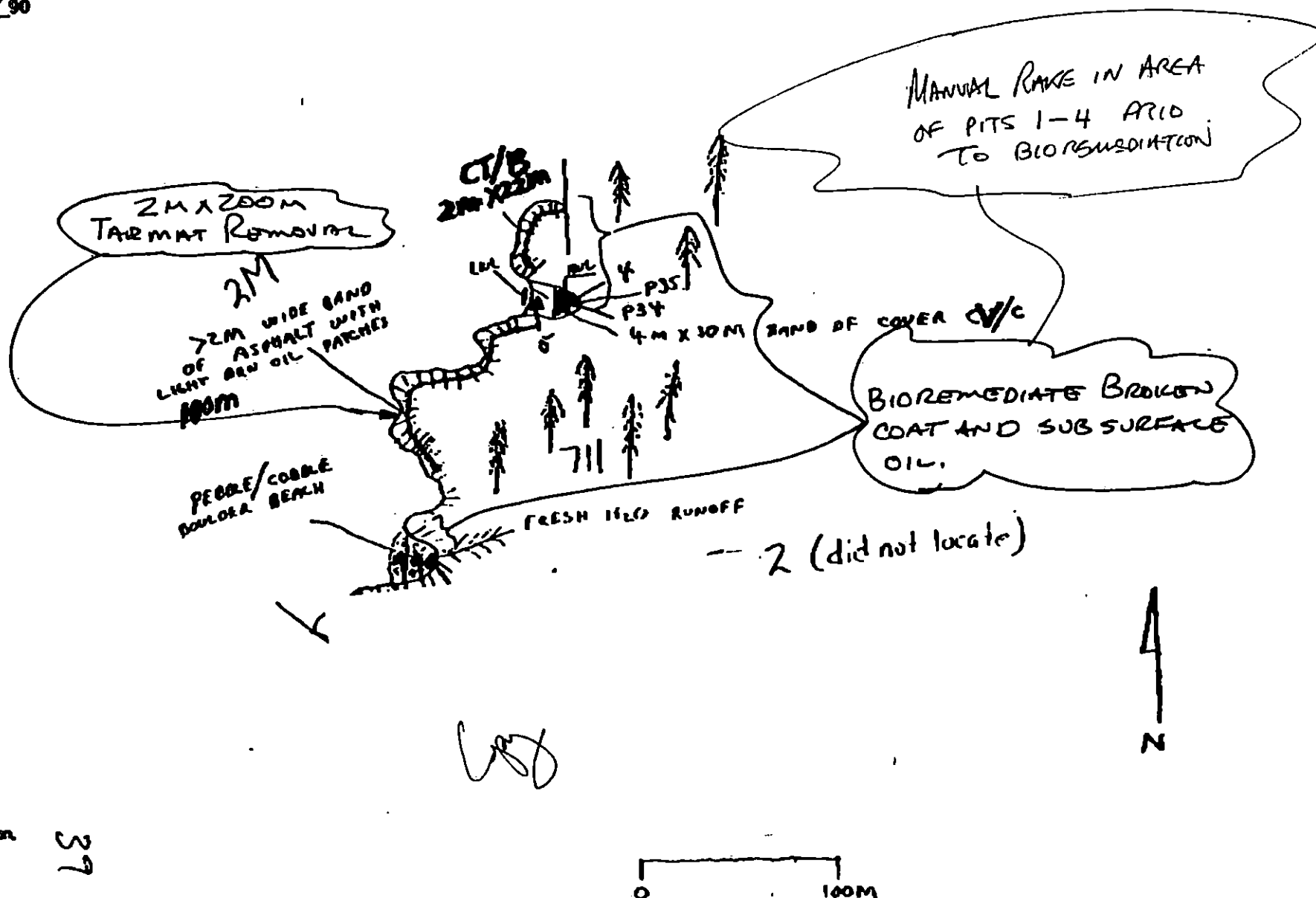
CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oil on Vegetation

1
Photo location, direction, and number



Oil Character Length (m): AP 100 PO CV 30 CT 22 ST MS PT TB FL NO 126

REVISION 02/04/90

SHORELINE ECOLOGICAL SUMMARY

Segment ST-102 Subdivision B Date (mo/day/yr) 3/31/90

Time (24 hr) 1430-1530 Biologist Crank Tide Height +6 → +8
Length: 278m

(A) Substrate type and % of segments:
(1) Bedrock 65 (2) Boulder 15 (3) Cobble 10 (4) Pebble (5) Sand (6) Silt

(B) Overall % cover of biota (% of segment): Dense 40 Moderate 30 Low 30

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

Photographs: 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	X	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
No data here

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
2U, M

GASTROPODS

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

NOT PRESENT

FUCUS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
2	2	2	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
in 3U, M
2U, M

Wildlife Observations/ General Comments:

4 - Bald Eagles - Adults
Otter Scat

Ecological Considerations:

711 - Deer Harvesting
2M - Herring spawning
5T-2 - Bald Eagle Nest

Time: 1230 - 1430

Length:

Tide Height: 42 $\rightarrow$ 46

Species List

Flora

Fauna

HITZ

Fucus
Green Encrustose (Blue Green?)

Littorina
Balanus glandula

MITZ

Fucus
Endocladia
Spongyomorpha
Halosaccion
Cladophora
Lithothamnion
Petrocelus

Mutilus
Littorina
Limpets
Amphipods
Searlesia dira
Anthopleura sp.
Leptostarius sp.
Katharina tunicata

LITZ

Bladed reds - small
Lithothamnion
Ulva
Endocladia

Searlesia
Katharina tunicata

UPRA

Round worm - unidentified

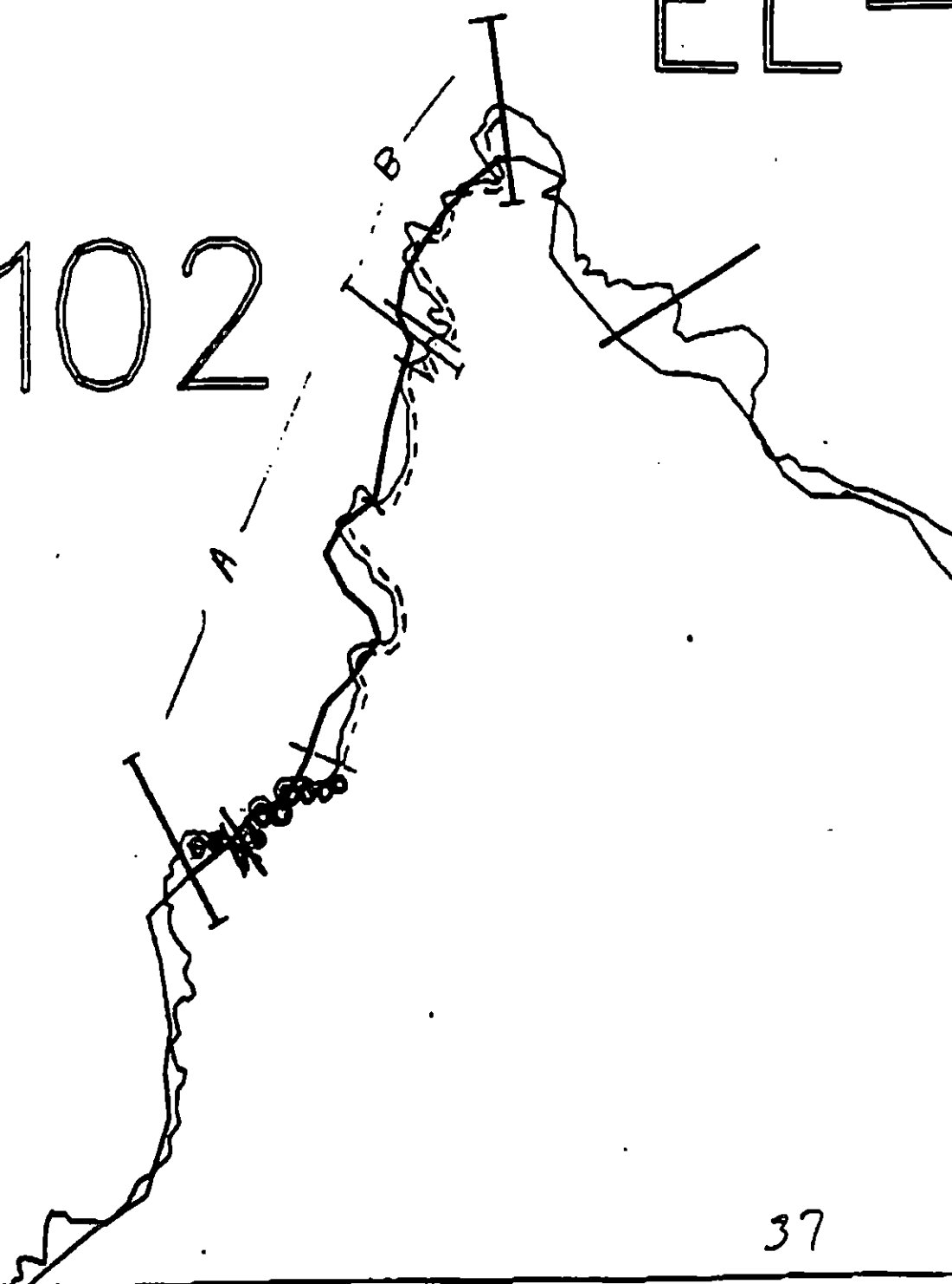
Comments

- Unable to make direct observation of LITZ (Tide Height)
- Dense Searlesia dira population - absence of Nucella
- High Energy $\rightarrow$ low biota on cobble/pebble
- Fresh H₂O runoff flowing under cobble
- Round worm in Supra found at 40cm depth.

Revised 4/6/90

EL-

EL-102



37

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

EL-102

ADEC Segment Length: 1113

0 100 200 300
METERS



Map Key: PWS-122
Name: James Spring
Date: 03/31/90
Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-102 SUBDIVISION B (2 of 2)

WORK WINDOW	
Tarmat Removal	CLOSED
Bioremediation Manual Raking	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M	Herring Spawning	NO CONSTRAINT. Authorized by Claudia Slater/ADF&G on 5/10/90 to Exxon/Tom Kelley.
5T	Bald Eagle Nest	USFWS 6/1/90 map indicates an active nest in Subdivision B. Closed to tarmat removal, manual raking and bioremediation within 400m of active nest.
7II	Subsistence: Deer Harvesting	Closed to bioremediation and manual raking after 8/15. No constraint to tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

DATE 6-10-90

Prepared By: W. Kellen

Date 6/7/90

WORK AREA

EL-101

EL-102

EL-100

EL-103

EL-999



Exxon Company, USA
Map Key: PWS-EL-102

ECOLOGY MAP
SEGMENT EL-102
SUBDIVISION B (1 of 2)
METERS

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

SHORELINE EVALUATION

SEGMENT ST/ EL-103 SUBDIVISION A (1 OF 1) DATE 3/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

Herring spawning (2M) - 4/1 to 6/15; Active bald eagle nests (5T-3) - 3/1 to 9/1; Subsistence area for deer harvesting (7II) - 8/15 to 2/28.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

(2M) Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations. (5T) Restrict air traffic to an essential minimum. Air approach and takeoff from and to seaward only. Contact USFWS prior to treatment for confirmation of dates and avoidance minimums.

SHPO SIGNATURE: Charles E. H. Simon DATE: 4/17/90

DILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 720 m: V.Light 0 m: No Oil 588 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: 4/16/90
ADEC AL HUGHES
EXXON ANDY TATE
NOAA Burt Wescott
USCG G.A. BEITER
FOSC: D.F. Lyle DATE: 4-20-90

FIELD SHORELINE COMMENT SHEET

MENT ST / EL 103 SUBDIVISION: A DATE 4/1/90

USCG

NAME AEC Vandepels SIGNATURE AEC Vandepels

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

I recommend no treatment.

ADEC

NAME Michelle Barr SIGNATURE M Barr

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

a broken stain ^{band} varying from 2 m wide to a 3cm line runs along the R headlands & B beach. The stain ~~runs~~ ^{crosses} some Balanus beds. The degree of staining is light. Therefore, I would recommend no treatment.

LAND MANAGER

NAME DAN LOGAN SIGNATURE Dan Logan

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

SHORELINE OILING SUMMARY

OG J. Springer USCG R. Vandevels SEGMENT STI EL 103
 BIO P. Crook LAND REP D. Logan SUBDIVISION A (1041)
 EXXON T. Tomblin ADEC M. Baer TIME 12:00 to 12:30
 TEAM NO.: 5 TIDE LEVEL: 0 to +1 DATE 03/31/1990
 EST. SUBDIVISION LENGTH: 1414 m ☐ Sun ☐ Clouds ☐ Fog ☐ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☐ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 80 % B 20 % C 0 % 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 700 m VL 0 m NO 714 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	10	20	30	40	50	60	70	80	90	SU	U	M	L
ASPHALT													
PAYEMENT													
POOLED													
COVER													
COAT													
STAIN	✓	✗					✓	✗		✓	✗		
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL										✗	✗	✗	✗

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

Roll No. _____

Frames _____

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-OR)	BELOW		OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UC	50	60	70	80	90	SU	U	M	L		

COMMENTS mostly rock cliffs. Surveyed primarily by boat with one beach landing.

SHORELINE ECOLOGICAL SUMMARY

Segment ST/EL 103 Subdivision A Date (mo/day/yr) 3/31/90
 Time (24 hr) 1200-1230 Biologist Crank
 Tide Height: +0.5 → +
 Length: 1414

- (A) Substrate type and % of segments:
 (1) Bedrock 80 (2) Boulder 20 (3) Cobble (4) Pebble (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: No 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 Harbor Seal - Adult 2 Land Otter - 1 juv, 1 adult
 1 Bald Eagle - Adult
 1 Brown Creeper

Ecological Considerations:

- 711 - Low harvesting
 2M -erring spawning
 5T-2 - Bald Eagle Nest

Seg: EL 103 A
Time: 1200-1230
Height: +0.5 → +2 ft

Biologist: Crank
Length:

Species List

Flora

Fauna

Littorina
Limpets
Balanus sp.

HITZ

Endocladia
Ralphsia
Cladophora
Filamentous reds
Fucus

Plaster
Serpulid worm
Bryozoan
Littorina
Limpets
Mytilus

MITZ

Halosaccion
Endocladia
Syrtosiphon
Filamentous Red algae
Fucus

LITZ

sn. Bladed reds
Filamentous reds
Alaria
Laminaria
Plocamium
Enteromorpha
Rhodamela larix
Bossiella

Littorina
Limpets
Dermasterias

Comments

- Did not see Eagle Nest
- Segment surveyed from skiff, vertical rock face and large, steep bowl
- Upper sub-tidal dense Laminaria
- Fucus stipes in HITZ
- Unable to make Mytilus spat determination from skiff
- Moderate barnacle scarring in MITZ
- Area appears healthy

OG J. S. IGER

SEGMENT 51103

SUBDIVISION A

DATE 03/31/90

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Beg/End Entry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. H/W/L/WL
- ☒ SSL
- ☐ 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

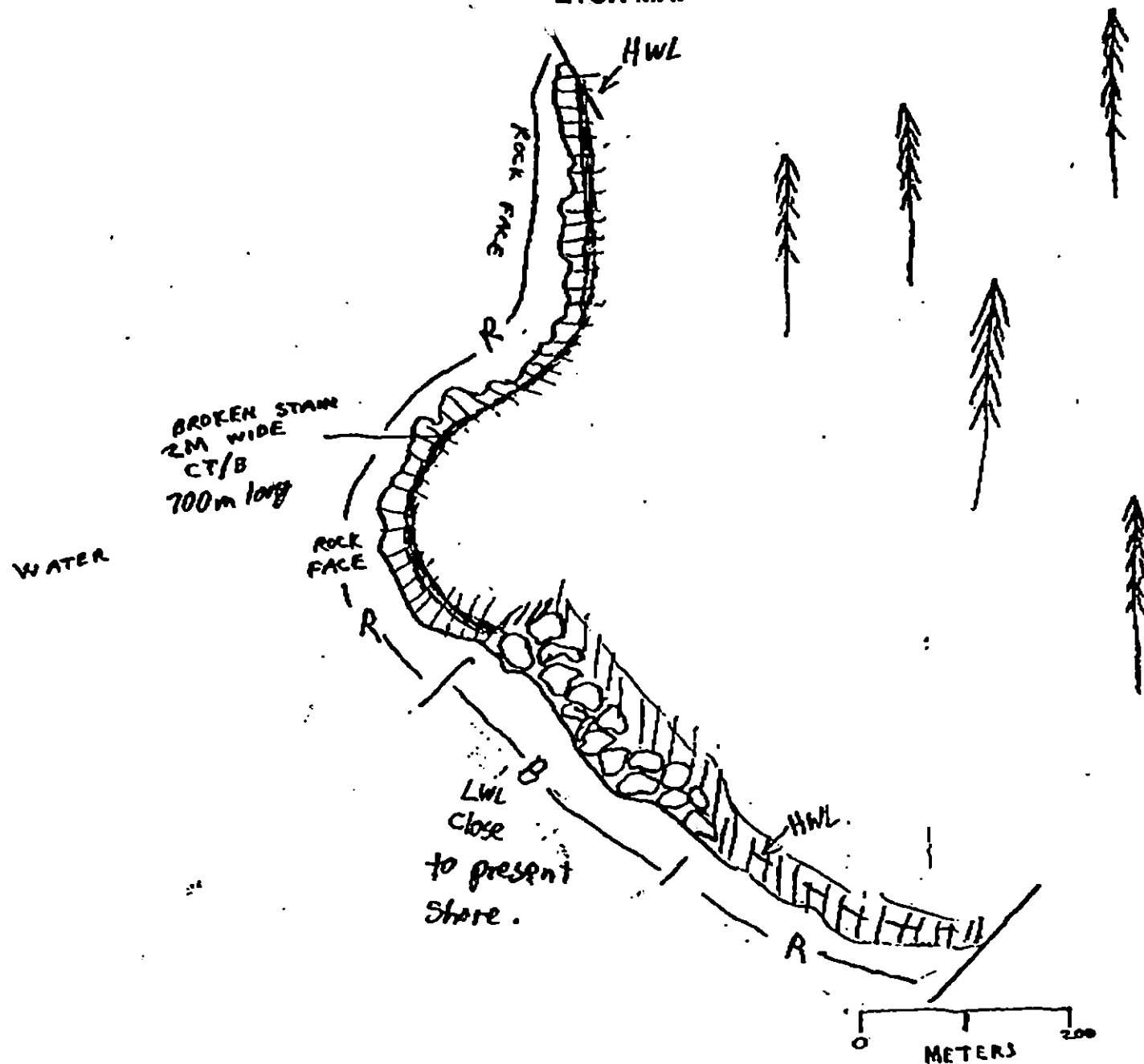
Splashed Distribution

Oil Vegetation

1 →

Photo location, direction,
and number

ETCH MAP



Oil Character Length (m): AP — PO — CV — CT — ST 700 MS — PT — TB — FL — NO 714

REVISION:000000

25

Rock
cliffs

Boulders/
Rock Upland

Rock
cliffs

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

EL-103

ADEC Segment Length: 1414

0 100 200 300

Map Key: PWS-123

Name: James Spring

Date: 03/31/90

Date Entered:

SHORELINE EVALUATION

SEGMENT ST/ EL-104 SUBDIVISION A (1 OF 4) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
5T-2 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
7HH Subsistence area: Finfish harvesting
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7Z Subsistence area: Salmon harvesting (5/1 to 9/30)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 14 m: Narrow 0 m: V.Light 0 m: No Oil 233 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> Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 4/26/80.
ADEC JOHN BAUER
EXXON ANDY GALT
NOAA GARY PETERSON
USCG KENNETH KEANE

FOSC: 4 1 DATE: 5-12-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
- 1D Esther Hatchery release (4/15 to 6/1)
- 1E Main Bay Hatchery release (4/20 to 5/10)
- 1F Sawmill Bay Hatchery release (4/15 to 6/1)
- 1G Cannery Creek Hatchery release (4/21 to 6/1)
- 1H Remote release site
- 1I Gill net area (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 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.
- 6J 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 Subistence 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 1 E404 SUBDIVISION: A DATE 04/04/90

USCG

NAME AEC Vandepels SIGNATURE AEC Vandepels

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

I suggest bio. if this beach is accessible

ADEC

NAME Michele Baer SIGNATURE mbaer

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

Most of the segments 104 and 105 consist of patches that require fertilizer application. I would recommend a 1-2 man operation cover these areas applying fertilizer in the areas indicated on the maps.

This beach had a 5m x 10m CT/P. The coat was lite on the C, B beach. Bioremediation is recommended. (Refer to photos #9 & #10).

LAND MANAGER

NAME DAN LOGAN SIGNATURE Dan Logan

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

I RECOMMEND FERTILIZER APPLICATION TO THE 5M X 10M PATCH CT/P

SHORELINE OILING SUMMARY

REVISION NO. 06/28/90

OG J. Springer USCG R. Vandepels SEGMENT ST/ EL 104
 BIO P. Crank LAND REP D. Layan SUBDIVISION A (104)
 EXXON T. Temple ADEC M. Baer TIME 15:00 to 15:20
 TEAM NO.: 5 TIDE LEVEL: +3 to +2 DATE 04/04/90
 EST. SUBDIVISION LENGTH: 310 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock Pillow Lava
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 80 % B 10 % C 10 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 10 % Hang 70 % Vert 20 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 10 m N 0 m VL 0 m NO 300 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	10	15	20	25	30	35	40	45	50	SU	IN	ME	U
ASPHALT PAVEMENT													
POOLED													
COVER													
GOAT			X					X			X		
STAIN													
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL										X	X	X	

PAVEMENT: H F S 0 sq. m by 0 mPATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

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

DEBRIS COLLECTED

☐ YES ☒ NOTYPE 0#BAGS 0

Photographs:

Roll No. ST-5-3Frames 9-11

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	CP	NO		VO	VC	30	35	40	45	50	SU	IN	ME	U		
							.													
							.													
							.													
							.													
							.													
							.													
							.													

COMMENTS

No test pits. - boulders.

12

7W

00 J. INSEK

SEGMENT ST/EL-104

SUBDIVISION A

DATE 04/04/90

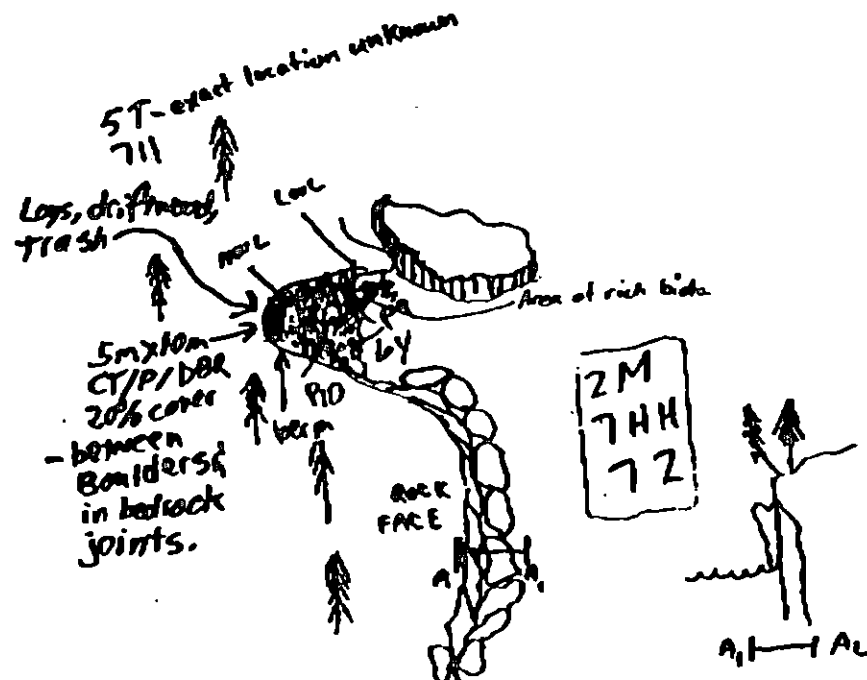
CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Sep/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☒ % Cover
- ☒ Substrate Character
- ☐ Est. 100% L.A.V.L.
- ☒ VESL
- ☒ Slope Location(s)
- ☒ Profile(s)
- ☐ Pit Location(s)
- ☒ Photo Location(s)

LEGEND

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

SKETCH MAP



Oil Character Length (m): AP 0 PO 0 CV 0 CT 10 ST 0 MB 0 PT 0 TB 0 FL 0 NO 300

SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/20/90

Segment ST 104 Subdivision A Date (mo/day/yr) 4/4/90
 Time (24 hr) 1510-1540 Biologist Crank Length 310m Tide Height +2.5 to +2 pg 101

- (A) Substrate type and % of segments:
 (1) Bedrock 80 (2) Boulder 10 (3) Cobble 10 (4) Pebble (5) Sand (6) Silt
- (B) Overall % cover of biota (% of segment): Dense 20 Moderate 30 Low 50
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (3)

Photographs:
 Roll No. ST-5-3

Frames 1, 11

BARNACLES

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

1, 3

Wildlife Observations/ General Comments:

Bald Eagle - Adult

Sm unidentified Shorebird

Ecological Considerations:

6Y - Special Use Destination

2M - Herring Spawning

ST-2 - Bald Eagle Nest - not observed

7M - Deer Harvesting

7H - Finfish Harvesting

7Z - Salmon Harvesting

LITZ - unexposed

Heavy barnacle scarring on 1, 2, 3 U1Z: M1Z

In angular cobble, lots of gastropod shells, rare living individuals.

1, 2, 3 covered with flora, sparse fauna, throughout most of subdivision. However, behind boulder (marked on OG map) fauna is rich and recruitment high. In most of subdivision the predominant flora are invader species.

14

SEGMENT-ST/ 104 SUBDIVISION A LENGTH 312 m BIOLOGIST Crank

DATE 4/4/92 TIME 1510-1540 TIDE HEIGHT +2.5 → +2

$$F_2 \cdot f_2$$

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

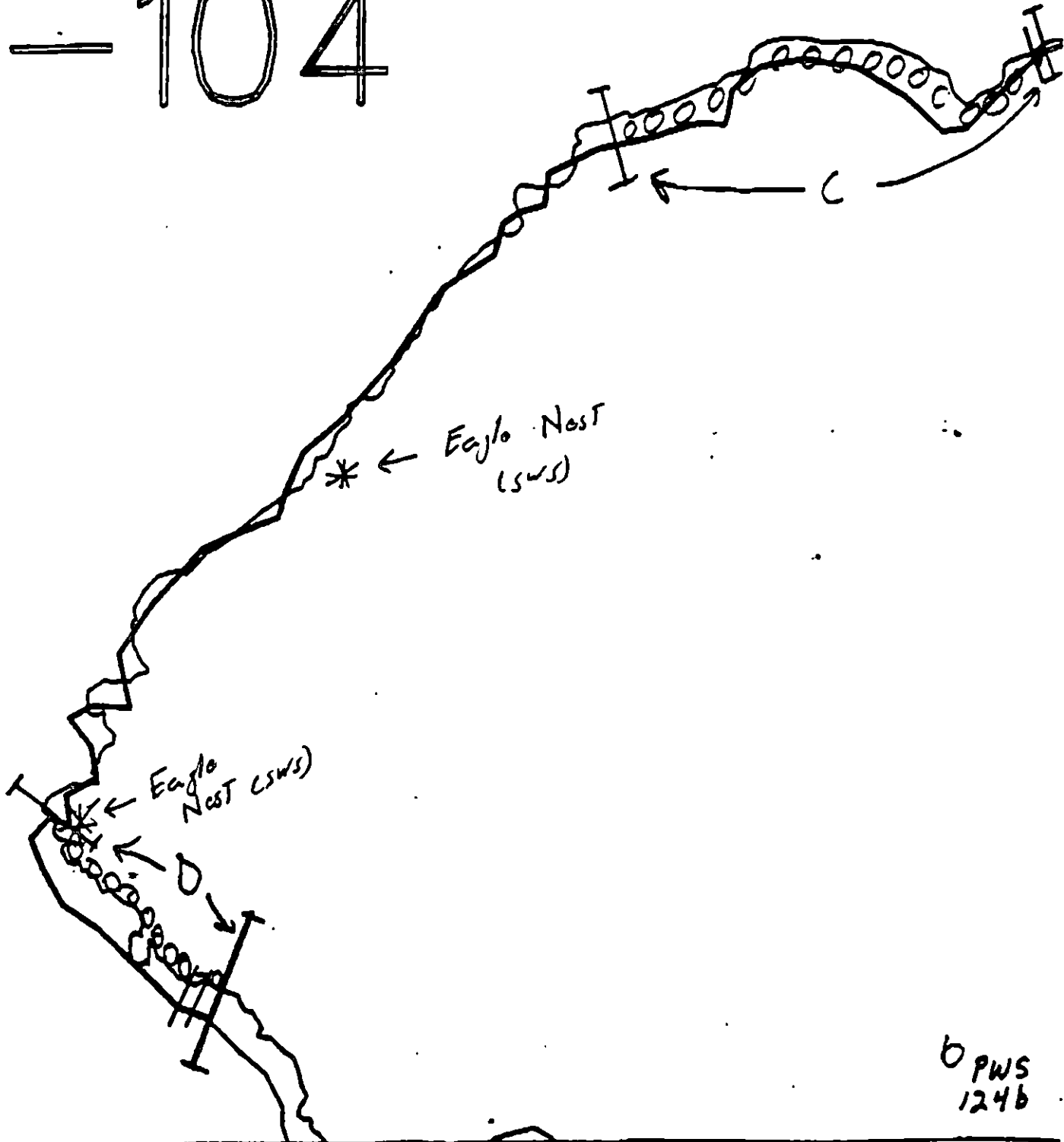
	SPECIES	UTZ	MITZ	LITZ	COMMENTS	
FLORA:	BOSSIELLA CORALLINA					
	CALLIARTHRON CORALLINA					
	CLADOPHORA SPP					
	COSTARIA SPP					
	ENDOCLADIA MURICATA					
	FILAMENTOUS GREENS	123	123	2		
	FILAMENTOUS REDS					
	GLOIOPELTIS PURCATA					
	HALOSACCION GLANDIFORME	1			Tidepool	
	LAMINARIA SPP					
	LITHOTHAMNION					
	NEREOCYSTIS SPP					
	PORPHYRA SPP	12	12			
	RALPHSIA HILDENBRANDIA		2			
	RHODOMELA LARIX					
	RHODOMENIA PALMATA					
	SCYTOSIPHON SPP		21			
	ULVA SPP		1			
	ZOSTERA MARINA					
	Enteromorpha		1			
	Potamogeton		2			
	FAUNA:	ANTHOPELEURA SPP				
		(SEM) BALANUS CARIOSUS				
B. GLANDULA						
BRYOZOANS			2			
CHITONS (OTHER THAN K. TUNICATU)						
CLAMS						
CRABS						
DERMASTERIAS FABRICATA						
KATHARINA TUNICATA						
LEPTASTERIAS HEXACTIS						
LIMPETS						
LITTORINA SPP		1	123			
NUCELLA SPP						
PAGURUS SPP			2			
PISASTER OCHRACEUS						
POLYCHAETES						
PYGNOPODIA HELIANTHOIDES						
SEARLESIA DIRA						
SERPULIDS						
SIPHONARIA THORSITES						
TEALIA						

15

ECOLOGY MAP

200

L-104



b PWS
124b

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

EL-104

ADEC Segment Length: 4428

0 100 200 300

Map Key: PWS-124a

Name: J. Springer

Date: 04/04/90

Date Entered:

FWS
124D

EL-105

← PWS
124a

5

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No. 0:1

EL-104

ADEC Segment Length: 4428

0 100 200 300

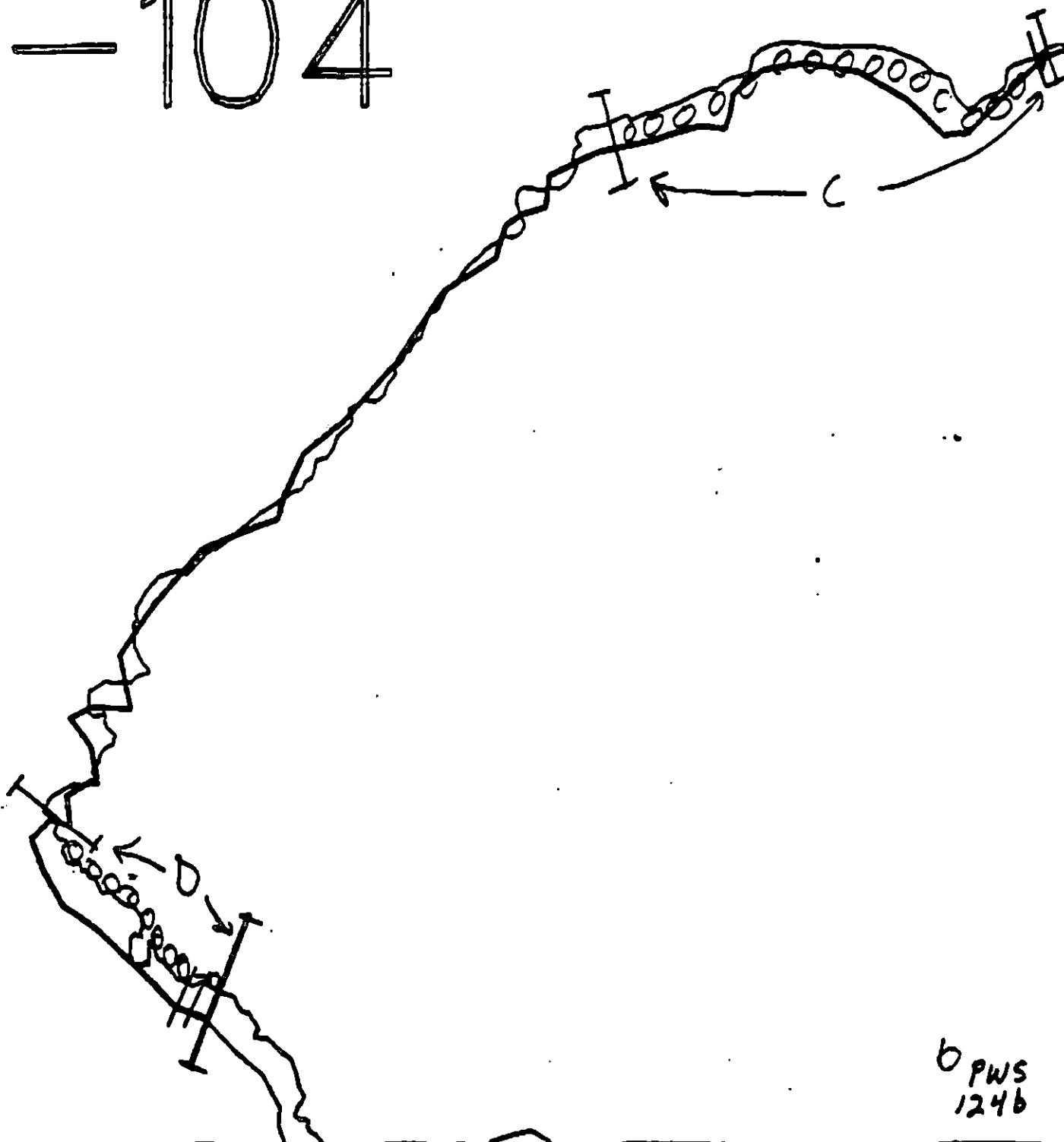
Map Key: PWS-124b

Name: J. Springer

Date: 04/04/90

Date Entered:

200



b PWS
1246

EL-104

ADEC Segment Length: ~~4428~~ ⁴⁴²⁸

4

AAAAAAAAA

Name: J. Springer

Date: 04/04/70

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ EL-104 SUBDIVISION B (2 OF 4) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
5T-2 All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
7HH Subsistence area: Finfish harvesting
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide 0 m: Medium 20 m: Narrow 35 m: V.Light 0 m: No Oil 154 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> Removal	☐ Beach Cleaner
	☐ Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/26/90
ADEC JOHN BAUER
EXXON ANDY TEAL
NOAA GARY PETRAE
USCG KENNETH KENNER
FOSC: [Signature] DATE: 5-12-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

USCG

NAME _____ SIGNATURE _____

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

I recommend no treatment.

ADEC

NAME Michele Baer SIGNATURE Michele Baer

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

An area of debris^{OT/B} (7x5m) is trapped behind the upper BS in the Uitz. The beach is a V-notch and is difficult to access. Burning is unrealistic for this area due to the inability to control where the burning oil flowed to below. Manual removal of the debris and the upper surface layer w/shore would be the best option. Please refer to photos #12 and #13 prior to deciding on sending people into this area.

LAND MANAGER

NAME DAN LOGAN SIGNATURE Dan Logan

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

THIS IS A VERY HIGH ENERGY BEACH AND DIFFICULT/DANGEROUS TO ACCESS ON ANYTHING OTHER THAN A FLAT CALM DAY. THE OILED DEBRIS IS NOT VISIBLE FROM THE WATER, THE OILED DEBRIS COULD BE REMOVED ON A HIGH TIDE WITH GOOD WEATHER. THIS IS A LOW PRIORITY.

SHORELINE OILING SUMMARY

REVISION NO. 06/23/90

OG J. Springer USCG R. Vandepels SEGMENT ST/ EL 104
 BIO Creek LAND REP D. Logan SUBDIVISION B (2 of 4)
 EXXON T. Tamblin ADEC M. Baer TIME 15:15 to 16:05
 TEAM NO.: 5 TIDE LEVEL: +2 to +1 DATE 04/04/90
 EST. SUBDIVISION LENGTH: 145 m ☐ Sun ☐ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock Pillow lava
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 85 % B 10 % C 5 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 5 % Hang 10 % Vert 85 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 7 m N 40 m VL 0 m NO 98 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	R	B	P	S	1	2	3	4	5	SU	U	ME	U
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			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE 6#BAGS 0

Photographs:

Roll No. ST-5-3Frames 12, 13

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm-0.08)	BELOW	OIL / FILM COLOR					PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO			1	2	3	4	5	SU	U	ME	U		

COMMENTS

SEGMENT EL-104

SUBDIVISION B

DATE 04 104 /90

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Sep/Sub Endry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HWA/LWA
- ☒ 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

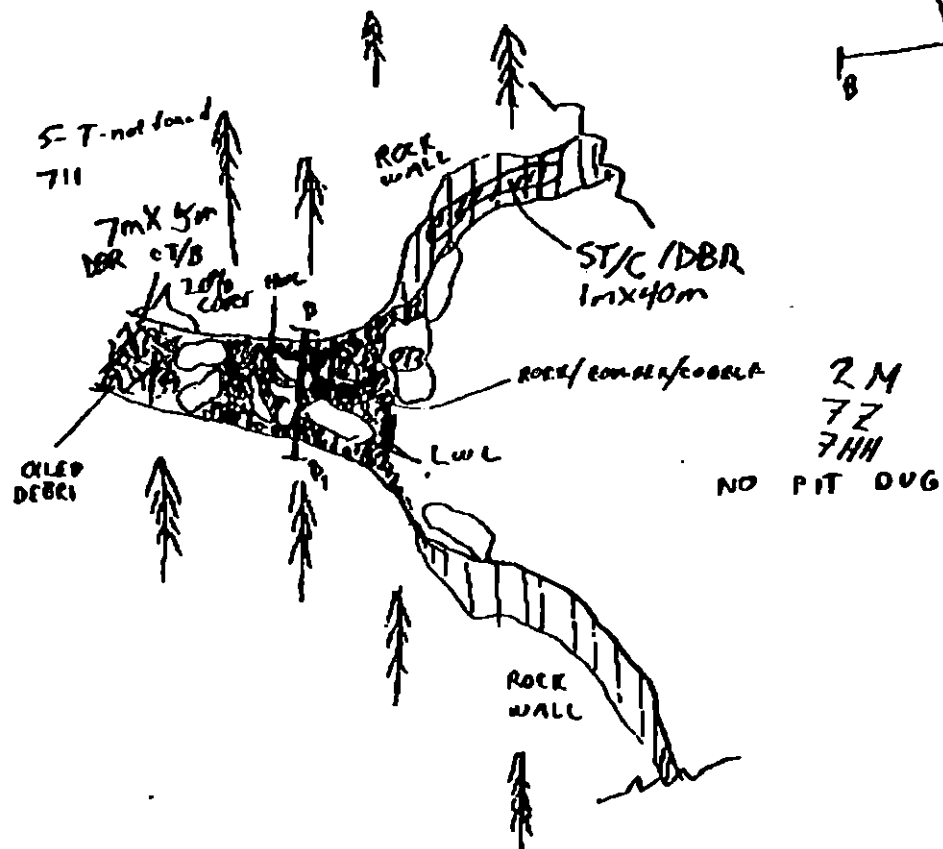
Splashed Distribution

Oil Vegetation

1 →

Photo location, direction,
and number

SKETCH MAP



Oil Character Length (m): AP _____ PO _____ CV _____ CT 7 ST 40 MS _____ PT _____ TB _____ FL _____ NO 98

REVISIONS

SHORELINE ECOLOGICAL SUMMARY pg 1 of 2

REVISION: 08/08/90

Segment ST / 104 Subdivision B Date (mo / day / yr) 4/4/90

Time (24 hr) 1540 - 1610 Biologist Crank Tide height +2.3 ± 1.5

Length 145m

(A) Substrate type and % of segments:
(1) Bedrock 85 (2) Boulder 10 (3) Cobble 5 (4) Pebble (5) Sand (6) Silt

(B) Overall % cover of biota (% of segment): Dense 40 Moderate 30 Low 30

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

Photographs: 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	X	2	2	2	2	2	2	2	2	
3	3	3	X	3	3	3	3	3	3	3	3	NOT PRESENT
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	3

MYTILUS

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

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

Marine mammal vertebrates (sm seal or lg otter?)

- 50% U/TZ barnacle mortality on bedrock faces in oil band
- Difficult human access area

Debris collection picker for drift logs.
Recruitment is higher for barnacles and gastropods.

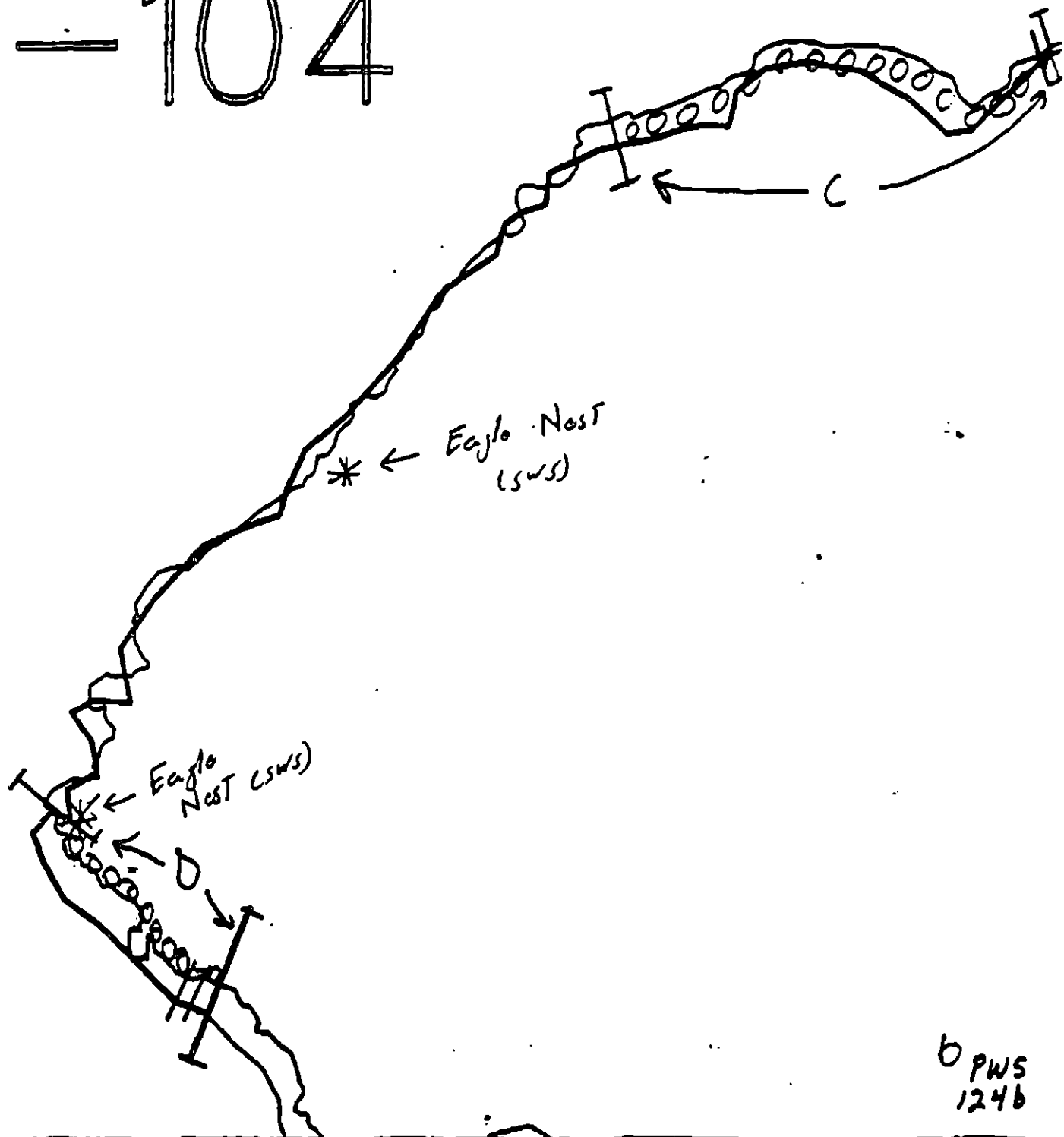
Ecological Considerations:

- 711 - Deer Harvesting
- 72 - Salmon Harvesting
- 7HH - Finfish Harvesting
- ST - Bald Eagle Nest - unable to locate
- ZM - Herring Spawning

ECOLOGY
MAP

L-104

200



b pws
124b

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

EL-104

ADEC Segment Length: ⁴⁴²⁸~~4100~~



Map Key: PWS-124a

Name: J. Springer

Date: 04/04/90

Note Entered:

FWS
124D

EL-105

← PWS
124a

5

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 N - 000

EL-104

ADEC Segment Length: 4426

0 100 200 300

Map Key: PWS-124b

Name: J. Springer

Date: 04/04/90

Data Entered:

SHORELINE EVALUATION

SEGMENT ST/ EL-104 SUBDIVISION C (3 OF 4) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M	Herring spawning (4/1 to 6/15)
5T-2	All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y	Recreation: Special use destination
7HH	Subsistence area: Finfish harvesting
7II	Subsistence area: Deer harvesting (8/15 to 2/28)
7Z	Subsistence area: Salmon harvesting (5/1 to 9/30)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. Do not trample or otherwise damage mussel beds.

SHPO SIGNATURE: Charles E. Stone

DATE: 4/28/90

OILING CATEGORIZATION:

Wide 0 m: Medium 6 m: Narrow 0 m: V.Light 0 m: No Oil 523 m
Subsurface Oil Observed: Yes ☒ No ☐ Maximum Depth 20+ cm

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: Recommended treatment includes 1) bioremediation of the east end area of subdivision EL-104-C. Work should be conducted after 6/15 based on herring constraints after consulting with USFWS and ADF&G regarding eagle nest and CVC regarding subsistence harvesting times.

TAG COMMENTS:

TAG APPROVAL DATE:

ADEC	John Bdnor	John Bdnor
EXXON	Andy TCA	Andy TCA
NOAA	Gary Petrus	Gary Petrus
USCG	Kenneth Mearns	Kenneth Mearns

FOSC:

DATE: 5-12-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

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

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

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

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

- 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

- 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 104 SUBDIVISION: C DATE 4-4-90

USCG

NAME AEC Vandepels SIGNATURE AEC Vandepels☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED*I suggest bio.*

ADEC

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

A 10m x 7m CT/B lies in the second pocket C, B, P, G beach. The pit in this section revealed OR down to 20 cm with the UL. The large B's make it difficult to pickax the patch up, therefore an initial application of fertilizer followed with a 2nd application in August would help penetrate into the surface layer (underlying the B's). If possible, removal of the larger B's and pickax of the underlying area ^{prior to application} would be even better.

LAND MANAGER

NAME DAN LEEAN SIGNATURE Dan Leean☐ NO TREATMENT RECOMMENDED
COMMENTS☒ TREATMENT SUGGESTED

I RECOMMEND HAND TILLING AND FERTILIZER APPLICATION TO THE 10M x 7M CT/B PATCH.

SHORELINE OILING SUMMARY

REVISION NO. 001

OG J. Springer USCG R. Vandepels SEGMENT ST/ EL 104
 BIO P. Crank LAND REP D. Logan SUBDIVISION C (3 of 4)
 EXXON T. Tomblin ADEC M. Baer TIME 16:10 to 17:00
 TEAM NO.: 5 TIDE LEVEL: +1.5 to +1.5 DATE 04/04/90
 EST. SUBDIVISION LENGTH: 550m ☐ 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 60 % B 20 % C 10 % P 7 % G 3 % S 0 % M 0 % V 0
 SLOPE: Lang 10 % Hang 40 % Ven 60 % WAVE EXPOSURE: ☐ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 10 m N 0 m VL 0 m NO 540 ft

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	W	M	N	VL	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 0PATTIES / 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. 5T.5-3Frames 14, 15

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm-OR)	BELOW		OIL / FILM COLOR								PIT ZONE	A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UD	UC	1	2	3	4	5	6	7	8			
1	20		X				0-20	X							X			X		BC P6
2	30					X	.		X									X		CP
							.													
							.													
							.													
							.													

COMMENTS

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/22/

Segment ST 104 Subdivision C Date (mo / day / yr) 4/4/90
 Length 550m
 Time (24 hr) 16:10-17:00 Biologist Crank Tide Height +1.5 pg 1 of 2

- (A) Substrate type and % of segments:
 (1) Bedrock 100 (2) Boulder 20 (3) Cobble 10 (4) Pebble 7 (5) Sand 3 (6) Silt
- (B) Overall % cover of biota (% of segment): Dense 50 Moderate 30 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-5-3
 Frames 14

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 3
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:

1 Eagle - Adult
 8 Crows
 1 Magpie
 1 Harbor Seal
 1 Cormorant

Ecological Considerations:

2M - Herring Spawning
 7H - Deer Harvesting
 7Z - Salmon Harvesting
 7M - Finfish Harvesting
 5T - Eagle Nest - not observed.

Subdivision is a high recruitment area
 • Mussels are in discontinuous dense patches
 • Most of LTR: unexposed.
 • Subdivision appears healthy.

9

SEGMENT: ST/ 104 SUBDIVISION C LENGTH 552 m BIOLOGIST Cronk

94 2 of 2

DATE 4/4/94 TIME 1610 - 1700 TIDE HEIGHT +1.5

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

FLORA:

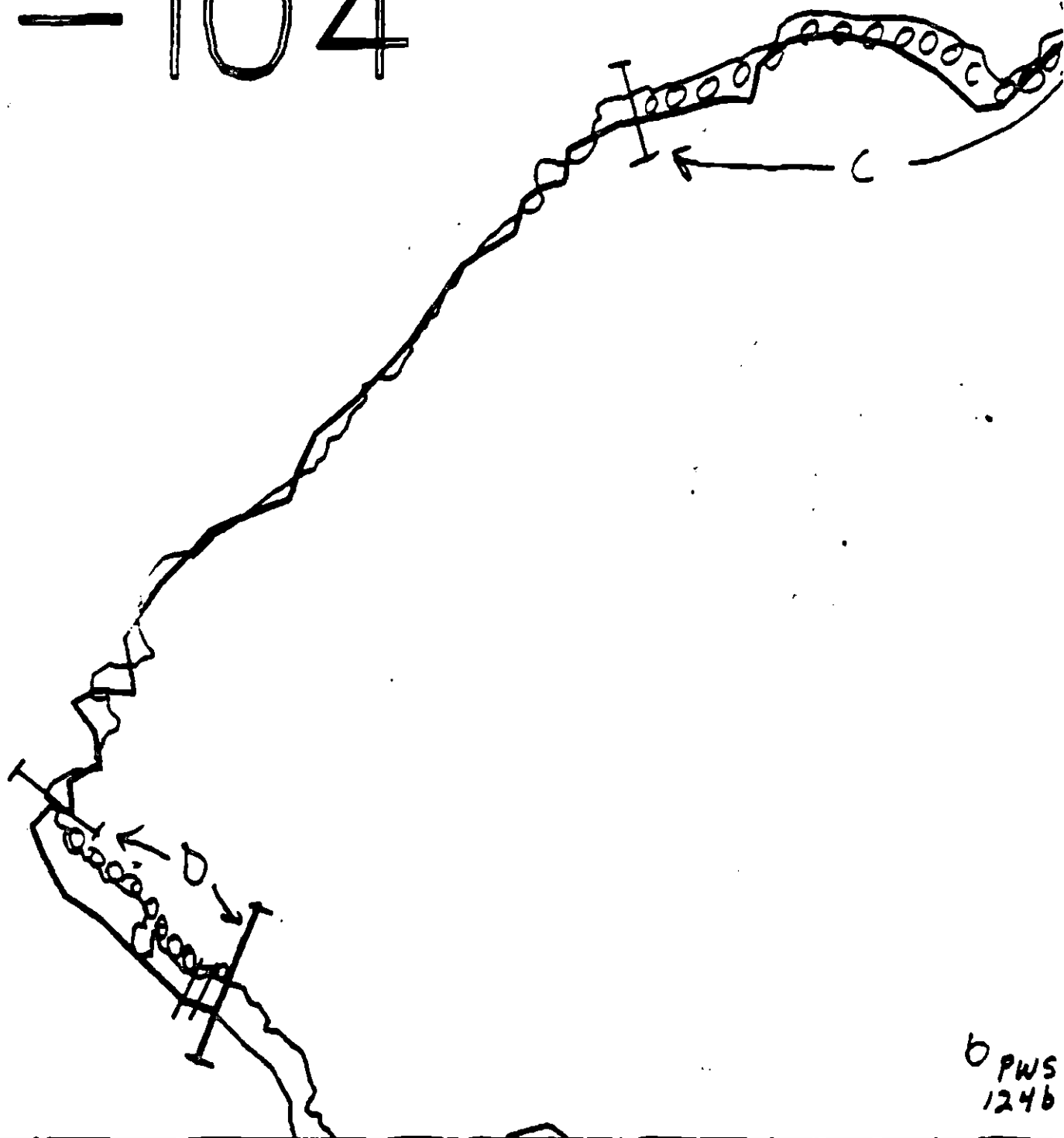
SPECIES	LITZ	MILTZ	LITZ	COMMENTS
BOSIELLA/CORALLINA				
GALLIARTHURON/CORALLINA				
CLADOPHORA SPP		1		
COSTARIA SPP				
ENDOCLADIA MURICATA				
FILAMENTOUS GREENS	1	1	123	
FILAMENTOUS REDS	1	21	213	Dense
GLOIOPELTIS FUSCATA		1		Scattered
RALOSAOCION GLANDIFORME		12		
LAMINARIA SPP				
LITHOTHAMNION	1	1		
NEREOCYSTIS SPP				
PORPHYRA SPP	1	12	2	
RALPHSIA/HILDENBRANDIA	12	21	32	
RHODOMELA LARIX	1	1	23	
RHODOMERIA PALMATA		1	231	
SCYTOSIPHON SPP	1	1		
ULVA SPP				
ZOSTERA MARINA				
Chloromorpha		7	251	
Alaria			21	
ANTHOPLURA SPP				
(SEM) BALANUS CARINATUS		1	12	
B. GLANDULA	1	1	1	
BRYOZOANS				
CHITONS (OTHER THAN K. TUNICATU)				
CLAAMS				
CRABS				
DERMASTERIAS IMPLICATA		1		
KATHARINA TUNICATA	1	2		Vedical? Medline?
LEPTASTERIAS HEXACTES				
LIMPETS	1	1	23	Heteropoda + other molluscs
LITTORINA SPP	1	1	123	
NUCELLA SPP				
PAGURUS SPP				
PISASTER OCHRACEUS				
POLYCHAETES				
PYDNOPODIA MELANTHODESS				
SEPIARIA DIRA				
SERPULIDS				
SIPHONARIA THIBSIDES	1	1	12	Dense concentrations
TEALIA				
Eel-jurata	2.	3		

FAUNA:

12

L-104

200



b PWS
124b

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

EL-104

ADEC Segment Length: 4428



Map Key: PWS-124a
 Name: J. Springe
 Date: 04/04/70
 Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-104 SUBDIVISION C (3 of 4)

WORK WINDOW

Bioremediation

WORK PRIOR TO 7/1

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M Herring Spawning

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

5T Bald Eagle Nest

NO CONSTRAINT. USFWS 6/1/90 map indicates no active nest within 400m of Subdivision C work site.

7HH Subsistence: Finfish Harvesting

Closed to bioremediation after 7/1

7II Subsistence: Deer Harvesting

Closed to bioremediation after 8/15.

7Z Subsistence: Salmon Harvesting

Closed to bioremediation after 7/1.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

[Signature]

Date

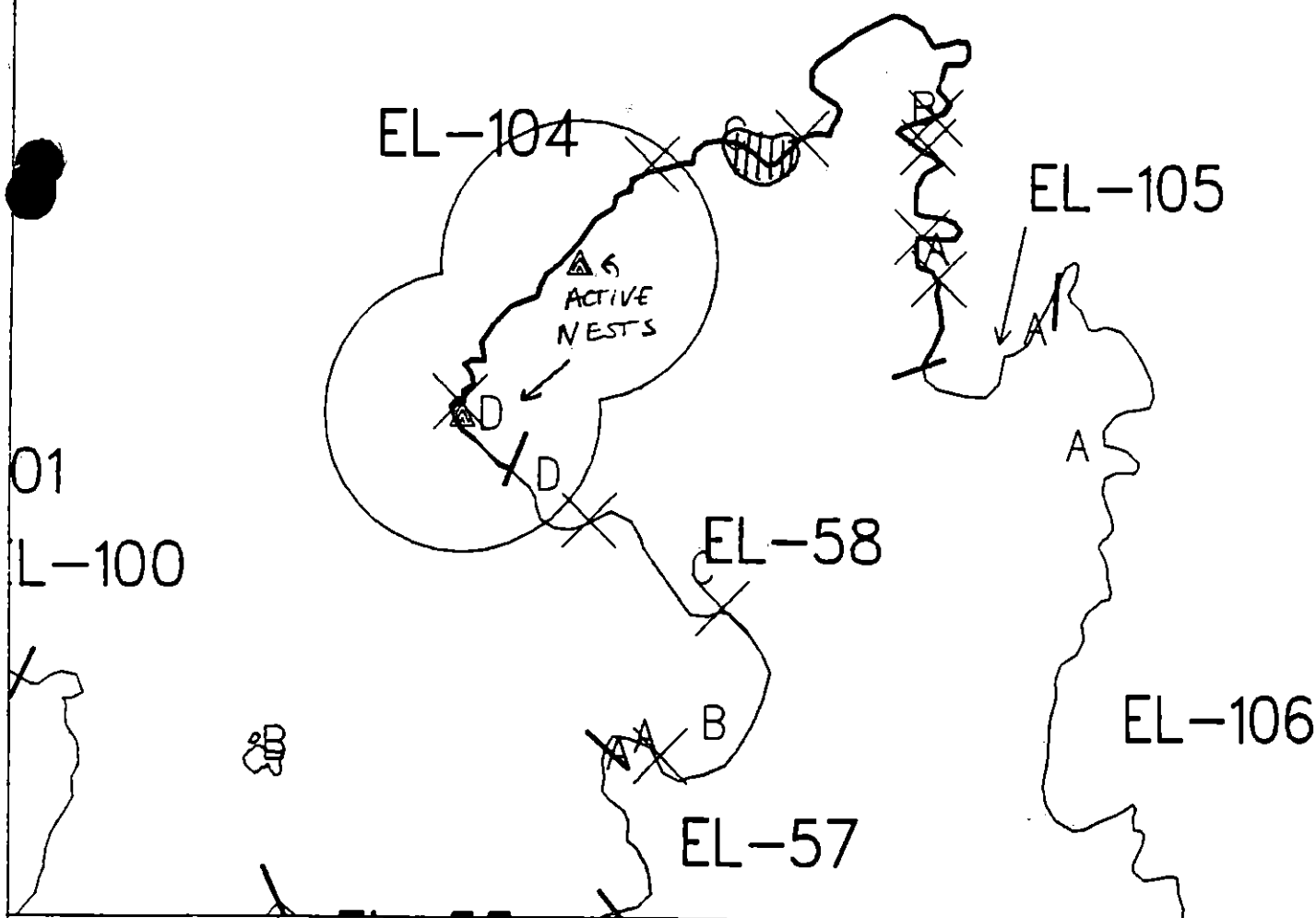
6-10-90

Prepared by

WTKelley

Date

6/9/90



Exxon Company, USA

Map Key: PWS-EL-104

June 04, 1990

ECOLOGY MAP

SEGMENT EL-104

SUBDIVISION C (3014)

METERS



Seabird Colony



Active Eagle Nest



Inactive Eagle Nest

ASAP FOLLOWUP RECOMMENDATIONS

Segment: AS/ EL-104 Subd.: C Site: 1 Date: 8/8/90 1990

Conditions Observed: Bedrock / Boulder / cobble beach. OR/OP sediments
present 0-10 cm in a 20 cm pit. AREA is located at the UITE.
All observations made me believe there was a band thru
OUT the UITE.

Followup Recommendations: Manually remove heavy SOR / OP
Sediments. Manually Till area and add Custom blend.

Completed by Pickup ☐ YES ☒ NO
 Crew:

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

ADEC Wesley Gibboney Wesley Gibboney
 (name) (signature)

Comments: The above recommendation is followed will put
this beach back in fairly good shape. A follow up
reassessment should follow in 1991.

Exxon REY SOTEL Rey Sotel
 (name) (signature)

Comments: Pick-up heavily oiled sediments and apply custom blend.

USCG PSI LEO BERSOLANA
 (name)

NOAA ART WEINER
 Comments:

(signature)

REMOVE ACCESSIBLE HEAVY SOR - REAPPLY CUSTOM BLEND.

THIS IS A MODERATE PRIORITY PROBLEM FOR 1990.

Land Rep. JOHN EBEL
 (name)

(signature)

Comments: I CONCUR W/ RECOMMENDATION. REMOVE ALL SPILL DEBRIS FROM SITE.
RECOMMEND TO ROLL BOULDERS / COBBLES - SMALL ENOUGH - 12" SIZE (BASKETBALL OR
SMALLER) TO SCRAPE COVERS EXPOSE SEDIMENTS TO CUSTOM BLEND + TO WEATHER.

ASAP TAG REVIEW SHEET

Segment: EL 104

Subd: C Site: 1

Date
PRE-Review 14 Aug 90

Priority For Addressing In 1990

☒ HIGH

☐ MEDIUM

☐ LOW

☒ NTR

Treatment
Recommended:

NTR

Only patchy sol.

Plt 1/2 of oil But

0-15 cm
0-10 cm } "same as sol" ??

Priority Site For Reassessment In 1991

YES

NO

CG

☒

YES

NO

ADEC

☒

YES

EXXON

NO

YES

LAND MGR

NO

☒

TAG 15 AUG 90

BIO

& reassess 91

FIELD SHORELINE COMMENT SHEET

RETURN TO: B

SEGMENT AS/ EL104 SUBDIVISION: C SITE: 1 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:

SMALL AMOUNT OF REMAINING OIL.

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley 

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

To assess the effectiveness of custom blend on subsurface oil.

LAND MANAGER

NAME John Ebel SIGNATURE John Ebel

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

To evaluate the effectiveness of bio treatment.

EXXON

NAME Ray Sotelo SIGNATURE Ray Sotelo

☐ YES

☒ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

No reassessment should be necessary on this site in '91.

TEAM NO. 1
 CG CLIPNEY
 ADEC GHORMLEY
 DATE AUG 18 1990

EXXON SC TELO
 USCG WEINER/BERSALONA
 LAND REP EBEL, JOHN (CNR)
 TIME 09:50 to 10:30

SEGMENT AS EL-104
 SUBDIVISION C
 TOTAL NO. SITES 1
 TIDE LEVEL -1.5 to -1.5

TOTAL EST LENGTH OF SHORELINE SURVEYED: 12 m

SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WEATHER: ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Sn
 OIL CATEGORY LENGTH: W — m M — m N 12 m VL — m NO — m US 516 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		X		
COAT				X		X		
STAIN								
MOUSSE								
PATTIES/T.B.								
FILM								
NO OIL					X		X	X
EST. SITE LENGTH					12			

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								

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 (cm)	CLEAN BELOW (Y/N)	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS
			OP	OR	OF	NO			SU	UI	MI	LI	
1	1	15	X	X			0-15	N		X			BCG-BCG
1	2	20	X	X			0-10	Y		X			BCG-BCG
1	3	20				X	.	Y		X			P-PR
1	4	25				X	.	Y		X			P-PR
							.						
							.						
							.						
							.						
							.						

Photographs: ASAP*

Roll No. Roll #2

Frames 33, 34

REVIEWED
 8/11/90 Y/L

COMMENTS Custombldr is present. This is a very small site and is difficult to locate from offshore due to the barrier rocks offshore. Large boulders shield most of the site. More oil may be present under these boulders. Very little oil was observed in the region which was supposed to have 50% cover. It seems unlikely that the

SEGMENT 11 EL-104
SUBDIVISION C SITES 1-2
DATE 6/18/90

CHECKLIST

☐ M Area
☐ Approx. Scale
☐ Supplied Data
☐ Oil Out
☐ Oil In
☐ Length
☐ % Cover
☐ Substrate Character
☐ F. of 1000 L/ML
☐ SCL
☐ Profile Location(s)
☐ Profile(s)
☐ F. of 1000 L/ML
☐ Photo Location(s)

LEGEND

1 Δ
F. of 1000 L/ML Substrate Oil
2 Δ
F. of 1000 L/ML Substrate Oil

CT/C

Controlled Distribution

CT/B

Biotic Distribution

SITE

F. of 1000 L/ML Distribution

2x1/2 meter
BAND CV/P
ON ROCK WALL

ASAP #2

AUG 8 1990

CHANEY
FROM BATMAE

SKETCH MAP

NOTE: THIS COVE IS
DIFFICULT TO SEE
FROM OFF SHORE.
IT IS THE MIDDLE
ONE OF THREE.

ASAP
PHOTOS
33,34

NO OIL

SITE 1

1/2 M² SDR/H

10m

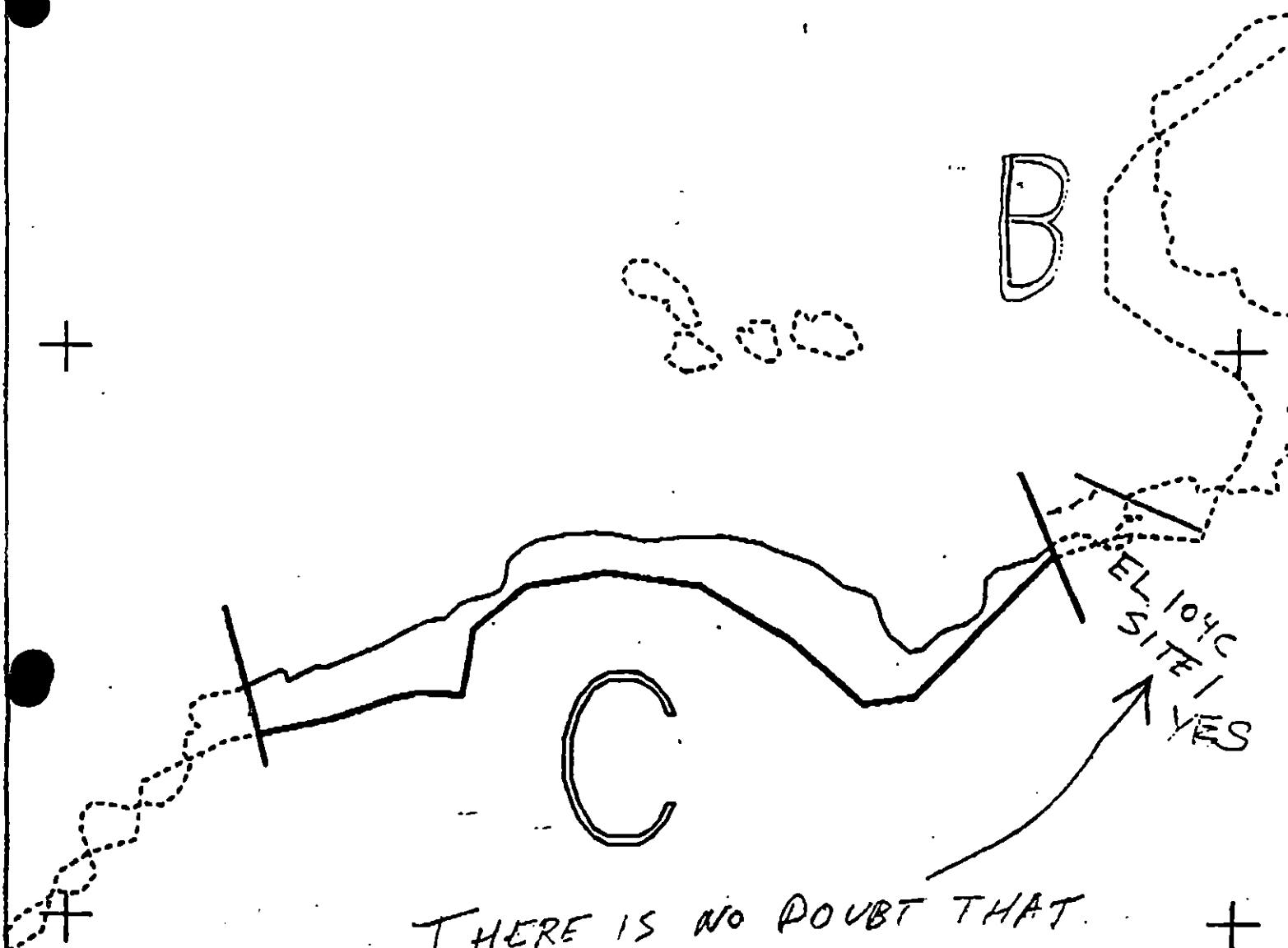
6m

SITE 2

~~SDR/H~~

ST/P
CV & CT/S/V

SDR/H
~1/M²



THERE IS NO DOUBT THAT
THE SITE IS LOCATED IN THE
EL 104B SUBDIVISION. THE SKETCH
MAP IS DETAILED AND FITS THE
SITE PERFECTLY.

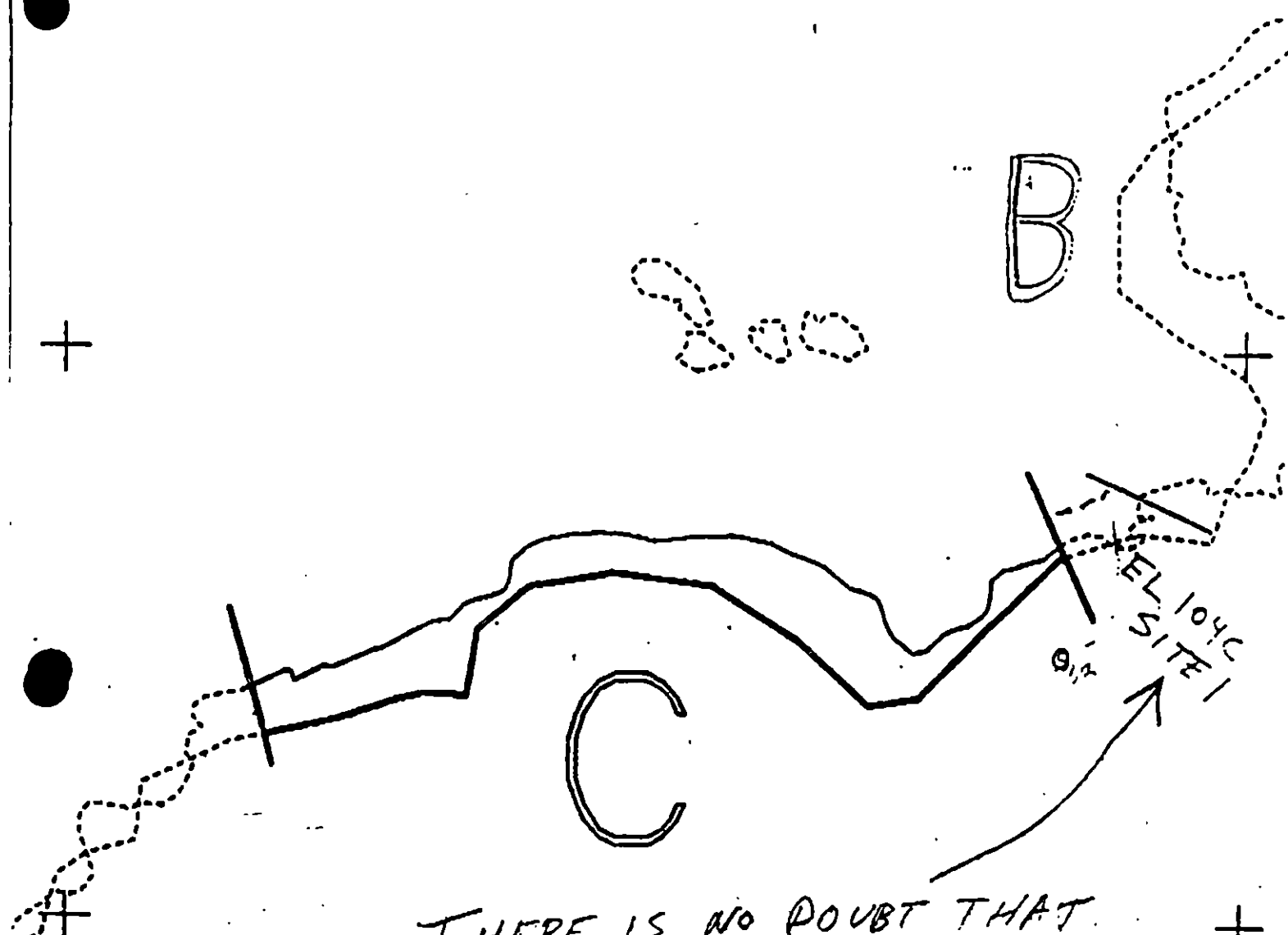
XXXX Wide
//// Medium
--- Narrow
TTT Very Light

EL-104 C
ADEC Subsegment Length: 528m
METERS

5 40 170

Subdivision Field Map
Map Key: KHEL-104C
Name: CHANEY

Scale 1:100,000



THERE IS NO DOUBT THAT
 THE SITE IS LOCATED IN THE
 EL 104B SUBDIVISION. THE SKETCH
 MAP IS DETAILED AND FITS THE
 SITE PERFECTLY.

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

EL-104 C
 ADEC Subsegment Length: 528m
 METERS



Subdivision Field Map
 Map Key: KRIEL-104C
 Name: CHANEY

SHORELINE EVALUATION

SEGMENT ST/ EL-104 SUBDIVISION D (4 OF 4) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

2M Herring spawning (4/1 to 6/15)
5T-2 All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
6Y Recreation: Special use destination
7HH Subsistence area: Pinfish harvesting
7II Subsistence area: Deer harvesting (8/15 to 2/28)
7Z Subsistence area: Salmon harvesting (5/1 to 9/30)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. 2 bald eagle nests in unsurveyed coastline between subdivisions C and D.

SHPO SIGNATURE: Charles E. Hume DATE: 4/29/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 15 m: V.Light 0 m: No Oil 284 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> Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: 4/26/20
 ADEC JOHN BAUER
 EXXON ANN TOL
 NOAA GARY PETRAE
 USCG KENNETH KENNEDY

FOSC: ✓ ✓ DATE: 5-9-90

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage
No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
1D Esther Hatchery release (4/15 to 6/1)
1E Main Bay Hatchery release (4/20 to 5/10)
1F Sawmill Bay Hatchery release (4/15 to 6/1)
1G Cannery Creek Hatchery release (4/21 to 6/1)
1H Remote release site
1I Gill net area (6/7 to 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
~~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 1 EL104 SUBDIVISION: D DATE 4-4-90

USCG

NAME AEC Vandepelt SIGNATURE AEC Vandepelt

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

I recommend no treatment.

ADEC

NAME Michelle Paer SIGNATURE Paer

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

*EL104-D is a headland with occasional large b's.
This is a high energy area and I would recommend
no treatment on the 2M x 20M ST/B/DBR.*

LAND MANAGER

NAME DAN LOGAN SIGNATURE Dan Logan

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

I CONCUR WITH ADEC

4

SHORELINE OILING SUMMARY

REVISION NO. 000001

OG J. Springer USCG R. Vandepels SEGMENT ST/ EL 104
 BIO P. Crank LAND REP D. Losen SUBDIVISION D(4 of 4)
 EXXON T. Yanklin ADEC M. Baer TIME 17:00 to 17:10
 TEAM NO.: 5 TIDE LEVEL: +1 1/2 to +1 1/2 DATE 04/04/90
 EST. SUBDIVISION LENGTH: 300 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock Pillow Lava
 SURVEYED FROM: ☐ Foot ☒ Boat ☐ Helo WORKING DIRECTION: NW to SE
 SURFACE SEDIMENTS: R 90 % B 10 % C 0 % P 0 % G 0 % S 0 % M 0 % V 0 %
 SLOPE: Long 0 % Hang 80 % Vert 20 % WAVE EXPOSURE: ☒ Low ☐ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 20 m VL 0 m NO 280 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	C	S	P	B	1	2	3	4	5	SW	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 0 sq. m by 0 orPATTIES / 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: No photos

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														

COMMENTS

No test pits. All rock and boulder.

1

OG VI 2/11/14
SEGMENT ST/EL104

SUBDIVISION D

DATE 04/04/90

CHECKLIST

☐ N Arrow
☐ Approx. Scale
☐ Seg/Sub Entry
☐ Oil Dist.
☐ Width
☐ Length
☐ % Cover
☐ Substrate Character
☐ Est. HW/LW/LWL
☐ SBL
☐ Profile Location(s)
☐ Profile(s)
☐ Pt Location(s)
☐ (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

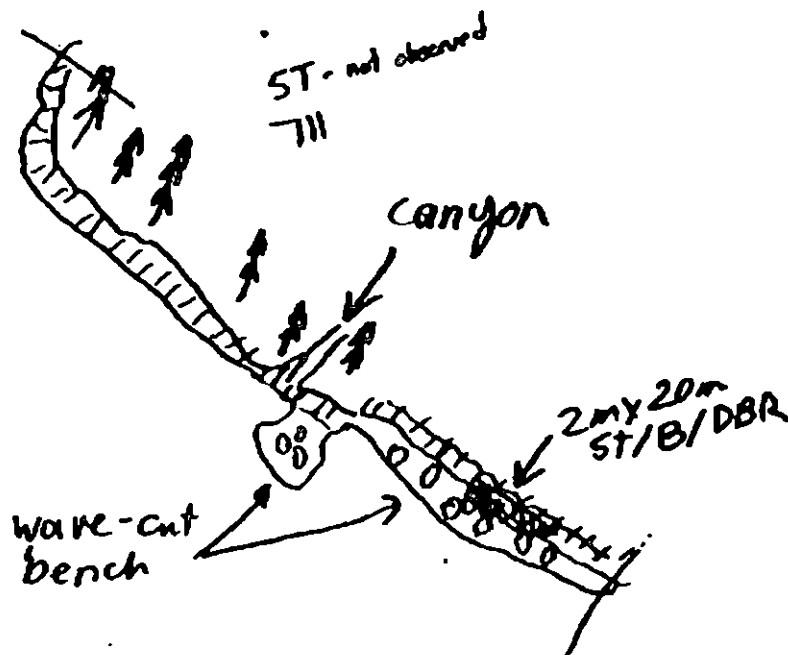
Splashed Distribution

Oil Vegetation

1 $\Rightarrow$

Photo location, direction,
and number

SKETCH MAP



Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 20 MS 0 PT 0 TB 0 FL 0 NO 280

SHORELINE ECOLOGICAL SUMMARY

STATION 002

Segment ST/EL 104 Subdivision D Date (mo/day/yr) 4/4/90

Time (24 hr) 1700-1720 Biologist Crank Length 300m Tide Height +1.5

(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 70 Moderate 15 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: 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
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:

- S-Barrows Goldeneye
- Total subdivision surveyed by shift
- Unable to determine gastropod concentrations
- Barnacle scarring in U1Z

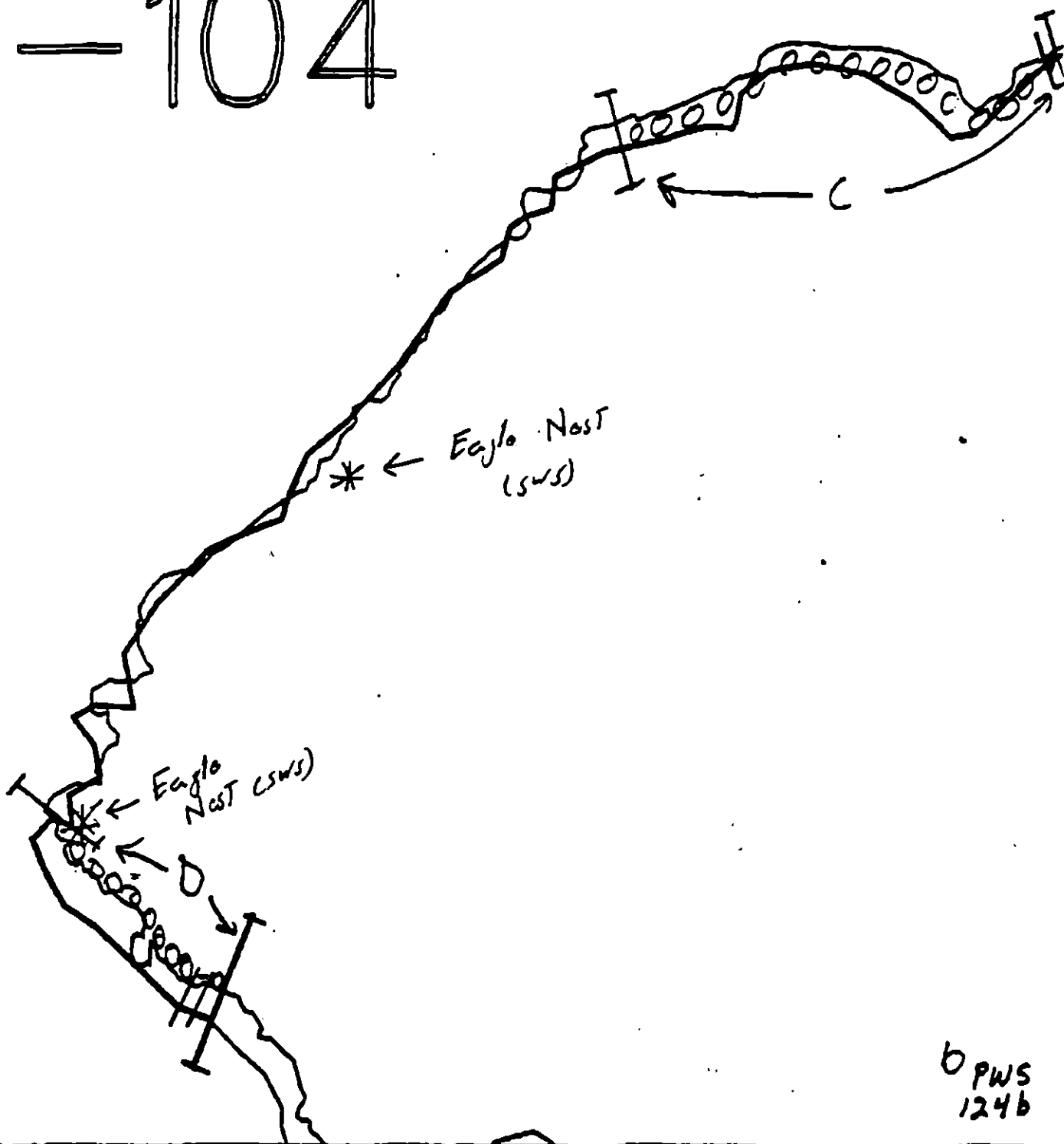
Ecological Considerations:

- ST - Eagle Nest (not observed)
- 711 - Deer Harvesting
- 72 - Salmon Harvesting
- 711 - Finfish Harvesting
- 2M - Herring Spawning

3

L-104

200



b PWS
124b

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EL-104

ADEC Segment Length: ~~4428~~



Map Key: PWS-124a

Name: J. Springer

Date: 04/04/90

Date Entered:

FWS
124D

EL-105



← PWS
124a

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

EL-104

ADEC Segment Length: 4428

0 100 200 300
METERS

Map Key: PWS-124b

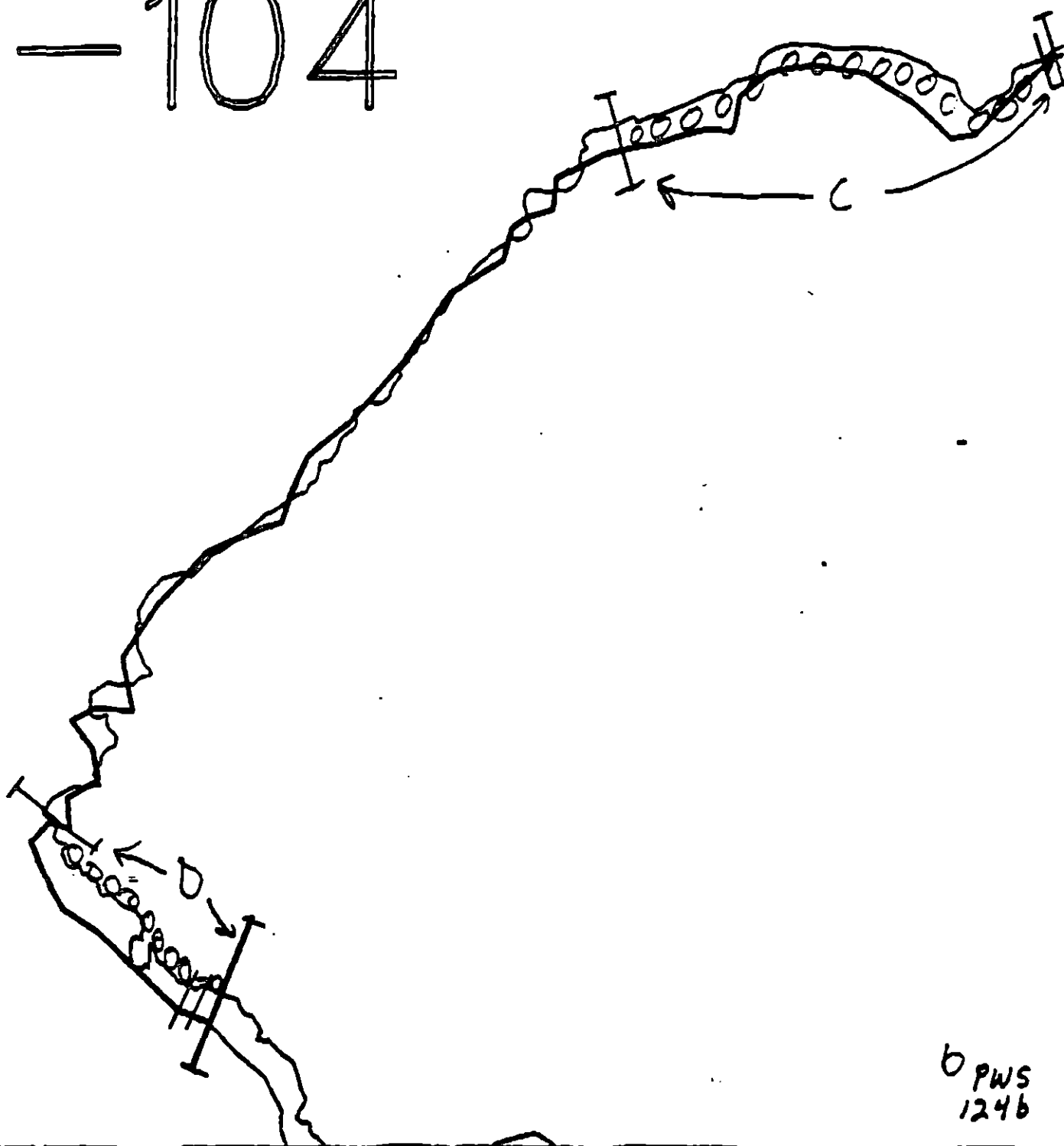
Name: J. Springer

Date: 04/04/90

Date Entered:

L-104

200



b PWS
1246

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EL-104

APEC Segment Length: 4428

0 100 200 300
METERS



Map Key: PWS-1246

Name: J. Springer

Date: 04/04/90

Date Entered:

ARLIS
Alaska Resources
Library & Information Services
Anchorage, Alaska