

OIL SPILL PUBLIC INFO. CENTER



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1991
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[Shoreline evaluations, 1991].

Prince William Sound EL-58 to EL-106

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REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-58

SUBDIVISIONS: A (1 OF 4)

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 unoiled substrate and biota. Avoid dense mussel beds in intertidal zone.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 184 m: V.Light 0 m: No Oil 0 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

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

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ EL 5758 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 M Baer

☐ 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/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 LOGAN SIGNATURE Dan Logan

☐ 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 90% IS STAIN. MOST TAR BALLS ARE LOCATED UNDER LARG ROCKS, THE ROCK FACE IS A SLIPPERY HAZARDOUS 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

G J. Springer USCG R. Vondepels SEGMENT ST/ EL 5-8
 BIO P. Crank LAND REP D. Logan 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: Lang 70 % Hang 30 % Vert 0 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m NS 070 m VL 0 m NO 0 m
153

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	IC	IB	IP	IS	BR GR	OR RW	OL GY	NOIR SL	TL LAK	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-CM)	BELOW		OIL / FILM COLOR							PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	BR	OR	OL	OF	NO	SU	UI	MI	U				
							-															
							.															
							.															
							.															
							.															
							.															
							.															

COMMENTS No pits dug. - Too many large boulders and intact bedrock
Few oily patches under boulders. Rare tar balls.

OGJ SPRU R

SEGMENT ST/EC-57

SUBDIVISION A

DATE 3/30/90

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 Δ
Pit - No Subsurface Oil

2 Δ⁺
Pit - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patched Distribution

CT/S
Splashed Distribution

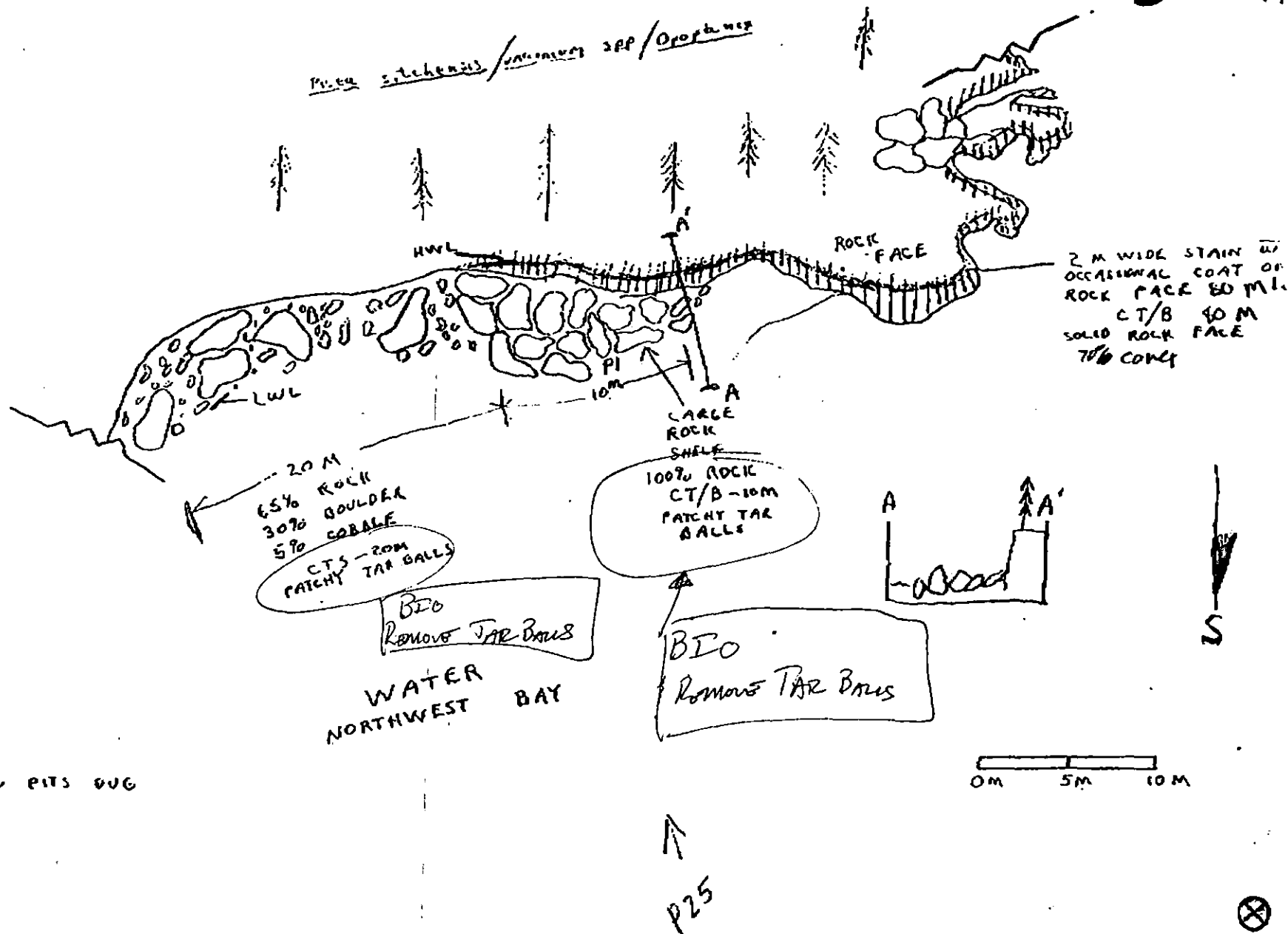
Oiled Vegetation

1 →
Photo location, direction, and number

NO PITS DUG

Oil Character Length (m): AP _____ PO _____ CV _____ CT _____ ST 80 MS _____ PT _____ TB _____ FL _____ NO 73

Sketch Map



SHORELINE ECOLOGICAL SUMMARY

REVISION: 02/22/90

Segment ST/EL 057 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	1L	1U	1M	1L	1U	1M	1L
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 U172

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 U172 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

dt: 3/30/90⁸

Length ~ 50m

Time: 0725-0830

Lat/Long: +2 to -1

Additional Present Biota:

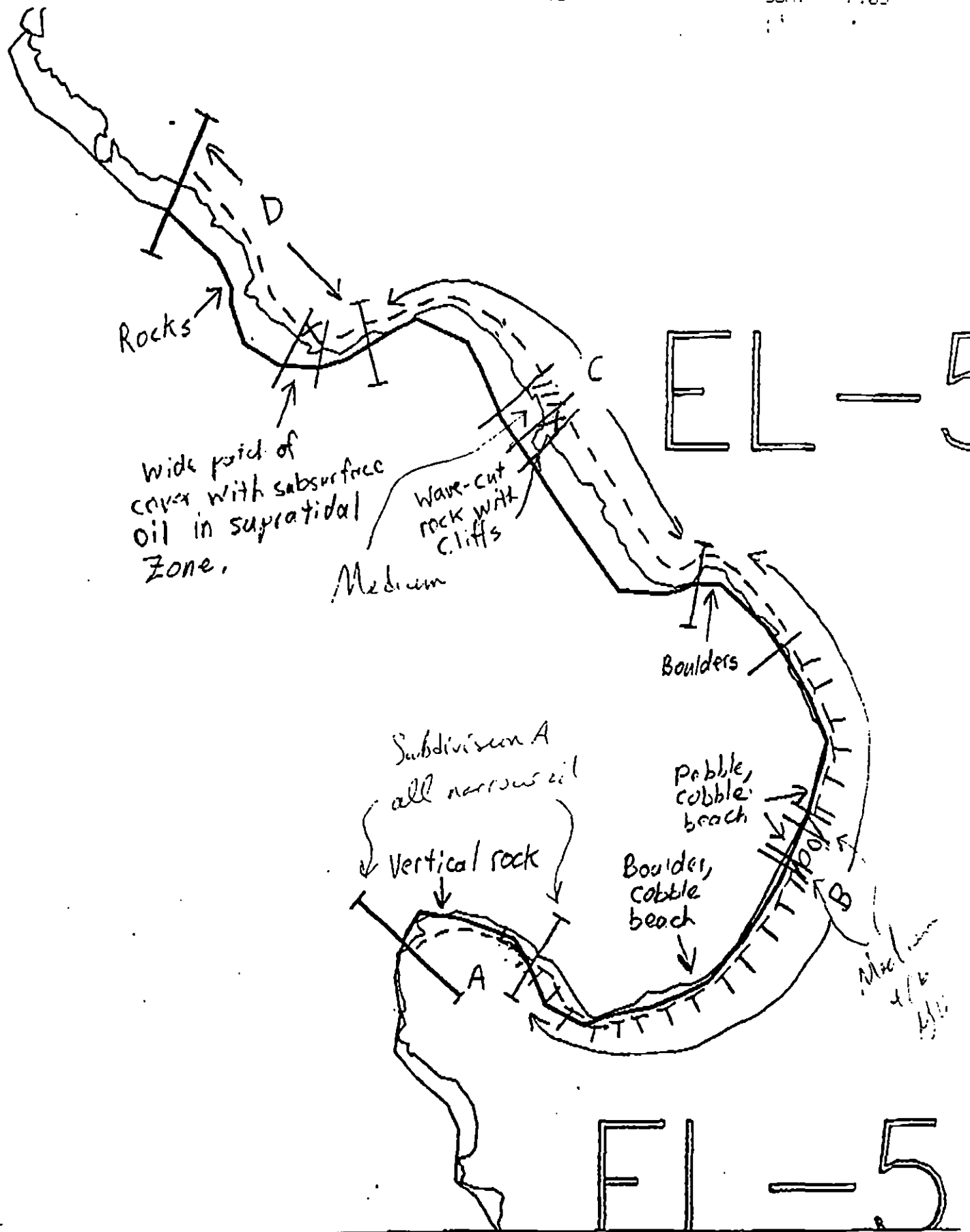
- MITZ - Filamentous Green Algae - possible combination of several species including Spongomorpha, Urospora
- may also include Blue Greens and Diatoms
 - Pterosiphonia and/or Polysiphonia may also be present w/ this cover.

Gloiopeltis
Enteromorpha
Rhodomela larix
Halosaccion

- LITZ - Several species of bladed reds; filamentous reds
- Enteromorpha
 - Laminaria
 - Pycnopodia sp.
 - Dermasteria sp.
 - Sepulid
 - Encrusting sponge
 - Encrusting coralline
 - Unknown clam

General Comments:

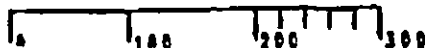
- Vertical rock face with boulder beach shoulder - boat surveyed
- Rich LITZ and upper subtidal
- LITZ/MITZ covered w/ an algae mat consisting of filamentous reds; greens coating barnacles
- Approx. 30% barnacle mortality
- Low LITZ and upper subtidal dense bladed reds concentration.
- Herring spawn 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

1999
 ADEC Segment Length: 1845m



Map Key: PWS-141

Name: James Springs

Date: 04/01/90

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-58

SUBDIVISIONS: B (2 OF 4)

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.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 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	☐ Snare/Absorbent Booms
☒ Treatment Recommended	☐ Oil Snares (pom poms)
☒ Manual Pickup	☐ Absorbents (pads, rolls, etc)
☒ Bioremediation	☐ Spot Washing: _____ Wands
☐ Tarmat: _____ Breakup	☐ Beach Cleaner
☐ Removal	☐ Other (see comments)

COMMENTS: Recommend manual 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: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

(X)

SHORELINE OILING SUMMARY

OG J. Springer USCG R. Vandepeels SEGMENT ST/ EL 57
 BIO P. Crank LAND REP D. Logan SUBDIVISION B (2 of 4)
 EXXON T. Tomlin ADEC m. Baer TIME 07:30 to 10:35
 TEAM NO.: 5 TIDE LEVEL: +1 to -1 DATE 03/30/90
 EST. SUBDIVISION LENGTH: 352 m 771 ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WORKING DIRECTION: S to N
 SURFACE SEDIMENTS: R 20 % B 40 % C 30 % P 7 % S 3 % M 0 % V 0 %
 SLOPE: Lang 95 % Hang 5 % Vert 0 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W D m M 70 m N 50 m VL 160 m NO 70 m
30 98300 15352 2989

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	10	10	10	10	BR	BR	BR	BR	BR	BR	BR	BR	SU	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT		X	V										X			
STAIN																
MOUSSE																
PATTIES																
TARBALLS					X	X							X			
FILM																
NO OIL													S		X	X

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

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

DEBRIS COLLECTED
☒ YES ☐ NOTYPE Pom-pom#BAGS 1

Photographs:

Roll No. ST-5-1Frames 2-3, 24

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	BR	BR	BR	BR	BR	BR	BR	SU	U	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					CP
6	45				X		25-45	X			X							X					CP

COMMENTS

Pebbles and boulders on beach are rounded.
 Storm berm covered with snow.

Ull

DATE 4/3/90

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-CH)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	BR	BL	BN	BY	CL	DL	EL	FL	SU	U	M	L		
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 BH DATE 4/30/90

OG J. Springer

SEGMENT ST/ 57

SUBDIVISION B

DATE 03/30/90

CHECKLIST

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

LEGEND

1 Δ
PII - No Subsurface Oil

2 Δ
PII - Subsurface Oil

CT/C
Continuous Distribution

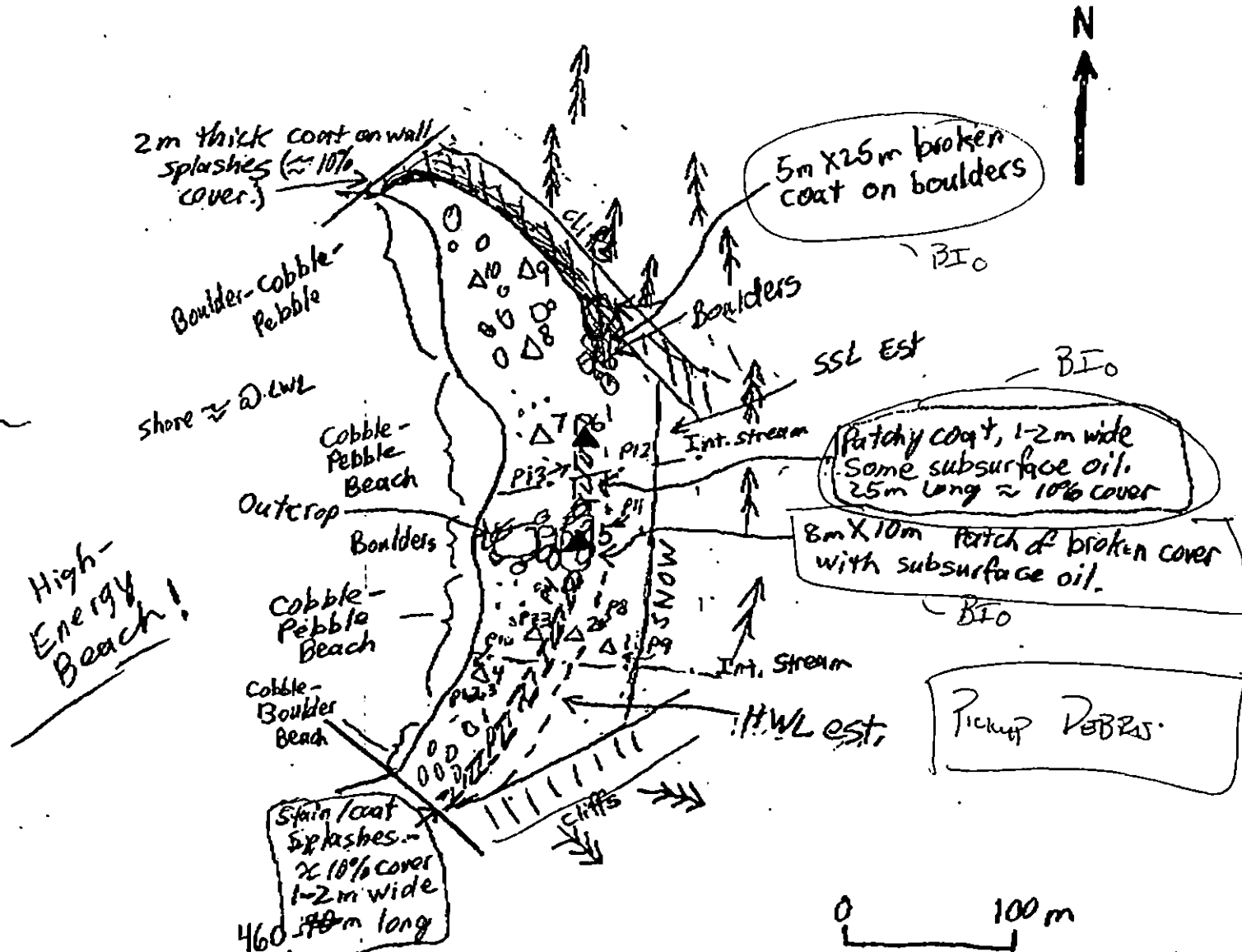
CT/B
Broken Distribution

CT/P
Patched Distribution

CT/S
Splashed Distribution

Oiled 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: 02/24/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03/22/90

Segment ST/EL 5 Subdivision B Date (mo/day/yr) 03/30/90Time (24 hr) 0830-1035 Biologist Crank Tide 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. 55-5-1Frames 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 MITZ
Raven - FlyingRock outcrop only in MITZ; UITS
See attached sheet

Ecological Considerations:

711 - Deer harvesting
2M - Herring spawn
6U - Tent Sites
6Y - Special Area Destination

Date: 2/30/90

Length - 252 m

Time: 0830-1035

Tide Height: -1 to -2 Ft

Regional Biota:

Rock Outcrop - Tidepools included

MITZ : Enteromorpha Nucella
 Cladophora Halosaccion
 Filamentous greens
 Fucus stipes in heavy concentrations
 Sytosiphon

LITZ : Encrusting corraline
 Opuntietta
 Articulating corraline
 Polychaete worm. unidentified
 Anemones
 Tidepool Sculpin
 Serpulid
 Urchin test
 Odonthalia?

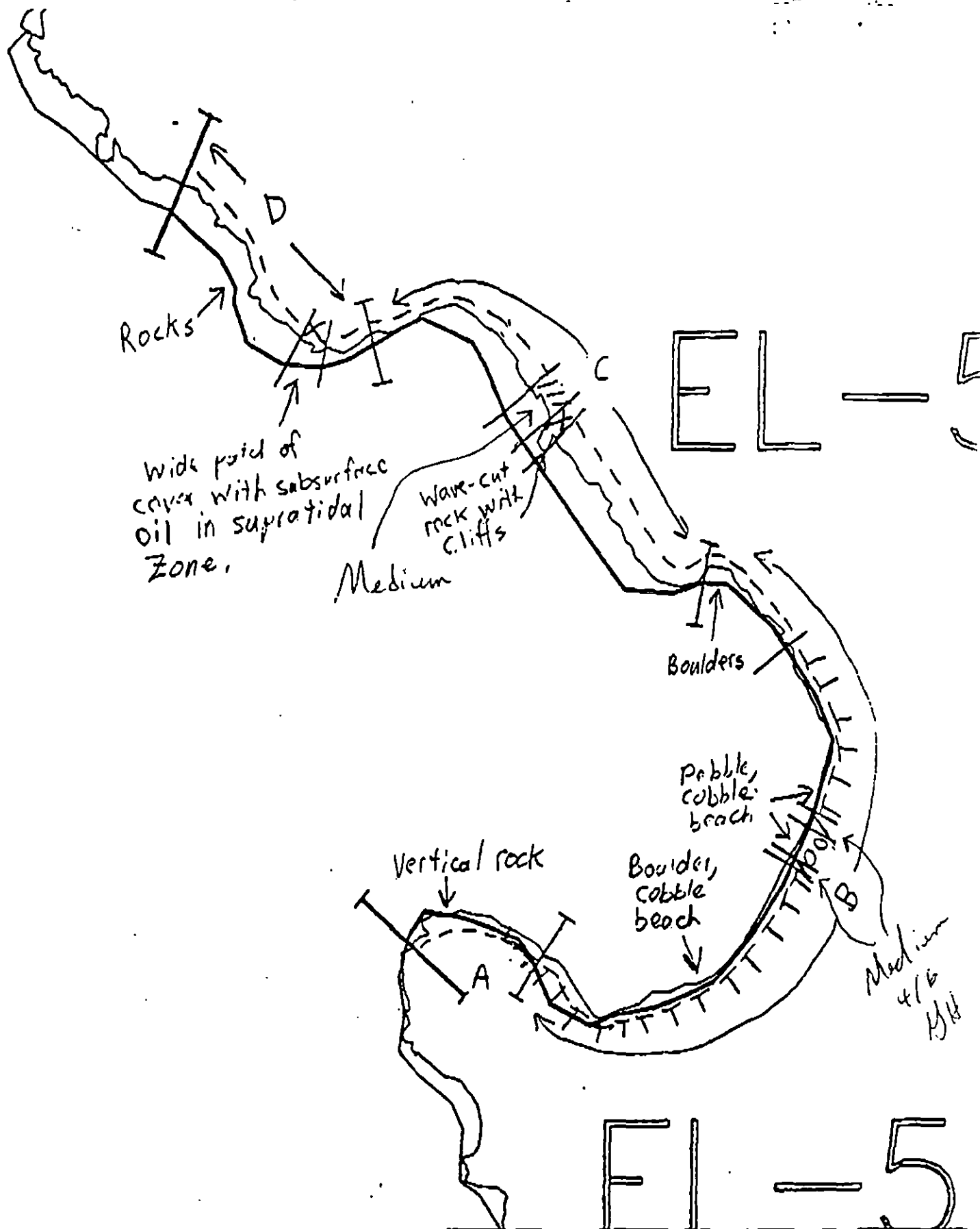
Cobble Beach -

UITZ - 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
 OOOO No Oil

EL-58

ADEC Segment Length: 1845m



Map Key: PWS-141

Name: James Springs

Date: 04/01/90

Date Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-58

SUBDIVISIONS: C (3 OF 4)

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 unoiled substrate and biota. Avoid dense mussel beds.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 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: _____ 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.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

 ELEMENT ST / EL 5³ SUBDIVISION: C DATE 03/30/90

USCG

NAME AEC Vandepels SIGNATURE AEC Vandepels
☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

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 Bauer SIGNATURE M Bauer
☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

The R 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 inhibits the MITZ and should be considered in the selection process. On the B, C, & P beach the B should be handwiped, 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
COMMENTS

☒ TREATMENT SUGGESTED

1) MANUALL SCRAPE TAR FROM ROCK FACE WHERE INDICATED ON SKETCH MAP

2) ON 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



SHORELINE OILING SUMMARY

REVISION NO. 02/22/90

OG J. Springer USCG R. Vandepels SEGMENT ST/ EL 51
 BIO P. Crank LAND REP D. Lagan SUBDIVISION C (3 of 4)
 EXXON T. Tamlin ADEC M. Baer TIME 10:35 to 11:35
 TEAM NO.: 5 TIDE LEVEL: -1' to +1' DATE 03 / 30 / 90
 EST. SUBDIVISION LENGTH: 43240 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: Lang 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	IP	IS	SB	BR	BL	BL	BL	BL	BL	BL	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 cmPATTIES / TARBALLS 2 BAGSNEAR SHORE SHEEN? NO BR ☒ SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash	X		
Debris			

DEBRIS COLLECTED
☒ YES ☐ NOTYPE Plastic bag#BAGS 1

Photographs:

Roll No. 51-S-1Frames 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	SB	BR	BL	BL	BL	BL	BL	BL	SU	UI	MI	U		
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

OG.T. SPR. ER

SKETCH MAP

SEGMENT ST/EL-57

SUBDIVISION C

DATE 03 130 /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)
- ☒ PH Location(s)
- ☒ Photo Location(s)
- ☒ PH = PHOTO #

LEGEND

1 Δ

PH - No Subsurface Oil

2 Δ

PH - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

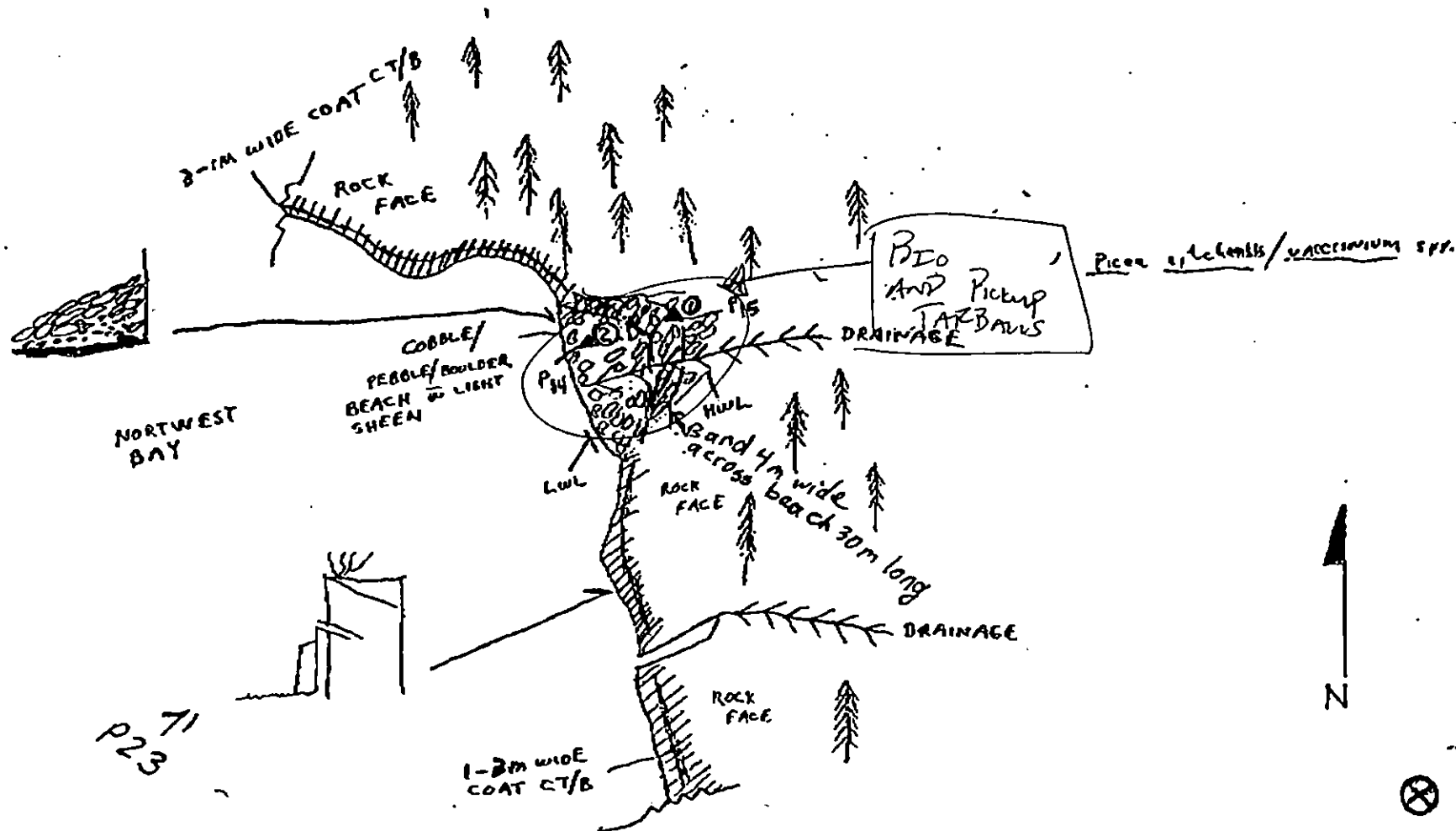
CT/S

Splashed Distribution

Oil Vegetation

1 ●→

Photo location, direction, and number



Oil Character Length (m): AP 306 PO 706 CV 706 CT 706 ST 706 MS 706 PT 706 TB 706 FL 706 NO 223

REVISION: 03/24/90

SHORELINE ECOLOGICAL SUMMARY

Segment ST/EL 5 Subdivision C Date (mo/day/yr) 3/30/90

Time (24 hr) 1035-1130 Biologist Crank

Tide 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-5-1

Frames 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
~~X~~	~~X~~	2	2	2	~~X~~	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:

7 H - Deer Harvesting

2 M - Herring spawn

6 U - Tent Sites

6 Y - 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

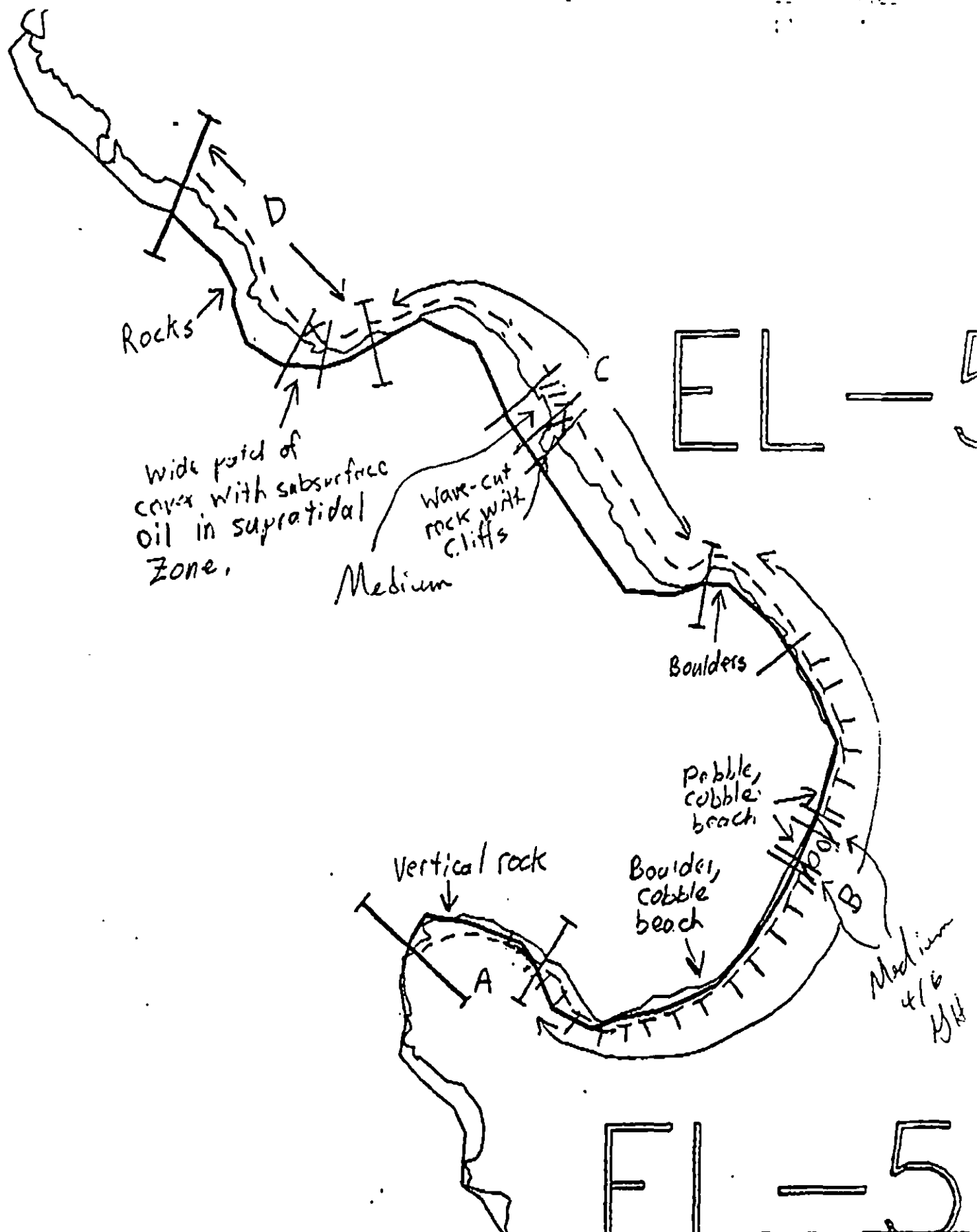
Dermasteria

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 east.
- Cobble beach foot surveyed



XXXX Wide
 //// Medium
 --- Narrow
 TTTT Very Light
 oooo " " oil

EL-58

ADEC Segment Length: 1045m 1999



Map Key: PMS-141

Name: James Spring

Date: 04/01/90

Date Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-58

SUBDIVISIONS: D (4 OF 4)

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 unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 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	☐ Snare/Absorbent Booms
☒ Treatment Recommended	☐ Oil Snares (pom poms)
☒ Manual Pickup	☐ Absorbents (pads, rolls, etc)
☒ Bioremediation	☐ Spot Washing: _____ Wands
☐ Tarmat: ☐ Breakup	☐ Beach Cleaner
☐ Removal	☐ Other (see comments)

COMMENTS: Recommend manual 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:

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT 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 (70) SIZE CREW. ACCESS SHOULD BE SOUTH POINT TO AVOID SPORLING IN IMMEDIATE AREA.

SUPRA TIDAL AREA NOT SURVEYED DUE TO SNOW

(X)

OG J. Springer USCG R. Vandepels SEGMENT ST/ EL 5
 BIO P. Crank LAND REP D. Logan SUBDIVISION DC404
 EXXON T. Tomlin ADEC M. Baer TIME 12:00 to 13:30
 TEAM NO.: 5 TIDE LEVEL: +2' to +6' DATE 03/30/90
 EST. SUBDIVISION LENGTH: 250-180m 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			
	IC	IS	IP	IS	SR	BR	OR	OL	OF	NO	SU	UI	MI	U
ASPHALT PAVEMENT														
POOLED														
COVER		X									X			
COAT		X		X							X			
STAIN			X								X			
MOUSSE														
PATTIES			X								X			
TARBALLS			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	SR BR	OR RW	OL CP	OF SL	NO TL	LR	SU	UI	MI	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

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	
~~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	

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 uM 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	

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	

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 uM 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	

Wildlife Observations/ General Comments:

Blackcap Chickadee Harbor Seal - Adult
 Raven Fish fry - unidentified
 Bald Eagle - Adult Deer Skeleton in SUPRA

LITZ covered by tide - observations made through H₂O

Ecological Considerations:

- 711 - Deer harvesting
- 2M - Herring spawn
- 6U - Tent Sites
- 6Y - Special Area Destination

⊗

EL-55D

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
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.

Date: 3/30/90 Length - 180m
 Time: 1200 - 1330
 Tide Height: +2 to +7

Additional Biota:

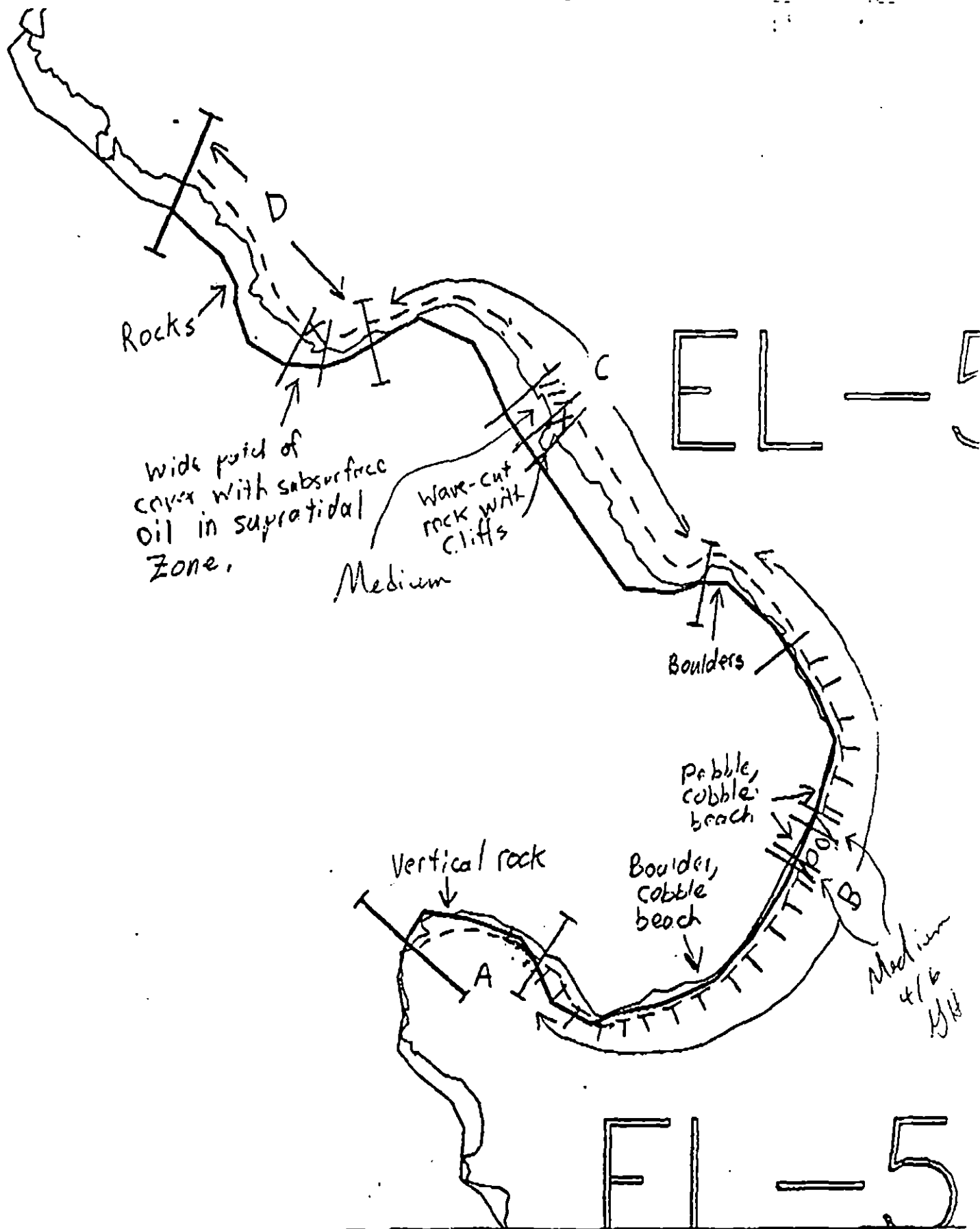
HITZ: Littorina
 Limpets

MITZ: Dense cover of Filamentous Greens
 Enteromorpha
 Polychaete Worm

LITZ: Alaria
 Laminaria
 Costeria
 Odontosticta
 Pyrosoma

Comments

- Filamentous greens can include several species including Spongiomorpha, Diatoms
 Blue-greens and/or other species
- On rock plateau in MITZ dense Fucus stipes and sporlings, sparse mature plank
- 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
 ooooo No Oil

EL-58

ADEC Segment Length: 1999 ~~1845~~ m



Map Key: PWS-141
 Name: James Spring
 Date: 04/01/90
 Date Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-58 SUBDIVISION A (1 of 4)

WORK WINDOW	
Manual Pickup	OPEN
Bioremediation	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.

711 Subsistence: Deer Harvesting

No constraint to manual pickup; closed to bioremediation after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict boat and air traffic and beach disturbance to essential minimum after 8/15. Avoid dense mussel beds in intertidal zone. Avoid any unnecessary disturbance or damage to uncollected biota and substrate.

TAG APPROVAL DATE 5/24/90.
ADEC ART WEINER
EXXON Amy TSP
NOAA B. Wesely
USCG W. J. Hall

FOSC my L DATE 5-24-90

Prepared By: Andru Thompson

Date 5/22/90

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.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Adams

DATE: 4/13/90

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:

 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 bioremediation as shown on sketch map. Work should be conducted between (6/15) and (8/15) as a result of constraints.

[See Constraint Addendum 5/22/90] WKC

TAG COMMENTS:

MONITOR TO CHECK SUPRA ITZ SNOW COVERED DURING SURVEY.

TAG APPROVAL DATE: 4/10/90

ADEC JOHN BAUER

EXXON ANDY TEAL

NOAA Buckley

USCG G.A. REITER

FOSC:

DATE: 4-12-90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-58 SUBDIVISION B (2 of 4)

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

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M Herring Spawning

NO CONSTRAINT. Authorized by ADF&G/Claudia Slater to Exxon/Tom Kelley 5/10/90.

7II Subsistence: Deer Harvesting

No constraint to manual pickup; closed to bioremediation after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG ADDENDUM DATE 5/21/90
ADEC Art Weiner
EXXON Amey Tarr
NOAA Joseph Talbot
USCG M. J. Hall, D.M.

FOSC

DATE 5-21-90

Prepared by: Anders May

Date: 5/19/90

EL-104

EL-105

47

46

EL-58

Works
Area

EL-57

EL-55

45

44

EL-53

EL-56



Exxon Company, USA

Map Key: KNI-EL-58

Mar. 11, 1990

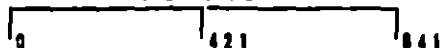


ECOLOGY MAP

SEGMENT EL-58

SUBDIVISION B (2 of 4)

METERS



Seabird Colony



Eagle Nest

1 inch = 1380 feet

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 uncoiled substrate and biota.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: *Charles E. Brown* 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:

<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 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.

SEE APPENDIX DATED 5/19/90

FOR C.

TAG COMMENTS: MONITORS TO ASSESS SUITZ DURING TREATMENT

TAG APPROVAL DATE: 4/18/90

ADEC JOHN BAUER *John Bauer*

EXXON ANDY TOL *Andy Tol*

NOAA Burt Wainwright *Burt Wainwright*

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

FOSC: *[Signature]* DATE: 4-22-90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-58 SUBDIVISION C (3 of 4)

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

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

2M Herring Spawning

NO CONSTRAINT. Authorized by ADF&G/Claudia Slater to Exxon/Tom Kelley 5/10/90.

7II Subsistence: Deer Harvesting

No constraint to manual pickup; closed to bioremediation and manual tilling after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG ADDENDUM DATE 5/21/90
ADEC Art Weisner
EXXON Amy Bar
NOAA Joseph Tallott
USCG M. J. Hall

FOSC

DATE 5-21-90

Prepared by: Cinda Meyer

Date: 5/20/90

EL-104

EL-10

47

46

WORK
AREA

EL-58

100

EL

EL-57

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44

EL-53

EL-56



Exxon Company, USA

Map Key: KNI-EL-58

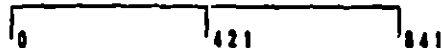
May 11, 1990

ECOLOGY MAP

SEGMENT EL-58

SUBDIVISION C (3 of 4)

METERS



Seabird Colony



Eagle Nest

1 inch = 1380 feet

SHORELINE EVALUATION

SEGMENT ST/ EL-58 SUBDIVISION C (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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS: Consultation ^{EEH} and nt, stop work inspection with an Exxon archaeologist is required : a member of prior to treatment. Specific on-site monitoring -3858 or 564- requirements will be determined at that time.

SHPO SIGNATURE: Charles J. Adams 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) <u>As</u>

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.

SEE ADDENDUM DATED 5/20/90 REYC
RAKE / MANUALLY TILL IN AREA OF PITS AS INDICATED ON SKETCH
PRIOR TO BIOREMEDIATION - WHERE FEASIBLE

TAG COMMENTS:

TAG APPROVAL DATE: 4/18/90

ADEC JOHN BAUER John Bauer

EXXON ANDY TEAL Andy Teal

NOAA Burl Wescott Burl Wescott

USCG G.A. REITER G.A. Reiter

FOSC: DATE: 4-22-90

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.

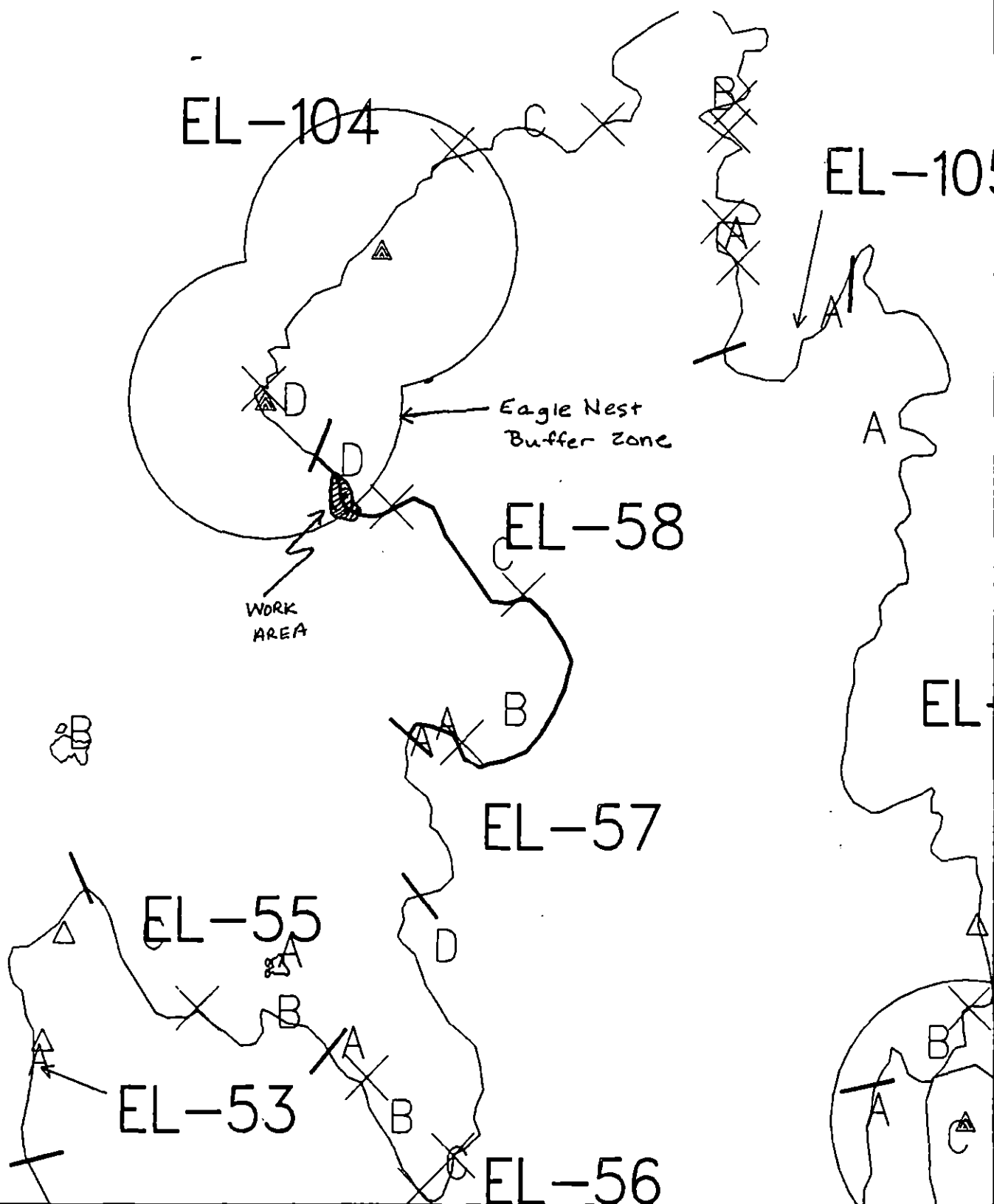
FOSC

DATE 6-10-90

Prepared By:

Date

6/9/90



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.

ARCHAEOLOGICAL CONSTRAINTS:

ARCHAEOLOGICAL CONSTRAINT: An Exxon archaeological monitor is required on-site during shoreline treatment.

k
f
-

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

SHPO SIGNATURE: Charles H. H. H.

DATE: 4/18/90

OILING CATEGORIZATION:

Wide 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:

<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 and oil spill related debris. Bioremediate area shown on attached sketch map. Work should be conducted after 6/15 based on above herring constraints.

→ See Constraint Addendum Dated 6/9/90 w/h

TAG COMMENTS:

MONITORS TO ASSESS SUITZ DURING TREATMENT

TAG APPROVAL DATE: 4/18/90

ADEC Al Kuzush

EXXON Andy Tek

NOAA Burt Wescott

USCG G.A. Reiter

FOSC: My L

DATE: 4-22-90

1991 MAYSAP EVALUATION

SEGMENT: EL 058 SUB: A REGION: PWS SURVEY DATE: 5/1/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) RESTRICTED 8/15 - 9/15

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Charles R. Himes Date: 5/10/91

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

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: MAY 10 1991

FOSC APPROVAL DATE: 5/14/91

ADEC [Signature]

FOSC [Signature]

EXXON [Signature]

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

USCG [Signature]

NOAA [Signature]

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL-58 SUBDIVISION A DATE 5/1/91

ADEC

NAME PETER MONTESANO

SIGNATURE [Signature]

☒ NTR ☐ TREATMENT RECOMMENDED

WE BROKE THIS SEGMENT AND BEGAN "B" WHERE THE BOULDER SHORELINE BEGAN, THUS THE SUR, ETC. FALLS INTO EL-58B. OG DATA COMPLETE AND ACCURATE.

EXXON

NAME C.M. Katsimpralis

SIGNATURE [Signature]

☒ NTR

GOOD DATA PROVIDED BY OG & BIO REPORTS.

LANDMANAGER

NAME DENNIS S Kennedy OF USFS

SIGNATURE [Signature]

☒ NTR

Rock face - some stain & coat.

USCG/NOAA

NAME MICHEL (NOAA)

BMI ZENONE (CG)

SIGNATURE [Signature]

[Signature]

☒ NTR

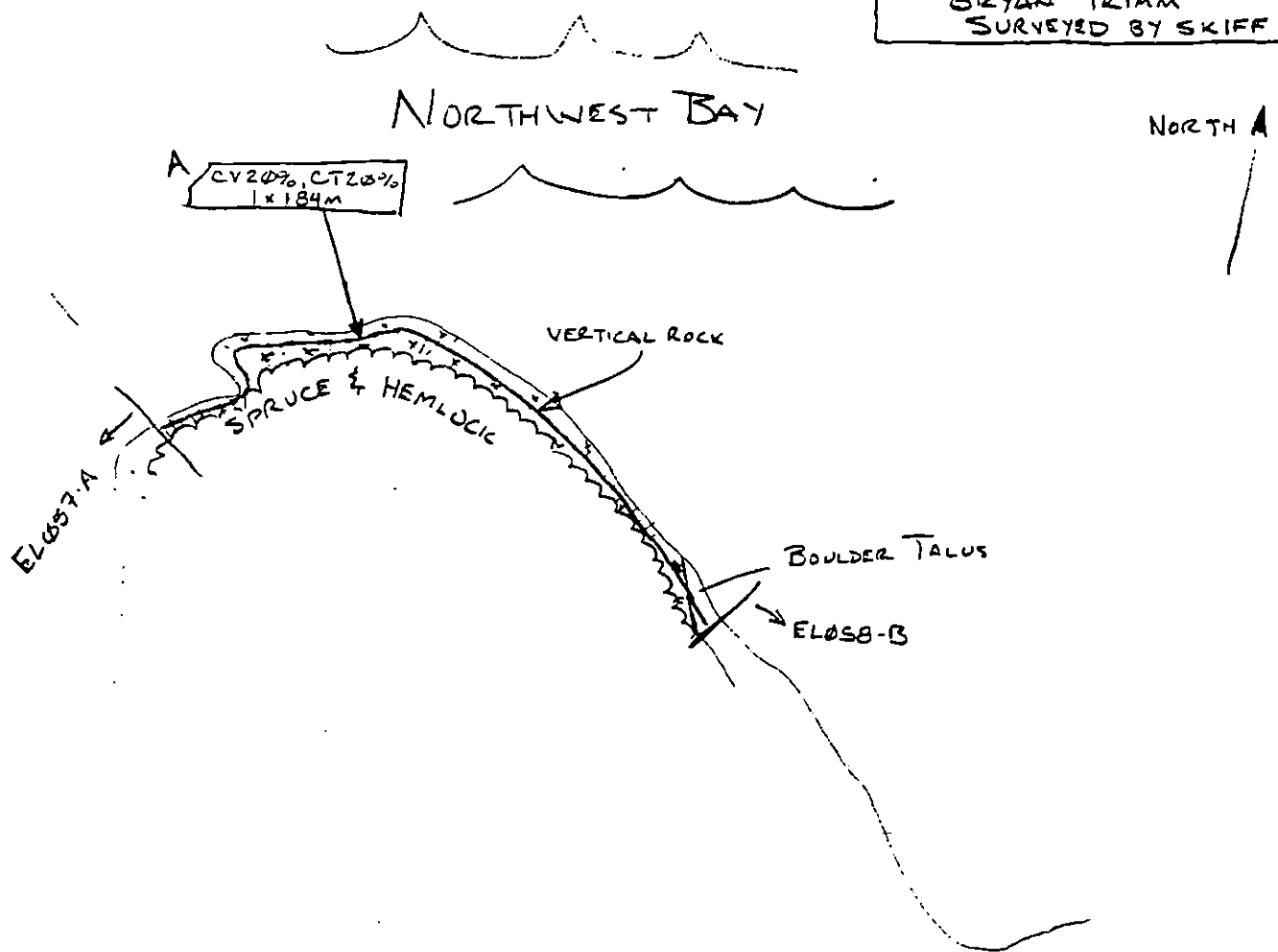
Relatively exposed - only CT/CV remaining. Good Survey

CG-

Good OG REPORT & BIO REPORT. 3

reviewed 5/4/91 KG
Reviewed 5/5/91 MC

OG SKETCH MAP
EL058-A
1-MAY-91
0652-0659
BRYAN TRIMM
SURVEYED BY SKIFF



reviewed 5/4/91 KG
REVIEWED 5/5/91 MC

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 1 May 91
 SEGMENT # EL 58 TIDAL HEIGHT(Range) +4' to +4'
 SUBDIVISION A BIOLOGIST Benson
 SEA STATE 0' WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # — FRAME # —

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

I could not observe the LITZ.

- (A) - The bedrock face was covered by a fairly typical community on moderately exposed, cliff substrates:
 LITZ - nearly 100% cover of *Verrucaria*.
 MITZ - dense *Fucus*, mixed with other algae (e.g. *Odon-thalia*) and barnacles (here, *Semibalanus cariosus*).
S. cariosus is a potentially large barnacle and, where patches of bare rock were exposed (by impact of floating logs?) in the barnacle bed, it could be seen that the barnacles were up to 4" tall. In the location of the CT & CV, filamentous green algae & *Enteromorpha* could be seen where fresh water ran down the rock face.

This rock wall community appears to be ecologically mature, but any potential damage due to cleanup activities would be ameliorated quickly due to fresh recruitment.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	—	—	—
Seabirds	—	—	—
Waterfowl	1	1	—
Gulls/Kittiwakes	1	2	—
Shorebirds	—	—	—
Corvids	—	—	—
Other Birds	—	—	—

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	—	—	—
Pinnipeds(specify)	—	—	—
Whales(specify)	—	—	—

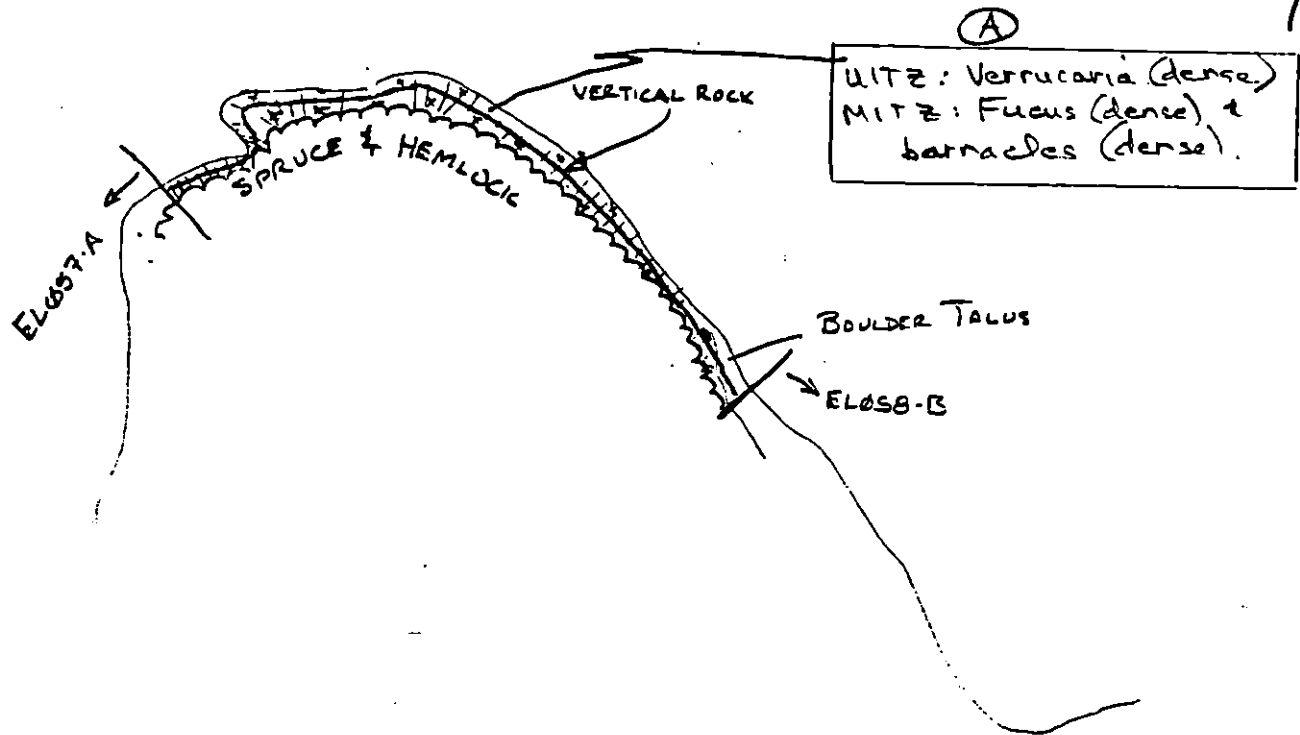
Shoreline subdivision map showing important biological features attached.

Reviewed MB 5/4/91

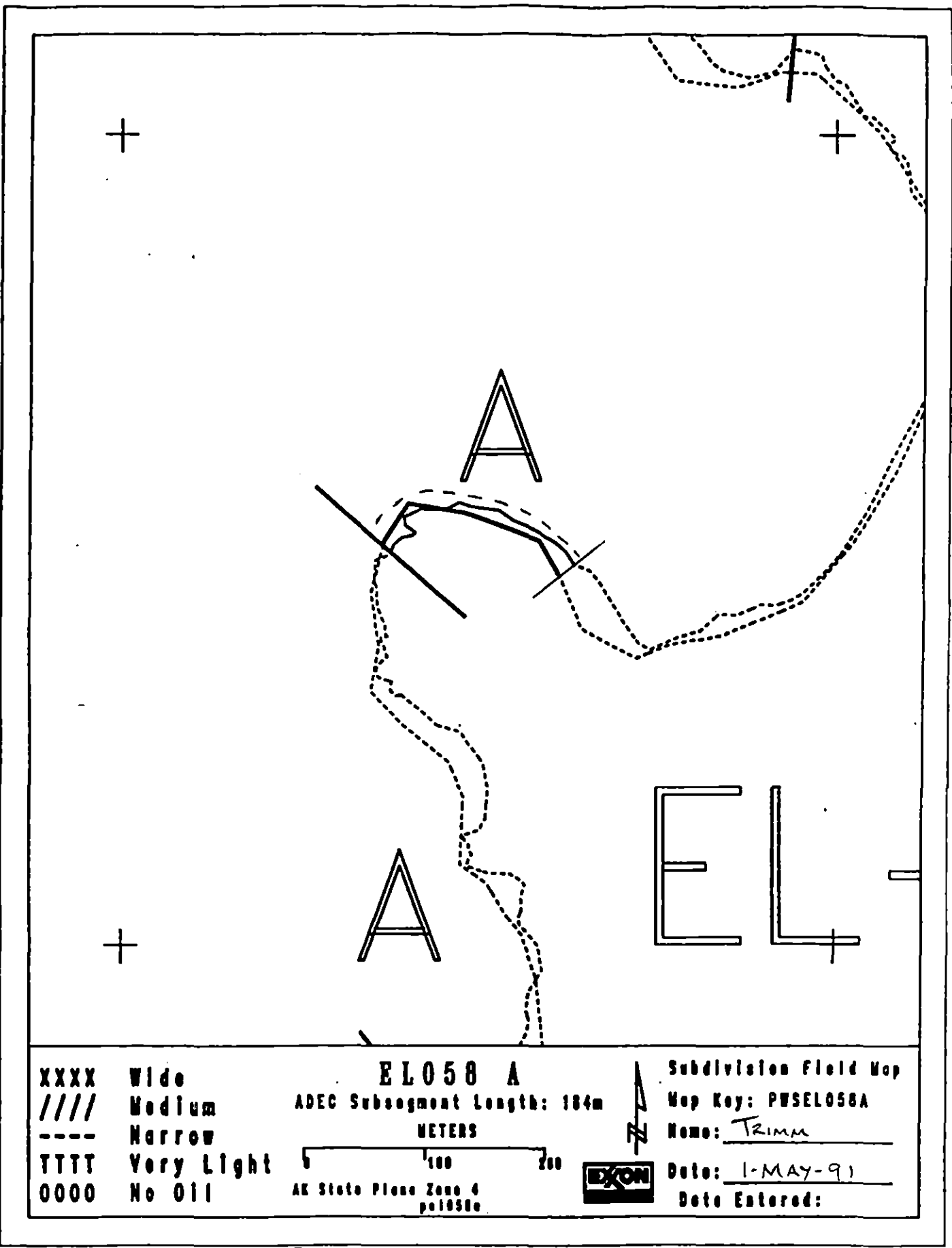
BIO SKETCH MAP
EL058-A
1-MAY-91
0652-0659
BENSON
SURVEYED BY SKIFF

NORTHWEST BAY

NORTH



Reviewed MB 5/4/91



SURFACE OIL CATEGORY MAP

reviewed 5/4/91 KG
Reviewed 5/5/91 MC

1991 MAYSAP EVALUATION

SEGMENT: EL 058 SUB: A REGION: PWS SURVEY DATE: 5/1/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) RESTRICTED 8/15 - 9/15

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE:

FOSC APPROVAL DATE:

ADEC

FOSC

EXXON

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL-58 SUBDIVISION A DATE 5/1/91

ADEC

NAME PETER MONTESANO

SIGNATURE *[Signature]*

☒ NTR ☐ TREATMENT RECOMMENDED

WE BROKE THIS SEGMENT AND BEGAN "B" WHERE THE BOULDER SHORELINE BEGAN, THUS THE SUR, ETC. FALLS INTO EL-58B. OG DATA COMPLETE AND ACCURATE.

EXXON

NAME C.M. LOTSIMPOLIS

SIGNATURE *[Signature]*

☒ NTR

GOOD DATA PROVIDED BY OG & BIO REPORTS.

LANDMANAGER

NAME DENNIS S KENNEDY OF USFS

SIGNATURE *[Signature]*

☒ NTR

Rock face - some stain & coat

USCG/NOAA

NAME MICHEL (NOAA)

BMI ZENONE (CG)

SIGNATURE *[Signature]*

[Signature]

[Signature]

☒ NTR

Relatively exposed - only CT/CH remaining. Good Survey

CG-

Good OG REPORT & BIO REPORT. *[Signature]*

TEAM NO. 2

OG B. TR, MM

BIO J. Benson

SEGMENT EL 058

ADEC P. MONTESANO

LANDMANAGER D. Kennedy for USFS

SUBDIVISION A

EXXON C. KATSIMPALIS

USCG/NOAA JACQUI MICHEL/NOAA

DATE MAY 1 1991

TIME 06 : 52 to 06 : 59

TIDE LEVEL 4.22 ft. to 3.85 ft.

ENERGY LEVEL: ☒ H ☒ M ☐ L

SURVEYED FROM: ☐ FOOT ☒ BOAT ☐ HELO

WEATHER: ☐ SUN ☒ CLOUDS ☐ FOG ☐ RAIN ☐ SNOW

TOTAL LENGTH SHORELINE SURVEYED: 184 m

NEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONE

EST. OIL CATEGORY LENGTH: W 0 m M 0 m N 1.84 m VL 0 m NO 0 m US 0 m

[illegible]

DISTRIBUTION: C = 81-100%; B = 51-80%; P = 11-50%; S = 1-10%; T = <1%

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

PHOTO ROLL # MAYSAP-

NO Photos
- FRAMES

[illegible]

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

OG COMMENTS:

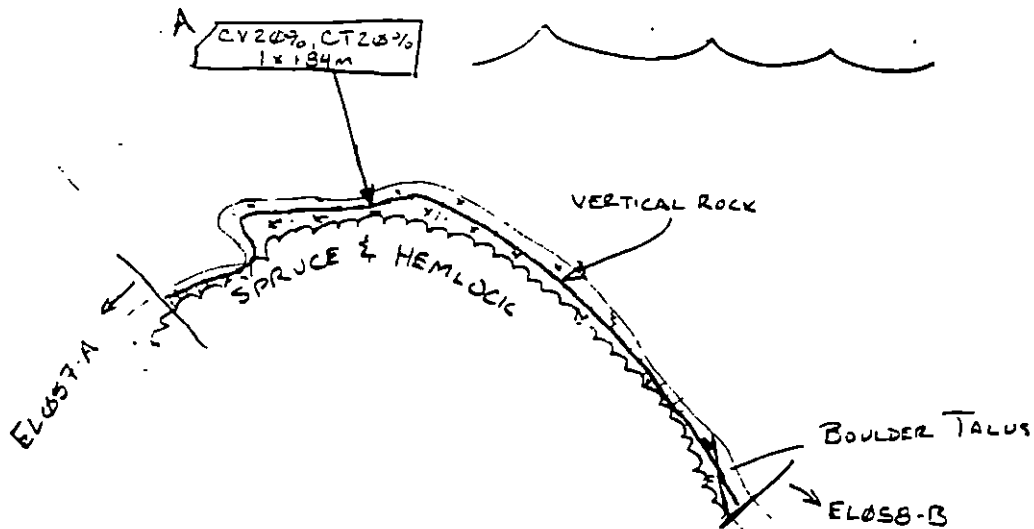
- SHORELINE IS 90°. VERTICAL ROCK $\frac{1}{2}$ 10%. BOULDER TALUS AT BASE OF VERTICAL ROCK.
- COAT & COVER ARE FOUND ~ 1m WIDE BAND IN SUPRA ON ROCK FACE (BATHED 2.1m) & ALSO BEHIND BOULDER TALUS. NOT TO BE CONFUSED WITH LICHEN
- NO PITS, VERTICAL ROCK & TALUS

REVIEWED 5/5/91 MC

OG SKETCH MAP
EL058-A
1-MAY-91
0652-0659
BRYAN TRIMM
SURVEYED BY SKIFF

NORTHWEST BAY

NORTH A



reviewed 5/4/91 L.J.
REVIEWED 5/5/91 MC

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 1 May 91
 SEGMENT # EL 58 TIDAL HEIGHT(Range) +4' to +4'
 SUBDIVISION A BIOLOGIST Benson
 SEA STATE 0' WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # — FRAME # —

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

I could not observe the LITZ.

(A) - The bedrock face was covered by a fairly typical community on moderately exposed, cliff substrates:
 LITZ - nearly 100% cover of Verrucaria.
 MITZ - dense Fucus, mixed with other algae (eg. Odontothalia) and barnacles (here, Semibalanus cariosus).
 S. cariosus is a potentially large barnacle and, where patches of bare rock were exposed (by impact of floating logs?) in the barnacle bed, it could be seen that the barnacles were up to 4" tall.
 In the location of the CT & CV, filamentous green algae & Enteromorpha could be seen where fresh water ran down the rock face.

This rock wall community appears to be ecologically mature, but any potential damage due to cleanup activities would be ameliorated quickly due to fresh recruitment.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	—	—	—
Seabirds	—	—	—
Waterfowl	1	1	—
Gulls/Kittiwakes	1	2	—
Shorebirds	—	—	—
Corvids	—	—	—
Other Birds	—	—	—

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	—	—	—
Pinnipeds (specify)	—	—	—
Whales (specify)	—	—	—

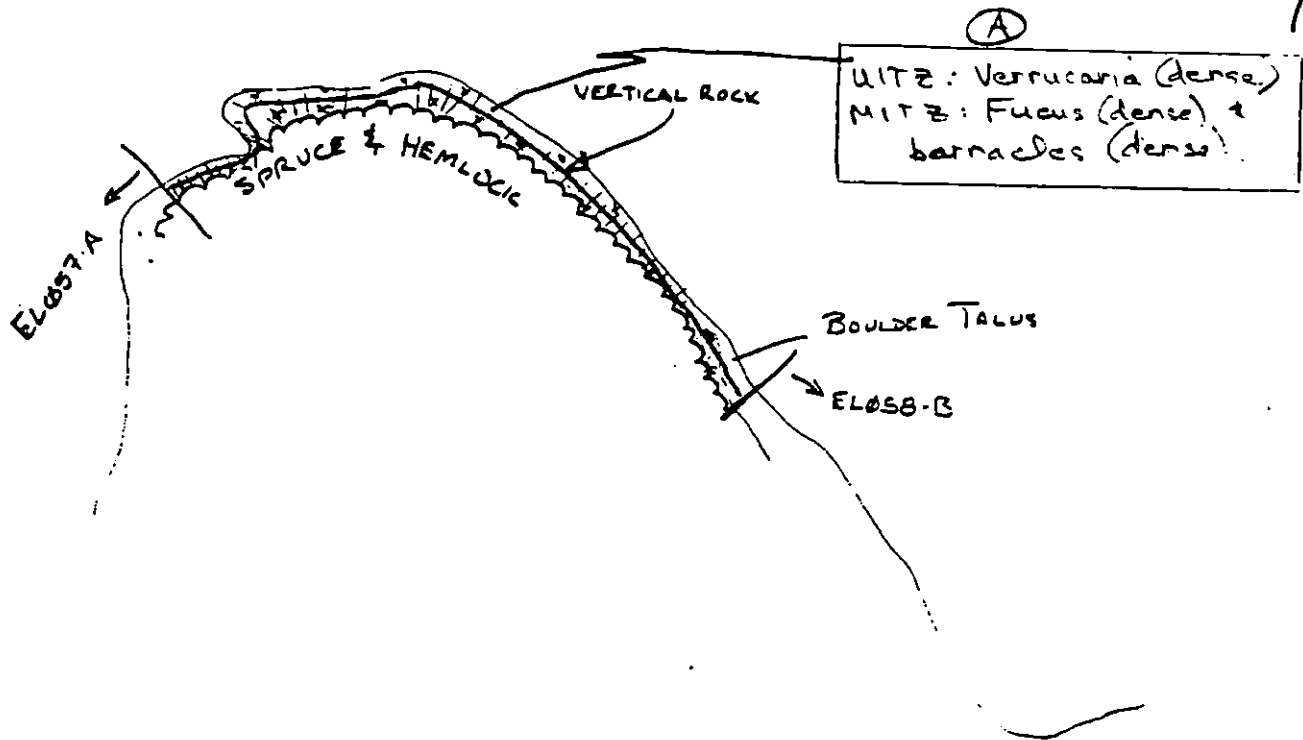
Shoreline subdivision map showing important biological features attached.

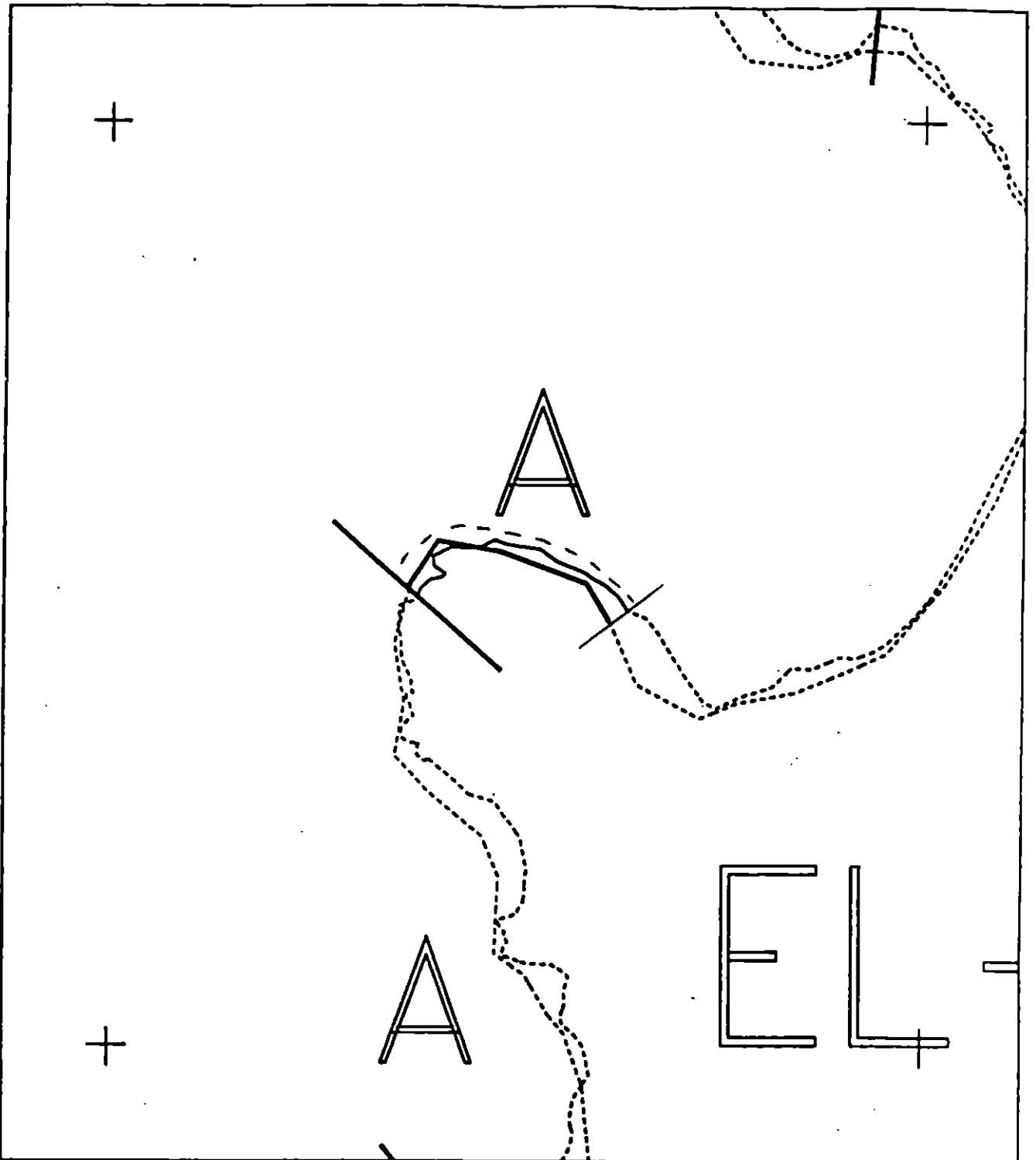
Reviewed MB 5/4/91

BIO SKETCH MAP
EL058-A
1-MAY-91
0652-0659
BENSON
SURVEYED BY SKIFF

NORTHWEST BAY

NORTH





XXXX	Wide	EL058 A ADEC Subsegment Length: 184m METERS 0 100 200 AK State Plane Zone 4 ps1058a	Subdivision Field Map
////	Medium		Map Key: PWSEL058A
----	Narrow		Name: <u>Trimu</u>
TTTT	Very Light		Date: <u>1-MAY-91</u>
0000	No Oil		Date Entered:

SURFACE OIL CATEGORY MAP

reviewed 5/4/91 -
REVIEWED 5/5/91 MC

1991 MAYSAP EVALUATION

SEGMENT: EL 058 SUB: B REGION: PWS SURVEY DATE: 5/1/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES

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

ADEC

NAME Peter Montezano

SIGNATURE Peter Montezano

☐ NTR ☒ TREATMENT RECOMMENDED

Oil persists throughout subdivision as depicted on the sketch map. Most of the oil is positioned at 180 degrees that make recovery extremely difficult. However, work is presently required in several areas. Standard manual removal of sediments is due in AREOSC, D₂, G, and around Pit 8. The SOR is simple shovel/shovel work. The area around Pit 8 is an oiled storm berm which was mostly covered with snow during survey. The HQR in berm was a firm, distinct layer which will come out in bricks. This berm is no longer than about 10m, with the oiling continuing under snow. The Exxon, NOAA, & USFS RPS were ahead and missed seeing the berm com.

EXXON

NAME C.M. LOTSIMPALIS

SIGNATURE C.M. Lotsimpalis

☐ NTR HEAVIER OIL CONCENTRATIONS ARE SCATTERED SEEM TO BE IMPROVING FOR THE MOST PART. STORM BERM (PIT #8) NEEDS FURTHER EVALUATION AFTER SNOW MELTS.

LANDMANAGER

NAME DENNIS S. KENNEDY OF USFS

SIGNATURE D.S. Kennedy

☐ NTR

This subdivision should be a low priority for treatment as it has rich habitat components and good wave exposure. TAG should visit before Rx'ing any treatment.

USCG/NOAA

NAME MICHEL (NOAA)

SIGNATURE Michel

☐ NTR

This shoreline is relatively exposed to high wave energy, as evidenced by sub-rounded cobbles and boulders. Very little oil remains — there are only scattered patches of SOR in/among the boulders/cobbles & ITZ, and in southernmost storm berm. Sheens were visible in runoff water throughout the area. Natural processes appear to be effectively removing the remaining oil. Good Survey — Michel.



TEAM NO. 2 SEGMENT EL 058 SUBDIVISION B DATE 5/1/91

ADEC

NAME _____

SIGNATURE _____

☐ NTR

EXXON

NAME _____

SIGNATURE _____

☐ NTR

LANDMANAGER

NAME _____

OF _____

SIGNATURE _____

☐ NTR

USCG/NOAA

NAME BMI ZENONESIGNATURE BMI ZENONE☐ NTR

AREA IN VICINITY OF PIT #8 IS AN OILED STORM BERM PRESTLY COVERED W/SLURRY. I WAS WITH ADEC REP WHEN WE CAME UPON THIS AREA. CONCUR W/HIM THAT THIS AREA COULD USE SOME SHOVEL + TROWEL WORK SOON AS SNOW MELTS AND AREA CAN BE DELIMITED. THE REST OF THE SUBDIVISION IS CLEANING WELL ON IT'S OWN.

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 3TEAM NO. 2OG B. TRIMMBIO J. BensonSEGMENT EL05BADEC P. MONTESANOLANDMANAGER D. Kennedy for USFSSUBDIVISION BXON C. KATSIMPALISBMT ZENONE
USCG/NOAA JACQUI MICHEL/NOAADATE MAY 1 1991TIME 06:59 to 09:47TIDE LEVEL 3.85 ft. to -1.25 ft.ENERGY LEVEL: ☒ H ☒ M ☐ LSURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELOWEATHER: ☐ SUN ☒ CLOUDS ☐ FOG ☒ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 782 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☒ SL ☐ NONEEST. OIL CATEGORY LENGTH: W 0 m M 10 m N 287 m VL 255 m NO 230 m US 0 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT	SHORE SLOPE	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			TYPE	VHML	WIDTH	LENGTH	S	UI	
											m	m							
A				S							B	H	3	35	X				HVY SOR UNDER/BETWEEN BOULDER
B1				S							B-C	M	2.5	15	X				HVY SOR UNDER/BETWEEN B-C
B2							S				B-C	M	1.5	15	X		X		STAIN ON CLASTS
B3					S						B-C-P	M	1	30	X				
B4				P	S	S					PC	M	1.5	15	X				
B5						S					R	H	1	5	X				ROCK FACE & CREVICES
C				P							B	M	10	30	X				HVY SOR UNDER BOULDERS
D1						S		S			BC	M	2	40	X		X		RAINBOW 'FL' IN INTER-TIDAL POOLS
D2				B							BC	M	1.5	4	X				HVY SOR WITH ORGANICS
E						S					PB	M	2	25	X		X		
F							S				PB	M	1.5	30	X				
G				B	S	S					PB	M	1.5	5	X				HVY SOR ASSOC. WITH MOR/RT
					S	S					PB	M	2	45	X				
			S	P	S	S					B	M	2	12	X				LT & HVY SOR UNDER TALUS
H3								S			B	M	10	20	X		X		RAINBOW 'FL' IN TIDAL POOLS
J				S	S	S					B-R	H	1	5	X				LT SOR UNDER TALUS/BASE OUTCROP

DISTRIBUTION: C = 91-100%; B = 51-80%; P = 11-50%; S = 1-10%; T = <1%

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

PHOTO ROLL # MAYSAP-

2 - 3FRAMES 16-20

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR BR SN	PIT ZONE				SURFACE- SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	19								—	Y	—	—		X			BPC-PGCBM	
2	16								0-8	Y	8	S		X			BPC-GPCB	ORGANICS IN P.
3	11								4-8	Y	8	B		X			BPC-GPCB	BASE OF TALUS
4A	19								1-15	N	—	—			X		BC-GSPCB	
4B									15-19								GSPCB	Follows surface layer
5	18								0-7	Y	14	B		X			BCP-GP	ANGULAR
6	21								—	Y	15	N		X			P-GP	ROUNDED
7	10								0-10	N	—	—		X			BCP-PG	MORASTLES - CR

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

OG COMMENTS:

- RECOVERED SEVERAL Pom Poms.
- OILED STORM BERM NEXT TO WATER RUNOFF IN SOUTH CORNER OF BEACH. PIT #8 IN STORM BERM LOCATED 'HOR', HOWEVER, SNOW COVERING BERM PREVENTED DELINEATION OF SURFACE SUBSURFACE OIL.
- PIT #3 AT BASE AND LEE SIDE OF TALUS. PITS 1 & 2 VERIFY THAT 'HOR' IS LOCALIZED. CUSTOM BERM FOUND IN AREA

REMOVED 15/7/91 MC

5/7/91 KG

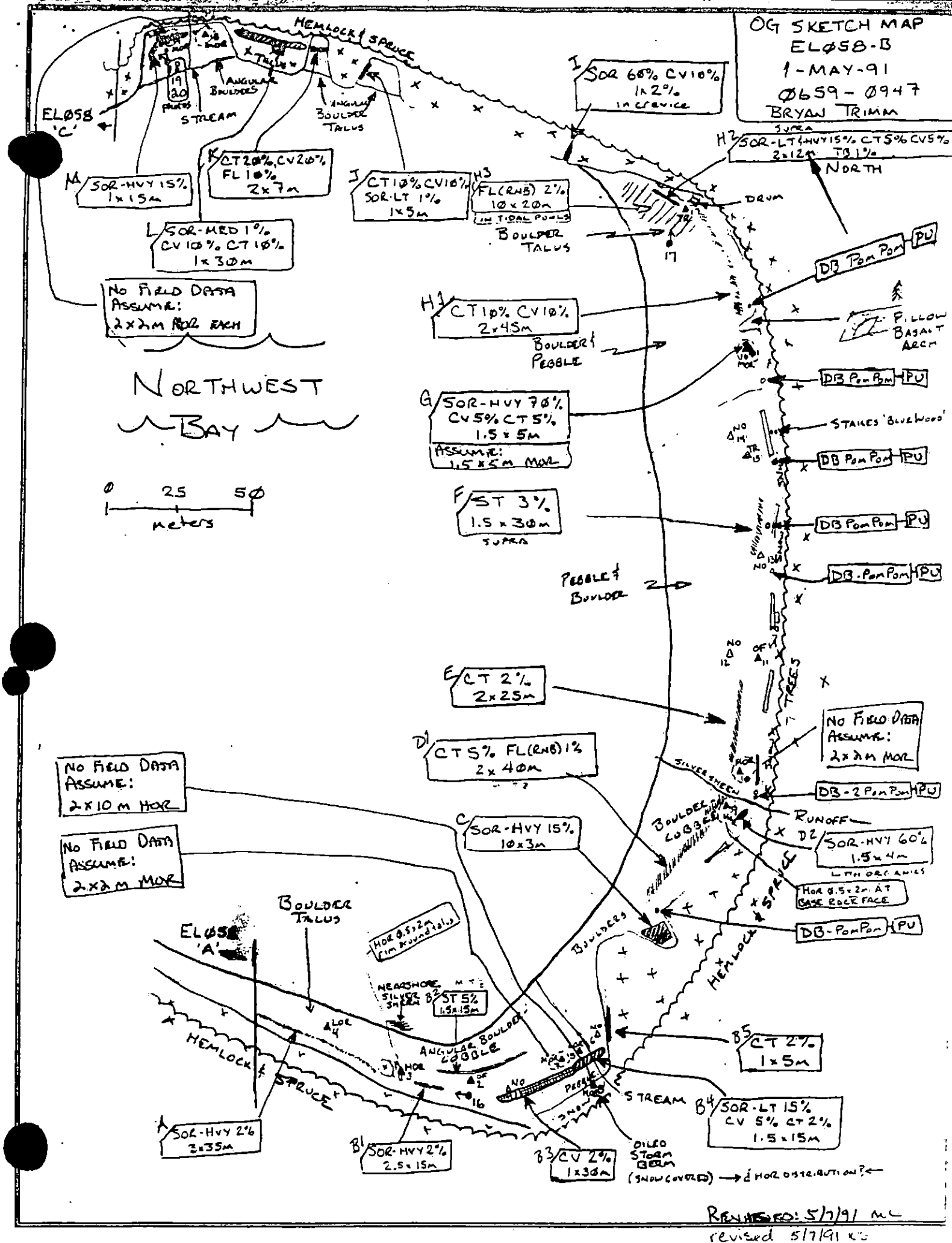
DATE MAY 1 / 1 / 91

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- _____ FRAMES

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

REMOVED: 5/7/91 MC
5/7/91 KG secured



KAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 1 May 1991
 SEGMENT # EL 58 TIDAL HEIGHT (Range) +4' to -1'
 SUBDIVISION B BIOLOGIST Benson
 SEA STATE calm WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # — FRAME # —

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

(A) - Filamentous green algae (FGA) grows on oiled surfaces in U1T2. #P44 Also, sparse barnacles in U1T2. In MIT2, FGA forms a thick cover. Small Fucus, rare barnacles & Cladophora were found beneath the FGA. Other species in the MIT2: Littorina (with egg masses), barnacle spat & Enteromorpha. The LIT2 contains Ulva, Fucus, Porphyra, Pycnopodia, hermit crabs, limpets and a nereid polychaete. Algal diversity is low, overall diversity moderate & total biotic % cover is high. This species assemblage should be resilient in the event of damage caused by cleanup activities, due to their strong recruitment.

(B) - (B5) FGA grows on oiled surfaces. FGA is also dense in #P45 the upper MIT2 and is joined throughout the MIT2 by #2,5-8 Littorina (with egg masses), barnacles (including spat), Fucus (with recruits), algal diversity is low, overall diversity is moderately high. Diversity on the nearby pebbles is low, probably due in part to high wave exposure & small rock size. In this well exposed location, re-recruitment of most of these species seems likely.

(C) FGA dominates the intertidal here, resulting in low diversity & high % cover. (continued on next page)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	—	—	"blenny eel"
Seabirds	—	—	
Waterfowl	—	—	
Gulls/kittiwakes	1	3	
Shorebirds	—	—	
Corvids	—	—	
Other Birds	—	—	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	—	—	
Amphipeds (specify)	1		
Whales (specify)	—		

Shoreline subdivision map showing important biological features attached REVIEWED: MC 5/7/91

Subdivision: EL 58 B

Team: 2

Bio: Benson

Comments (cont.) -

①, ⑤, & Pits #9, 10 - FGA is found throughout the inter-tidal zone. Verrucaria extends very high in UITZ. The MITZ & LITZ resemble the boulder talus community (A) described above. In addition, more barnacle spat, a few blenny eels & nudibranch egg masses were observed here. In the event of cleanup activities here, a reasonable effort to avoid the MITZ & LITZ where possible should be sufficient to minimize damage to the biota.

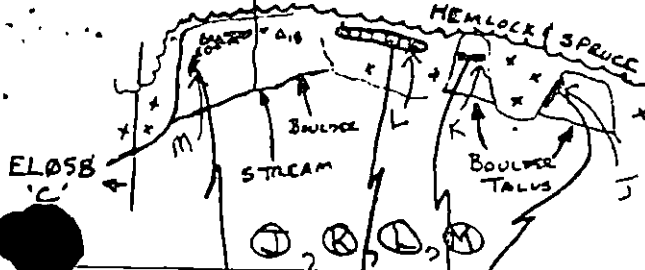
⑥, ⑦, ⑪, & Pits #11-16 - FGA is sparse except in the streams, where it is more abundant. UITZ: FGA & Verrucaria. In the MITZ, Fucus is dense only on boulders, where barnacles, Littorina & limpets are moderately dense. Species diversity is low even in the LITZ, where FGA & a few other algae form a high % cover. Overall, this is a beach of low diversity & moderate biotic cover & so is not highly sensitive to any potential cleanup activities.

⑫, ⑬, ⑩, & Pit #17 - Both the UITZ & MITZ are inhabited by primarily FGA & barnacles. The LITZ is similar to that in A.

⑭, ⑮, ⑯, ⑰, & Pits #18-20 - Verrucaria, FGA, rare barnacles occur near & on the oiled surfaces in the UITZ. The MITZ contains typical, common species, with the addition of Nucella & bryozoans, perhaps because this beach receives higher wave exposure. It is not, however, biologically sensitive.

This is a habitat-rich subdivision, whose parts must be considered individually in the event that treatment is recommended.

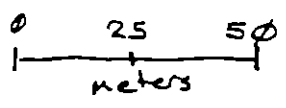
BIO SKETCH MAP
 ELØSB-B
 1-MAY-91
 0659-0947
 Benson



UITZ: Verrucaria, Nucella & bryozoans in MITZ of cove.

H2, H3, T
 FGA dominates MITZ & UITZ. LITZ similar to LITZ of A.

NORTHWEST
 Bay



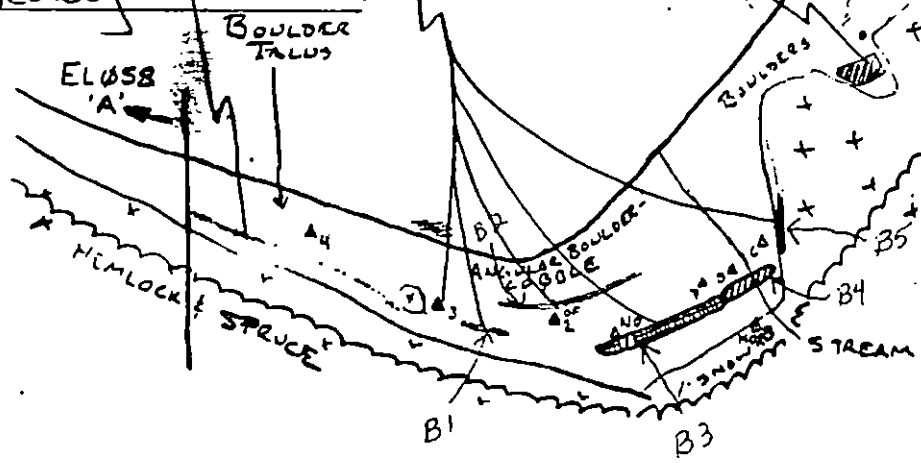
F, G, H1
 Low diversity & moderate % cover, perhaps because of pebble scouring.

D, E
 Productive & moderately diverse. Somewhat sensitive.

B
 FGA on oiled surfaces. Faunal diversity is moderately high, except on pebbles.

A
 FGA on oiled surfaces. Moderate diversity & high % cover of FGA especially.

C
 FGA dominated.



NORTH

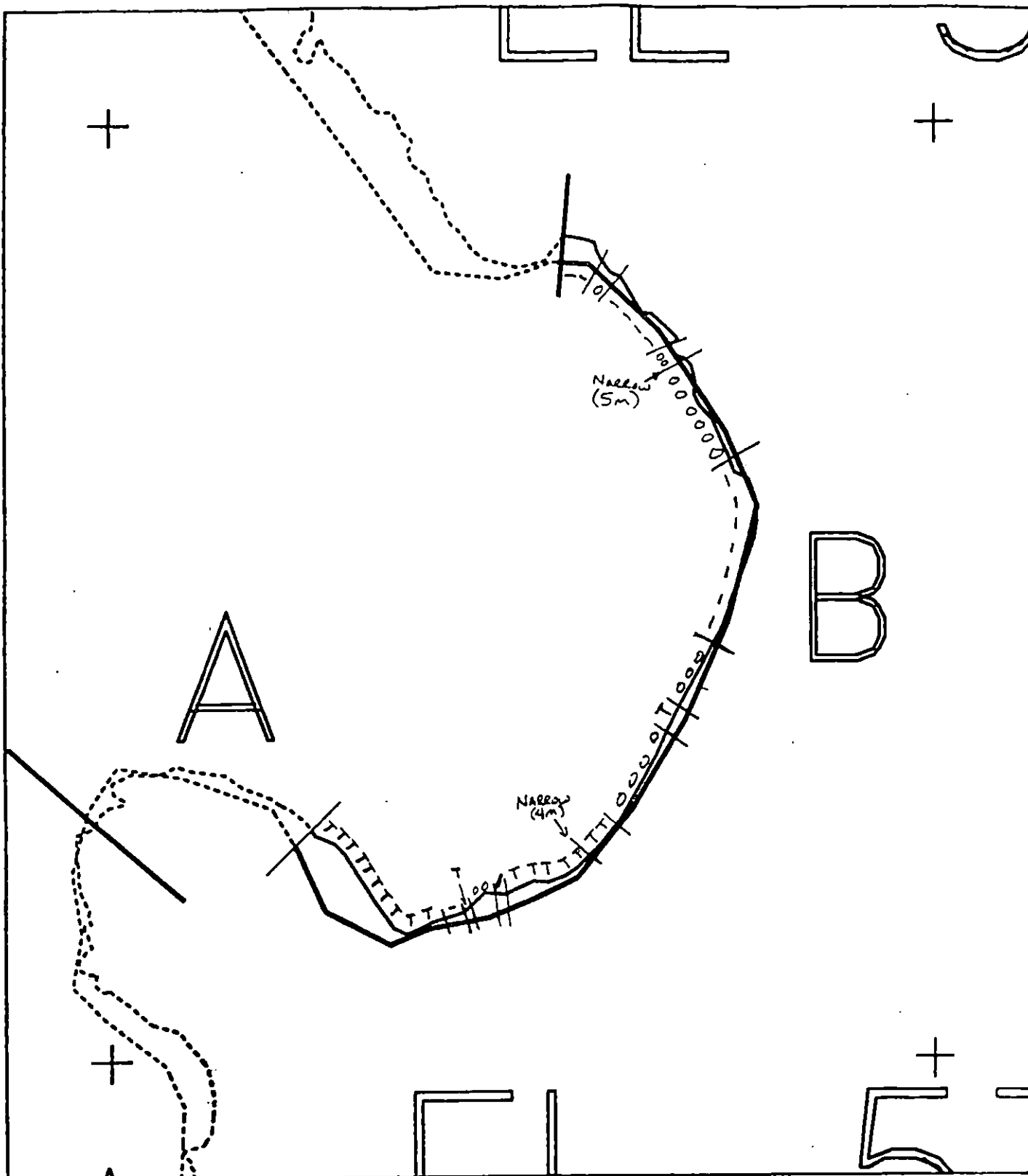
Pillow Basalt Arch

Stakes 'Blue Wood'

Boulder Log

Hemlock Spruce

Stream



XXXX
////

TTTT
0000

Wide
Medium
Narrow
Very Light
No Oil

EL058 B

ADEC Subsegment Length: 782m

METERS

5 100 200

AK State Plane Zone 4
941058B



Subdivision Field Map

Map Key: PWSEL058B

Name: TRIMM

Date: 1-MAY-91

Date Entered:

• SURFACE OIL CATEGORY MAP.

Reviewed: 5/7/91 MC
reviewed 5/17/91

1991 MAYSAP EVALUATION

SEGMENT: EL 058 SUB: D REGION: PWS SURVEY DATE: 5/1/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____ FOSC APPROVAL DATE: _____

ADEC

FOSC

EXXON

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL-58 SUBDIVISION D DATE 5/1/91

ADEC

NAME PETER MONTESANO

SIGNATURE [Signature]

☐ NTR ☒ TREATMENT RECOMMENDED.

THE ENLARGED AREA ON THE SKETCH CONTAINS RECOVERABLE SOR + HOR, NEITHER OF WHICH ARE CONCENTRATED. THIS IS A LOW PRIORITY FOR TREATMENT, BUT WOULD FALL UNDER STANDARD MANUAL REMOVAL. THIS AREA IS A RAISED PLATEAU PROTECTED FROM HEAVY, STRAIGHT ON ENERGY; SHEENS WERE NOTED ON THE TIDE POOLS.

EXXON

NAME C. M. LOTSIMPAUS

SIGNATURE [Signature]

☒ NTR ACCURATE INFO. IN CG & BIO. REPORTS. VERY LITTLE BENEFIT WOULD BE GAINED FROM TREATMENT.

LANDMANAGER

NAME DENNIS S. KENNEDY OF USFS

SIGNATURE [Signature]

☐ NTR

I feel that the subdivision offers very little benefit from cleanup; I suggest that it would be better to direct efforts elsewhere.

USCG/NOAA

NAME MICHEL (NOAA)

BRI ZENONE (CG)

SIGNATURE [Signature]

☒ NTR

The only significant oil on this subdivision is a small area of heavy SOR in between boulders/bedrock in a depression behind a rocky peninsula. Although sheltered from wave attack, the oil poses little environmental risk to organisms in the area. Michel

CGT

CONCUR W/NOAA, USFS + EXXON REPS. OILED AREA POSES A VERY SMALL ENVIRONMENTAL RISK. 3

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 1

TEAM NO. 2OG B. TRIMMBIO J. BensonSEGMENT EL058ADEC P. MONTESANOLANDMANAGER D. Kennedy for USFSSUBDIVISION DEXXON C. KATSIMPALISBM1 ZENONE
USCG/NOAA JACQUI MICHEL/NGAADATE MAY 1 /91TIME 11 : 20 to 11 : 59TIDE LEVEL 0.90 ft. to 2.48 ft.ENERGY LEVEL: ☒ H ☐ M ☐ LSURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELOWEATHER: ☐ SUN ☒ CLOUDS ☐ FOG ☐ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 331 * 555 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W 0 m M 0 m N 331 m VL 0 m NO 0 m US 0 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT	SHORE SLOPE	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			TYPE	VHML	WIDTH	LENGTH	S	UI	
											m	m							
A						S	P				R	V	1	555	X				STAIN & COAT ON ROCK FACE
B				P							B	M	2	4	X				HVY SOR

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

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

PHOTO ROLL # MAYSAP-

2 - 4FRAMES 3-4

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1A	9								0-5	Y	-	-	X				BE - P ₂ CB	
1B									5-8								- P ₂ CB	MOTTLED PEACE BOTTOM
									-									
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SHEEN COLOR: B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS:

BOUNDARY DISCREPANCY - SEE SKETCH MAP.

EL058-D IS A VERTICAL ROCK FACE, HIGH ENERGY SHORE WITH A WELL DEFINED BAND OF COAT & STAIN THROUGH THE SUBDIVISIONS LENGTH.

REVISIT: MC 5/191
reviewed 5/7/91

OG SKETCH MAP
EL058-D
1120-1159
1-MAY-91
BRYAN TRIMM

NORTH
↑

EL-104 D

1989 & 1990 Boundary

1991 GIS Boundary for 'D'

meters
0 100

No Field Onset
Assume:
2nd m Hor

B
SOR-HVY 20%
2x4m

A
CT 10%, ST 20%
1x555m

Hor
Boundaries

0 5
meters

Revised: MC 5/10/91
revised 5/1/91 KG

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 1 May 1991
 SEGMENT # EL 5B TIDAL HEIGHT(Range) +1' to +2'
 SUBDIVISION D BIOLOGIST Benson
 SEA STATE calm WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # — FRAME # —

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

(A) - Verrucaria grows next to the oiled surfaces in the UITZ. The biotic zonation from UITZ down to the upper LITZ is: Verrucaria (dense) - filamentous green algae (FGA - moderately dense) - barnacles (dense) - Fucus + Odonthalia + Enteromorpha. Total biotic % cover was nearly 100%. These are typical biotic features of moderate-wave-exposure, stable vertical substrates. These most-obvious species have strong recruitment in most years & are not particularly sensitive to damage that may be caused if treatment is performed here.

(B) - Verrucaria grows next to PIT#1 (HOR) & the oiled surfaces. Barnacles (sparse) also inhabit the lower UITZ. The MITZ contains dense barnacles & Littorina on the boulders. The barnacle typically in wave-exposed sites, Semibalanus cariosus, occurs here. FGA is also found in more protected areas of the MITZ. Mutilus & Impet recruitment has occurred recently. Several small, low-diversity tidepools in the MITZ contain Rhodanella, Littorina & Hildenbrandia. The LITZ on this saddle is dominated by Fucus, FGA, & Halosaccion. I could not locate the eagle nest that is mapped at the west end of this subdivision.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1	—
Seabirds	—	—	
Waterfowl	—	—	
Gulls/kittiwakes	1	3	
Shorebirds	—	—	
Corvids	—	—	
Other Birds	—	—	

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters	—	—	
Pinnipeds (specify)	3		
2 Sea lions, 1 Harbor Seal			
Whales (specify)	4		
Humpbacks (?) (outside of Northwest Bay)			

Shoreline subdivision map showing important biological features attached.

BIO SKETCH MAP
EL058-D
1120 - 1159
1-MAY-91
Benson

NORTH
↑

1989 & 1990 Boundary

1991 GIS Boundary For'D

0 100
meters

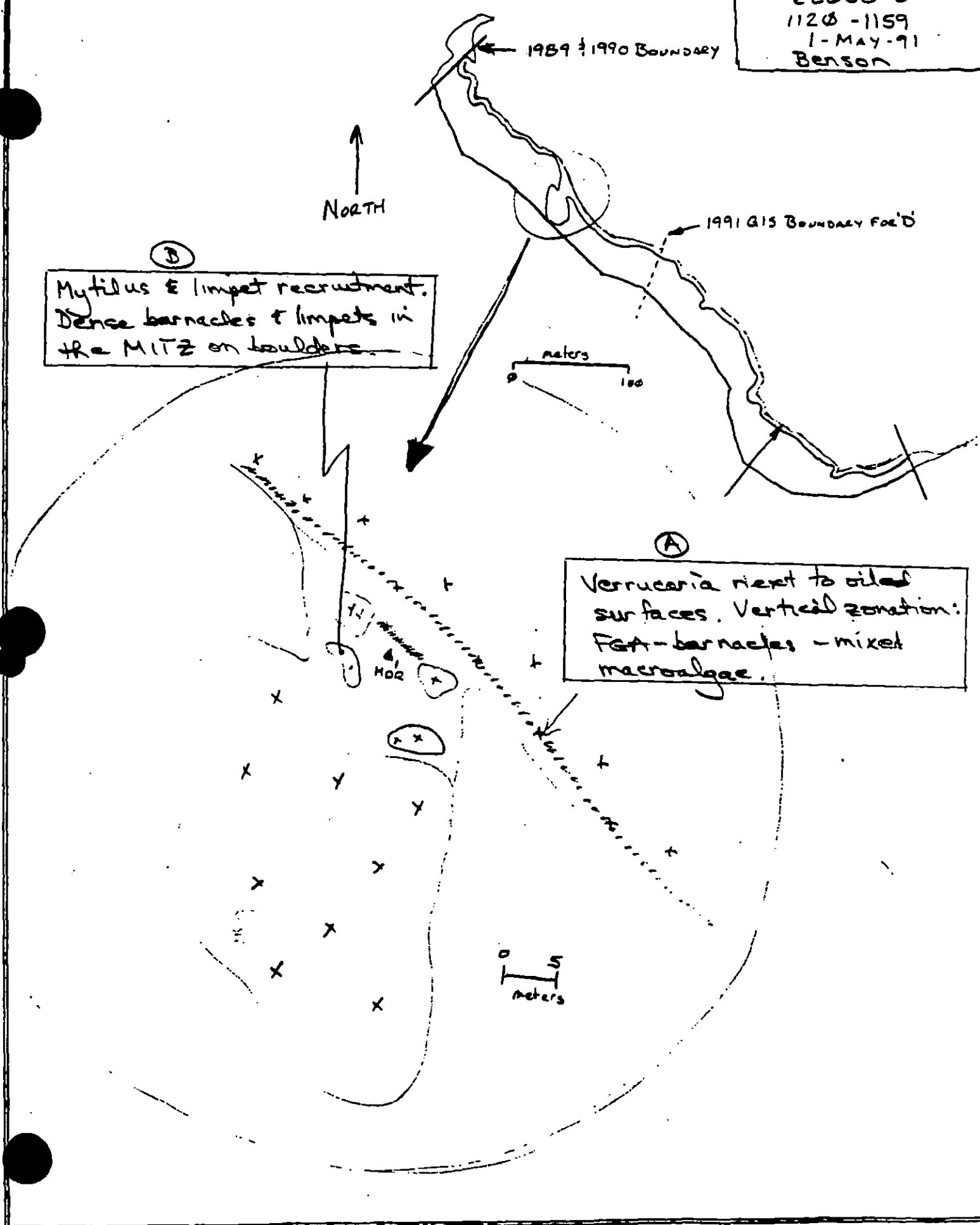
Ⓐ

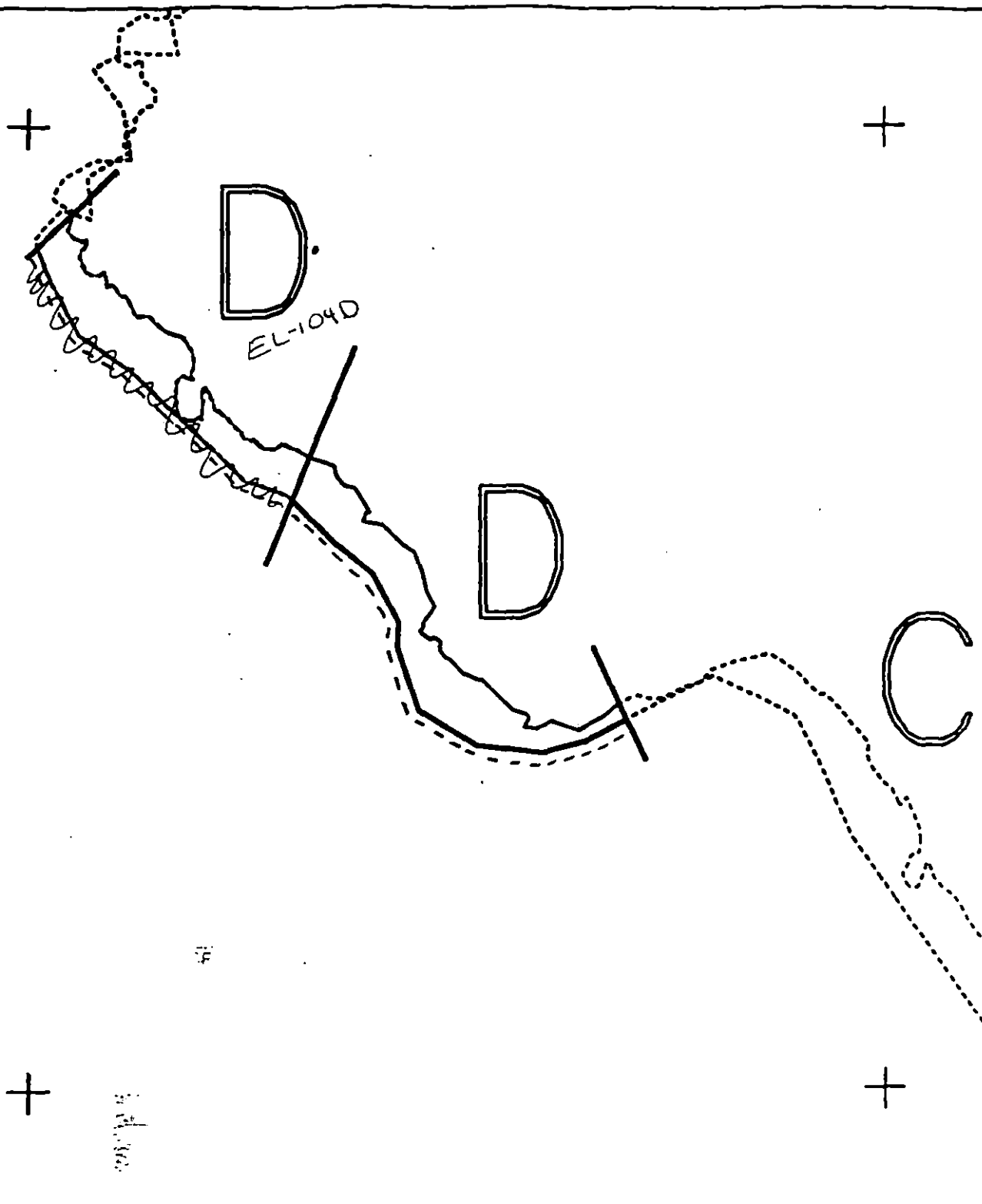
Verrucaria next to oiled
surfaces. Vertical zonation:
FGA - barnacles - mixed
macroalgae.

0 5
meters

Ⓑ

Mytilus & limpet recruitment.
Dense barnacles & limpets in
the MITZ on boulders.





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

EL058 D ^{est 555m}
 ADEC Subsegment Length: 331m
 METERS
 0 100 200
 AK State Plane Zone 4
 821058d

Subdivision Field Map
 Map Key: KNIEL058D
 Name: TRIMM
 Date: 1 MAY 91
 Date Entered:



• SURFACE OIL CATEGORY MAP •

reviewed 5/10/91
 REWISFD: 5/10/91 MC

1991 MAYSAP EVALUATION

SEGMENT: EL 058 **SUB:** C **REGION:** PWS **SURVEY DATE:** 5/1/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

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

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____ **FOSC APPROVAL DATE:** _____

ADEC _____ FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL 58 SUBDIVISION C DATE 5/1/91

ADEC

NAME PETER MONTESANO

SIGNATURE [Signature]

☐ NTR

☒ TREATMENT RECOMMENDED

WE DID NOT HAVE THE COMPLETE ASAP WHEN SURVEYING THIS SUBDIVISION, SO LAST FALLS CONCENTRATIONS OF OIL WERE NOT KNOWN.

AREAS D2 + B BOTH REQUIRE STANDARD MANUAL REMOVAL. THE SUB/SURFACE CONCENTRATION ARE READILY ACCESSIBLE AND EASILY REMOVABLE. AS SUGGESTED BY THE BIOLOGIST, THERE IS NO TROUBLE TREATING THESE AREAS.

EXXON

NAME C.M. TATSIMPAKIS

SIGNATURE [Signature]

☐ NTR

AREA "B" IS THE MAJOR CONCERN IN THIS SEGMENT & COULD BENEFIT FROM TREATMENT THIS YEAR. (REMOVAL, BREAKUP & BIOREMEDIATION)

LANDMANAGER

NAME DENNIS S. KENNEDY OF USFS

SIGNATURE [Signature]

☐ NTR

The major area for any possible clean up would be in location [B]. A method discussed was to manually break up and bioremediate, as break up alone may just reform. If action is taken, care must be shown around the LITZ pools.

USCG/NOAA

NAME MICHEL (NOAA) BMI ZENONE (CG)

SIGNATURE [Signature]

☐ NTR

The only area with significant amounts of oil is Location B, a high, sheltered rock plateau behind a narrow beach peninsula. The SOR deposits filled all the interstitial spaces between the pebbles and cobbles, so coverage was 100% of the available pore space. Location B3 has large boulders over part of the area. Since this area is very sheltered, a break-up-and-leave approach would not be very successful. Some people thought the Impol treatment helped a lot last year -- its supratidal position would minimize tidal dilution. jlmichel

CG - AREA "B" COULD USE SOME WORK - REMOVAL + BIOREMEDIATION. ~~AS DISCUSSED~~ WOULD BE THE KEY. OR AT LEAST BREAK-UP - TREATMENT ON ANY OTHER PART OF THE SEGMENT WOULD REAP NO NET BENEFIT

DATE May / 1 / 91

ENERGY LEVEL: ☐ H ☒ M ☐ L

WEATHER: ☐ SUN ☐ CLOUDS ☐ FOG ☒ RAIN ☐ SNOW

NEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONE

EST. OIL CATEGORY LENGTH: W 15 m M 0 m N 65 m VL 467 m NO 0 m US 0 m

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

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

PHOTO ROLL # MAYSAP-

FRAMES 21-25

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

More

OG COMMENTS:

- LOCATION 'B2', LIGHT 'SOR' UNDER BOULDER VENEER. ON A 'BENCH' IN THE SUPRATIDAL.
- PITS 1 & 2 DELINEATE A 3x7m 'MOR' AREA IN SUPRATIDAL NE LOCATION 'B'.
- CUSTOMER FOUND IN LOCATION 'B3', STORM BEEM DEPOSIT WITH LIGHT TO HEAVY 'SOR'. THIS STORM DEPOSIT IS WELL PACKED & VERY PROTECTED - NOT YOUR TYPICAL STORM BEEM.
- MOUSSE IN LOCATION 'D3' IS A VERY SMALL DEPOSIT UNDER BOULDER VENEER.

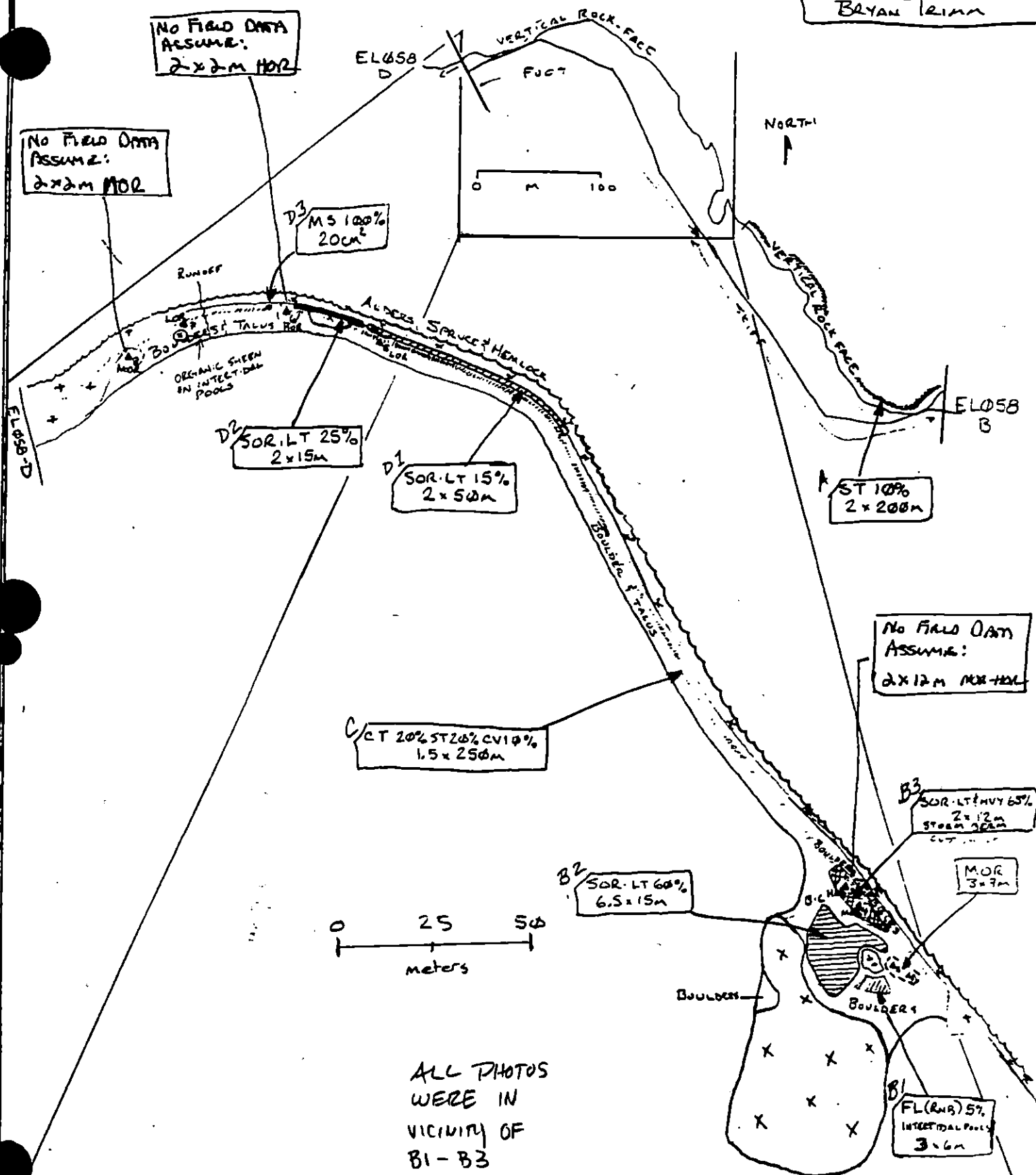
RE

revised 5/7/91 K.G.

OG SKETCH MAP
EL058-C
1-MAY-91
0950-1119
BRYAN TRINN

NO FIELD DATA
ASSUME:
2x2m MOR

NO FIELD DATA
ASSUME:
2x2m MOR



ALL PHOTOS
WERE IN
VICINITY OF
B1-B3

22 overview
23 B2 closeup
24 PIT 3
25 AREA OF PIT 3

REVISER: 5/7/91 MC
reviewed 5/7/91 KG

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 1 May 91
SEGMENT # EL 58 TIDAL HEIGHT (Range) -1' to +1'
SUBDIVISION C BIOLOGIST Benson
SEA STATE calm WIND SPEED/DIRECTION calm
PHOTOGRAPHS: ROLL # — FRAME # —

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

① - We "skipped" along the bedrock cliff at the east end of this subdivision. Verrucaria was found on the wall near the oiled surfaces. From top to bottom, the biotic zonation changed from Verrucaria to barnacles (high MITZ) to Fucus plus filamentous green algae (FGA) to Littorina. Total biotic % cover was nearly 100%. Dermasterias is more common where wave exposure is higher. These are typical biotic features of moderate-exposure, stable, vertical substrates.

①, ②, ③, PITS 1-4 - Verrucaria on oiled rocks in U1TZ & FGA is found nearby. Unusually diverse biota was found in a tidepool in the U1TZ; dense Rhodomela & Littorina along with FGA, Fucus, coralline algae, & Hildenbrandia (see SKETCH MAPS). These organisms are common in other intertidal zones, but U1TZ pools are nonetheless somewhat susceptible to damage in the event of cleanup activities. Below the U1TZ, dense barnacles & Littorina and moderately dense Fucus are found in the MITZ along with a few small tidepools. The LITZ has high total biotic % cover and moderately diverse algae. The abundance of hermit crabs suggests high organic productivity. This is a moderately diverse biota with minor biological sensitivities (U1TZ pools).

WILDLIFE OBSERVATIONS

(continued on the next page)

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	—	—	"blenny eel"
Seabirds	—	—	
Waterfowl	—	—	
Gulls/kittiwakes	1	1	
Shorebirds	—	—	
Corvids	1	1	
Other Birds	—	—	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	—	—	
Pinnipeds (specify)	—		
Whales (specify)	—		

Shoreline subdivision map showing important biological features attached.

REVIEWED: 5/7/91 MC

Subdivision: EL58C

Team: 2

Bio: Benson

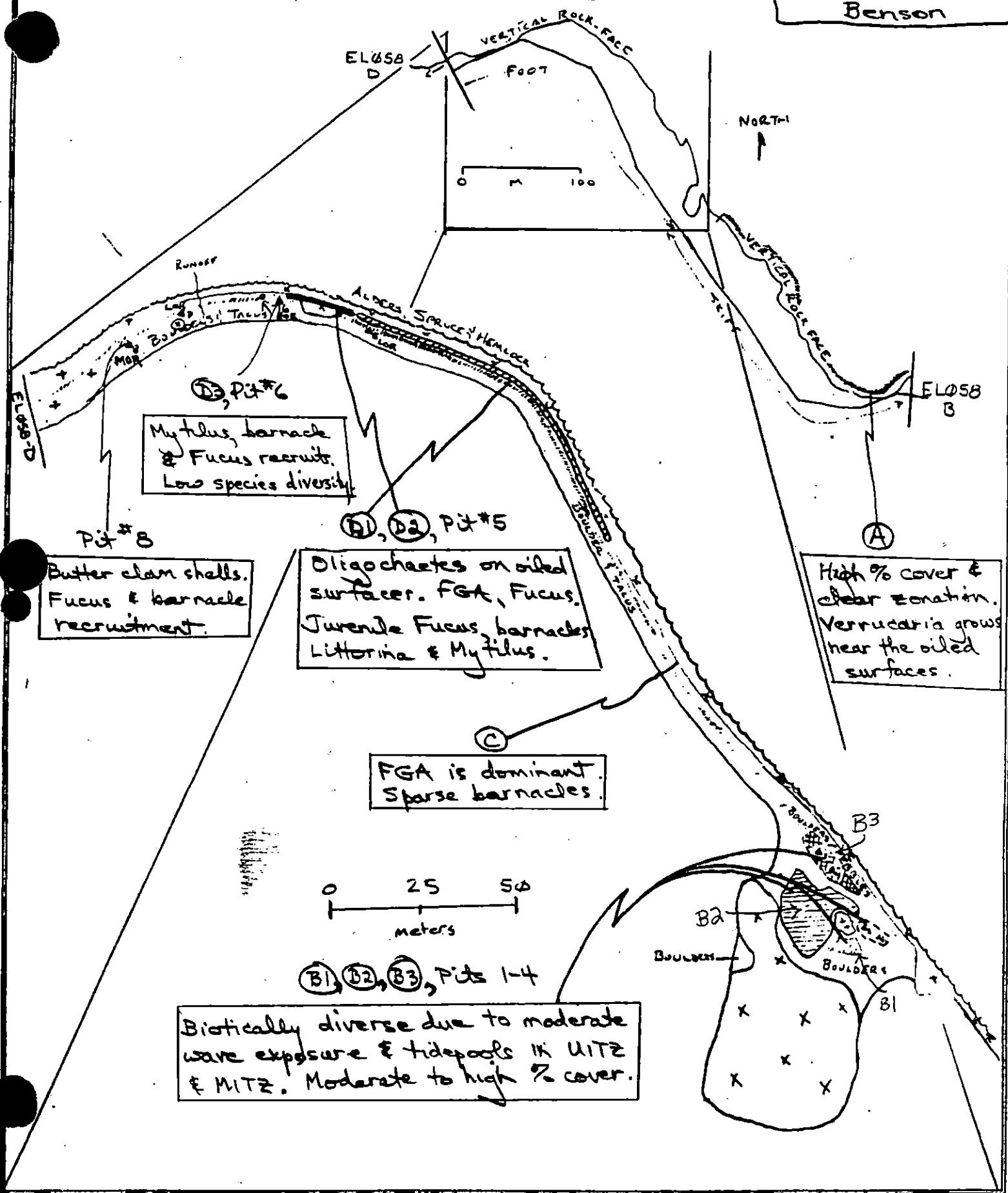
Comments (cont.) -

- © - Sparse barnacles found on boulders near the CT & CV. FGA dominates the MITZ, though some *Littorina* adults & juveniles are found below the FGA. Species diversity is low.
- ①①, ①② & Pit #5 - One-inch pink oligochaetes were found on SOR. The MITZ biotic assemblage consists of dense FGA & barnacles and moderately dense *Fucus*. Recent recruitment was observed for *Fucus*, barnacles, *Littorina*, & *Mytilus*.
- ①③ & Pit #6 - *Verrucaria* grows near the oiled surfaces. The biota is of low diversity, with recruitment of *Mytilus*, barnacles & *Fucus*. This assemblage is not sensitive to possible cleanup activities.
- Pit #8 - Relatively smaller sediments at west end of core support only sparse biota. Recent recruitment of *Fucus* & barnacles was observed. The large number of empty *Saxidomus* shells washed up suggests that a butter clam bed lies here in the subtidal.

This is a moderately wave-exposed site, but the biotic diversity seems generally low except at the tombolo approximately in the middle of the subdivision. This is also the location of somewhat sensitive ecological assemblages (MITZ tidepools). In the event that treatment is performed there, accessing the saddle from the north could help to minimize the chance of damaging the organisms or their habitat.

REVIEWED: 5/7/91 nc

BIO SKETCH MAP
EL058-C
1-MAY-91
0950-1119
Benson



EL058-D

FOOT

0 100

NORTH

Runoff

ALGAE

SPRUCE & HEMLOCK

EL058-B

Pit #6

Mytilus, barnacle
& Fucus recruits.
Low species diversity.

Pit #5

Pit #B

Butter clam shells.
Fucus & barnacle
recruitment.

Oligochaetes on oiled
surfaces. FGA, Fucus.
Juvenile Fucus, barnacles
Littorina & Mytilus.

A

High % cover &
clear zonation.
Verrucaria grows
near the oiled
surfaces.

C

FGA is dominant.
Sparse barnacles.

0 25 50
meters

Pits 1-4

Biotically diverse due to moderate
wave exposure & tidepools in U1TZ
& M1TZ. Moderate to high % cover.

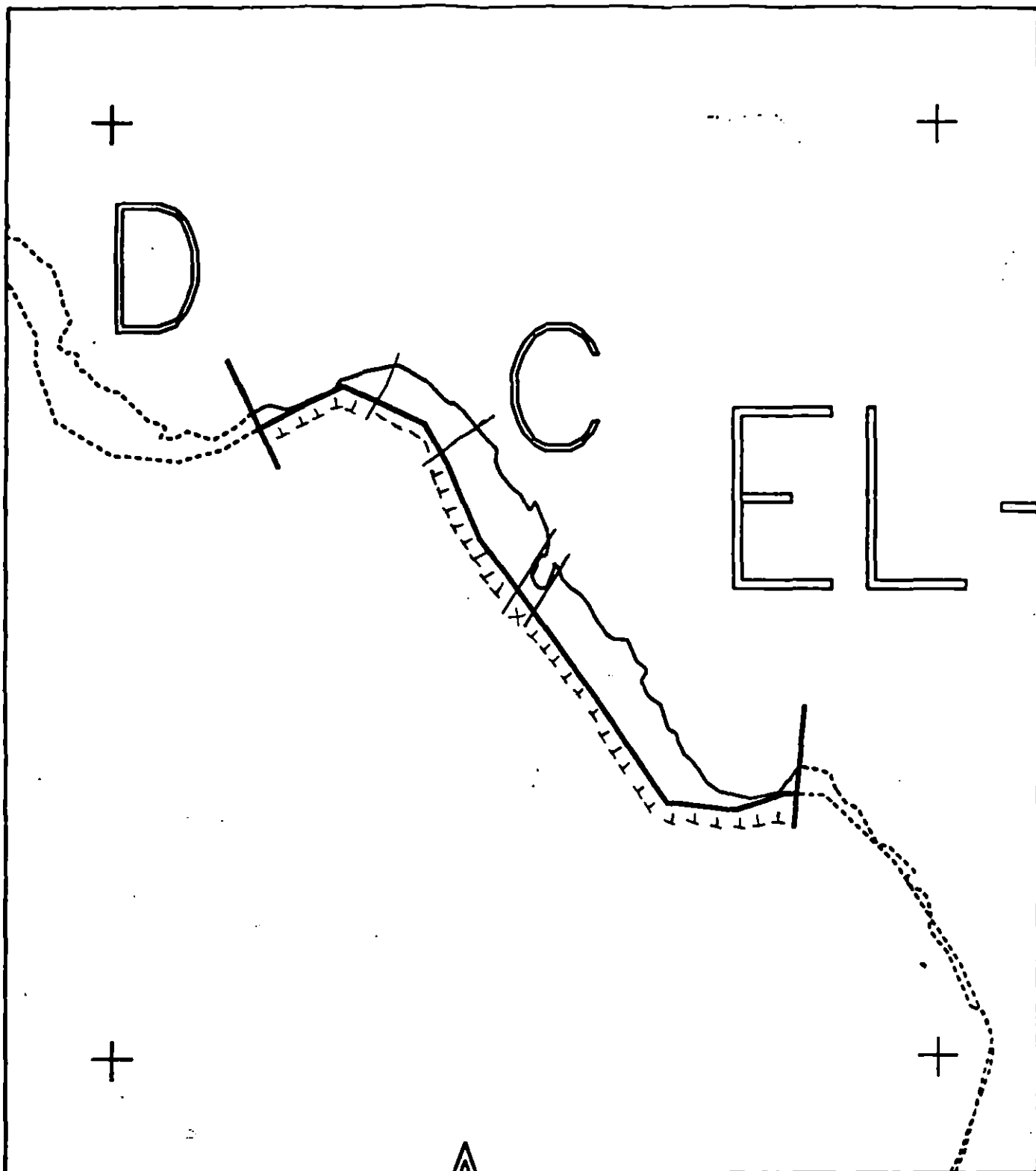
B2

Boulders

Boulders

B1

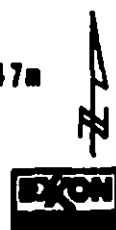
B3



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

EL058 C
 ADEC Subsegment Length: 547m
 METERS

5 100 200
 AK State Plane Zone 4
 6010580



Subdivision Field Map
 Map Key: KNELO58C
 Name: TRIMM
 Date: 1-MAY-91
 Date Entered:

• SURFACE OIL CATEGORY MAP •

Reviewed: 5/7/91 MC
 reviewed K6 5/7/91

1991 MAYSAP EVALUATION

SEGMENT: EL 058 **SUB:** C **REGION:** PWS **SURVEY DATE:** 5/1/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL 58 SUBDIVISION C DATE 5/1/91

ADEC

NAME PETER MONTESANOSIGNATURE Peter Montesano☐ NTR☒ TREATMENT RECOMMENDED

WE DID NOT HAVE THE COMPLETE ASAP WHEN SURVEYING THIS SUBDIVISION, SO LAST FALLS CONCENTRATIONS OF OIL WERE NOT KNOWN.

AREAS D2 + B BOTH REQUIRE STANDARD MANUAL REMOVAL. THE SUB/SURFACE CONCENTRATION ARE READILY ACCESSIBLE AND EASILY REMOVABLE. AS SUGGESTED BY THE BIOLOGIST, THERE IS NO TROUBLE TREATING THESE AREAS.

EXXON

NAME C.M. LOTSIMPAKISSIGNATURE C.M. Lotsimpakis☐ NTR

AREA "B" IS THE MAJOR CONCERN IN THIS SEGMENT & COULD BENEFIT FROM TREATMENT THIS YEAR. (REMOVAL, BREAKUP & BIOREMEDIATION)

LANDMANAGER

NAME DENNIS S. KENNEDY OF USFSSIGNATURE D.S. Kennedy☐ NTR

The major area for any possible clean up would be in location [B]. A method discussed was to manually break up and bioremediate, as break up alone may just reform. If action is taken, care must be shown around the UITE pools.

USCG/NOAA

NAME MICHEL (NOAA) BMI ZENONE (CG)SIGNATURE Michel Bmi Zenone☐ NTR

The only area with significant amounts of oil is LOCATION B, a high, sheltered rock plateau behind a narrow bedrock peninsula. The SOR deposits filled all the interstitial spaces between the pebbles and cobbles, so coverage was 100% of the available pore space. Location B3 has large boulders over part of the area. Since this area is very sheltered, a break-up-and-leave approach would not be very successful. Some people thought the Impol treatment helped a lot last year -- its supratidal position would minimize tidal dilution. Michel

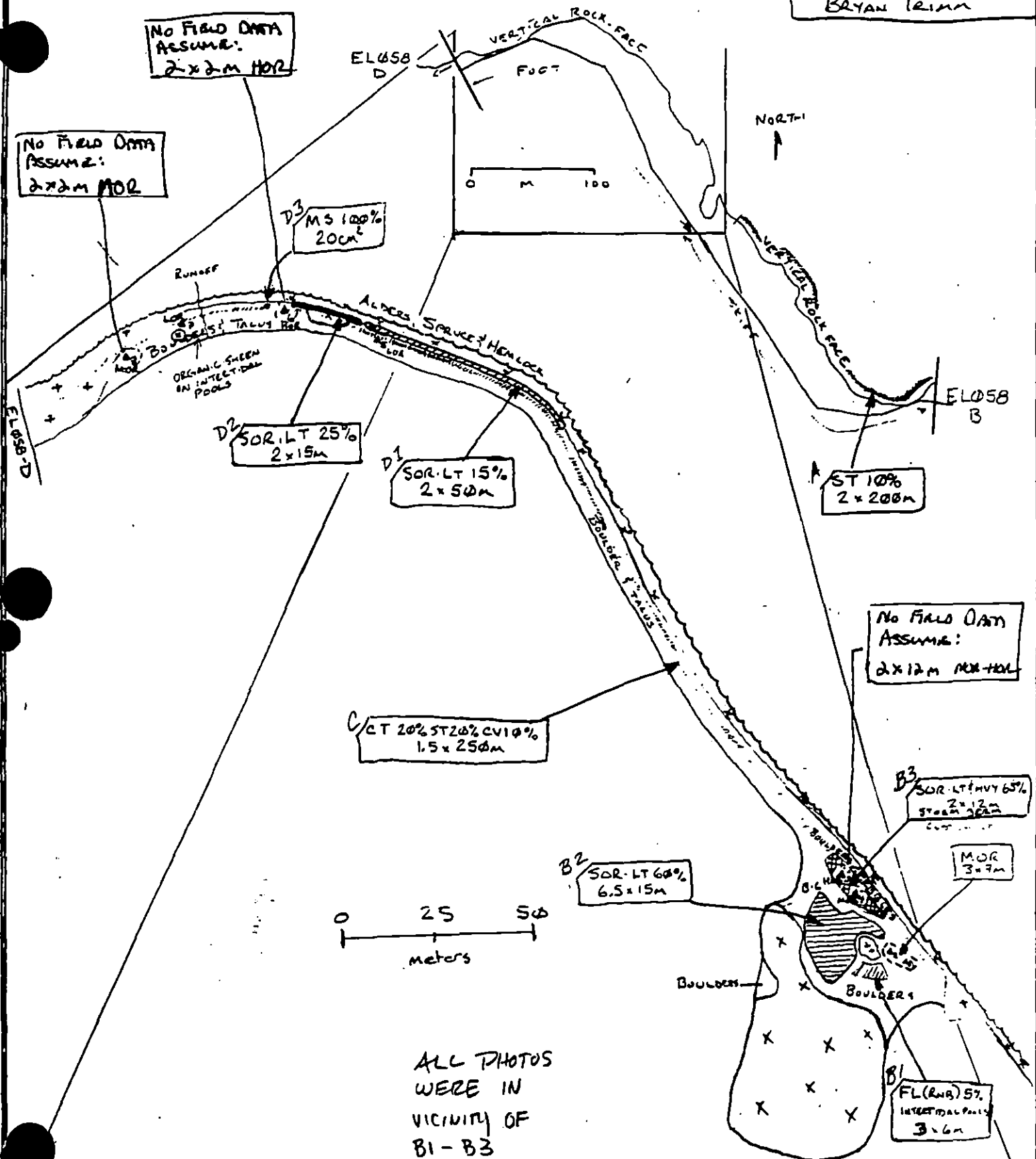
CG - AREA "B" COULD USE SOME WORK - REMOVAL & BIOREMEDIATION. ~~REMOVAL~~ WOULD BE THE KEY. OR AT LEAST BREAK-UP - TREATMENT ON ANY OTHER PART OF THE SEGMENT WOULD REAP NO NET BENEFIT 3

revised 5/7/91 KL

OG SKETCH MAP
EL058-C
1-MAY-91
0950-1119
BRYAN TRINN

NO FIELD DATA
ASSUMED:
2x2m MOR

NO FIELD DATA
ASSUMED:
2x2m MOR



C/CT 20% ST 20% CV 10%
1.5x250m

0 25 50
meters

ALL PHOTOS
WERE IN
VICINITY OF
B1-B3

22 overview
23 B2 closeup
24 pit 3
25 AREA OF pit 3

REVISOR: 5/7/91 MC
reviewed 5/7/91 KC

NAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 1 May 91
 SEGMENT # EL 58 TIDAL HEIGHT(Range) = 1' to +1'
 SUBDIVISION C BIOLOGIST Benson
 SEA STATE calm WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # — FRAME # —

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

① - We "skiffed" along the bedrock cliff at the east end of this subdivision. Verrucaria was found on the wall near the oiled surfaces. From top to bottom, the biotic zonation changed from Verrucaria to barnacles (high MITZ) to Fucus plus filamentous green algae (FGA) to Laminaria. Total biotic % cover was nearly 100%. Dermasterias is more common where wave exposure is higher. These are typical biotic features of moderate-exposure, stable, vertical substrates.

①, ②, ③, Pits 1-4 - Verrucaria on oiled rocks in UITE & FGA is found nearby. Unusually diverse biota was found in a tidepool in the UITE dense Rhodomela & Littorina along with FGA, Fucus, coralline algae, & Hildenbrandia (see SKETCH MAPS). These organisms are common in other intertidal zones, but UITE pools are nonetheless somewhat susceptible to damage in the event of cleanup activities. Below the UITE, dense barnacles & Littorina and moderately dense Fucus are found in the MITZ along with a few small tidepools. The LITE has high total biotic % cover and moderately diverse algae. The abundance of hermit crabs suggests high organic productivity. This is a moderately diverse biota with minor biological sensitivities (UITE pools).

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

(continued on the next page)

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	—	—	"blenny eel"
Seabirds	—	—	
Waterfowl	—	—	
Gulls/Kittiwakes	1	1	
Shorebirds	—	—	
Corvids	1	1	
Other Birds	—	—	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	—	—	
Pinnipeds(specify)	—		
Ceaus(specify)	—		

Shoreline subdivision map showing important biological features attached.

REVIEWED: 5/7/91 MC

Subdivision: EL58C

Team: 2

Bio: Benson

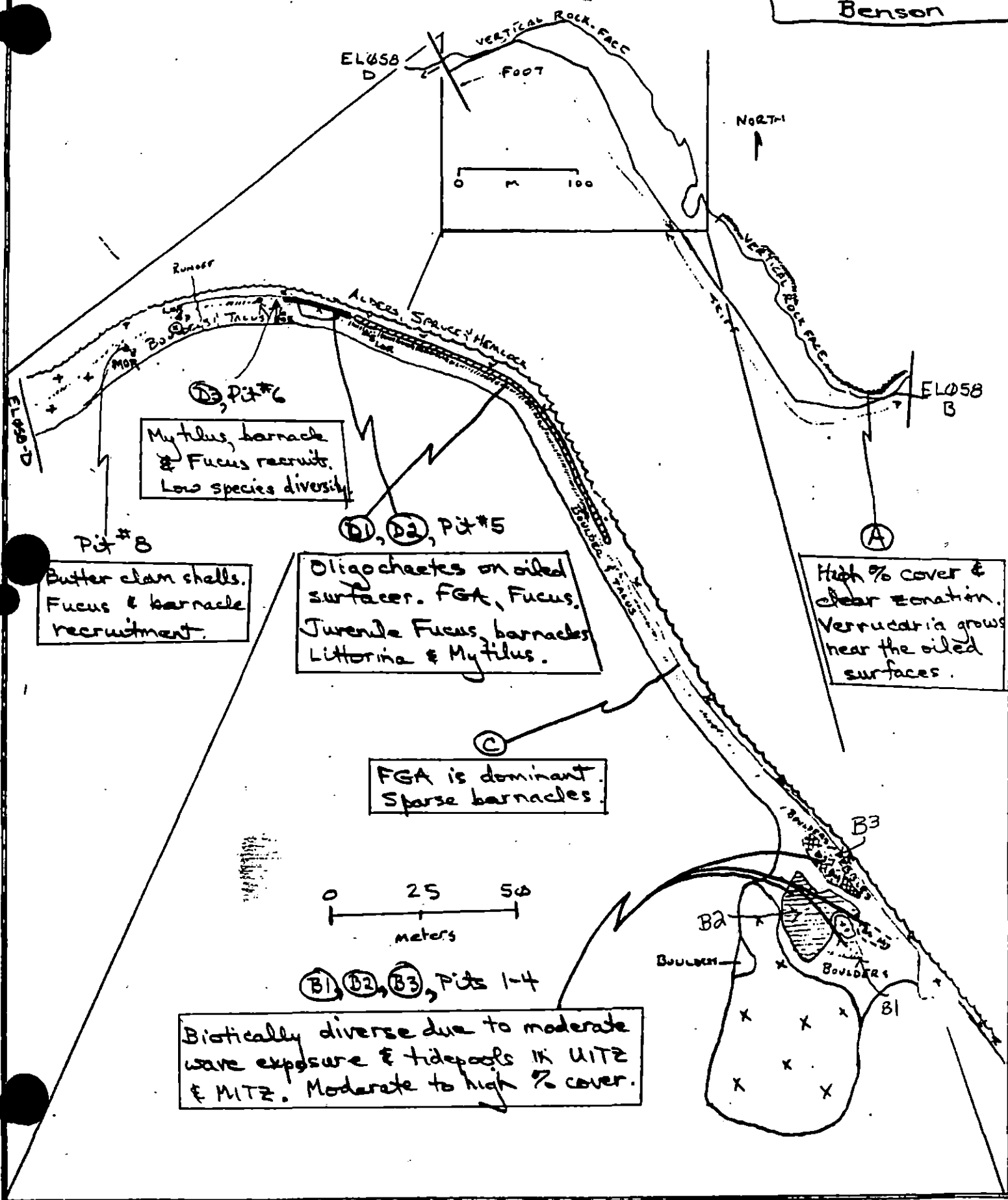
Comments (cont.) -

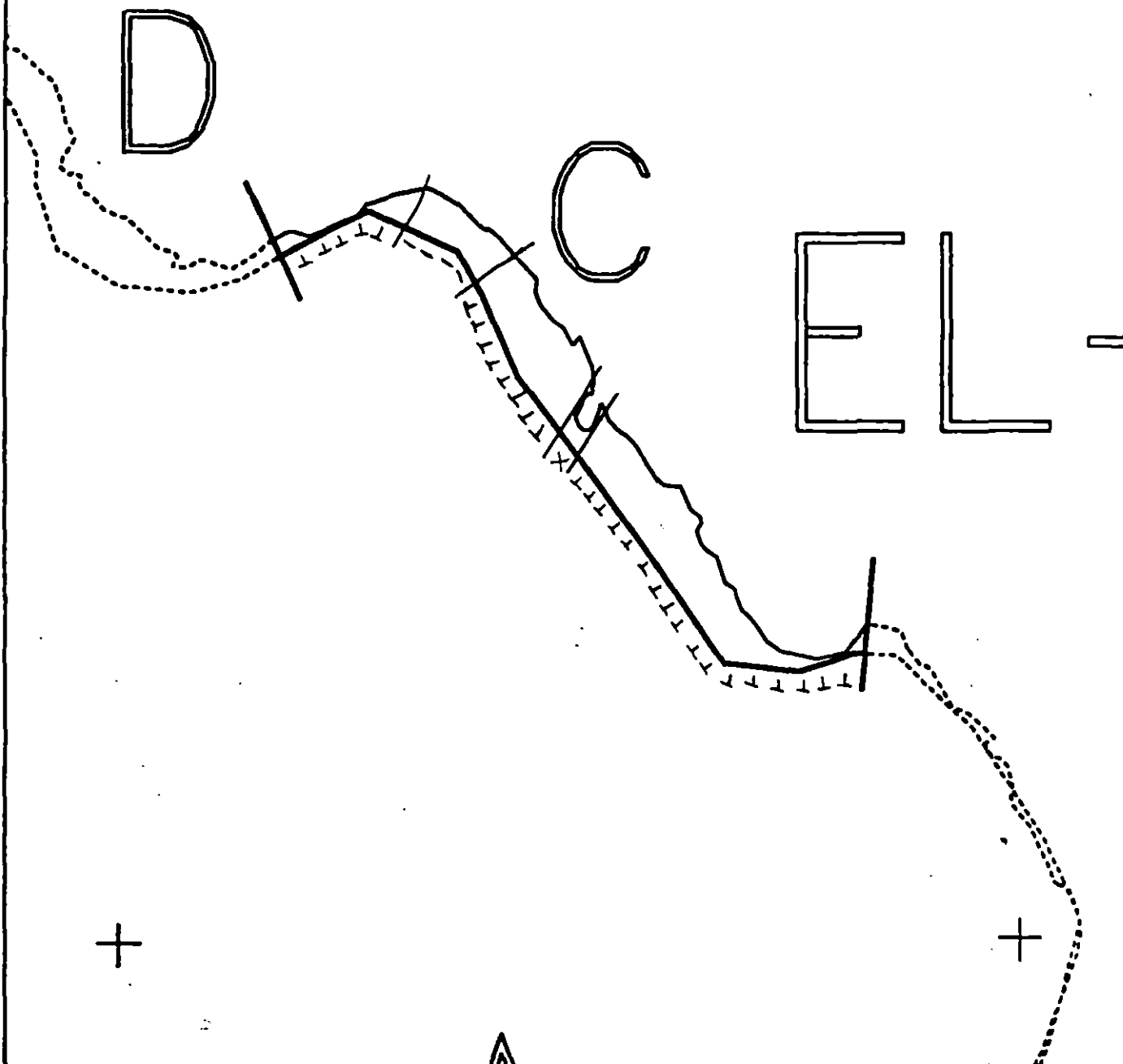
- ③ - Sparse barnacles found on boulders near the CT & CV. FGA dominates the MITZ, though some *Littorina* adults & juveniles are found below the FGA. Species diversity is low.
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This is a moderately wave-exposed site, but the biotic diversity seems generally low except at the tombolo approximately in the middle of the subdivision. This is also the location of somewhat sensitive ecological assemblages (MITZ tidepools). In the event that treatment is performed there, accessing the saddle from the north could help to minimize the chance of damaging the organisms or their habitat.

REVIEWED: 5/7/91 NC

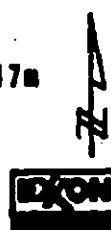
BIO SKETCH MAP
EL058-C
1-MAY-91
0950-1119
Benson





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

EL058 C
 ADEC Subsegment Length: 547m
 METERS
 0 100 200
 AK State Plane Zone 4
 6010301



Subdivision Field Map
 Map Key: KNIEL058C
 Name: TRIMM
 Date: 1-MAY-91
 Date Entered:

• SURFACE OIL CATEGORY MAP •

Reviewed: 5/7/91 MC
 reviewed KG 5/7/91

1991 MAYSAP EVALUATION

SEGMENT: EL 058 SUB: B REGION: PWS SURVEY DATE: 5/1/91ENVIRONMENTAL SENSITIVITIES:Work Window(s) OPEN 5/1 - 8/15; RESTRICTED 8/15 - 9/15Ecological/Constraints (see page two for details) Subsistence - Deer harvestingARCHAEOLOGICAL CONSTRAINTS:An Exxon archaeological monitor is required on-site during shoreline treatment. PHONE 564-3276; 564-3657; (Anchorage) or 229-1514 (24 hrs.). *for*onr signature. *Rachel Chen Dene* Date: 5/14/91RECOMMENDATIONS:

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

COMMENTS:

INITIAL: _____

TAG: MANUAL PICKUP OF HIGH SOR AT AREAS C, D₂, + GMONITORS TO ASSESS STORM BERM ^(B4) DURING TREATMENT OF OTHER AREAS

FOSC: _____

TAG APPROVAL DATE: MAY 14 1991FOSC APPROVAL DATE: 5/20/91ADEC *[Signature]*FOSC *[Signature]*EXXON *[Signature]*E. E. PAGE, CDR, USCG
CHIEF OF STAFF, FOSCUSCG *7. M. Murphy et.*NOAA *[Signature]*

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL 058 SUBDIVISION B DATE 5/1/91

ADEC

NAME Peter Montesano

SIGNATURE Peter Montesano

☐ NTR ☒ TREATMENT RECOMMENDED

Oil persists throughout subdivision as depicted on the sketch map. Most of the oil is positioned and in degrees that make recovery extremely difficult. However, work is presently required in several areas. Standard manual removal of sediments is due in Areas C, D₂, G, and around Pit 8. The SOR is simple shovel/shovel work. The area around Pit 8 is an oiled storm berm which was mostly covered with snow during survey. The HOR in berm was a firm, distinct layer which will come out in bricks. This berm is no longer than about 10m, with the oiling continuing under snow. The Exxon, NOAA, and USFS Reps were ahead and missed seeing the berm completely.

EXXON

NAME C.M. LOTSIMPALUS

SIGNATURE C.M. Lotsimpalus

☐ NTR HEAVIER OIL CONCENTRATIONS ARE SCATTERED SEEM TO BE IMPROVING FOR THE MOST PART. STORM BERM (PIT #8) NEEDS FURTHER EVALUATION AFTER SNOW MELTS.

LANDMANAGER

NAME DENNIS S. KENNEY OF USFS

SIGNATURE D.S. Kennedy

☐ NTR This subdivision should be a low priority for treatment as it has rich habitat components and good wave exposure. TAG should visit before Rx'ing any treatment.

USCG/NOAA

NAME MICHEL (NOAA)

SIGNATURE Michel

☐ NTR This shoreline is relatively exposed to high wave energy, as evidenced by sub-rounded cobbles and boulders. Very little oil remains — there are only scattered patches of SOR in/among the boulders/cobbles U 172, and in southernmost storm berm. Sheens were visible in runoff water throughout the area. Natural processes appear to be effectively removing the remaining oil. Good Survey — Michel.

CGI COMMENT Pg. 2 COMMENT SHEET

MAYSAP FIELD SHORELINE COMMENT SHEET

PAGE 2

TEAM NO. 2 SEGMENT EL 058 SUBDIVISION B DATE 5/1/91

ADEC

NAME _____

SIGNATURE _____

☐ NTR

EXXON

NAME _____

SIGNATURE _____

☐ NTR

LANDMANAGER

NAME _____

OF _____

SIGNATURE _____

☐ NTR

USCG/NOAA

NAME BMI ZENONESIGNATURE BMI ZENONE☐ NTR

AREA IN VICINITY OF PIT #B IS AN OILED STORM BERM PRESTLY COVERED W/SNOW. I WAS WITH ADEC REP WHEN WE CAME UPON THIS AREA. CONCUR W/HIM THAT THIS AREA COULD USE SOME SHOVEL & TROWEL WORK SOON AS SNOW MELTS AND AREA CAN BE DELIMITED. THE REST OF THE SUBDIVISION IS CLEANING WELL ON IT'S OWN.

MAYSAP SHORELINE OILING SUMMARY

PAGE 1 OF 3TEAM NO. 2OG B. TRIMMBIO J. BensonSEGMENT EL058ADEC P. MONTESANOLANDMANAGER D. Kennedy for USFSSUBDIVISION BXON C. KATSIMPALISBMT ZENONR
USCG/NOAA JACQUI MICHEL/NOAADATE MAY 1 / 1 / 91TIME 06:59 to 09:47TIDE LEVEL 3.85 ft. to -1.25 ft.ENERGY LEVEL: ☒ H ☒ M ☐ LSURVEYED FROM: ☒ FOOT ☐ BOAT ☐ HELOWEATHER: ☐ SUN ☒ CLOUDS ☐ FOG ☒ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 782 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☒ SL ☐ NONEEST. OIL CATEGORY LENGTH: W 0 m M 10 m N 287 m VL 255 m NO 230 m US 0 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A				S							B	H	3	35V	X				HVY SOR UNDER/BETWEEN BOULDERS
B1				S							B-C	M	2.5	15V	X				HVY SOR UNDER/BETWEEN B-C
B2							S				B-C	M	1.5	15V			X		STAIN ON CLASTS
B3					S						B-C-P	M	1	30V	X				
B4				P	S	S					PC	M	1.5	15N	X				
B5						S					R	H	1	5V	X				ROCK FACE & CREVICES
C				P							B	M	10	3N	X				HVY SOR UNDER BOULDERS
D1						S		S			BC	M	2	40V		X			RAINBOW 'FL' IN INTERTIDAL POOLS
D2				B							BC	M	1.5	4N	X				HVY SOR WITH ORGANICS
E						S					PB	M	2	25V		X			
F							S				PB	M	1.5	30V	X				
				B	S	S					PB	M	1.5	5N	X				HVY SOR ASSOC. WITH MOR/PIT 16
					S	S					PB	M	2	45V	X				
H2			S	P	S	S					B	M	2	12N	X				LT HVY SOR UNDER TALUS
H3								S			B	M	10	20V		X	X		RAINBOW 'FL' IN TIDAL POOLS
J				S	S	S					B-R	H	1	5N	X				LT SOR UNDER TALUS/BASE OUTCROP

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

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

PHOTO ROLL # MAYSAP- 2-3 FRAMES 16-20

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	19								—	Y	—	—		X			BPC-PGCBM	
2	16								0-8	Y	8	S		X			BPC-GPCB	ORGANICS IN P.T
3	11								4-8	Y	8	B		X			BPC-GPCB	BASE OF TALUS
4A	19								1-15	N	—	—			X		BC-GSPCB	
4B									15-19								-GSPCB	Follows surface layer
5	18								0-7	Y	14	B		X			BCP-GP	ANGULAR
6	21								—	Y	15	N		X			P-GP	ROUNDED
7	10								0-10	N	—	—		X			BCP-PG	MOR MOTTLED w/ LOR
1	1								-									

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

OG COMMENTS:

- RECOVERED SEVERAL PomPoms.
- OILED STORM BERM NEXT TO WATER RUN OFF IN SOUTH CORNER OF BEACH; PIT #8 IN STORM BERM LOCATED 'HOR'; HOWEVER, SNOW COVERING BERM PREVENTED DELINEATION OF SURFACE & SUBSURFACE OIL.
- PIT #3 AT BASE AND LEE SIDE OF TALUS; PITS 1 & 2 VERIFY THAT 'HOR' IS LOCALIZED. CUSTOM BERN FOUND IN AREA.

Reviewed 5/15/91 MC

5/17/91 RG reviewed

PAGE 2 OF 3

DATE MAY 1 / 1 / 91

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

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

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP-_____ - _____ FRAMES

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

OG COMMENTS:

REVIEWED: 5/7/91 MC
5/7/91 KG revised

MAYSAP SHORELINE OILING SUMMARY (cont.)

PAGE 3 OF 3

TEAM NO. 2

SEGMENT EL058

SUBDIVISION B

DATE MAY, 1 / 91

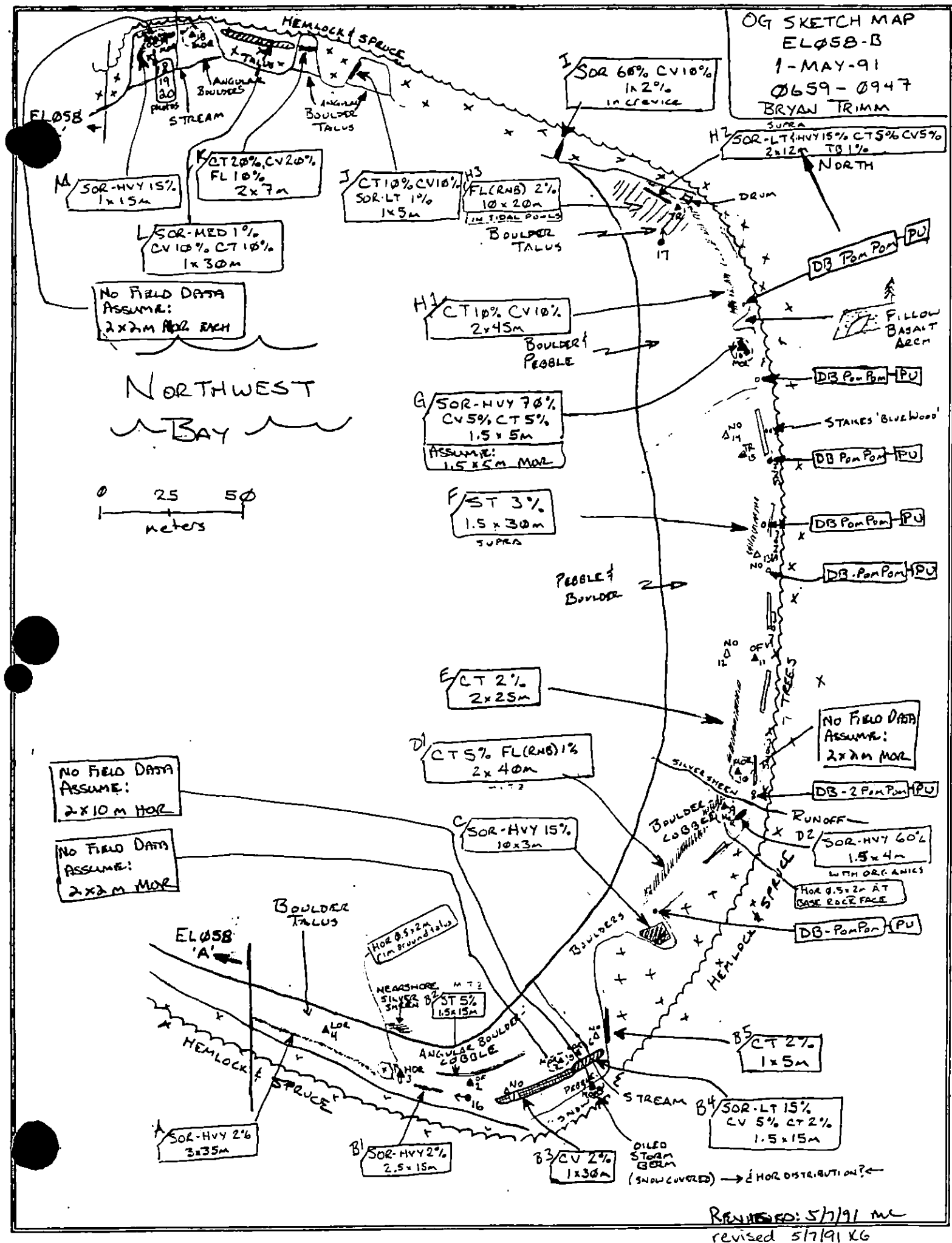
[illegible]

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

OG COMMENTS:

- PIT 9 LOCATED AT BASE OF ROCK FACE $\frac{1}{2}$ ASSOCIATED WITH HEAVY SOR OILING, IN LOCATION 'D2'. TWO PITS WERE EXCAVATED WITHIN 2 M OF PIT 9 AND MOR WAS FOUND.
- PIT 16 ASSOCIATED WITH HEAVY 'SOR' OF LOCATION 'G'.
- PITS 18-20 ON A HIGH ANGLED BOULDER POCKET BEACH.

REVIEWED: 5/7/91 MC
reviewed 5/7/91 KG



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 1 May 1991
 SEGMENT # EL 58 TIDAL HEIGHT(Range) +4' to -1'
 SUBDIVISION B BIOLOGIST Benson
 SEA STATE calm WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # — FRAME # —

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

(A) - Filamentous green algae (FGA) grows on oiled surfaces in U1T2.
 #P44 Also, sparse barnacles in U1T2. In M1T2, FGA forms a thick cover. Small Fucus, rare barnacles & Cladophora were found beneath the FGA. Other species in the M1T2: Littorina (with egg masses), barnacle spat & Enteromorpha. The L1T2 contains Ulva, Fucus, Porphyra, Pycnospadia, hermit crabs, limpets and a nereid polychaete. Algal diversity is low, overall diversity moderate & total biotic % cover is high. This species assemblage should be resilient in the event of damage caused by cleanup activities, due to their strong recruitment.

(B) - (B5) FGA grows on oiled surfaces. FGA is also dense in the upper M1T2 and is joined throughout the M1T2 by
 #P45 Littorina (with egg masses), barnacles (including spat), Fucus (with recruits), ~~abundant~~ Mytilus, limpets, amphipods, Nereid polychaete & hermit crabs. Although algal diversity on boulders is low, overall diversity is moderately high. Diversity on the nearby pebbles is low, probably due in part to high wave exposure & small rock size. In this well exposed location, re-recruitment of most of these species seems likely.

(C) FGA dominates the intertidal here, resulting in low diversity & high % cover.
 (continued on next page)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	—	—	"blenny eel"
Seabirds	—	—	
Waterfowl	—	—	
Gulls/kittiwakes	1	3	
Shorebirds	—	—	
Corvids	—	—	
Other Birds	—	—	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	—	—	
Amphipeds (specify)	1		
Whales (specify)	—		

Shoreline subdivision map showing important biological features attached.

Reviewed: MC 5/7/91

Subdivision: EL 58 B

Team: 2

Bio: Benson

Comments (cont.) -

①, ⑤, & Pits* 9, 10 - FGA is found throughout the inter-tidal zone. Verrucaria extends very high in UITZ. The MITZ & LITZ resemble the boulder talus community (A) described above. In addition, more barnacle spat, a few blenny eels & nudibranch egg masses were observed here. In the event of cleanup activities here, a reasonable effort to avoid the MITZ & LITZ where possible should be sufficient to minimize damage to the biota.

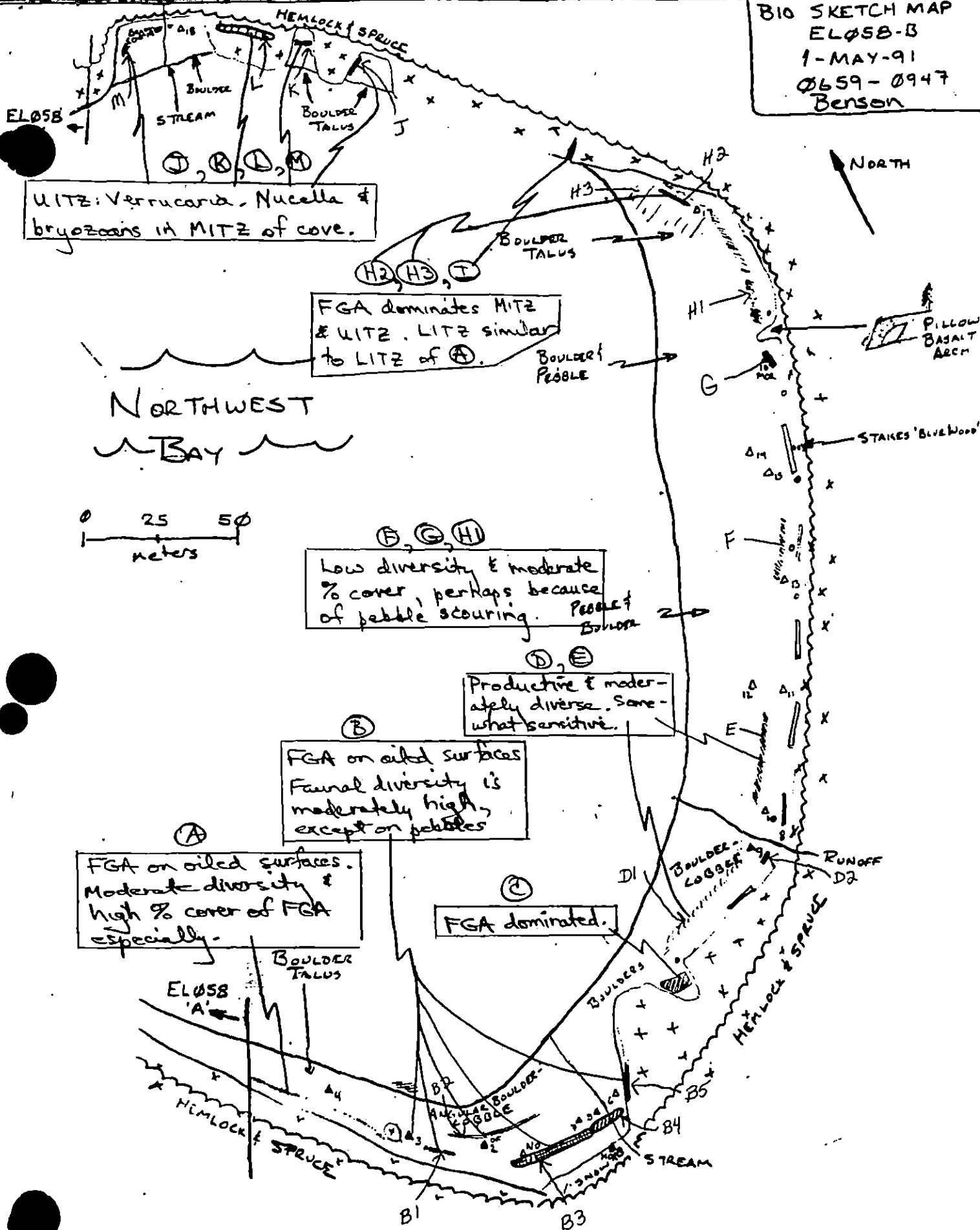
⑥, ⑦, ⑪, & Pits* 11-16 - FGA is sparse except in the streams, where it is more abundant. UITZ: FGA & Verrucaria. In the MITZ, Fucus is dense only on boulders, where barnacles, Littorina & limpets are moderately dense. Species diversity is low even in the LITZ, where FGA & a few other algae form a high % cover. Overall, this is a beach of low diversity & moderate biotic cover & so is not highly sensitive to any potential cleanup activities.

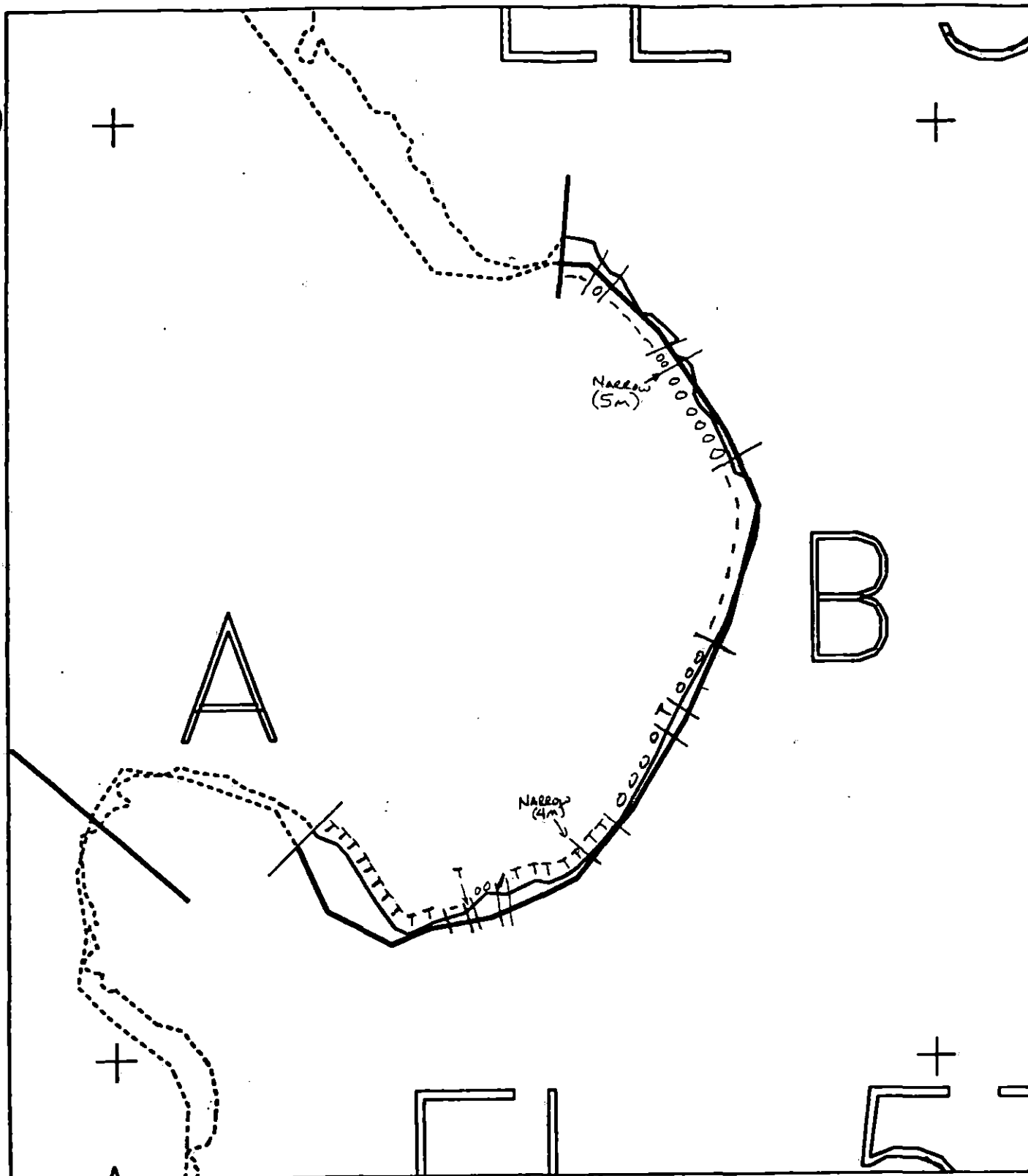
⑫, ⑬, ① & Pit* 17 - Both the UITZ & MITZ are inhabited by primarily FGA & barnacles. The LITZ is similar to that in (A).

⑭, ⑮, ⑯, ⑰ & Pits* 18-20 - Verrucaria, FGA, rare barnacles occur near & on the oiled surfaces in the UITZ. The MITZ contains typical, common species, with the addition of Nucella & bryozoans, perhaps because this beach receives higher wave exposure. It is not, however, biotically sensitive.

This is a habitat-rich subdivision, whose parts must be considered individually in the event that treatment is recommended.

BIO SKETCH MAP
ELØSB-B
1-MAY-91
0659-0947
Benson





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

EL058 B
 ADEC Subsegment Length: 782m
 METERS
 0 100 200
 AK State Plane Zone 4
 p01058b



Subdivision Field Map
 Map Key: PWSELO58B
 Name: TRIMM
 Date: 1-MAY-91
 Date Entered:

• SURFACE OIL CATEGORY MAP •

Reviewed: 5/7/91 MC
 reviewed 5/7/91 KG

1991 MAYSAP EVALUATION

SEGMENT: EL 058 SUB: D REGION: PWS SURVEY DATE: 5/1/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Rachel Jan Dan

Date: 5/17/91

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

N

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: MAY 17 1991

FOSC APPROVAL DATE: 25 MAY 1991

ADEC

FOSC

EXXON

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

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL-58 SUBDIVISION D DATE 5/1/91

ADEC

NAME PETER MONTESANO

SIGNATURE *Peter Montesano*

☐ NTR

☒ TREATMENT RECOMMENDED.

THE ENLARGED AREA ON TIDE SKETCH CONTAINS RECOVERABLE SOR + HQR, NEITHER OF WHICH ARE CONCENTRATED. THIS IS A LOW PRIORITY FOR TREATMENT, BUT WOULD FALL UNDER STANDARD MANUAL REMOVAL. THIS AREA IS A RAISED PLATEAU PROTECTED FROM HEAVY, STRAIGHT ON ENERGY; SHEENS WERE NOTED ON THE TIDE POOLS.

EXXON

NAME C.M. KOTSIMPALIS

SIGNATURE *C.M. Kotsimpalis*

☒ NTR

ACCURATE INFO. IN CG & BIO. REPORTS. VERY LITTLE BENEFIT WOULD BE GAINED FROM TREATMENT.

LANDMANAGER

NAME DENNIS S. KENNEDY OF USFS

SIGNATURE *D.S. Kennedy*

☐ NTR

I feel that the subdivision offers very little benefit from cleanup; I suggest that it would be better to direct efforts elsewhere.

USCG/NOAA

NAME MICHEL (NOAA) BML ZENONE (CG)

SIGNATURE *Michel Bml Zenone*

☒ NTR

The only significant oil on this subdivision is a small area of heavy SOR in between boulders/bedrock in a depression behind a rocky peninsula. Although sheltered from wave attack, the oil poses little environmental risk to organisms in the area. Michel

CGT
CONCUR W/NOAA, USFS + EXXON REPS. OILED AREA POSES A VERY SMALL ENVIRONMENTAL RISK. 3

PAGE 1 OF 1

DATE MAY/ 1 / 91

ENERGY LEVEL: ☒ H ☐ M ☐ L

WEATHER: ☐ SUN ☒ CLOUDS ☐ FOG ☐ RAIN ☐ SNOW

NEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONE

EST. OIL CATEGORY LENGTH: W $\emptyset$ m M $\emptyset$ m N ³⁵¹~~555~~ m VL $\emptyset$ m NO $\emptyset$ m US $\emptyset$ m

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

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

PHOTO ROLL # MAYSAP-

2 - 4

FRAMES 34

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

EL 05B-D IS A VERTICAL ROCK FACE, HIGH ENERGY SHORE WITH A WELL DEFINED BAND OF COAT & STAIN THROUGH THE SUBDIVISIONS LENGTH.

REVISED: MC 5/191

reviewed 5/7/91 KG

OG SKETCH MAP
EL058-D
1120-1159
1-MAY-91
BRYAN TRIMM

NORTH
↑

EL-104 D

1989 & 1990 BOUNDARY

1991 GIS BOUNDARY FOR D

SKIFF
FOOT

SKIFF

0 100
meters

No Field Data
Assumed:
2x4m Here

B 50% HWY 20%
2x4m

A CT 10%, ST 20%
1x555m

Hor. Boulders

0 5
meters

Revised: MC 5/10/91
revised 5/1/91 KG

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 1 May 1991
 SEGMENT # EL 58 TIDAL HEIGHT(Range) +1' to +2'
 SUBDIVISION D BIOLOGIST Benson
 SEA STATE calm WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # — FRAME # —

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

- ① - Verrucaria grows next to the oiled surfaces in the UITZ. The biotic zonation from UITZ down to the upper LITZ is: Verrucaria (dense) - filamentous green algae (FGA - moderately dense) - barnacles (dense) - Fucus + Odonthalia + Enteromorpha. Total biotic % cover was nearly 100%. These are typical biotic features of moderate-wave-exposure, stable, vertical substrates. These most-obvious species have strong recruitment in most years & are not particularly sensitive to damage that may be caused if treatment is performed here.
- ② - Verrucaria grows next to PZ #1 (HOR) & the oiled surfaces. Barnacles (sparse) also inhabit the lower UITZ. The MITZ contains dense barnacles & Littorina on the boulders. The barnacle typically in wave-exposed sites, Semibalanus cariosus, occurs here. FGA is also found in more protected areas of the MITZ. Mutilus & limpet recruitment has occurred recently. Several small, low-diversity tidepools in the MITZ contain Rhodanella, Littorina & Hildenbrandia. The LITZ on this saddle is dominated by Fucus, FGA, & Halosaccion. I could not locate the eagle nest that is mapped at the west end of this subdivision.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1	—
Seabirds	—	—	
Waterfowl	—	—	
Gulls/kittiwakes	1	3	
Shorebirds	—	—	
Corvids	—	—	
Other Birds	—	—	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	—	—	
Amphipeds (specify)	3		
Sea lions, 1 Harbor Seal			
Whales (specify)	4		
Humpbacks (?) (outside of Northwest Bay)			

Shoreline subdivision map showing important biological features attached.

BIO SKETCH MAP
EL058-D
1120-1159
1-MAY-91
Benson

NORTH
↑

1989 & 1990 BOUNDARY

1991 GIS BOUNDARY FOR D

③

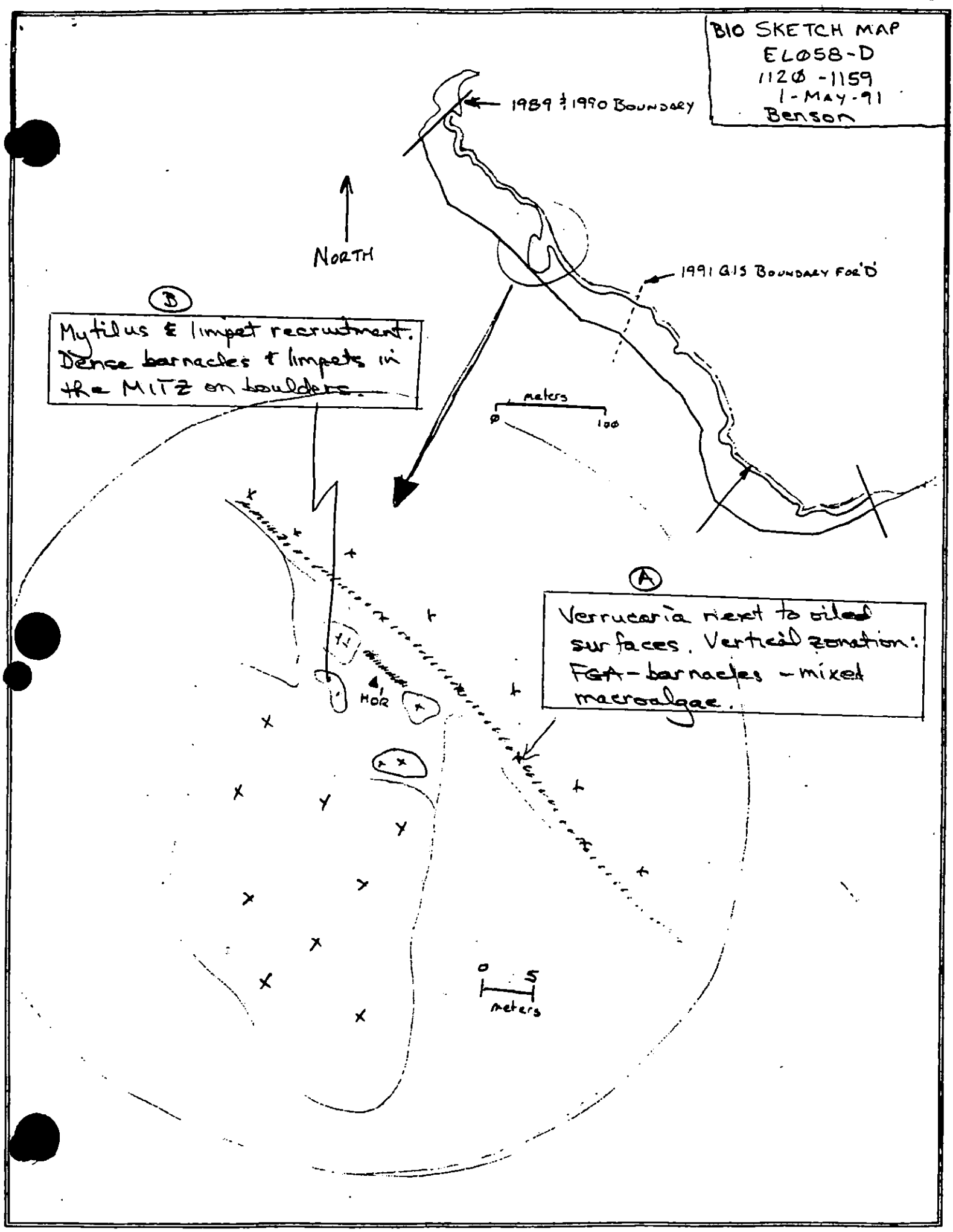
Mytilus & limpet recruitment.
Dense barnacles & limpets in
the MITZ on boulders.

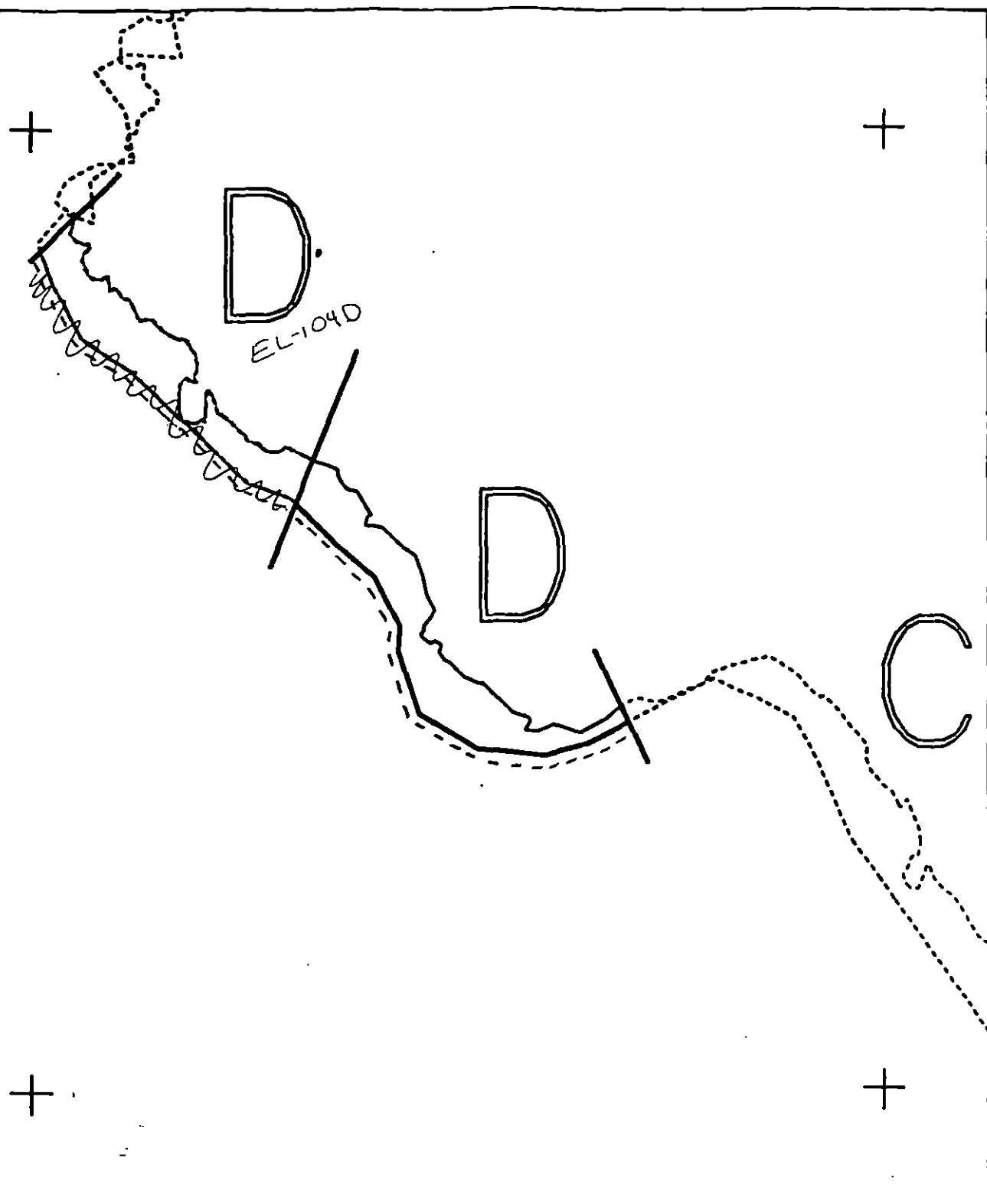
meters
0 100

①

Verrucaria next to oiled
surfaces. Vertical zonation:
FGA - barnacles - mixed
macroalgae.

0 5
meters





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

EL058 D ^{est 555m}
 ADEC Subsegment Length: 331m
 METERS
 0 100 200
 AK State Plane Zone 4
 601058d



Subdivision Field Map
 Map Key: KNIEL058D
 Name: TRIMM
 Date: 1 MAY 91
 Date Entered:

1991 MAYSAP EVALUATION

SEGMENT: EL 058 SUB: C REGION: PWS SURVEY DATE: 5/1/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

An Exxon archaeological monitor is required on-site during shoreline treatment. PHONE 564-3276; 564-3657; (Anchorage) or 229-1514 (24 hrs.). no

SHPO Signature: Jackie Don Dan Date: 5/17/91

RECOMMENDATIONS:

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

COMMENTS:

INITIAL: _____

TAG: MANUAL PICKUP OF EASILY ACCESSIBLE HSDR
AND MANUALLY TILL AREA OF PIT 3, RARE IN
CUSTOMBLEN

FOSC: _____

TAG APPROVAL DATE: MAY 17 1991

FOSC APPROVAL DATE: 5/20/91

ADEC [Signature]

FOSC [Signature]

EXXON [Signature]

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

USCG [Signature]

NOAA [Signature]

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

PAGE 1 OF 2

DATE May 1 / 91

revised 5/7/91 KG

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL 58 SUBDIVISION C DATE 5/1/91

ADEC

NAME PETER MONTESANO

SIGNATURE [Signature]

☐ NTR

☒ TREATMENT RECOMMENDED

WE DID NOT HAVE THE COMPLETE ASAP WHEN SURVEYING THIS SUBDIVISION, SO LAST FALLS CONCENTRATIONS OF OIL WERE NOT KNOWN.

AREAS D2 + B BOTH REQUIRE STANDARD MANUAL REMOVAL. THE SUB/SURFACE CONCENTRATION ARE READILY ACCESSIBLE AND EASILY REMOVABLE. AS SUGGESTED BY THE BIOLOGIST, THERE IS NO TROUBLE TREATING THESE AREAS.

EXXON

NAME

C.M. LATSIMPAKIS

SIGNATURE

[Signature]

☐ NTR

AREA "B" IS THE MAJOR CONCERN IN THIS SEGMENT & COULD BENEFIT FROM TREATMENT THIS YEAR. (REMOVAL, BREAKUP & BIOREMEDIATION)

LANDMANAGER

NAME

DENNIS S. KENNEDY OF USFS

SIGNATURE

[Signature]

☐ NTR

The major area for any possible clean up would be in location [B]. A method discussed was to manually break up and bioremediate, as break up alone may just reform. If action is taken, care must be shown around the LITZ pools.

USCG/NOAA

NAME

MICHEL (NOAA) BMI ZENONE (CG)

SIGNATURE

[Signature] [Signature]

☐ NTR

The only area with significant amounts of oil is LOCATION B, a high, sheltered rock plateau behind a narrow beach peninsula. The SOR deposits filled all the interstitial spaces between the pebbles and cobbles, so coverage was 100% of the available pore space. Location B3 has large boulders over part of the area. Since this area is very sheltered, a break-up-and-leave approach would not be very successful. Some people thought the tripart treatment helped a lot last year -- it's supratidal position would minimize tidal dilution. Michel

CG - AREA "B" COULD USE SOME WORK - REMOVAL & BIOREMEDIATION. ~~THE~~ WOULD BE THE KEY. OR AT LEAST BREAK-UP - TREATMENT ON ANY OTHER PART OF THE SEGMENT WOULD REAP NO NET BENEFIT

MAYSAP SHORELINE OILING SUMMARY (cont.)

PAGE 1 OF 2

TEAM NO. 2

SEGMENT EL058

SUBDIVISION C

DATE May 1 / 91

[illegible]

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

OG COMMENTS:

reviewed 5/7/91 KG

OG SKETCH MAP
EL058-C
1-MAY-91
0950-1119
BRYAN TRIMM

NO FIELD DATA
ASSUMED:
2x2m MOR

NO FIELD DATA
ASSUMED:
2x2m MOR

D3 MS 100%
20cm

D2 SOR-LT 25%
2x15m

D1 SOR-LT 15%
2x50m

A ST 100%
2x200m

C CT 20% ST 20% CV 10%
1.5x250m

NO FIELD DATA
ASSUMED:
2x12m MOR-HOL

B3 SOR-LT HVY 65%
2x12m
STORM 30cm
CUT 1m

MOR
3x7m

B2 SOR-LT 60%
6.5x15m

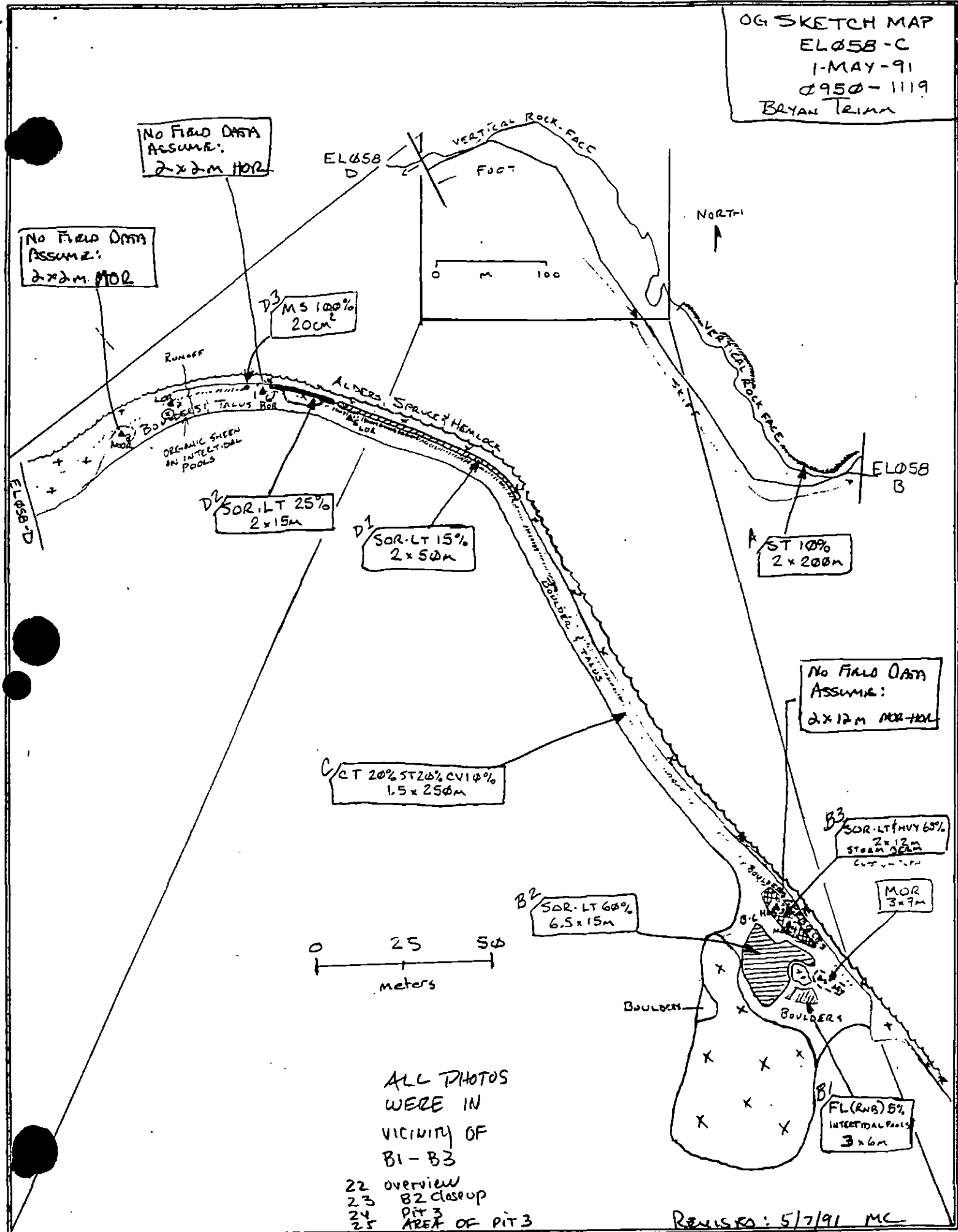
B1 FL(RNG) 5%
INTERSTITIAL POOLS
3x6m

0 25 50
meters

ALL PHOTOS
WERE IN
VICINITY OF
B1-B3

- 22 overview
- 23 B2 closeup
- 24 PIT 3
- 25 AREA OF PIT 3

REVISOR: 5/7/91 MC
reviewed 5/17/91 KG



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 1 May 91
 SEGMENT # EL 58 TIDAL HEIGHT(Range) -1' to +1'
 SUBDIVISION C BIOLOGIST Benson
 SEA STATE calm WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # — FRAME # —

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

① - We "skipped" along the bedrock cliff at the east end of this subdivision. Verrucaria was found on the wall near the oiled surfaces. From top to bottom, the biotic zonation changed from Verrucaria to barnacles (high MITZ) to Fucus plus filamentous green algae (FGA) to Littorina. Total biotic % cover was nearly 100%. Dermasterias is more common where wave exposure is higher. These are typical biotic features of moderate-exposure, stable, vertical substrates.

①, ②, ③, Pits 1-4 - Verrucaria on oiled rocks in U1TZ & FGA is found nearby. Unusually diverse biota was found in a tidepool in the U1TZ; dense Rhodomela & Littorina along with FGA, Fucus, coralline algae, & Hildenbrandia (see SKETCH MAPS). These organisms are common in other intertidal zones, but U1TZ pools are nonetheless somewhat susceptible to damage in the event of cleanup activities. Below the U1TZ, dense barnacles & Littorina and moderately dense Fucus are found in the MITZ along with a few small tidepools. The MITZ has high total biotic % cover and moderately diverse algae. The abundance of hermit crabs suggests high organic productivity. This is a moderately diverse biota with minor biological sensitivities (U1TZ pools).

(continued on the next page)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	—	—	"blenny eel"
Seabirds	—	—	
Waterfowl	—	—	
Gulls/kittiwakes	1	1	
Shorebirds	—	—	
Corvids	1	1	
Other Birds	—	—	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	—	—	
Pinnipeds (specify)	—		
Whales (specify)	—		

Shoreline subdivision map showing important biological features attached.

REVIEWED: 5/7/91 MC

Subdivision: EL5BC

Team: 2

Bio: Benson

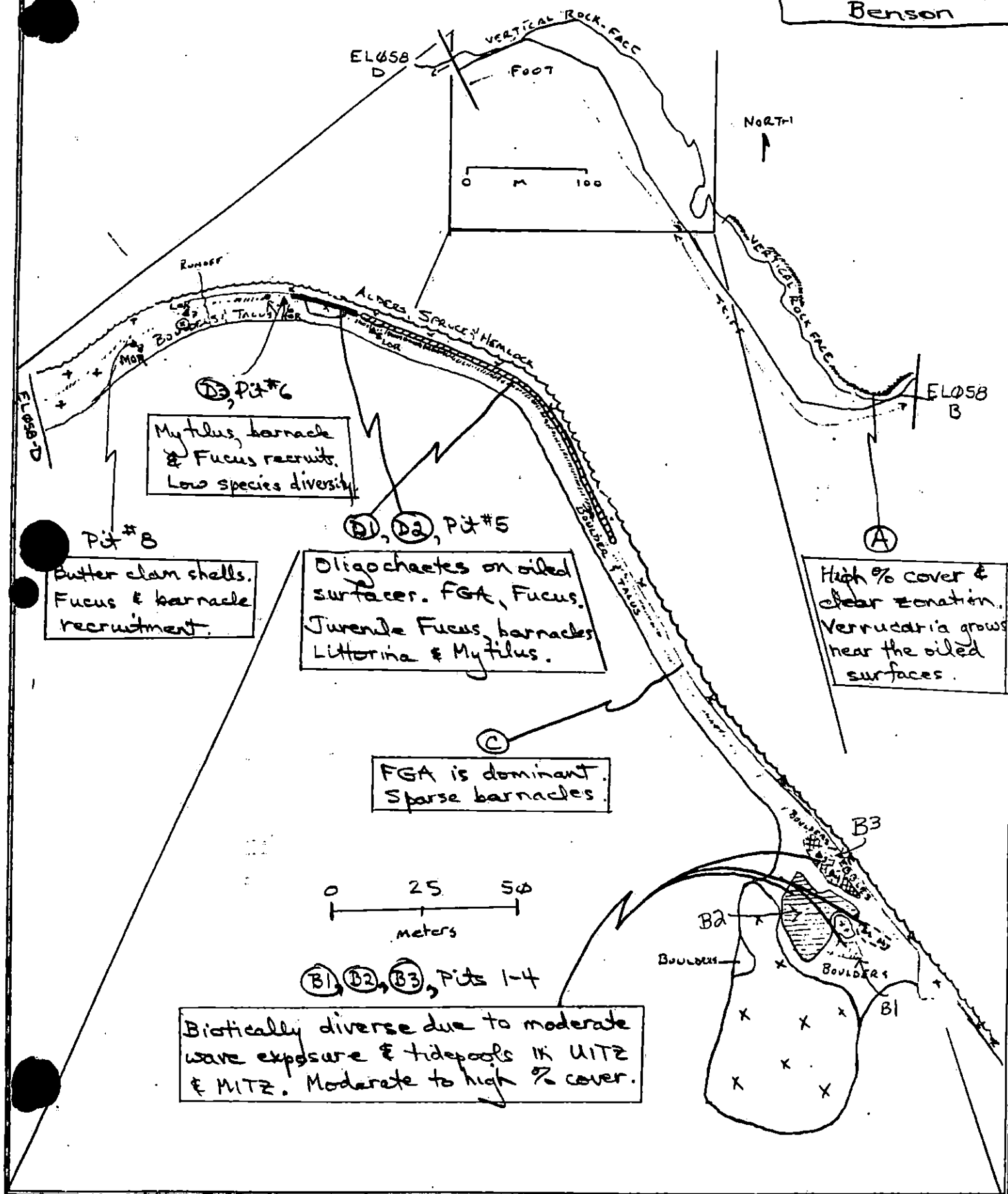
Comments (cont.) -

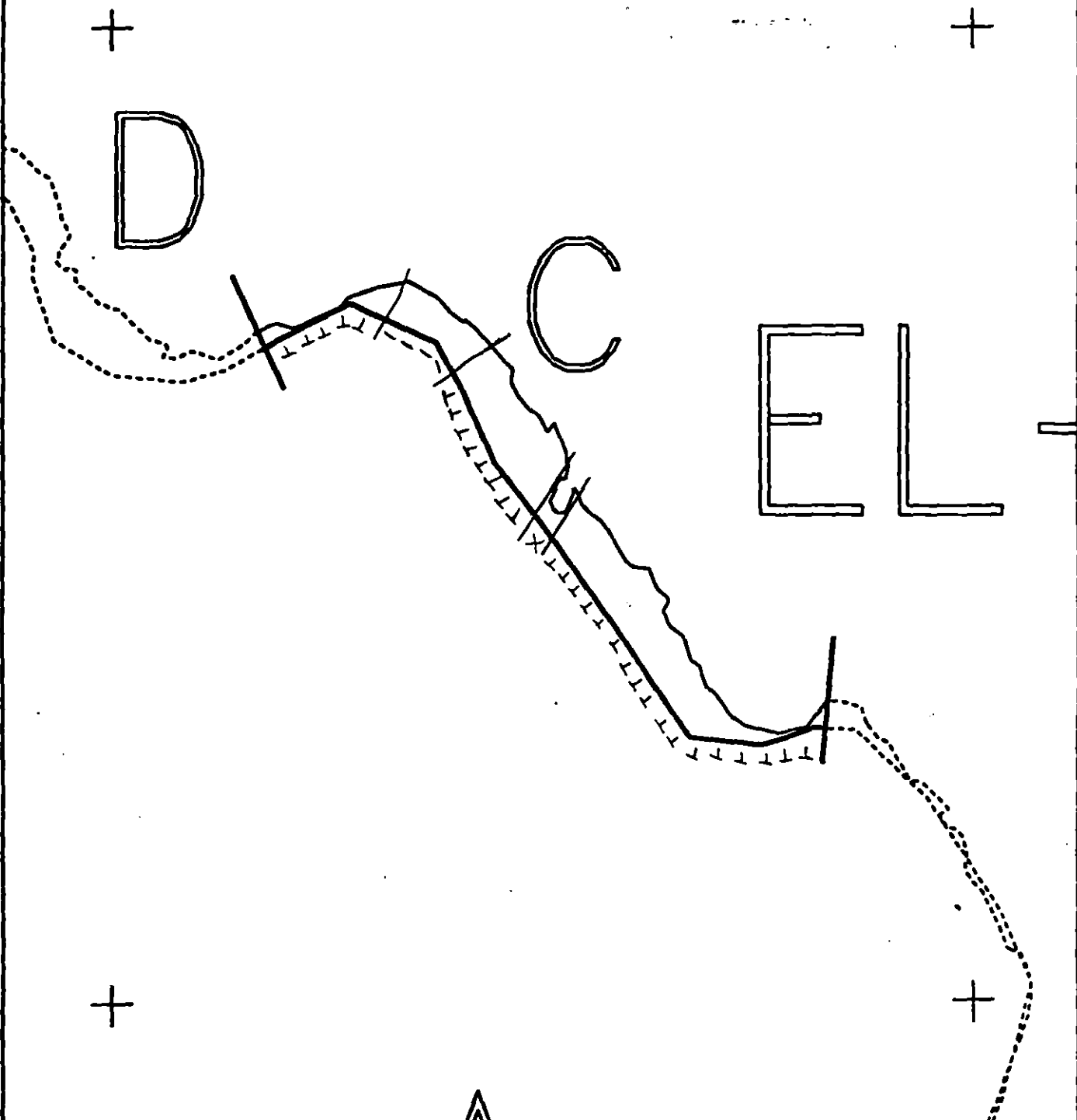
- ③ - Sparse barnacles found on boulders near the CT & CV. FGA dominates the MITZ, though some *Littorina* adults & juveniles are found below the FGA. Species diversity is low.
- ①①, ①② & Pit #5 - One-inch pink *olygochaetes* were found on SOR. The MITZ biotic assemblage consists of dense FGA & barnacles and moderately dense *Fucus*. Recent recruitment was observed for *Fucus*, barnacles, *Littorina*, & *Mytilus*.
- ①③ & Pit #6 - *Verrucaria* grows near the oiled surfaces. The biota is of low diversity, with recruitment of *Mytilus*, barnacles & *Fucus*. This assemblage is not sensitive to possible cleanup activities.
- Pit #8 - Relatively smaller sediments at west end of core support only sparse biota. Recent recruitment of *Fucus* & barnacles was observed. The large number of empty *Saxidomus* shells washed up suggests that a butter clam bed lies here in the subtidal.

This is a moderately wave-exposed site, but the biotic diversity seems generally low except at the tombolo approximately in the middle of the subdivision. This is also the location of somewhat sensitive ecological assemblages (MITZ tidepools). In the event that treatment is performed there, accessing the saddle from the north could help to minimize the chance of damaging the organisms or their habitat.

REVIEWED: 5/7/91 NC

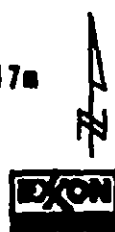
BIO SKETCH MAP
EL058-C
1-MAY-91
0950-1119
Benson





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

EL058 C
 ADEC Subsegment Length: 547m
 METERS
 0 100 200
 AK State Plane Zone 4
 601058a



Subdivision Field Map
 Map Key: KNELO58C
 Name: TRIMM
 Date: 1-MAY-91
 Date Entered:

• SURFACE OIL CATEGORY MAP •

REVIEWED: 5/7/91 MC
 reviewed RG 5/1/91

ASAP TAG REVIEW SHEET

Segment: EL58 Subd: C Site: 1 Date 11 AUG 90
PRE-Review

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
reassess
next spring

ASAP

ASAP FOLLOWUP RECOMMENDATIONS

ment: 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 DEFINING EXTENT AND DEPTH OF SUBSURFACE RESERVOIR.

③ STRIP AWAY ARMOR, EXCAVATE AND REMOVE OILED SEDIMENTS W/ ADEQUATE CONTAINMENT

④ TREAT AREA WITH CUSTOM BLEND.

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 SOTELA
(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 arch to be washed because of its inaccessibility - this should not be a high priority for

USCG

PSI Leo Bersalona
(name)

Leo Bersalona
(signature)

NOAA

ART WEINER

Art Weiner

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 risk

Land Rep.

John Ebel
(name)

(signature)

Comments:

Beach w/ high tide, water fill / stream. Limited remediation opportunities. I concur w/ removal by excavation.

FIELD SHORELINE COMMENT SHEET

SEGMENT AS / EL 58 SUBDIVISION: C SITE: 1 DATE 8-6-90

USCG / NOAA PSI 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 Gihormley SIGNATURE Wesley Gihormley

☒ 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 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 SOTE SIGNATURE REY SOTE

☒ YES ☐ NO PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Recommend the reassessment of this site in 91.

TEAM NO. 1 EXACON SC-540 SEGMENT AS 1-1
 CG CHANEY USCG WEINER/BERSALONA SUBDIVISION C
 ADEC GHORMLEY LAND REP EGEL, JOHN (PDR) TOTAL NO. SITES 1
 DATE AUG 16 1990 TIME 19 10 20 TIDE LEVEL 2.5 to 3.5 ft.
 TOTAL EST LENGTH OF SHORELINE SURVEYED: 30 m
 SURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WEATHER: ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ Sx
 OIL CATEGORY LENGTH: W — m M — m N 30 m VL — m NO — m US 17 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								
COAT				X		X		
STAIN								
MOUSSE								
PATTIES/T.B.								
FILM				X			X	
NO OIL					X			X
EST. SITE LENGTH					30			

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	35	X	X			0-35	N	X				B-Bc PM
							.						
							.						
							.						
							.						
							.						
							.						
							.						

Photographs: ASAP #2
 Roll No. ROT #2
 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 rustblow was observed at this site.

ASAP TAG REVIEW SHEET

Segment: EL58 Subd: D Site: 1 Date
PRE-Review 11 AUG 90

Priority For Addressing In 1990

X 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
X CG _____ X ADEC _____ ~~YES~~ EXXON X LAND MGR _____

13 AUG 90 TAG
Apply Custom Blen
reassess next year

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 CUSTOMBLEND 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

ADBC

Wesley Ghormley
(name)

Wesley Ghormley
(signature)

Comments: If sub-surface oil in the form of OP remains in 1991
then removal will be requested by ADEC.

EXTRA

PEY SOTELO
(name)

Pey Sotel
(signature)

Comments: Recommend the re-application of customblend 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 armor coatings (forming) protecting the
sediments saturated w/ oil.

FIELD SHORELINE COMMENT SHEET

SEGMENT AS/EL-58 SUBDIVISION: D SITE: 1 DATE 8-6-90

USCG / NOAA PSI Leo Bersglona

Leo Bersglona

NAME Art Weiner

SIGNATURE Art Weiner

☒ YES
REASON:

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

ASSESS CUSTOMERLAND TREATMENT OF BOTH SURFACE + SUBSURFACE OIL.

ADEC

NAME Wesley Ghormley

SIGNATURE

Wesley Ghormley

☒ YES
REASON:

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

To assess condition of oiling after winter activities & observe the progress of bioremediation.

LAND MANAGER

NAME John Fabel

SIGNATURE

John Fabel

☒ YES
REASON:

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

To evaluate sedimentation and prescribe additional treatment if necessary.

EXCON

NAME Rey Sotelo

SIGNATURE

Rey Sotelo

☐ YES
REASON:

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

If this site is surveyed in '91 it should not be a priority site.

TEAM NO. ASAP #2EXXON SO TELOSEGMENT AS: EL 58OG CHANEYUSCG WEINER/BERSALONASUBDIVISION DADEC GHORMLEYLAND REP EGEL, JOHN (PNR)TOTAL NO. SITES 1DATE AUG 16 1990TIME 20:20 to 20:50TIDE LEVEL 2.5 to 2.5 FtTOTAL EST LENGTH OF SHORELINE SURVEYED: 150 mSURVEYED FROM: ☒ Foot ☐ Boat ☐ Helo WEATHER: ☐ Sun ☒ Clouds ☐ Fog ☒ Rain ☐ SnowOIL 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								<u>55</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 (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 #2Roll No. Roll #2Frames 26

COMMENTS Manual removal was conducted at this location. Majority of oiled sediment may have been removed however SOR/MI & LI 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.

REVISION NO. 7/1

ASAP #2
CHANEY
AUG 6 1980
MAP FROM SSAT.

~~Vietnam~~
~~Vietnam~~
~~Vietnam~~
-L = 10/10 18
LEGEND

1. The Subsurface Oil

FA
Fig - Surfactant Oil

CT/C
Case/Control

CT/8

CT/P

Policy Distribution
 1 - 1
 1/3

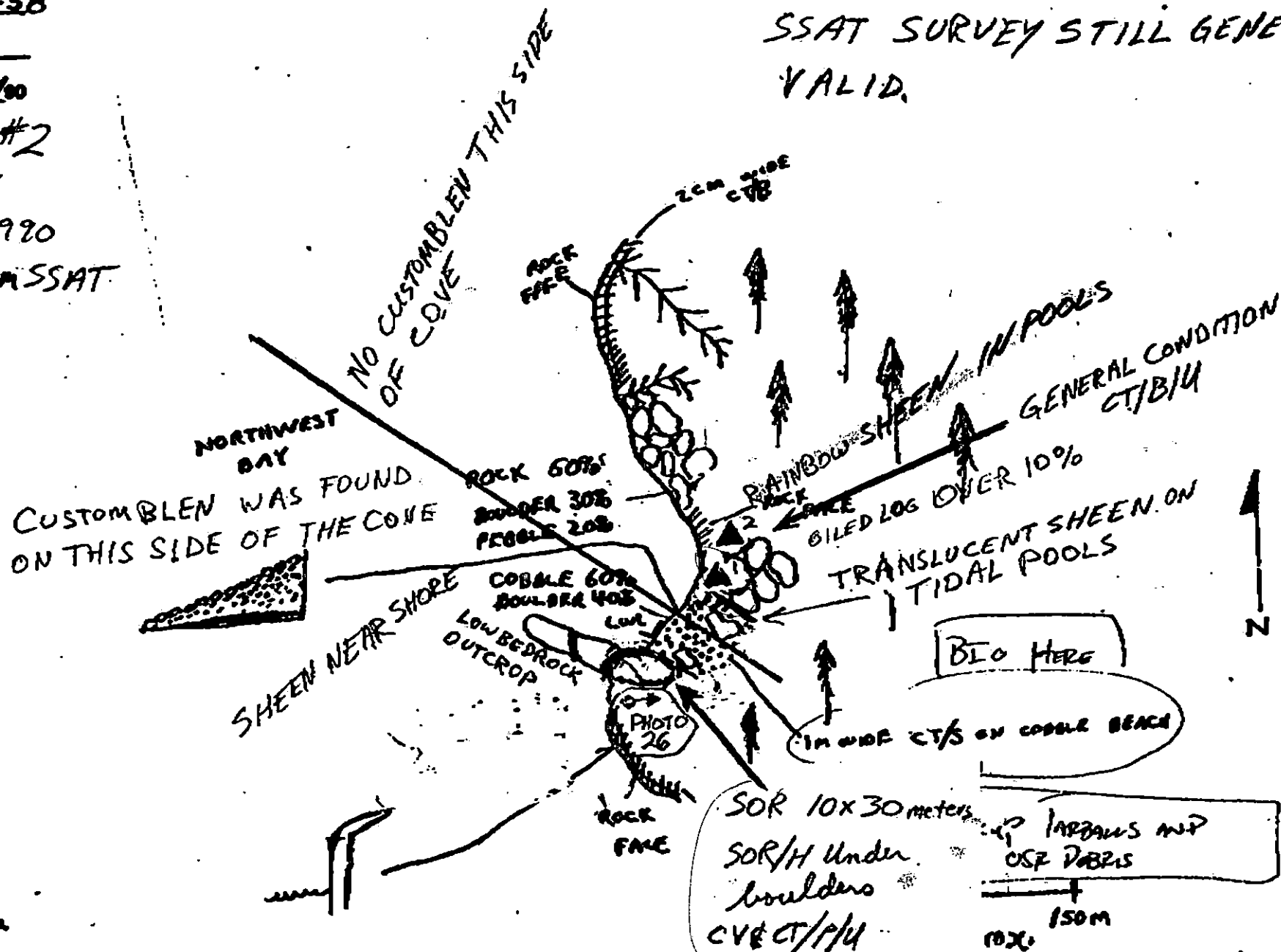
Selected Disasters

Cold Vegetation

Page number, section,
and number

SKETCH MAP

GENERAL OILING TRENDS
INDICATED ON ORIGINAL
SSAT SURVEY STILL GENERALLY
VALID.



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

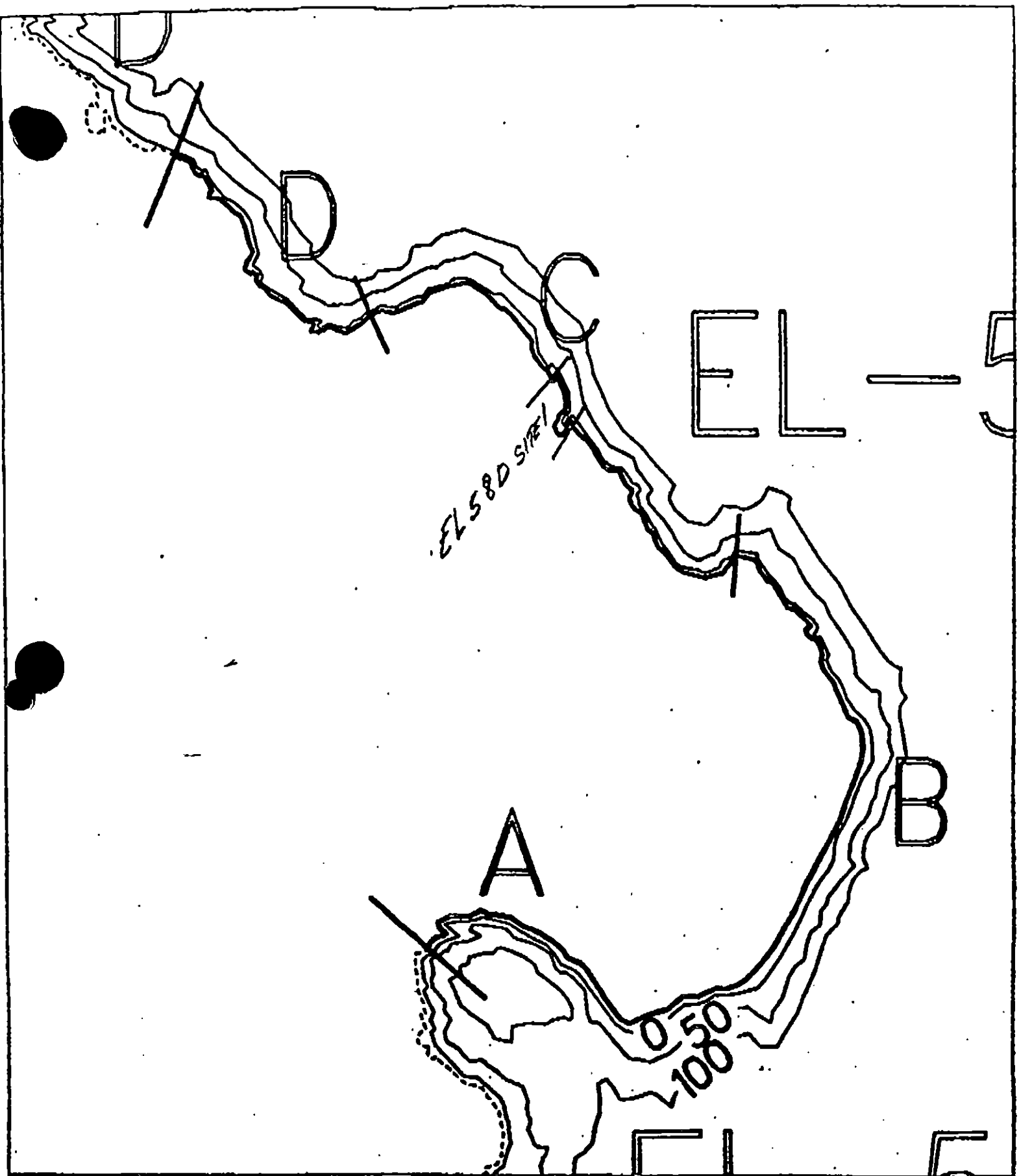
Segment Location Map
Map Key: KNIEL-58

METERS

0 137 274

July 19, 1990

4:5305



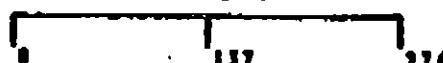
SEGMENT EL-58

Segment Location Map

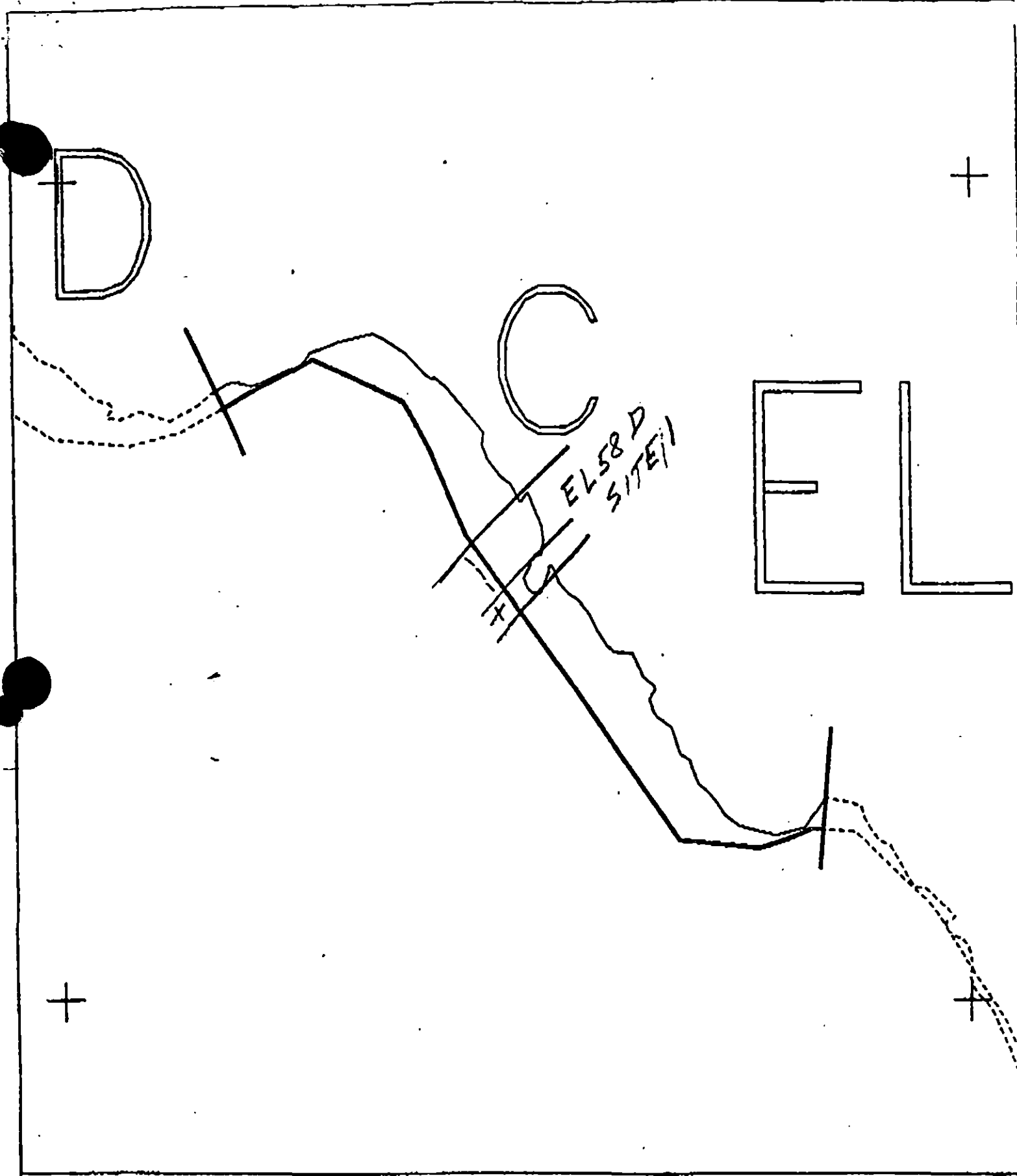
Map Key: KRIEL-58

July 19, 1990

METERS



1-4185



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: KNIEL-58C
 Name: CHANEY
 Date: AUG 6 1990
 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 unoiled substrate and biota. Avoid dense mussel beds in intertidal zone.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles Z. Adams DATE: 4/18/90

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: 4/18/90

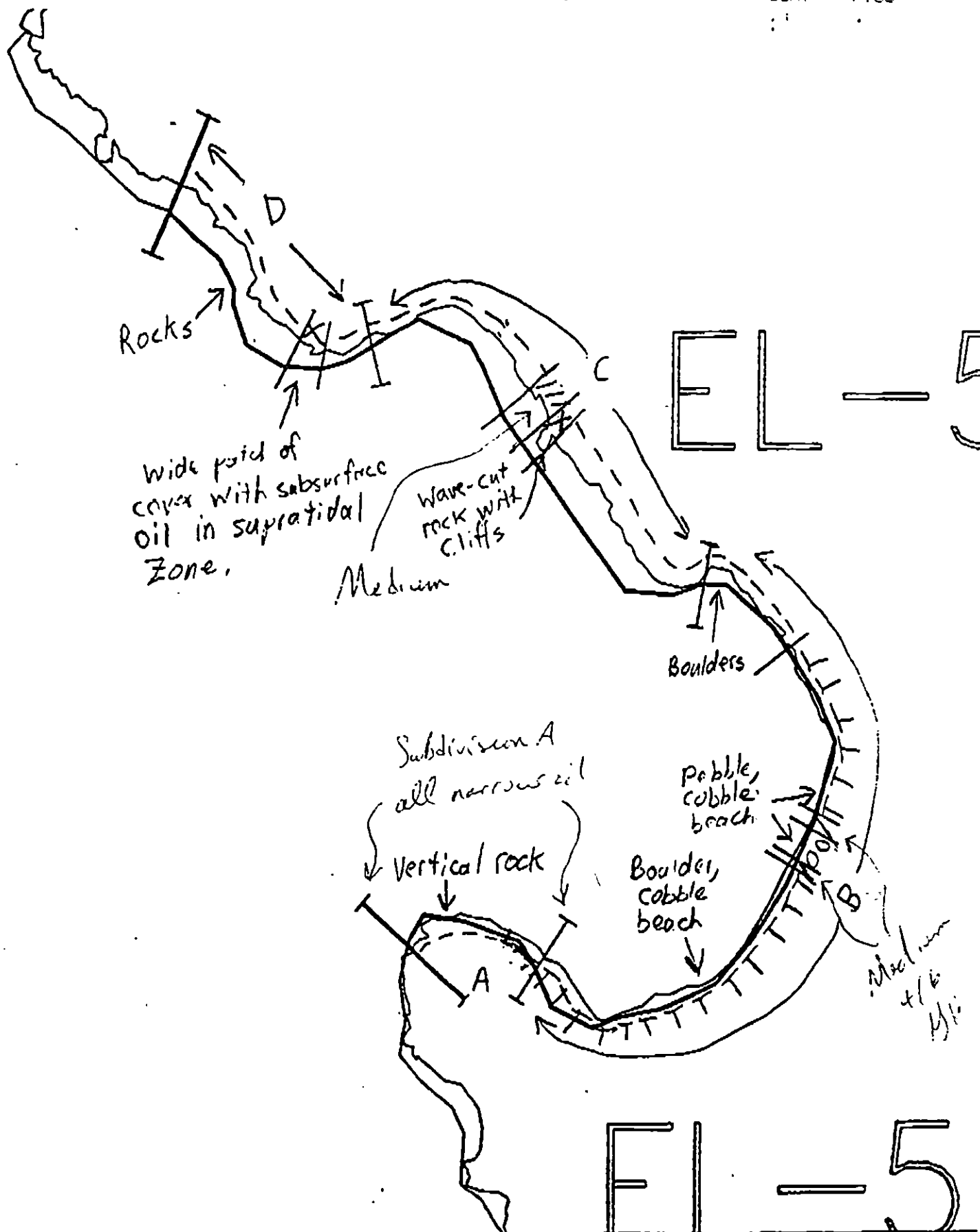
ADEC JOHN BAUER John

EXXON ANDY TEAL Andy

NOAA Burt Wesscott Burt Wesscott

USCG G.A. REITER G.A. Reiter

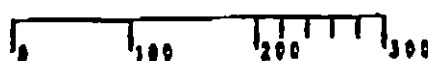
FOSC: My L DATE: 4-22-90



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

EL-58

ADEC Segment Length: 1999 1845m



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.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: *Charles E. Hoffman* 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:

<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 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 ASSESS SUITZ DURING TREATMENT

TAG APPROVAL DATE: 4/18/90

ADEC JOHN BAUER *John Bauer*

EXXON AMY TOL *Amy Tol*

NOAA Burt Wainwright *Burt Wainwright*

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

FOSC: *[Signature]* DATE: 4-22-90

OG J. Springer

SEGMENT ST/ LL57

SUBDIVISION B

DATE 03/30/90

SPRINT MAP

CHECKLIST

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

LEGEND

1 Δ

P1 - No Subsurface Oil

2 Δ

P2 - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

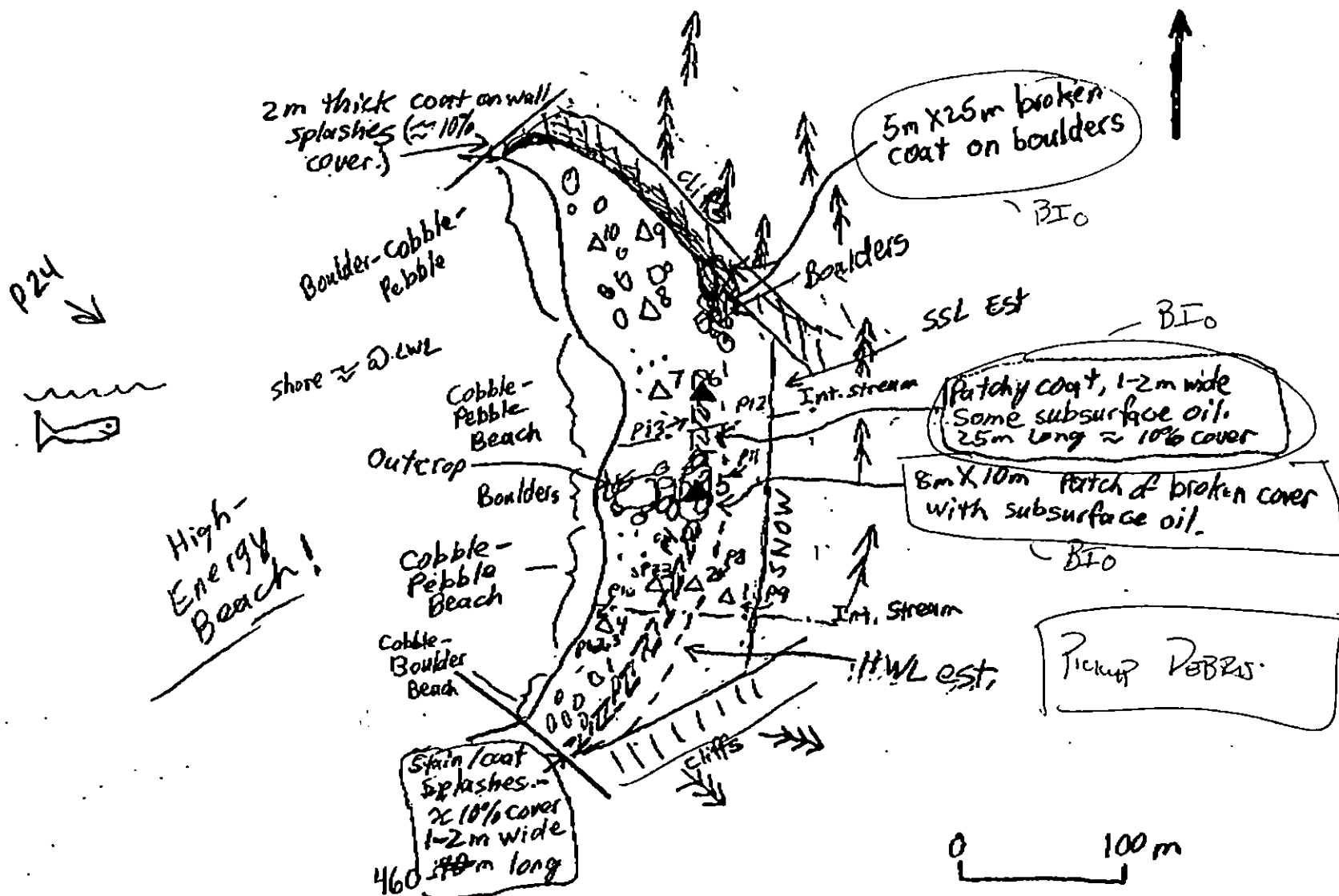
CT/S

Splashed Distribution

Oiled Vegetation

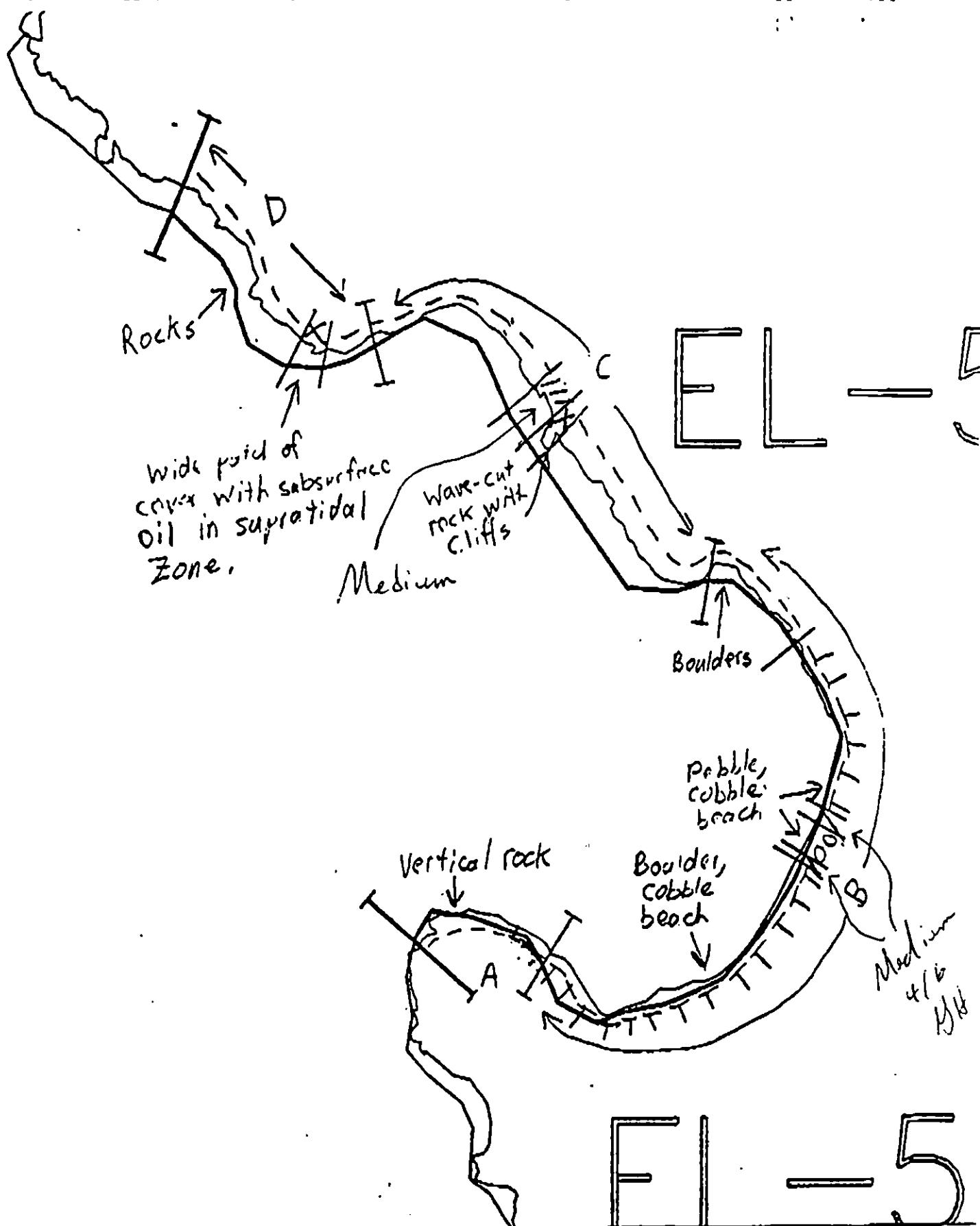
1 $\rightarrow$

Photo location, direction, and number



Oil Character Length (m): AP _____ PO _____ CV _____ CT 732 ST _____ MS _____ PT _____ TB _____ FL _____ NO 39

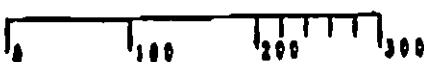
REVISION: 03/30/90



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

EL-58

ADEC Segment Length: 1999
 1845m



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.

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

SHPO SIGNATURE: Cheryl E. Horner DATE: 7/18/90

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: ☐ 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 PITS AS INDICATED ON SKETCH
PRIOR TO BIOREMEDIATION - WHERE FEASIBLE

TAG COMMENTS: _____

TAG APPROVAL DATE:

ADEC JOHN BAUER
 EXXON ANDY TEAL
 NOAA Burl Wescott
 USCG G. A. FELTZER

FOSC: My L DATE: 4-22-90

OG T. SP. ER

SEGMENT ST/CL-57

SUBDIVISION C

DATE 03 130 /90

CHECKLIST

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

LEGEND

1 ▲
PH - No Subsurface Oil

2 ▲
PH - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

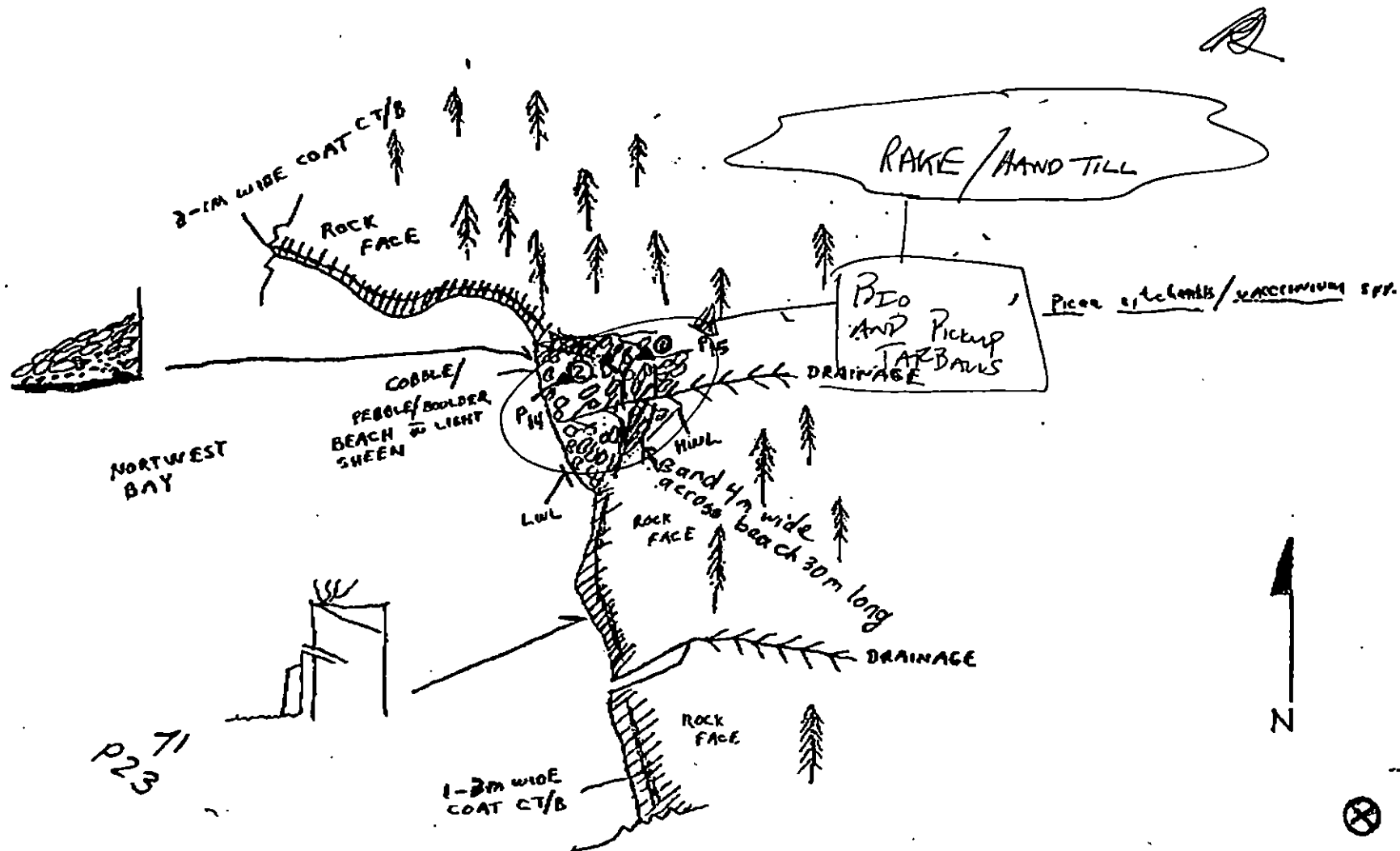
CT/P
Pachy Distribution

CT/S
Splashed Distribution

Oil Vegetation

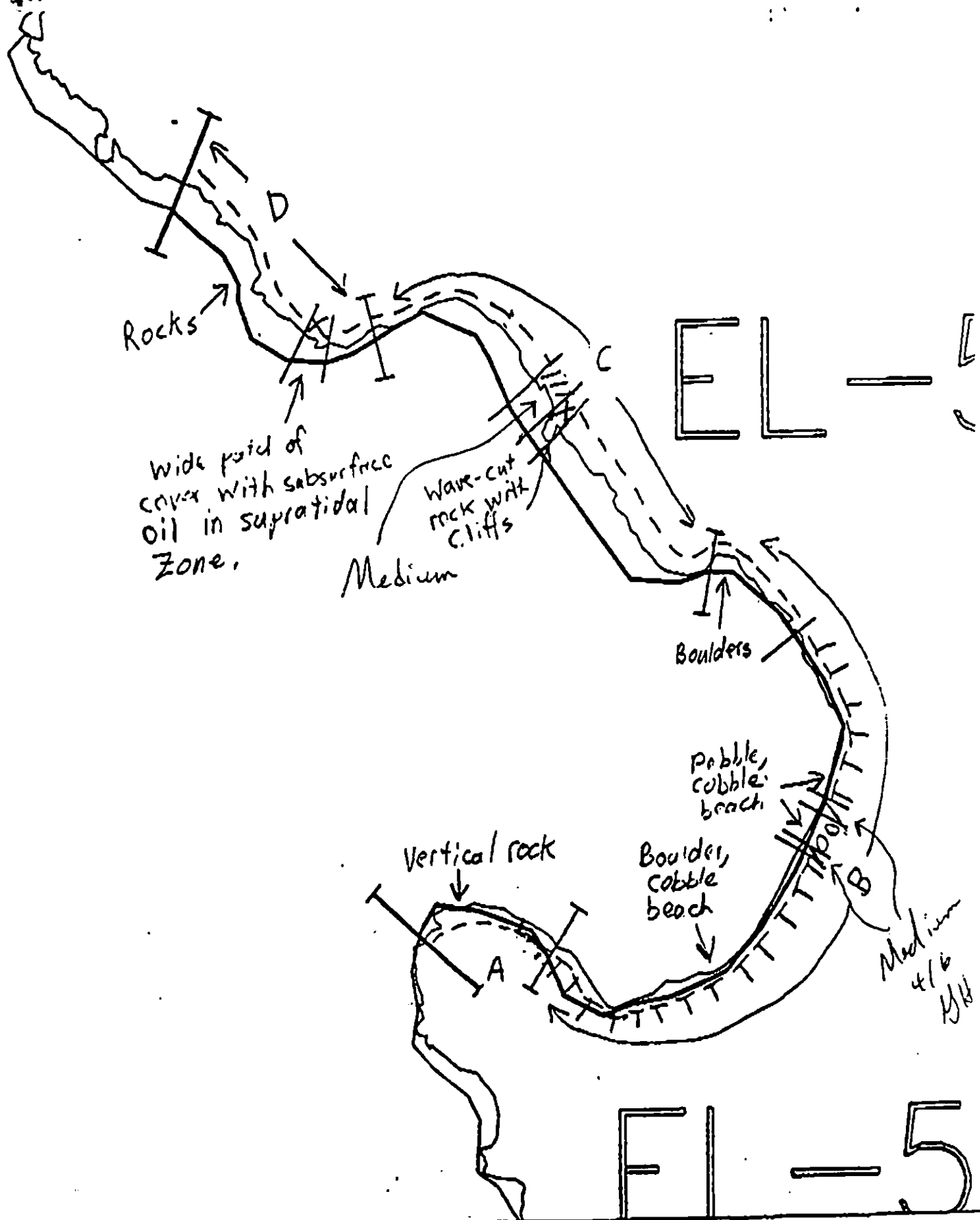
1 ●→
Photo location, direction,
and number

SKETCH MAP



Oil Character Length (m): AP _____ PO _____ CV _____ CT 306 ST 106 MS _____ PT _____ TB _____ FL _____ NO 223

REVISION 03/24/90



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

EL-58

ADEC Segment Length: 1999
 1145m



Map Key: PWS-141
 Name: James Spring
 Date: 04/01/90
 Data Entered:

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 unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles H. Dimer

DATE: 4/18/90

OILING CATEGORIZATION:

Wide 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 SUITZ DURING TREATMENT

TAG APPROVAL DATE: 4/18/90

ADEC Al Kieulish

EXXON ANDY TEE

NOAA Burt Wescott

USCG G.A. Pfeiffer

FOSC: myl

DATE: 4-22-90

JG.T. SPRINGS

SKETCH MAP

SEGMENT ST/EL-58

SUBDIVISION D

DATE 03/31/90

CHECKLIST

- ☒ Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Entry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. NW/L/LWL
- ☒ SSI
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ P/L Location(s)
- ☒ Photo Location(s)
- ☒ P = PHOTO #

LEGEND

1 P/L - No Subsurface Oil

2 P/L - Subsurface Oil

CT/C
Continuous Distribution

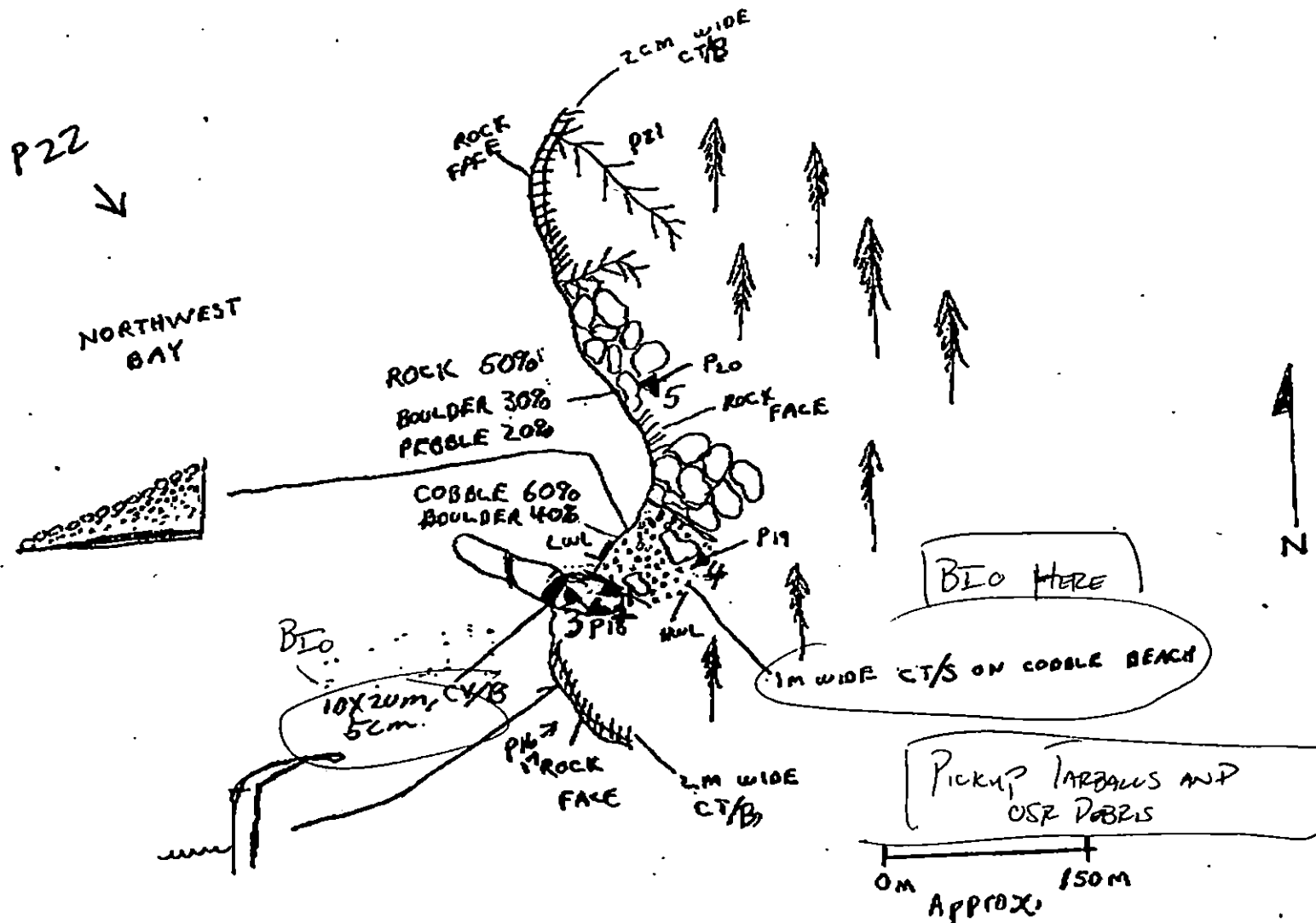
CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oil Vegetation

1 Photo location, direction, and number



APR-05-1990 20:58 FROM ARCTIC SHLUDR

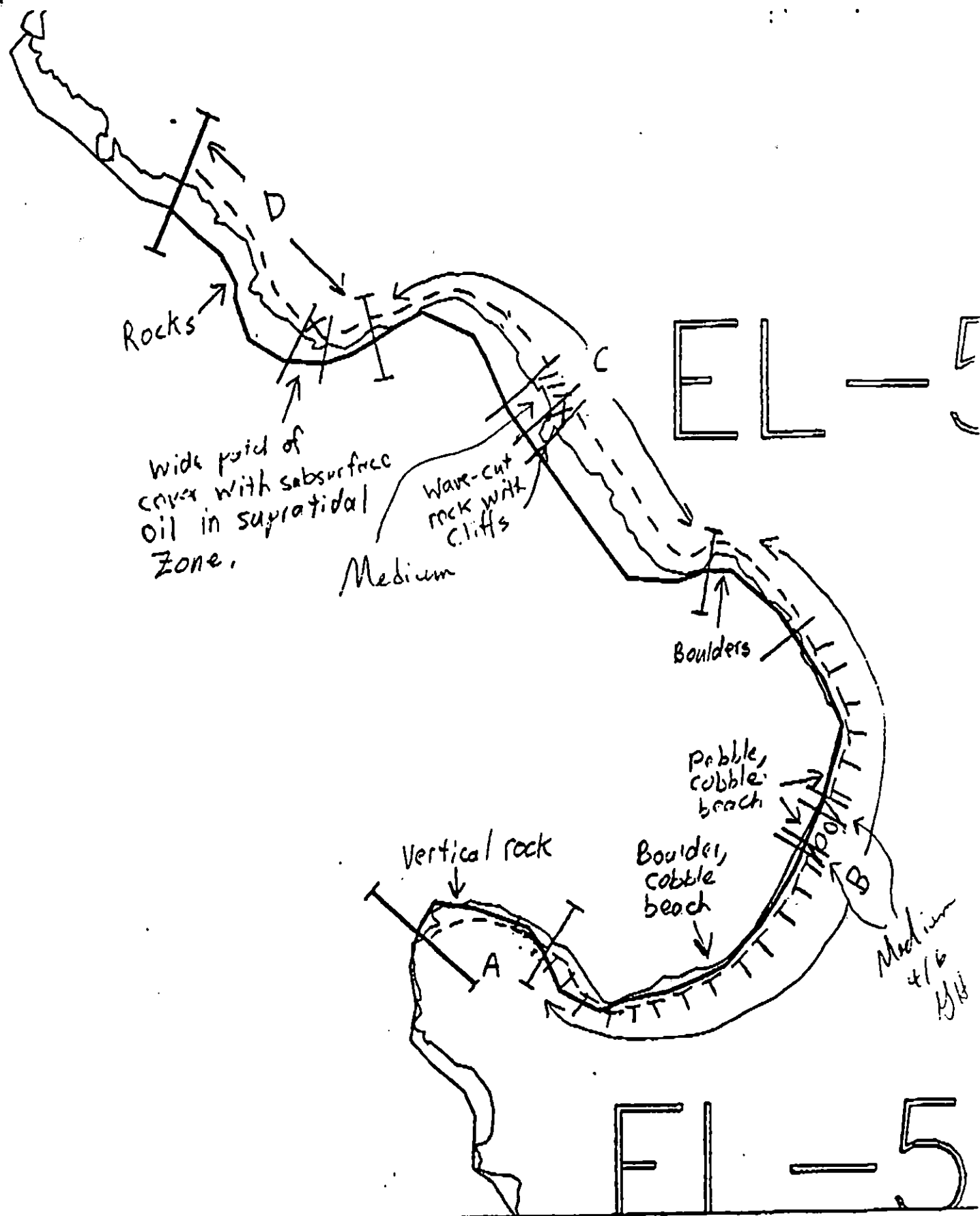
TO

35HT

P.02

REVISION 03/04/90

Oil Character Length (m): AP _____ PO _____ CV 25 CT 376 ST _____ MS _____ PT _____ TB _____ FL _____ NO 150



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

EL-58

ADEC Segment Length: 1999 1845m

0 100 200 300
 METERS

Map Key: PWS-141

Name: James Spring

Date: 04/01/90

Date Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-100

SUBDIVISIONS: A (1 OF 1)

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.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 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: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ EL 100 SUBDIVISION: A (10 of 1) DATE 03/31/90

USCG

NAME

AEC Vandepels SIGNATURE AEC Vandepels

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

Lots (1000's x 10) of mussels + snails present on all areas.

ADEC

NAME

Michele Baer SIGNATURE M Baer

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

EL100 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 bc of 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
COMMENTS

☐ TREATMENT SUGGESTED

I CONCUR WITH ADEC. THE TWO BEACHES HAVE POTENTIAL AS RECREATION CAMP SITES.

OG J. Springer USCG R. Vandeples SEGMENT ST/ E L 10'0
 BIO P. Crank LAND REP D. Logan SUBDIVISION A (10'0)
 EXXON T. Temblin ADEC M. Baet 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 0 % S 0 % M 0 % V
 SLOPE: Lang 20 % Hang 45 % Ven 35 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 632 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	IC	IR	IP	IS	BR	BL	RW	SL	TL	LR	BR	BL	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 c

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE 0

#BAGS 0

Photographs:

Roll No. 0

Frames 0

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR						PIT ZONE				A N A	SUBSURFACE SEDIMENTS		
		OP	OR	OL	OF	NO		VO	UC	50/60	100/150	200/300	300/400	400/500	500/600	SU	U	M	L				
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. S. 1995
SEGMENT ST/ EL100

SEARCH MAP

SUBDIVISION A

DATE 03/31/90

CHECKLIST

- ☒ 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 Δ
Pit - No Subsurface Oil

2 Δ
Pit - Subsurface Oil

CT/C
Continuous Distribution

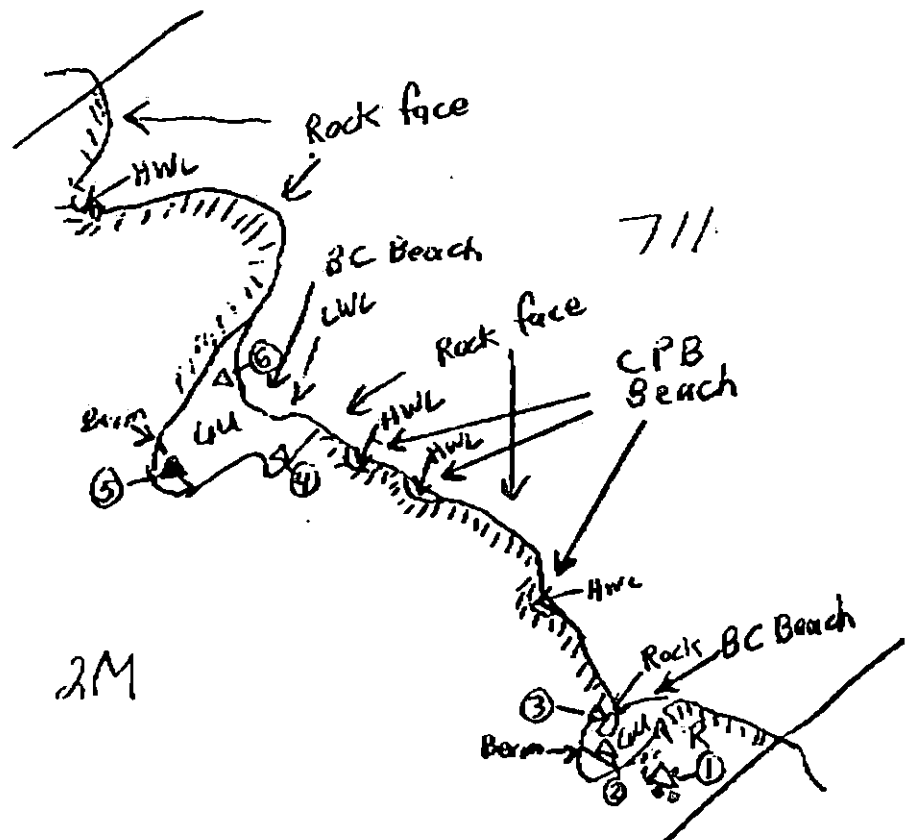
CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

2nd Vegetation

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



0 100 m
Approx

Revised 4/6/90

Water Length (m): AP _____ PO _____ CV _____ CT _____ ST _____ MS _____ PT _____ TB _____ FL _____ NO 632

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: 57-4-1
 Roll No.
 Frames 36 38

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 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	

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 sent in drift line

Seg: EL 100A

Time: 1010-1200

Tide Height: -1 → +0.5 ft

Biologist: Crank

Length: 632m

Species List

Flora

Fauna

HITZ

Fucus
Enteromorpha
Furopusia
Cladophora
Filamentous Red.

Nucella
Littorina
Limpets
Mysids
Littorina

MITZ

Heterocercion
Lithothamnion
Enteromorpha
Sargassum
Fucus

Tonicella
Littorina
Limpets
Antinoplorea xantho
gramma
A. artemisa

LITZ

Bladed reds
Enteromorpha
Alaria
Heterocercion
Enteromorpha
Bosniella
Rhodomela larix
Ulva fenestrata
Filamentous reds

Piaster
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 exposure

Seg. EL 100 A

Time: 1010 - 1200

Tide Height: -1 $\Rightarrow$ 10.5 ft

Longitude: 141° 1'

Latitude: 63° 2m

SEA

F.O.

FD -

Comments (cont)

- Vertical Rock faces were surveyed from shift.

- High re. rudimental.

- Tidepools in bedrock 141° Z, 63° Z.

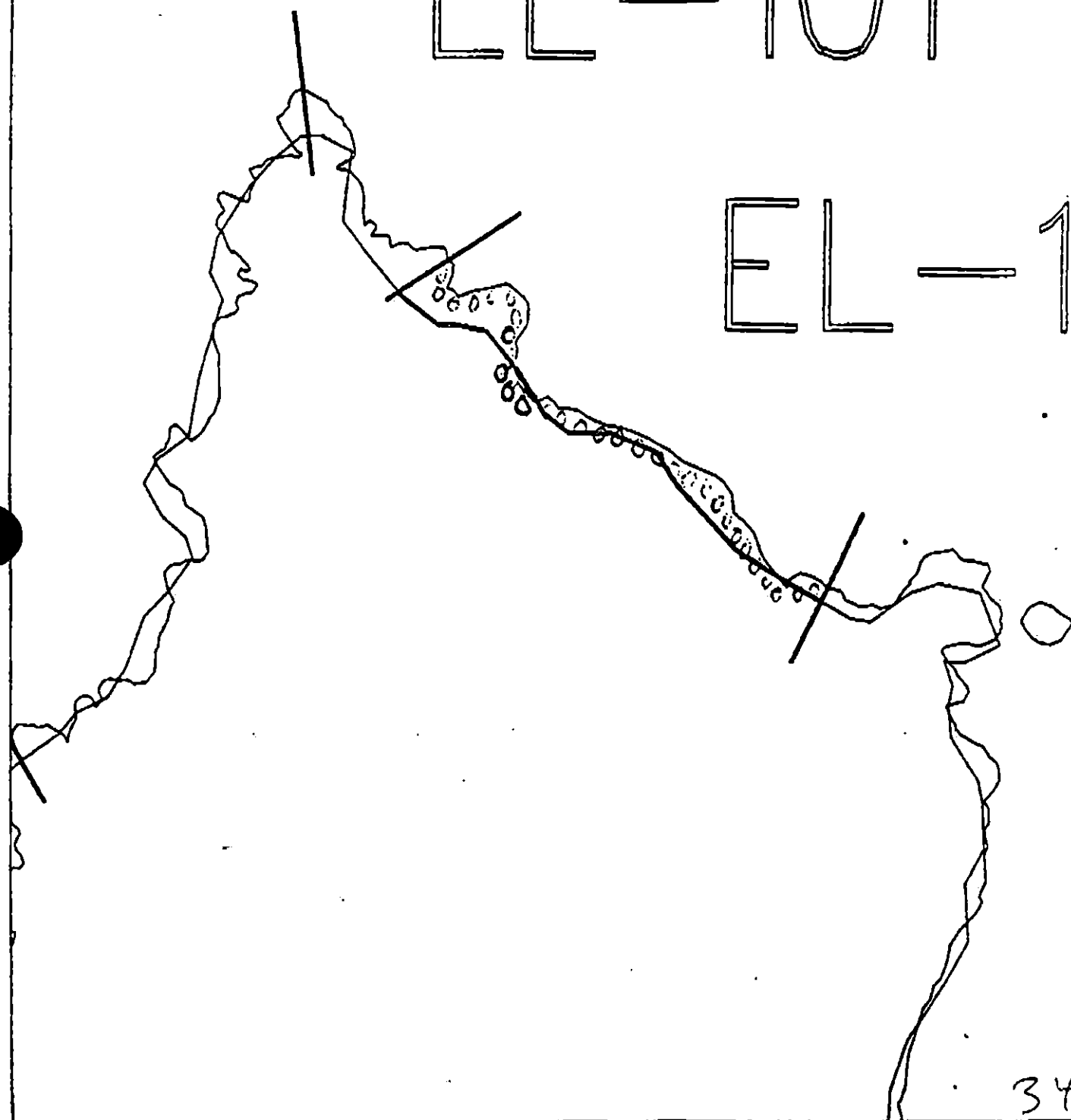
- Dense Fucus at 10:10, 10:15, 10:20.

- Filamentous algae is abundant in tidepools. Why films springs are not in higher concentrations.

Revised 4/6/90

EL-101

EL-1C



XXXX Wide

//// Medium

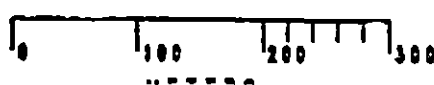
---- Narrow

TTTT Very Light

OOOO No Oil

EL-100

ADEC Segment Length: ~~556m~~ 632



Map Key: PWS-120

Name: James Spring

Date: 03/31/90

Data Entered:

PWS ECOLOGICAL CONSTRAINTS

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

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.

ARCHAEOLOGICAL CONSTRAINTS:

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

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 Wenzel Art Wenzel

EXXON

ANDY TAYLOR

NOAA

Burl Wenzel Burl Wenzel

USCG

G.A. Reiter G.A. REITER

FOSC:

DATE:

4-22-90

OG J. Sp...
SEGMENT ST/ EL100

SKETCH MAP

SUBDIVISION A

DATE 03 / 31 / 90

CHECKLIST

- ☒ 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 Δ
No Subsurface Oil

2 Δ
Subsurface Oil

CT/C
Continuous Distribution

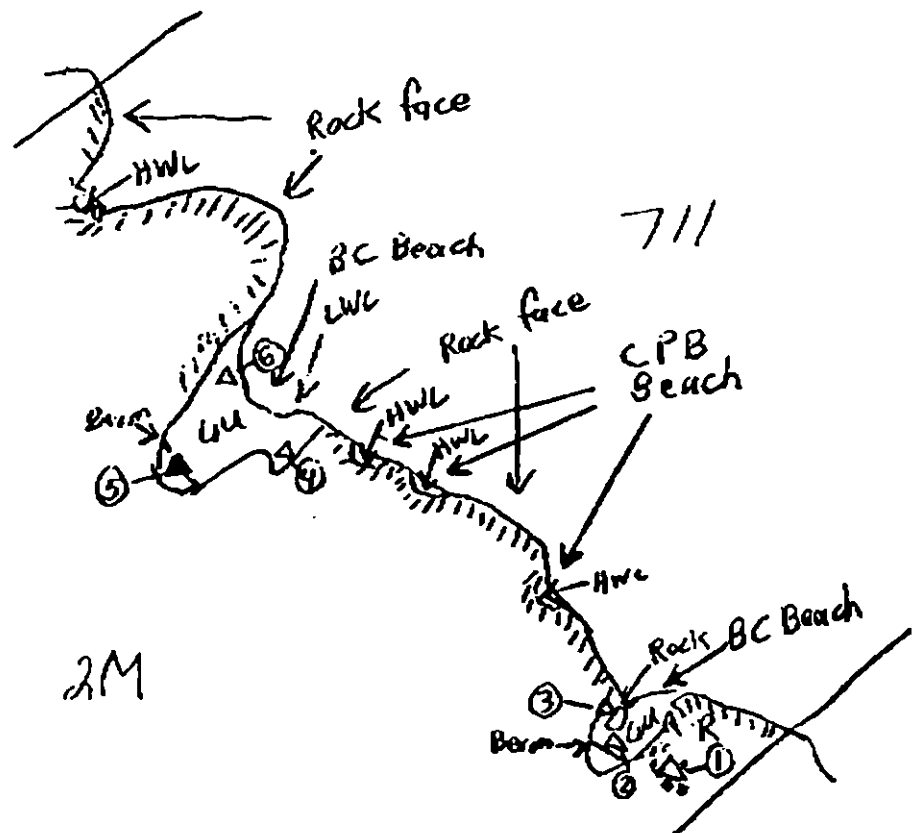
CT/B
Broken Distribution

CT/D
Patchy Distribution

CT/S
Splashed Distribution

Med Vegetation

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



0 100 m
Approx

Revised 4/6/90

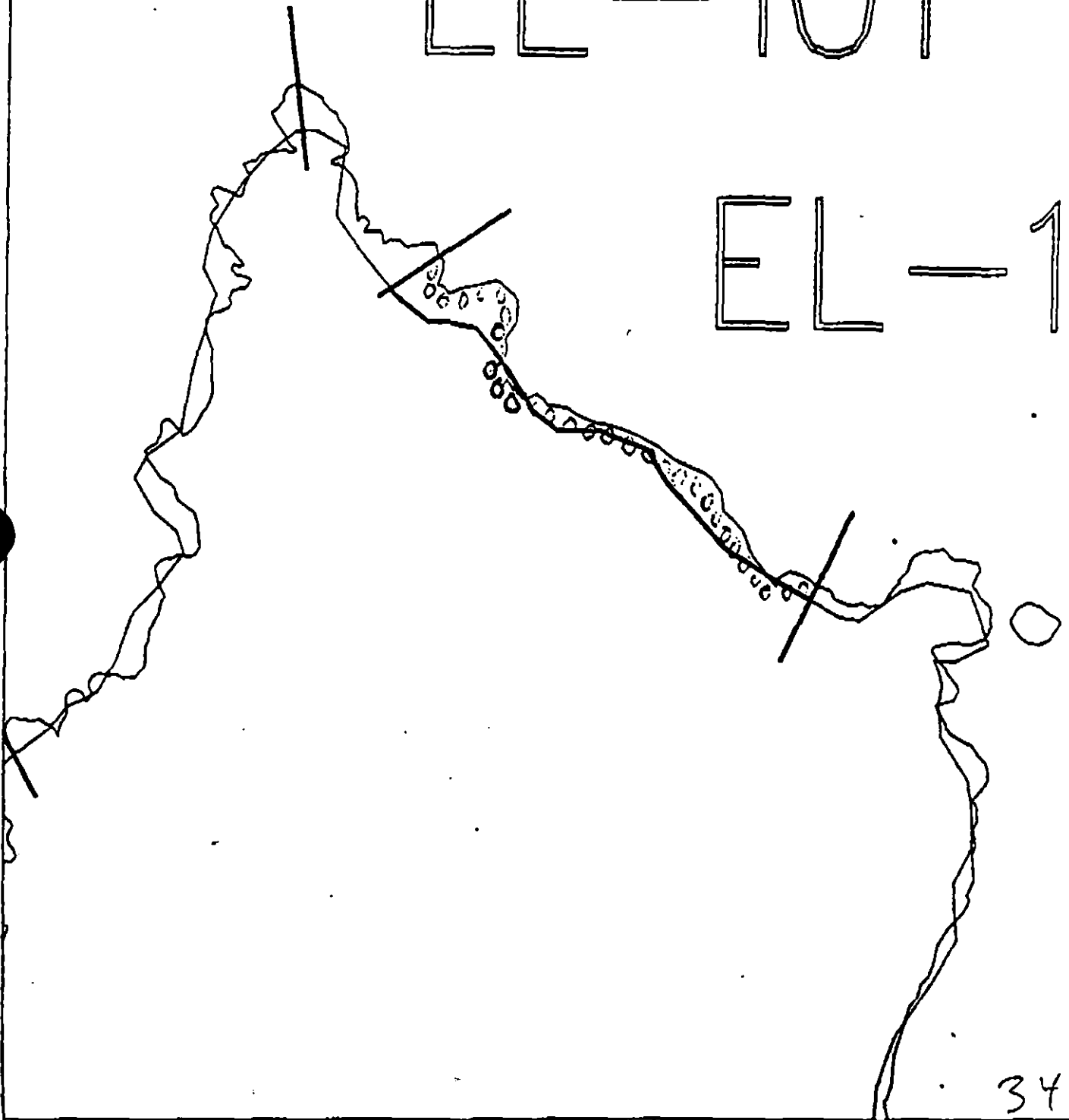
Plot Length (m): AP _____ PO _____ CV _____ CT _____ ST _____ MS _____ PT _____ TB _____ FL _____ NO 632

REVISION: 03/24/90

Revised 4/6/90

EL-101

EL-1C



34

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No Oil

EL-100

ADEC Segment Length: ~~556m~~ 632



Map Key: PWS-120

Name: James Springs

Date: 03/31/90

Data Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-101

SUBDIVISIONS: A (1 OF 1)

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.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 21 m: No Oil 187 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 60+ cm

RECOMMENDATIONS:

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

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ EL101 SUBDIVISION: A DATE 03-31-90

USCG

NAME AEC Vandepelt SIGNATURE AEC Vandepelt

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

I recommend no cleaning just due to the amounts of mussels, snails, fucus, barnicals and algae present.

ADEC

NAME Michele 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 mussels and balanoids 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 @ 45cm and goes beyond 60 cm.*

LAND MANAGER

NAME DAN LOGAN (NPS) ^{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. Temblin ADEC M. Baer TIME 09:00 to 10:00
 TEAM NO.: 5 TIDE LEVEL: 0' to -1' DATE 03/31/90
 EST. SUBDIVISION LENGTH: 313 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% Vert 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			
	IC	IB	IP	IS	SB	SB	SB	SB	SB	SB	SB	SB	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 ☐ NO
 TYPE smoke, gas can, bottles, inner
 #BAGS 1

Photographs:

Roll No. ST-5-1Frames 21-34

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	SB	SB	SB	SB	SB	SB	SB	SB	SU	UI	MI	U		
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: 03/22/90

Segment ST / FL101 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. ST51
 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~~	3	3	NOT PRESENT
4	4	4	4	4	4	4	4	4	4	4	4	4,5
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~~	1L	1U	1M	1L	1U	1M	1L	~~1U~~	~~1M~~	~~1L~~	NOT PRESENT
2	2	2	2	2	2	2	2	2	~~2~~	~~2~~	~~2~~	4,5
3	3	3	3	3	3	3	3	3	3	3	3	
4	4	4	4	4	4	4	4	4	4	4	4	
5	5	5	5	5	5	5	5	5	5	5	5	
6	6	6	6	6	6	6	6	6	6	6	6	

GASTROPODS

Dense			Moderate			Sparse			Rare			
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L	
~~2~~	~~2~~	~~2~~	2	2	2	2	2	2	2	2	2	NOT PRESENT
~~3~~	~~3~~	~~3~~	3	3	3	3	~~3~~	~~3~~	3	3	3	3U
4	4	4	4	4	4	4	4	4	4	4	4	4,5
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	<u>2</u>	2	~~2~~	~~2~~	~~2~~	2	2	2	NOT PRESENT
3	3	3	3	3	3	3	3	3	3	3	3	on boulders in
4	4	4	4	4	4	4	4	4	4	4	4	4,5
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 Birds on H₂O - no ID
 1 Pigeon - Guineafowl - flying
 1 Crow - flying
 1 Raven flying

Ecological Considerations:

711 - Deer Harvesting
 2M - Herring Spawning
 6Y - Special Use Destination

Time: 0900-1010

Length: 313 m

Tide Height: 0 to -1 ft

Species List (Incomplete)

Flora

Fauna

HITZ

Syrtosiphon
Green filamentous

Heavy Barnacle S. ...
Balanus glandula
Mytilus

MITZ

Odonotalia sp.
Halosaccion
Rulphsia
Endocladia
Lithothamnium
Porphyra
Enteromorpha
Bosziella
Filamentous Greens
Filamentous Reds
may include polysiphonia
Fucus and polysiphonia

Katharina tunicata
Searlesia alba
Fore barnacle spp.
Siphonaria thersites
Limpets
Limpets
Balanus glandula
Mytilus

LITZ

Enteromorpha
Ulva fenestrata
Small bladed reds
Lithothamnium
Alaria
Cladophora
Fucus

Littorina
Limpets
Siphonaria thersites
Balanus glandula
B. cariosus

Comments:

- Green filamentous algae may be impeding recruitment on boulders
- Many 'tidepools' in bedrock at MITZ and LITZ
- Dense Katharina tunicata ~ 6m²
- 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, 03/11/90

SEGMENT EL101

SUBDIVISION A

DATE 03/31/90

SKETCH MAP

CHECKLIST

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

LEGEND

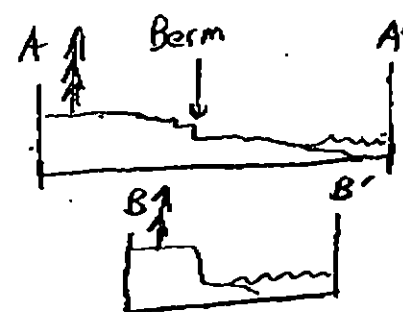
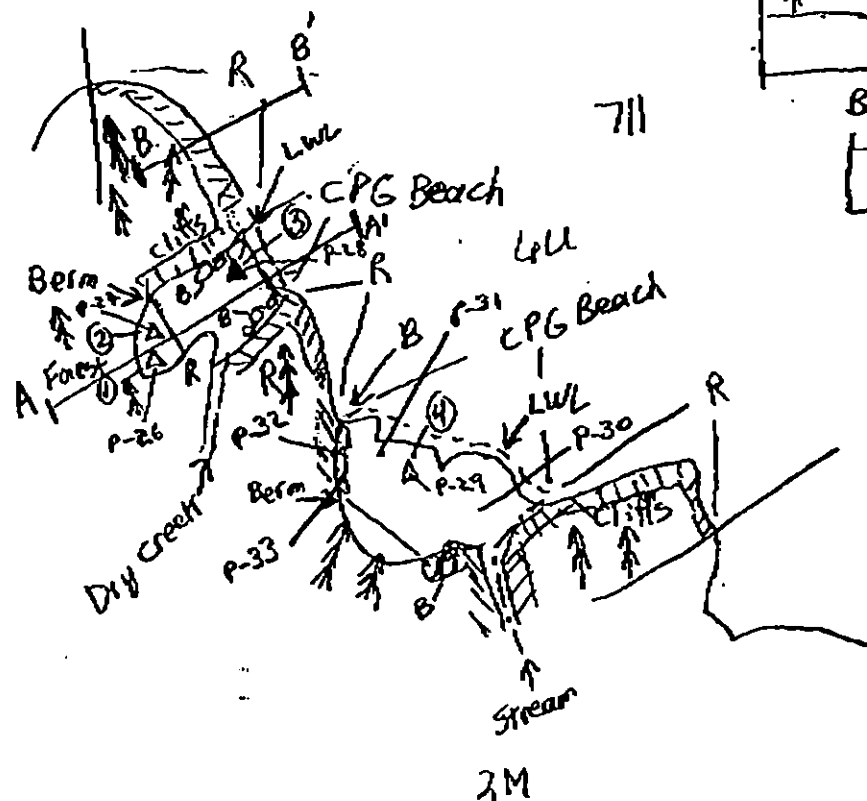
- 1 Δ
Pit - No Subsurface Oil
- 2 Δ
Pit - Subsurface Oil
- CT/C

Continuous Distribution
- CT/B

Broken Distribution
- CT/P

Patchy Distribution
- CT/S

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



PT-57

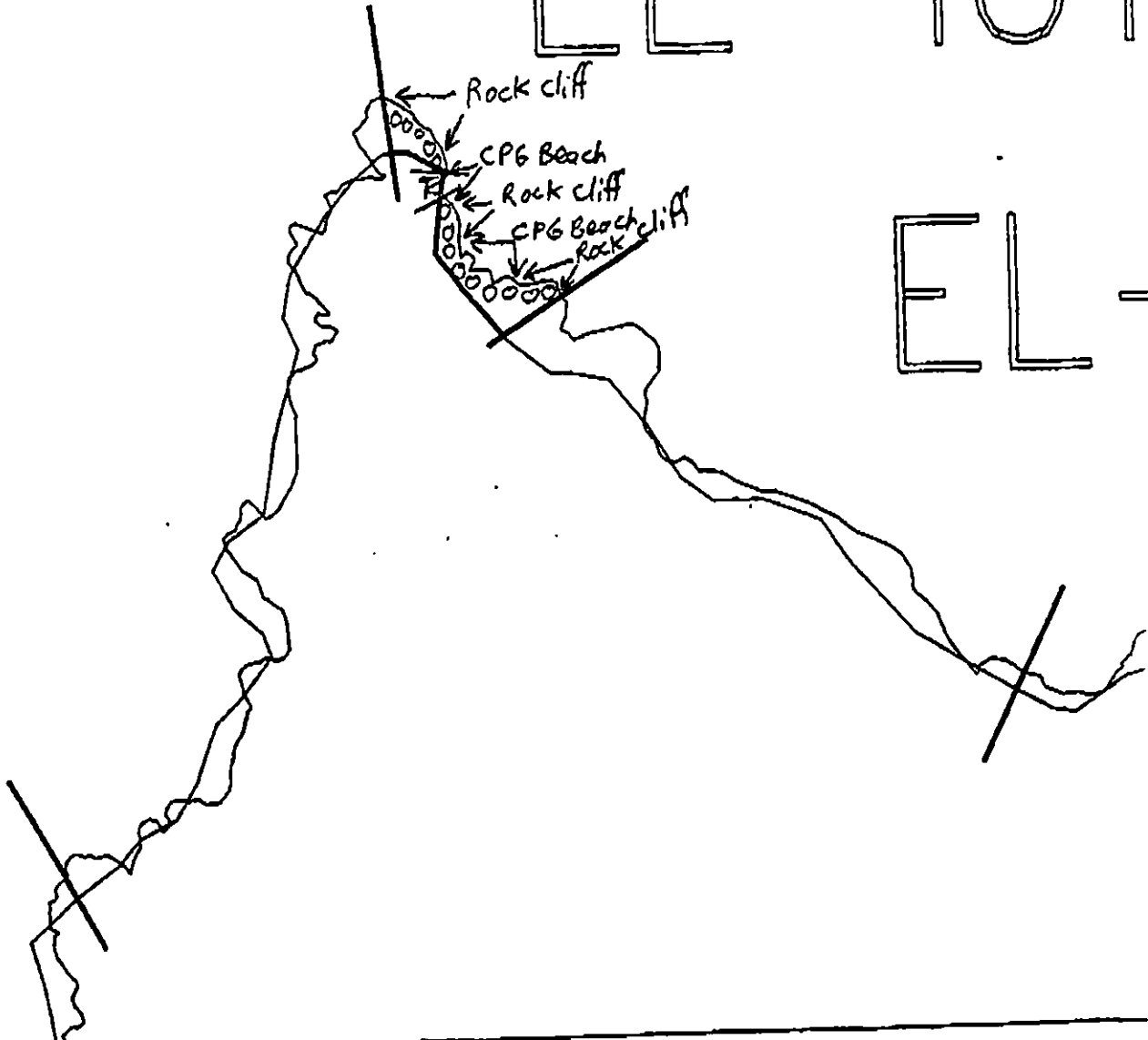
0 100m
Approx

Oil Character Length (m): AP PO CV CT ST MS PT TB FL NO 313

REVISION 03/24/90

EL-101

EL-



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

EL-101

ADEC Segment Length: ³¹³~~248~~m



Map Key: PWS-121
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 unopened intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles R. Hines 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 TEATZ
NOAA Burt Wescott
USCG KENNETH KERR
FOSC: DEK DATE: 4-21-90

SEGMENT: 2101

SUBDIVISION A

DATE 03 / 31 / 90

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Sep/Sub Bndry
- ☒ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☒ Substrate Character
- ☒ Est. HW/LW/L
- ☒ VSL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Pz Location(s)
- ☐ Photo Location(s)
- ☐ Pz = PHOTO #

LEGEND

1 Δ

P11 - No Subsurface Oil

2 ▲

Px - Subsurface Oil

CT/C

Continuous Distribution

CT/8

Broken Distribution

CT/P

Patchy Distribution

CT/5

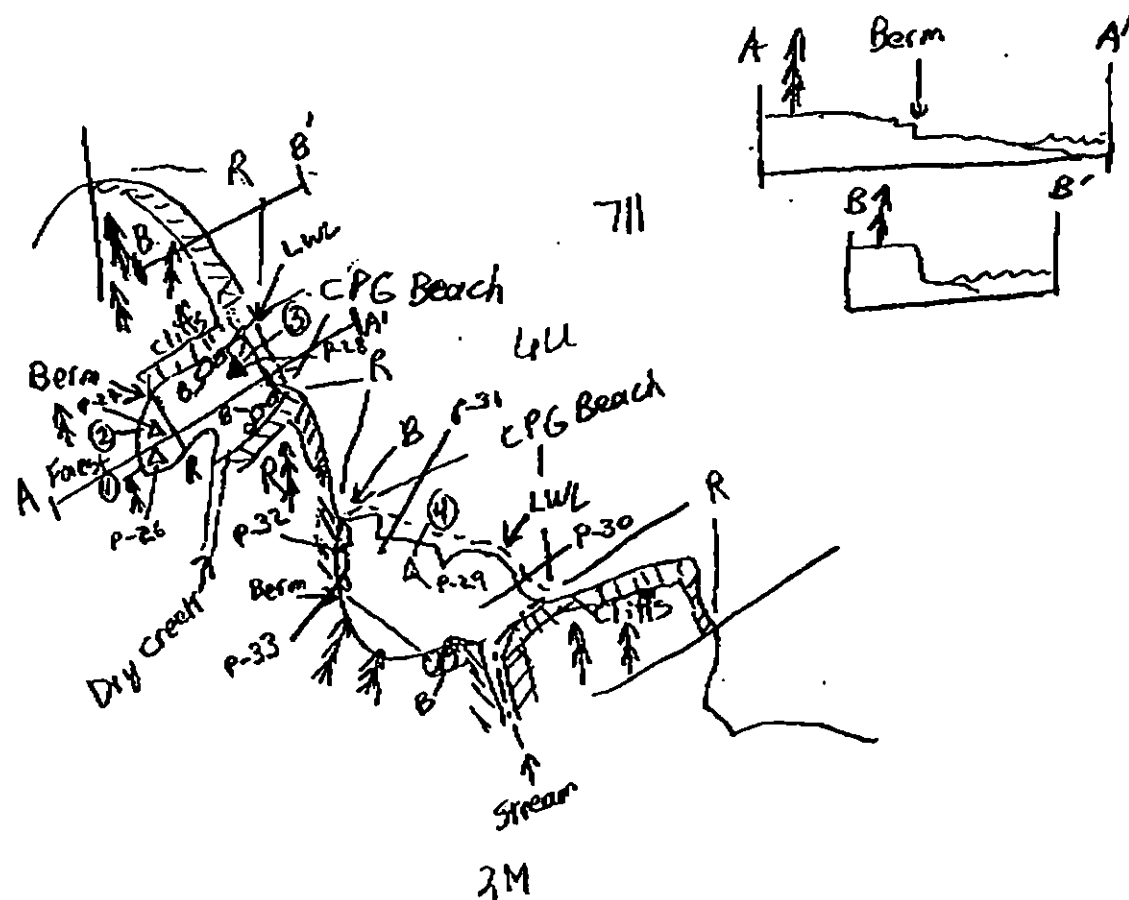
Splashed Distribution

Old Vegetation

1.

**Photo location, direction,
and number**

ETCH MAP



A1

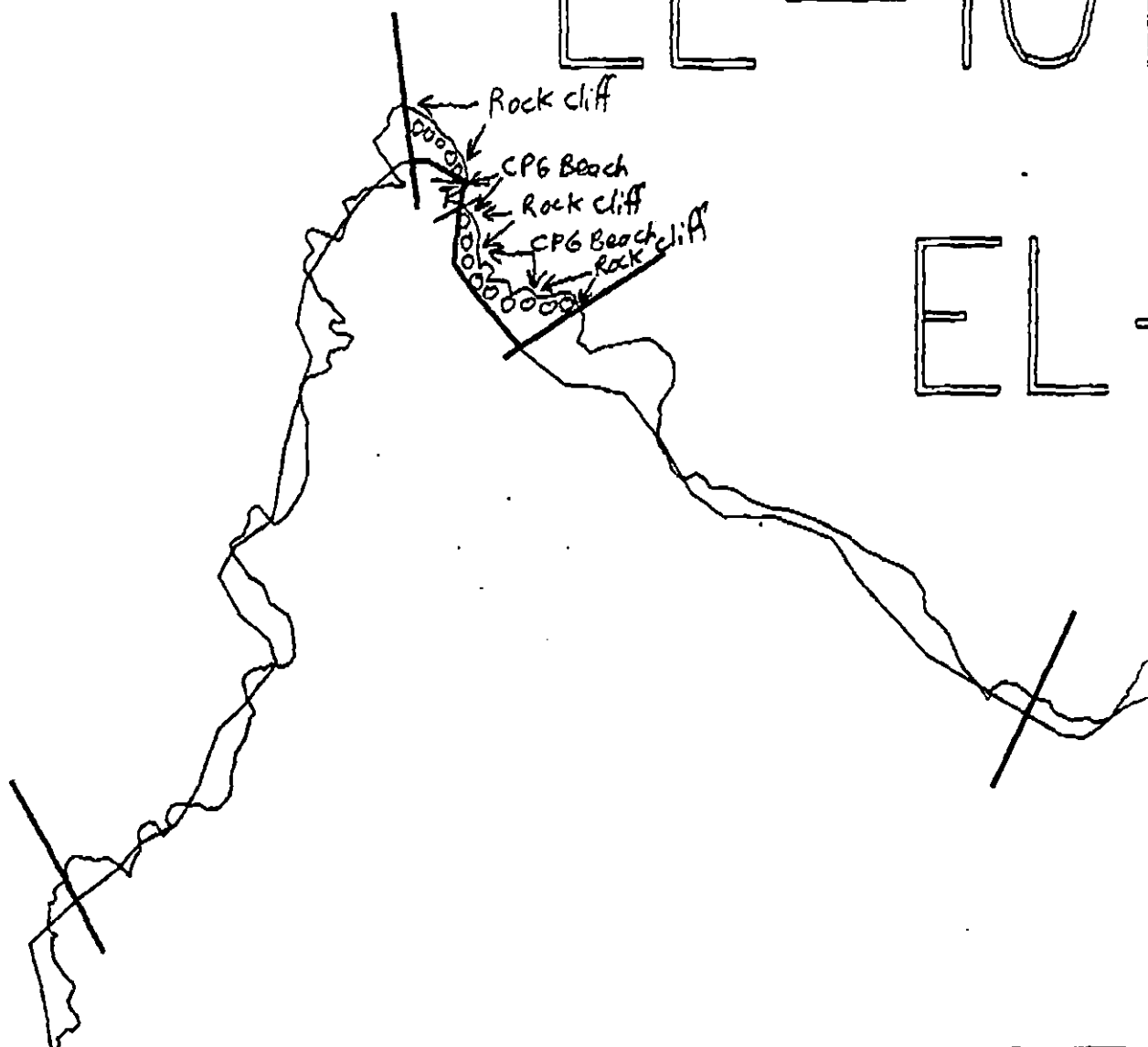
A scale bar with a horizontal line. At the left end is a vertical tick mark labeled '0'. At the right end is a vertical tick mark labeled '100 m'. Below the horizontal line, centered, is the word 'Approx'.

Oil Character Length (m): AP PO CV CT ST MS PT TB FL NO 313

REVISION: 03/24/98

EL-101

EL-



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

EL-101

ADEC Segment Length: ^{3/3} 200m

0 100 200 300

Map Key: PWS-121

Name: James Sprin

Date: 03/31/90

Date Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-102

SUBDIVISIONS: A (1 OF 2)

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.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 40 m: Narrow 392 m: V.Light 0 m: No Oil 146 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: Recommend manual 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: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ EL 102 SUBDIVISION: A DATE 03/31/90

JSCG

NAME AEC Vandepels SIGNATURE AEC Vandepels

☒ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

I recommend no treatment for this area.

ADEC

NAME Michele Paer SIGNATURE M Paer

☒ NO TREATMENT RECOMMENDED

☒ 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 ^{not} clean naturally, I consider this area medium-poor camping potential.

4/6/90
 OG J. Springer USCG R. Vardopoulos SEGMENT ST/ EL 102
 BIO P. Clark LAND REP D. Logan SUBDIVISION A (1012)
 EXXON T. Tomkalin ADEC M. Boser 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: Long 15 % Hang 15 % Vert 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	SU	UI	MI	LI
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT			X					X					X			
STAIN																
MOUSSE			X					X					X			
PATTIES																
TARBALLS																
FILM																
NO OIL													E		X	X

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. 46 PHOTOS

Frames 100 100000

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	30	35	40	45	50	55	60	65	SU	UI	MI	LI		
1	30					X	—		X									X					P
2	20					X	—		X											X			CPG
3*	10					X	—		X									X					CPG
4	30					X	—		X									X					CP
5	10					X	—		X											X			CPM
							—																

COMMENTS

* Pit 3 Surface (+5cm) mousse or soft asphalt.

35

OGI SP 2ER

Revised 4/6/90

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. HML/LVL
- ☒ SCL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ Pit Location(s)
- ☒ Photo Location(s)

LEGEND

1 Δ

Pit - No Subsurface Oil

2 Δ

Pit - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

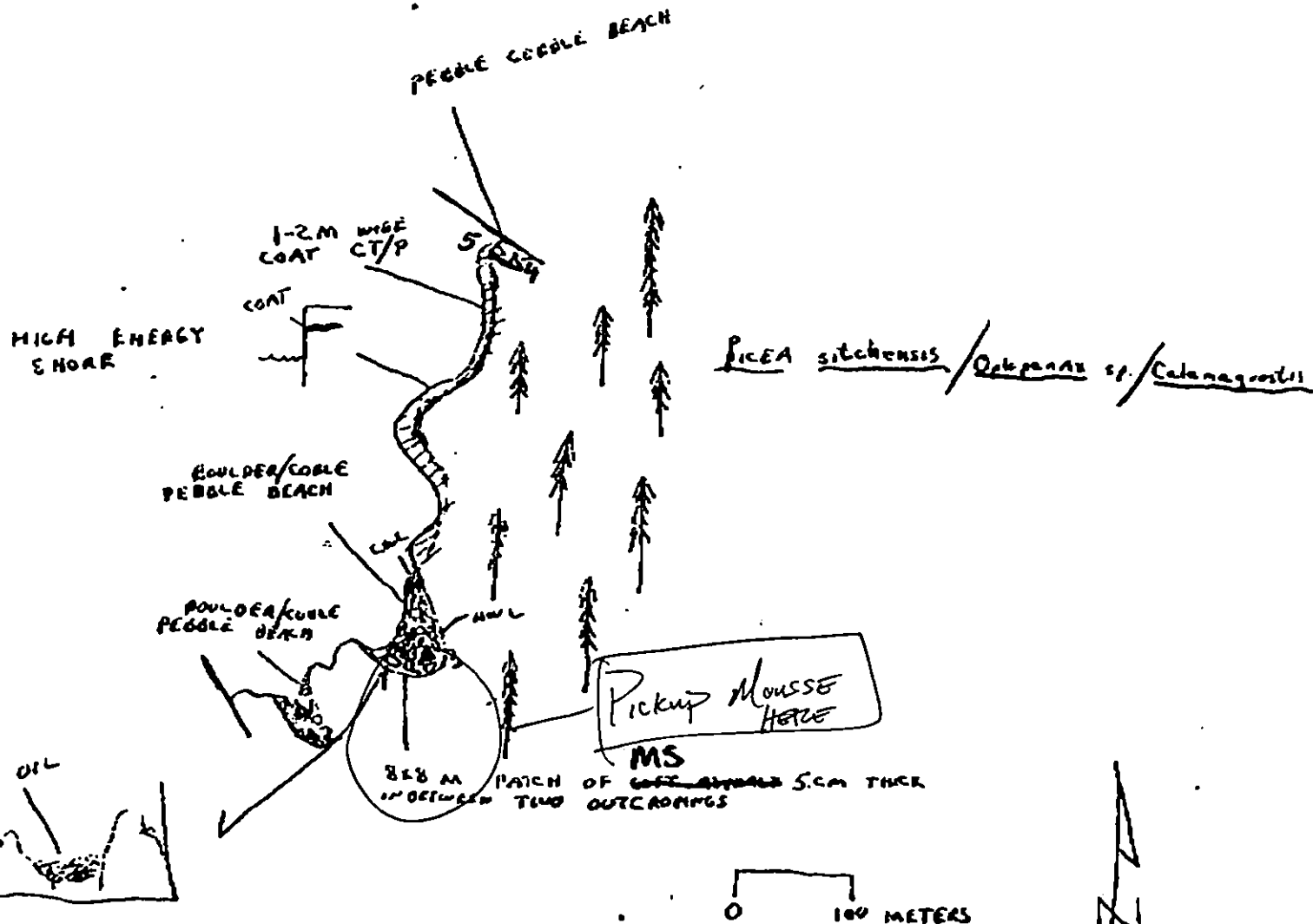
CT/S

Scattered Distribution

illed Vegetation

1 ●

Notes location, direction, no number



Vector Length (m): AP PO CV CT 542 ST MS 8 PT TB FL NO 285

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/22/90

Segment ST1 FL102 Subdivision A 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 40 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	

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	

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	

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	

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

APR-02-1990 00:51 FROM ARCTIC SALVOR TO
Segment; EL 102 B
Time: 1430-1530
Tide Height: +6 → +8

Biologist: Crank
Length: 278m

Species List

Flora

Fauna

HITZ

Filamentous green
Fucus

Balanus
Littorina
Mytilus

MITZ

Enteromorpha
Filamentous Greens
Filamentous Reds
Gloiopeltis
Endocladia
Fucus

Balanus
Mytilus

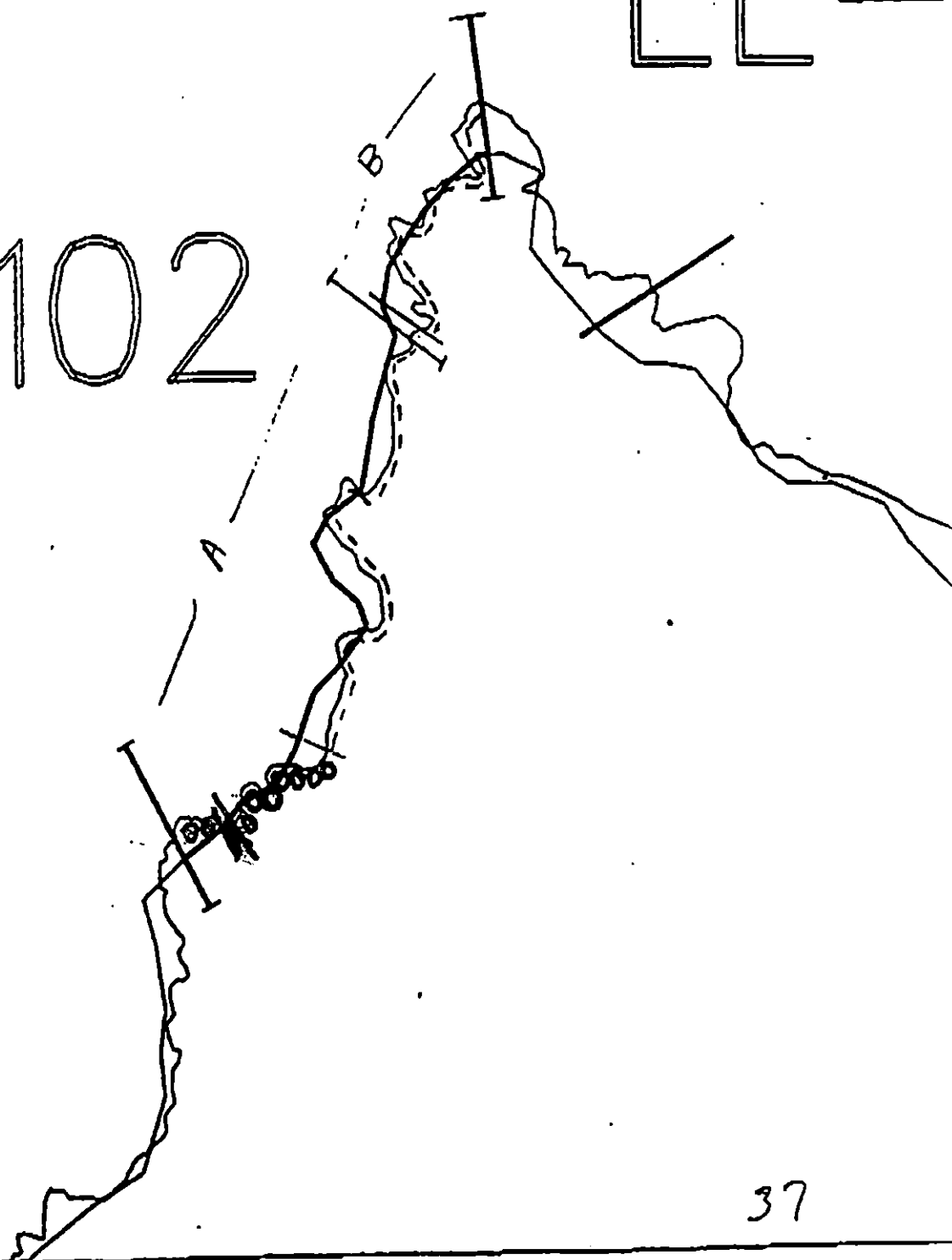
Comments

- 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



37

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EL-102

ADEC Segment Length: ¹¹¹³~~743~~m



Map Key: PWS-122

Name: James Spring

Date: 03/31/90

Date Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-102

SUBDIVISIONS: B (2 OF 2)

SHORELINE EVALUATION

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 unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 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	☐ Snare/Absorbent Booms
☒ Treatment Recommended	☐ Oil Snares (pom poms)
☐ Manual Pickup	☐ Absorbents (pads, rolls, etc)
☒ Bioremediation	☐ Spot Washing: _____ Wands
☒ Tarmat: _____ Breakup	☐ Beach Cleaner
☒ Removal	☐ Other (see comments)

COMMENTS: Recommend tarmat removal and 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.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/ 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 to 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 fertility to migrate into the lower intertidal zone.

LAND MANAGER

NAME DAN LOGAN SIGNATURE D Logan

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

I RECOMMEND MANUAL SCRUBBING 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. Vandeputts SEGMENT ST/ EL 102
 BIO P. Crank LAND REP D. Logan SUBDIVISION B (2 of 2)
 EXXON T. Tomblin ADEC M. Baker TIME 14:30 to 15:30
 TEAM NO.: 5 TIDE LEVEL: +6 to +8 DATE 03/31/90
 EST. SUBDIVISION LENGTH: 2.78 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			
	IC	IB	IF	IS	BR	BL	GR	OR	OL	DF	SU	U	M	U
ASPHALT PAVEMENT			X			X						X		
POOLED														
COVER	X	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. 37-3-1

Frames 36-36

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		UC	UC	BR	BL	GR	OR	OL	DF	NO	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 IER

SH CH MAP

Revised 4/6/90

SEGMENT ST/ 102

SUBDIVISION B

DATE 03 / 31 / 90

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Entry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HML/LVL
- ☒ 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

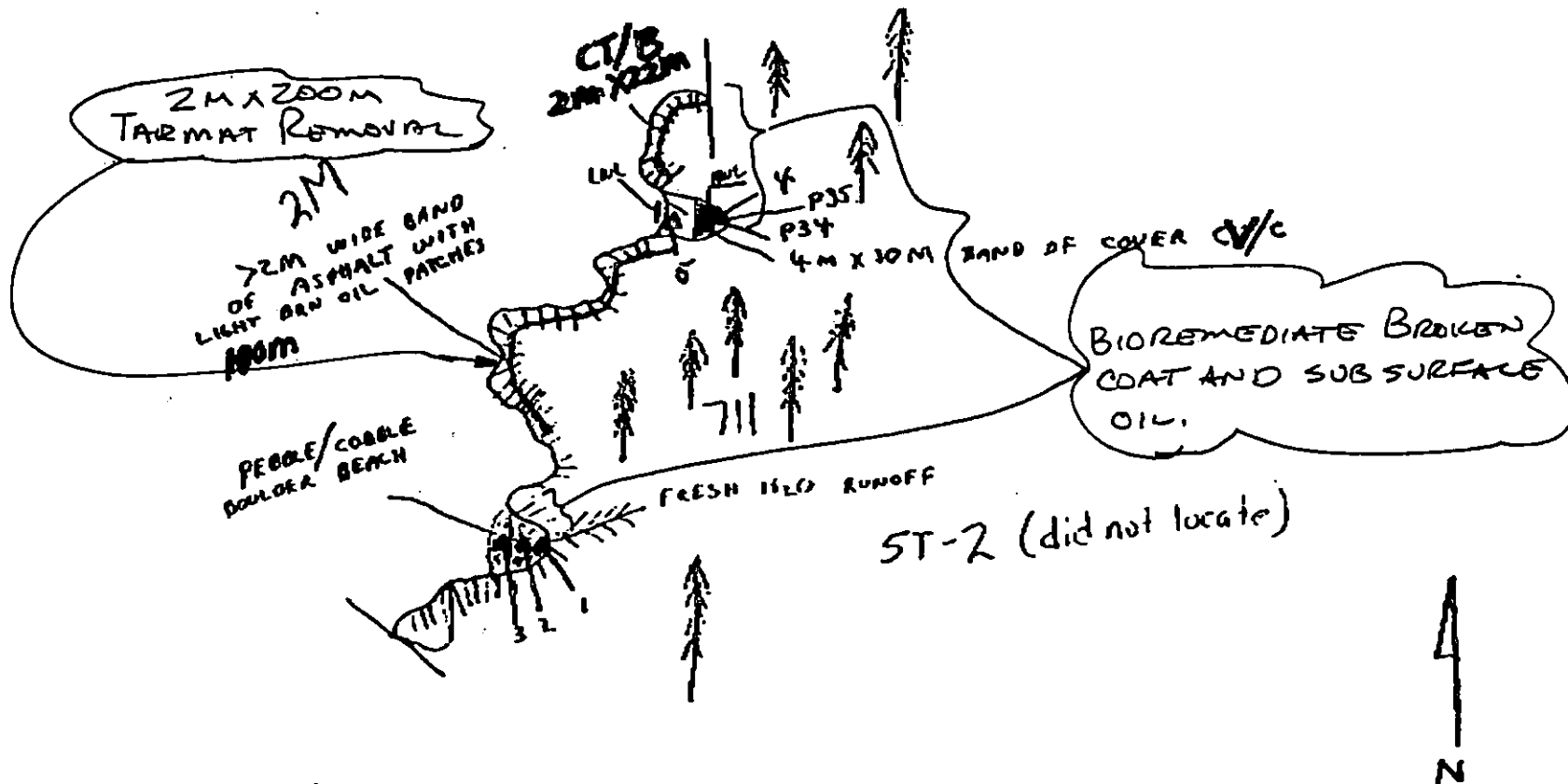
Splashed Distribution

Old Vegetation

1 ●→

Photo location, direction, and number

37



Oil Character Length (m): AP 100 PO CV 30 CT 22 ST MS PT TB FL NO 126

REVISION 022499

SHORELINE ECOLOGICAL SUMMARY

Segment ST / 61 / 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	~~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
No adults in

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	~~2~~	~~2~~	2	2	2	2
3	3	3	3	3	3	~~3~~	~~3~~	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	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

Seg- 4-10-21 11:00 AM: 100m

Time: 1230 - 1430 Length:

Tide Height: +2 → +6

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. Leptostearius sp. Katharina tunicata
LITZ	Bladed reds - small Lithothamnion Ulva Endocladia	Searlesia Katharina tunicata
SUPRA		Round worm - unidentified

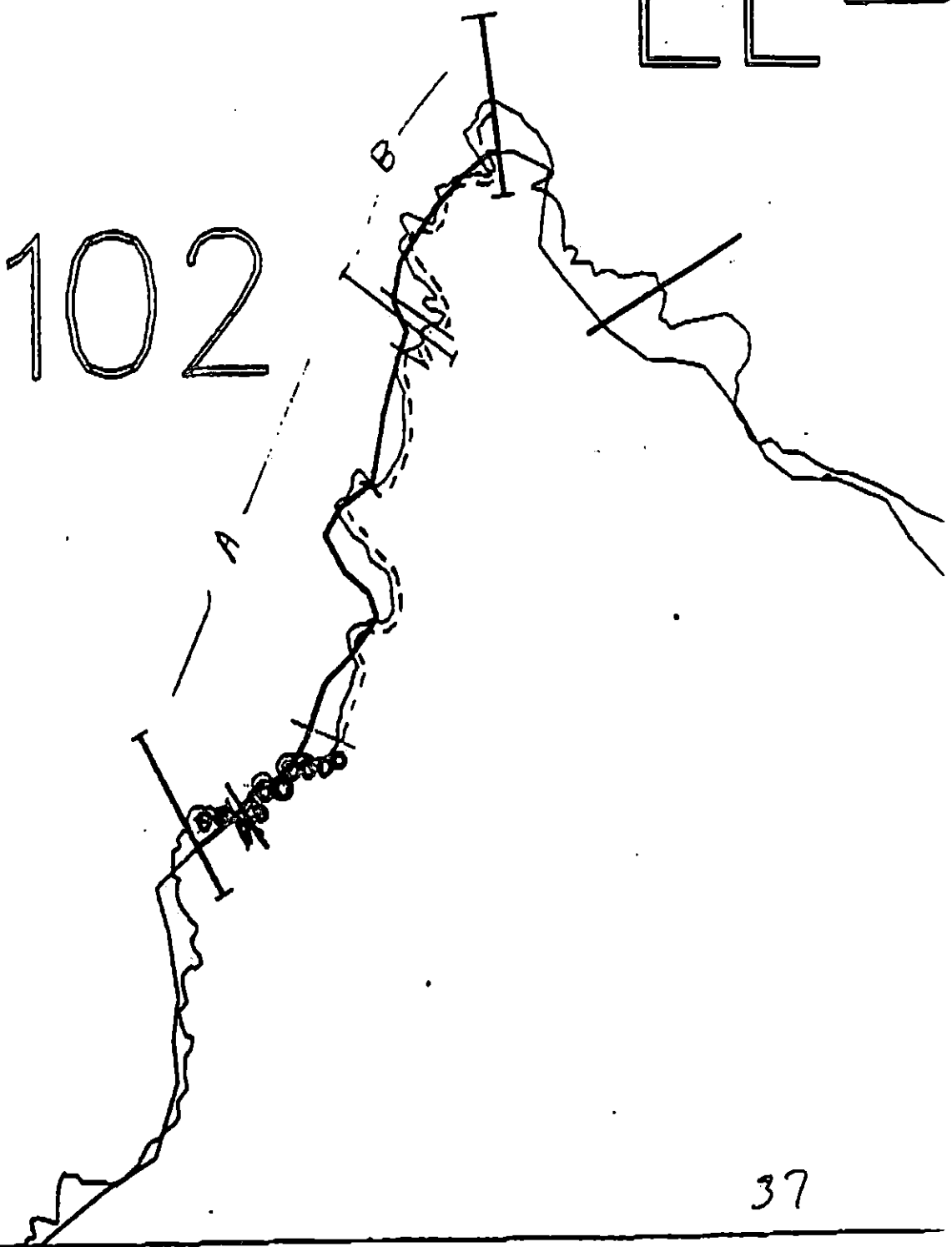
Comments

- Unable to make direct observation of LITZ (Tide Height)
- Dense Searlesia dira population - absence of Nucella
- High Energy → 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

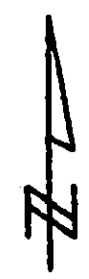
---- Narrow

TTTT Very Light

0000 No Oil

EL-102

ADEC Segment Length: 1113



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

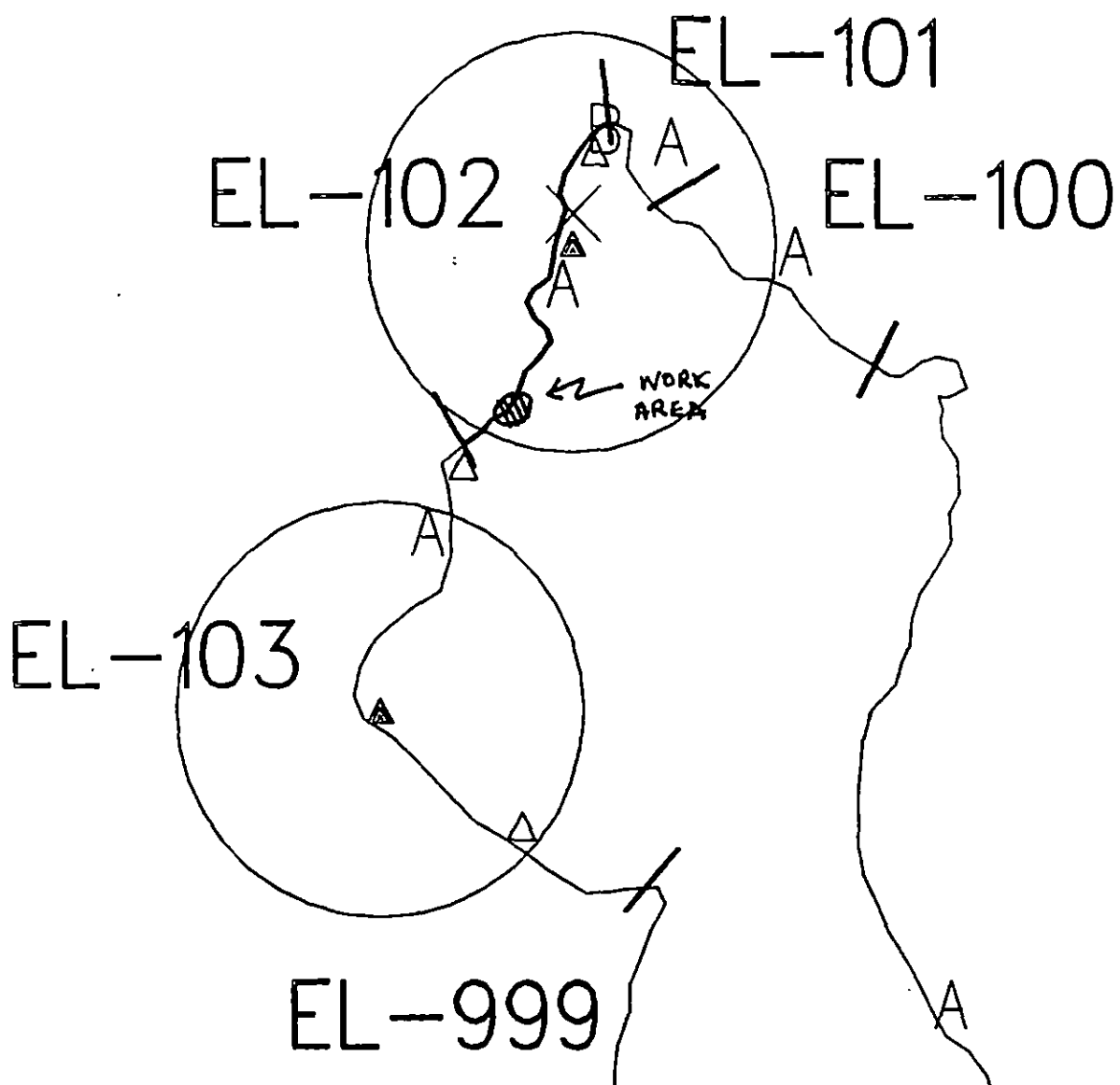
If eagle nest constraint is removed, other ecological considerations will apply.

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

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.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles J. 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.

See Constraint Addendum 6/7/90 wtk

TAG COMMENTS:

TAG APPROVAL DATE: 4/21/90.
ADEC ART WEINER
EXXON ANNY TAYLOR
NOAA Bruce Westcott
USCG KENNETH KEDDIE

FOSC: 4 DATE: 4-21-90

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

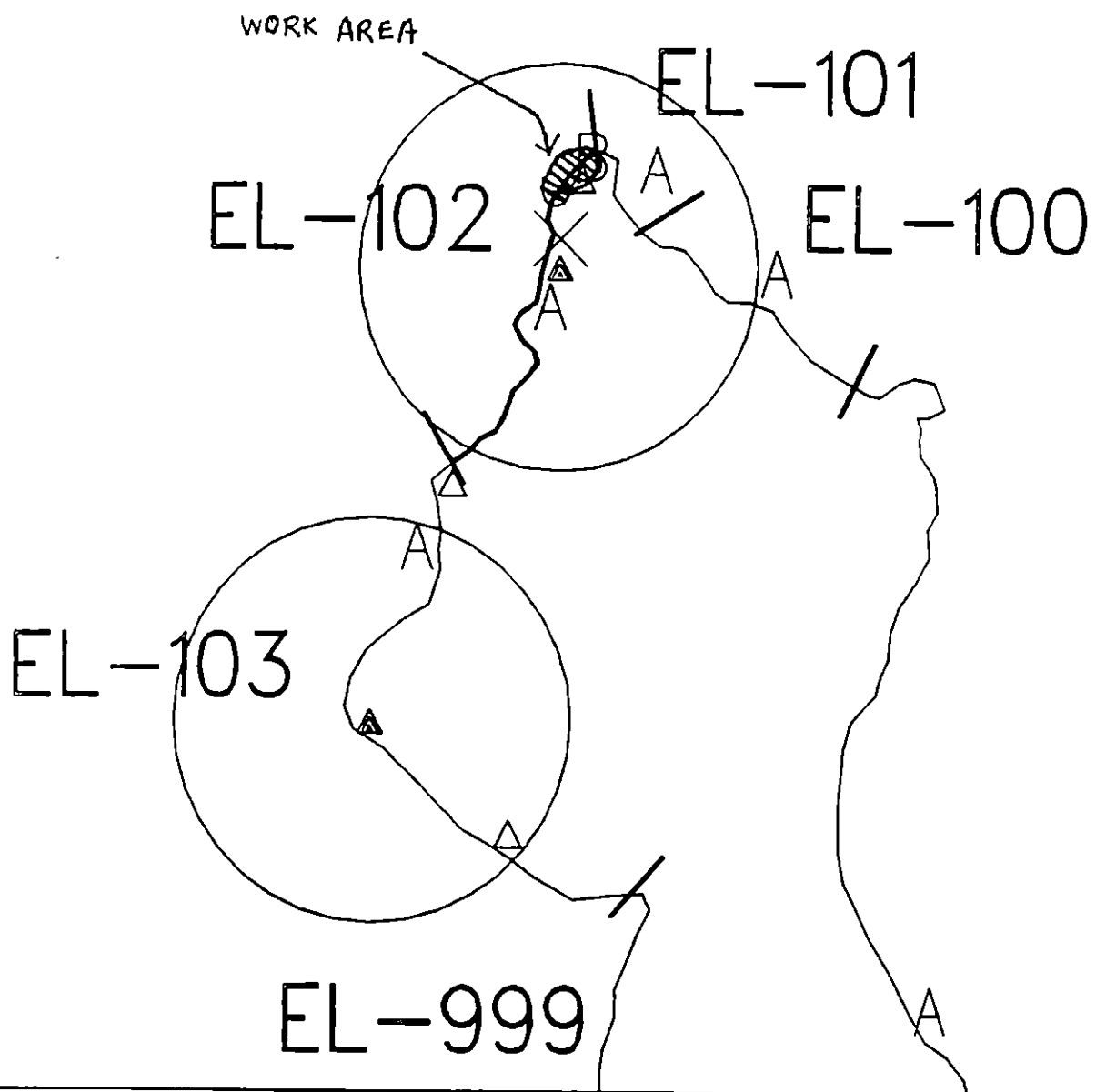
6-10-90

Prepared By:

W. Kallen

Date

6/7/90



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 S7 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 unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

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

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

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:

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

COMMENTS: Recommend 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 1000 LBS OF PITS 1-4
Prior to Bioremediation. See Constraint Addendum

TAG COMMENTS: deduct 6/1/90 upk

TAG APPROVAL DATE: 4/26/90
ADEC [Signature] Art Weimer
EXXON [Signature] Andy Galt
NOAA [Signature] Burt Wescott
USCG [Signature]

FOSC: 1 DATE: 4-27-90

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.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles J. Hanna 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 WEINER
EXXON ANN TAYLOR
NOAA Burt Wasscott
USCG KENNETH KEANE
FOSC: 4 DATE: 4-27-90

OGI SP ER

Revised 4/6 '0

SEGMENT ST/102

SKETCH MAP

SUBDIVISION A

DATE 03/31/90

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Seq/Sub Entry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. MW/L/V/L
- ☒ SGL
- ☒ 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

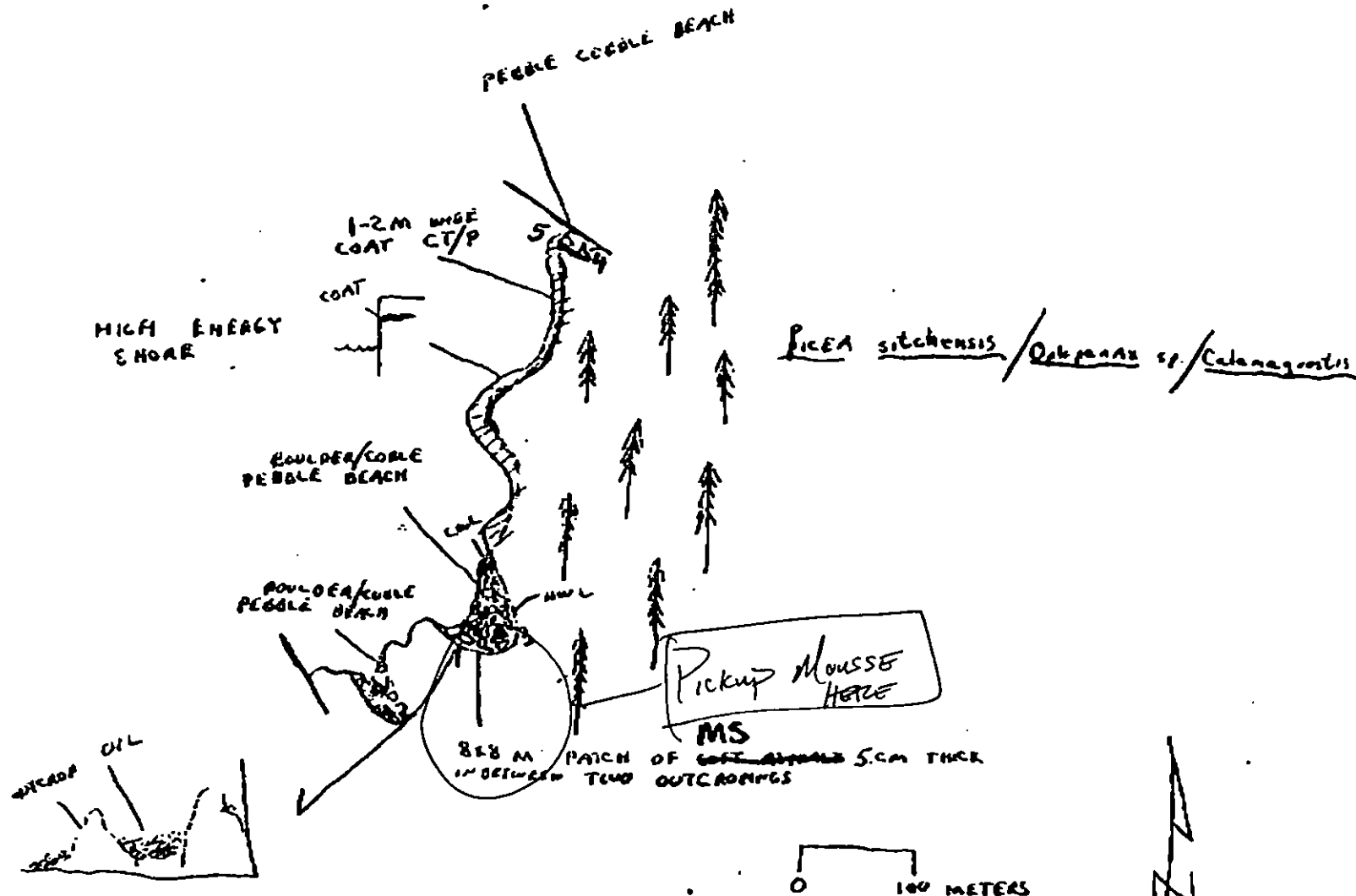
CT/S

Splashed Distribution

Dist. Vegetation

1 ●

Photo location, direction, and number

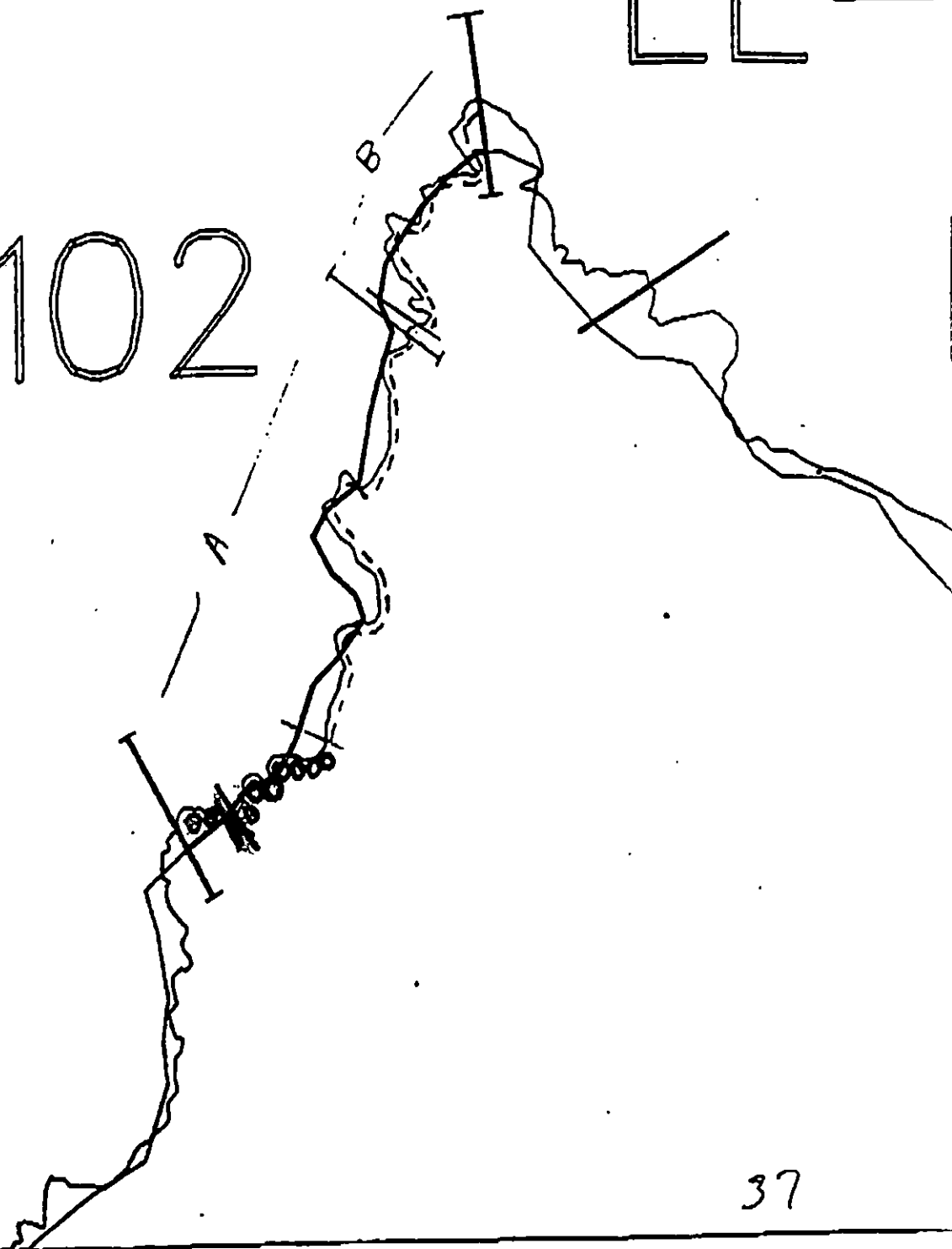


Factor Length (m): AP PO CV CT 542 ST MS 8 PT TB FL NO 285

Revised 4/6/90

EL-

EL-102



37

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

EL-102

ADEC Segment Length: 1113
743m



Map Key: PWS-122
Name: James Springer
Date: 03/31/90
Data Entered:

SHORELINE EVALUATION

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 unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: *Arthur E. Hume* 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:

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

COMMENTS: Recommend 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 re-
garding eagle nest constraint. MANUAL RAKE IN AREAS OF PITS 1-4
Prior to Bioremediation.

TAG COMMENTS: _____

TAG APPROVAL DATE: 4/20/90
ADEC *Art Weimer*
EXXON *Art Weimer*
NOAA *Burt Wescott*
USCG *Kenneth Keane*

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

OG J. SPR ER

SK HMAP

Revised 4/6/90

SEGMENT ST/ 102

SUBDIVISION B

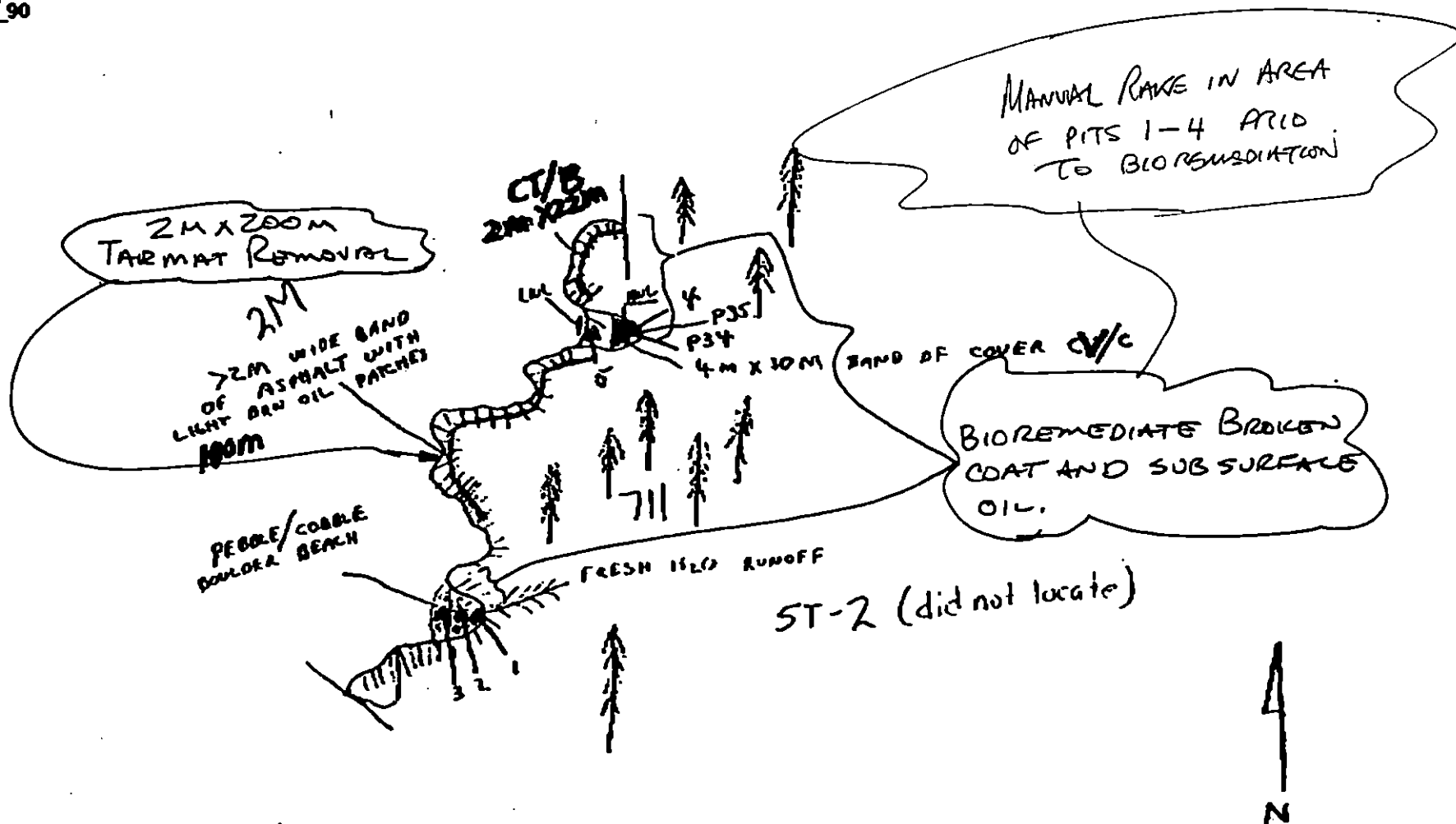
DATE 03 / 31 / 90

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Seg/Sub Entry
- ☒ Oil Dist.
- ☒ Width
- ☒ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HWA/VL
- ☒ 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
- Oil Vegetation
- 1 ●→
Photo location, direction, and number



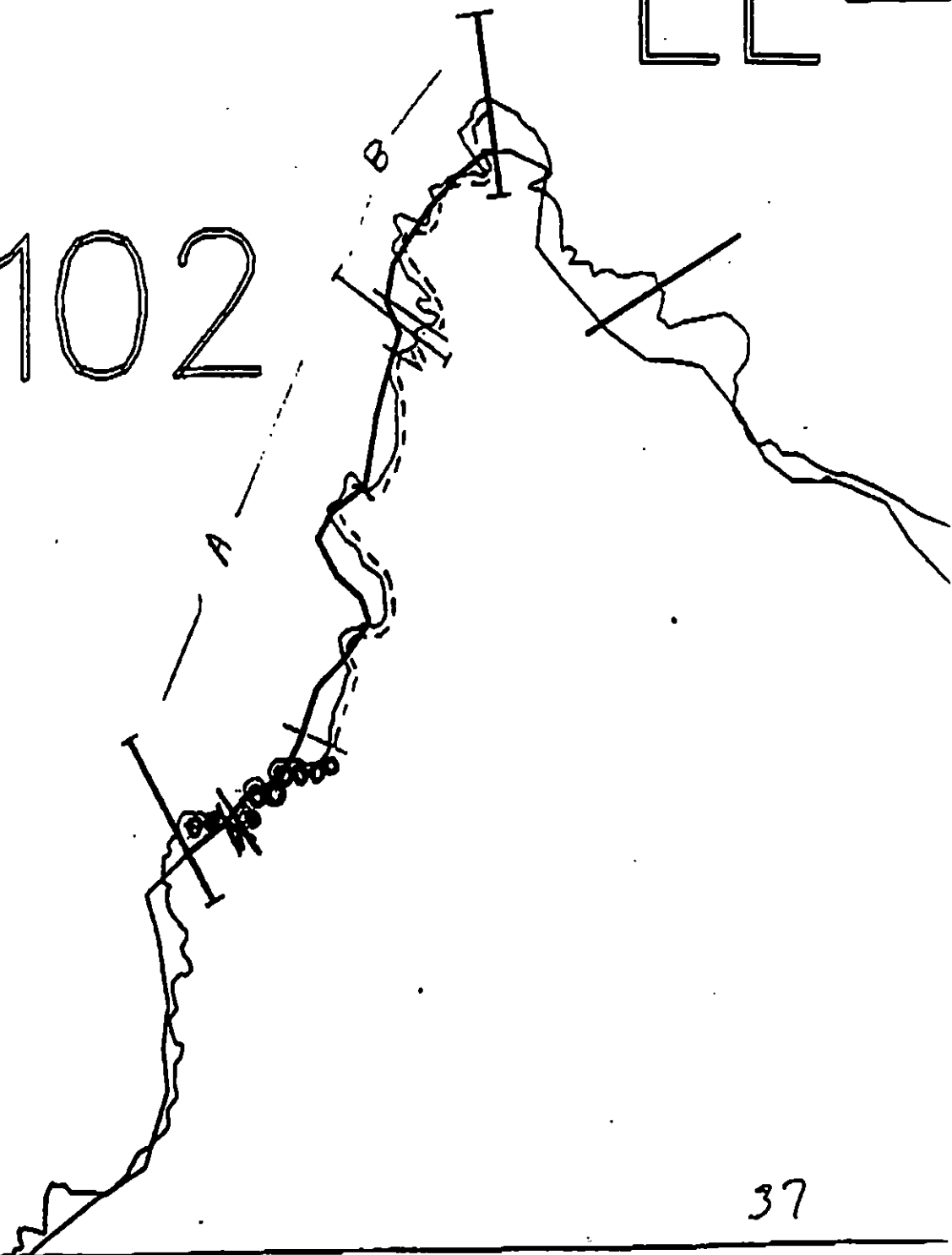
Oil Character Length (m): AP 100 PO CV 30 CT 22 ST MS PT TB FL NO 126

REVISION 2224/90

Revised 4/6/90

EL-

EL-102



37

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EL-102

ADEC Segment Length: 4113



Map Key: PWS-122

Name: James Spring

Date: 03/31/90

Date Entered:

1991 MAYSAP EVALUATION

SEGMENT: EL-102 SUB: B REGION: PWS SURVEY DATE: 6/26/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Eagle Nest,
Subsistence, Deer Harvesting

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC

FOSC

EXXON

USCG

NOAA

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 1 SEGMENT EL-102 SUBDIVISION B DATE 6/26/91

ADEC

NAME Dianne Munson SIGNATURE Dianne Munson

☒ NTR ☐ Treatment Recommended.

Majority of oiling was located near pits # 1, 2. 1 6ec bag of oiled debris was removed. Significant oiling was broken up or removed.

EXXON

NAME Mike Barker SIGNATURE Mike Barker

☒ NTR

AREA Looked very good. LOTS OF STARFISH, WHELKS, MUSSELS, ETC. EAGLES WERE UNDISTURBED. 1/2 BAG OF L SOR PICKED UP, REST TILLED & BROKEN UP. OUR BUBBAS DID A GREAT JOB.

LANDMANAGER

NAME — OF — SIGNATURE —

☐ NTR

ORIGINAL COPY

USCG/NOAA

NAME IVAN NAME, LTJG, USCG SIGNATURE Ivan Name

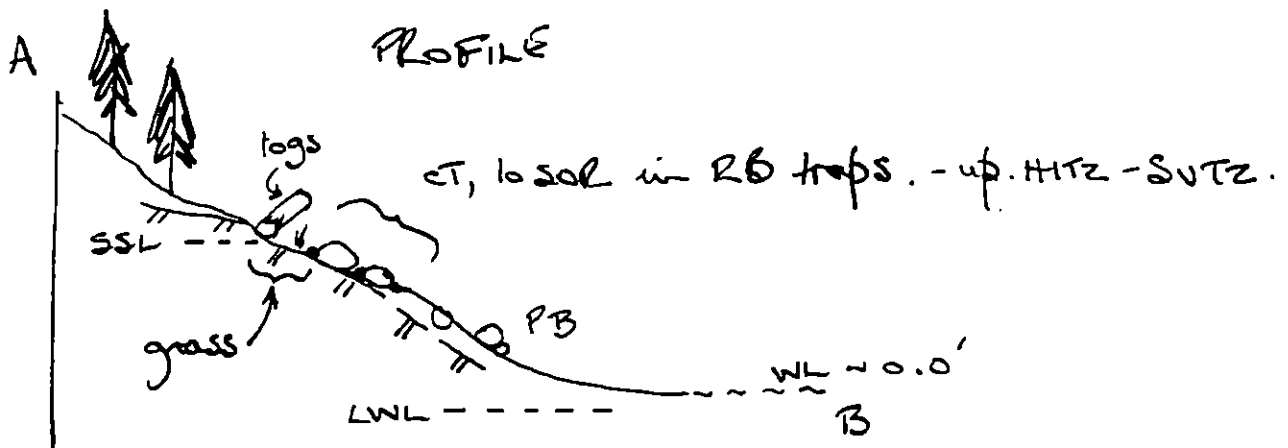
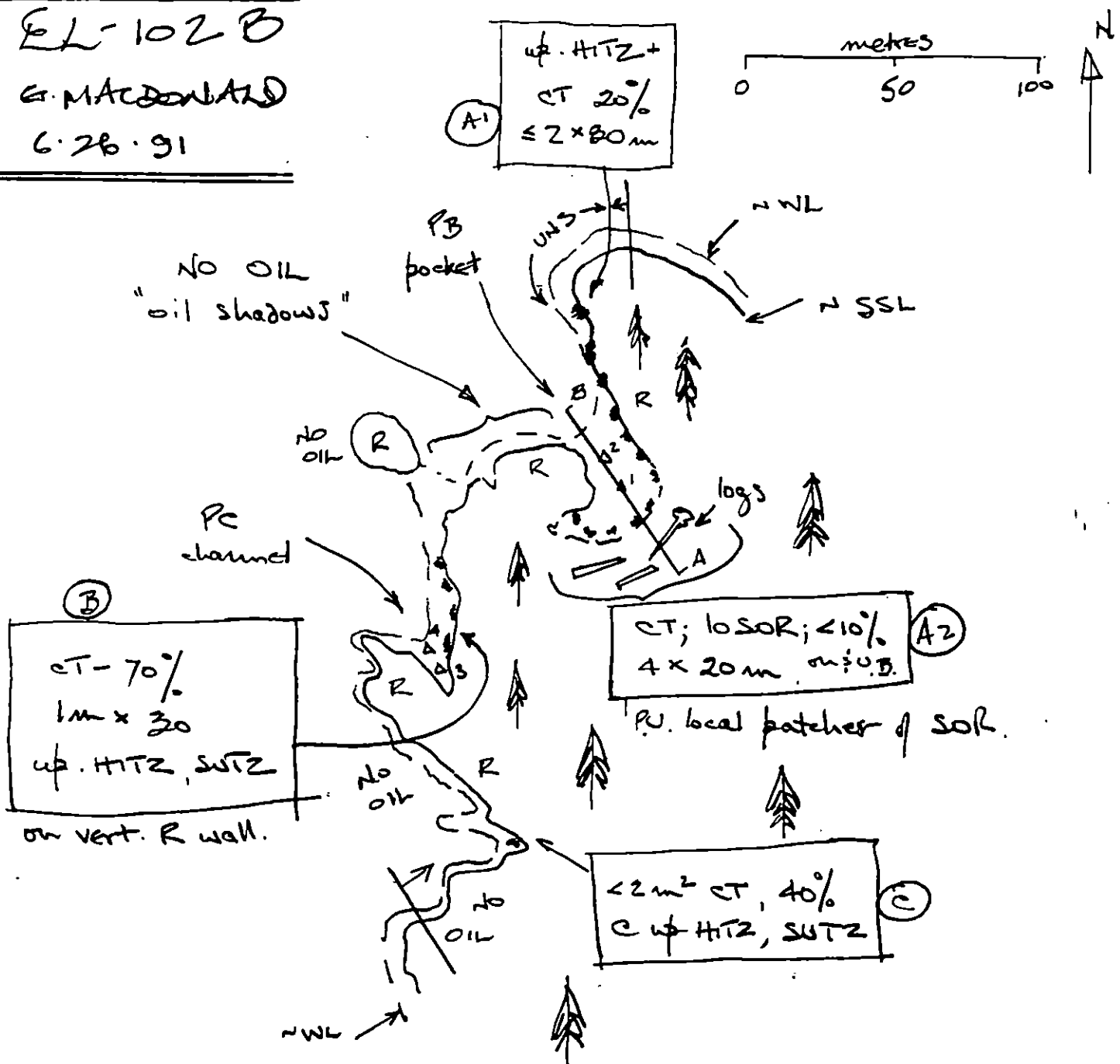
☒ NTR

NO FURTHER CLEANUP RECOMMENDED.

EL-102B

G. MACDONALD

6.26.91



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 00 DATE 6/26/91
 SEGMENT # EL 102 TIDAL HEIGHT (Range) -1.1' ~ -0.2'
 SUBDIVISION B BIOLOGIST D. McCORMICK
 SEA STATE <1' WIND SPEED/DIRECTION None
 PHOTOGRAPHS: ROLL # MAXSAP-00-04 FRAME # 9-11
 COMMENTS/OBSERVATIONS (to be completed in oiled subdivisions only):

A1-C. Oil in this subdivision is in the upper to supra ITZ above zone of significant biota. Coar + stain occurs on bedrock faces and in crevices, not in close proximity to surface macrofauna.

This mostly steep bedrock/boulder subd shows very distinct intertidal zonation: wildflowers (Shooting stars, dwarf dogwoods, wild irises) occur throughout the subdivision in the supra: a continuous band of black lichen and patchy moss growth occurs in the U-STIZ; below this, barnacle spp + adults occur to the lower tide zone, becoming very dense on bedrock faces in the M-LITZ; littorine and mussel spp are dense in bedrock crevices, with all age classes represented in the M-LITZ; whelks were very dense in some areas, both *Nucella lamellosa* and *N. lima*. Tidal pools support encrusting pink algae, *Anthopleura* (anemones), rock oysters (*Podomyces*), *Ulva*, *Streblospio*, *Tunicella* (chitons); sea stars (*Dermasterias*, *Pisaster*). Lower zone is nearly 100% covered with algal species which include *Fucus*, *Ulva*, *Sargassum*, *Halosaccus*, *Cladophora* and other filamentous green algae, *Dermasterias*, *Palmaria*, branched reds and brown. An impressively dense + diverse community.
 2 adult b.e. + 2 chicks
 crow's nest (2 birds)

WILDLIFE OBSERVATIONS TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	4	
Seabirds			
Waterfowl			
Gulls/kittiwakes			
Shorebirds			
Corvids	1	2	
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)			
_____les (specify)			
_____les (specify)			

Shoreline subdivision map showing important biological features attached.

EL-102B
D. MCCORMICK
BIG SKETCH
6-26-91

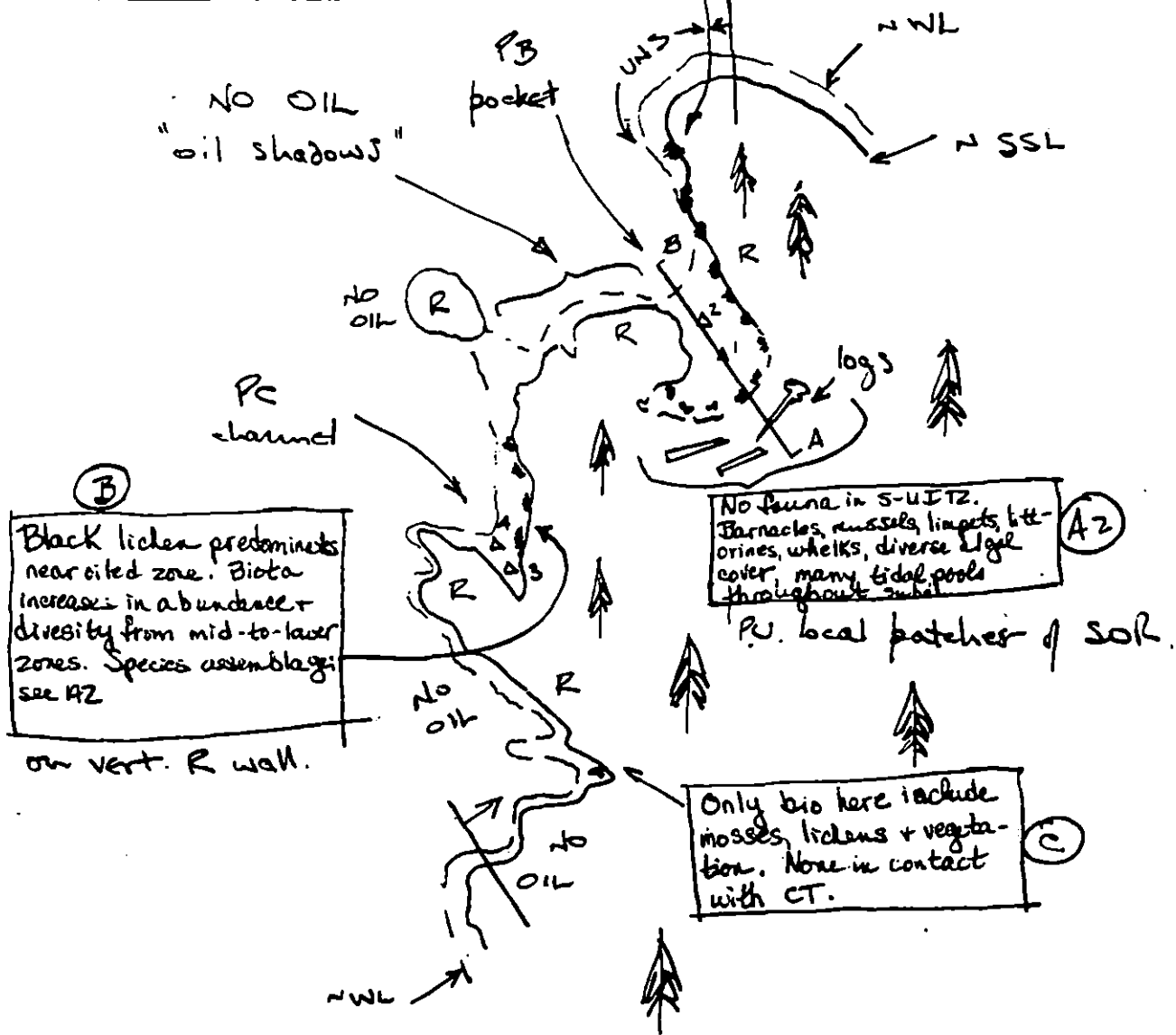
Barnacle zone
below bathtub
ring, mussels
and gastropods
below.

metres

50

100

2



PROFILE

ET, 10 sol in RB traps. - up. HITZ - SVTZ.

A

PROFILE

CT, 10 sol in RB traps. -

logs

SSL - - - -

grass

PB

LWL - - - -

WL = 0.0'

B

Eagle map
6/26/91
FWS monitor present

B

A

Active
2 adults
2 chicks

102

50

A

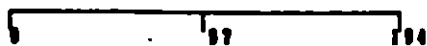
EL102B

Segment Reference Map

Map Key: PWSRL102



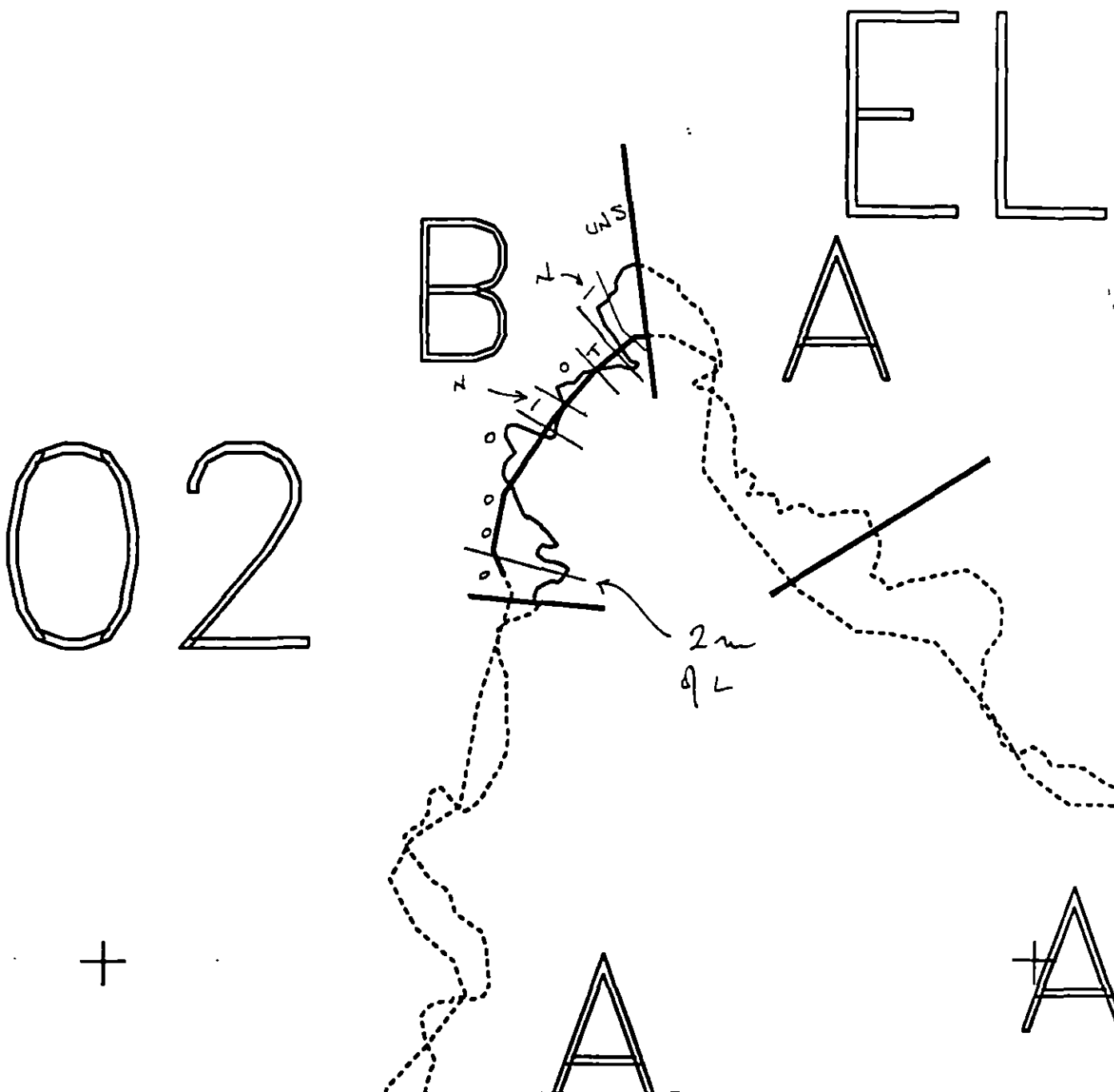
METERS



AK State Plane Zone 4
901102



EAGLE NEST



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

EL102 B
 ADEC Subsegment Length: 101m
 METERS
 0 100 200
 AK State Plane Zone 4
 601102B



Subdivision Field Map
 Map Key: KNIEL102B
 Name: G.M.
 Date: 6.26.91
 Date Entered:

1991 MAYSAP EVALUATION

SEGMENT: EL-102 SUB: B REGION: PWS SURVEY DATE: 6/26/91 **RECEIVED**

ENVIRONMENTAL SENSITIVITIES:

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

JUL 18 1991

Ecological/Constraints (see page two for details) Eagle Nest, Anchorage-A00/A
Subsistence, Deer Harvesting

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Timothy A Smith

Date: 7/2/91

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

N

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: July 2 1991

FOSC APPROVAL DATE: 7/8/91

ADEC

FOSC

EXXON

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

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 1 SEGMENT EL-102 SUBDIVISION B DATE 6/26/91

ADEC

NAME Dianne Munson SIGNATURE Dianne Munson

☒ NTR ☐ Treatment Recommended.

Majority of oiling was located near pits # 1, 2. 1 6ec bag of oiled debris was removed. Significant oiling was broken up or removed.

EXXON

NAME Mike Barker SIGNATURE Mike Barker

☒ NTR

AREA Looked very good. LOTS OF STARFISH, WHELKS, MUSSELS, ETC. EAGLES WERE UNDISTURBED. 1/2 BAG OF L SOR PICKED UP, REST TILLED & BROKEN UP. OUR BUBBAS DID A GREAT JOB.

LANDMANAGER

NAME — OF — SIGNATURE —

☐ NTR

USCG/NOAA

NAME IVAN NANCE, LTJG, USCG SIGNATURE Ivan Nance

☒ NTR

NO FURTHER CLEANUP RECOMMENDED.

PAGE 1 OF 1

SEGMENT EL-102

SUBDIVISION B

DATE 6 / 26 / 91

ENERGY LEVEL: ☐ H ☒ M ☐ L

WEATHER: ☒ SUN ☐ CLOUDS ☐ FOG ☐ RAIN ☐ SNOW

NEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONE

EST. OIL CATEGORY LENGTH: W 1 m M 1 m N 45 m VL 20 m NO 170 m US 15 m

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

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

PHOTO ROLL # MAYSAP-

FRAMES

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

OG COMMENTS: Steep R shore w/ occasional PB channel. Surface oil only, as CT/B-5 @ up HTZ, SWTZ and 10 SOL @ SWTZ in RB traps. CT is typically desiccated and easily scraped off, - located on two west-facing vertical R walls.

EL-102B
G. MACDONALD
6.26.91

(A1) up. HITZ+
CT 20%
≤ 2 × 80 m

metres
0 50 100



NO OIL
"oil shadows"

PB
pocket

UNL

NWL

NSSL

NO OIL (R)

Pc
channel

(B)

CT-70%
1m × 30
up. HITZ, SVTZ
on vert. R wall.

(A2) CT; 10 SOR; <10%
4 × 20 m on S.O.B.

PV. local patches of SOR.

NO OIL (R)

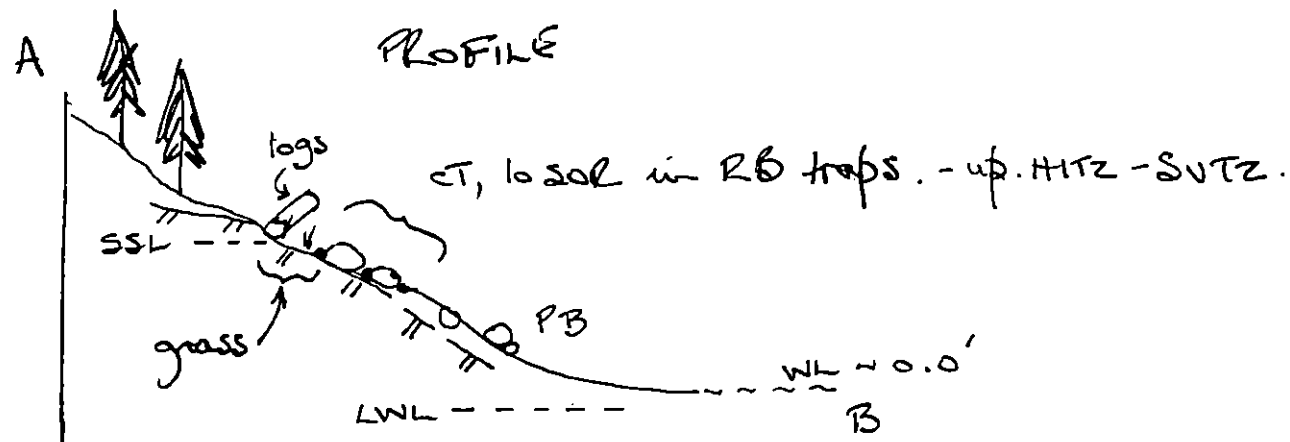
NO OIL (R)

NO OIL (R)

NWL

(C) <2 m² CT, 40%
C up HITZ, SVTZ

PROFILE



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 00 DATE 6/26/91
 SEGMENT # EL 102 TIDAL HEIGHT (Range) -1.1' ~ -0.2'
 SUBDIVISION B BIOLOGIST D. McCORMICK
 SEA STATE <1' WIND SPEED/DIRECTION None
 PHOTOGRAPHS: ROLL # MAYSAP-00-04 FRAME # 9-11

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

A1-C. Oil in this subdivision is in the upper to supra ITZ above zone of significant benthos. Coat + stain occurs on bedrock faces and in crevices, not in close proximity to surface macrofauna.

This mostly steep bedrock/boulder subd shows very distinct intertidal zonation: wildflowers (Shooting stars, dwarf dogwoods, wild irises) occur throughout the subdivision in the supra: a continuous band of black lichen and patchy moss growth occurs in the U-SITZ; below this, barnacle spp + adults occur to the lower tide zone, becoming very dense on bedrock faces in the M-LITZ; littorine and mussel spp are dense in bedrock crevices, with all age classes represented in the M-LITZ; Whelks were very dense in some areas, both *Nucella lamellosa* and *N. lima*. Tidal pools support excreting pink algae, *Tealid*, *Anthopleura* (anemones), rock oysters (*Poliodorus*), Ulva, *Characid*, *Tunicella* (chitons); sea stars (*Dermasterias*, *Pisaster*). Lower zone is nearly 100% covered with algal species which include *Fucus*, *Ulva*, *Scytosiphon*, *Halosaccion*, *Cladophora* and other filamentous green algae, *Desmarestia*, *Palmaria*, branched reds and browns. An impressively dense + diverse community

2 adult b.c. + 2 chicks
 Crow's nest (2 birds)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	4	
Seabirds			
Waterfowl			
Gulls/Kittiwakes			
Shorebirds			
Corvids	1	2	
Other Birds			

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)			
.....les (specify)			

Shoreline subdivision map showing important biological features attached.

EL-102B
D. McCORMICK
BIG SKETCH
6-26-91

Barnacle zone
below bathtub
ring, mussels
and gastropods
below;

A horizontal number line with tick marks at 0, 50, and 100. The word "metres" is written above the line.

$$\begin{array}{c} N \\ \uparrow \end{array}$$

NO OIL
"oil shadows"

FB
pocket

UN3 →

232

2 SSL

no
oil

Pc
channel

log 3

No fauna in S-UITZ.
Barnacles, mussels, limpets, littorines, whelks, diverse algal cover many tidal pools throughout intertidal.

P.V. local patches of soil.

Black lichen predominates near oiled zone. Biota increases in abundance & diversity from mid- to lower zones. Species assemblage; see HZ

on vert. R wall.

Only bio here include
mosses, lichens + vegeta-
tion. None in contact
with CT.

PROFILE

CT, 10 sol in RB traps. - up. HITZ - SVTZ.

A

1093

SSL

grass

FB

 $WL \approx 0.0$

3

Eagle map
6/26/91
FWS monitor present

B

A

Active
2 adults
2 chicks

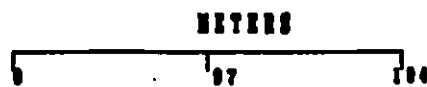
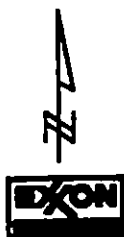
102

50

A

EL102B

Segment Reference Map
Map Key: PUSBL102



AK State Plane Zone 4
proj102



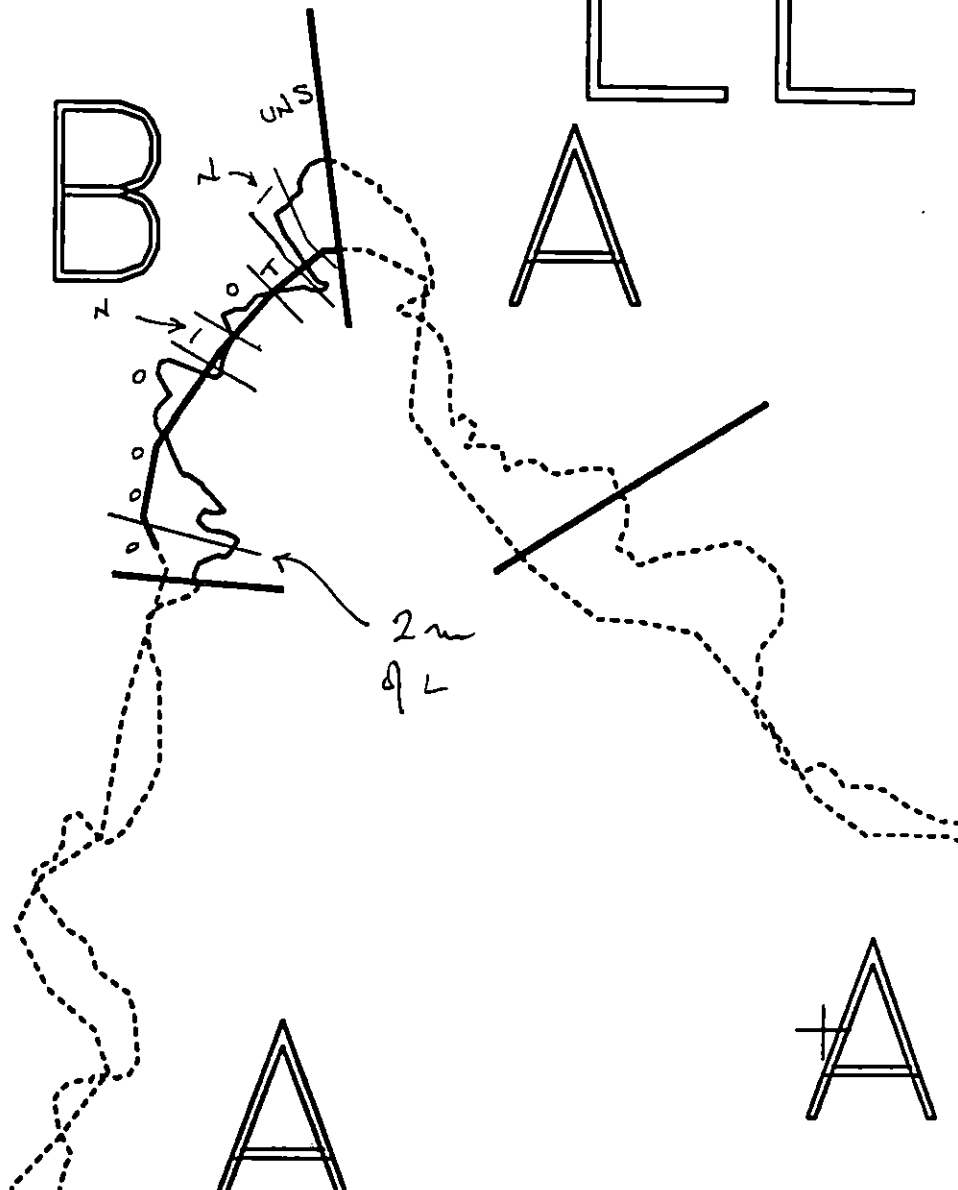
EAGLE NEST

02

B

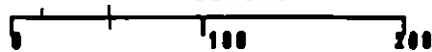
EL

A



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

EL102 B
 ADEC Subsegment Length: 101m
 METERS



AK State Plane Zone 4
 601102b



Subdivision Field Map
 Map Key: KNIEL02B
 Name: G.M.
 Date: 6.26.91
 Date Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-103

SUBDIVISIONS: A (1 OF 1)

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 unopened 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.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 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: _____ Wands
_____ Tarmat: _____ Breakup	_____ Beach Cleaner
_____ Removal	_____ Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 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 across some Balanus beds. The degree of staining is light. Therefore, I would recommend no treatment.

LAND MANAGER

NAME DAN LOGAN

SIGNATURE Daniel Logan

☒ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

SHORELINE OILING SUMMARY

REVISION NO. 03/23/90

OG J. Springer USCG R. Vandepels SEGMENT ST/ EL 103
 BIO P. Crank LAND REP D. Logan SUBDIVISION A (141)
 EXXON T. Tomblin ADEC M. Baer TIME 12:00 to 12:30
 TEAM NO.: 5 TIDE LEVEL: 0 to +1 DATE 03/31/90
 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	15	20	25	BR DR	OR PW	OL SL	OF TL	NO LRR	SU	U	M	U
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT													
STAIN	✓	✗						✓ ✗			✓ ✗		
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL										✗		✗	✗

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

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE _____

#BAGS _____

Photographs:

Roll No. _____

Frames _____

SUBSURFACE OIL

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

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 → +2
 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 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	~~3~~	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

GASTROPODS

Dense			Moderate			Sparse			Rare		
1U	1M	1L	1U	1M	1L	1U	1M	1L	1U	1M	1L
~~2~~	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	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
 1 Bald Eagle - Adult
 1 Brown Creeper

Ecological Considerations:

711 - Low harvesting
 2M - feeding, spawning
 5T-2 - Bald Eagle Nest

Seg: EL 103 A
Time: 1200-1230
Tide Height: +0.5 → +2 ft

Biologist: Crank
Length:

Species List	Flora	Fauna
HITZ	Endocladia Ralphsia Cladophora Filamentous reds Fucus	Littorina Limpets Balanus sp.
MITZ	Halosaccion Endocladia Syrtosiphon Filamentous Red algae Fucus	Plaster Sepulid worm Bryozoan Littorina Limpets Mytilus
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 MITZ
- Unable to make Mytilus spat determination from skiff
- Moderate barnacle scarring in MITZ
- Area appears healthy

OG 3 NGER

SEGMENT ST/ 103

SUBDIVISION A

DATE 03 / 31 / 90

CHECKLIST

- ☐ N Arrow
- ☒ Approx. Scale
- ☒ Dep/Sub Body
- ☒ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☒ Substrate Character
- ☒ Est. HWL/LWL
- ☐ SSI
- ☐ 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

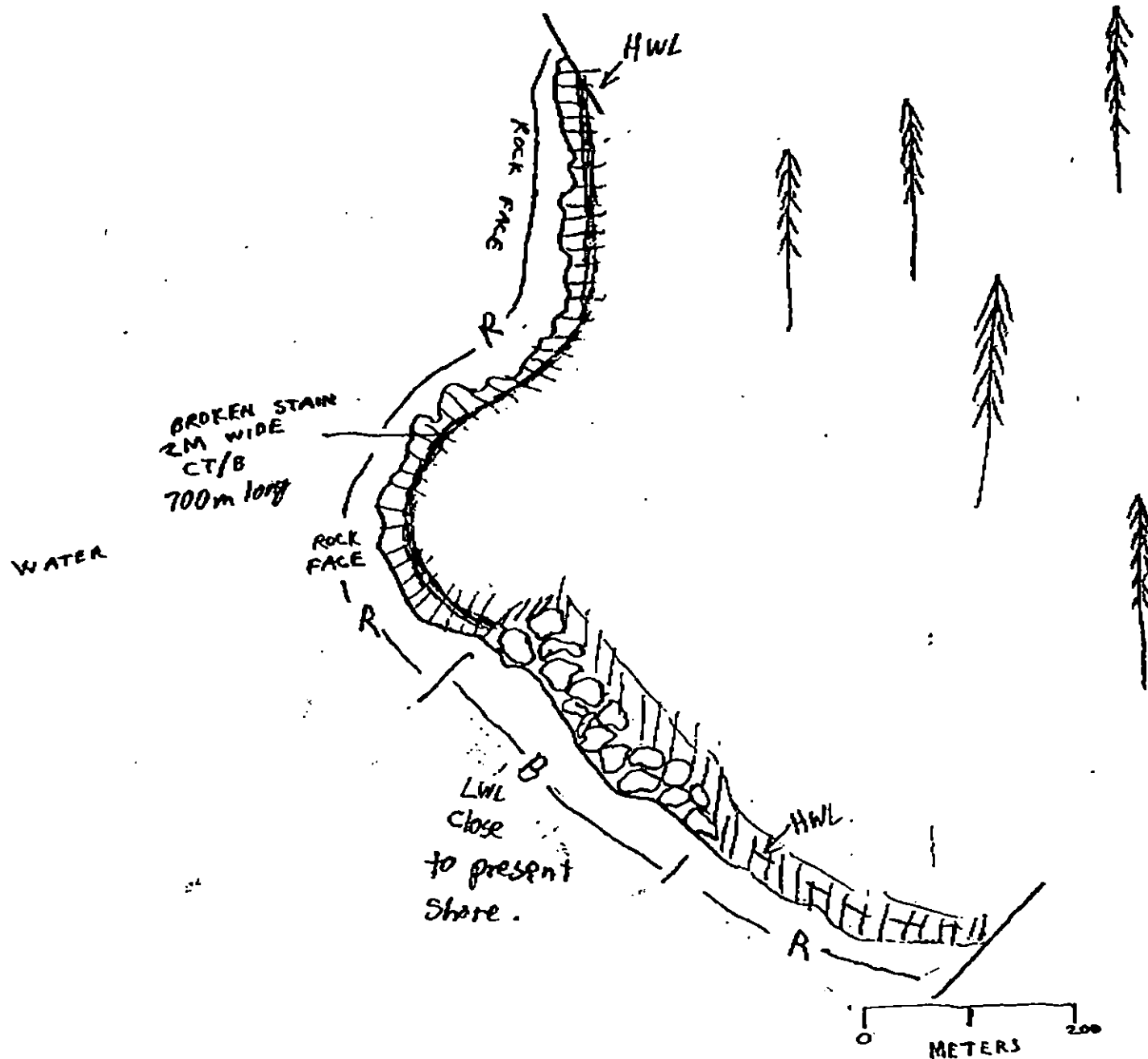
Splashed Distribution

Oil Vegetation

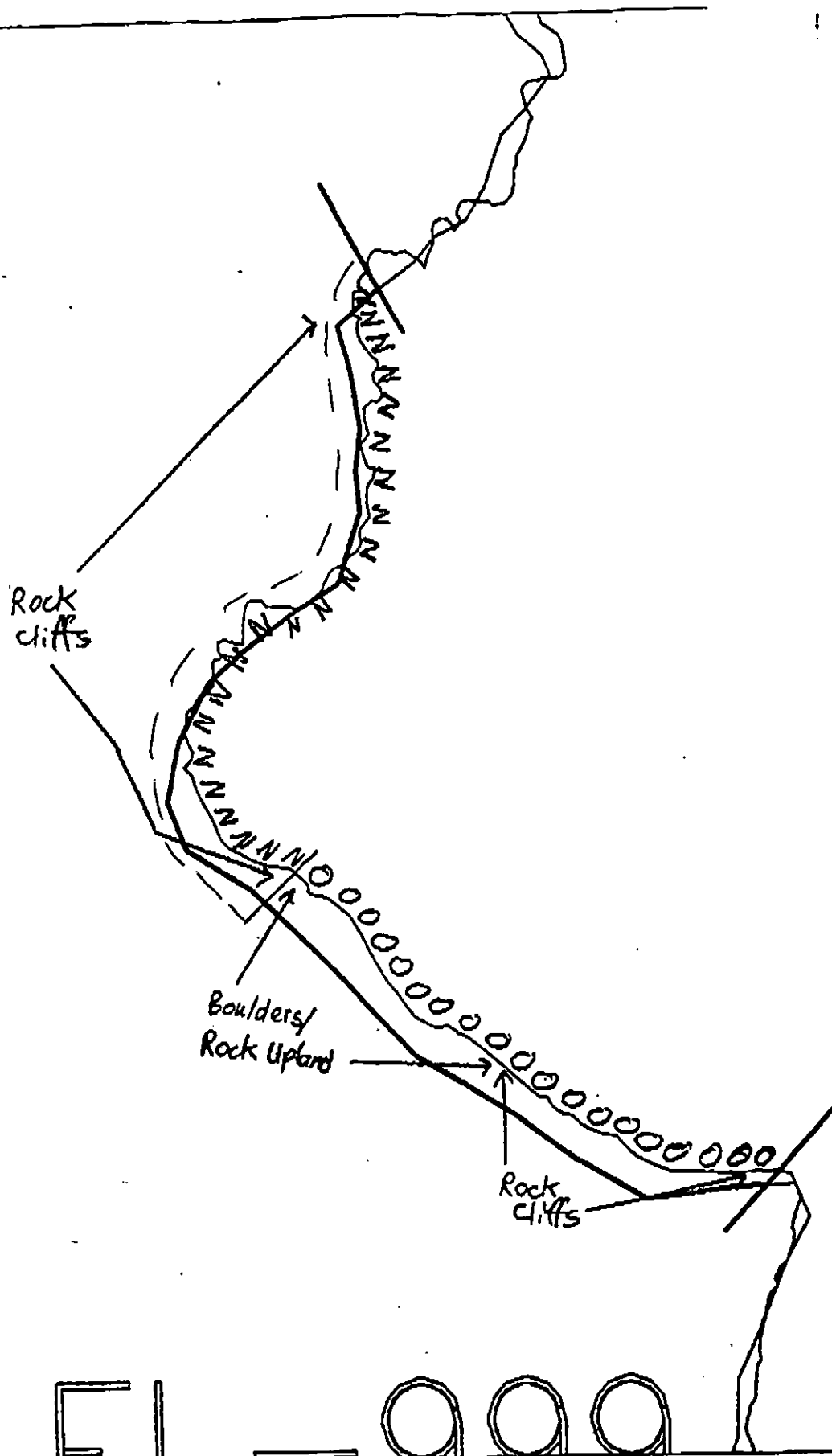
1 $\Rightarrow$

Photo location, direction,
and number

SKETCH MAP



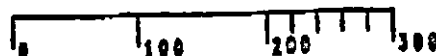
Oil Character Length (m): AP PO CV CT ST 700 MS PT TB FL NO 714



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

EL-103

ADEC Segment Length: 1414



Map Key: PWS-123

Name: James Spring

Date: 03/31/90

Date Entered:

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.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. H. Simon DATE: 4/17/90

OILING 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:

<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: 4/16/90

ADEC AL HUGHES
EXXON ANDY TATE
NOAA Burl Wescott
USCG G.A. REITER

FOSC: D.E. Lyle DATE: 4-20-90

OG J. RINGER

SEGMENT ST/ 103

SUBDIVISION A

DATE 03 / 31 / 90

CHECKLIST

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

LEGEND

1 ▲

Pn - No Subsurface Oil

2 ▲

Pn - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

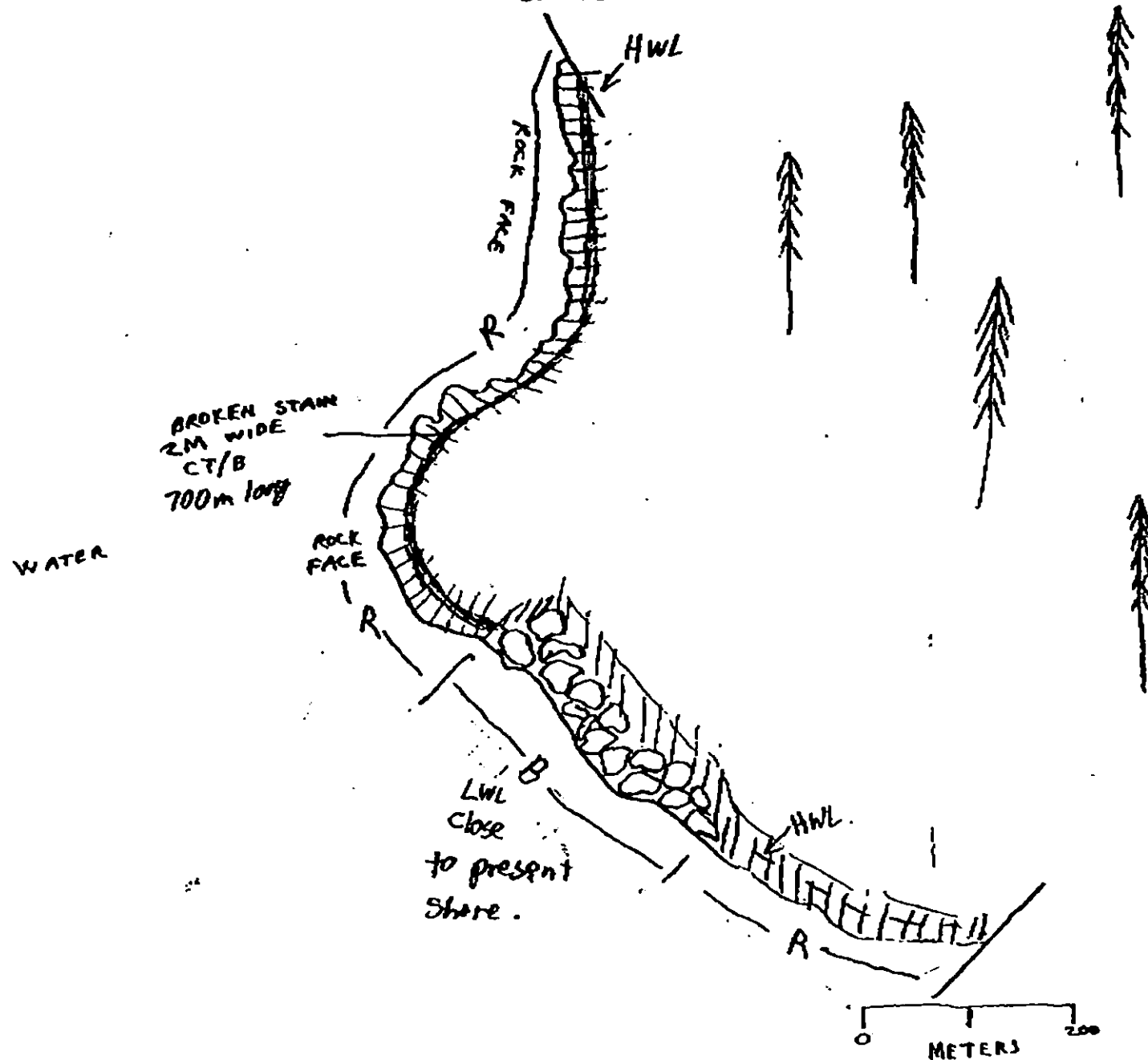
Splashed Distribution

Oiled Vegetation

1 ●→

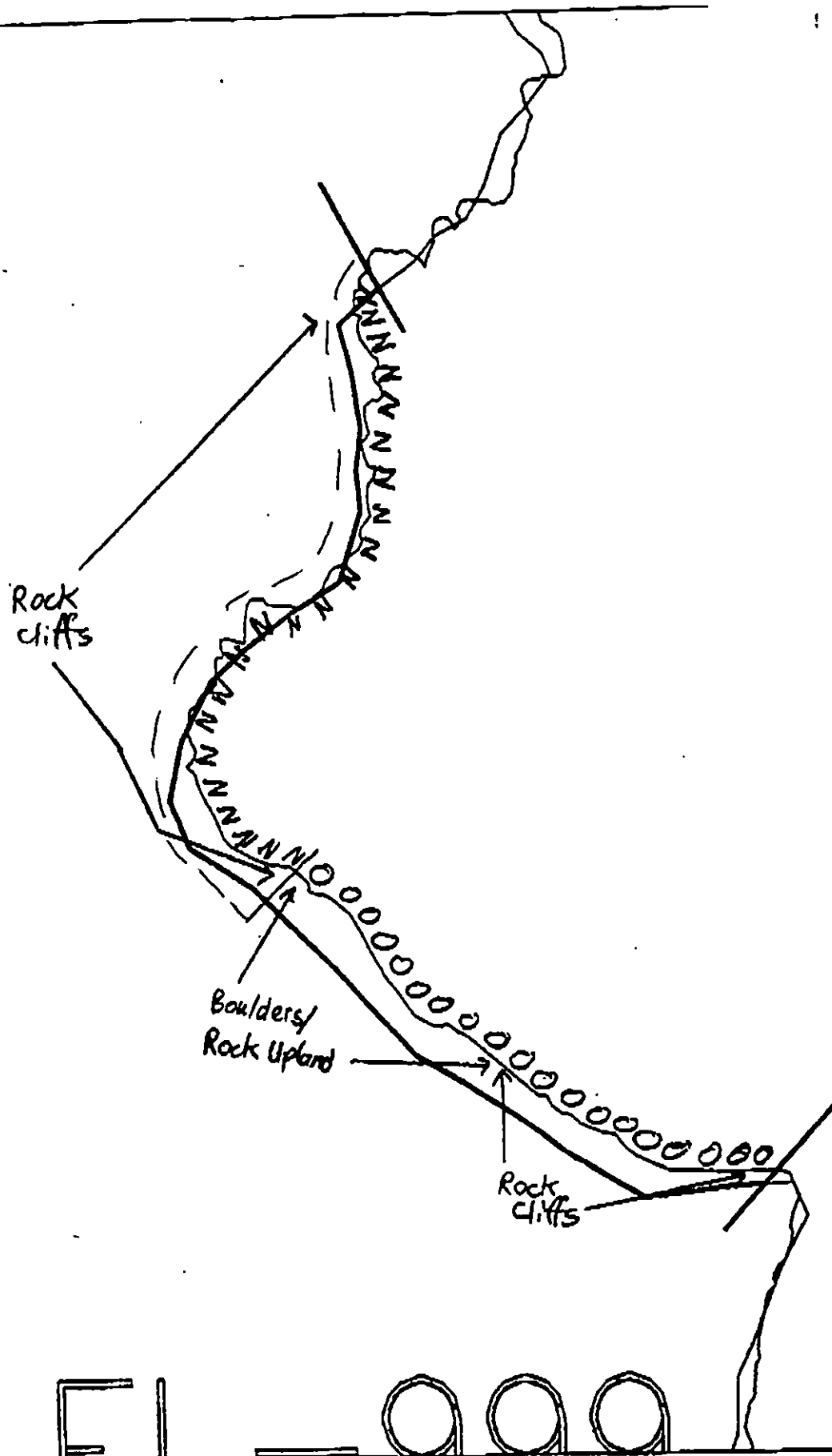
Photo location, direction,
and number

SKETCH MAP



Oil Character Length (m): AP PO CV CT ST 700 MS PT TB FL NO 714

REVISIONS



XXXX Wide

/// Medium

--- Narrow

TTTT Very Light

260000 No Oil

EL-103

ADEC Segment Length: ¹⁴¹⁴1000m



METERS

Map Key: PWS-123

Name: James Spring

Date: 03/31/90

Data Entered:

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 soil

Plt 1/2 of oil But

0-15 cm

0-10 cm

"Same as soil" ??

Priority Site For Reassessment In 1991

YES

CG

NO

☒

YES

ADEC

NO

☒

YES

EXXON

NO

☒

YES

LAND MGR

NO

☒

TAG 15 AUG 90

BIO

& reassess 91

ASAP FOLLOWUP RECOMMENDATIONS

Segment: ASV 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 UIC.
All observations made me believe there was a band thru
out the UIC.

Followup Recommendations: Manually remove heavy SOR/OP
Sediments. Manually Till area and add Custom blend.

Completed by Pickup Crew: ☐ YES ☒ NOPriority for Addressing in 1990: ☒ High ☐ Mod. ☐ Low

ADBC

Wesley Gibormley
(name)Wesley Gibormley
(signature)

Comments: The above recommendation if followed will put
this beach back in fairly good shape. A follow up
assessment should follow in 1991.

Exxon

REY SOTEL
(name)Rey Sotel
(signature)

Comments: Pick-up heavily oiled sediments and apply customblend.

USCG

PSI LEO BERSOLANA
(name)

(signature)

NOAA

ART WEINER

Comments:

REMOVE ACCESSIBLE HEAVY SOR. REAPPLY CUSTOM BLEND.THIS IS A MODERATE PRIORITY PROBLEM FOR 1990.

Land Rep.

JOHN EREL
(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.

FIELD SHORELINE COMMENT SHEET

Segment 3 Subarea 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 EXXON SOTELLO SEGMENT AS. EL-104
 OG CLIPNEY USCG WEINER/BERSALONA SUBDIVISION E
 ADEC GHORMLEY LAND REP EBEL, JOHN (PDR) TOTAL NO. SITES 1
 DATE AUG 18 190 TIME 09:50 to 10:30 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

CHARACTER	DISTRIBUTION				OILED ZONES			
	IC	IB	IP	IS	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			
	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				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

3/11/90 Y/L

COMMENTS Customben 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 **EL-104**

SUBDIVISION **C SITES 1-2**

DATE **6.18.90**

CHECKLIST

☐ H Area
☐ Approx. Scale
☐ Day/Time Study
☐ Oil Dist.
☐ Width
☐ Length
☐ S. Cover
☐ Substrate Character
☐ Est. 1000/LINE
☐ SCL
☐ Profile Location(s)
☐ Profile(s)
☐ Photo Location(s)
☐ Photo Location(s)

LEGEND

1 Δ

PS - No Substrate Oil

2 Δ

PS - Substrate Oil

CT/C

Continuous Distribution

CT/S

Scattered Distribution

CT/P

Patchy Distribution

ASAP #2
AUG 8 1990
CHANEY
FROM BATMAN

KETCH MAP

NOTE: THIS COVER IS
DIFFICULT TO SEE
FROM OFF SHORE.
IT IS THE MIDDLE
ONE OF THREE.

ASAP
PHOTOS
33,34

NO OIL

SITE 1

2x1/2 meter
BAND CV/P
ON ROCK WALL

1/2 m² SDR/H

10m

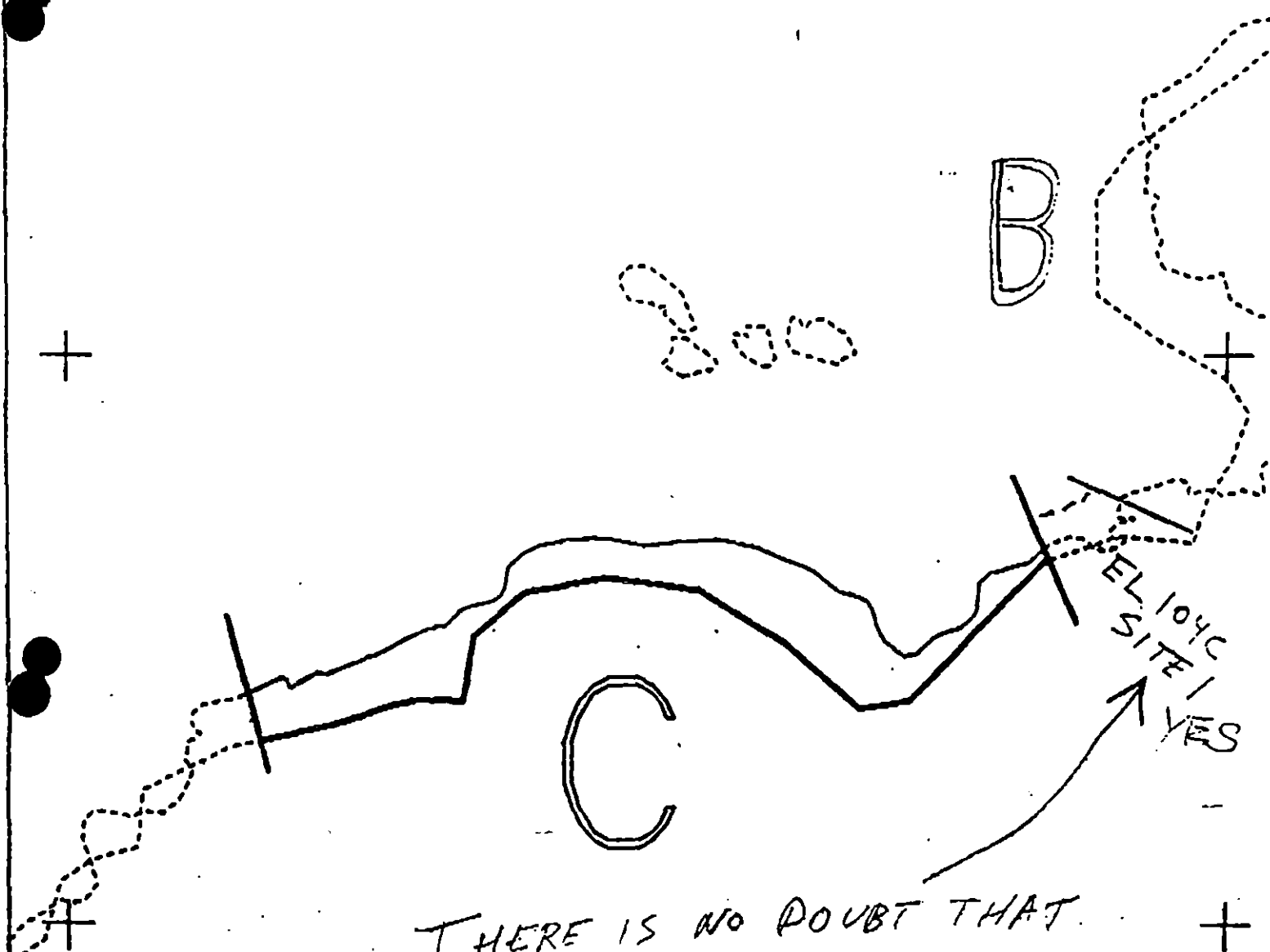
6m

SITE 2

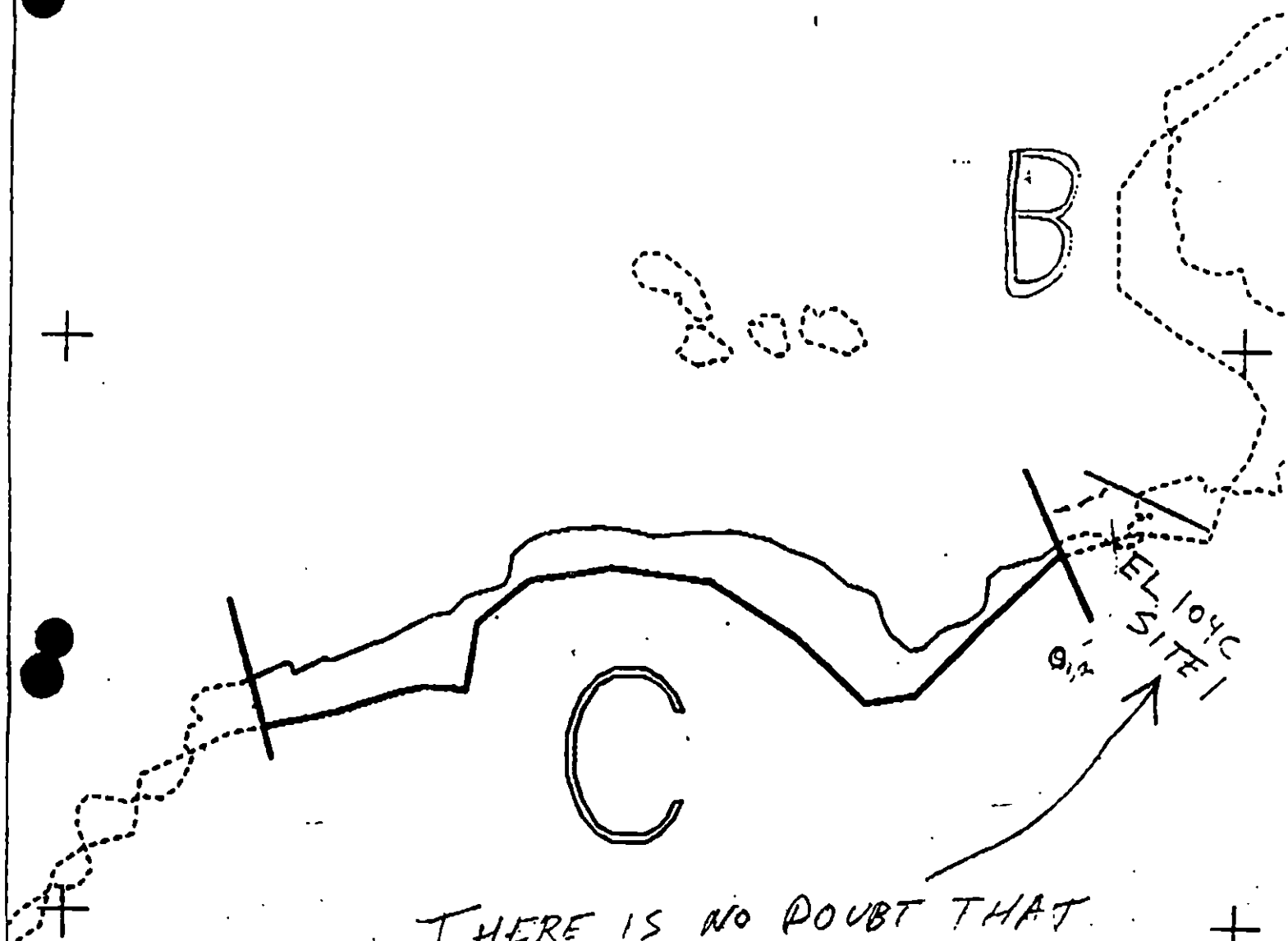
~~SDR COVER~~

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.



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

1991 MAYSAP EVALUATION

SEGMENT: EL 104 SUB: D REGION: PWS SURVEY DATE: 5/1/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Eagle nest

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Rachel Jan Owen Date: 5/21/91

RECOMMENDATIONS:

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

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: MAY 21 1991 FOSC APPROVAL DATE: 5/25/91

ADEC [Signature] FOSC [Signature]

EXXON [Signature]

USCG [Signature]

NOAA [Signature]

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

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL-58 10420 SUBDIVISION D DATE 5/1/91
 NOTE: AGENCY COMMENTS FOR BOTH EL-58D AND EL-10420

ADEC

NAME PETER MONTESANO SIGNATURE [Signature]

☐ NTR ☒ TREATMENT RECOMMENDED.

THE ENLARGED AREA ON THE SKETCH CONTAINS RECOVERABLE SGR + HGR, NEITHER OF WHICH ARE CONCENTRATED. THIS IS A LOW PRIORITY FOR TREATMENT, BUT WOULD FALL UNDER STANDARD MANUAL REMOVAL. THIS AREA IS A RAISED PLATEAU PROTECTED FROM HEAVY, STRAIGHT ON ENERGY; SHEENS WERE NOTED ON THE TIDE POOLS.

EXXON

NAME C. M. LOTSIMPALIS SIGNATURE [Signature]

☒ NTR ACCURATE INFO. IN CG & BIO. REPORTS. VERY LITTLE BENEFIT WOULD BE GAINED FROM TREATMENT.

LANDMANAGER

NAME DENNIS S. KENNEDY OF USFS SIGNATURE [Signature]

☐ NTR

I feel that the subdivision offers very little benefit from cleanup; I suggest that it would be better to direct efforts elsewhere.

USCG/NOAA

NAME MICHEL (NOAA) BEN ZENOU (CG) SIGNATURE [Signature] [Signature]

☒ NTR The only significant oil on this subdivision is a small area of heavy SGR in between boulders / bedrock in a depression behind a rocky peninsula. Although sheltered from wave attack, the oil poses little environmental risk to organisms in the area. Michel

CG

CONCUR W/ NOAA, USFS + EXXON REPS. OILED AREA POSES A VERY SMALL ENVIRONMENTAL RISK. 3

PAGE 1 OF 1

DATE May/ 1 / 91

ENERGY LEVEL: ☒ H ☐ M ☐ L

WEATHER: ☐ SUN ☒ CLOUDS ☐ FOG ☐ RAIN ☐ SNOW

NEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONE

EST. OIL CATEGORY LENGTH: W 0 m M 4 m N 326 m VL 0 m NO 0 m US 0 m

DISTRIBUTION: C = 91-100%; B = 61-90%; P = 11-50%; S = 1-10%; T = <1%

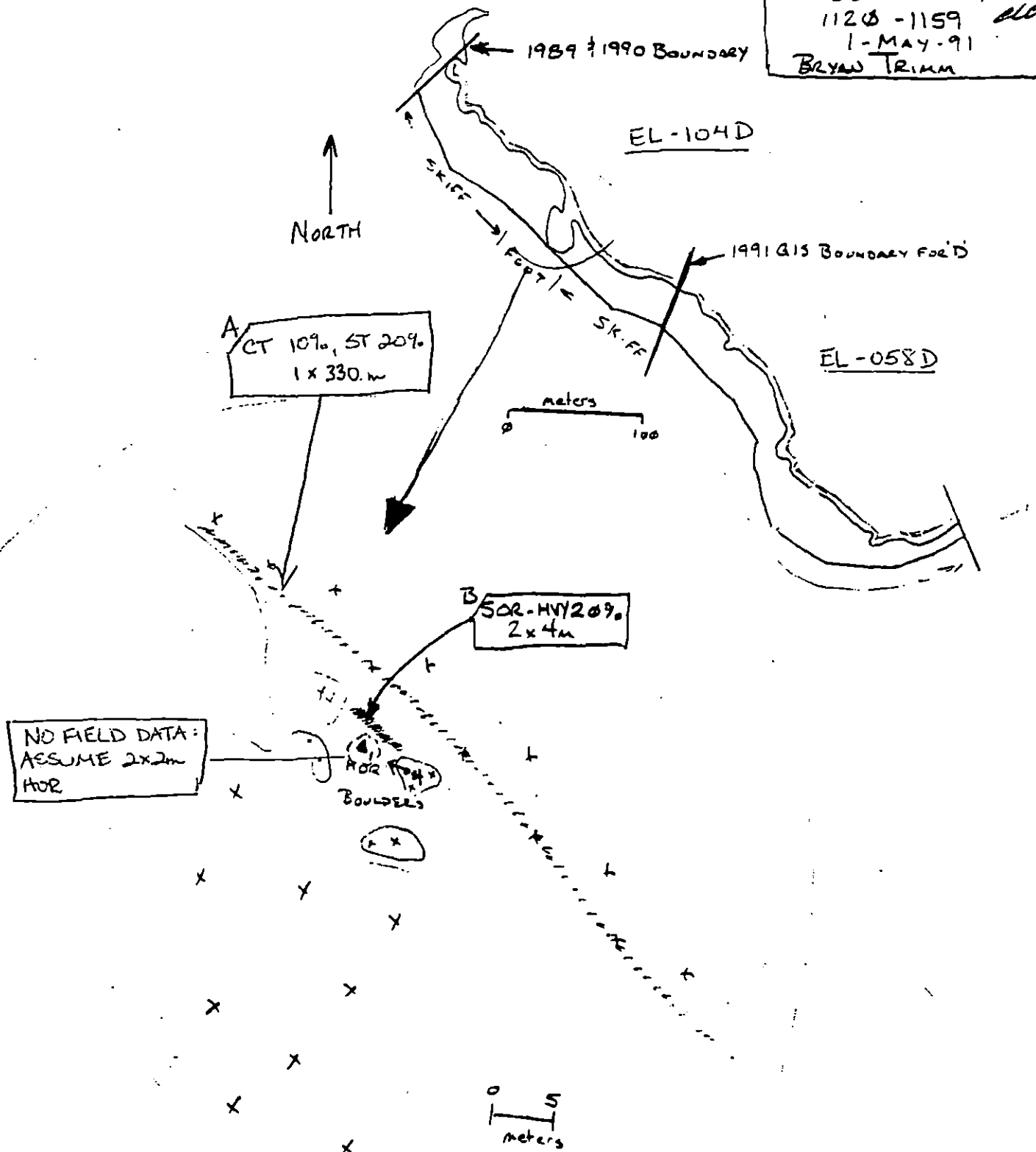
SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE

PHOTO ROLL # MAYSAP- 2 - 4 FRAMES 34

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

REVIEWED CP 14 MAY

OG SKETCH MAP
EL058-D 104-D
1120-1159 ~~EL0~~
1-MAY-91
BRYAN TRIMM



Revised May 14, KG & ET

REVIEWED CO 14 MAY

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 1 May 1991
 SEGMENT # EL 58 104 110 TIDAL HEIGHT (Range) +1' to +2'
 SUBDIVISION D BIOLOGIST Benson
 SEA STATE calm WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # — FRAME # —

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

(A) — ~~Verrucaria~~ grows next to the oiled surfaces in the UITZ. The biotic zonation from UITZ down to the upper LITZ is: Verrucaria (dense) — filamentous green algae (FGA — moderately dense) — barnacles (dense) — Fucus + Odonthalia + Enteromorpha. Total biotic % cover was nearly 100%. These are typical biotic features of moderate-wave-exposure, stable, vertical substrates. These most-obvious species have strong recruitment in most years & are not particularly sensitive to damage that may be caused if treatment is performed here.

(A) (2) — Verrucaria grows next to PJ#1 (HOR) & the oiled surfaces. Barnacles (sparse) also inhabit the lower UITZ. The MITZ contains dense barnacles & Littorina on the boulders. The barnacle typically in wave-exposed sites, Semibalanus cariosus, occurs here. FGA is also found in more protected areas of the MITZ. Mytilus & limpet recruitment has occurred recently. Several small, low-diversity tidepools in the MITZ contain Rhodanella, Littorina & Hildenbrandia. The LITZ on this saddle is dominated by Fucus, FGA, & Halosaccion. I could not locate the eagle nest that is mapped at the west end of this subdivision.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1	—
Seabirds	—	—	—
Waterfowl	—	—	—
Gulls/kittiwakes	1	3	—
Shorebirds	—	—	—
Corvids	—	—	—
Other Birds	—	—	—

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	—	—	—
Pinnipeds (specify)	3	—	—
2 Sea Lions, 1 Harbor Seal	—	—	—
Whales (specify)	4	—	—
Humpbacks (?) (outside of Northwest Bay)	—	—	—

Shoreline subdivision map showing important biological features attached.

REVIEWED CD 14 MAY

BIO SKETCH MAP
 EL058-D 104-D
 1120-1159 ~~EL~~
 1-MAY-91
 Benson

NORTH


Mytilus & limpet recruitment.
 Dense barnacles & limpets in
 the MITZ on boulders.

EL-104D

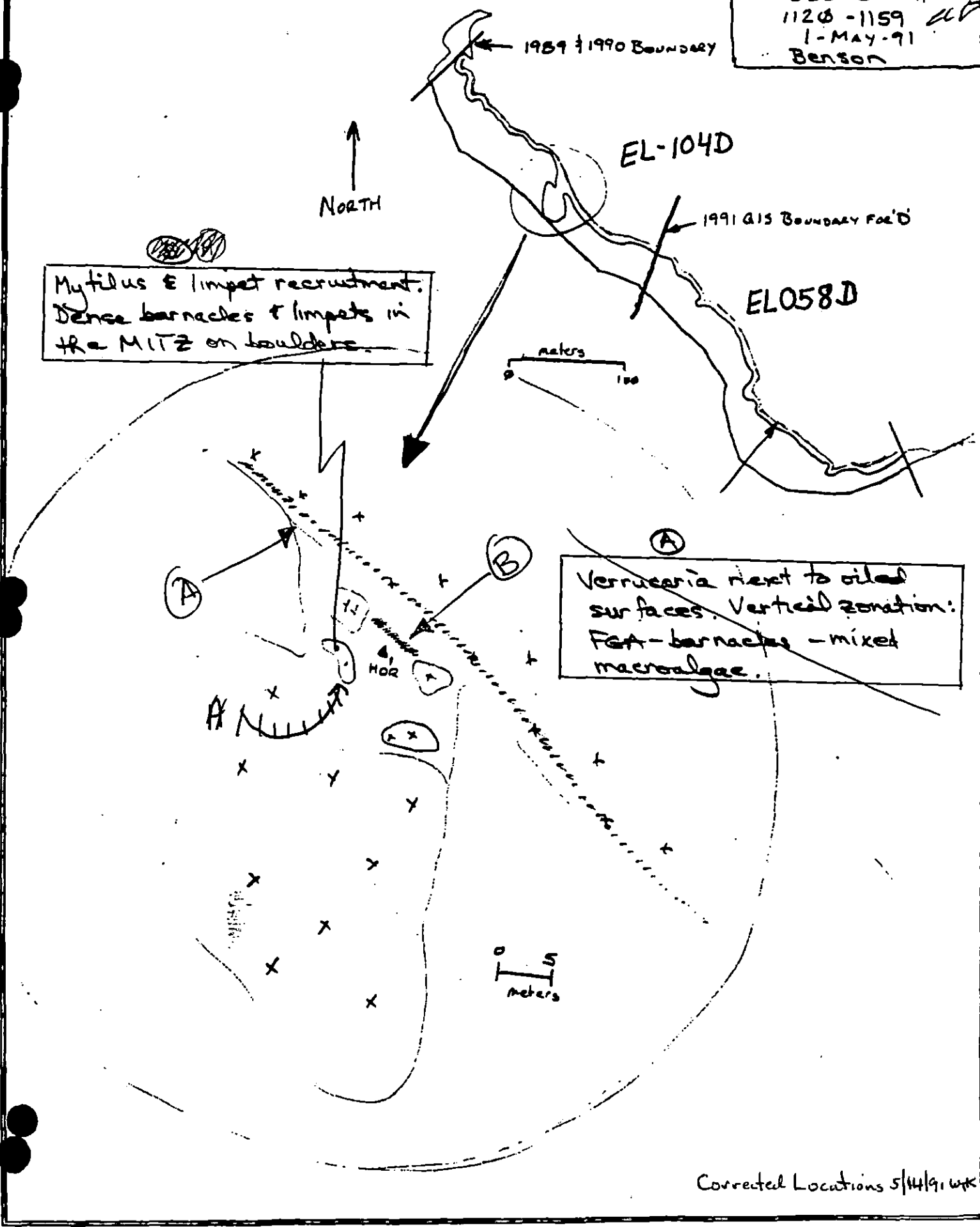
EL058D

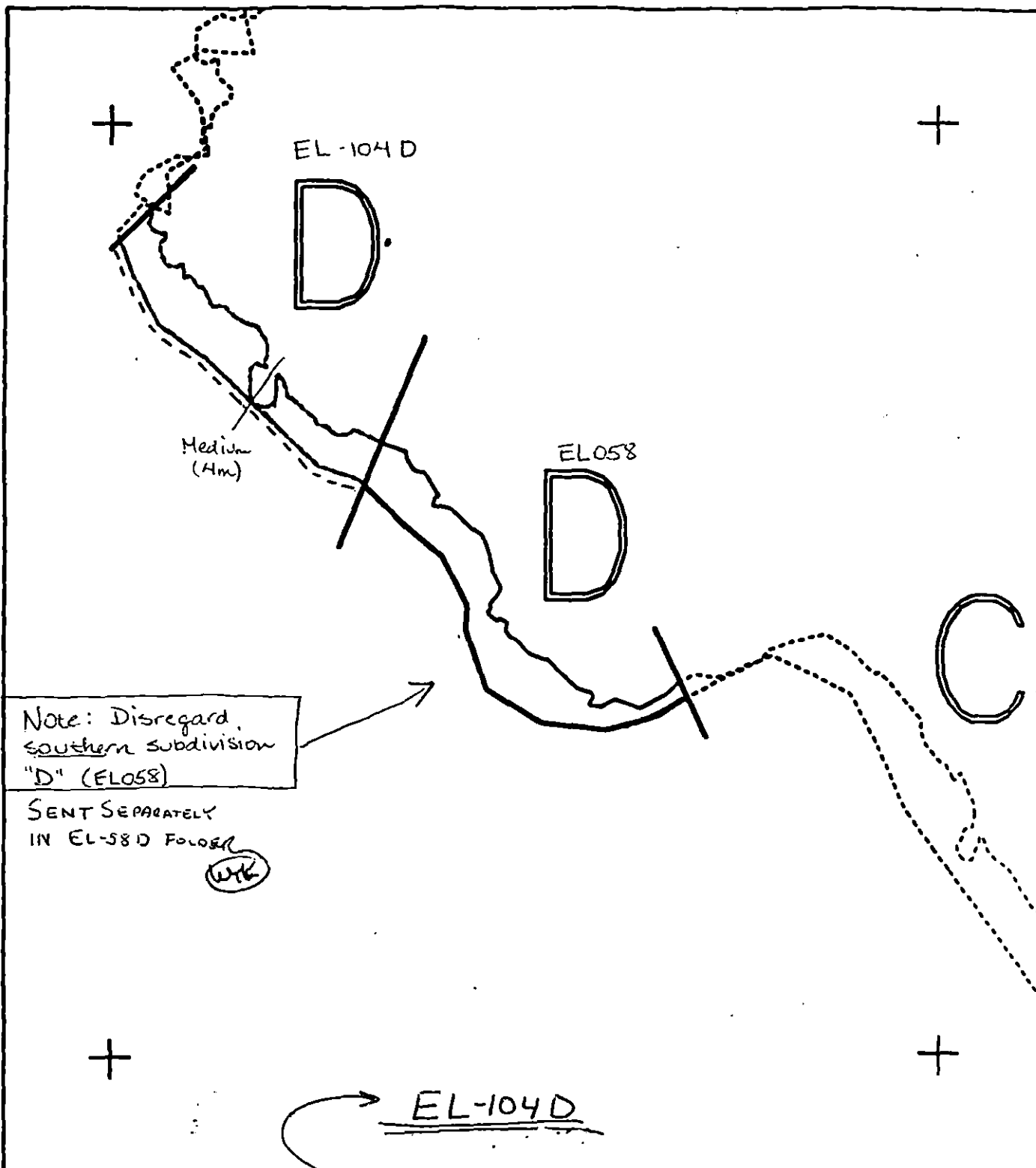
0 100
 meters

(A)
 Verrucaria next to oiled
 surfaces. Vertical zonation:
 FGA - barnacles - mixed
 macroalgae.

0 5
 meters

Corrected Locations 5/14/91, WPK





XXXX	Wide	~~EL058~~ D	330 m	Subdivision Field Map
////	Medium	ADEC Subsegment Length: 330m	est 565m	Map Key: KNIEL058D
---	Narrow	METERS		Name: TRIMM
TTTT	Very Light	0 100 200		Date: 1 MAY 91
0000	No Oil	AK State Plane Zone 4		Date Entered:
		6010384		

• SURFACE OIL CATEGORY MAP •

revised 5/14/91 KG + EC

REVIEWED CA 14 MAY

N.O.S. CORRECTED TIK 5/14/91

1991 MAYSAP EVALUATION

SEGMENT: EL 104 SUB: C REGION: PWS SURVEY DATE: 5/21/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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

Subsistence - Salmon Harvesting: Unlimited treatment up to stream bank between May 15 and July 10. ADF&G approval required for work after July 10. Fish Habitat Permit required for instream work. ADF&G approval required for bioremediation within 100 meters of anadromous stream after July 10.

Subsistence, Finfish Harvesting: Unlimited treatment.

ADEC

NAME Peter Montesano

SIGNATURE

[Signature]

☒ NTR ☐ TREATMENT RECOMMENDED

The ASAP site on this Subdivision was NOT really on this Subdivision. EL104 has unassigned areas between EL104A/EL104B and EL104B/EL104C. I recall this coming up in 1989 and it is well noted on the ASAP report.

The Picket was small w/ well protected HOR and SOR oil which appears as if it will persist, however the oil is relatively inactivated and will have remain.

EXXON

NAME FRANK Box

SIGNATURE

[Signature]

☒ NTR

Not enough oiling to warrant clean-up activity.

LANDMANAGER

NAME DENNIS S Kennedy OF USFS

SIGNATURE

[Signature]

☒ NTR The subdivision as indicated on GIS maps had little oiling. Site #1 was not within the boundary of EL104-C as per GIS map. We surveyed it and it appears cleaner than what existed on ASAP report. This site needs to be corrected on the data base.
an active eagle nest is located just west of end of Sub ^(500 MAP)

USCG/NOAA D. SIMCEK - BETTY NOAA

NAME BMI M. P. Z... OF USCG

SIGNATURE

[Signature]

☐ NTR

Surface oiling occurs between the boulders / cobbles and mainly consists of roat and cener. The areas of SOR and HOR are not readily obtainable, therefore, no treatment is recommended. PS-B

CG - NO TREATMENT RECOMMENDED. 3

REMOVED: MC 6|3|9|



CT/CV 5% under sides
of Boulders
SOR (Light-Moderate) 2%
3 X 6 meters
(sub-surface extent g)
HOR 2 1/2 X 2 m g

CT/ST 20%
1 X 5 m
VERT Rock

- ▲ 1 TR
- ▲ 2 HOR
- ▲ 3 FL
- ▲ 4 HOR
- ▲ 5 TR

CT/CV/ST 20%
(mostly under
sides CB/PeB
SOR (Light) 10%
3 X 1 m

~ WATER ~

VERTICAL ROCK
(SKIFF)

Boulder lay over
Rock (Highway)
(WALK)

Small pebble beach
STEPPED ROCK
(SKIFF)

SITE #1

LAND

CT/ST E
1% (BTR)
1/2 X 40m

CT (BTR)
1-10% Patchy
Remains on Rock
and boulder faces
1 X 140m

NOTE: SITE #1
IS NOT within boundary
of EL 104 C as mapped
on GIS - Extend boundary
OR Add New sub-div.
KN 104 D. This problem
was described on
ASAP Report as well.

OG SKETCH
EL 104 C
MAY 21, 1991
11:45 - 12:26
Doug Reimer

Revised: MC 6/3/91

TEAM # 2

DATE _____

5/01/91

SEGMENT # EL-124

TIDAL HEIGHT (Range) + 4 to +2 ft

SUBDIVISION C

BIOLOGIST S M Bar

SEA STATE *Cochran*WIND SPEED/DIRECTION *Calm*

PHOTOGRAPHS: ROLL #

FRAME # _____

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

A+B: CT/CU/ST + SOR Bl in HIZ. Lichen nearby, SOR in vicinity of beechgrove

C: Area surrounding Pits 1 through 5 supports green algae + lichens only. Boulders scattered on the pits have dense adult and juvenile limnices small limpets + recent sppt. Subtidal zones exhibit Fucus clumps

D+E: BTR high in ETZ on rock & steep boulder faces. Flower zones dense with stags & antlers.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS

OF SPECIES

TOTAL BIRDS

FISH OBSERVED
SPECIES PRESENT

Eagles		3 adults	
Seabirds			
Waterfowl			
Gulls/Kittiwakes			
Shorebirds			
Corvids			
Other Birds	2 sandpipers	2	

MARINE MAMMALS

OBSERVED

LAND MAMMALS SPECIES

OBSERVED

Sea Otters			
Pinnipeds (specify)			
Whales (specify)			

Shoreline subdivision map showing important biological features attached.

Rev'd Mr. [unclear]

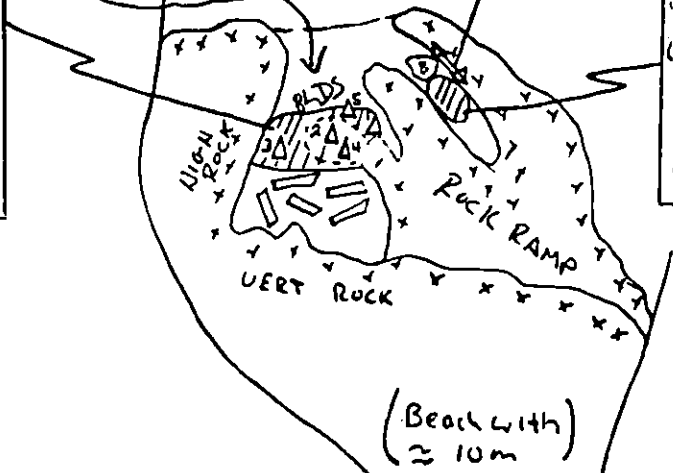
C
 Green algae & Lichen
 near pits #4 & #2
 Green algae only
 near pits #3 & #5.
 sparse barnacles
 immediately seaward
 of pits #2 & 5.

Small limpets
 + Littorines
 recent spat

B
 Lichen
 only

- ▲ 1 TR
- ▲ 2 NOR
- ▲ 3 FL
- ▲ 4 NOR
- ▲ 5 TR

A
 CT/CV/ST
 (IN Lichen
 zone).
 SOR/CT
 near beachgrass



Not previously
 Documented
 Eagle Nest

E
 BTR in
 Lichen
 Zone

D
 BTR in
 Lichen zone,
 Dense Fucus,
 Olive + red
 algae below.

NOTE: SITE #1
 IS NOT within boundary
 of EL 104 C as mapped
 on GIS - Extend boundary
 or Add New sub-div.
 KN 104 D. This problem
 was described on
 ASAP Report as well.

OG SKETCH
 L 104 C
 MAY 21, 1991
 11:45 - 12:26
 Doug Reimer

amb 21 May 91

undocumented
nest with ♀+♂
eagle.

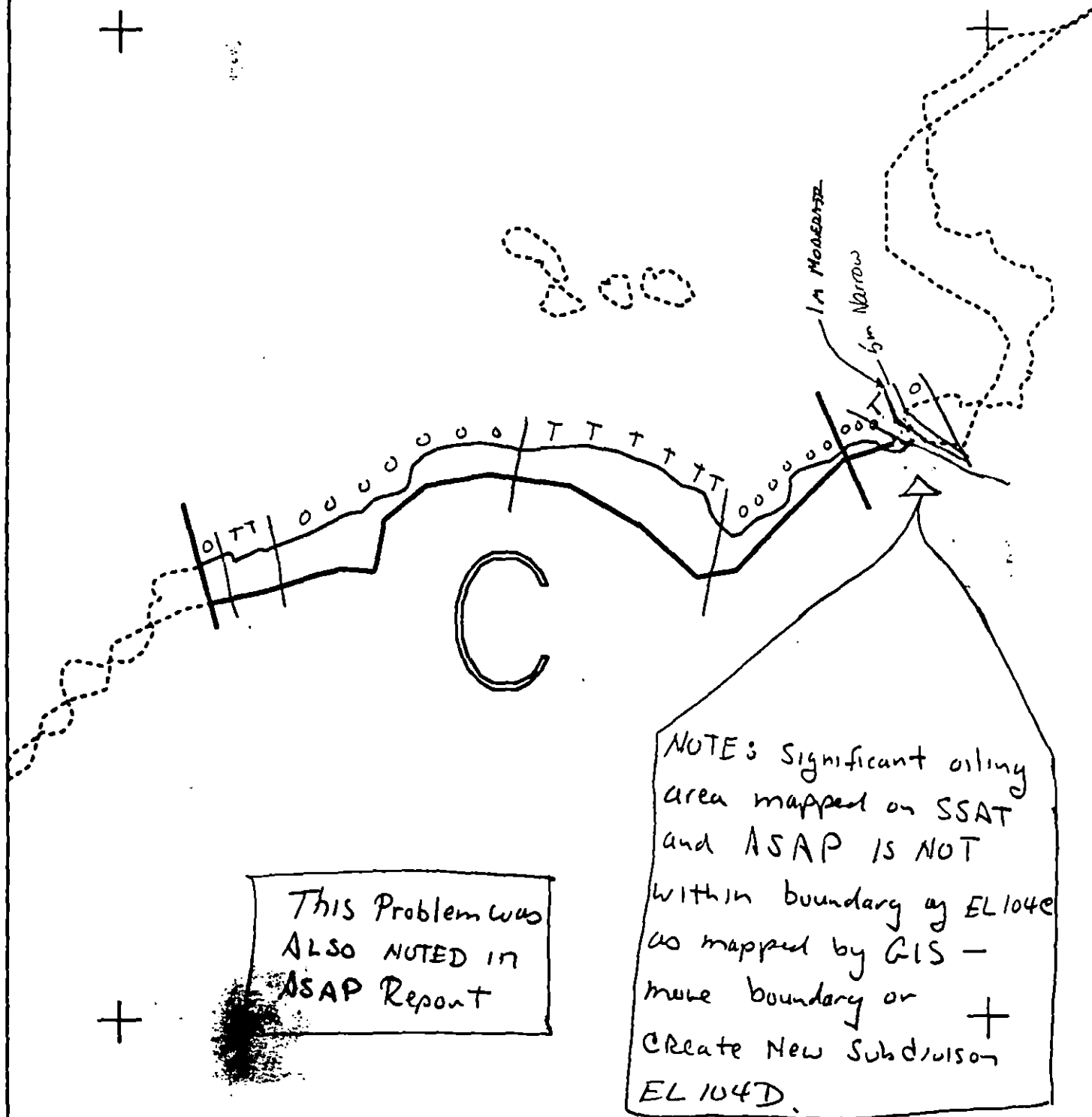
♀ eagle left nest
upon air approach
but returned within
minutes. Nest is easily
visible from shore
and may have an egg.
SMB 21 May 91

XXXX Wide
//// Medium
---- Narrow
TTT Very Light
OOO No Oil

EL104 C
ADEC Subsegment Length: 584m
METERS
5 100 200
AK State Plane Zone 4
6011040

Subdivision Field Map
Map Key: KNE104C
Name: Sue Ben
Date: 5/21/91
Data Entered:





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

EL104 C
 ADEC Subsegment Length: 504m
 METERS
 5 100 200
 AK State Plane Zone 4
 6011040

Subdivision Field Map
 Map Key: KNIEL104C
 Name: Reimer
 Date: 5/21/91
 Date Entered:

REMOVED: MC 6/3/91

1991 MAYSAP EVALUATION

SEGMENT: EL 104 SUB: B REGION: PWS SURVEY DATE: 5/21/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) NONE

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

ADEC

NAME Peter MontesanoSIGNATURE [Signature]☒ NTR ☐ TREATMENT RECOMMENDED

In this pocket, we found previously undocumented subsurface oil on the southern half of the beach. The MS/MOR lens is relatively thin in w/ gravel/pebb over it in an area of a thin boulder cover. Considering the size of the oiled area and the relative inaccessibility, I recommend no treatment. The lens is protected from high energy.

EXXON

NAME Frank A. BaySIGNATURE [Signature]☒ NTR Not enough oiling to warrant clean up activity.

LANDMANAGER

NAME Dennis S. Kennedy OF USFSSIGNATURE [Signature]☐ NTR This is a small subsection with one sh. beach. The amount of oil does not warrant future work.USCG/NOAA N/A SINCE BEACH [Signature]NAME Bu. M. P. Z... USCGSIGNATURE [Signature]☐ NTR

No treatment is recommended as surface oiling consists of cones and coats on boulders and cliff faces. Some subsurface oil was observed between boulders but this would be difficult to remove. DS-B

CG- NO TREATMENT RECOMMENDED. 3

LANDMANAGER Kennedy for USFS

SUBDIVISION B

USCG/NOAA O. Sumner-Beath

DATE 5 / 21 / 91

TIME 11 : 00 to 11 : 25

TIDE LEVEL 5.81 ft. to 4.89 ft.

ENERGY LEVEL: ☒ H ☐ M ☐ L

SURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELO

WEATHER: ☒ SUN ☐ CLOUDS ☐ FOG ☐ RAIN ☐ SNOW

TOTAL LENGTH SHORELINE SURVEYED: 209 m

NEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONE

EST. OIL CATEGORY LENGTH: W 0 m M 0 m N 99 m VL 50 m NO 60 m US 0 m

[illegible]

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 2 - 23 FRAMES 1-3

[illegible]

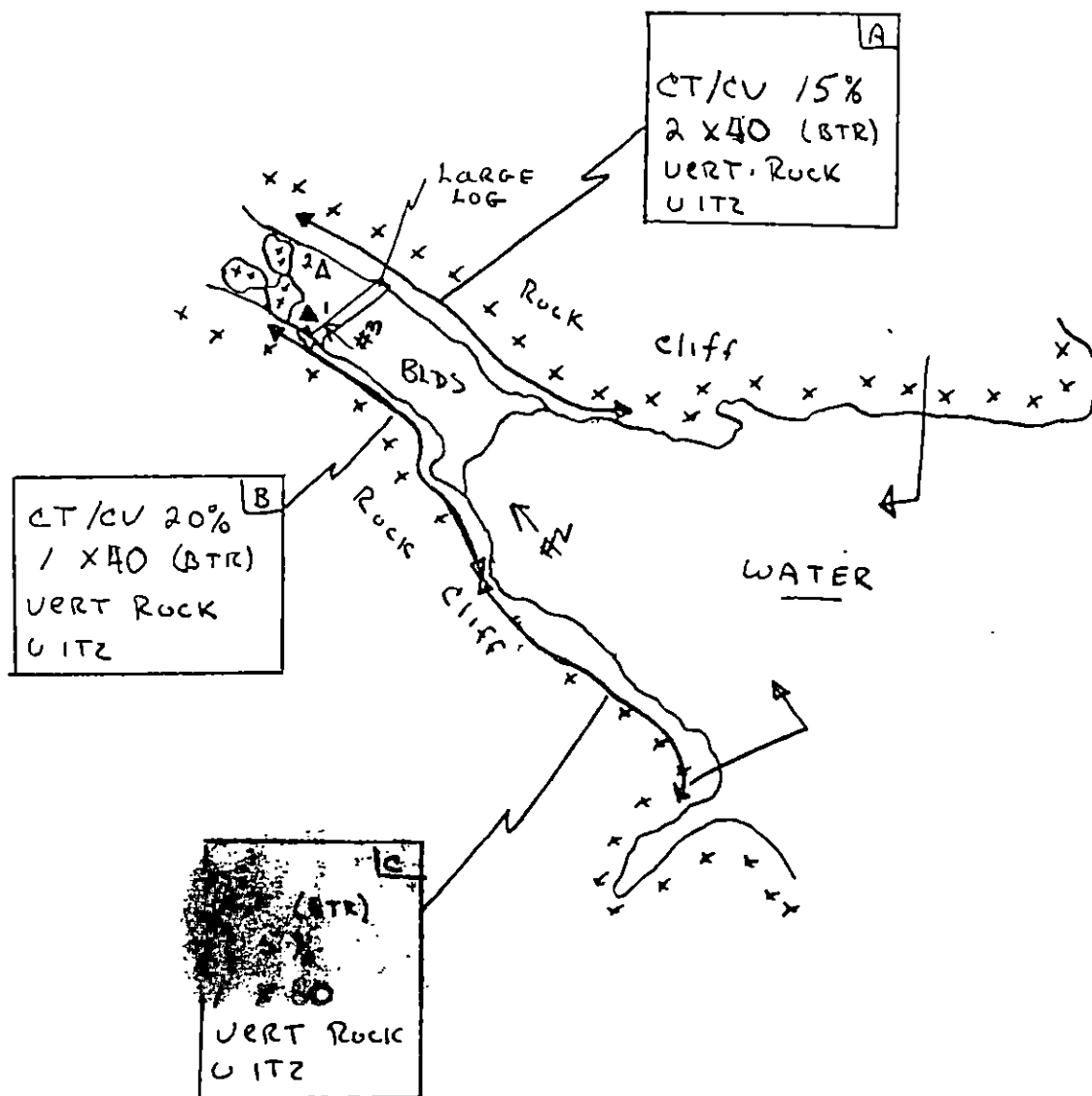
SHEEN B = BROWN; R = RAINBOW; S = SILVER; N = NONE

OG COMMENTS: Small fissure in steep Rocky Shoreline, with a mouth of boulders. Oil consists of CT/CV along NITC on vertical Rock cliff on both sides of fissure. One Pit dug at base of cliff in small 1x1m pocket found some trapped MOR.

Reviewed: MC 5/30/91
revised 5/28/91 KG



OG SKETCH
EL 104 B
MAY 21, 1981
11:00 - 11:25
Doug Reimer



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM #	2	DATE	21 May 91
SEGMENT #	EL-104	TIDAL HEIGHT (Range)	6 to 5 ft
SUBDIVISION	B	BIOLOGIST	SMRBN
SEA STATE	calm	WIND SPEED/DIRECTION	calm
PHOTOGRAPHS: ROLL #	—	FRAME #	—

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

A BXC: All BTR in and around lichen zone

→ Sporadic splatters (<0.5%) to lichen zone on Boulder beach
Lower itz supports dense biota as shown. Tide pools at
base of rock cliff sustain sculpins (small fish) mussels and
algae.

WILDLIFE OBSERVATIONS TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			Salmon fry
Seabirds			
Waterfowl			
Gulls/Kittiwake	gulls	± 5	
Shorebirds			
Corvids			
Other Birds	Arctic Tern	1	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters	/	/	/
Pinnipeds (specify)	/	/	/
Whales (specify)	/	/	/

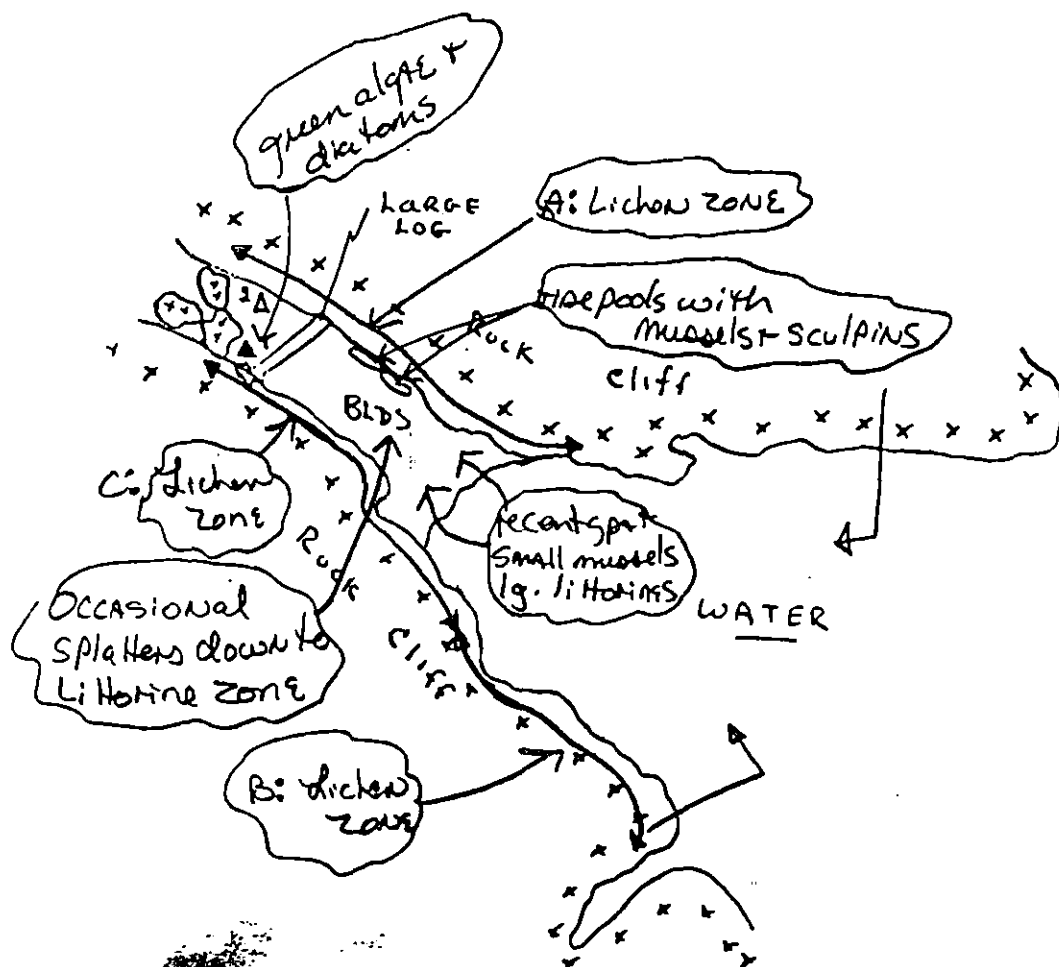
Shoreline subdivision map showing important biological features attached.

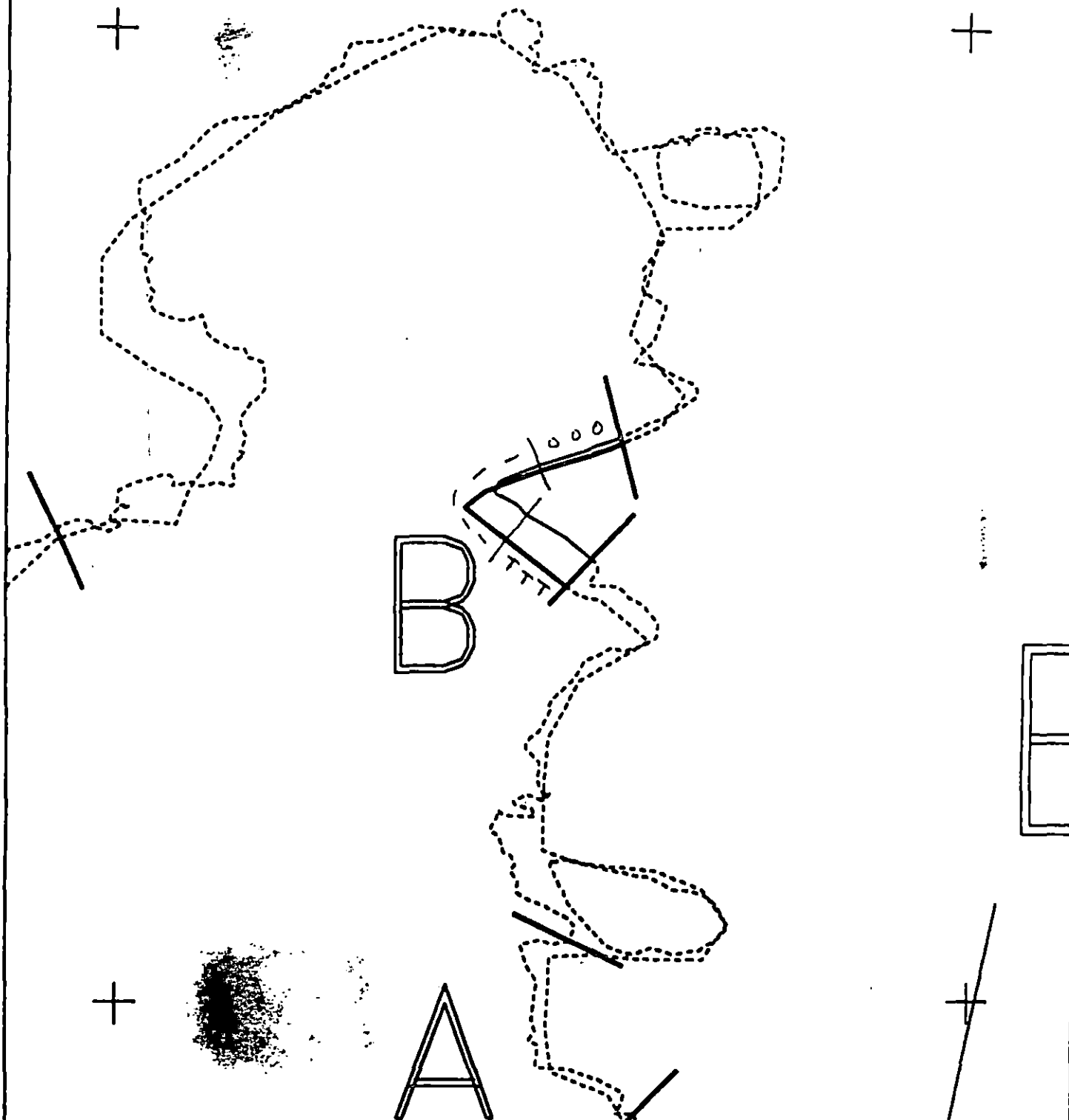
R. 12/25/91 T.M.



OG SKETCH
EL 104 B
MAY 21, 1991
11:00 - 11:25
Doug Reimer

SMB 21 May 91





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

EL104 B
 ADEC Subsegment Length: 200m
 METERS

0 100 200
 AK State Plane Zone 4
 601104b



Subdivision Field Map
 Map Key: KHEL104B
 Name: Reimer
 Date: 5/21/91
 Date Entered:

Reviewed: MC 5/30/91
 reviewed 5/28/91 KG

1991 MAYSAP EVALUATION

SEGMENT: EL 104 **SUB:** D **REGION:** PWS **SURVEY DATE:** 5/1/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Eagle nest

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ **Date:** _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL-58 10400 SUBDIVISION D DATE 5/1/91
 NOTE: AGENCY COMMENTS FOR BOTH EL-58D AND EL-104D

ADEC

NAME PETER MONTESANO

SIGNATURE *P. Montesano*

☐ NTR ☒ TREATMENT RECOMMENDED.

THE ENLARGED AREA ON TIDE SKETCH CONTAINS RECOVERABLE SOR + HOB, NEITHER OF WHICH ARE CONCENTRATED. THIS IS A LOW PRIORITY FOR TREATMENT, BUT WOULD FALL UNDER STANDARD MANUAL REMOVAL. THIS AREA IS A RAISED PLATEAU PROTECTED FROM HEAVY, STRAIGHT ON ENERGY; SHEENS WERE NOTED ON THE TIDE POOLS.

EXXON

NAME C.M. KATSIMPALIS

SIGNATURE *C.M. Katsimpalis*

☒ NTR ACCURATE INFO. IN CG & BIO. REPORTS. VERY LITTLE BENEFIT WOULD BE GAINED FROM TREATMENT.

LANDMANAGER

NAME DENNIS S. KENNEDY OF USFS

SIGNATURE *D.S. Kennedy*

☐ NTR

I feel that the subdivision offers very little benefit from cleanup; I suggest that it would be better to direct efforts elsewhere.

USCG/NOAA

NAME MICHEL (NOAA) BEN ZENONE (CG)

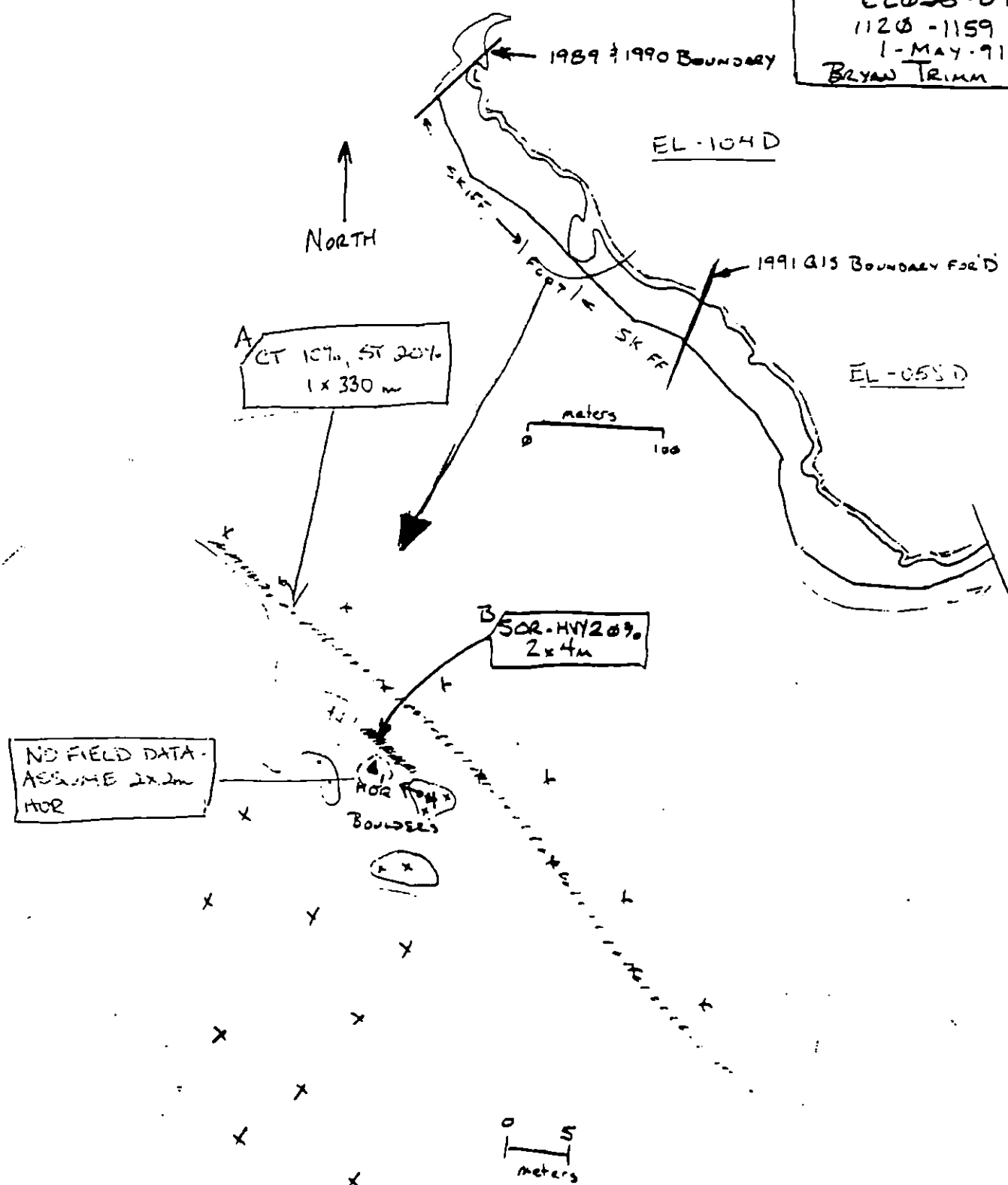
SIGNATURE *Michel Ben Zenone*

☒ NTR The only significant oil on this subdivision is a small area of heavy SOR in between boulders/bedrock in a depression behind a rocky peninsula. Although sheltered from wave attack, the oil poses little environmental risk to organisms in the area. Michel

CG

CONCUR W/NOAA, USFS & EXXON REPS. OILED AREA POSES A VERY SMALL ENVIRONMENTAL RISK. 3

OG SKETCH MAP
EL-058-D 104-D
1120-1159 *do*
1-MAY-91
BRYAN TRIMM



Revised May 17 1991

REVIEWED CA 14 MAY

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 1 May 1991
 SEGMENT # EL 58 104 110 TIDAL HEIGHT (Range) +1' to +2'
 SUBDIVISION 5 BIOLOGIST Benson
 SEA STATE calm WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # — FRAME # —

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

EL 058 D
 (A) — Verrucaria grows next to the oiled surfaces in the UITZ. The biotic zonation from UITZ down to the upper LITZ is: Verrucaria (dense) — filamentous green algae (FGA — moderately dense) — barnacles (dense) — Fucus + Odonthalia + Enteromorpha. Total biotic % cover was nearly 100%. These are typical biotic features of moderate-wave-exposure, stable, vertical substrates. These most-obvious species have strong recruitment in most years & are not particularly sensitive to damage that may be caused if treatment is performed here.

04 D
 (A) (B) — Verrucaria grows next to PIT#1 (HOR) & the oiled surfaces. Barnacles (sparse) also inhabit the lower UITZ. The MITZ contains dense barnacles & Littorina on the boulders. The barnacle typically in wave-exposed sites, Semibalanus cariosus, occurs here. FGA is also found in more protected areas of the MITZ. Mutilus & Impost recruitment has occurred recently. Several small, low-diversity tidepools in the MITZ contain Rhodanella, Littorina & Hildenbrandia. The LITZ on this saddle is dominated by Fucus, FGA, & Halosaccion. I could not locate the eagle nest that is mapped at the west end of this subdivision.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	1	1	—
Seabirds	—	—	—
Waterfowl	—	—	—
Gulls/Kittiwakes	1	3	—
Shorebirds	—	—	—
Corvids	—	—	—
Other Birds	—	—	—

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters	—	—	—
Pinnipeds (specify)	3	—	—
2 Sea Lions, 1 Harbor Seal	—	—	—
Whales (specify)	4	—	—
Humpbacks (?) (outside of Northwest Bay)	—	—	—

Shoreline subdivision map showing important biological features attached.

REVIEWED CD 14 MAY

Page 1 of 1

BIO SKETCH MAP
 EL058-D 104-D
 1120-1159
 1-MAY-91
 Benson

↑
 NORTH

1989 & 1990 BOUNDARY

EL-104D

1991 GIS BOUNDARY FOR'D

EL058D

Mytilus & limpet recruitment.
 Dense barnacles & limpets in
 the MITZ on boulders.

meters
 0 100

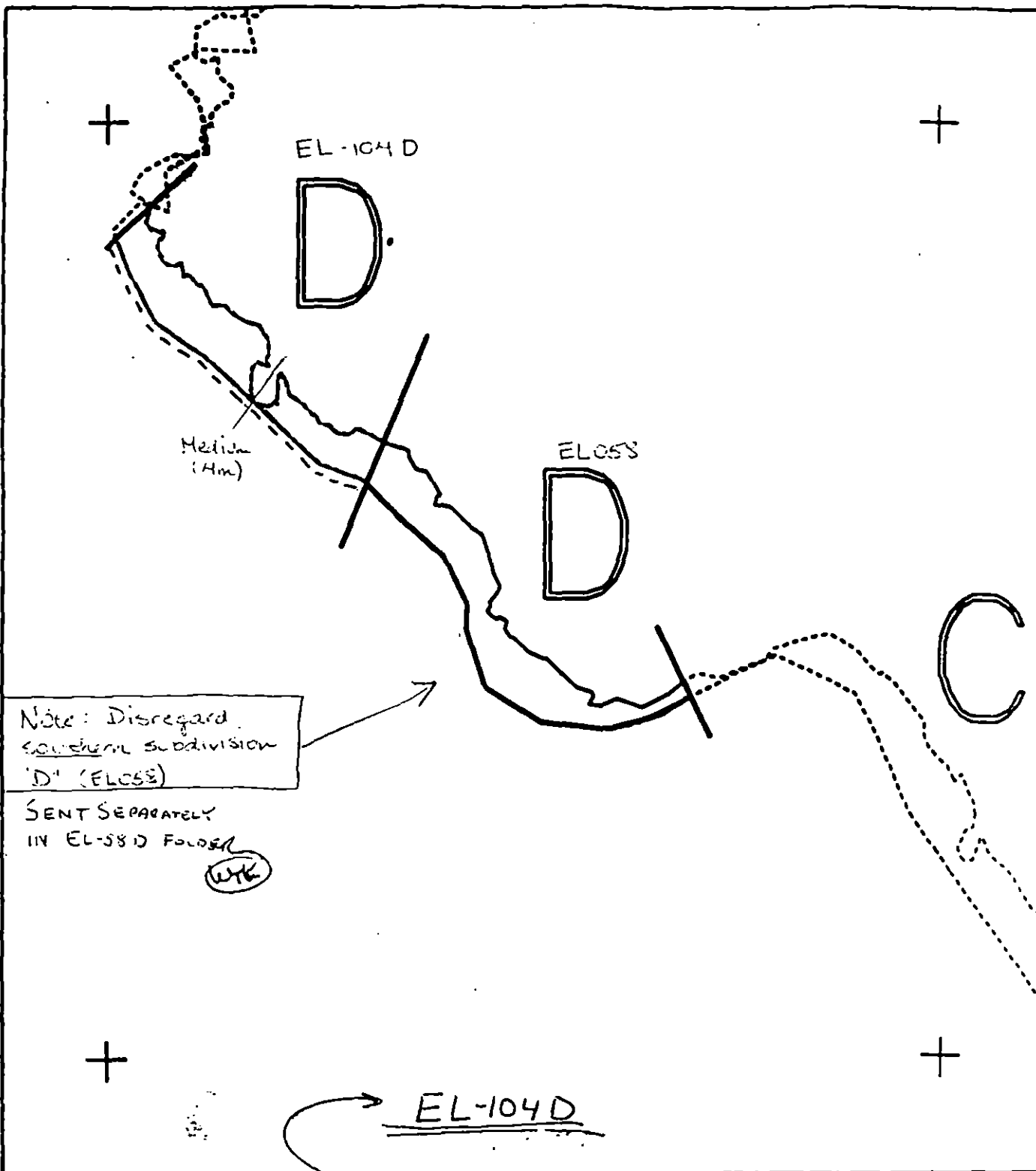
(A) (B)

(A)
 Verrucaria next to oiled
 surfaces. Vertical zonation:
 F&A - barnacles - mixed
 macroalgae.

A

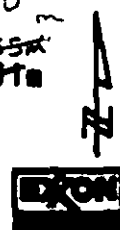
0 5
 meters

Corrected Locations 5/14/91 WPK



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

~~ELCSE~~ D 330 m
 est 555m
 ADEC Subsegment Length: 330m
 METERS
 0 100 200
 AK State Plane Zone 4
 801050d



Subdivision Field Map
 Map Key: XN1E0500
 Name: TRIMM
 Date: 1 MAY 91
 Data Entered:

• SURFACE OIL CATEGORY MAP •

REVISED 5/14/91

REVIEWED CB 14 MAY

NO.5 CORRECTED TIK 5/14/91

1991 MAYSAP EVALUATION

SEGMENT: EL 104 SUB: B REGION: PWS SURVEY DATE: 5/21/91

ENVIRONMENTAL SENSITIVITIES:

Work Window(s) OPEN

Ecological/Constraints (see page two for details) NONE

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: *Timothy A. Smith*

Date: 6/07/91

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

N

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: June 6 1991

FOSC APPROVAL DATE: 6/10/91

ADEC

FOSC

EXXON

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

USCG

NOAA

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL-104 SUBDIVISION B DATE 5/21/91

ADEC

NAME Peter MontesanoSIGNATURE [Signature]☒ NTR ☐ TREATMENT RECOMMENDED

In this pocket, we found previously undocumented subsurface oil on the southern half of the beach. The MS/MOR lens is relatively thin in w/ gravel/pebbles over it in an area of a thin boulder cover. Considering the size of the oiled area and the relative inaccessibility, I recommend no treatment. The lens is protected from high energy.

EXXON

NAME Frank A. BaySIGNATURE [Signature]☒ NTR Not enough oiling to warrant cleanup activity.

LANDMANAGER

NAME Dennis S. Kennedy OF USFSSIGNATURE D.S. Kennedy☐ NTR

This is a small subdivision with one sm. beach. The amount of oil does not warrant future work.

USCG/NOAA NARRATIVE SIGNED - BETTY

NAME Bvt. M. P. ZERONE USCGSIGNATURE [Signature]☐ NTR

No treatment is recommended as oil/gel is on beach remains of cover and coat on boulders and cliff face. Some subsurface oil was observed between boulders but this would be difficult to remove. DS-B

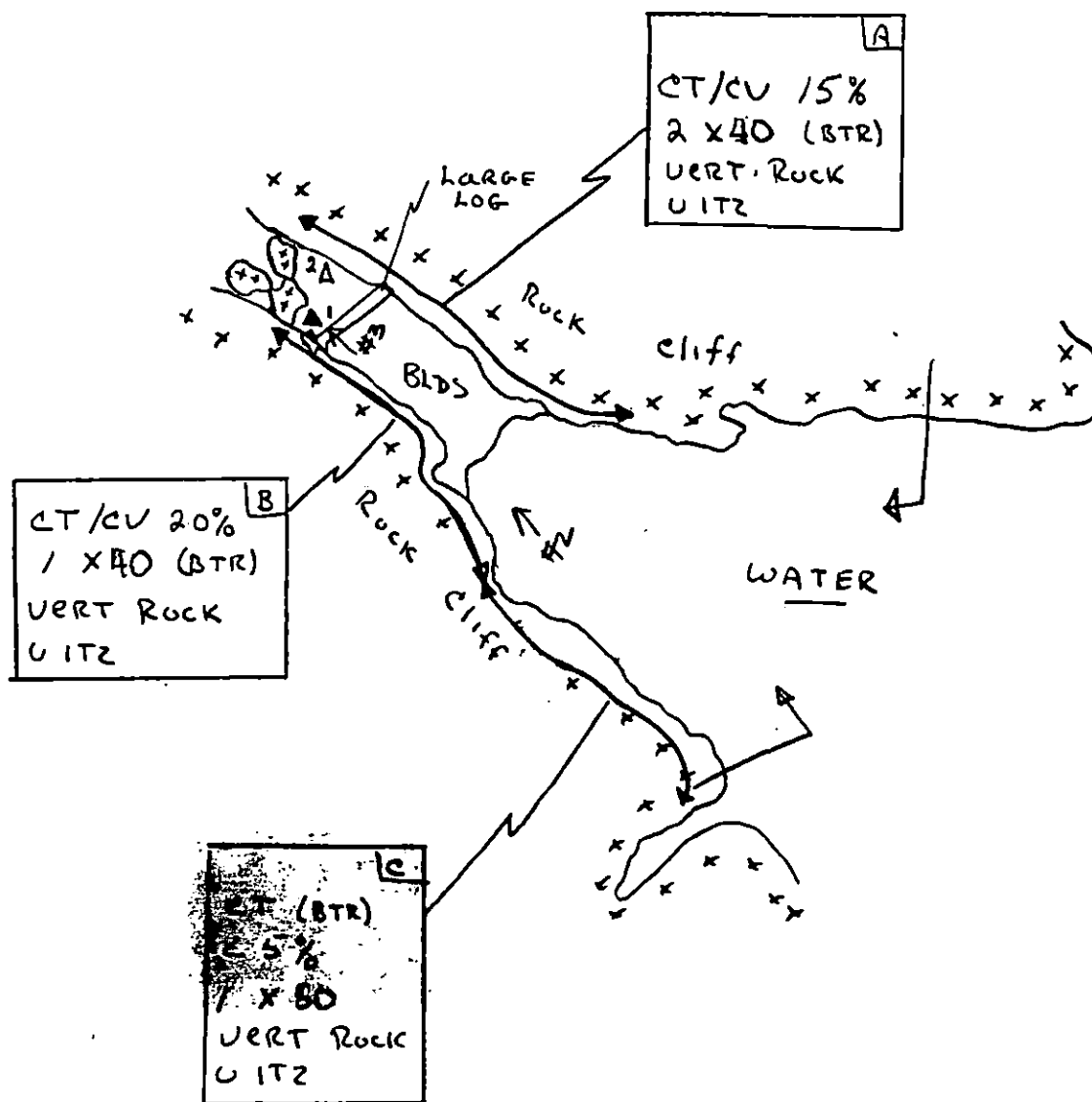
SG- NO TREATMENT RECOMMENDED. 3

DATE 5 / 21 / 91

REVIEWED: MC 5/30/91
revised 5/28/91 KG



OG SKETCH
EL 104 B
MAY 21, 1991
11:00 - 11:25
Doug Reimer



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 21 May 91
 SEGMENT # EL-104 TIDAL HEIGHT(Range) 6 to 5 ft
 SUBDIVISION B BIOLOGIST SMRAN
 SEA STATE calm WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # — FRAME # —

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

ABYC: All BTR in and around lichen zone

→ Sporadic splatters (<0.5%) to lichen zone on Boulder beach
 Lower itz supports dense biota as shown. Tide pools at
 base of rock cliff sustain sculpins (small fish) mussels and
 algae.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			Salmon fry
Seabirds			
Waterfowl			
Gulls/Kittiwakes	gulls	± 5	
Shorebirds			
Corvids			
Other Birds	Arctic Tern	1	

MARINE MAMMALS

OBSERVED

LAND MAMMALS

SPECIES

OBSERVED

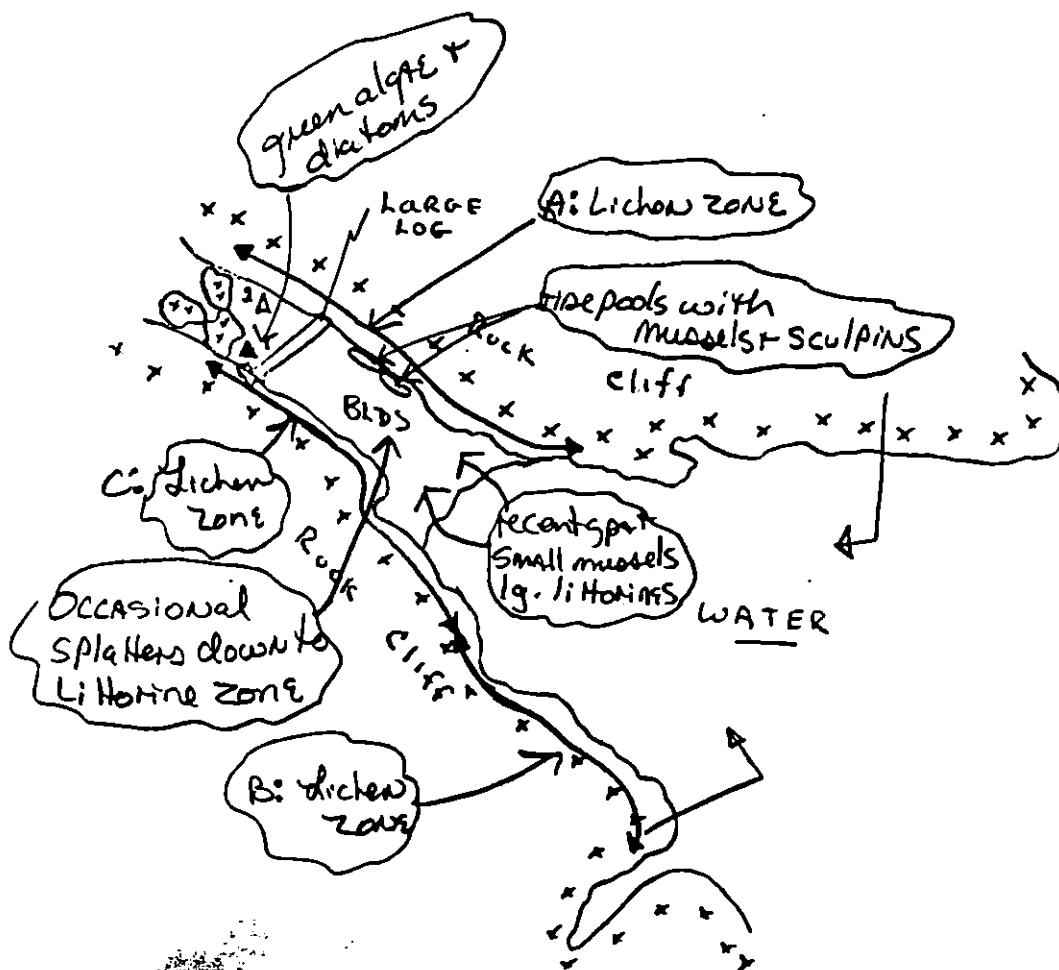
Sea Otters			
Phocids(specify)			
Wales(specify)			

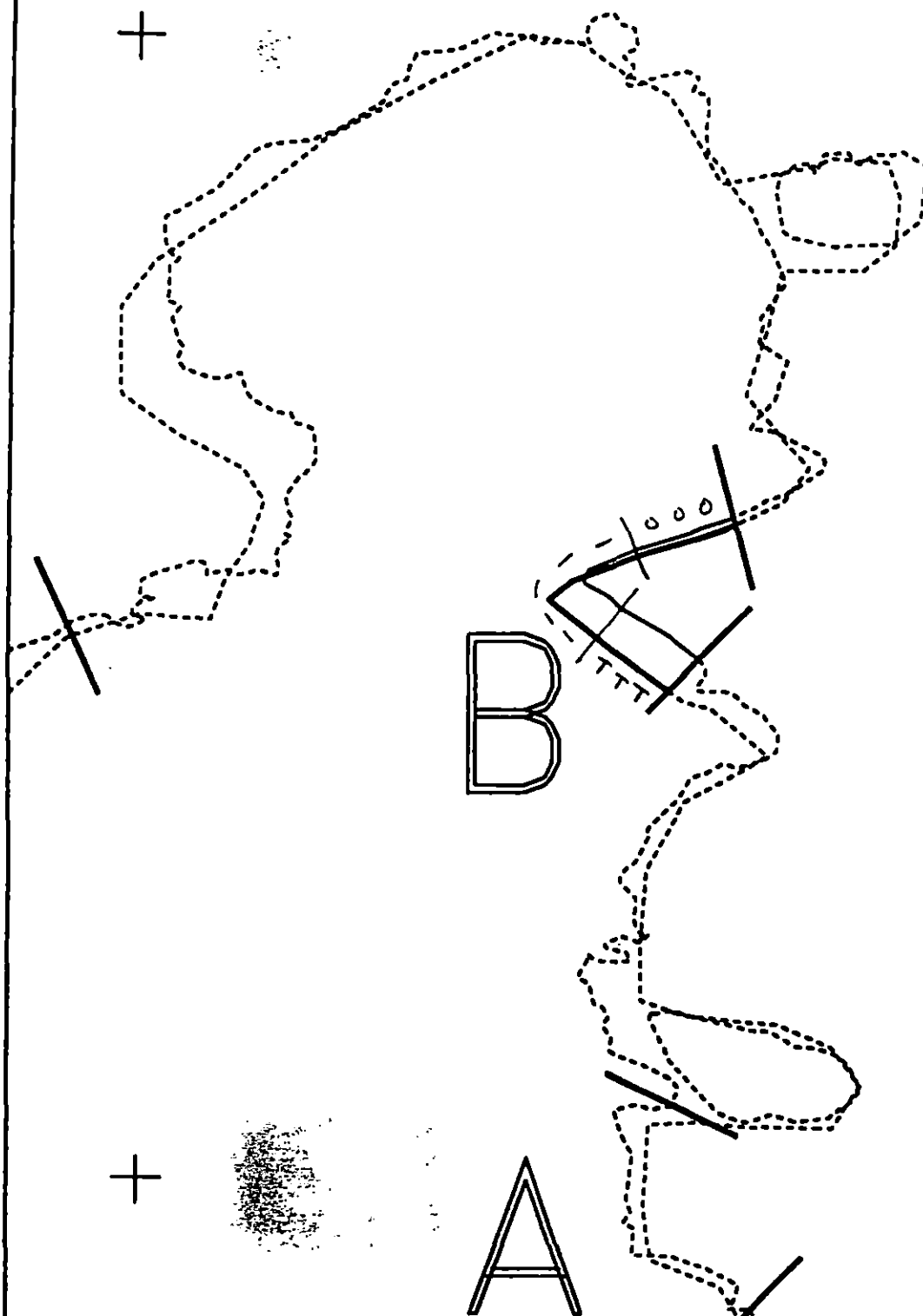
Shoreline subdivision map showing important biological features attached.



OG SKETCH
EL 104 B
MAY 21, 1981
11:00 - 11:25
Doug Reimer

SMB 21 May 91





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

EL104 B
 ADEC Subsegment Length: 209m
 METERS

0 100 200
 AK State Plane Zone 4
 601104b



Subdivision Field Map
 Map Key: KNIEL104B
 Name: Reimer
 Date: 5/21/91
 Date Entered:

Reviewed: MC 5/30/91
 reviewed 5/28/91 KG

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 unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles Z. Holmes 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: 4/26/90.

ADEC JOHN BAUER
EXXON ANDY GEL
NOAA GARY DELANEY
USCG KENNETH KEANE

FOSC: 4 L DATE: 5-12-90

OG J. J. NIGER

SEGMENT ST/EL-104

SUBDIVISION A

DATE 04 104/90

CHECKLIST

- ☒ N Area
- ☒ Approx. Scale
- ☒ Seg/Sub Entry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☒ % Cover
- ☒ Substrate Character
- ☒ Est. HAZ/LEWL
- ☒ EST
- ☒ Volume Location(s)
- ☒ Profile(s)
- ☒ Pz Location(s)
- ☒ Photo Location(s)

LEGEND

1 Δ
Pz - No Subsurface Oil

2 Δ
Pz - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

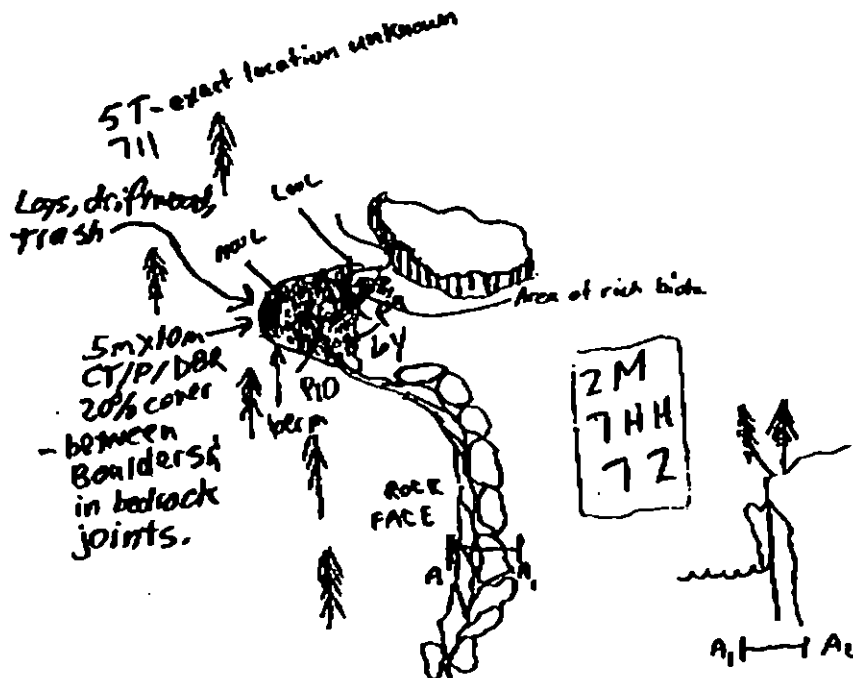
CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oil Vegetation

1 →
Photo location, direction,
and number

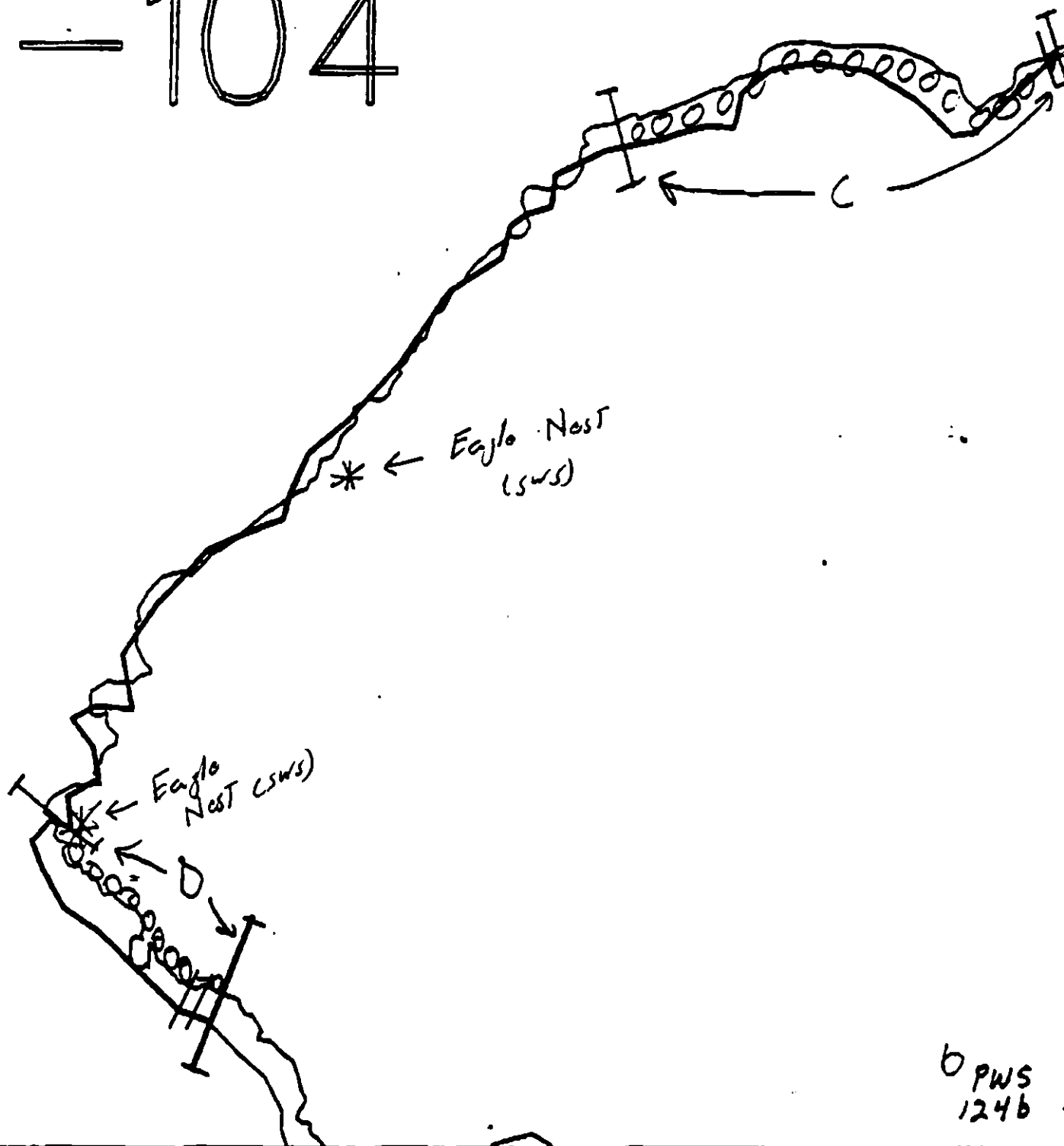
SKETCH MAP



Oil Character Length (m): AP 0 PO 0 CV 0 CT 10 ST 0 MS 0 PT 0 TB 0 FL 0 NO 300

ECOLOGY MAP

L-104



b pws
124b

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EL-104

ADEC Segment Length: ~~415m~~ 4428



Map Key: PWS-124a

Name: J. Springer

Date: 04/04/90

Date Entered:

EL-105

← PWS
124a

5

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

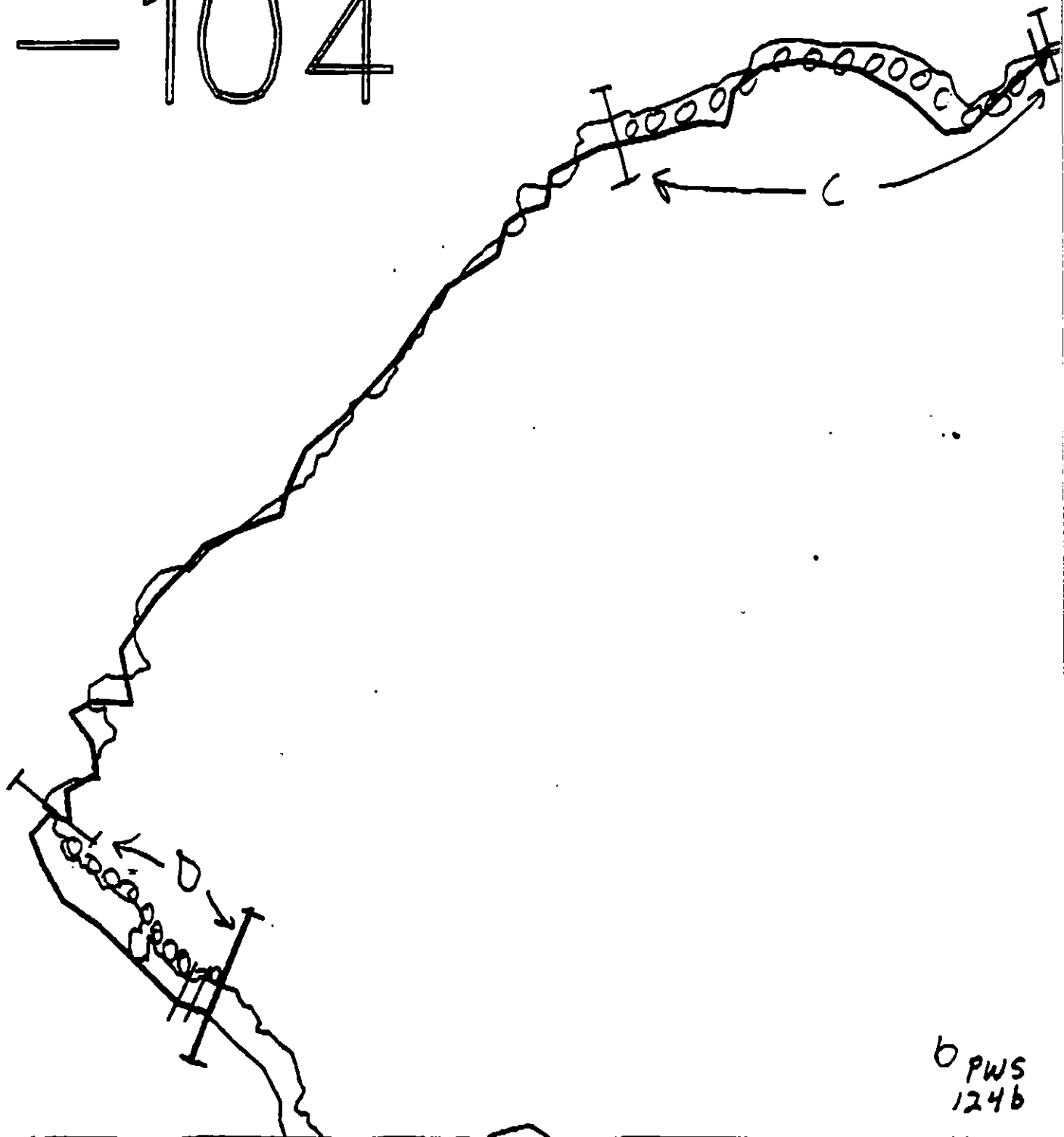
EL-104

ADEC Segment Length: 4428



Map Key: PWS-124b
Name: J. Springer
Date: 04/04/90
Date Entered: _____

L-104



b PWS
124b

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EL-104

ADEC Segment Length: ~~4428~~ 4428



Map Key: PWS-124b

Name: J. Springer

Date: 04/04/90

Date 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 unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Hume 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:

<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: 4/26/90
ADEC JOHRI BAUER
EXXON ANDY PETER
NOAA GARY PETRAE
USCG KENNETH KEENE
FOSC: DATE: 5-12-90

OG J. SPRINGER

SEGMENT S L-104

SUBDIVISION B

DATE 04 / 04 / 90

CHECKLIST

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

LEGEND

1 Δ
Pit - No Subsurface Oil

2 Δ
Pit - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

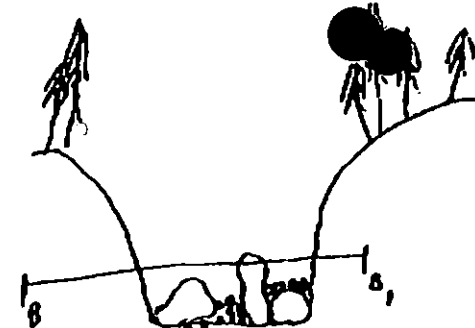
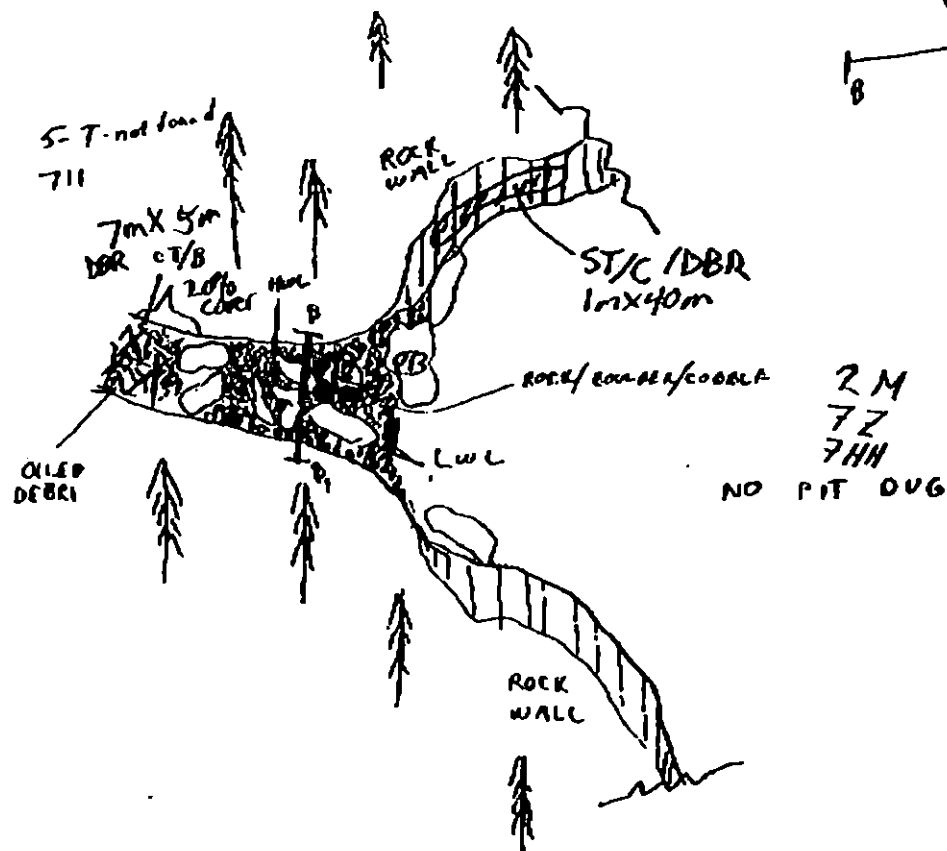
CT/P
Patchy Distribution

CT/S
Splashed Distribution

Oil on Vegetation

1 ●→
Photo location, direction,
and number

SKETCH MAP



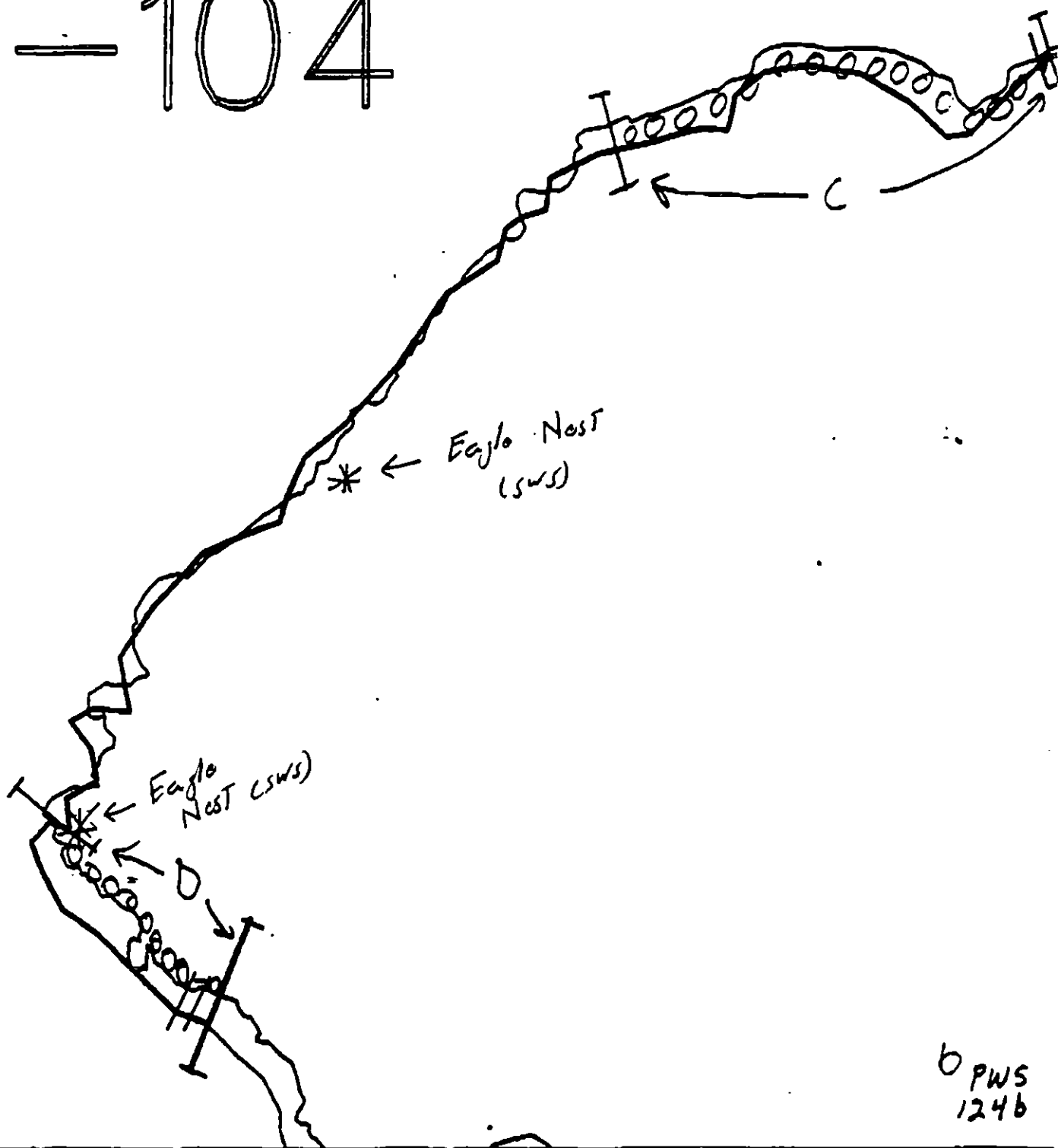
2 M
7 Z
7 HH
NO PIT DUG

0 30
METERS

Oil Character Length (m): AP _____ PO _____ CV _____ CT 7 ST 40 MS _____ PT _____ TB _____ FL _____ NO 98

ECOLOGY
MAP

L-104



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

EL-104

ADEC Segment Length: ~~4100m~~ 4428

0 100 200 300
 METERS



Map Key: PWS-124a

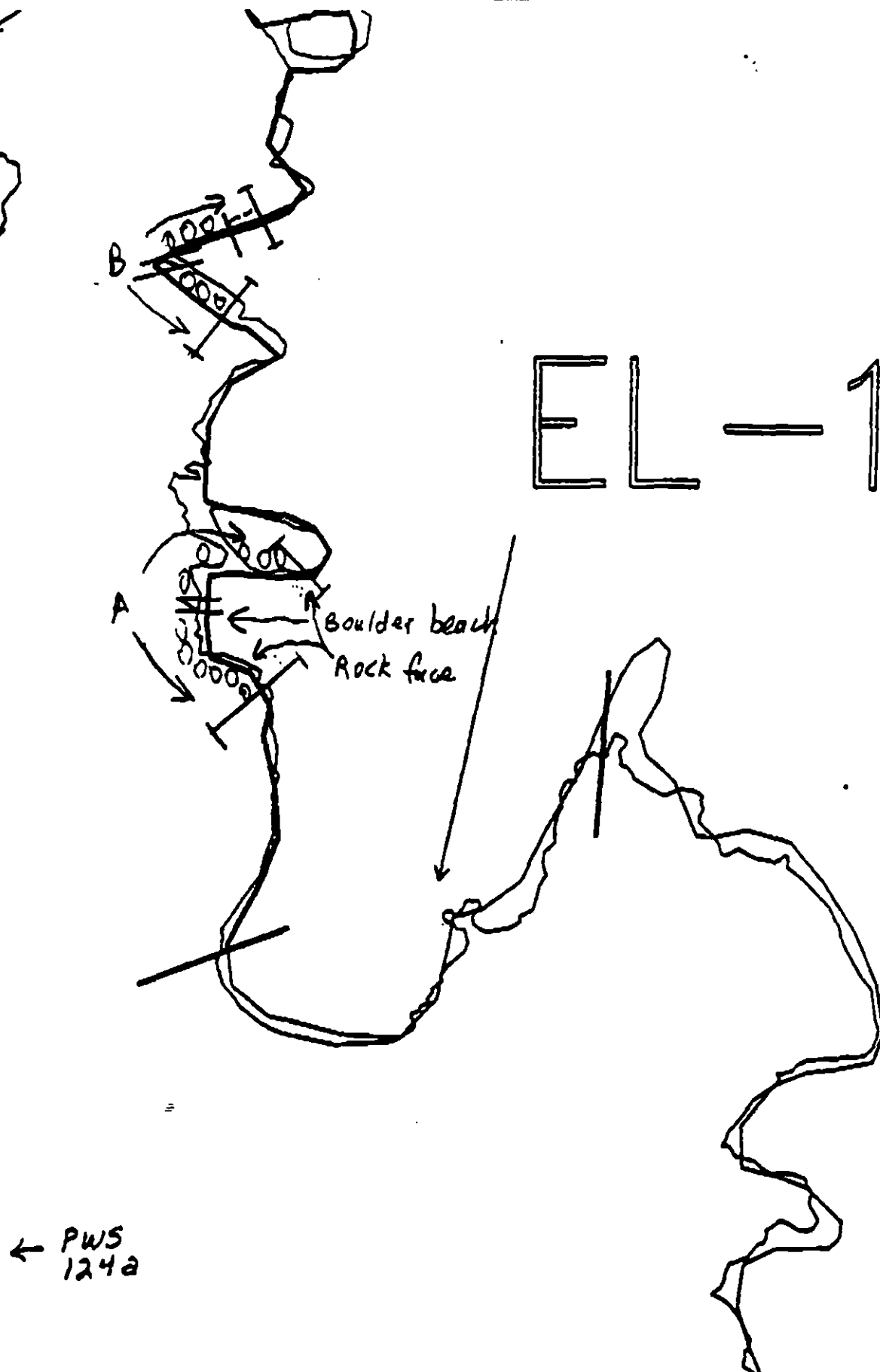
Name: J. Springer

Date: 04/04/90

Date Entered:

b PWS
 124b

EL-105



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

EL-104

ADEC Segment Length: 4428



Map Key: PWS-124b

Name: J. Springer

Date: 04/04/90

Date 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 unoiled biota and substrate. Do not trample or otherwise damage mussel beds.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. [Signature] DATE: 4/29/90

OILING CATEGORIZATION:

Wide 0 m: Medium 6 m: Narrow 0 m: V.Light 0 m: No Oil 523 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> </u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u>X</u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u> </u> Tarmat: <u> </u> Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: 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.

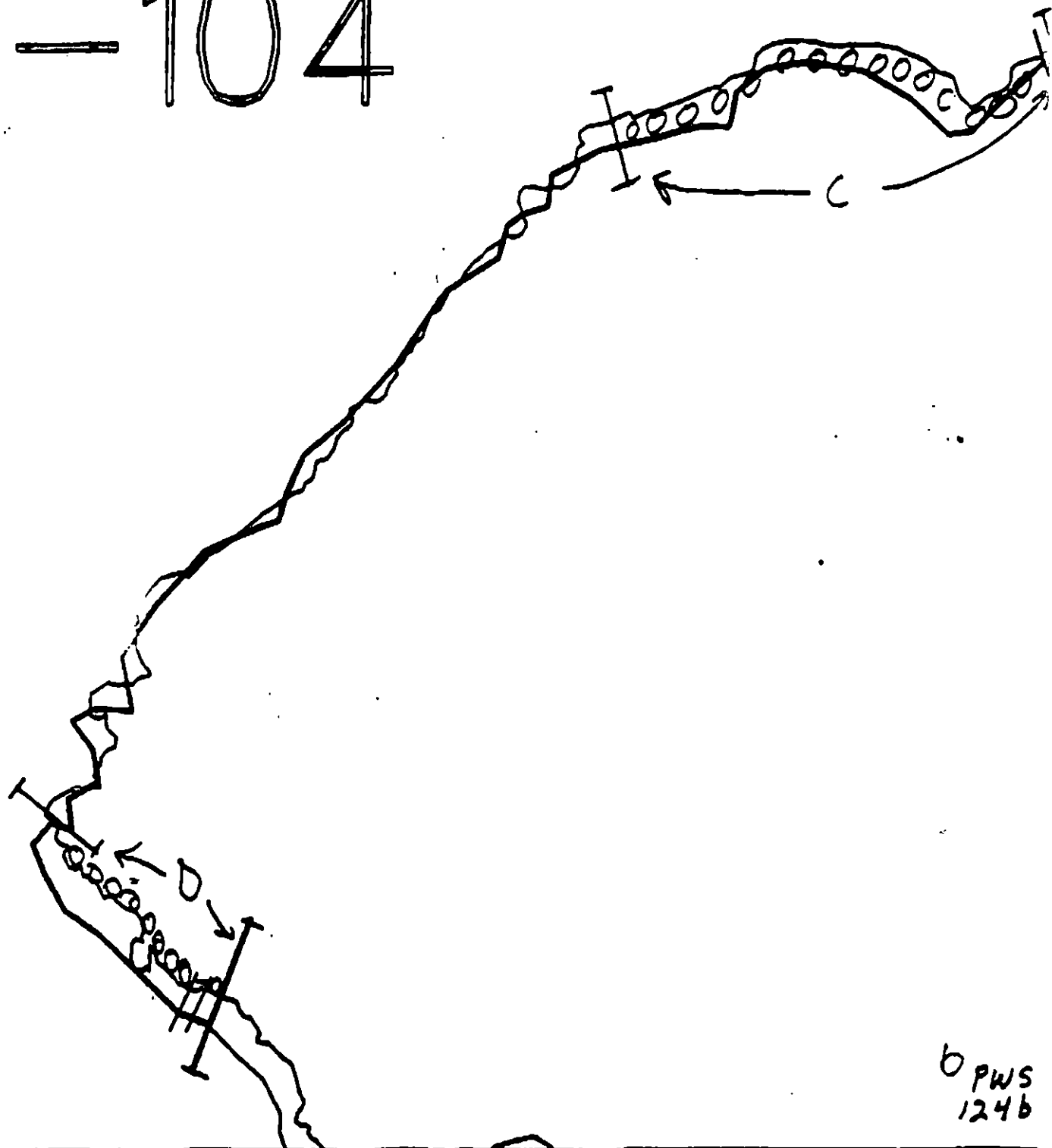
TAG COMMENTS:

TAG APPROVAL DATE: 4/26/90
ADEC John Bauer
EXXON Andy [Signature]
NOAA Gary Petree
USCG Kenneth [Signature]

FOSC: [Signature] DATE: 5-12-90

200

L-104



b pws
124b

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EL-104

ADEC Segment Length: 4428

0 100 200 300
METERS



Map Key: PWS-124a

Name: J. Springer

Date: 04/04/90

Date Entered:

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: 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. 2 bald eagle nests in unsurveyed coastline between subdivisions C and D.

ARCHAEOLOGICAL CONSTRAINTS:

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

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:

☒ 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 ANN TGA
NOAA GARY PETRO
USCG KENNETH KEANE

FOSC: W L DATE: 5-9-90

OG 04/04/90
SEGMENT ST/EL 104

SUBDIVISION D

DATE 04/04/90

CHECKLIST

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

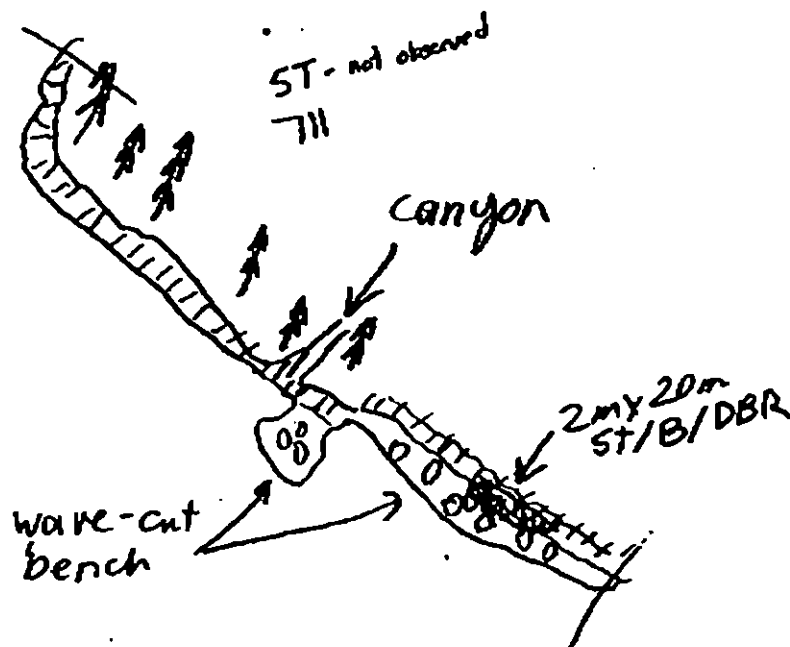
CT/P
Patched Distribution

CT/S
Splashed Distribution

Oiled Vegetation

Photo location, direction,
and number

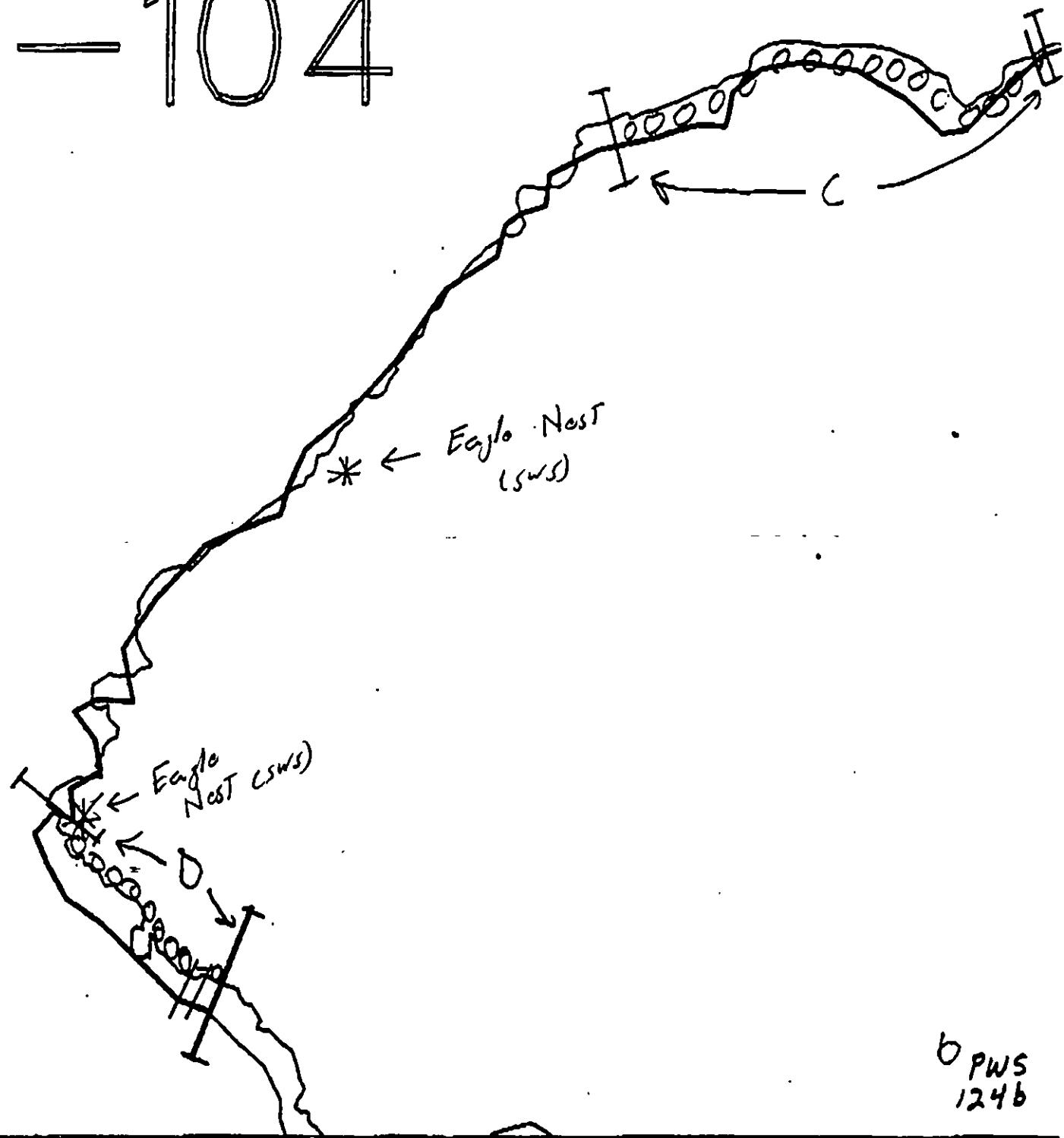
SKETCH MAP



Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 20 MS 0 PT 0 TB 0 FL 0 NO 280

200

L-104



b pws
124b

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

EL-104

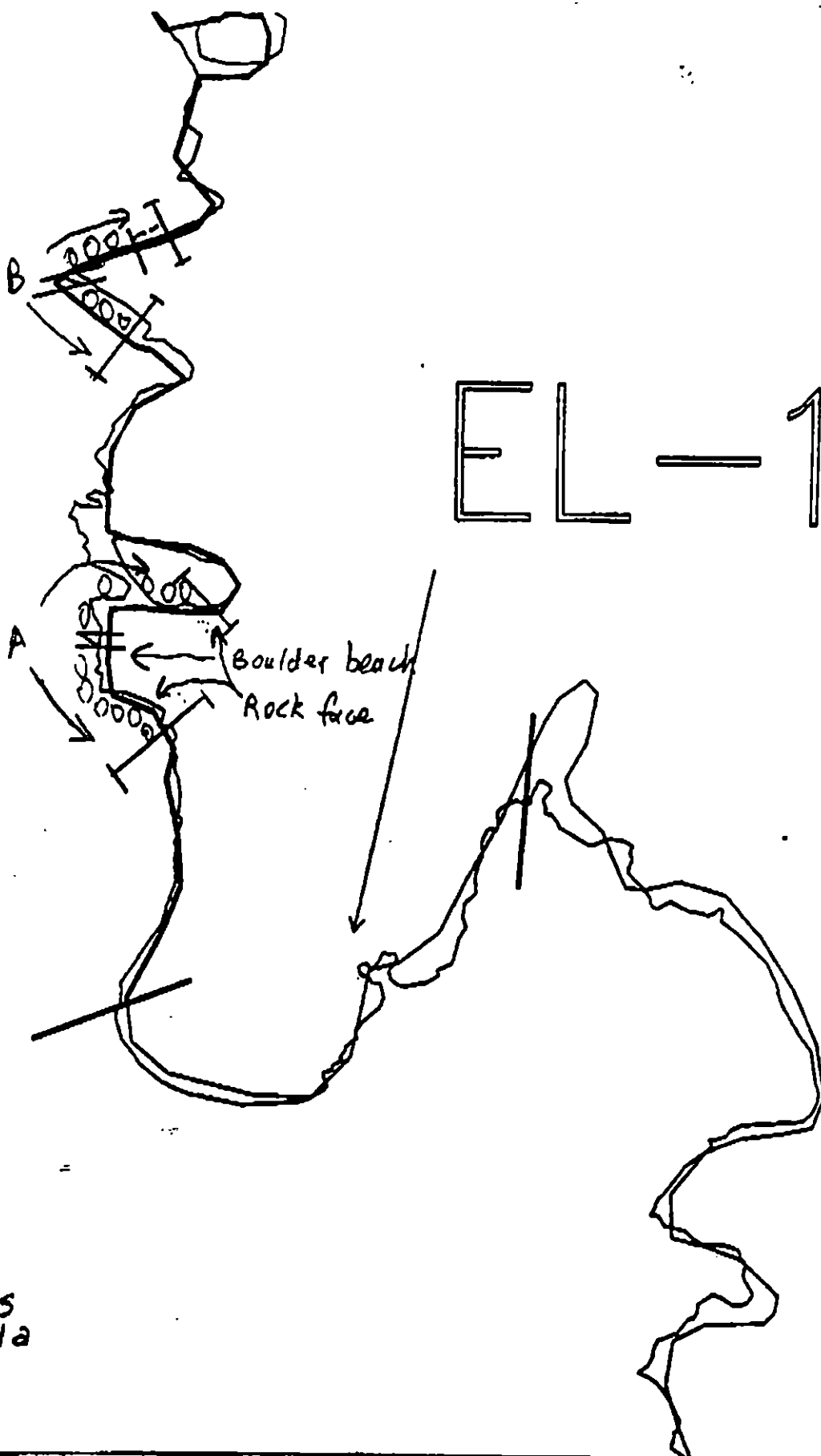
ADEC Segment Length: ⁴⁴²⁸~~4140~~m



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 Oil

EL-104

ADEC Segment Length: 4428



METERS

Map Key: PWS-124b

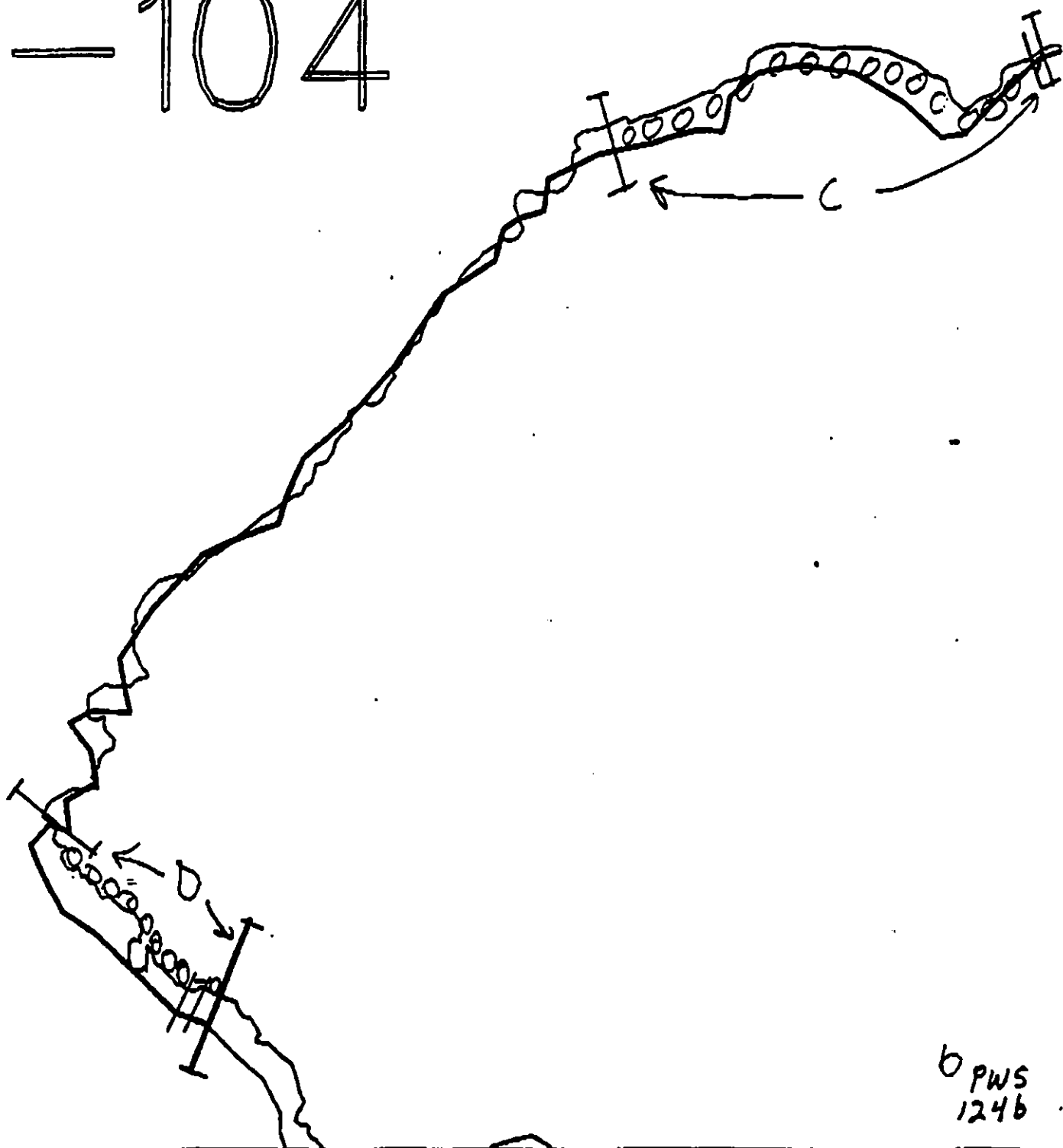
Name: J. Springer

Date: 04/04/90

Date Entered:

L-104

200



6 PWS
1246

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EL-104

ADEC Segment Length: 4428



Map Key: PWS-1246

Name: J. Springer

Date: 04/04/90

Date Entered:

1991 MAYSAP EVALUATION

SEGMENT: EL 104 SUB: C REGION: PWS SURVEY DATE: 5/21/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Timothy A Smith Date: 6/8/91

RECOMMENDATIONS:

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

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: JUNE 7 1991

FOSC APPROVAL DATE: 6/12/91

ADEC John Bar

FOSC E. E. PAGE

EXXON Bar

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

USCG T.M. Mangan

NOAA John

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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

Subsistence - Salmon Harvesting: Unlimited treatment up to stream bank between May 15 and July 10. ADF&G approval required for work after July 10. Fish Habitat Permit required for instream work. ADF&G approval required for bioremediation within 100 meters of anadromous stream after July 10.

Subsistence, Finfish Harvesting: Unlimited treatment.

MAYSAP FIELD SHORELINE COMMENT SHEET

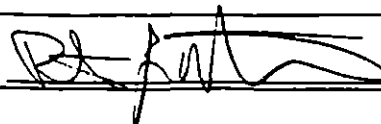
TEAM NO. II SEGMENT EL-104 SUBDIVISION C DATE 5/21/91

ADEC

NAME

Peter Montesano

SIGNATURE

☒ NTR

TREATMENT RECOMMENDED

The ASAP site on this Subdivision was not really on this Subdivision. EL104 has unassigned areas between EL104A/EL104B and EL104B/EL104C. I recall this coming up in 1989 and it is well noted on the ASAP report.

The Pocket was small w/ well protected HOR and SOR oil which appears as if it will persist, however the oil is relatively inaccessible and will have remain.

EXXON

NAME

FRANK Box

SIGNATURE

Frank A. Box☒ NTR

Not enough oiling to warrant clean-up activity.

LANDMANAGER

NAME

DENNIS S Kennedy OF USFS

SIGNATURE

D.S. Kennedy☒ NTR

The subdivision as indicated on GIS maps had little oiling. Site #1 was not within the boundary of EL104-C as per GIS map. We surveyed it and it appears cleaner than what existed on ASAP report. This site needs to be corrected on the data base.

an active eagle nest is located just west of end of Sub $\div$ (See MAP)

USCG/NOAA

D. Simecek - BERRY NOAAD. SIMECEK - BERRY NOAA

NAME

BMI M.P. ZENONE USCG

SIGNATURE

BMI M.P. ZENONE☐ NTR

Surface oiling occurs between the boulders / cobbles and mainly consists of roat and omer. The areas of SOR and HOR are not readily obtainable, therefore, no treatment is recommended. PD-B

3 - No TREATMENT RECOMMENDED. 3

REMOVED: MC 6/3/91

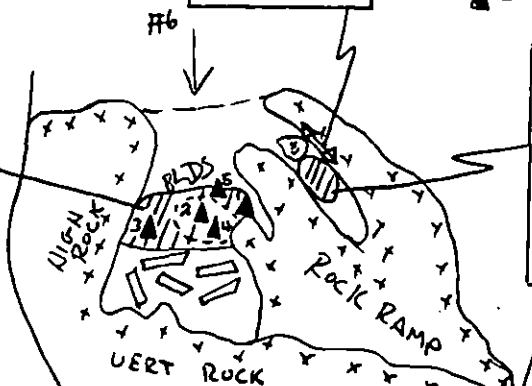


CT/CL 5% under sides
of Boulders
SOR (Light-Moderate) 2%
3 X 6 meters
(sub-surface extent of)
NOR $\approx 1\frac{1}{2} \times 2$ m

B
CT/ST 20%
1 X 5 m
VERT Rock

- ▲ 1 TR
- ▲ 2 NOR
- ▲ 3 FL
- ▲ 4 NOR
- ▲ 5 TR

A
CT/CL/ST 20%
(mostly under
sides of Peb
SOR (Light) 10%
3 X 1 m



~ WATER ~

VERTICAL ROCK
(SKIFF)

Boulder hang over
Rock (High angle)

Small pebble beach
(SKIFF)

SITE #1



D
CT (BTR)
1-10% Patchy
Remains on Rock
and boulder faces
1 X 140 m

E
CT/ST
1% (BTR)
 $\frac{1}{2} \times 40$ m

NOTE: SITE #1
IS NOT within boundary
of EL 104 C as mapped
on GIS - Extend boundary
OR Add New sub-div.
KN 104 D. This problem
was described on
ASAP Report as well.

OG SKETCH
EL 104 C
MAY 21, 1991
11:45 - 12:26
Doug Reimer

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2
 DATE 5/21/91
 SEGMENT # EL-104
 TIDAL HEIGHT(Range) +4 to +2 ft
 SUBDIVISION C
 BIOLOGIST S M B A R
 SEA STATE Calm
 WIND SPEED/DIRECTION Calm
 PHOTOGRAPHS: ROLL # — FRAME # —

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

A+B: CT/CT/ST + SOR all in HIZ. Lichen nearby, SOR in vicinity of beachgrass.

C: Area surrounding pits 1 through 5 supports green algae + lichen only. Boulder seawards of the pits have dense adult and juvenile limpets small limpets + recent sp. Subtidal zones exhibit Fucus clumps.

D+E: BTR high in HIZ on rock + steep boulder faces. Lower zones dense with algae + bryozoans.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles		3 adults	
Seabirds			
Waterfowl			
Gulls/kittiwakes			
Shorebirds			
Corvids			
Other Birds	sandpipers	2	

MARINE MAMMALS

OBSERVED

LAND MAMMALS

SPECIES

OBSERVED

Sea Otters			
Phocipeds(specify)			
Whales(specify)			

Shoreline subdivision map showing important biological features attached.

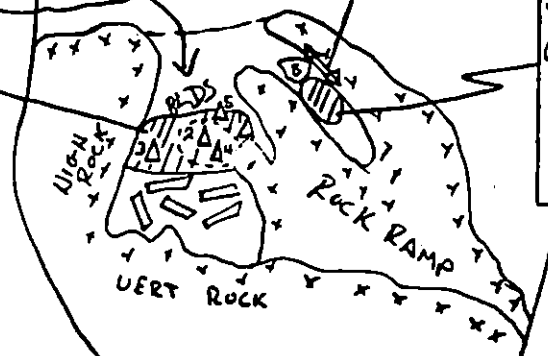
Green algae & Lichen
near pits #4 & #2
Green algae only
near pits #3 & #5.
sparse barnacles
immediately seaward
of pits #2 & #5.

Lichen
only

- ▲ 1 TR
- ▲ 2 NOR
- ▲ 3 FL
- ▲ 4 NOR
- ▲ 5 TR

CT/CU/ST :
IN Lichen
zone.
SOR/CT
near beachgrass

Small limpets
& Littorines
recent spat



(Beach with)
≈ 10m

VERTICAL ROCK
(SKIFF)

Boulder boulder
Rock (High on shore)
(LUNAR)

Small pebble beach
(SKIFF)

SITE #1

Not previously
documented
eagle nest

BTR IN
Lichen zone,
Dense Fucus,
olive & red
algae below.

BTR IN
Lichen
zone

NOTE: SITE #1
IS NOT within boundary
of EL 104 E as mapped
on GIS - Extend boundary
OR Add New sub-div.
KN 104 D. This problem
was described on
ASAP Report as well.

OG SKETCH
EL 104 C
MAY 21, 1991
11:45 - 12:26
Doug Reimer

smB 21 May 91

+

+

200

undocumented
nest with ♀+♂
eagle.

♀ eagle left nest
upon air approach
but returned within
minutes. Nest is easily
visible from shore
and may have an egg.
SMB 21 May '91

C

+

+

XXXX

Wide

////

Medium

Narrow

TTT

Very Light

000

No Oil

EL104 C

ADEC Subsegment Length: 584m

METERS

5 100 200

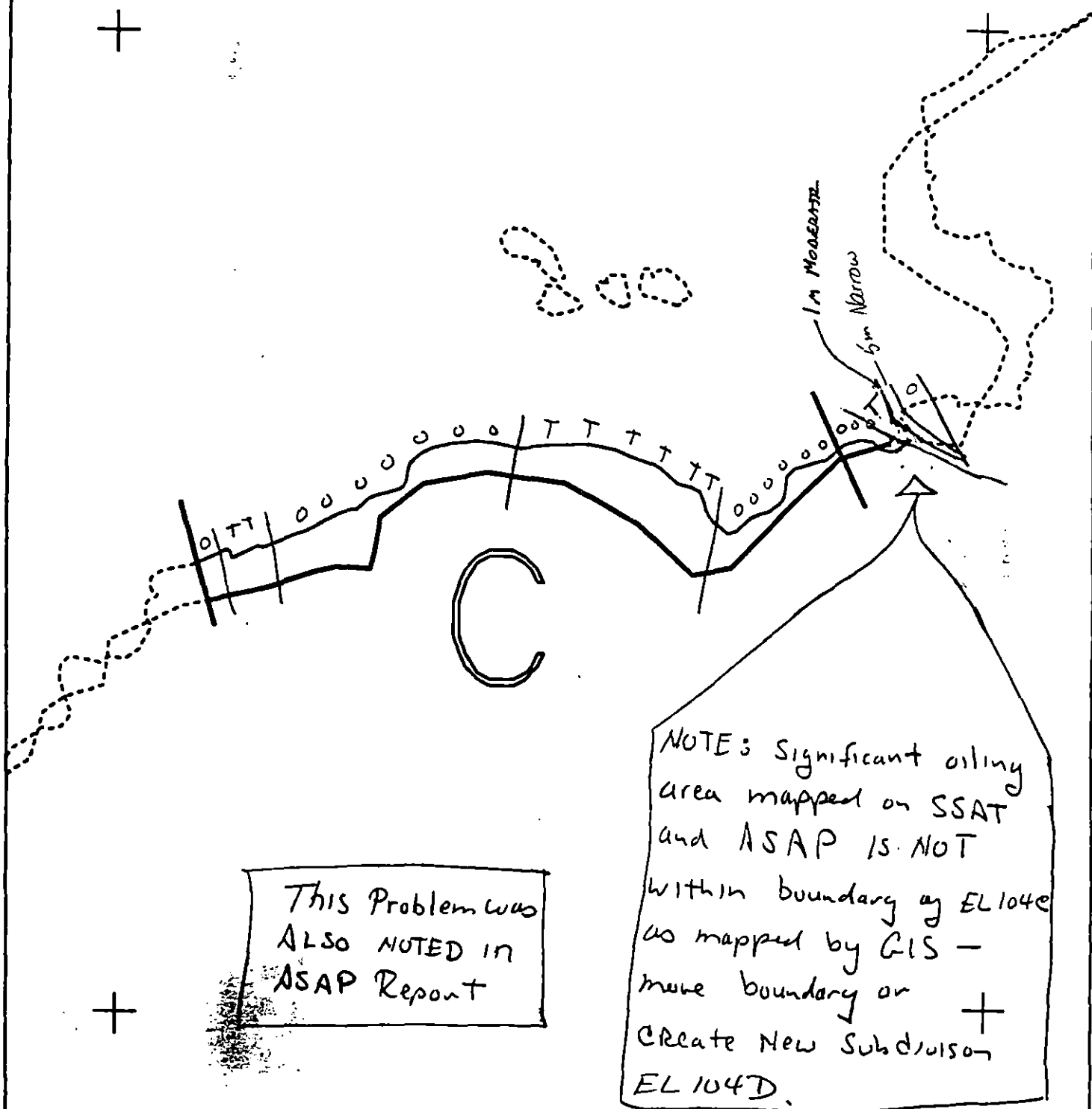
AK State Plane Zone 4
6011040

Subdivision Field Map

Map Key: KNE104C

Name: Sue BarDate: 5/21/91

Data Entered:



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

EL104 C

ADEC Subsegment Length: 584m

METERS

5 100 200
 AK State Plane Zone 4
 6011040



Subdivision Field Map

Map Key: KNI104C

Name: Reimer

Date: 5/21/91

Date Entered:

REMOVED: MC 6/3/91

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-104

SUBDIVISIONS: C (3 OF 4)

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 unoiled biota and substrate. Do not trample or otherwise damage mussel beds.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 6 m: Narrow 0 m: V.Light 0 m: No Oil 523 m
Subsurface Oil Observed: Yes X No _____ Maximum Depth 20+ cm

RECOMMENDATIONS:

☐ No Treatment Recommended	☐ Snare/Absorbent Booms
☒ Treatment Recommended	☐ Oil Snares (pom poms)
☐ Manual Pickup	☐ Absorbents (pads, rolls, etc)
☒ Bioremediation	☐ Spot Washing: _____ Wands
☐ Tarmat: _____ Removal	☐ 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 _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EL104 SUBDIVISION: C DATE 4-4-90

USCG

NAME AEC Vandepels SIGNATURE AEC Vandepels

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

I suggest bio.

ADEC

NAME Michele Baer SIGNATURE M Baer

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

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 UC. The large Bs 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 Bs). If possible, removal of the larger Bs and pickax of the underlying area ^{prior to application} would be even better.

LAND MANAGER

NAME DAN LOGAN SIGNATURE Dan Logan

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

I RECOMMEND HAND TILLING AND FERTILIZER APPLICATION TO THE 10M x 7M CT/B PATCH.

SHORELINE OILING SUMMARY

REVISION NO. 05/23/90

OG J. Springer USCG R. Vandepels SEGMENT ST/ EL 104
 BIO P. Crank LAND REP D. Logan SUBDIVISION C (3 of 4)
 EXXON T. Ramblin 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 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	10	15	17	18	19	20	21	22	23	24	25	26	SU	U	M	L
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT		X								X				X		
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL													X		X	X

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED

☐ YES ☒ NOTYPE 0#BAGS 0

Photographs:

Roll No. 57-5-3Frames 14, 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
		OP	OR	OL	OF	NO		UD	UC	19	20	21	22	23	24	25	26			
1	20		X				0-20	X						X				X		BC P6
2	30					X	.		X									X		CP
							.													
							.													
							.													
							.													

COMMENTS

7

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/22/90

Segment ST 104 Subdivision C Date (mo / day / yr) 4/4/90
 Length 550m
 Time (24 hr) 1610-1700 Biologist Crank Tide Height +1.5 pg 1 of 2

- (A) Substrate type and % of segments:
 (1) Bedrock 10 (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. 57-5-3
 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

- Subdivision is a high recruitment area
- Mussels are in discontinuous dense patches
- Most of LTR: unexposed
- Subdivision appears healthy.

Ecological Considerations:

2M - Herring Spawning
 7H - Deer Harvesting
 7Z - Salmon Harvesting
 7H - Finfish Harvesting
 5T - Eagle Nest - not observed.

9

SEGMENT: ST/ 104 SUBDIVISION C LENGTH 550m BIOLOGIST Crank

pg 2 of 2

DATE 4/4/92 TIME 1410-1700 TIDE HEIGHT +1.5

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

FLORA:

SPECIES	UNTZ	MITZ	LITZ	COMMENTS
BOSSIELLA/CORALLINA				
CALLIARTHRON/CORALLINA				
CLADOPHORA SPP		1		
COSTARIA SPP				
ENDOCLADIA MURICATA				
FILAMENTOUS GREENS	1	1	123	
FILAMENTOUS REDS	1	21	213	Dense
GLOIOPELTIS FURCATA		1		Scattered
HALOSACCION GLANDIFORME		12		
LAMINARIA SPP				
LITHOTHAMNION	1	1		
NEREOCYSTIS SPP				
PORPHYRA SPP	1	12	2	
RALPHSIA/HILDENBRANDIA	12	21	32	
RHODOMELA LARIX	1	1	23	
RHODOMENIA PALMATA		1	231	
SCYTOSIPHON SPP	1	1		
ULVA SPP				
ZOSTERA MARINA				
~~Enteromorpha~~		1	231	
~~Alaria~~			21	

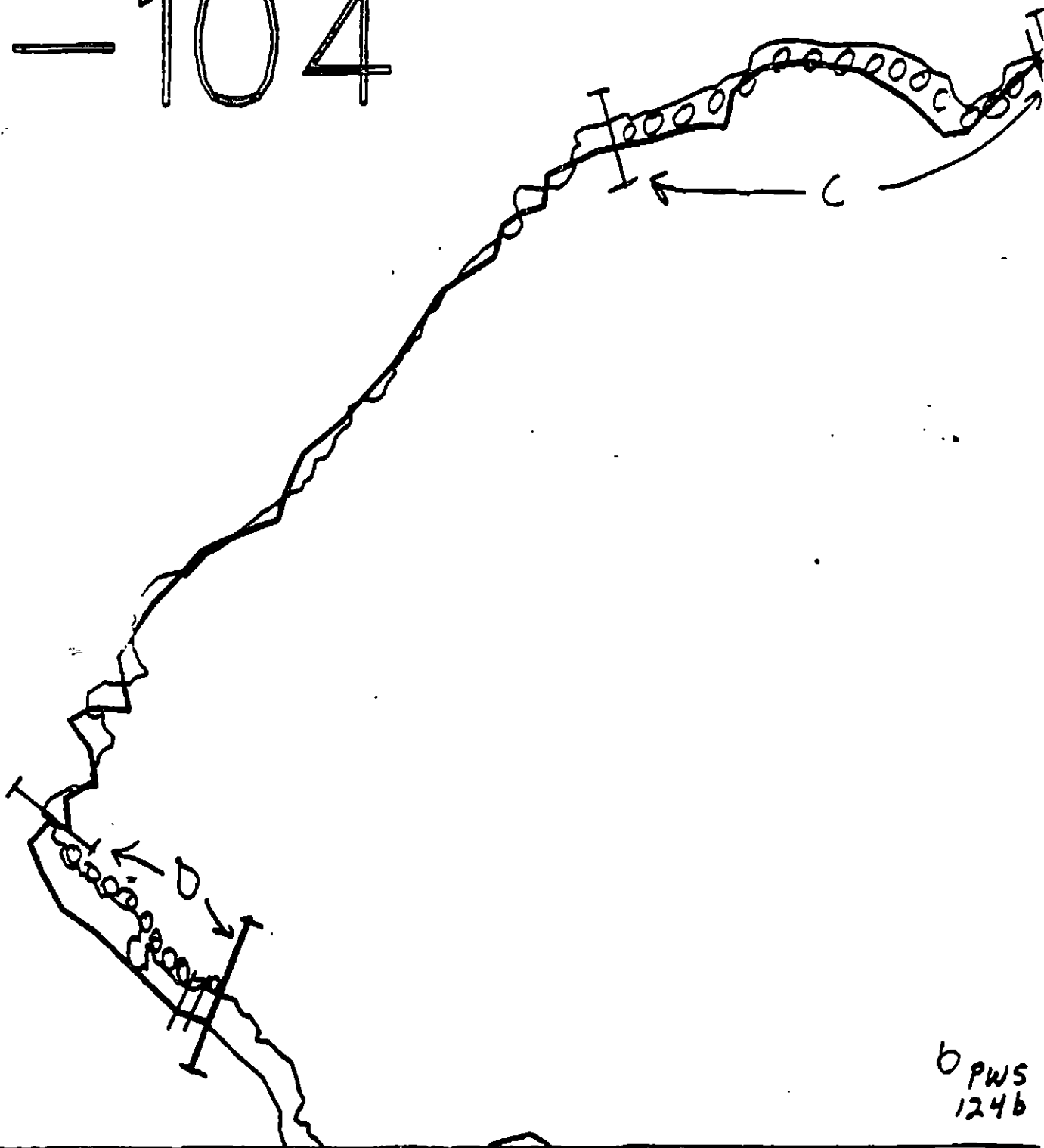
FAUNA:

ANTHOPELURA SPP				
(SEM) BALANUS CARIOSUS		1	12	
B. GLANDULA	1	1	1	
BRYOZOANS				
CHITONS (OTHER THAN K. TUNICATUS)				
CLAMS				
CRABS				
DERMASTERIAS IMBRICATA		1		
KATHARINA TUNICATA	1	1		Vertical heart-like
LEPTASTERIAS HEXACTIS				
LIMPETS	1	1	23	Heavy concentrations
LITTORINA SPP	1	1	123	
NUCULA SPP				
PAGURUS SPP				
PISASTER OCHRACEUS				
POLYCHAETES				
PYGNOPODIA HELIANTHOIDES				
SEPIARIA DIRA				
SERPULIDS				
SIPHONARIA THERSITES	1	1	12	Dense concentrations
TEALIA				
Eel - juvenile		1	3	

10

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: _____

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-104

SUBDIVISIONS: D (4 OF 4)

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: 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 unoiled biota and substrate. 2 bald eagle nests in unsurveyed coastline between subdivisions C and D.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 15 m: V.Light 0 m: No Oil 284 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
 1D Esther Hatchery release (4/15 to 6/1)
 1E Main Bay Hatchery release (4/20 to 5/10)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 1I Gill net area (6/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (6/11 to 7/25)
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
 Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3Q, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 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 1 EL104 SUBDIVISION: D DATE 4-4-90

USCG

NAME AEC Vandepels SIGNATURE AEC Vandepels

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

I recommend no treatment.

ADEC

NAME Michelle Paer SIGNATURE Paer

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

*EL104-D is a headland with occasional large bs.
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
COMMENTS

☐ TREATMENT SUGGESTED

I CONCUR WITH ADEC

4

SHORELINE OILING SUMMARY

REVISION NO. 02/22/98

OG J. Springer USCG R. Vandepeis SEGMENT ST/ EL 104
 BIO P. Crank LAND REP D. Logan 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 09/04/90
 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: Lang 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	B	P	R	1	2	3	4	5	6	7	8	SU	U	M	L
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT																
STAIN		X								X				X		
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL													X		X	X

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

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		UO	VO	1	2	3	4	5	6	7	8			

COMMENTS

No test pits. All rock and boulder.

1

OG Spring

SEGMENT EL 104

SUBDIVISION D

DATE 04/04/90

CHECKLIST

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

LEGEND

1 Δ

Pl - No Subsurface Oil

2 Δ

Pl - Subsurface Oil

CT/C

Continuous Distribution

CT/B

Broken Distribution

CT/P

Patchy Distribution

CT/S

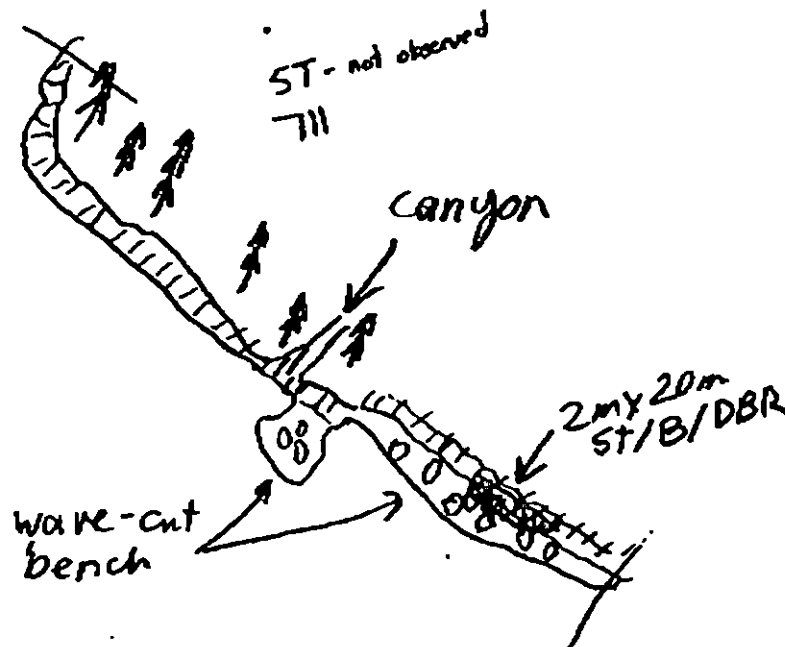
Splashed Distribution

Oiled Vegetation

1 $\Rightarrow$

Photo location, direction,
and number

SKETCH MAP



Wave-cut
bench

2M
7HH
7Z

0 100 m
Approx

Oil Character Length (m): AP 0 PO 0 CV 0 CT 0 ST 20 MS 0 PT 0 TB 0 FL 0 NO 280

REVISION: 8324/00

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/22/90

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:

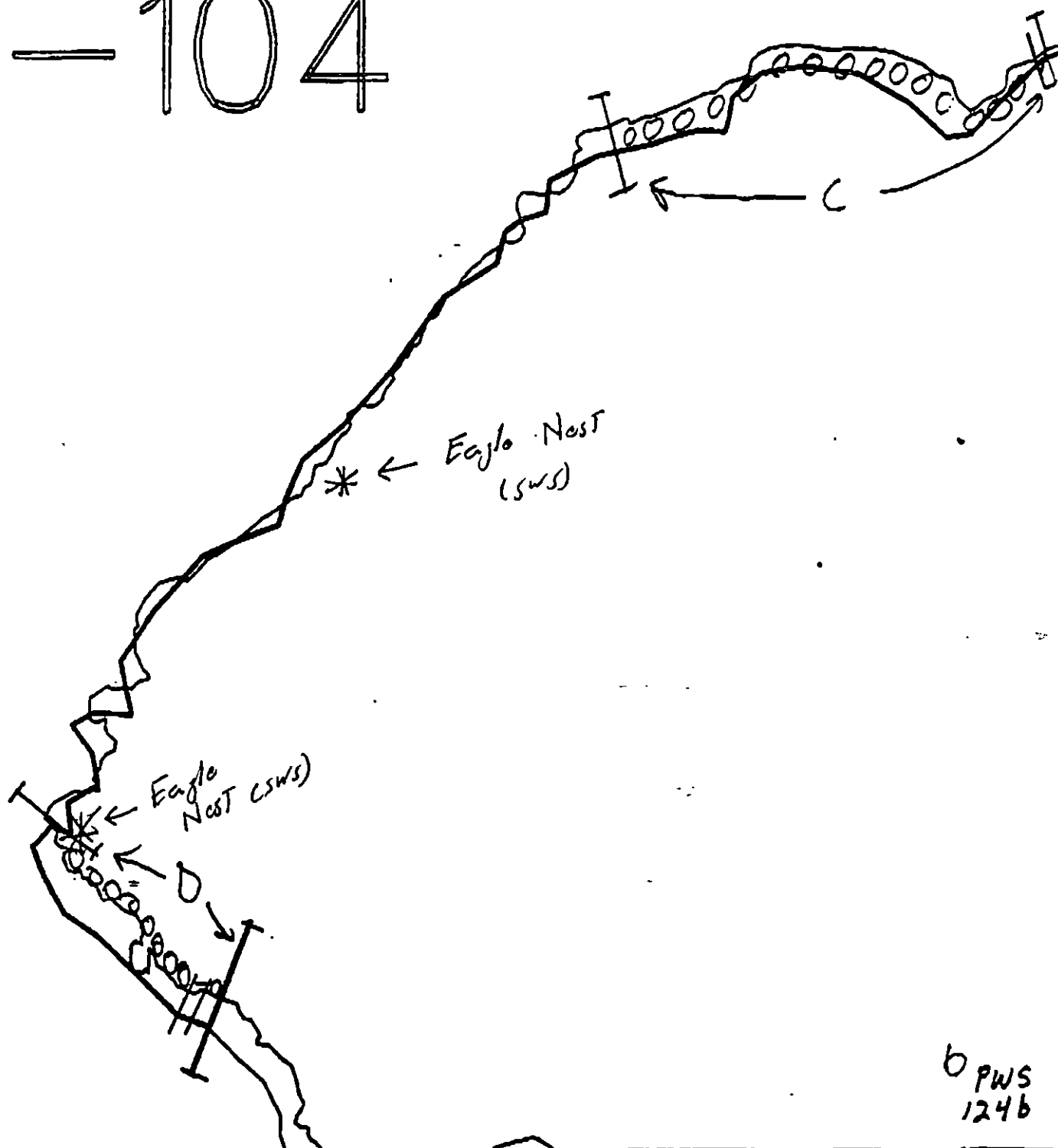
- 5 - Barrows Goldeneye
 - Total subdivision surveyed by skiff
 - Unable to determine gastropod concentrations
 - Barnacle scarring in U1Z

Ecological Considerations:

- ST - Eagle Nest (not observed)
 711 - Deer Harvesting
 72 - Salmon Harvesting
 711 - Finfish Harvesting
 2M - Herring Spawn

3

L-104



b PWS
124b

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EL-104

ADEC Segment Length: ⁴⁴²⁸~~4140~~m



Map Key: PWS-124a

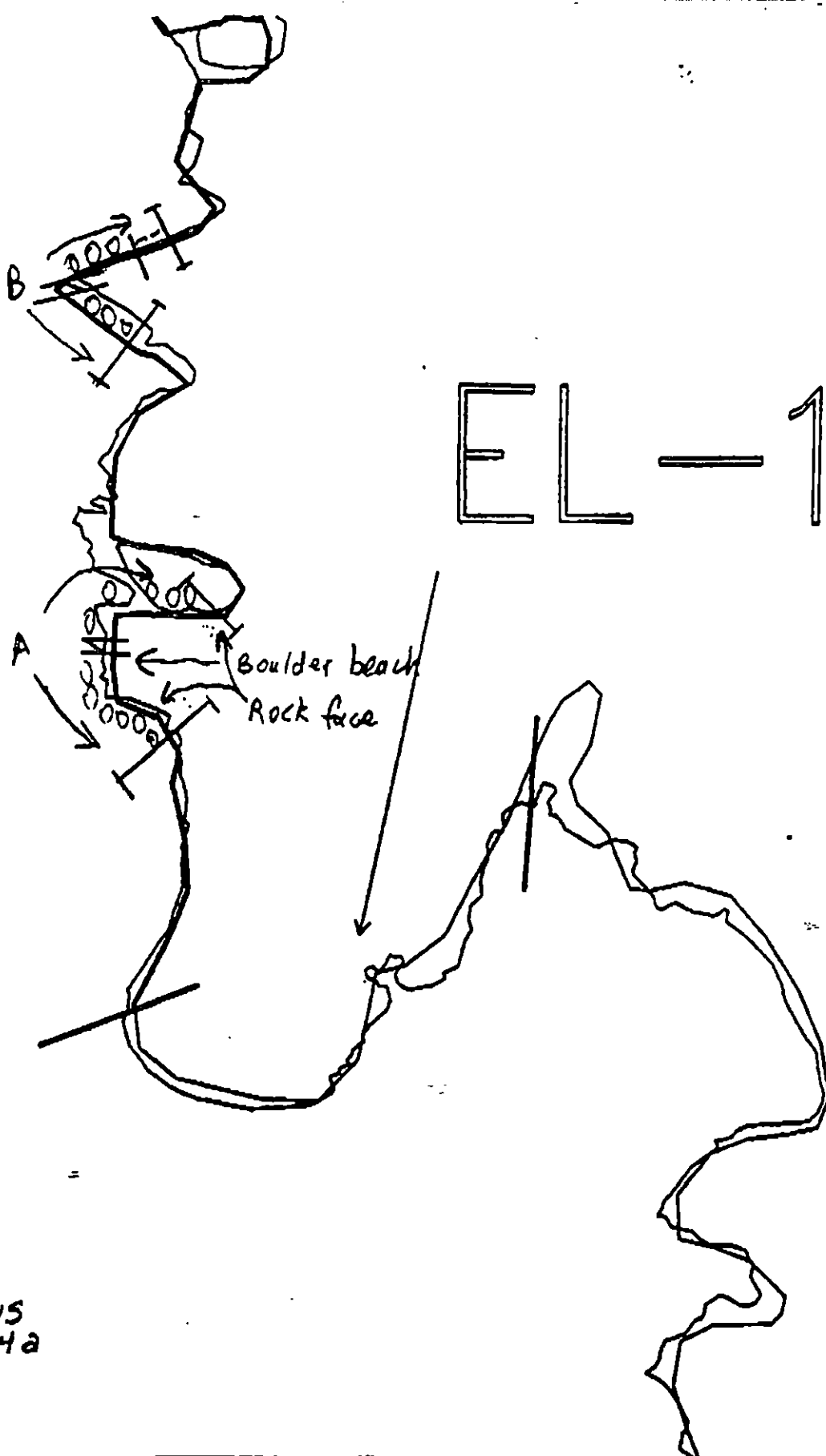
Name: J. Springer

Date: 04/04/90

Date Entered:

FWS
124D

EL-105



← PWS
124a

5

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EL-104

ADEC Segment Length: 4428

0 100 200 300
METERS

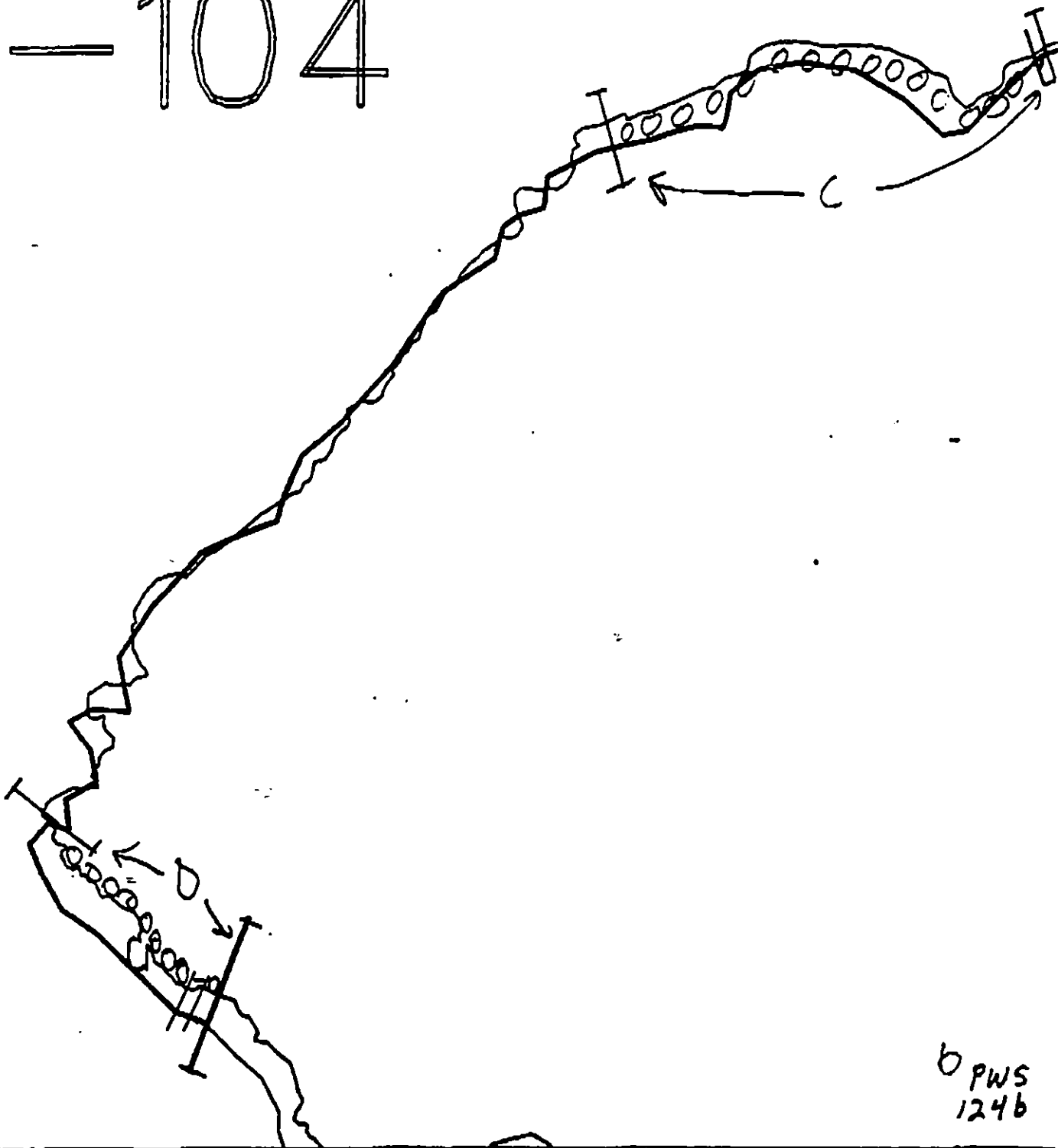
Map Key: PWS-124b

Name: J. Springer

Date: 04/04/90

Date Entered:

L-104



b PWS
1246

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

0000 No Oil

EL-104

ADEC Segment Length: ⁴⁴²⁸~~4140~~m



Map Key: PWS-1246

Name: J. Springer

Date: 04/04/90

Date 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

EL-104

EL-105

6
ACTIVE
NESTS

EL-58

EL-106

EL-57

01
L-100



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

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.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles E. Stone DATE: 4/22/90

OILING CATEGORIZATION:

Wide 0 m: Medium 6 m: Narrow 0 m: V.Light 0 m: No Oil 523 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> </u> Manual Pickup	<u> </u> Absorbents (pads, rolls, etc)
<u>X</u> Bioremediation	<u> </u> Spot Washing: <u> </u> Wands
<u> </u> Tarmat: <u> </u> Removal	<u> </u> Beach Cleaner
	<u> </u> Other (see comments)

COMMENTS: 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.

[See Constraint Addendum Dated 6/9/90 LMK]

TAG COMMENTS:

TAG APPROVAL DATE: 4/26/90

ADEC John Baker
EXXON AMY TOL
NOAA Gary Petrus
USCG KENNETH KEANE

FOSC: W L DATE: 5-12-90

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-104

SUBDIVISIONS: A (1 OF 4)

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 unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 14 m: Narrow 0 m: V.Light 0 m: No Oil 233 m
Subsurface Oil Observed: Yes _____ No X Maximum Depth _____

RECOMMENDATIONS:

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

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
- 1D Esther Hatchery release (4/15 to 6/1)
- 1E Main Bay Hatchery release (4/20 to 5/10)
- 1F Sawmill Bay Hatchery release (4/15 to 6/1)
- 1G Cannery Creek Hatchery release (4/21 to 6/1)
- 1H Remote release site
- 1I Gill net area (6/7 to 8/31)
- 1J Purse seine area (7/20 to 9/30)
- 1K Purse seine hook-off (7/20 to 9/30)
- 1L Set net sites (6/11 to 7/25)
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
 Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and 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 1 E404 SUBDIVISION: A DATE 04/04/90

USCG

NAME A.E.C. Vandepels SIGNATURE A.E.C. Vandepels

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

I suggest bio. if this beach is accessible

ADEC

NAME Michele Baer SIGNATURE M Baer

☐ 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. 03/23/98

OG J. Springer USCG R. Vandepels SEGMENT ST/ EL 104
 BIO P. Clark LAND REP D. Logan 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: 3/0 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			
	C	R	P	B	1	2	3	4	5	SU	U	M	L
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT			X					X			X		
STAIN													
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL										X	X	X	

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

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? (NO) BR RW SL TL

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

DEBRIS COLLECTED

☐ YES ☒ NO

TYPE 0

#BAGS 0

Photographs:

Roll No. ST-5-3

Frames 9-11

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CH)	BELOW	OIL / FILM COLOR	PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO				UO	UC	1	2	3	
							-								
							-								
							-								
							-								
							-								
							-								
							-								

COMMENTS

No test pits. - boulders.

12

OG J. **ER**

SKETCH MAP

SEGMENT ST/EL - 104

SUBDIVISION A

DATE 04/04/90

CHECKLIST

- ☒ N Arrow
- ☒ Approx. Scale
- ☒ Beg/Sub Endry
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☒ Substrate Character
- ☒ Est. HAV/LAVL
- ☒ VESL
- ☐ 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

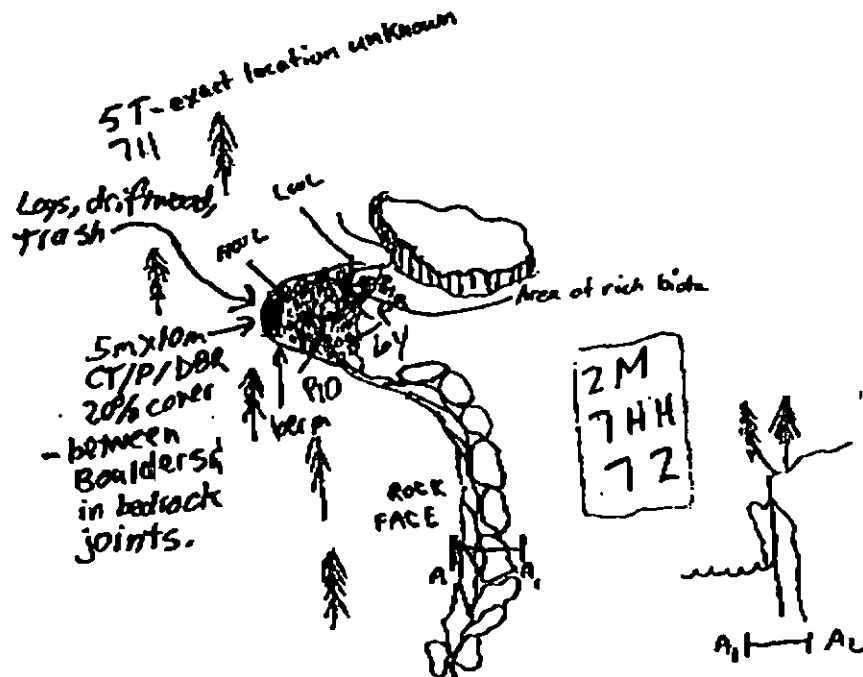
Spashed Distribution

Oil Vegetation

1 ●

Photo location, direction, and number

0 100
METERS



Oil Character Length (m): AP 0 PO 0 CV 0 CT 10 ST 0 MS 0 PT 0 TB 0 FL 0 NO 300

REVISION: 03/04/90

SHORELINE ECOLOGICAL SUMMARY

REVISED: 02/22/90

Segment ST 104 Subdivision A Date (mo / day / yr) 4/4/90
 Length 310m pg 101
 Time (24 hr) 1510-1540 Biologist Crank Tide Height +2.5 → +2

- (A) Substrate type and % of segments:
 (1) Bedrock 20 (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: ST-5-3
 Roll No. ST-5-3
 Frames 9, 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

7HH - Finfish Harvesting

7Z - Salmon Harvesting

- LITZ - unexposed
- Heavy barnacle scarring on 1, 2, 3 U1T2; MITZ
- 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

pg 2 of 2

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

FLORA:

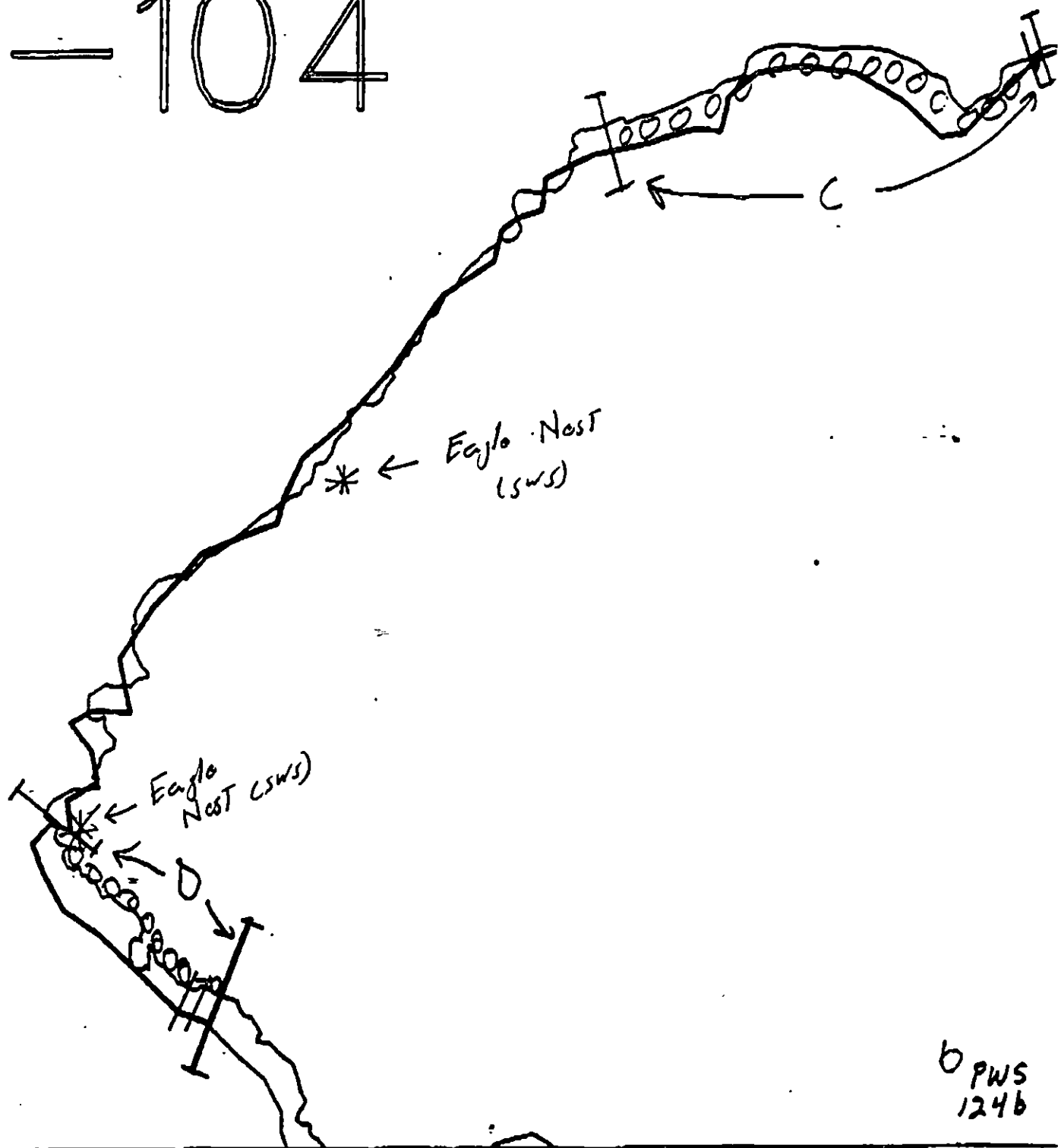
[illegible]

FAUNA:

15

ECOLOGY MAP

L-104



b PWS
1246

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

EL-104

ADEC Segment Length: 4428



Map Key: PWS-1246
 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 Oil

EL-104

ADEC Segment Length: 4428

0 100 200 300
METERS

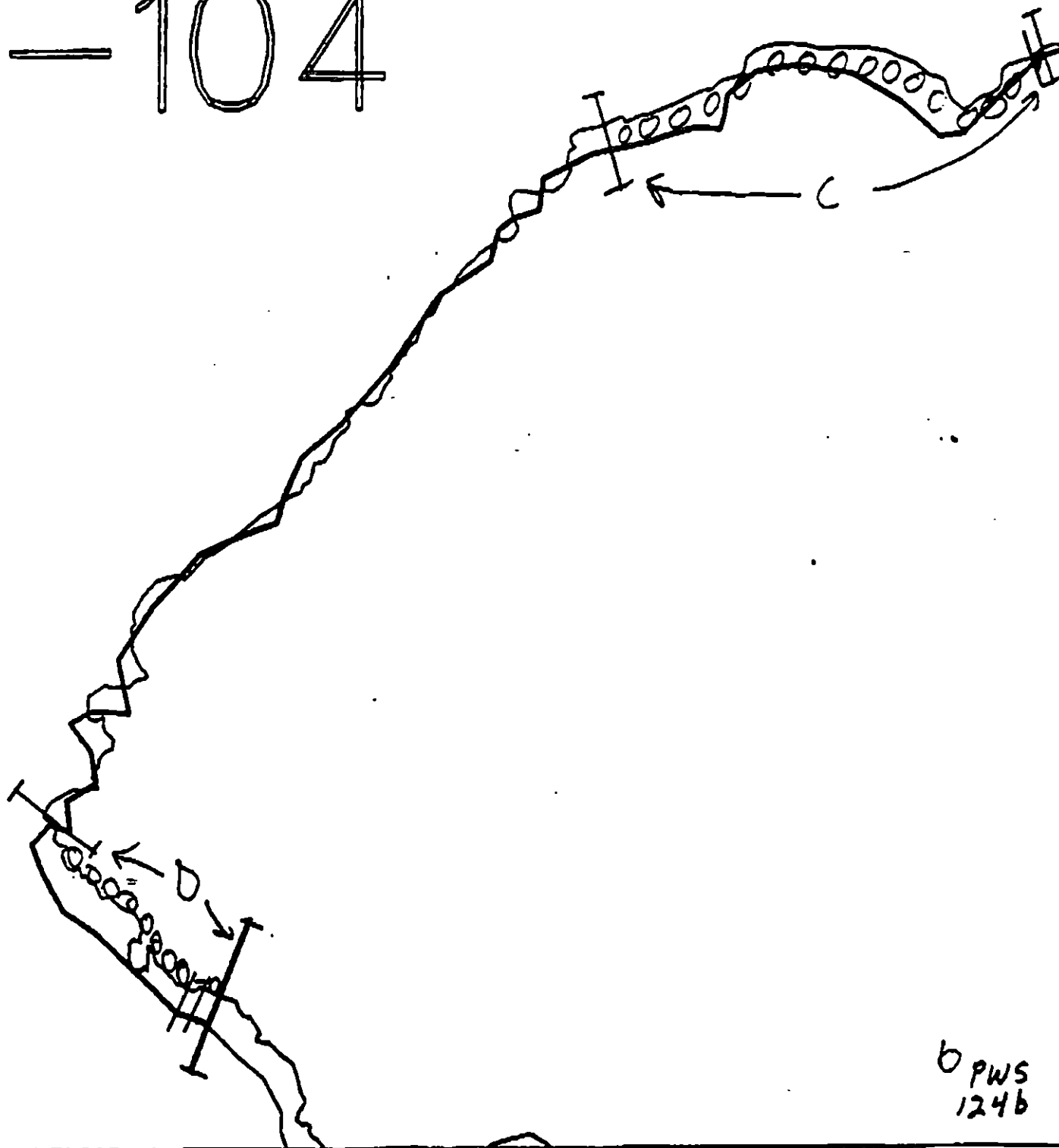
Map Key: PWS-124b

Name: J. Springer

Date: 04/04/90

Data Entered:

L-104



b pws
124b

XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

0000 No Oil

EL-104

ADEC Segment Length: ~~440m~~ 4428



Map Key: PWS-124a

Name: J. Springer

Date: 04/04/90

Date Entered:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-104

SUBDIVISIONS: B (2 OF 4)

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 unoiled biota and substrate.

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

Wide 0 m: Medium 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: _____ Wands
☐ Tarmat: _____ Removal	☐ Beach Cleaner
	☐ Other (see comments)

COMMENTS: _____

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

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

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / ELKH SUBDIVISION: B DATE 4-4-90

USCG

NAME _____ SIGNATURE _____

☒ NO TREATMENT RECOMMENDED
COMMENTS

☐ TREATMENT SUGGESTED

I recommend no treatment.

ADEC

NAME Michele Baer SIGNATURE M Baer

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

or B
An area of debris (7 x 5 m) 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/shov. 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 LOW TIDE WITH GOOD WEATHER. THIS IS A LOW PRIORITY.

SHORELINE OILING SUMMARY

REVISION NO. 02/23/90

OG J. Springer USCG R. Vandepels SEGMENT ST/ EL 104
 BIO Creek LAND REP D. Logan SUBDIVISION B (2 of 4)
 EXXON T. Temblin 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			
	10	15	17	18	20	25	30	35	40	45	50	55	SU	U	M	L
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT		X							X				X			
STAIN	X								X				X			
MOUSSE																
PATTIES																
TARBALLS																
FILM																
NO OIL													X		X	X

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

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris			

DEBRIS COLLECTED
☐ YES ☒ NOTYPE 0#BAGS 0

Photographs:

Roll No. ST-5-3Frames 12, 13

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-DB)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	20	25	30	35	40	45	50	55	SU	U	M	L		
							-																
							-																
							-																
							-																
							-																
							-																
							-																

COMMENTS

OG J. SPRINGER

SEGMENT 3 L-104

SUBDIVISION B

DATE 04/104/90

CHECKLIST

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

LEGEND

1 Δ
Pit - No Subsurface Oil

2 Δ_{sub}
Pit - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

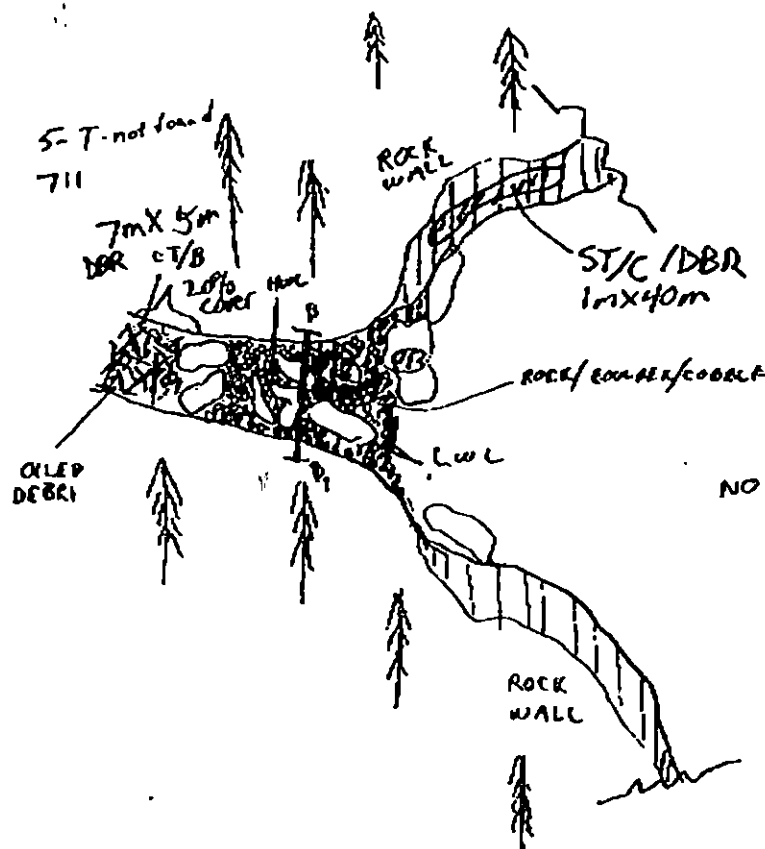
CT/P
Patched Distribution

CT/S
Splashed Distribution

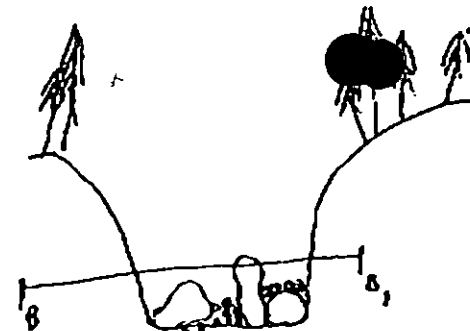
Oiled Vegetation

1 →
Photo location, direction, and number

SKETCH MAP



2 M
7 Z
7 HH
NO PIT DUG



7 Z

0 30
METERS

Oil Character Length (m): AP _____ PO _____ CV _____ CT 7 ST 40 MS _____ PT _____ TB _____ FL _____ NO 981

REVISION: 02/94/90

SHORELINE ECOLOGICAL SUMMARY pg 1 of 2

REVISION: 03/22/92

Segment ST / 104 Subdivision B Date (mo / day / yr) 4/4/90

Time (24 hr) 1540 - 1610 Biologist Crank Tide height +2 to +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
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

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
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

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

NOT PRESENT

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
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6

NOT PRESENT

3

Wildlife Observations/ General Comments:

- Marine mammal vertebrates (seal or lg. otter?)
- 50% U/TZ barnacle mortality on Bedrock faces in oil band
- Difficult Human access area
- Debris collection pocket for drift kgs.
- Recruitment is highest in barnacles and gastropods.

Ecological Considerations:

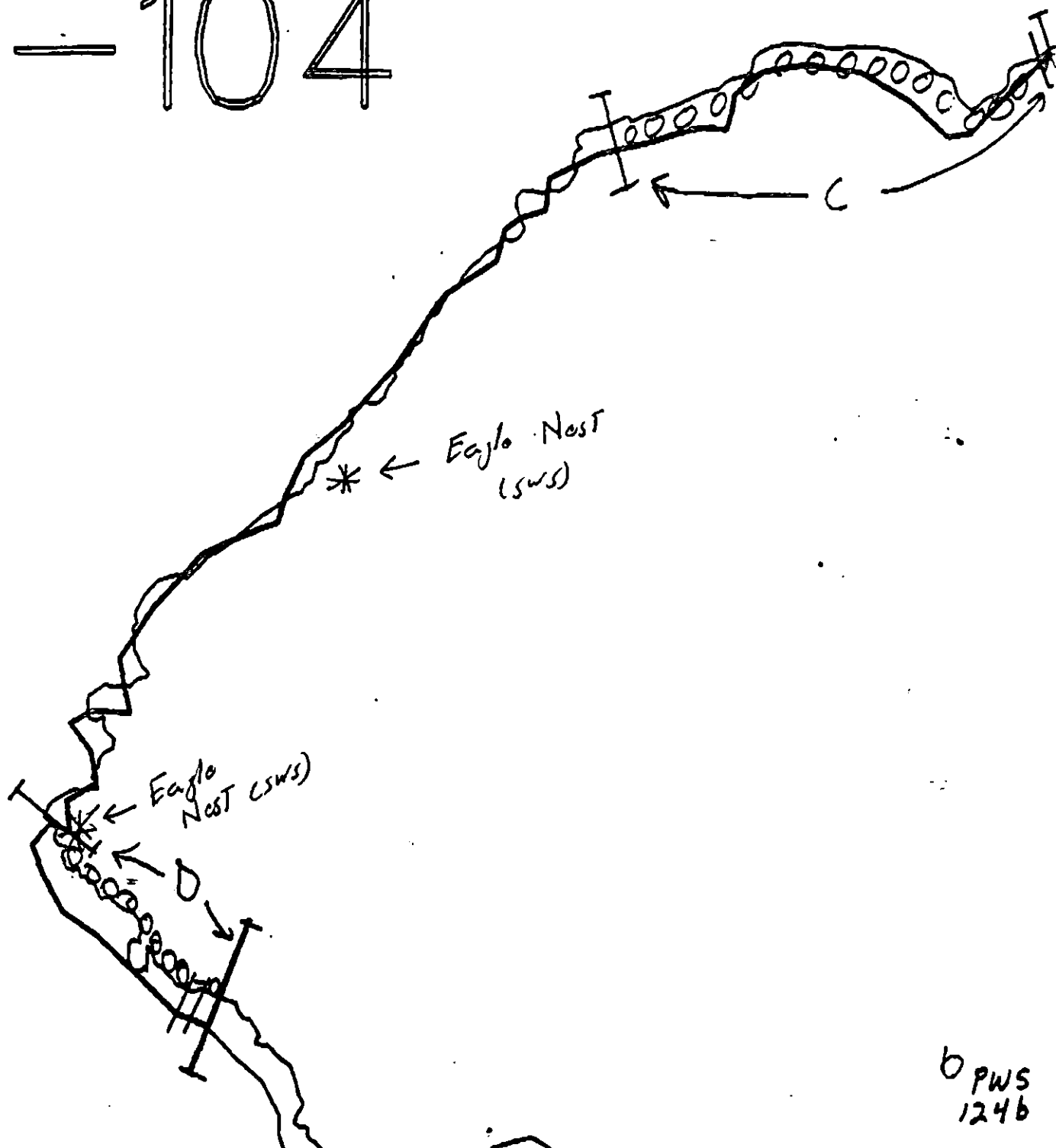
- 711 - Deer Harvesting
- 7E - Salmon Harvesting
- 7HH - Finfish Harvesting
- ST - Bald Eagle Nest - unable to locate
- ZM - Herring Spawning

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

FAUNA:

ECOLOGY
MAP

L-104



b PWS
124b

XXXX Wide

//// Medium

--- Narrow

TTTT Very Light

OOOO No fill

EL-104

ADEC Segment Length: ~~4428~~ 4428



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 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:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-105

SUBDIVISIONS: A (1 OF 1)

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

See attached Ecological Constraint Sheet for specific constraints and contacts.

6Y Special use destination

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

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

RECOMMENDATIONS:

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

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

TAG COMMENTS:

TAG APPROVAL DATE: _____

ADEC _____

EXXON _____

NOAA _____

FOSC: _____ DATE: _____

PWS, SEWARD AND HOMER ECOLOGICAL CONSTRAINTS

- 1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
 1B Salmon stream mouth - spawning (7/10 to 8/31)
 No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.
- 1C Salmon fry nursery area (4/31 to 7/31)
 1D Esther Hatchery release (4/15 to 6/1)
 1E Main Bay Hatchery release (4/20 to 5/10)
 1F Sawmill Bay Hatchery release (4/15 to 6/1)
 1G Cannery Creek Hatchery release (4/21 to 6/1)
 1H Remote release site
 1I Gill net area (6/7 to 8/31)
 1J Purse seine area (7/20 to 9/30)
 1K Purse seine hook-off (7/20 to 9/30)
 1L Set net sites (6/11 to 7/25)
 For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.
- 2M Herring spawning (4/1 to 6/15)
 Restrict boat traffic to essential minimum. Avoid damage to unrolled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.
- 3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
 3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 5R Seabird colony (5/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.
- 5S Shorebird/waterfowl concentration (4/1 to 5/15)
 Restrict all activity to essential minimum, especially air traffic.
- 5T All Bald Eagle nests (3/1 to 6/1)
 Active Bald Eagle nests (3/1 to 9/1)
 Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
- 6U Recreation: Tent sites (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 105 SUBDIVISION: A DATE 04/04/90

USCG

NAME AEC Vandepols SIGNATURE AEC Vandepols

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

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

I concur with land manager.

ADEC

NAME Michelle Bower SIGNATURE M Bower

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

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

NAMED DAN LOBAN SIGNATURE Dan Loban

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

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

24

REVISED

SHORELINE OILING SUMMARY

OG J. Springer USCG R. Vandepels SEGMENT ST/ EL. 105
 BIO P. Crenk LAND REP D. Logan (FS) SUBDIVISION A (001)
 EXXON T. Tomblin ADEC M. Barr TIME 13:30 to 15:00
 TEAM NO.: 5 TIDE LEVEL: +5 to +2 DATE 04/04/90
 EST. SUBDIVISION LENGTH: 751 m ☐ Sun ☐ Clouds ☐ Fog ☒ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock Pillow Lava, Schist
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: E to W
 SURFACE SEDIMENTS: R 30 % B 45 % C 10 % P 10 % G 3 % S 2 % M 0 % V 0 %
 SLOPE: Lang 50 % Hang 45 % Vert 5 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 10 m M 5 m N 5 m VL 5 m NO 665 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR								IMPACTED ZONES			
	AC	AS	AP	AB	SC	SB	ST	SL	TL	BL	BR	LR	SU	U	M	U
ASPHALT PAVEMENT																
POOLED																
COVER																
COAT		X								X				X		
STAIN																
MOUSSE																
PATTIES																
TARBALLS																
FILM		X								X				X		
NO OIL													SU		X	X

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

 PATTIES / TARBALLS 0 BAGS

 NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS	AMOUNT		
	SM	MD	LG
Logs			
Vegetation			
Trash			
Debris	X		

 DEBRIS COLLECTED ☒ YES ☐ NO

 TYPE Pompe

 #BAGS 1

Photographs:

 Roll No. ST-5-3

 Frames 1-8

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm-cm)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UO	UC	SC	SB	ST	SL	TL	BL	BR	LR	SU	U	M	U		
1	30					X	-		X									X					BCPGS
2	30					X	-		X									X					PGS
3	35				X		4-6		X				X					X					BCPGS
4	30					X	-		X											X			BPG
5	50	X					45-50	X						X				X					PGSV
6	30					X	-		X									X					PSV

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

SHORELINE OILING SUMMARY (PAGE 2 of 2)

REVISION 03/22/90

SEGMENT ST/ EL105 SUBDIVISION A

SUBSURFACE OIL (CONTINUED)

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM-CM)	BELOW		OIL / FILM COLOR								PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		VO	UC	BR	BL	FR	FL	GY	GR	TR	LR	SU	UT	M	LI		
7	30					X	.		X											X			PGS
8	30					X	.		X												X		CPG
9	45					X	.		X									X					PG
10	40					X	.		X									X					PG
							.																
							.																
							.																
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COMMENTS

3

REVIEWED JW DATE 4/10/90

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/25/90

Segment ST/EL 105 Subdivision A Date (mo / day / yr) 4/4/90

Time (24 hr) 1310 - 1510 Biologist Crank

Tide Height to +2.5
Length 751m

pg 1 of 1

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

(B) Overall % cover of biota (% of segment): Dense 10 Moderate 50 Low 40

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

Photographs:
Roll No. ST-5-3

Frames 8

BARNACLES

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

NOT PRESENT

4,5

MYTILUS

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

NOT PRESENT

3,4,5

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~~	3	3	3	3	3
4	4	4	~~4~~	~~4~~	4	~~4~~	4	4	4	4	4
5	5	5	~~5~~	~~5~~	5	~~5~~	5	5	5	5	5
6	6	6	~~6~~	~~6~~	6	~~6~~	6	6	6	6	6

NOT PRESENT

4,5

FUCUS

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

NOT PRESENT

3,4,5

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

2 Ravens

Eagle heard

1 Cormorant

Deer tracks in snow

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

LITZ unexposed for most of segment.

Ecological Considerations:

6Y - Special Use Destination

711 - Deer Harvesting

21

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

DATE 4/4/90 TIME 1310-1510 TIDE HEIGHT +6 → +2.5

pg 2 of

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

FLORA:

SPECIES	UTZ	MITZ	LITZ	COMMENTS
BOSSIELLA/CORALLINA				
CALLIARTHRON/CORALLINA		1		Tidepool
GLADOPHORA SPP				
COSTARIA SPP				
ENDOCLADIA MURICATA	1	1		
FILAMENTOUS GREENS	123	123		
FILAMENTOUS REDS		1		
GLOIOPELTIS FURCATA	12	12		
HALOSACCION GLANDIFORME				
LAMINARIA SPP				
LITHOTHAMNION		1		
NEHEOCYSTIS SPP				
PORPHYRA SPP	1	1		
RALPHSIA/HILDENBRANDIA	1	1		
RHODOMELA LARIX		1		Tidepool
RHODOMENIA PALMATA		2		
SCYTOSIPHON SPP	1	12		
ULVA SPP				
ZOSTERA MARINA				
Enteromorpha spp	1			Tidepool

FAUNA:

ANTHOPELURA SPP		1		
(SEM) BALUNUS CARIOSUS		1		
B. GLANDULA	123	123		Spot dense in angular 3
BRYOZOANS		3		In angular 3, not in rounded 3
CHITONS (OTHER THAN K. TUNICATA)				
CLAMS				
CRABS				
DERMASTERIAS IMBRICATA				
KATHARINA TUNICATA				
LEPTASTERIAS HEXACTIS				
LIMPETS	1	123		
LITTORINA SPP	1	123		Adults and Spot dense in angular 3
NUCELLA SPP		1		
PAGURUS SPP		1		Tidepool
PISASTER OCHRACEUS				
POLYCHAETES				
PYGNOPODIA HELIANTHOIDES				
SEARLESIA DIRA		1		
SERPULIDS				
SIPHONARIA THERSITES				
TEALIA				

Drift included Laminaria spp. and pieces of Zostera.

22

OG J. Springer
SEGMENT ST/ LL105

SUBDIVISION A

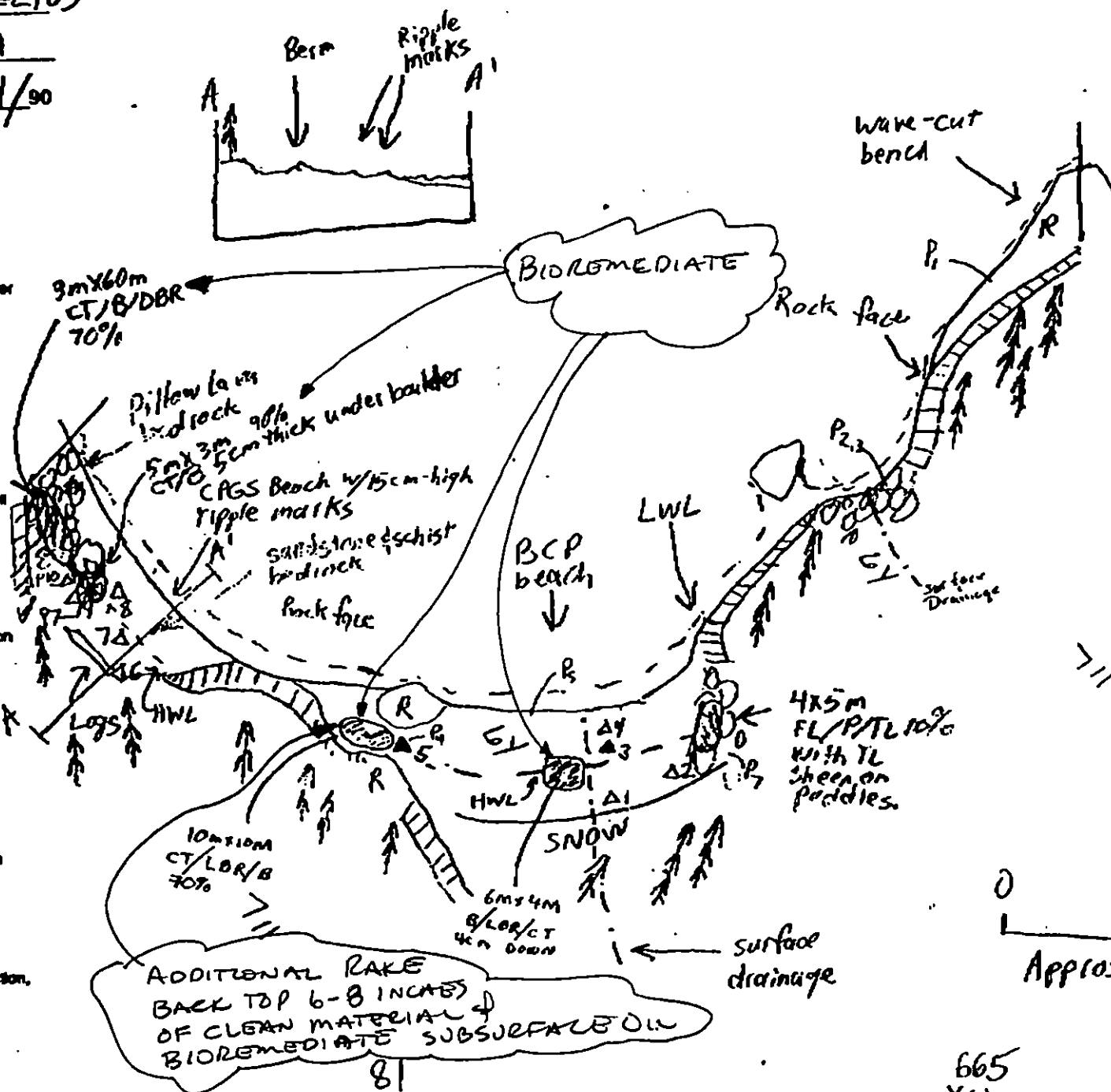
DATE 04/04/90

CHECKLIST

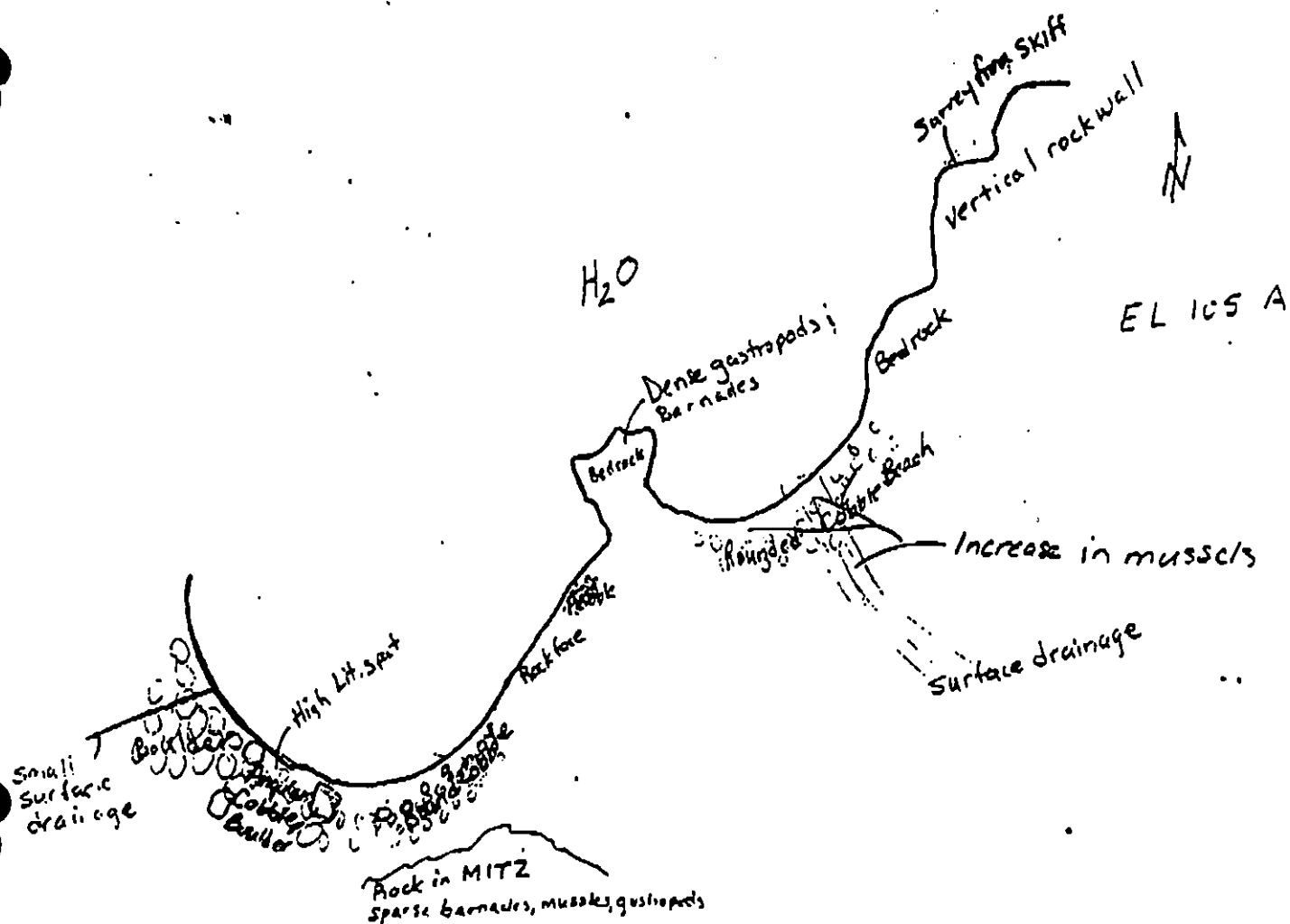
- ☒ M Arrow
- ☒ Approx. Scale
- ☒ Sub/Endry
- ☒ Oil Dist.
- ☒ Wash
- ☒ Length
- ☒ Cover
- ☒ Substrate Character
- ☒ Est. HWA/LVL
- ☒ Profile Location(s)
- ☒ Profile(s)
- ☒ PH Location(s)
- ☒ Photo Location(s)

LEGEND

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



Oil Character Length (m): AP 0 PO 0 CV 0 CT 65 ST 0 MS 0 PT 0 TB 0 FL 5 NO 86



Comments

- Mussel concentrations increase near and in fresh H₂O drainage
- Vertical rock wall surveyed by boat, Fucus sporting observations may be low and unable to obs. gastropods
- Recruitment for segment mod → low with an occasional high Barnacle recruited boulder.
- In the angular cobble recruitment is high for Littorinas. Barnacle recruitment higher but still moderate.
- Porphyra and Filamentous greens are dense on boulders and cobble.

EL-10

Revised
4/7/90



XXXX Wide

//// Medium

---- Narrow

TTTT Very Light

OOOO No Oil

EL-105

ADEC Segment Length: 751



Map Key: PWS-125

Name: James Spring

Date: 4/7/90

Data Entered:

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-105 SUBDIVISION A (1 of 1)

WORK WINDOW

Bioremediation

CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5R Seabird Colony

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

7II Subsistence: Deer Harvesting

Closed to bioremediation after 8/15.

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

[Signature]

Date

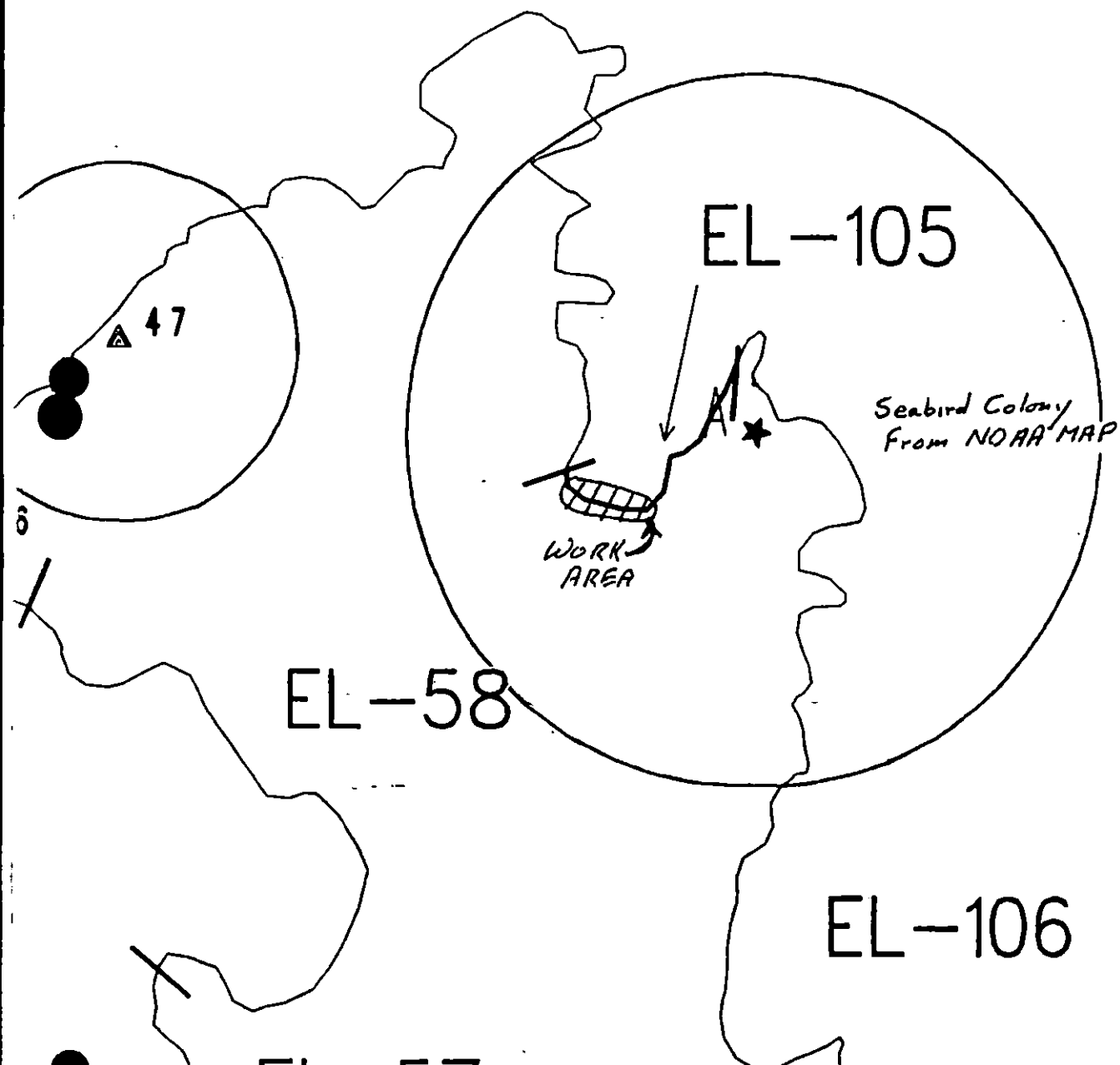
6/18/90

Prepared by

[Signature]

Date

6/14/90



SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

See attached Ecological Constraint Sheet for specific constraints and contacts.

6Y Special use destination
7II Deer harvest (8/15 to 2/28)

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: [Signature] DATE: 4/17/90

OILING CATEGORIZATION:

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

RECOMMENDATIONS:

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

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

SEE CONSTRAINTS ADDENDUM dated 6/14/90 [Signature]

TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90

ADEC Art Weisner [Signature]
EXXON Andy Ten [Signature]
NOAA Buck Westcott [Signature]
USCG Kenneth Kerne [Signature]

FOSC: [Signature]

DATE: 4-22-90

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

See attached Ecological Constraint Sheet for specific constraints and contacts.

6Y Special use destination

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: *Shirley E. H. Jones*

DATE: 4/17/90

OILING CATEGORIZATION:

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

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

 Manual Pickup

X Bioremediation

 Tarmat: Breakup

 Removal

 Snare/Absorbent Booms

 Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

 Spot Washing: Wands

 Beach Cleaner

X Other (see comments)

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

TAG COMMENTS:

TAG APPROVAL DATE: 4/17/90

ADEC *Art Weisner* *Det. Weisner*

EXXON *ANDY TGA* *Real*

NOAA *Burt Wescott* *Burt Wescott*

USCG *KENNETH KEANE* *James H. Jones*

FOSC: *[Signature]*

DATE: 4-22-90

OG J. Sander
SEGMENT ST/ EL105

SUBDIVISION A

DATE 04/04/90

CHECKLIST

- ☒ M Area
- ☒ Approx. Scale
- ☒ Seg/Sub Bndry
- ☒ Oil Dist
- ☒ Wash
- ☒ Length
- ☒ Cover
- ☒ Substrate Character
- ☒ Est. HML/LWL
- ☒ Profile Location(s)
- ☒ Photo Location(s)

LEGEND

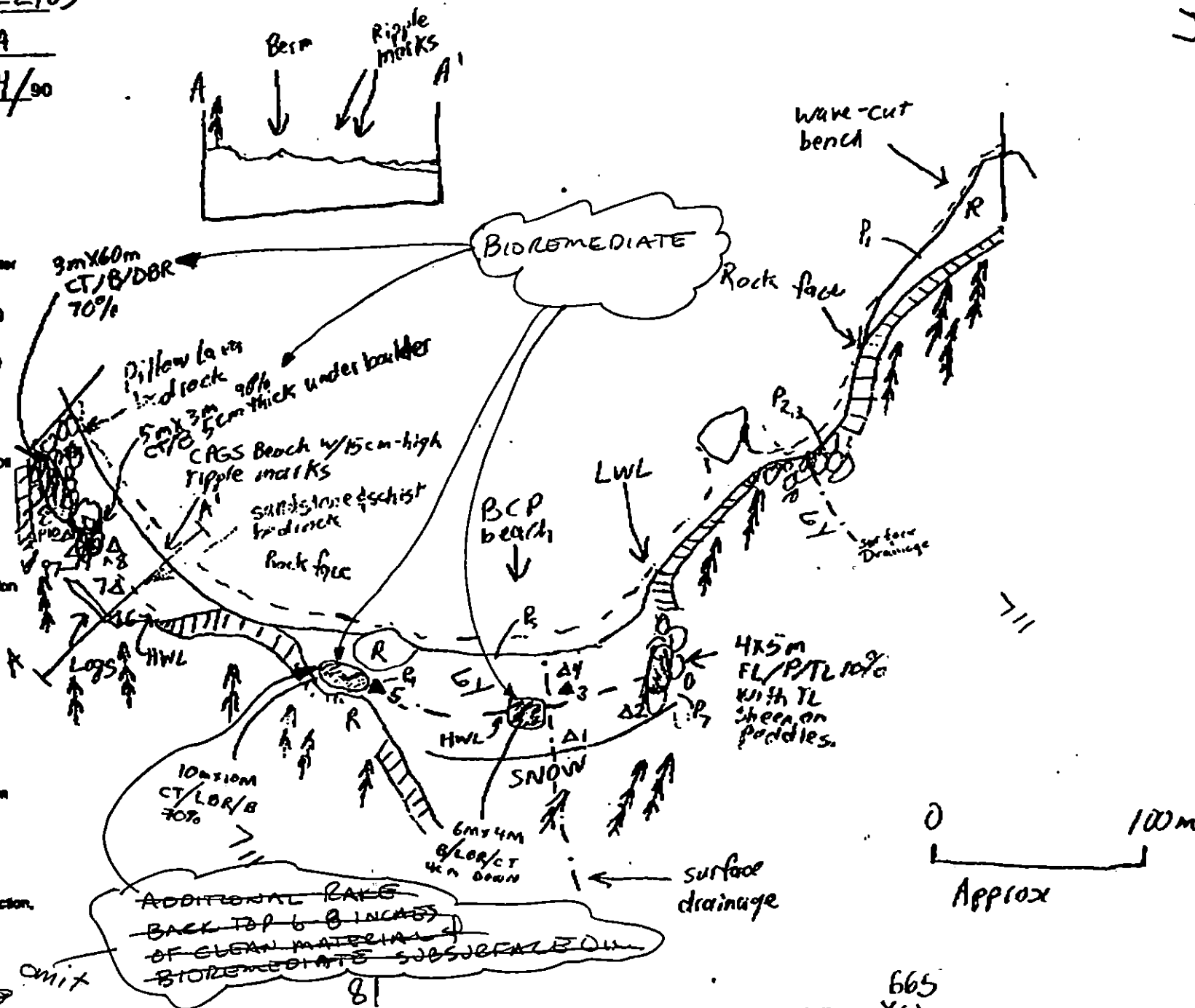
- 1 Δ
PH - No Subsurface Oil
- 2 Δ
PH - Subsurface Oil
- CT/C
Continuous Distribution
- CT/B
Broken Distribution
- CT/P
Patchy Distribution
- CT/S
Splashed Distribution
- Oiled Vegetation
- 1 $\Rightarrow$
Photo location, direction, and number

ETCH MAP

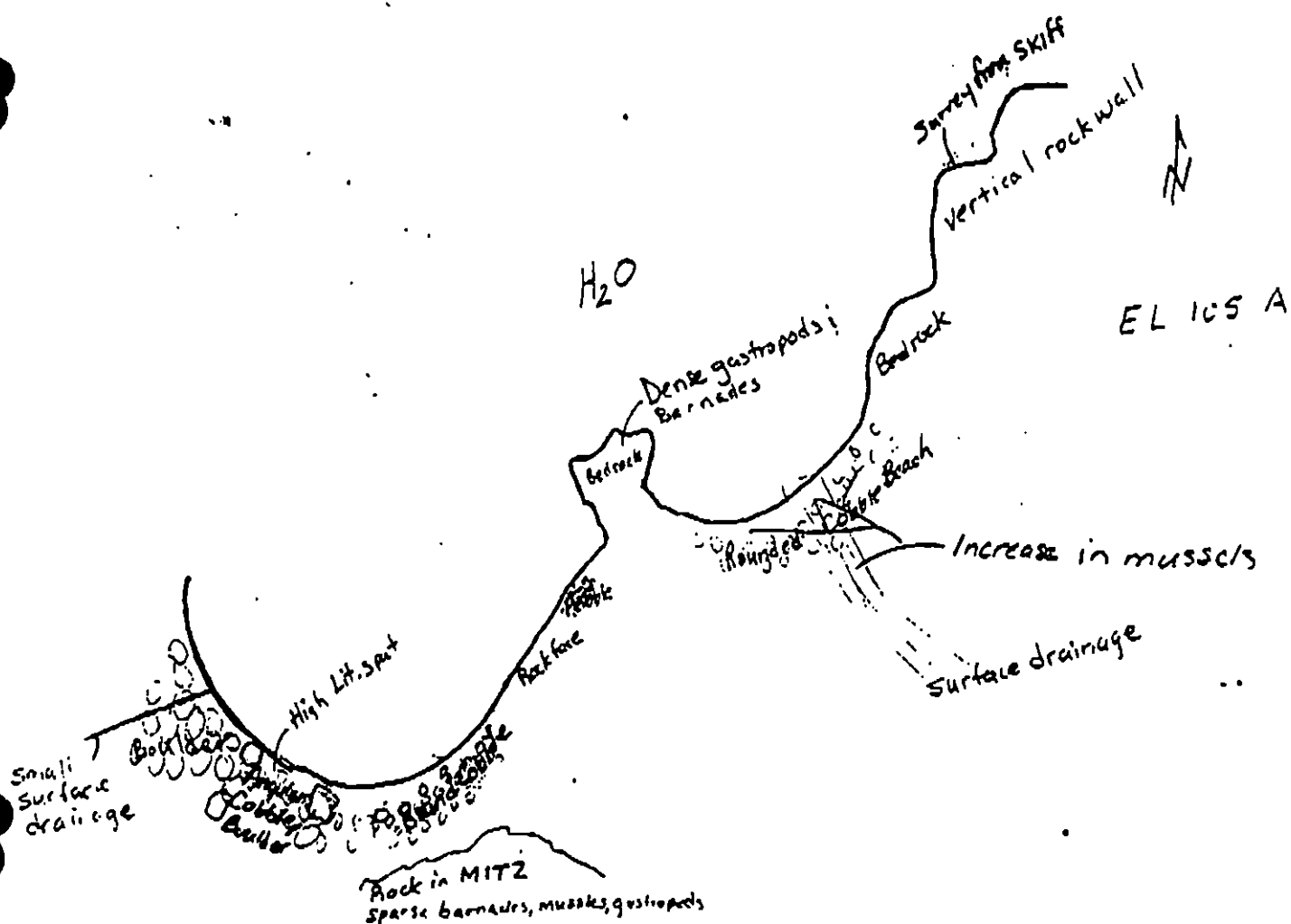
Revised 4/7/90

4

2



Oil Character Length (m): AP 0 PO 0 CV 0 CT 65 ST 0 MS 0 PT 0 TB 0 FL 5 NO 665

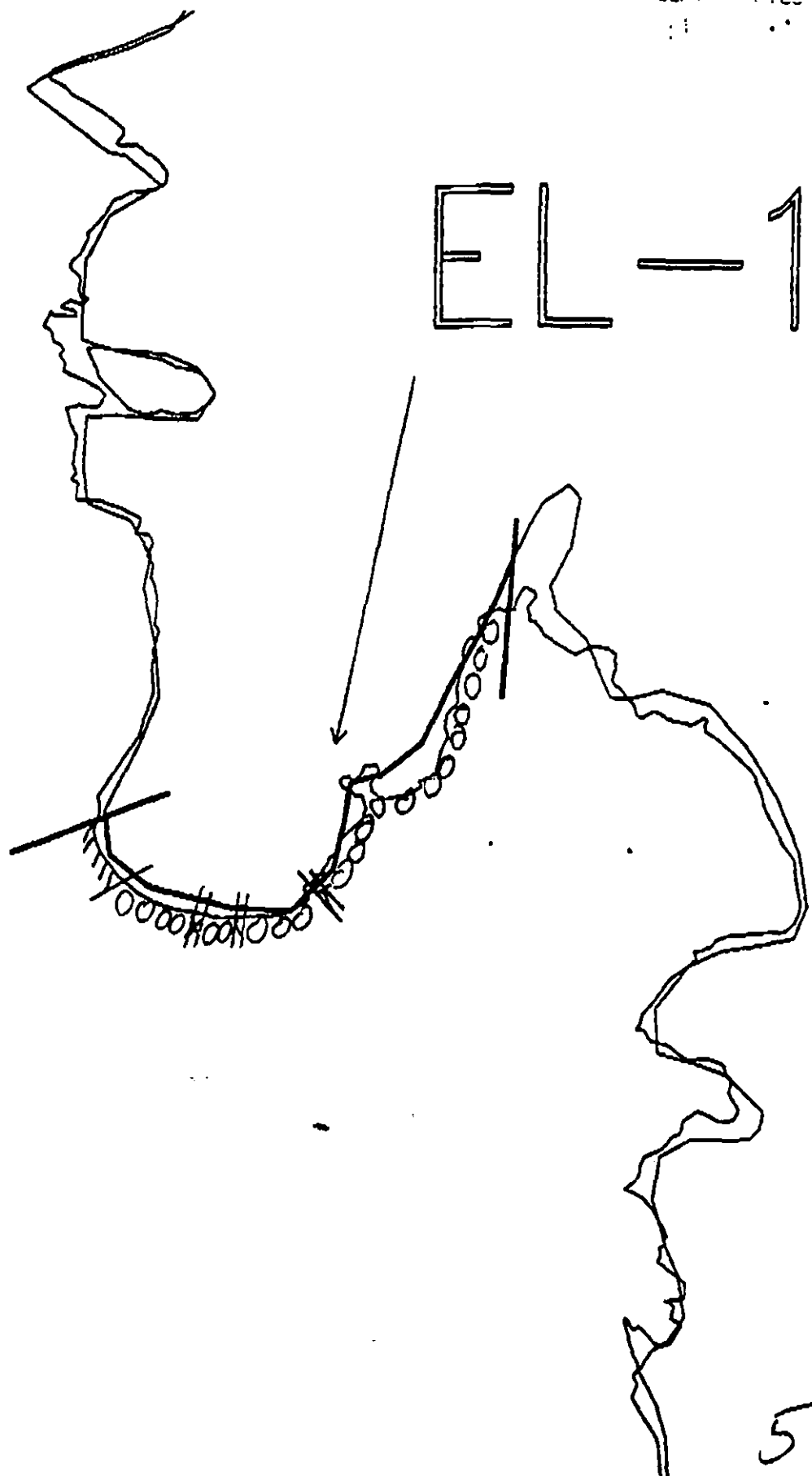


Comments

- Mussel concentrations increase near and in fresh H₂O drainage
- Vertical rock wall surveyed by boat, Fucus sporting observations may be low and unable to obs. gastropods
- Recruitment for segment mod → low with an occasional high Barnacle recruited boulder.
- In the angular cobble recruitment is high for Littorinas. Barnacle recruitment higher but still moderate.
- Porphyra and Filamentous greens are dense on boulders and cobble.

EL-10

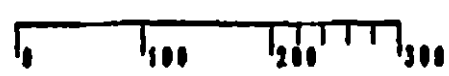
Revised
4/7/90



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

EL-105

ADEC Segment Length: 751



Map Key: PWS-125
Name: James Spring
Date: 4/7/90
Data Entered:

7/13/90

P.P.

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-105 SUBDIVISION A (1 of 1)

WORK WINDOW

Bioremediation

WORK PRIOR TO 8/15

~~8/15/90~~**ARCHAEOLOGICAL STANDARD CONSTRAINT**

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5R Seabird Colony

NO CONSTRAINT

~~Closed to all activities~~; work site is ^{more} ~~less~~ than 800m from seabird colony.

7II Subsistence: Deer Harvesting

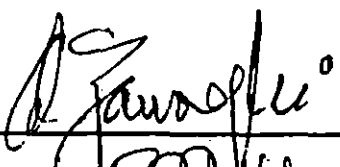
Closed to bioremediation after 8/15.

✓ 17-1 f

OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC



Date

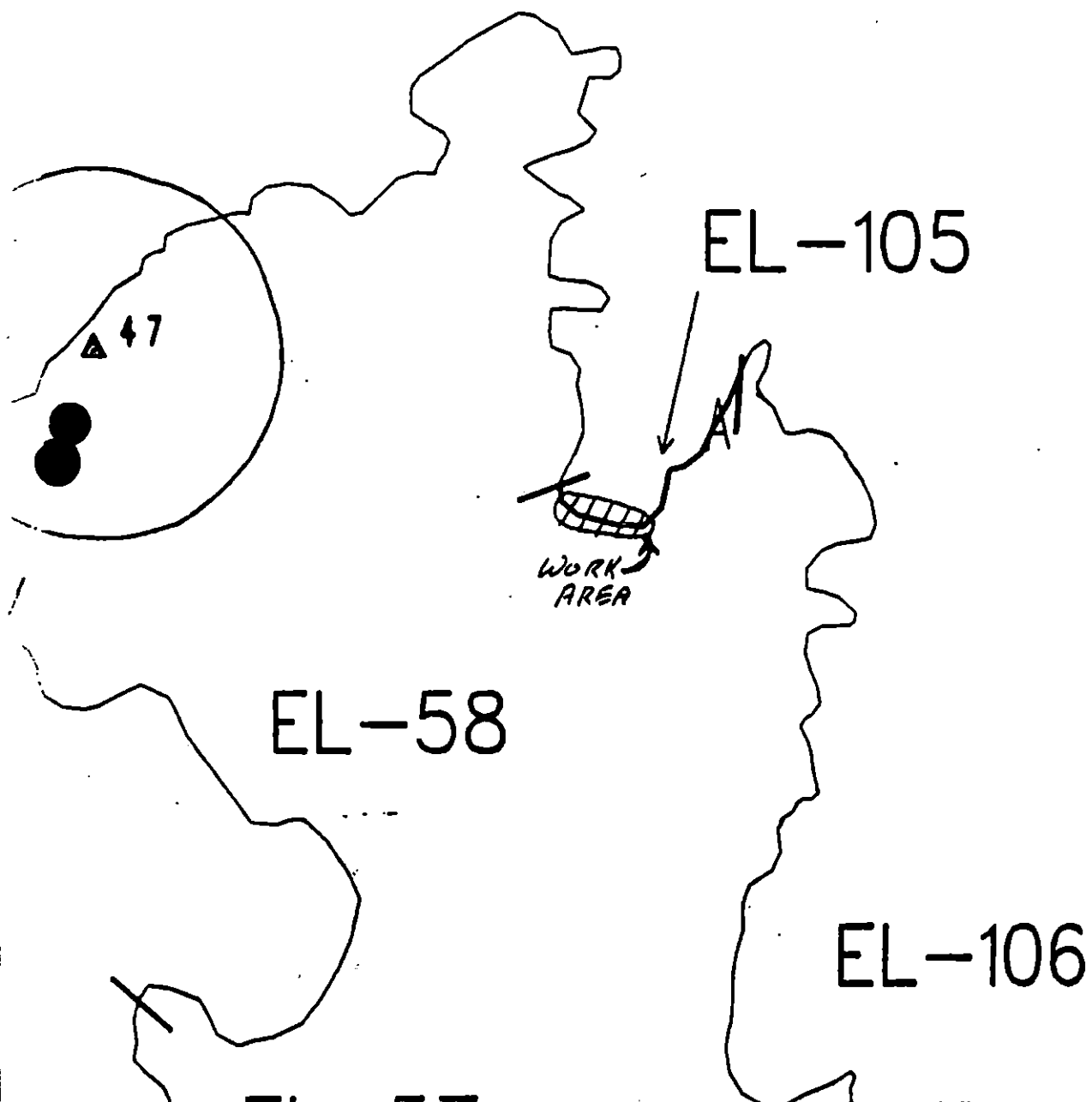
6/16/90

Prepared by



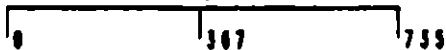
Date

6/14/90



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

METERS



Seabird Colony



Eagle Nest

1 inch = 1205 feet

KON Company, USA

Map Key: KON-EL-105

May 11, 1990

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

See attached Ecological Constraint Sheet for specific constraints and contacts.

6Y Special use destination
7II Deer harvest (8/15 to 2/28)

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: [Signature] DATE: 4/17/90

OILING CATEGORIZATION:

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

RECOMMENDATIONS:

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

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

SEE CONSTRAINTS ADDENDUM DATED 6/14/90 PP

SEE CONSTRAINTS ADDENDUM DATED 7/13/90

TAG COMMENTS:

REVISION 1 PP

TAG APPROVAL DATE: 4/17/90

ADEC Art Weimer
EXXON Andy Ten
NOAA Bruce Weslett
USCG Kenneth Kerne

FOSC: [Signature]

DATE: 4-22-90

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-106

SUBDIVISIONS: A (1 OF 3)

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

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

RECOMMENDATIONS:

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

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

Seal & sea lion

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

SEGMENT ST / EL-106-A SUBDIVISION: A DATE 4/6/90

USCG

NAME DAVID A. SCHNEIDER SIGNATURE David A. Schneider☒ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED PSS/USCG

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

ADEC

NAME Peter Montesano SIGNATURE Peter J. Montesano☐ NO TREATMENT RECOMMENDED☐ TREATMENT SUGGESTED > N/A

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

LAND MANAGER

NAME JANETTA PRITCHARD SIGNATURE Janetta Pritchard☐ NO TREATMENT RECOMMENDED
COMMENTS☐ TREATMENT SUGGESTED

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

OG C. DILLON USCG D. SCHNEIDER SEGMENT ST/ EL-106
 BIO T. BARRY LAND REP J. FEITCHARD (DNR) SUBDIVISION A (1043)
 EXXON A. SNOOK ADEC P. MONTESANO TIME 14:30 to 16:45
 TEAM NO.: 6 TIDE LEVEL: +1 to +4 DATE 04/02/90
 EST. SUBDIVISION LENGTH: 3900 m ☐ Sun ☒ Clouds ☐ Fog ☐ Rain ☒ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock cliffs and steep mountainside
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: N to S
 SURFACE SEDIMENTS: R 96 % B 2 % C 2 % P 0 % G 0 % S 0 % M 0 % V 0
 SLOPE: Lang 2 % Hang 100 % Vert 38 % WAVE EXPOSURE: ☐ Low ☐ Med ☒ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 25 m VL 75 m NO 3900 m

SURFACE OIL

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

PAVEMENT: H F S 0 sq. m by 0

PATTIES / TARBALLS 0 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-6-3

Frames 5-7

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (CM)	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OF	OR	OL	OF	NO		UD	UC	1	2	3	4	SU	U	M	U		
1	35				X		0-35	X				X	X	X					C/P
							.												
							.												
							.												
							.												
							.												

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

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

SHORELINE ECOLOGICAL SUMMARY

REVISION: 08/22

Segment ST/ EL106 Subdivision A Date (mo/day/yr) April 2 1990Time (24 hr) 1430 1645 Biologist Jim BARRY Length 3900(A) Substrate type and % of segments:
(1) Bedrock 96 (2) Boulder 2 (3) Cobble 2 (4) Pebble (5) Sand (6) Silt (B) Overall % cover of biota (% of segment): Dense 90 Moderate 6 Low 4

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

Photographs:
Roll No. NoneFrames

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

MYTILUS

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

NOT PRESENT

GASTROPODS

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

Glaucous-winged gulls - 9

Buoys - 25

Seals - 8

Eagle nest in another subdivision.

Ecological Considerations: 6Y, 711 5T

1) Eagle nests observed in another subdivision of the segment - No apparent risk to nest from cleaning operations.

2) Caution advised for boating activities near seal haul-out areas. Avoid these sites if possible.

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

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)
 3Q, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
 Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.
- 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
 7JL Deer harvesting (5/15 to 2/25)
 7JJ Invertebrate harvesting
 For Codes 7Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.

START TIDE WINDOW
END 1700

I General Comments

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

II Major Species

A. Barnacles

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

B. Mussels

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

C. Gastropods

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

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

E. A LIST OF MAJOR & MINOR SPECIES FOLLOWS

MAJOR SPECIES

I MARINE PLANTS

A. DIATOMS / BLUE GREEN ALGAE D123.

B. GREEN ALGAE - CHLOROPHYTA

Sporogompha / Acrosiphonia D12*

Ulva m12

Ulva spora D23

C. Red Algae - Rhodophyta

Petrocelis m12

Porphyra D123

Rhodomela larix m123

Rhodomenia palmata m12*

D. Brown Algae

Alaria pylaia m12

Fucus distichus D123*

Laminaria spp. m12

Hildenbrandia spp. D12*

Ralfsia spp. m1

* Juveniles present

D = Dense / Abundant

M = Moderate / Common

S = Sparse / Occasional

R = RARE

1 = Bedrock

2 = Boulder

3 = Cobble

4 = Pebble

5 = Sand

II Animals

A. BARNACLES

Chthamalus dalli D12*

Balanus glandula D12*

Semibalanus cariosus D1*

B. Hermit Crabs - Paguridae D23

C. Amphipods - Orchestra spp.? m23

D. Mussels - Mytilus edulis D123*

E. Snails

Littorina scutulata D123*

L. sitkana D123*

Nucella lamellosa m123*

N. emarginata m123*

F. Limpets

Lolita digitalis D12*

Tectura sentum m23*

G. Sea Stars - Pycnopodia m123*

Pisaster D12

II MINOR SPECIES

B. Animals

1. WORMS -

Flatworms (unlabeled spp) R3

Polychaetes

Spirorbis sp D 23 *

Serpula sp S 12

Crucigera sp S 12

2. Molluscs

a) Snails / Limpets

Tachyrhynchus spp m 23 *

Lottia pumila S 12 *

Tectura pumila S 12 *

b) Chitons

Katharina tunicata D 12 *

Tonicella lineata S 12

Mopalia spp R 12

3. Sea Stars

Dermasterias m 12 *

Henricia R 1

Leptasterias m 23 *

Orthasterias S 12

4. Scallops

Pododesmus cepio S 12

5. Mussels

Modiolus modiolus R 1

6. Anemones

Anthopleura xanthogrammica S 12 *

Tealia crassicornis m 12

Epiactis sp. m 12 *

7. Pulmonate Snails - Siphonaria sp. D 1 *

8. Crabs

Acanthelithodes ? S 123

Pagetta productus S 123 *

9.

9. Bryozoans

Schizoporella spp. m 23 *

10. Beach Hoppers

Isopoda S 23

11. Fish

Pholidae D 23 *

Cottidae S 1

12. Hydroids

Stylandrea porphyra S 123

13. Hydroids

Sertulariidae S 23

*	Juveniles present
D	Dense / Abundant
m	Moderate / Common
S	Sparsely / Occasional
R	Rare
1	Bedrock
2	Boulder
3	Cobble
4	Pebble
5	Sand

II MINOR SPECIES

A. MARINE PLANTS

1. GREEN ALGAE - CHLOROPHYTA

Cladophora S12

Enteromorpha M12A

2. Red Algae - Rhodophyta

Amphitetia plicata S12

Bassiella spp. M1

Callianthron spp. M1

Coralina spp. M1

Endocladia muricata S1

Halosaccus glandiforme M12A

Iridaea spp. M1

Lithothamnion M1, M12A

Membranoptera platyphylla? D12A

Microcladia / Pterocladia? S12

Odanthalia M12A

Placodium O12

MASTOCARPUS O12A

3. Brown Algae

Costaria M12

Sargassum M123

F General Comments.

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

G. WILDLIFE

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

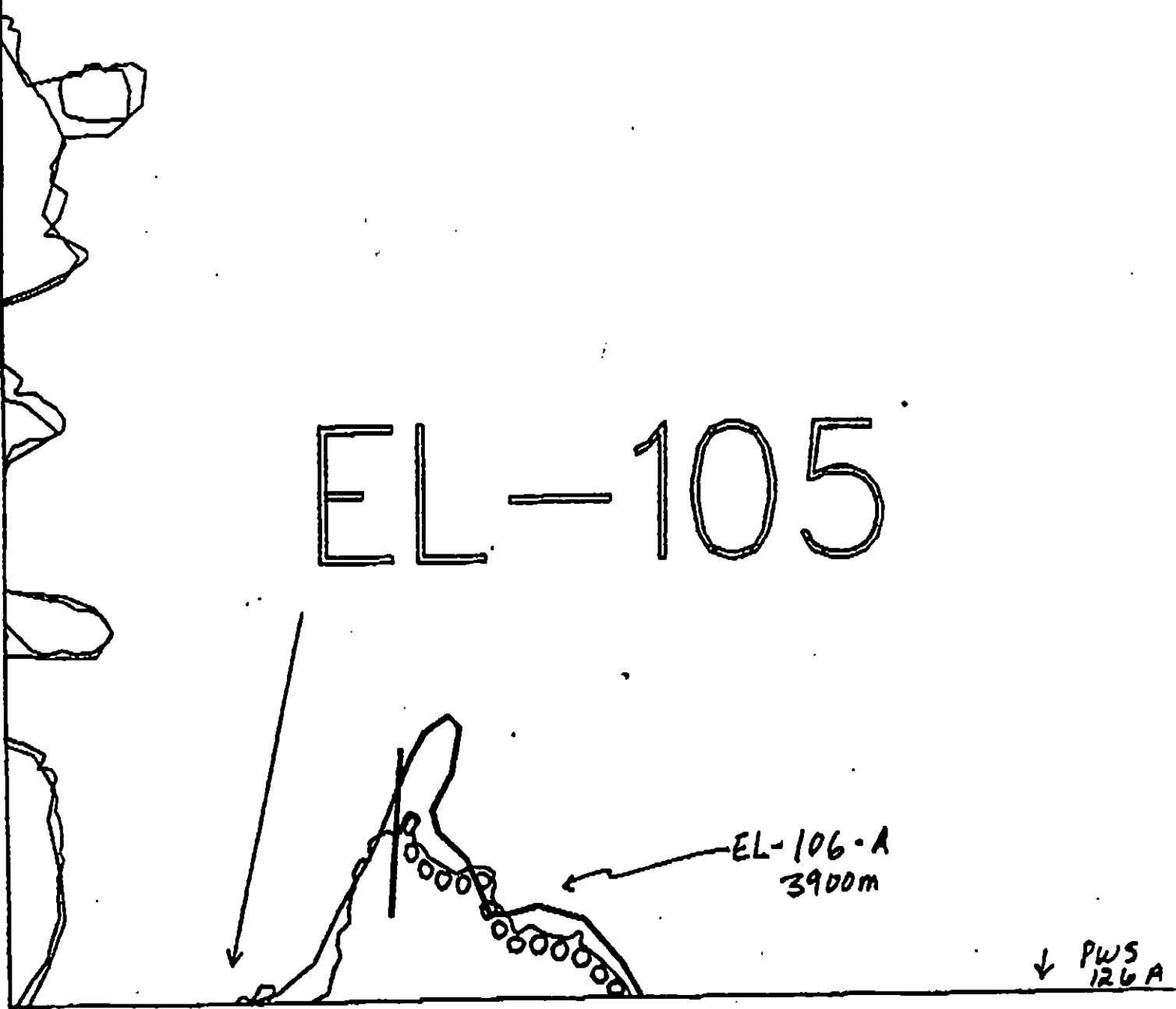
2. Bald eagles - common

3. Clamorous veeryed gull

4. Ravens

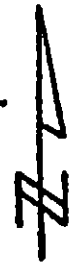
5. Crows

EL-105



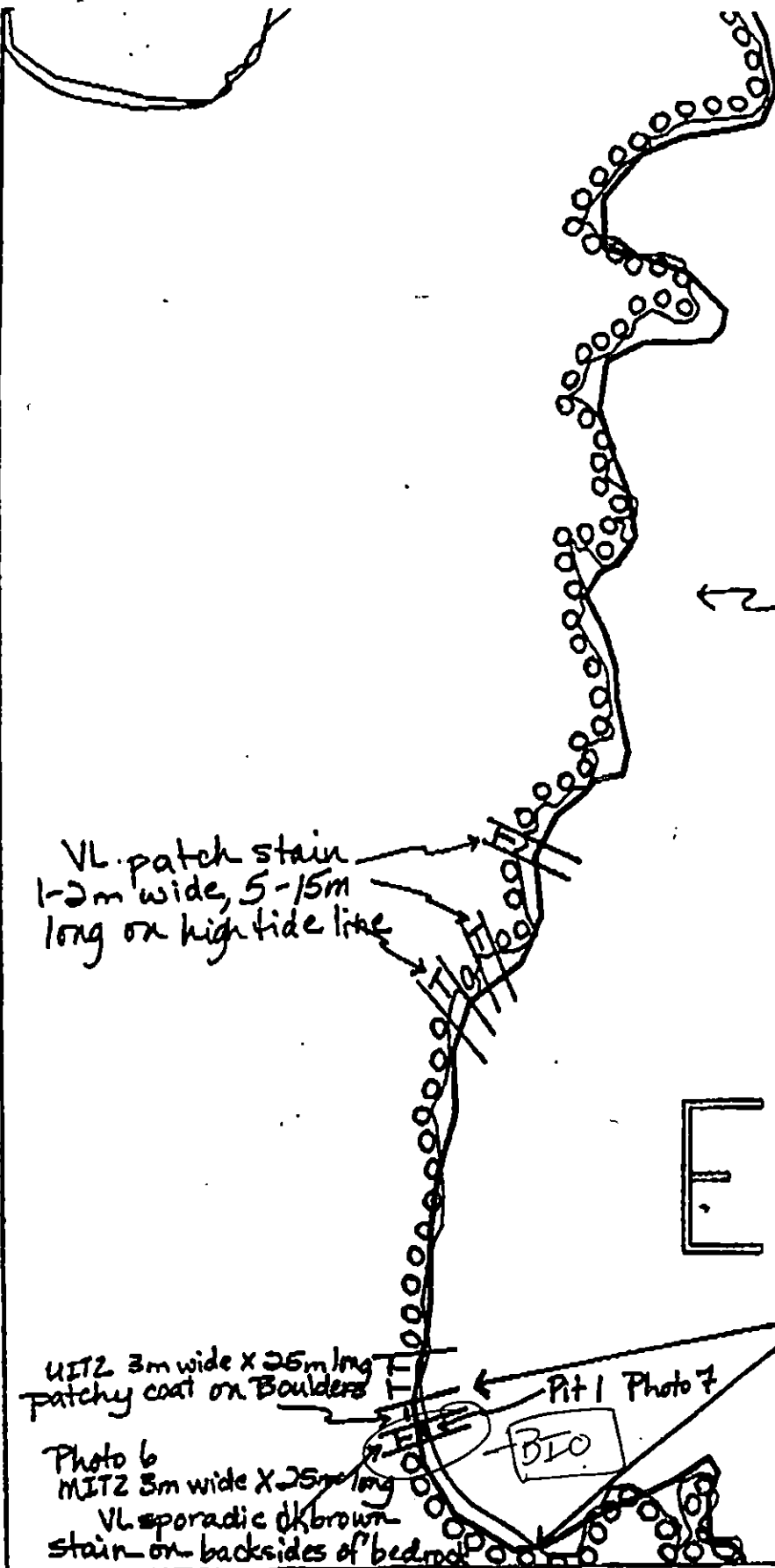
XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
0000 No Oil

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



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

PWS
1266
~~Page 2 of 4~~



← EL-106-A
3900 m

EL-106

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

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

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

Pit 1 Photo 7

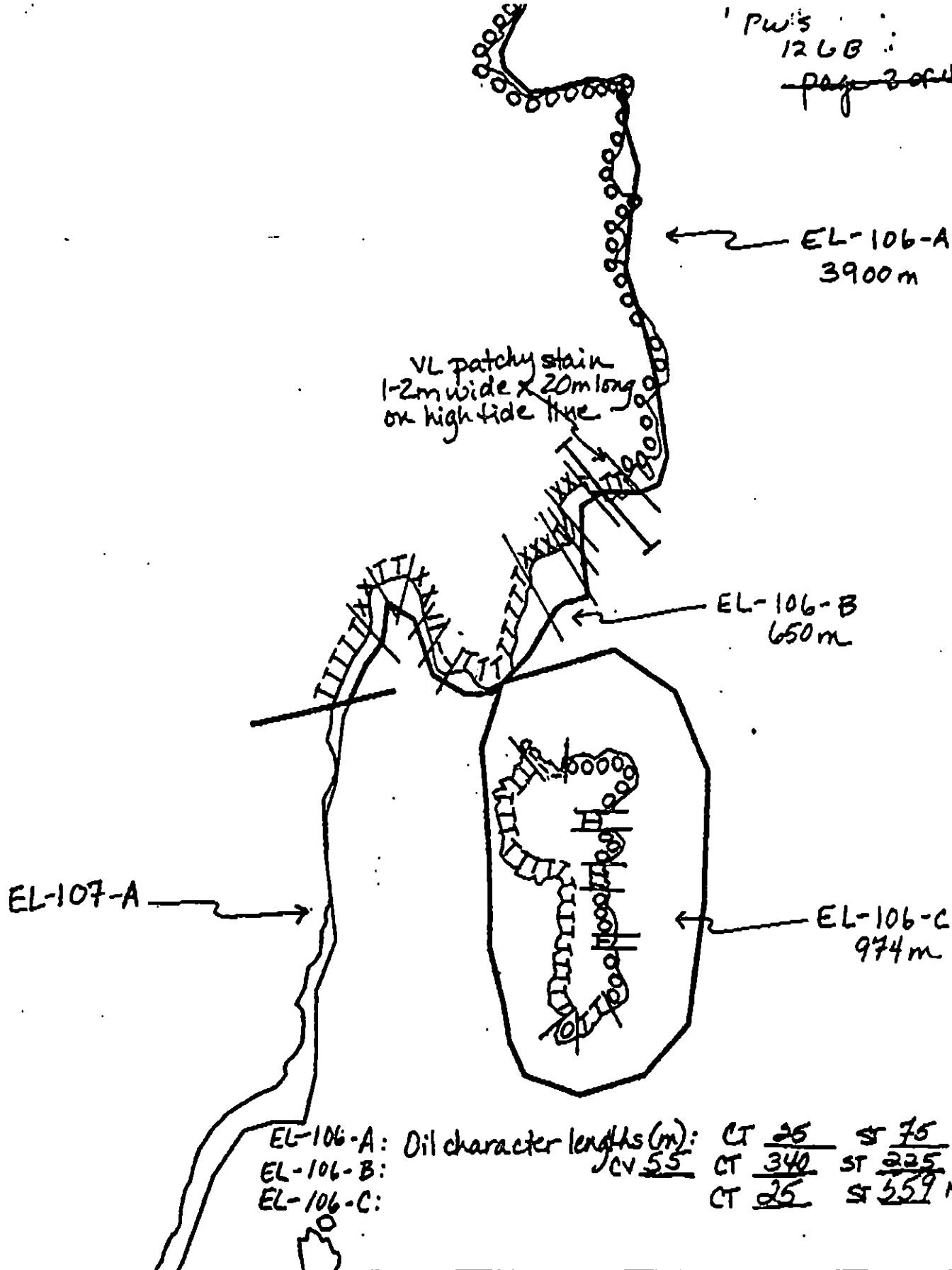
BLO

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

EL-106
Exxon Segment Length: 6524m
ADEC Segment Length: 5078m



Map Key: PWS-1266
Name: C. Dillon
Date: 4/2/90
Data Entered:



EL-106-A:	Oil character lengths (m):	CT <u>25</u>	ST <u>75</u>	NO:
EL-106-B:		CV <u>55</u>	CT <u>340</u>	ST <u>235</u>
EL-106-C:			CT <u>25</u>	ST <u>559</u> NO:

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

EL-106

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



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

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-106

SUBDIVISIONS: B (2 OF 3)

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

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

RECOMMENDATIONS:

☐ 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	☒ X* Other (see comments)

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

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

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

USCG

NAME DAVID A. SCHNEIDER SIGNATURE David A. Schneider

FBS/USCGR

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

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

ADEC

NAME

Peter Montesano

SIGNATURE

Peter Montesano

(Signature)

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS The small Cobble Pocket by Pit #2 has oiling to be bried. The upper tidal oiled area should be pulled down to expose + thin oil layer before bio. The surface is t clean to apply a fertilizer now.

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

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

LAND MANAGER

NAME

JANETTA PRITCHARD

SIGNATURE

Janetta Pritchard

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

The beach on the N end of this subdivision is p/c and provides easy access to the uplands but is not necessarily a good recreation site. The U12 should be pulled down + bio'd. The other end of the beach + beach where pit 5 is located are mainly boulders. These areas are log covered + I recommend hot water wash. Stone + absorbent worms + pom poms must be picked up. Beach adjacent to EL107 is really a sloping GPs beach which would provide excellent recreational use + access to the uplands. b/c's areas on each side has coal + tar balls. These should be picked up prior to hot water washing. Hot water wash should be utilized to loosen oil and then bioremediation of the two areas are recommended.

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

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR				IMPACTED ZONES			
	C	N	P	R	1	2	3	4	SU	U	M	U
ASPHALT PAVEMENT			X					X		X		
POOLED												
COVER		X			X					X	X	
COAT	X	✓			X					X	X	
STAIN	X				X					X	X	
MOUSSE												
PATTIES												
TARBALLS												
FILM												
NO OIL	Snow on last beach								S			X

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

PATTIES / TARBALLS 0 BAGS

NEAR SHORE SHEEN? NO BR (RW) SL TL

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

DEBRIS COLLECTED
☐ YES ☒ NO

TYPE 0

#BAGS 0

Photographs:

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

Frames 2-4 Frames 19, 21-24

26-28

SUBSURFACE OIL

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER					OILED INTERVAL (cm)	BELOW		OIL / FILM COLOR				PIT ZONE				A N A	SUBSURFACE SEDIMENTS
		OP	OR	OL	OF	NO		UD	UC	1	2	3	4	SU	U	M	U		
1	20	X					0-15		X	X			X		X				C/P/G
2	35		X				0-30		X				X		X				C/P
3	38					X			X						X				C/P
4	15		X				0-15	X					X		X				C/P/G
5	18	X					0-18	X		X					X				B/C/Veg
6	25				X		15-25	X					X				X		P/G
7	40					X	0-15								X				P/C/G
7	40				X		15-30	X					X		X				P/G

SHORELINE ECOLOGICAL SUMMARY

Segment ST/ ELIOG Subdivision B Date (mo/day/yr) April 6 1990

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

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

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

Frames 18-28

BARNACLES

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

MYTILUS

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

GASTROPODS

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

FUCUS

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

Wildlife Observations/ General Comments:

Crow - 5 SEA OTTERS - 2
Pelecanus Cormorant ~20 SEALS - 3
Common Loon - 3 KILLER WHALE - 1
Pilot Whale - 1

Ecological Considerations:

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

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
 ✓ 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.

APRIL 7 1990

3/6

I General Comments

A. MAJOR HABITAT TYPES

1) COBBLE BEACHES - EXPOSED

Three beaches are found at several sites in subdivision A. All have sediments to high corners of fucos in the mid to low zone. Cobs also in the low to mid zone appear to be clean on the surface, but have some oil coating on the undersurface with the sediments. This oil is washing rapidly down in the intertidal, but is more persistent in the upper zone where feeding and biological activity is lower.

2) Sandy/Pebble beaches. One beach of this type is present near a small stream (noted on map) a small mudflat but is developing as the pebble beach when it may have started before the cleaning activities began. Wet grass is abundant in shallow waters just offshore, as well as along the shore at other locations with a sediment bottom. Hard bottom areas have kelp on the north.

3) Cobble beaches ~~be~~ shores have moderate cover of fucos and amphipods and similar characteristics to cobble beaches, but are less exposed and overcast by waves. Bioturbation is generally more dense on these sites. Clean beds are present and are necessary.

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

B) Sensitive Areas

1) The sand flat beach would be as little disturbed as possible, due to the presence of a spore, but necessary mudflat bed and clam bed.

2) Areas where wet grass beds occur should not be heavily disturbed, especially during burning seasons periods.

EL106-B

April 7 1990

3/1

B) Sensitive Areas (cont)

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

II MAJOR SPECIES

A BARNACLES - COMPOSED OF Balanus GLANVILIA, WITH lesser cover of Semibalanus cariosus (middle intertidal zone) and CATHARINUS and Balanus present.

B. Mollusks - see above

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

D. Pucers. Sparse and dead adults present in the high zone of some sites, apparently due to cleaning operations

III Other species

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

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

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

ELOS2 - 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 S123

3) RED ALGAE

- PORPHYRA M12
PETROCOLIS S12
RHODOMELA LARIX M12
RHODYMENIA PALMATA D12
BOSSIELLA SPP. S12
CALLIARTHRON S12
CORALLINA S12
ENDOCLADIA S12
HALOSACCION M123
IRIDARIA S12
CRYPTOSIPHONIA M12
MEMBRANOPTERA M12
MASTOCARPUS S12
MICROCLADIA / PTEROCLADIA M123
LITHOTHAMNION S12

4) BROWN ALGAE - PHAEOPHYTA

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

B. ANIMALS

1) BARNACLES

- Semibalanus cariosus S123
Balanus glandula M123
Chthamalus dalli M123

2) POGONIDAE - HAMMUS CARDS M123

- Hemigobius crenulatus S23
HAPLOGASTER R23
PUGETTIA spp. R23

3) Amphipods -

Orchesto spp. M123

4) Mysids - Mysidacea. R. W. Allen

5) Beach Hoppers - ISOPODA S23

6) MUSSELS - Mytilus edulis M12 Modiolus spp. R12

7) Littorina k'scutulata M-D123

L. siliqua M-D123

Nucella lamellosa S123

N. emarginata S23

Scaphesia dira M23

Tachyagathus S23

8) LIMPETS

Tectaria scutum M23

T. fenestrata S12

T. pumila

Lottia digitalis S12

L. pumila S12

Pemacra mitra R12

Siphonaria dithersites M123

9) CHITONS

Tunicella lineata R12

Mopalia spp. R12

Katharina tunicata R12

10) Sea Stars

Pyropodia helianthoides M23

Dermasterias M12

Leptasterias M12

Orthasterias R123

Pisaster ochraceus M12

11) Scallops / Clams

Pododermus S12

Hyattella S12

Prototheca S12

Macoma spp. S12

12) Anemones

Anthopleura elegantissima S12

A. artemesia R123

A. kumthymma R123

Tealica crassicornis R123

Epiactis R123

ELOS2-B

ANIMALS (cont)

APRIL 7 1990

5/6

13) WORMS

ECHINURAN WORMS - ECHINURUS ECHINURUS

SIPUNCULIDS - PHASCOLOSOMA spp.

POLYCHAETES -

NEREIDAE *S123

NIDMIDAE R123

OTHSA3

SERPULIDAE R123

SERPULA

CRUCIGERA

SPIROBIDAE M-D123

SPIROBIS spp.

* Juveniles present

D Dense

M Moderate

S Sparse

R RARE

1 Bare Bedrock

2 Boulder

3 CORAL

4 Pebble/Sand

14) FISH -

Cottidae - 3 spp. M123

PHOLIDAE - 1-2 spp. M23

15) ~~Hydrozoa - Stylaster porphyra~~

16) OTHERS

Natica clausa - trochus - R23

Amphissa columbiana R23

Lanellideris fusca? M12

Guerrinosphaeroma oregonensis S123

Other isopods - 2 spp

~~Lebbeus spp. R23~~

Schizoporella spp? M123

~~Strongylocentrotus drobachensis R23~~

DATE 07 / APRIL 90

CHECKLIST

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

LEGEND

1 
 FIG. - No Subsurface Oil

2 
 FIG. - Subsurface Oil

CT/C
Continuous Distribution

CT/B
Broken Distribution

CT/P
Patchy Distribution

CT/S
Splashed Distribution

Cited Vegetation

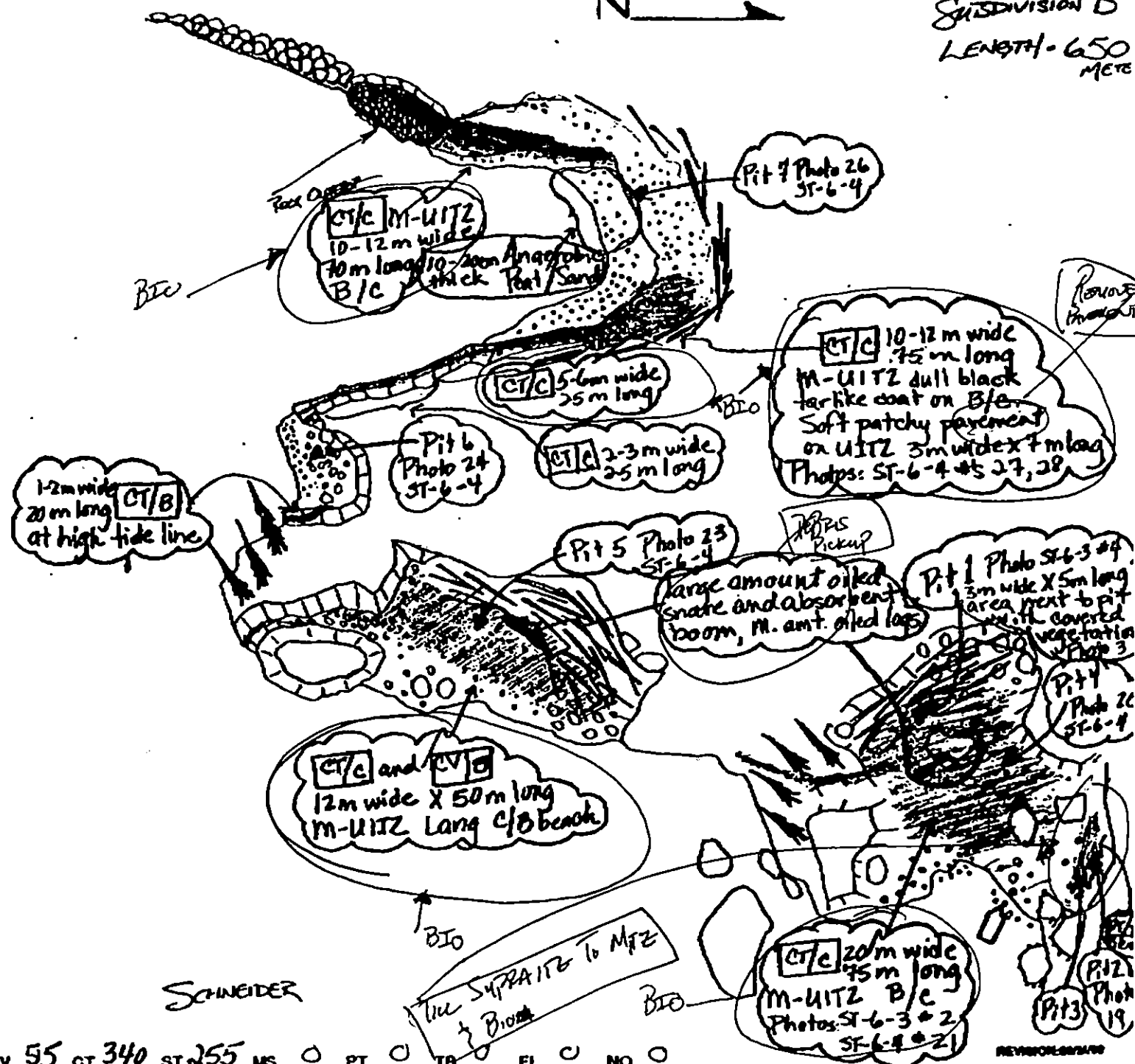
1 ➡
Photo location, direction,
and number

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

SKETCH MAP

N

SEGMENT EL-10
SUBDIVISION B
LENGTH - 650
METS

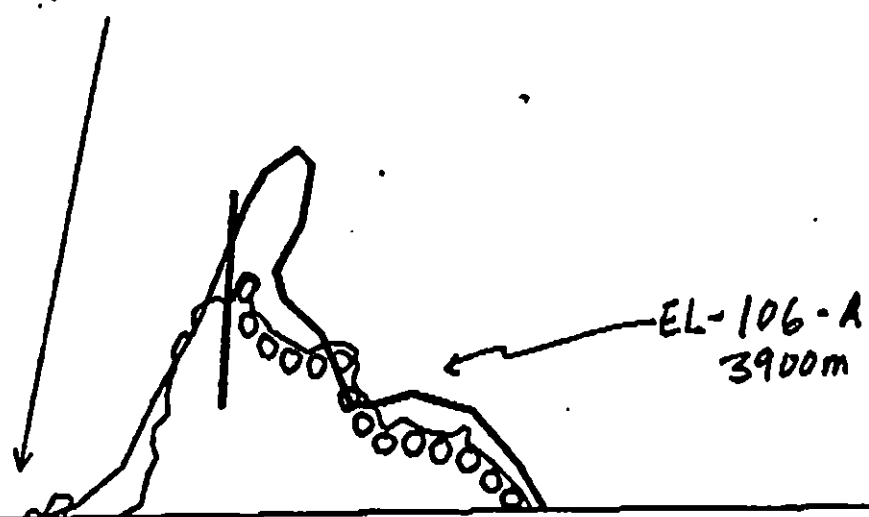
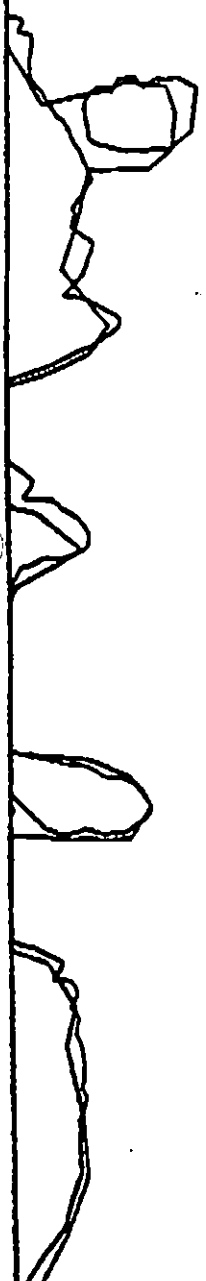


SCHNEIDER

1 BIO
The SUPRA 176 to MFE
to Brook B

857-982-0214/50

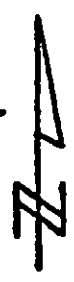
EL-105



↓ PWS
126A

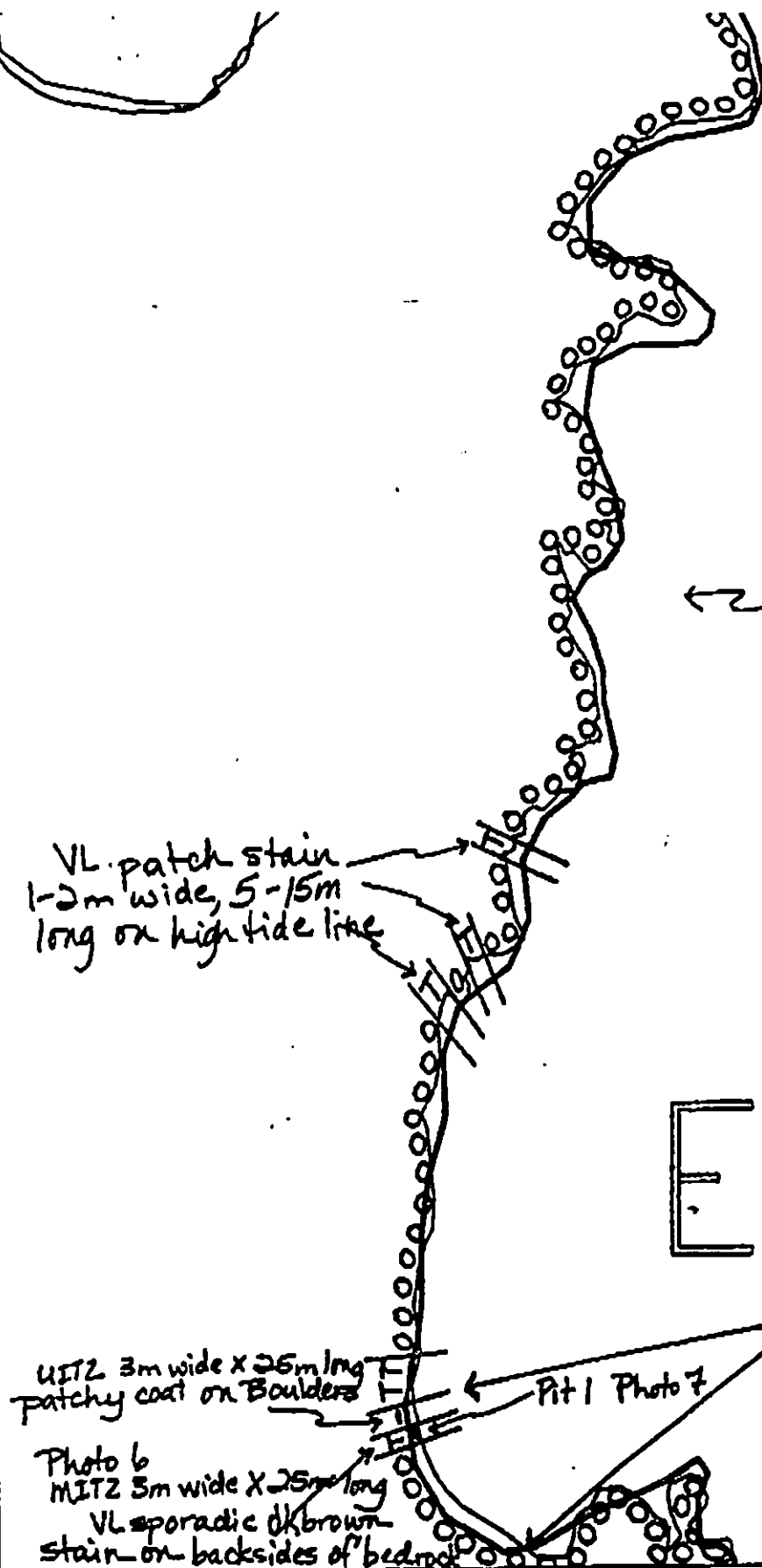
XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
0000 No Oil

EL-106
EXXON SEGMENT LENGTH: 5524m
ADEC Segment Length: 5078m



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

PWS
126C
~~Page 2 of 4~~



← EL-106-A
3900 m

EL-106

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

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

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

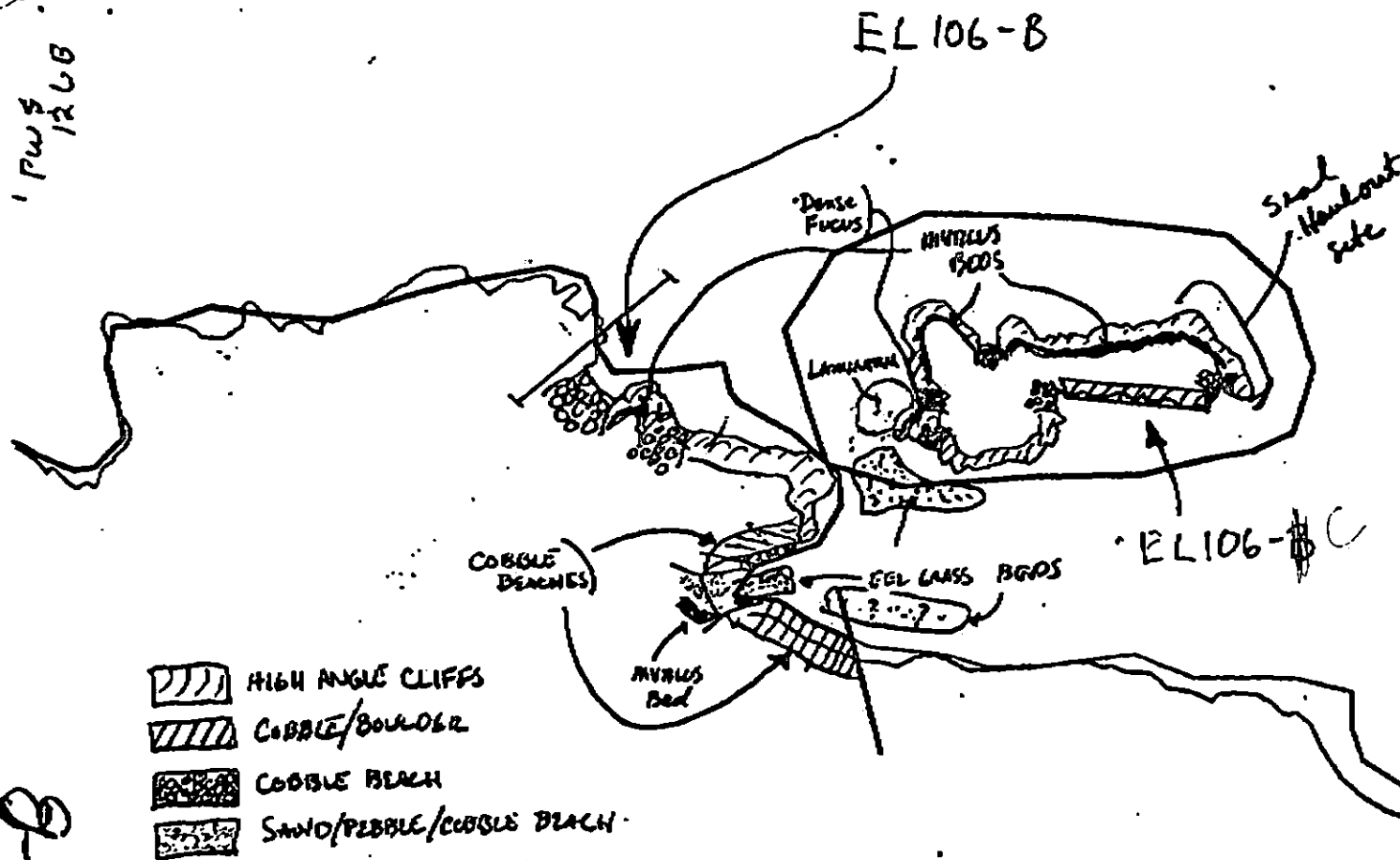


Map Key: PWS-126b
Name: C. Dillon
Date: 4/2/90
Data Entered:

EL106-B

PWS
1260
6/6

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



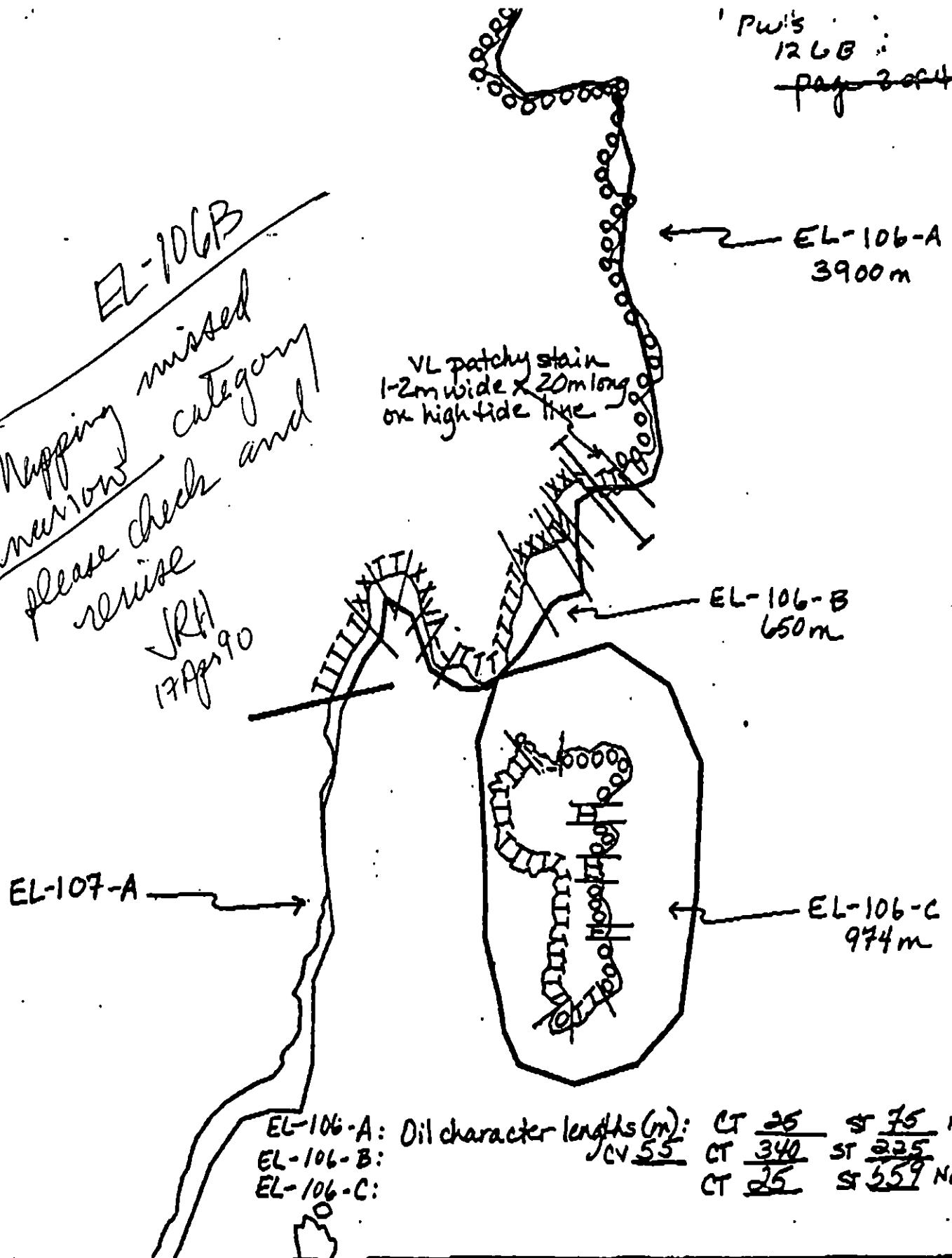
Map Key: PWS-126a
 Name: _____
 Date: _____
 Data Entered: _____

EL-106
 ADCC Segment Length: 5078m

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

0 100 200 300
 METERS

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



EL-106-A: Oil character lengths (m): CT 25 ST 75 NO 3
 EL-106-B: CV 55 CT 340 ST 225
 EL-106-C: CT 25 ST 559 NO 2

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

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



Map Key: PWS-126a
 Name: C. Dillon
 Date: 11/2/90
 Prepared:

REGION: PRINCE WILLIAM SOUND

SEGMENT: ST/EL-106

SUBDIVISIONS: C (3 OF 3)

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: _____ DATE: _____

OILING CATEGORIZATION:

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

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) bioremediation of surface and subsurface oil in areas shown on attached sketch map. Work should be conducted between 7/1 and 8/15 based on pinneped constraints, after approval by ADF&G and USFWS regarding eagle nest.

TAG COMMENTS: _____

TAG APPROVAL DATE: _____

ADEC _____
EXXON _____
NOAA _____
USCG _____

FOSC: _____ DATE: _____

FIELD SHORELINE COMMENT SHEET

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

USCG

NAME DAVID A. SCHNEIDER SIGNATURE David A. Schneider

☐ NO TREATMENT RECOMMENDED
COMMENTS

☒ TREATMENT SUGGESTED

PS/USCG

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

PS

ADEC

NAME Peter Montesano

SIGNATURE Peter J. Montesano

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS refer to map for ^NW directions:

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

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

LAND MANAGER

NAME Janetta Pritchard

SIGNATURE Janetta Pritchard

☐ NO TREATMENT RECOMMENDED

☒ TREATMENT SUGGESTED

COMMENTS

I concur with ADEC recommendations. The NE beach has an absorbent boom which needs to be picked up. If additional debris is found after the snowmelt and a reevaluation of the site of the SUPAC.

OG C. DILLON USCG D. SCHNEIDER SEGMENT ST/ EL-106
 BIO J. BARRY LAND REP J. PLITCHARD (DAR) SUBDIVISION C. (3 of 3)
 EXXON A. SNOOK ADEC P. MONTESANO TIME 17:15 to 18:15
 TEAM NO.: 6 TIDE LEVEL: +1 to +1 DATE 06/06/90
 EST. SUBDIVISION LENGTH: 974 m ☒ Sun ☐ Clouds ☐ Fog ☐ Rain ☐ Snow
 UPLANDS DESCRIPTION: ☐ Grass ☒ Forest ☒ Rock SUBDIVISION ISLAND
 SURVEYED FROM: ☒ Foot ☒ Boat ☐ Helo WORKING DIRECTION: W to E
 SURFACE SEDIMENTS: R 90 % B 5 % C 3 % P 2 % G 0 % S 0 % M 0 % V 0
 SLOPE: Long 5 % Hang 25 % Vert 20 % WAVE EXPOSURE: ☒ Low ☒ Med ☐ High
 OIL CATEGORY LENGTH: W 0 m M 0 m N 65 m VL 519 m NO 390 m

SURFACE OIL

CHARACTER	DISTRIBUTION				OIL / FILM COLOR					IMPACTED ZONES			
	C	S	P	N	1	2	3	4	5	SU	U	M	U
ASPHALT PAVEMENT													
POOLED													
COVER													
COAT				X				X		X			
STAIN		X	X	X				X		X			
MOUSSE													
PATTIES													
TARBALLS													
FILM													
NO OIL	Kudos on N.E. Beach Super ITB									S		X	X

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-6-4

Frames 32, 33

SUBSURFACE OIL

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

OG C. DILLON

SEGMENT ST/ EL-106

SUBDIVISION C

DATE 06 APR 90

CHECKLIST

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

LEGEND

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

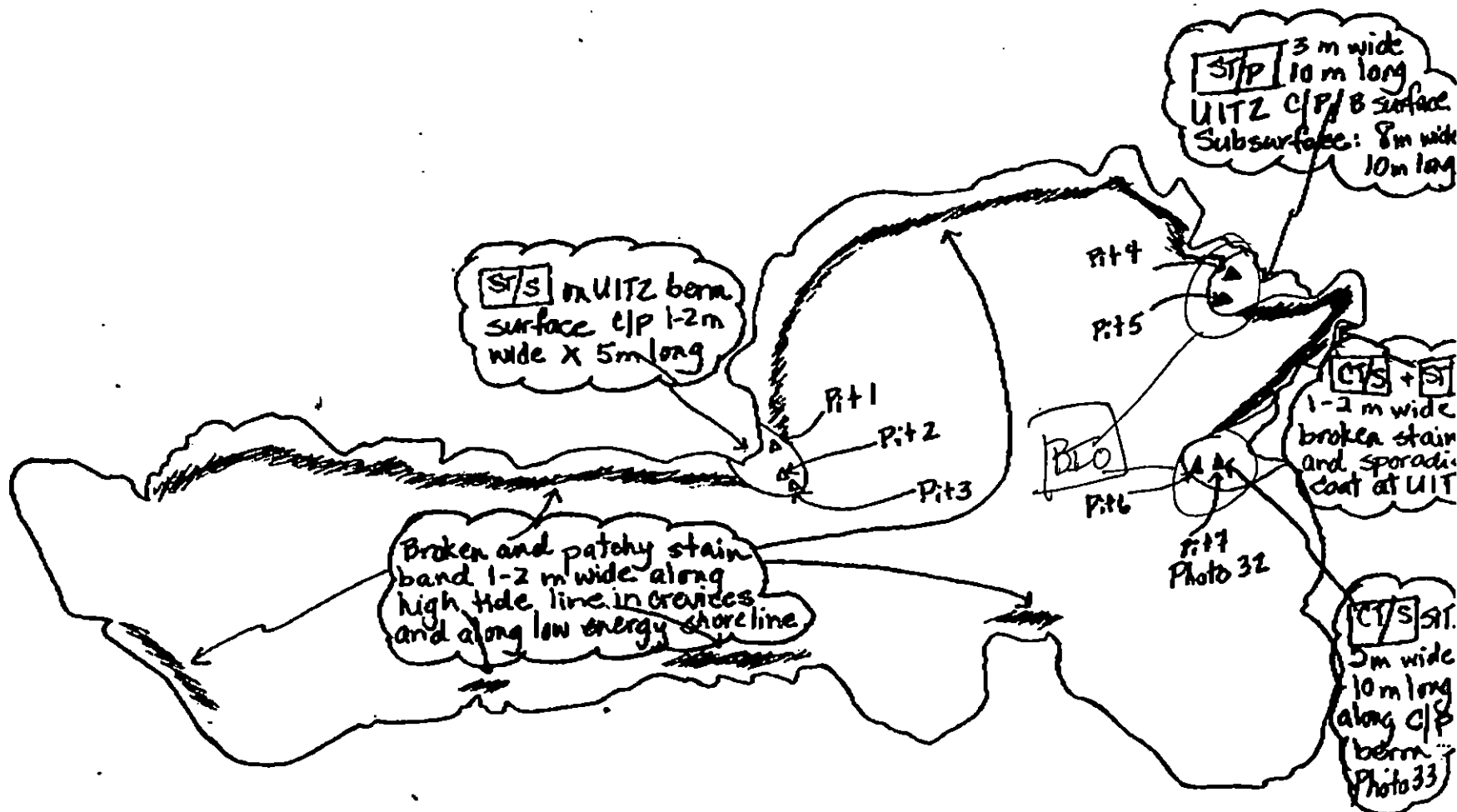
SKETCH MAP

SEGMENT EL-106

SUBDIVISION C

LENGTH - 974m

N 



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

REVISION 01/01/90

1260

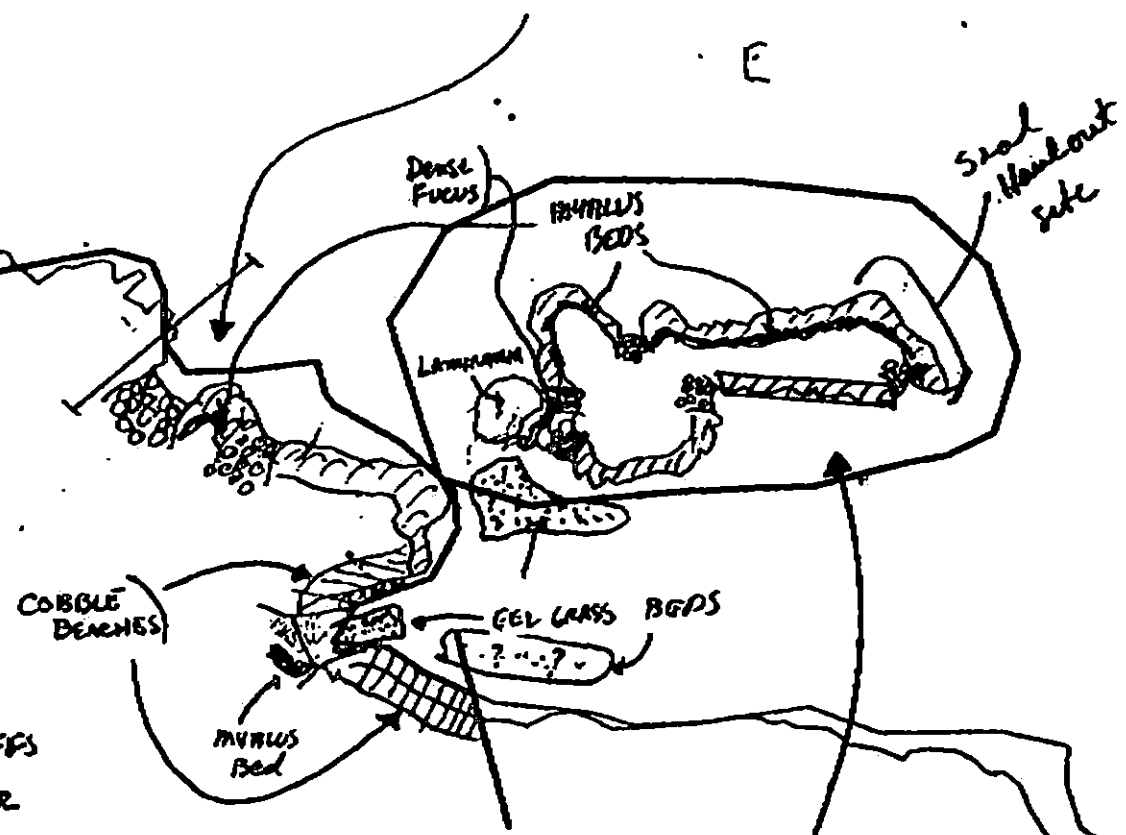
5/5

EL106-C

EL106-B - "

E

-  HIGH ANGLE CLIFFS
-  COBBLE/BANDER
-  COBBLE BEACH
-  SAND/PEBBLE/COBBLE BEACH
-  MOLLUSK BED
-  ZOISYRA BEDS (EEL GRASS)



EL106-C
ISLAND CONT.

EL-106

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

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

ADEC Segment Length: 5078m

100 200 300
METERS

SHORELINE ECOLOGICAL SUMMARY

REVISION: 03-22-88

Segment ST/ E2-106 Subdivision C Date (mo/day/yr) April 6 1990
 Time (24 hr) 1300-1445 Biologist 1445 - 1830 Length 974 m 1/5

- (A) Substrate type and % of segments:
 (1) Bedrock 90 (2) Boulder 5 (3) Cobble 3 (4) Pebble 2 (5) Sand (6) Silt
- (B) Overall % cover of biota (% of segment): Dense 40 Moderate 50 Low 10
- (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (3)

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

BARNACLES

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

NOT PRESENT

MYTILUS

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

NOT PRESENT

GASTROPODS

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

NOT PRESENT

FUCUS

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

NOT PRESENT

Wildlife Observations/ General Comments:

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

Ecological Considerations: KILLER WHALE - 1

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

SN

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
 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.

General Comments

I Habitat types -

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

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

II Major Species - See 106-BIII

" " "

III SPECIES LIST

A. MARINE PLANTS

- 1) DIATOMS / BLUE GREEN ALGAE
- 2) GREEN ALGAE - CHLOROPHYTA
SPONGOMORPHA / ACROSIPHONIA M123
ULVA S123
CLADOPHORA S12
ENTEROMORPHA S123
- 3) RED ALGAE
PORPHYRA M12
PETMOCELIS S12
RHODOMELA LARIX M12
RHODYMENIA PALMATA D12
BOSSIELLA SPP. S12
CALLIARTHRON S12
CORALLINA S12
ENDOCLADIA S12
HALOSACCION S123
IRIDAEA S12
CRYPTOSIPHONIA M12
MEMBRANOPTERA M12
MASTOCARPUS S12
MICROCLADIA / PTEROCLADIA M123
LITHOTHAMNION S12

4) BROWN ALGAE - PHAEOPHYTA

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

5) HIGHER PLANTS - EEL GRASS - R3

B. ANIMALS

1) BARNACLES

- Semibalanus cariosus M123
Balanus balanoides M123
Citharus ocellatus M123

2) PAGURIDAE - HAMMIT CARDS M123

- Hemigrapsus oregonensis S23
HAPLOGASTRA R23
PUGETIA spp. R23

3) Amphipods -

Orchestoidea spp. M23

4) Mysids - Mysidacea. Rivala

5) BEACH HOPPOLES - ISOPODA S23

6) MUSSELS - Mytilus edulis D12
Modiolus spp. R12

7) Littorina & scutellata M123

L. siphon M123

Nucella lamellosa S123

N. emarginata S23

Scaevola diva M23

Tachygychus S23

8) LIMPOTS

Tectaria scutellum M23

T. fenestrata S12

T. parva

Lottia digitalis S12

L. parva S12

Rimosa mitra R12

Siphonaria dithersites M123

9) CHIRONIDS

Tonicella lineata R12

Mopalia spp. R12

Katharina tunicata R12

10) Sea Stars

Pycnopodia helianthoides M23

Dermasterias R12

Leptasterias M12

Orthasterias R123

Pisaster ochraceus M12

11) Scallops / Clams

Pododesmus S12

12) Anemones

Anthopleura elegantissima S12

A. ostenia R123

A. xanthogramma R123

Tealca crassicornis R123

Spiroactis R123

ELI06-E
ANIMALS (cont)

~~APRIL~~ APRIL 7 1990

4/5

13) WORMS

SIPUNCULIDS - PHASCULOSOMA spp.

POLYCHAETES -

NEREIDAE *9/23

NEPHYDIAE M/23

OTHERS

SERPULIDAE R/23

SERPULA

CRUCIGERA

SPIRORBIDAE M-D/23

SPIRORBIS spp.

* Juveniles present

D Dense

M Moderate

S Sparse

R RARE

1 ~~on~~ Bedrock

2 Boulder

3 Corals

4 Pebble/sand

14) FISH -

COHIDAE - 3 spp. M¹²/~~23~~

PHOLIDAE - 1-2 spp. M 23

15) Hydrocorals - Stylantheca porphyra

16) OTHERS

Natica clausa moon snail - R 23

Amphissa columbiana R 23

Lanellideris fusca ? M 12

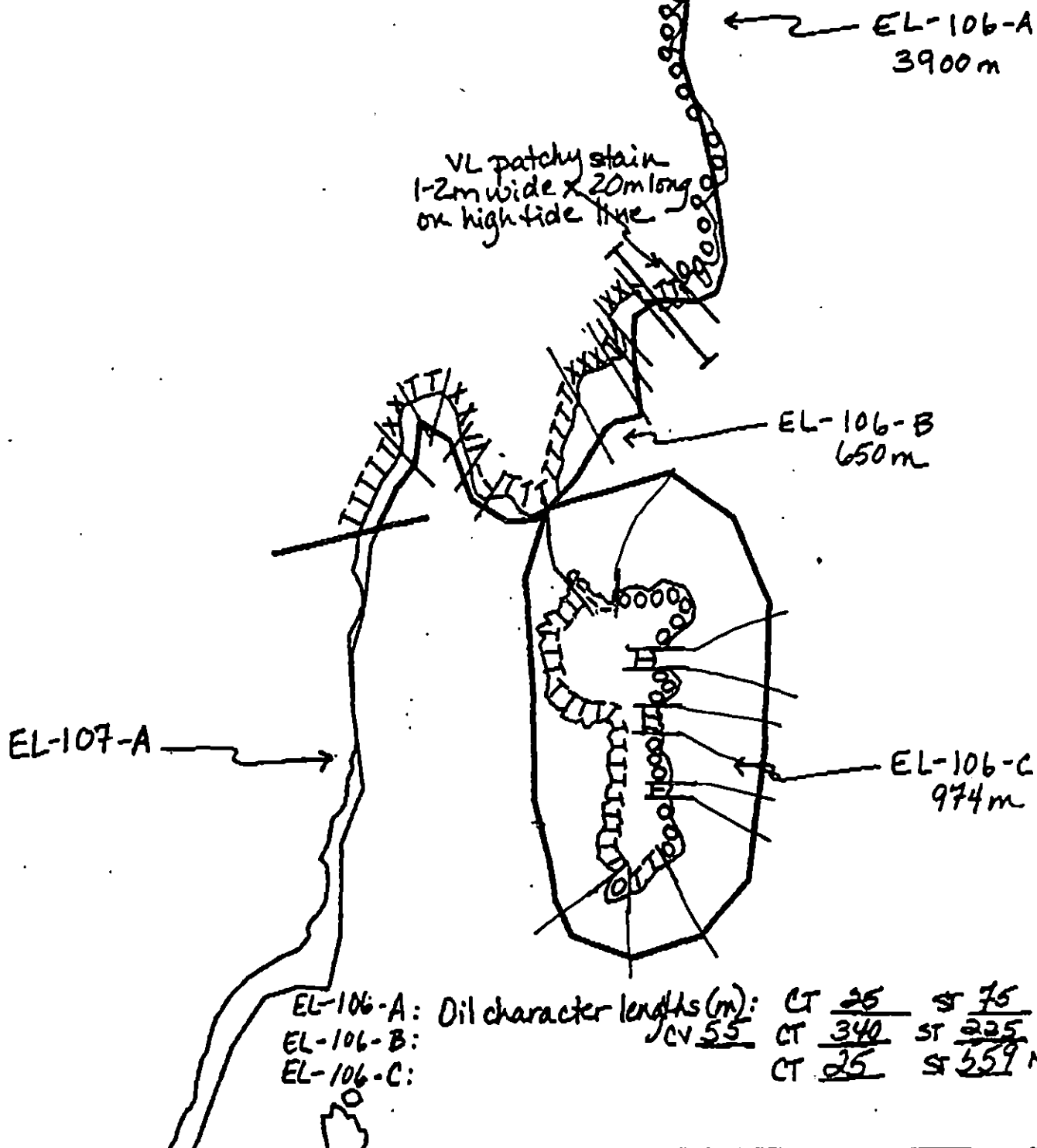
Guerinotapha oregonensis S 123

Other isopods - 2 spp.

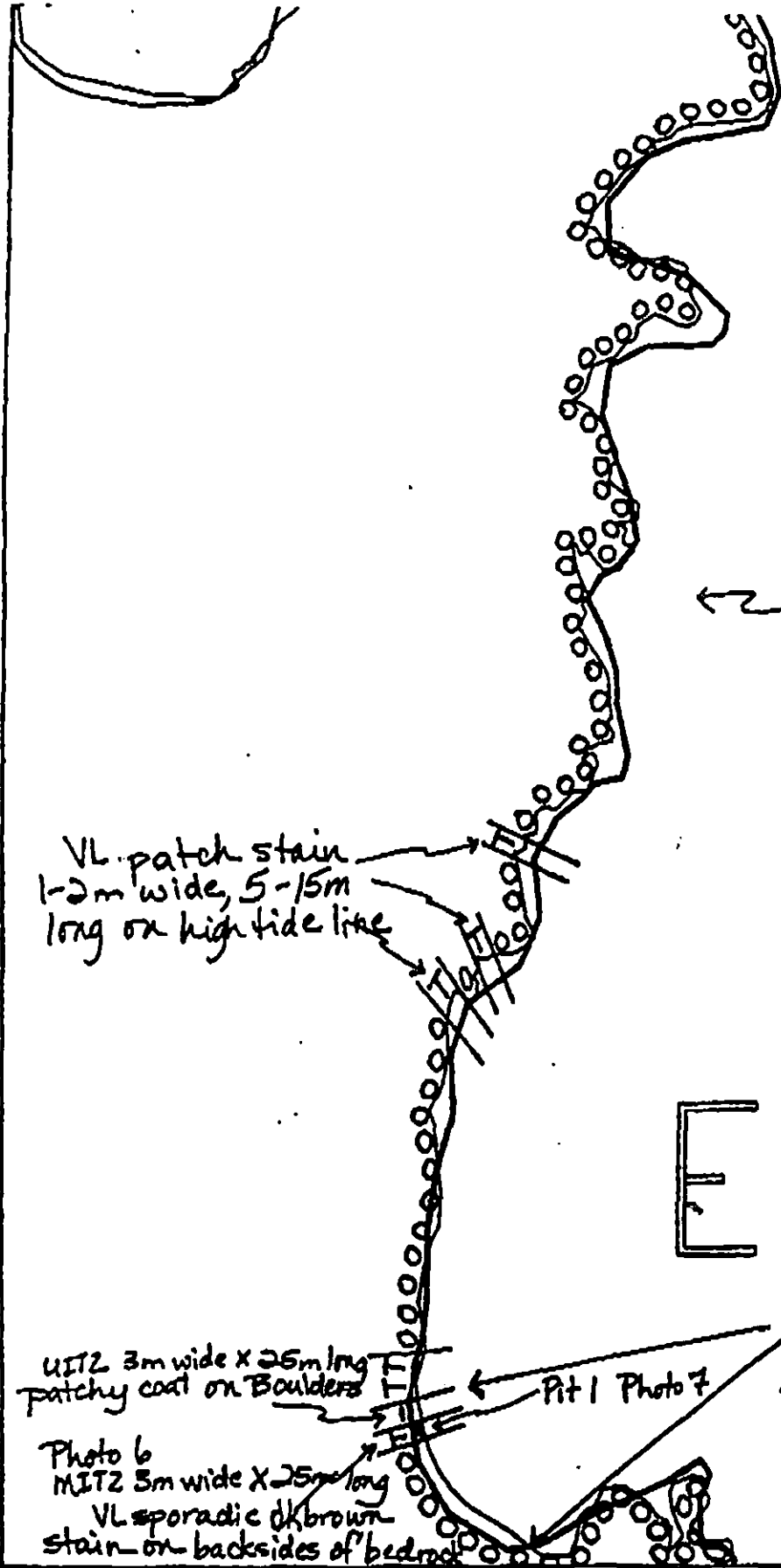
Lebbeus spp. R 23

Schizoporella spp. ? M 123

Strongylocentrotus droebachiensis R 23



XXXX Wide	EL-106 EXXON SEGMENT LENGTH: 5524m ADEC Segment Length: 5078m METERS	Map Key: PWS-126a
//// Medium		Name: <u>C. Dillon</u>
--- Narrow		Date: <u>4/2/90</u>
TTTT Very Light		Date Entered:
0000 No Oil		



EL-106

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

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

Photo 5
Large LANG Cobble/pebble beach
All Surface sediments uniled.
Pit 1 shows what appears to be a
localized subsurface oiled berm
area about 2m X 2m on UITZ.
Snow covered BITZ may be oiled.
PWS
126A

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

EL-106
Exxon Segment Length: 6524m
ADEC Segment Length: 5078m



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

EL-105

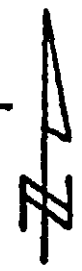


EL-106-A
3900m

↓ PWS
126A

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

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



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

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-106 SUBDIVISION B (2 of 3)

WORK WINDOW	
Manual Pickup Tarmat Removal	CLOSED
Bioremediation Manual Tilling	CLOSED

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

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

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

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

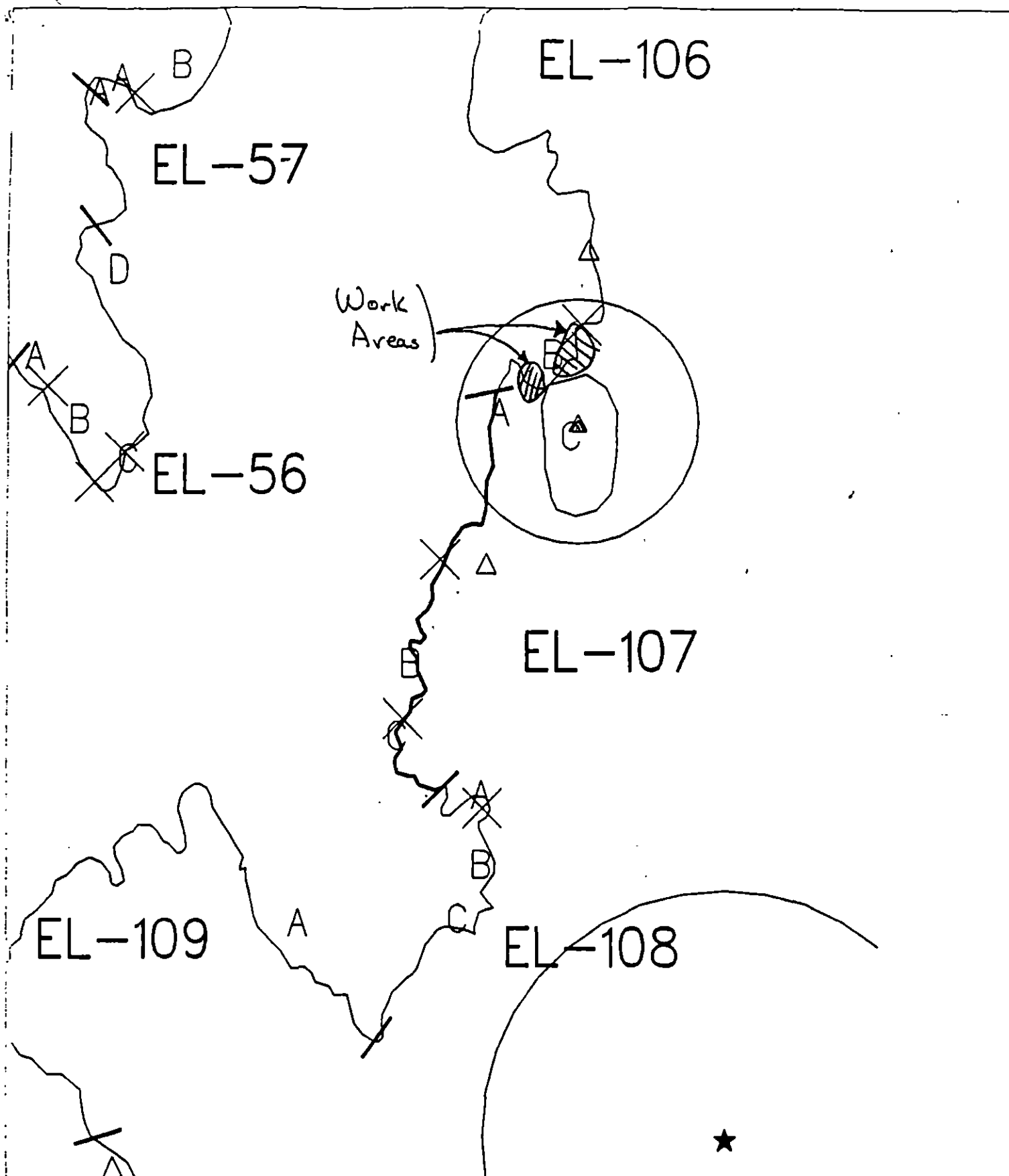
OTHER ECOLOGICAL CONSIDERATIONS

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

FOSC

Date

6.10.90

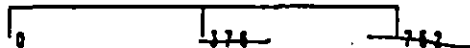


Exxon Company, USA

Map Key: PWS-EL-107

June 04, 1990

ECOLOGY MAP
SEGMENT EL-106
SUBDIVISION B (2 of 3)
METERS



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

1 inch = 1233 feet

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

*ent. stop work
if a member of
4-1658 or 564-*

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

OILING CATEGORIZATION:

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

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) manual removal of tarmats
2) manual pick up of oiled debris and logs, 3) bioremediation of areas
shown on attached sketch map, 4) *manual tilling of areas shown on
attached sketch map. Work should be conducted between 6/1 and 8/15 due
to pinned constraints after approval by ADF&G and USFWS regarding
eagle nest. *See Constraint Addendum 6/9/90 wk*

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

TAG APPROVAL DATE: 4/24/90

ADEC JOHN BAUER *John Bauer*

EXXON ANDY TAYLOR *Andy Taylor*

NOAA Joseph Talbot *Joseph Talbot*

USCG M. J. HALL *M. J. Hall*

FOSC: *[Signature]*

DATE: 5-3-90

ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT EL-106 SUBDIVISION C (3 of 3)

WORK WINDOW	
Bioremediation Manual Raking	CLOSED

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

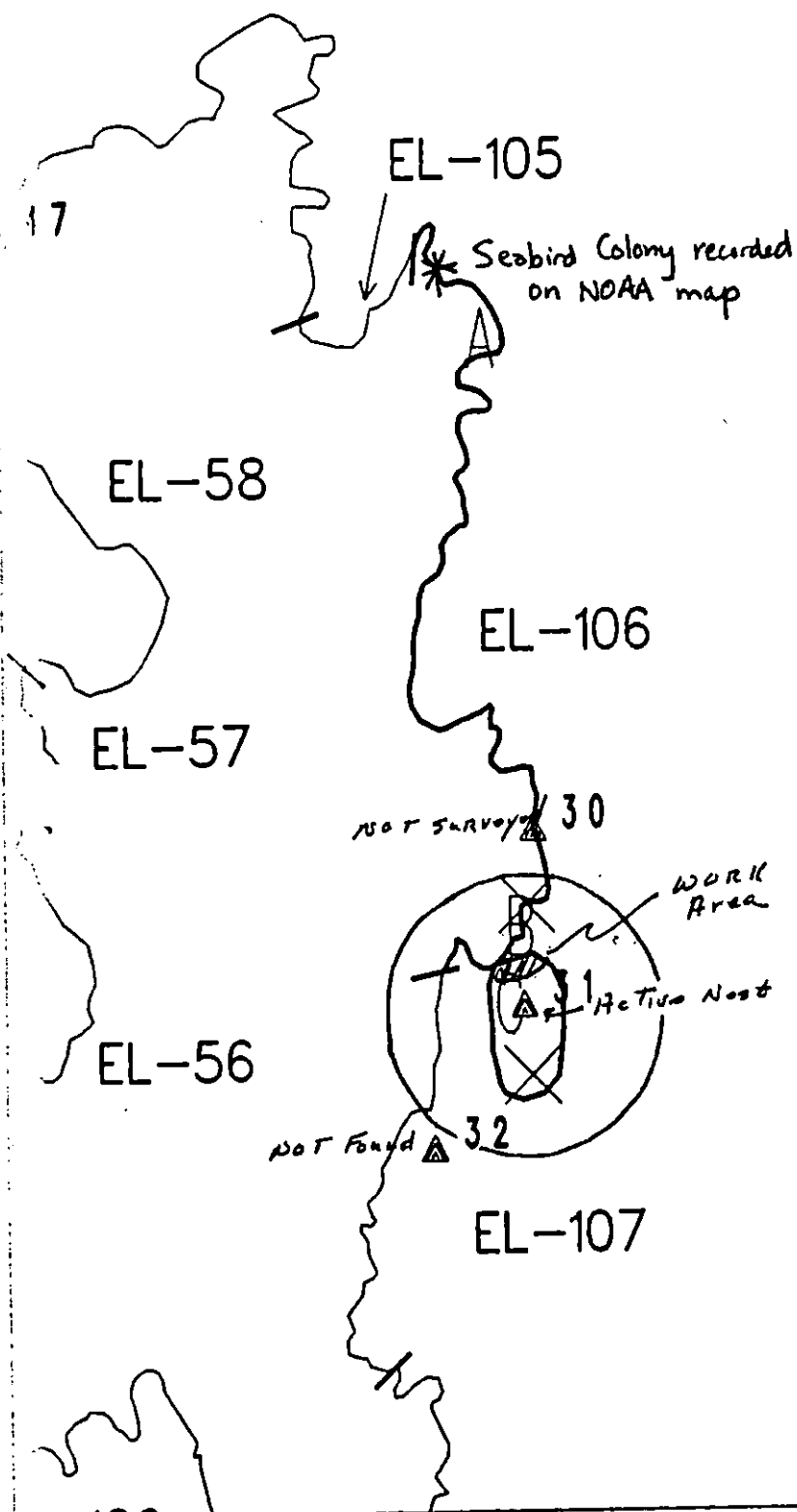
3N,O,P,Q	Harbor Seal & Sea Lion Pupping and Molting	NO TIME CONSTRAINT. Authorized per memorandum dated 5/14/90 from Kathryn Frost/ADF&G to Mark Kuwada/ADF&G
7II	Subsistence: Deer Harvesting	Closed to bioremediation and manual raking after 8/15.
5T	Bald Eagle Nests	Closed to bioremediation and manual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

OTHER ECOLOGICAL CONSIDERATIONS

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

TAG APPROVAL DATE 5/29/90
ADEC ART WEINER Art Weiner
EXXON ANDY BOAT Andy Boat
NOAA B. Wescott B. Wescott
USCG G.A. BEITER G.A. Beiter
FOSC [Signature] Date MAY 29 1990

Prepared by Anden Meyer wrk Date 5/28/90



Incorporates information from USFWS Bald Eagle survey 5/15/90.

XON

Exxon Company, USA

Map Key: KNI-EL-106

May 11, 1990

ECOLOGY MAP 5/28

SEGMENT EL-106

SUBDIVISION C (3 of 3)

METERS

0 539 1077

★	Seabird Colony
▲	Eagle Nest

1 inch = 1767 feet

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

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

RECOMMENDATIONS:

<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: Recommended treatment includes 1) bioremediation of surface and subsurface oil in areas shown on attached sketch map. Work should be conducted between 7/1 and 8/15 based on pinned constraints, after approval by ADF&G and USFWS regarding eagle nest.

"IF FEASIBLE" TAKE PRIOR TO BIOREMEDIATION IN AREA OF TEST PIT 7
See Addendum 5/28/90 WTK

TAG COMMENTS:

TAG APPROVAL DATE: 4/24/90

ADEC ART WEINER
EXXON ANDY BEN
NOAA Joseph Talbott
USCG M. J. HALL

FOSC: DATE: 5-3-90

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO SIGNATURE: Charles Z. [Signature]

DATE: 4/25/90

OILING CATEGORIZATION:

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

RECOMMENDATIONS:

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

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

Seal Erection

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

TAG APPROVAL DATE: 4/24/90

ADEC ART WEINER Art Weiner

EXXON ANDY TGAZ Andy TGAZ

NOAA Joseph Talbot Joseph Talbot

USCG M. J. HALL M. J. HALL

FOSC: [Signature]

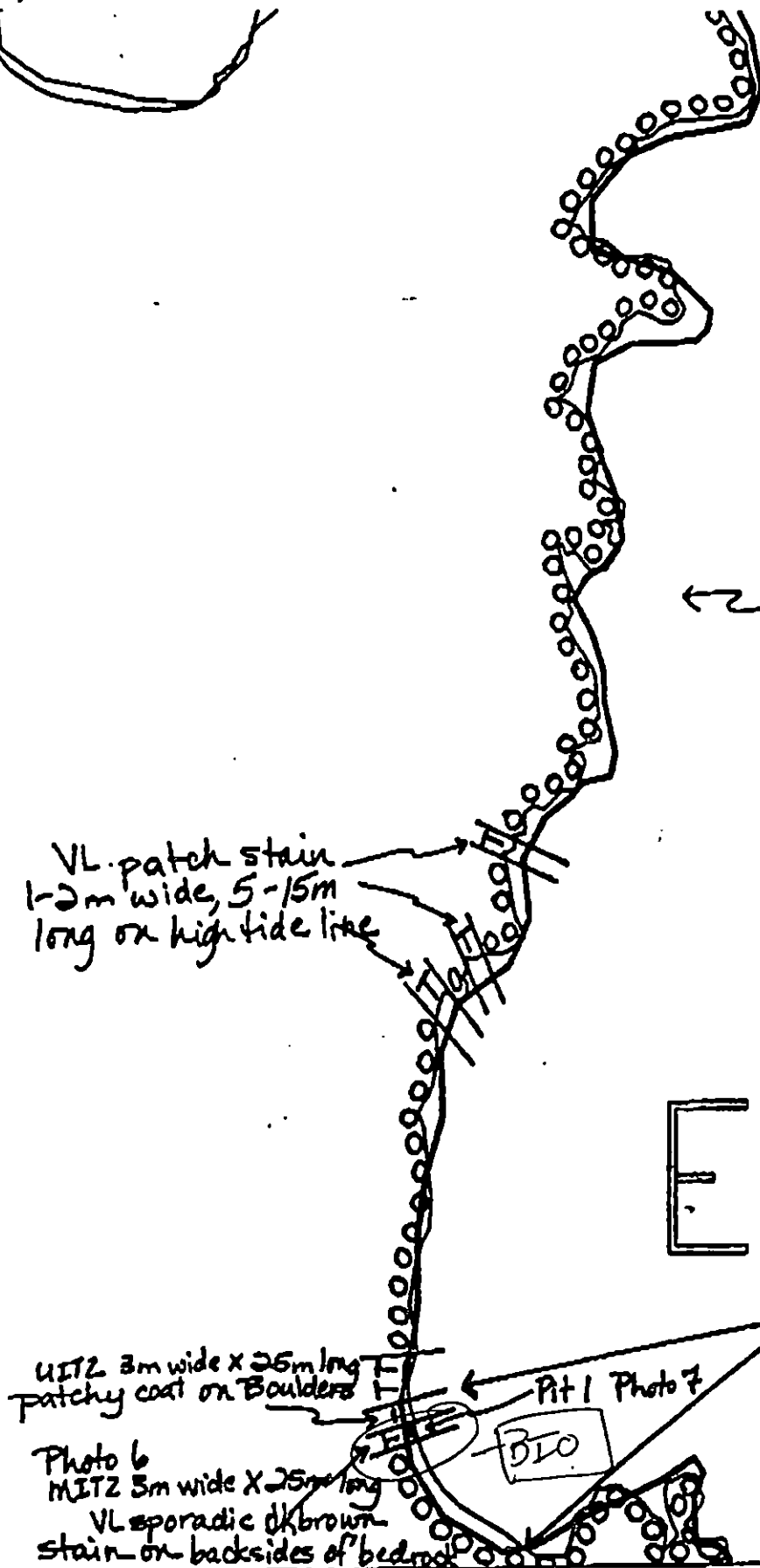
DATE: 5-3-90

//// Medium

EL-100
Exxon Segment Length: 5524m

Map Key: PWS-128c
C. Diller

PWS
126C
Page 2 of 4



EL-106

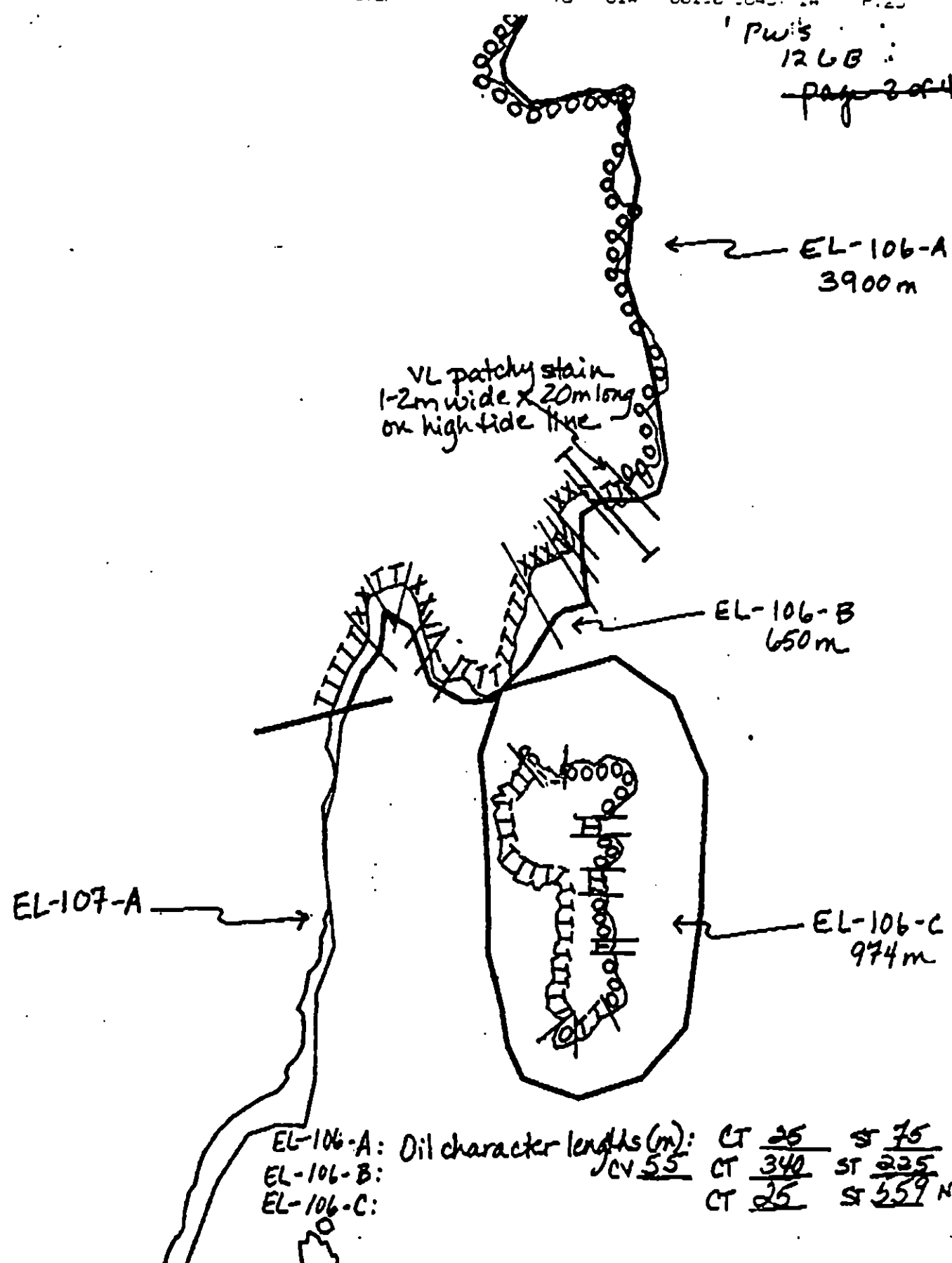
Photo 5
Large LANG cobble/pebble beach
All Surface sediments unoiled.
Pit 1 shows what appears to be a
localized subsurface oiled berm
area about 2m x 2m on UITZ.
Snow covered SITZ may be oiled
PWS
126A

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

EL-106
Exxon Segment Length: 6524m
ADEC Segment Length: 5078m

0 100 200 300
METERS

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



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

XXXX Wide	EL-106 Exxon Segment Length: 5524m ADEC Segment Length: 5078m	 	Map Key: PWS-1250
//// Medium			Name: <u>C. DILLON</u>
--- Narrow			Date: <u>4/2/90</u>
TTTT Very Light			Date Entered:
OOOO No Oil			

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

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

~~ant stop work
a member of
4-1658 or 564-~~

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

OILING CATEGORIZATION:

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

RECOMMENDATIONS:

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

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

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

TAG APPROVAL DATE: 4/24/90

ADEC JOHN BAUER *John Bauer*

EXXON ANNY TELL *Ann Tell*

NOAA Joseph Tallon *Joe Tallon*

USCG M. J. HALL *M. J. Hall*

FOSC: *[Signature]*

DATE: 5-3-90

DATE 07 / APRIL 80

CHECKLIST

- ☐ N Arrow
- ☐ Approx. Scale
- ☐ Seg/Sub Body
- ☐ Oil Dist.
- ☐ Width
- ☐ Length
- ☐ % Cover
- ☐ Substrate Character
- ☐ Est. NWFLA/VL
- ☐ 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
Disjointed Distribution

Oiled Vegetation

Photo location, direction,
and number

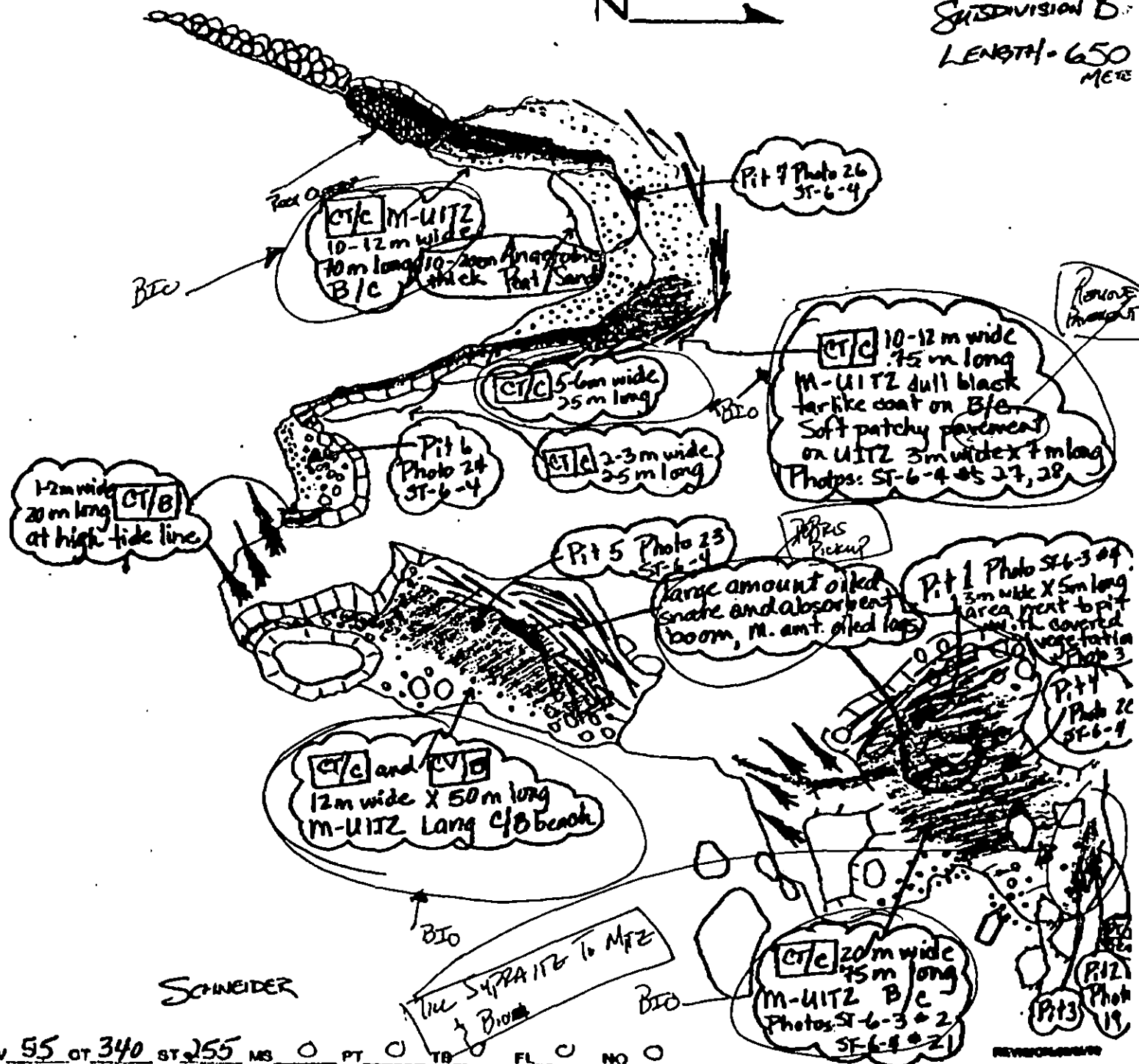
Oil Character Length (m): AP 7 PO 0 CV 55 OT 340 ST 255 MS 0 PT 0 TB 0 FL 0 NO 0

RESEARCH DESIGN

SKETCH MAP

N

SEG. - NTEL-10
SUBDIVISION B
LENGTH - 650
METER



SCHNEIDER

~~1 BIO~~
~~The SUPRA 176 To MFE~~
~~3 Broom~~ BI

Page 2092

EL-105

EL-106-A
3900m

↓ PWS
126A

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

EL-106

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

100 200 300
METERS

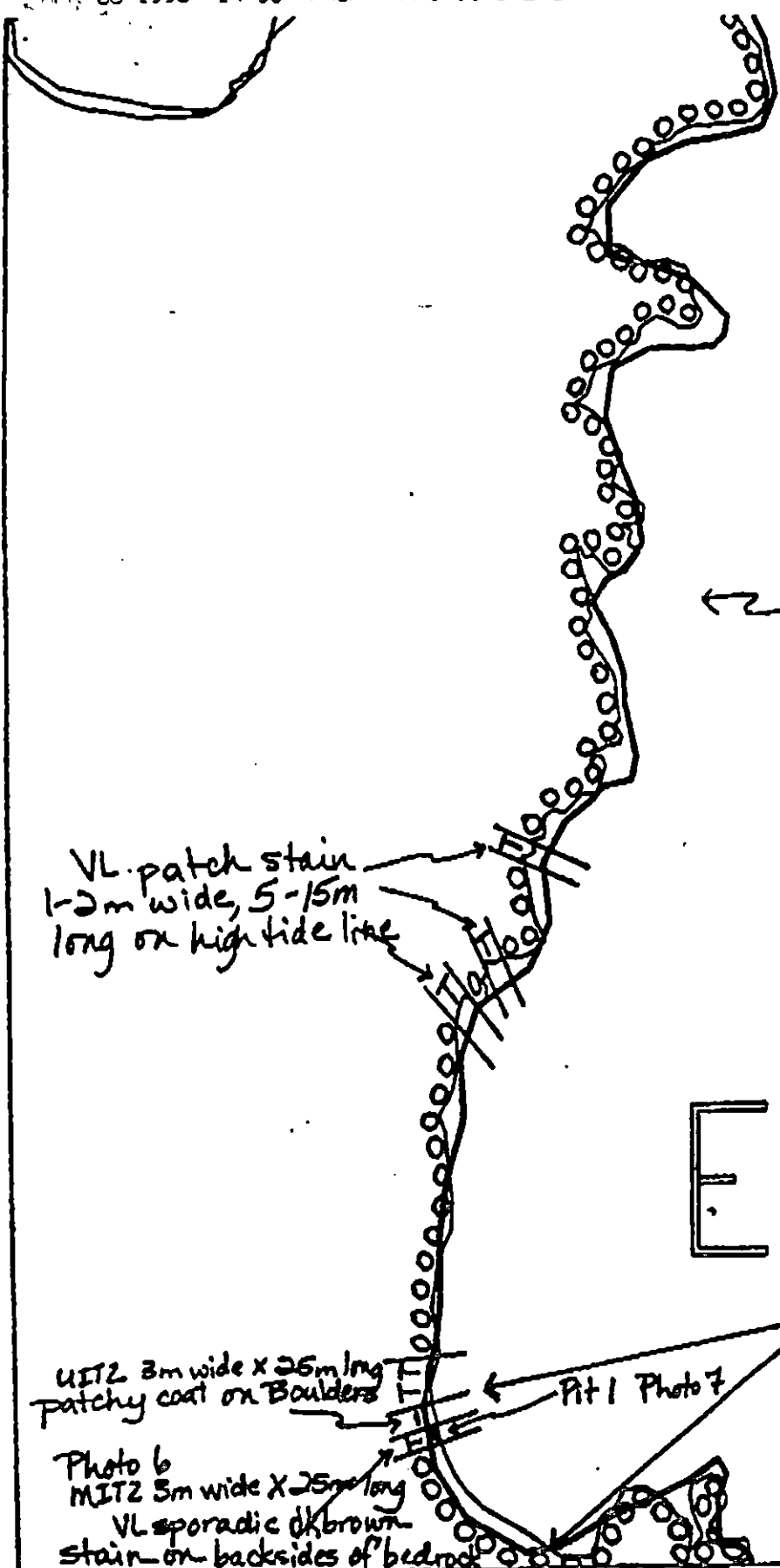


Map Key: PWS-126c

Name: C. Dillon

Date: 4/2/90

Date Entered:



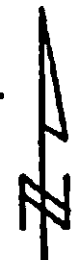
← EL-106-A
3900 m

EL-1

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

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

EL-106
Exxon Segment Length: 6524m
ADEC Segment Length: 5078m

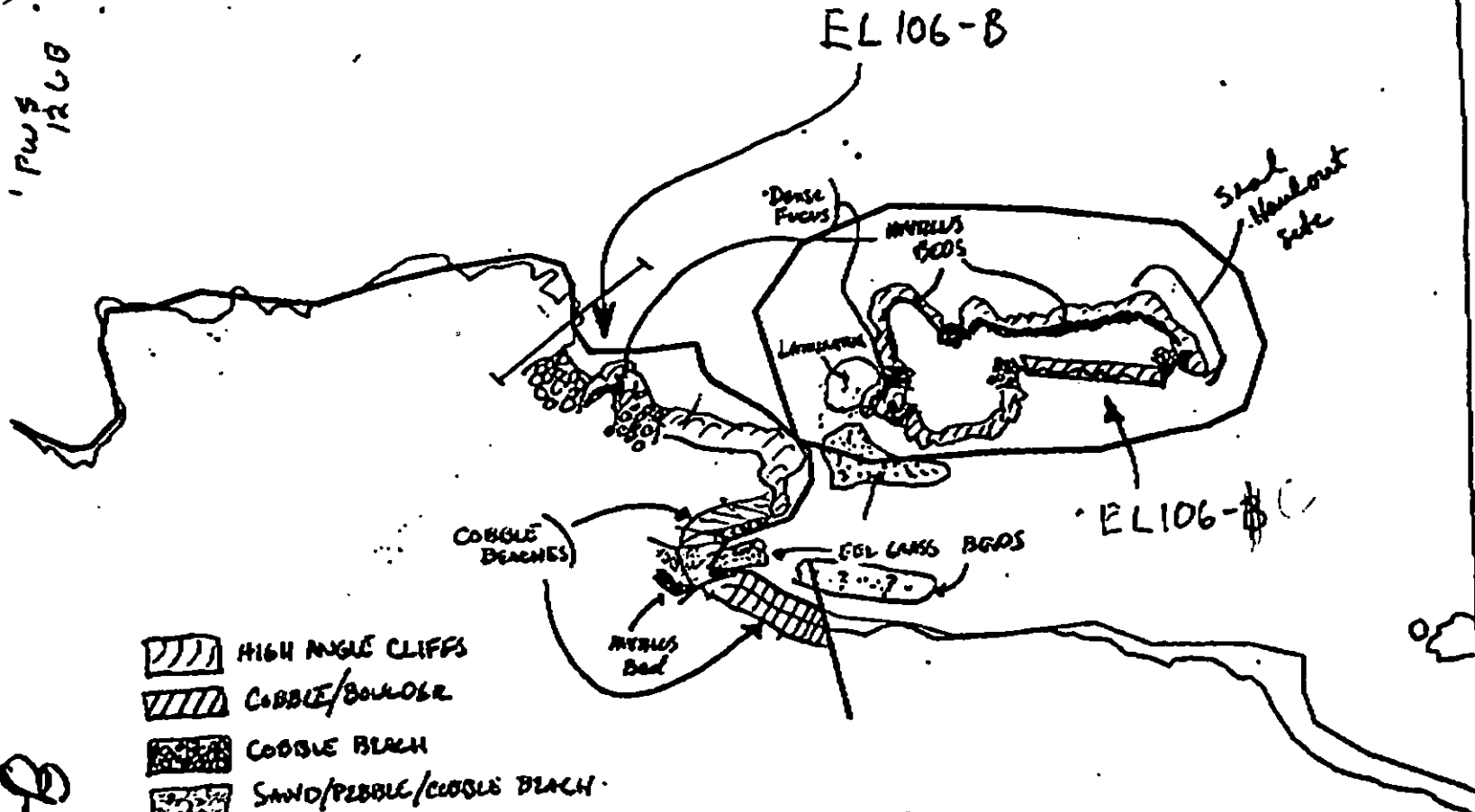


Map Key: PWS-126C
Name: C. Dixon
Date: 4/2/90
Data Entered:

EL106-B

PWS
1260
6/1

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



EL-106

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

Map Key: PWS-126a

Name:

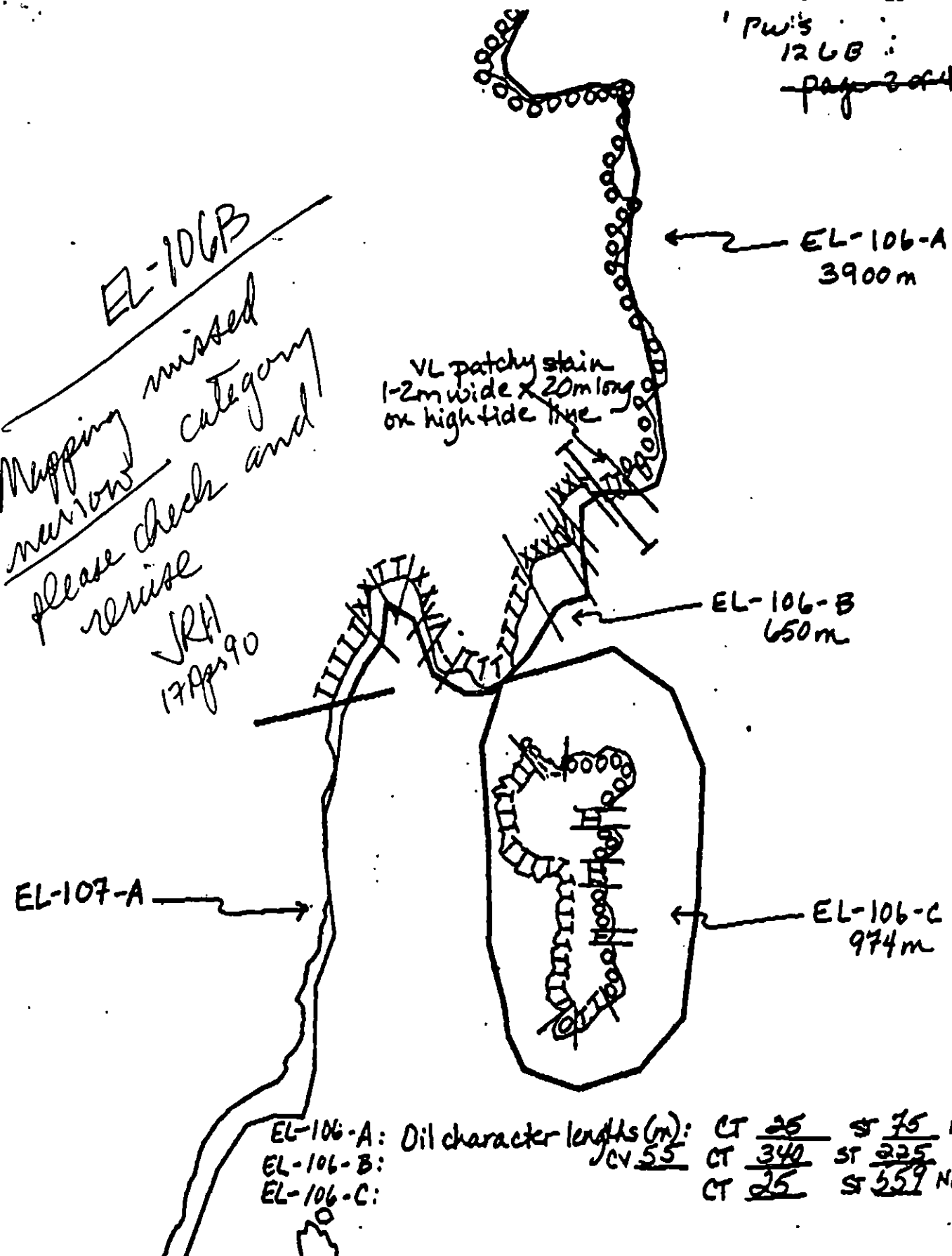
Date:

Date Entered:

ADEC Segment Length: 507m

100 200 300 METERS

EL-106B
Mapping missed
narrows category
please check and
revise
JRH
17 Apr 90



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

EL-106

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

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

METERS

SHORELINE EVALUATION

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

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

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

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

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

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

OILING CATEGORIZATION:

Wide_0_m: Medium_0_m: Narrow_228_m: V.Light_1121_m: No Oil_956_m
Subsurface Oil Observed: Yes X No Maximum Depth 40 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes 1) bioremediation of surface and subsurface oil in areas shown on attached sketch map. Work should be conducted between 7/1 and 8/15 based on pinned constraints, after approval by ADF&G and USFWS regarding eagle nest.

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

TAG COMMENTS: _____

TAG APPROVAL DATE: 7/24/90.

ADEC Art Weinger Art Weinger

EXXON *INDY 240 1000*

NOAA Joseph Talbott - ICTM

USCG M. J. HALL W. J. H.

FOSC: ML DATE: 5-3-90

DATE 06 APRIL 90

SKETCH MAP

SEGMENT L-106

SUBDIVISION C

LENGTH - 974 mps



CHECKLIST

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

LEGEND

Fig. 10. Subsurface OM

2 ▲
Pg - Subsurface Or

CT/C
Continuous Distribution

CT/B
Broken Distribution

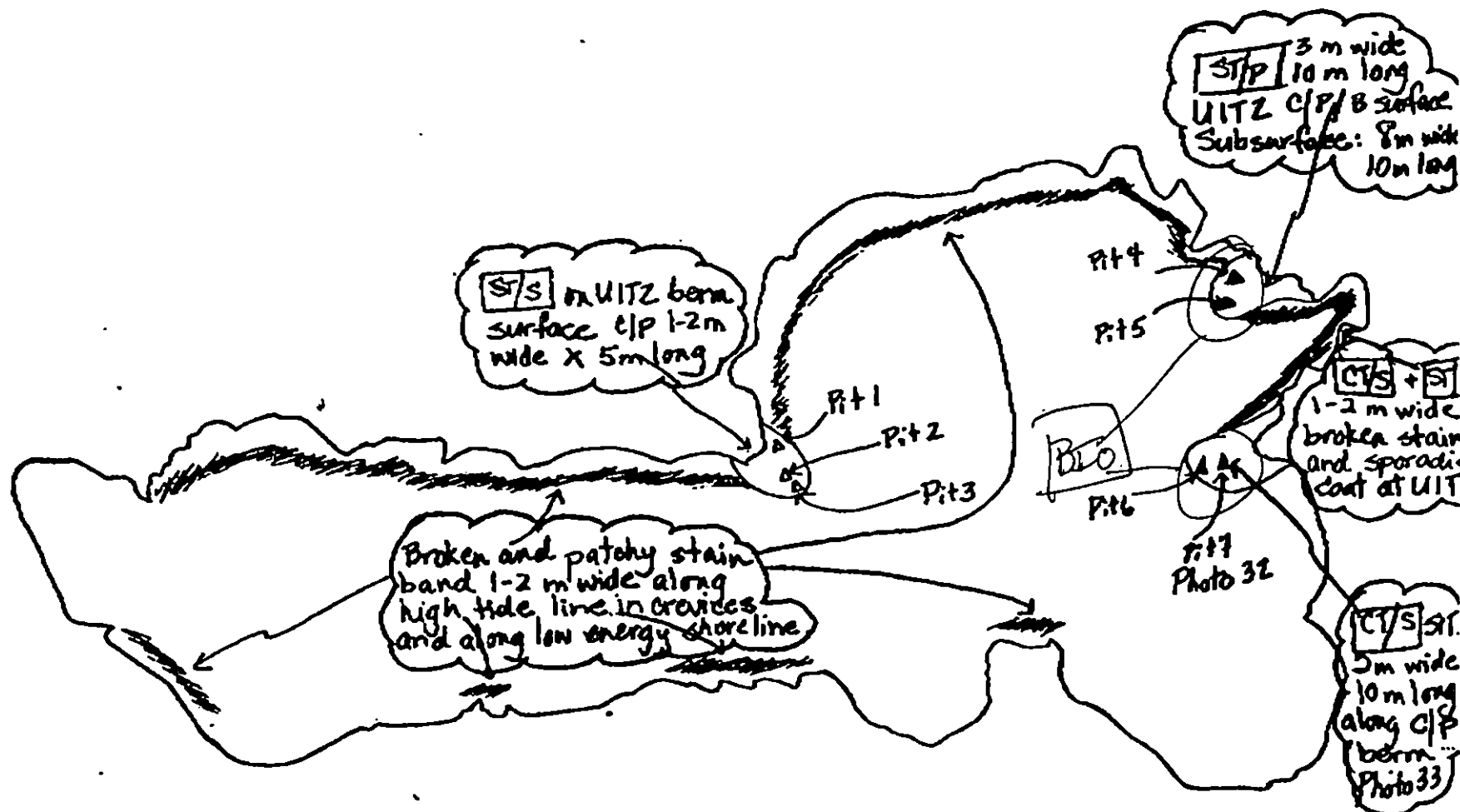
CT/P
Patchy Distribution

[CT/3]
Selected Distribution

Cited Vegetation

1 

Photo location, direction,
and number



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

REVISED 03/04/00

5/s

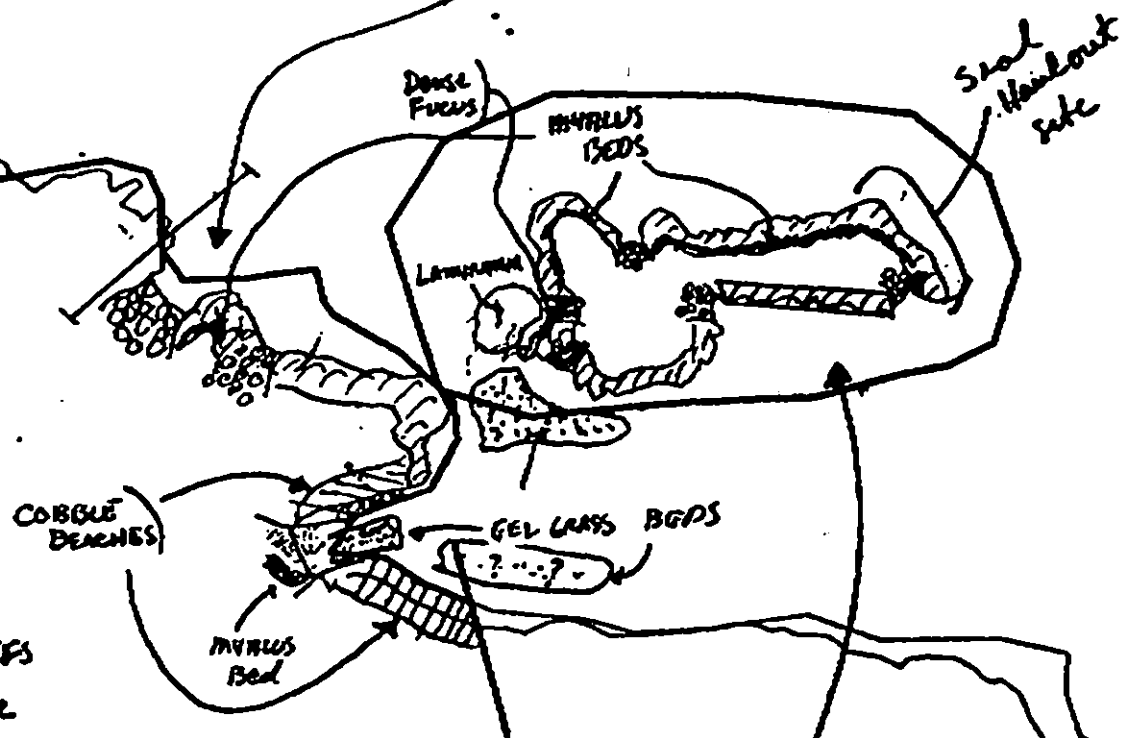
1260

EL106-C

EL106-B - "

E

- HIGH ANGLE CLIFFS
- COBBLE/BOULDER
- COBBLE BEACH
- SAND/PEBBLE/COBBLE BEACH
- MYRILUS BED
- ZOSTERA BED (EEL GRASS)



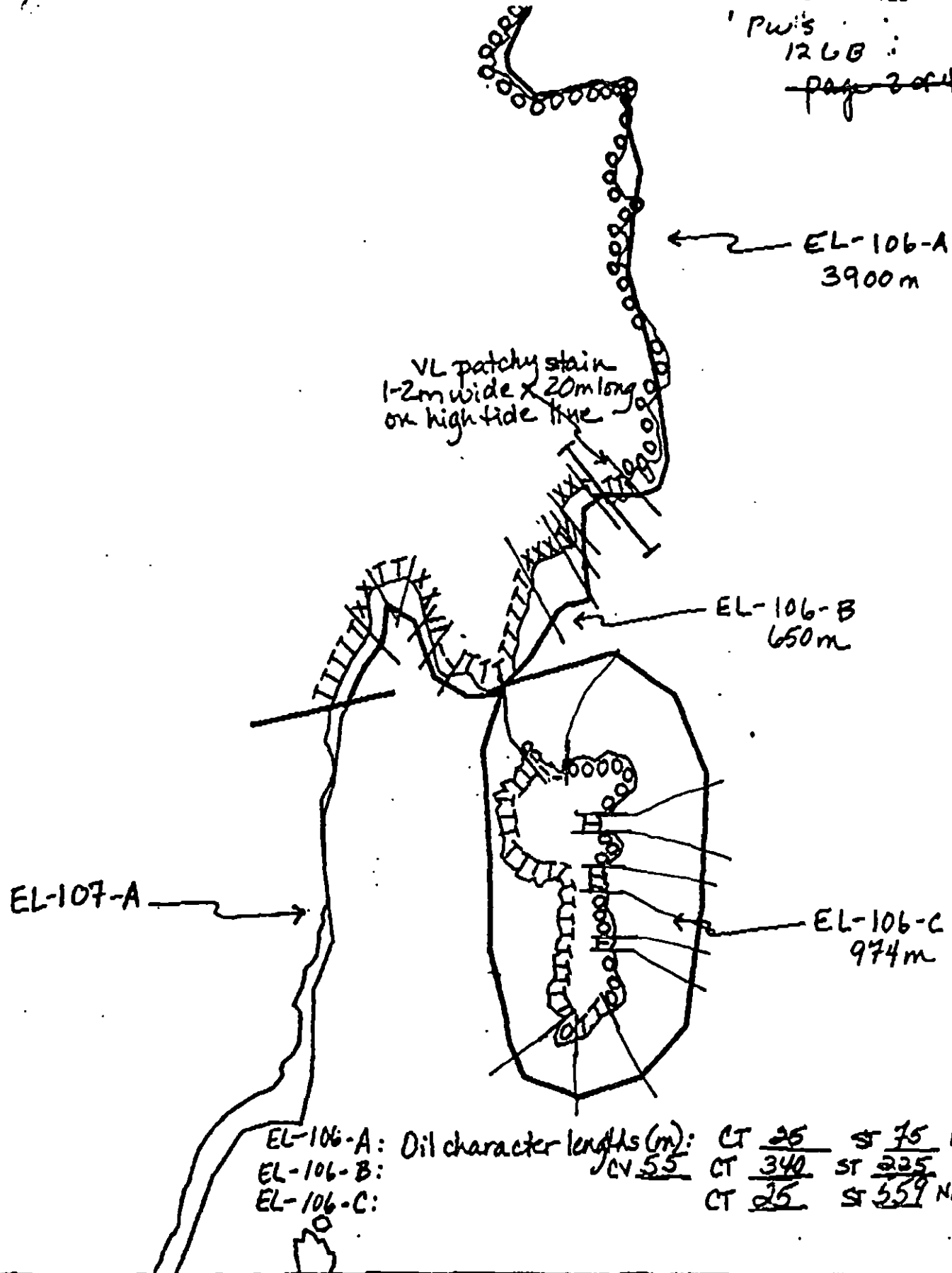
EL106-C
ISLAND COAST.

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



EL-106
ADEC Segment Length: 5078m
XXXX Wide
//// Medium
--- Narrow
TTTT Very Light
0000 No Oil

100 200 300
METERS



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

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



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

PWS
126C
~~Page 3 of 4~~

← EL-106-A
3900 m

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

EL-106

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

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

← Pit 1 Photo 7

Photo 5
Large LANG Cobble/pebble beach
All Surface sediments un-oiled.
Pit 1 shows what appears to be a
localized subsurface oiled berm
area about 2m X 2m on UITZ.
Snow covered BITZ may be oiled.
PWS
126A

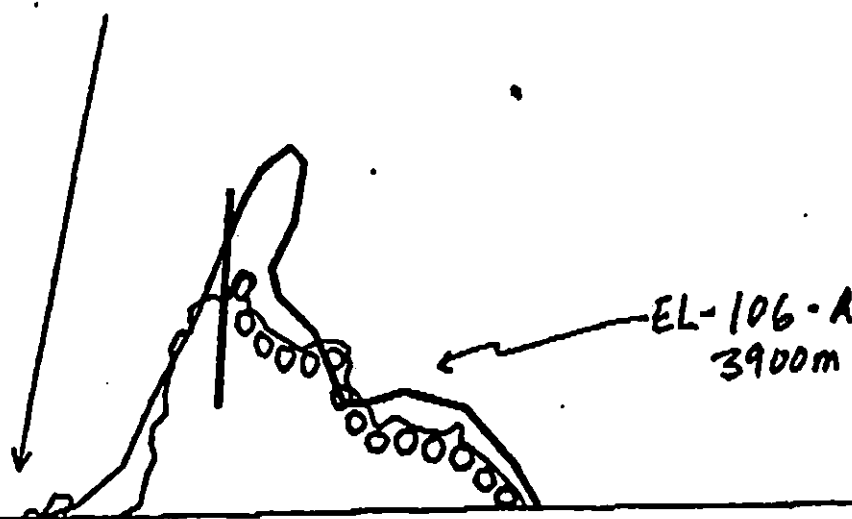
XXXX Wide
//// Medium
---- Narrow
TTTT Very Light
OOOO No Oil

EL-106
Exxon Segment Length: 6524m
ADEC Segment Length: 5078m



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

EL-105



↓ PWS 126A

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

EL-106

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



Map Key: PWS-126c

Name: C. Dillon

Date: 4/2/90

Date Entered: _____

1991 MAYSAP EVALUATION

SEGMENT: EL 106 SUB: B REGION: PWS SURVEY DATE: 5/20/91ENVIRONMENTAL SENSITIVITIES:Work Window(s) RESTRICTED 3/1 - 9/15Ecological/Constraints (see page two for details) Eagle nest,
Subsistence - Deer harvestingARCHAEOLOGICAL CONSTRAINTS:

Consultation and inspection with an Exxon archaeologist is required prior to treatment. Specific on-site monitoring requirements will be determined at that time. PHONE 564-3276; 564-3657; (Anchorage) or 229-1514 (24 hrs.).

Timothy D Smith for SHPD 6/07/91

RECOMMENDATIONS:

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

COMMENTS:

INITIAL: Manual pickup of easily accessible AP and HSOR at
locations A and C, follow with Inipol and Customblen.

TAG: FOSC: TAG APPROVAL DATE: June 7 1991FOSC APPROVAL DATE: 6/12/91ADEC *[Signature]*FOSC *[Signature]*EXXON *[Signature]*

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

USCG *[Signature]*NOAA *[Signature]*

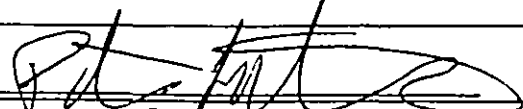
**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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

TEAM NO. 2 SEGMENT EL-106 SUBDIVISION B DATE 5/20/91

ADEC

NAME Peter MontasanoSIGNATURE 

☐ NTR **TREATMENT RECOMMENDED** ADNR LISTS THIS SUBDIVISION AS A RECREATIONAL DESTINATION. AREA "A" HAS SOME THIN BUT HARD AP WHICH GLUES THE SEDIMENTS TOGETHER - EASY BREAKUP. AREA "C", SOR/AP WHICH I RECALL FROM SSAT - REMOVE IT! THE B/C IN AREA "C" ARE SPACED FOR EASY ACCESS. BEACHES ON SKETCHES #2, #3 ARE IN EXTREMELY POOR CONDITION AND WILL REQUIRE TAG REVIEW. #3 IS WORSE OFF AND ASAP DOCUMENTED THE OILING TO 50cm. #2 IS Barely/IF AT ALL ACCESSIBLE FOR MECHANICAL WORK WHICH IS MARGINALLY APPROPRIATE. MECHANICAL TREATMENT SHOULD BE CONSIDERED FOR #3; IT WOULD HAVE TO BE EXTREMELY AGGRESSIVE. THESE SITES PUSH THE LIMITS OF AVAILABLE AND DESERVED MORE TREATMENT IN 1989.

EXXON

NAME FRANK BoxSIGNATURE 

☐ NTR The only thing that I would recommend for this area would be the use of Bioremediation on the worst area at the surface oiling as indicated on sketch map #2 (section K) - Also on sketch #1 sec. A+C. to include break-up of SOR and Bio-Bath soap + custom Blen.

ANDMANAGER

NAME DENNIS S Kennedy OF WSFSSIGNATURE D. S. Kennedy

☐ NTR This subdivision showed quite a bit of oiling, but, oil would be hard to work. at location A and C handwork and bioremediation would be possible, although work would be slow and results minimal.

USCG/NOAA NOAA D. SINGLER - BEATTY D. SINGLER - Beatty

NAME BMI M.P. ZENONE 4566SIGNATURE Bmi M.P. Zenone

☐ NTR Sections A & C contain SOR and asphalt that could be manually broken-up, however, the oil was found from the supratidal zone (black grass) to the LITZ (tide pools and sea grass bed). Areas appear to be recovering and further clean-up may hamper the recovery. DSB

CONCUR W/ EXXON REP, W/ CONSIDERATION TO NOAA REP. COMMENTS. MANUAL WORK WOULD BE TEDIOUS AND OF QUESTIONABLE BENEFIT. MINIMAL MANUAL IN TERMS OF BREAKUP OF AP & SOR THEN BIOREMEDIATE. 3

TEAM NO. 2OG ReimerBIO BanSEGMENT EL 106ADEC MontesaroLANDMANAGER Kennedy for USFSSUBDIVISION BXXON BoxUSCG/NOAA D Simmeret - BeattyDATE 5/20/91TIME 12:00 to 14:25TIDE LEVEL 1.06 ft. to 1.09 ft.ENERGY LEVEL: ☒ H ☐ M ☐ LSURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELOWEATHER: ☒ SUN ☐ CLOUDS ☐ FOG ☐ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 549 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W 10 m M 120 m N 61 m VL 115 m NO 243 m US 0 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE VHML	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A	P			P		P	P				BR	H	20	50		X			
B						T	T				PC	M	15	40		X			
C	P			P	P	P					BC	M	10	30		X			
D				S		S	S				BE	H	3	15		X			
E						S	S				R	V	1	15		X			
F						S					R	V	0.5	10		X			
G						S					R	V	2	10		X			
H						P	P				R	V	1	20		X			
I						S					R	V	1	20		X			
J						P					R	V	1	20		X			
K				S	P	P					B	H	4	15		X			
L						S					R	V	1	20		X			
M				S	P	P					B	H	10	25		X			
N						P	P				R	V	2	15		X			
O				S		B	B				B	H	10	10		X			
P						T					P	M	3	5		X			

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 2-22 FRAMES 6-9

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR BR SN	PIT ZONE				SURFACE- SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	45							X	-						✓		P-GSP	
2	75							X	-						✓		P-GSPD	Protat bottom
3	15					X			0-10	Y			X				B-PG	BLACK FISH ON CLASTS
4	10		X						0-9	Y	9	B	X				B	
5A	13						X		0-8	N					✓		B-PFB	Hit boulders
5B				X					8-13						✓			
6	20					X			10-11	Y	10	B		✓			B-PCG	drops on H ₂ O
7	25							X	-				X				B-P	

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

OG COMMENTS:

44 Dug in heavy SOR area between BLDs - VERY coarse BLD/Rock outcrop beach, Similar subsurface oil character may be found in same area as surface oil, but will not be continuous due to nature of beach material. Irregular Rocky coastline with CT/CV on cliff sections mostly in crevices or behind near shore Rock. SOR across UITE on boulder beaches. Pebble/Cobble beach, sketch map # 1 is clean except for a few drops on pebbles/cobbles

revised 5/28/91 KG

reviewed 5/28/91 KG

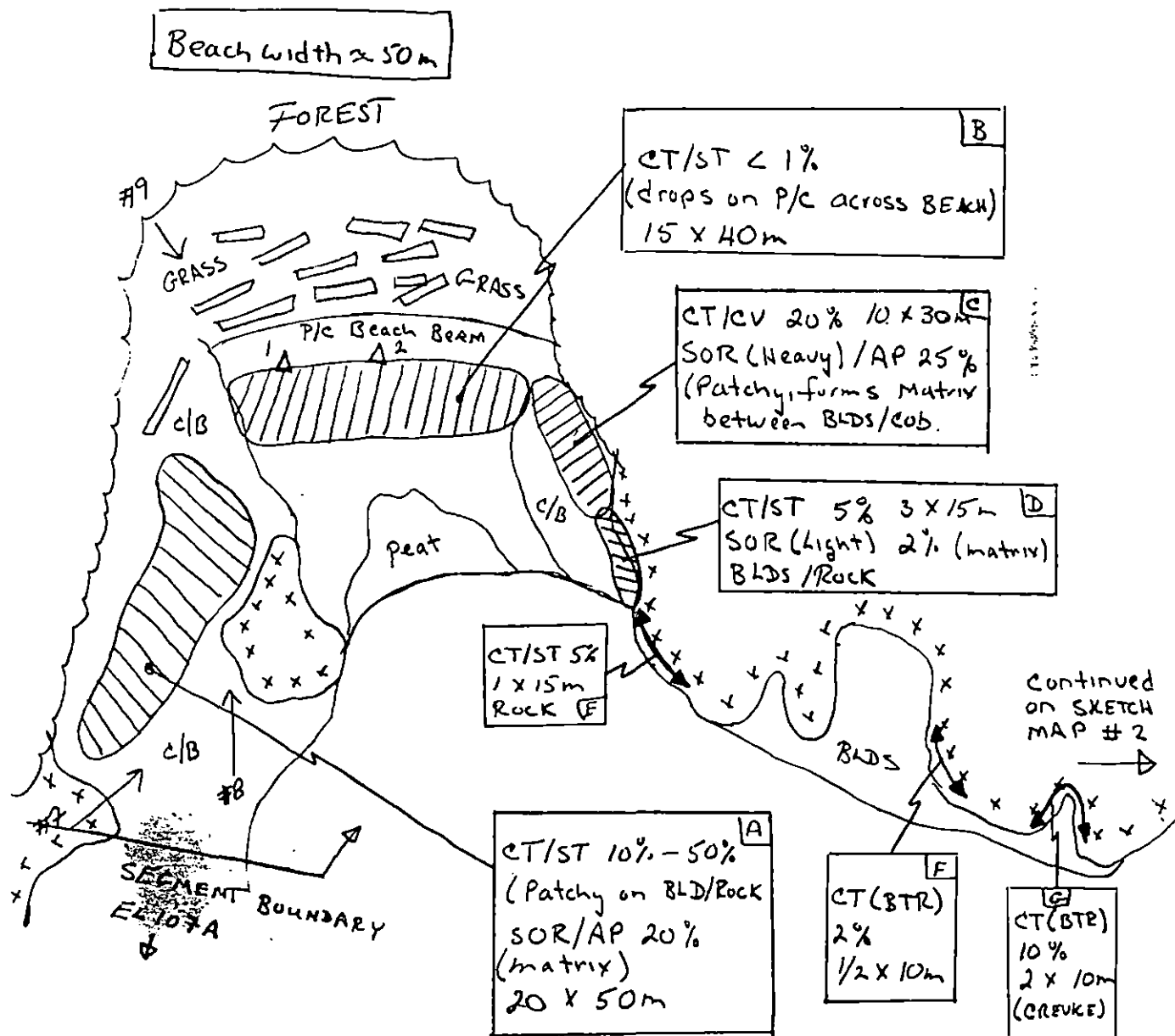
DATE 5 / 20 / 91

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

reviewed 5/28/91 XG



OG SKETCH #1
EL 106 B
MAY 20, 1991
12:00 - 14:25
Doug Reimer



REVIEWED: MC 5/30/91
reviewed 5/28/91 LB

CONTINUED ON
SKETCH MAP #3

CT/CV 20%
SOR (Light-Heavy) 10%
10 x 25 m
Boulders

FOREST

High Rock

No Field Data
Assume:
2 x 2 m 100

CT (BTR) 2%
1 x 20 m
VERT. ROCK

CT/CV 40%
SOR (Heavy) 5%
4 x 15 m
Boulder Pocket
Behind Rock

CT 40%
1 x 20 m
Rock Crevice
NITZ

CT 5% (BTR) I
1 x 20 m
STEEP ROCK
UITZ

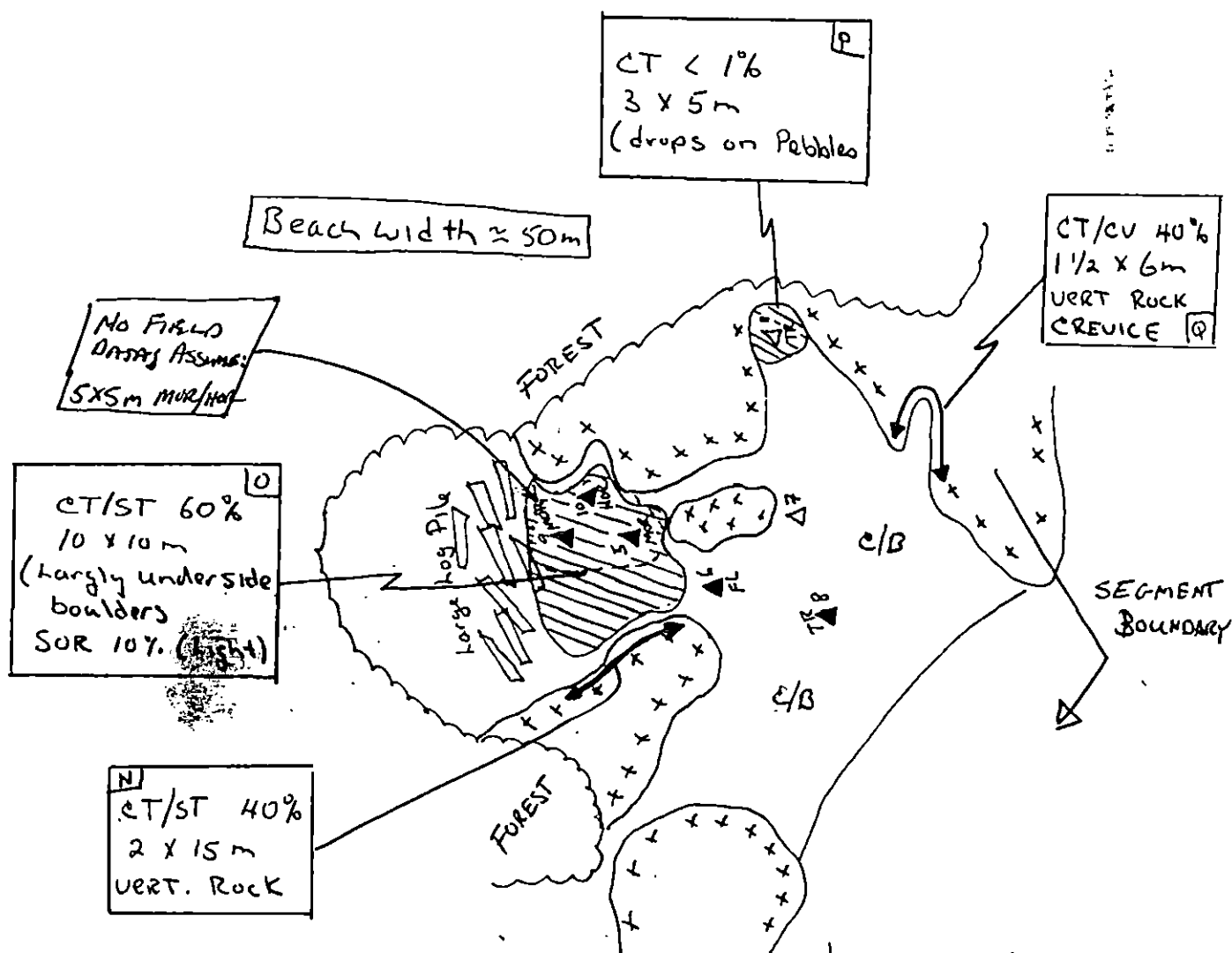
CT/CV 50%
1 x 20 m
NITZ VERT. ROCK

CONTINUED ON
SKETCH MAP #1
NO OVERLAP

OG SKETCH #2
EL 106 B
MAY 20, 1991
12:00 - 14:25
Doug Reimer

REVISOR: MC 5/30/91
revised 5/28/91 KG

OG SKETCH #3
EL 106B
MAY 20, 1991
12:00 - 14:25
Doug Reimer



continued
on SKETCH MAP #2
(slight overlap)
REVISED: MC 5/30/91
reviewed 6/29/91 KG

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 20 May 91
 SEGMENT # EL-106 TIDAL HEIGHT(Range) 1ft
 SUBDIVISION B BIOLOGIST S. BAN
 SEA STATE calm WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # — FRAME # —

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

- A: Oil in the mapped area is found over a wide tidal range. CT/ST high in the ITZ was observed in the lichen zone. A patch of sor/AP was encountered in a grassy area. Additional sor/AP was scattered throughout the area NW of the mapped boulders. This area supported biota as indicated on the map. Living oiler bivalves & shells were also observed here.
- Fine sediments near port area did not have evidence of living clams (no siphon holes). However Saxidomus and Protothaca shells were scattered on the surface here.
- B,C,D,E,F,G: As indicated on map. Lower intertidal areas dense & diverse on bldgs/rock.
- H,I,J,K,L: Oil is CT/BTR high in ITZ, sporadic within lichen zone. No biota near sor at "K".
- M: No biota in upper ITZ of beach. Biota is well below oiled zone as indicated.
- N,Q: BTR high in ITZ - Lichen zone -
- 2: Lichens and green algae in oiler zone as indicated. Area seaward shows numerous, dense bivalve shells & scars - an artifact of 1989 washing - However, lichens are dense in the area and some recent spat was observed.

WILDLIFE OBSERVATIONS

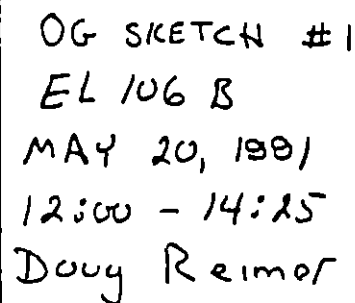
TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl			
Gulls/Kittiwakes			
Shorebirds			
Corvids			
Other Birds	Shipe	1	

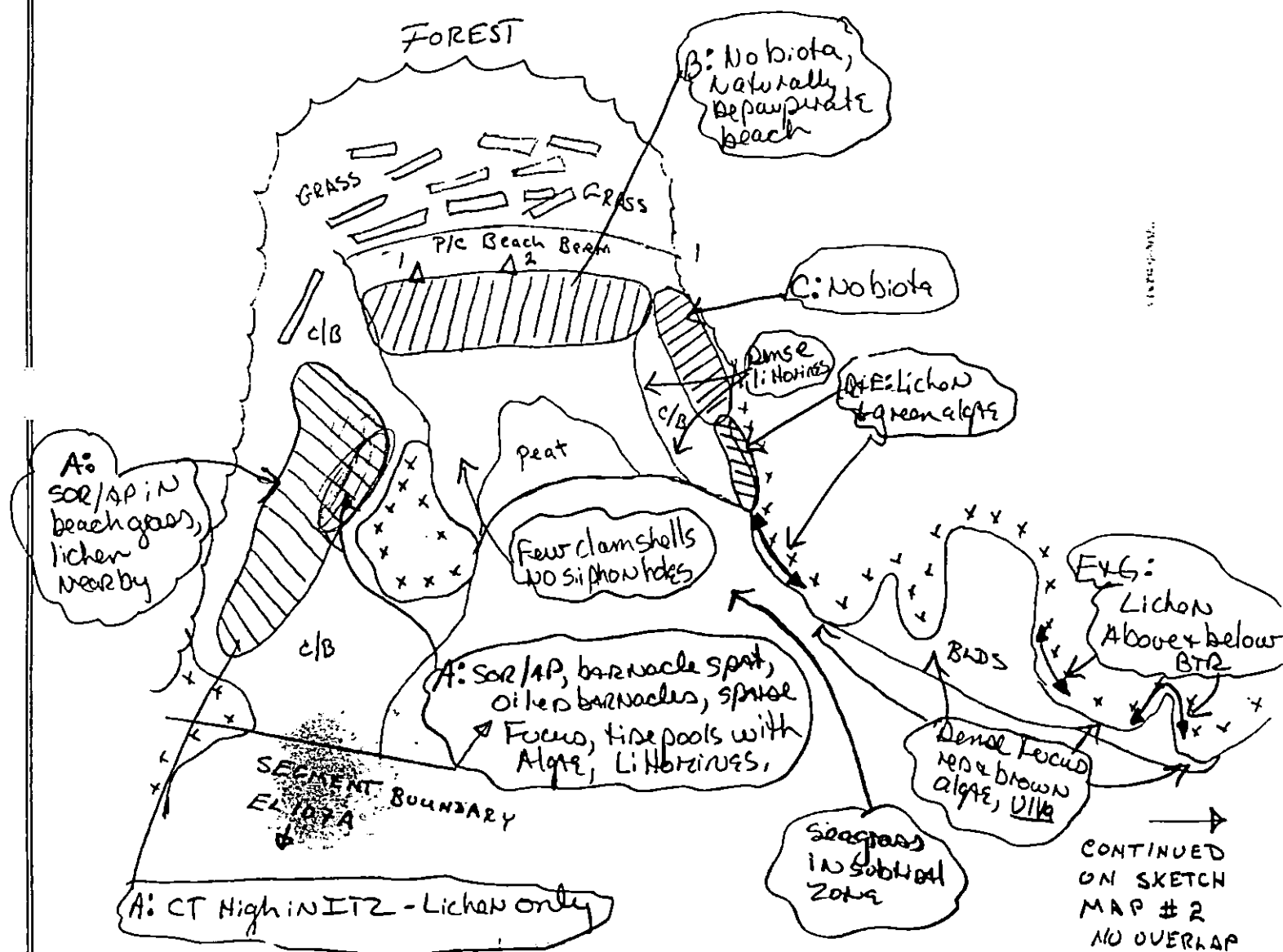
MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)			
Seal	1		
Illes (specify)			

Shoreline subdivision map showing important biological features attached.

REVIEWED: MC 5/30/91

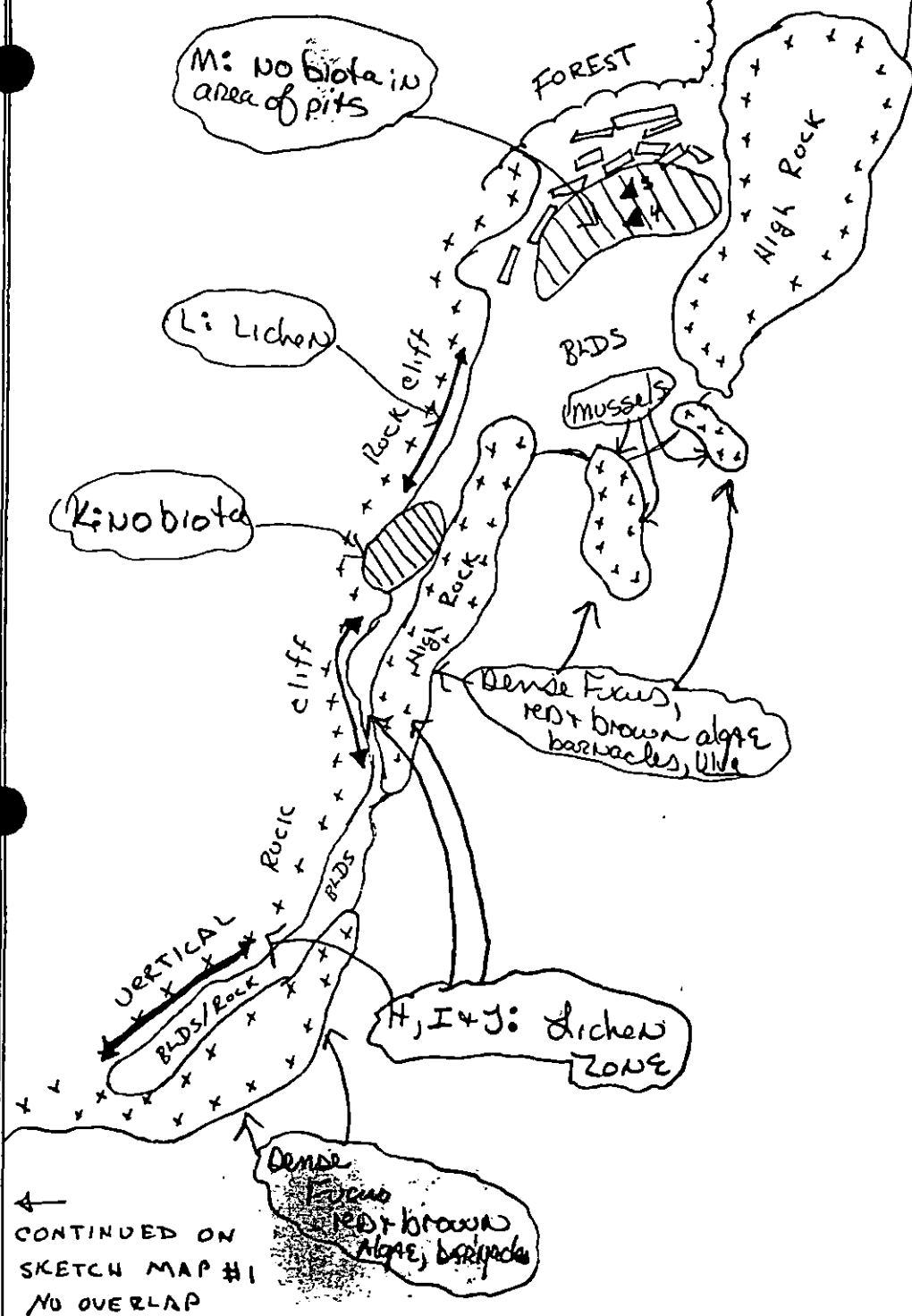


SMB May 20 '91



REVIEWED: MC 5/30/91

4



REVIEWED: MC 5/30/91

OG SKETCH #3

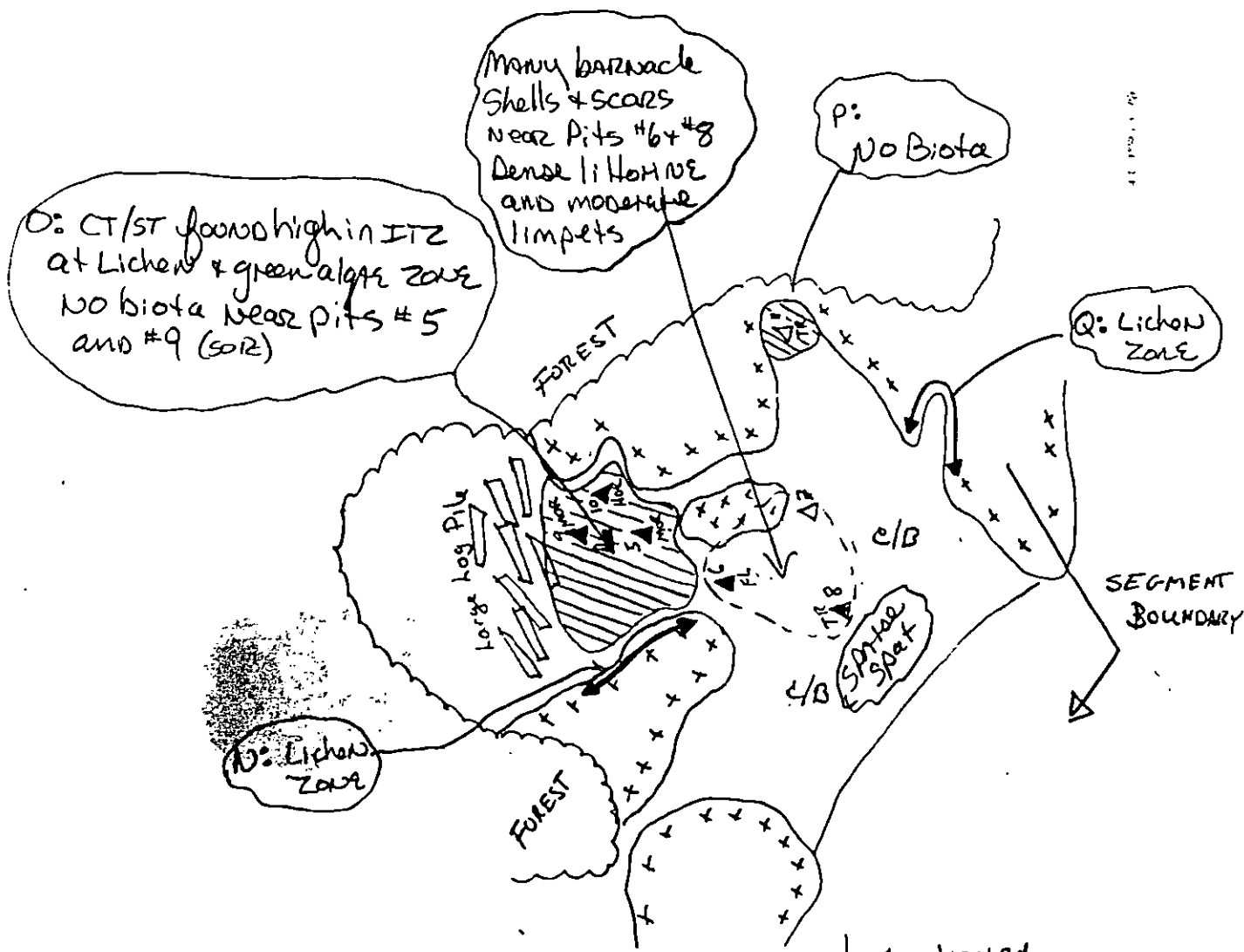
EL 106 B

MAY 20, 1991

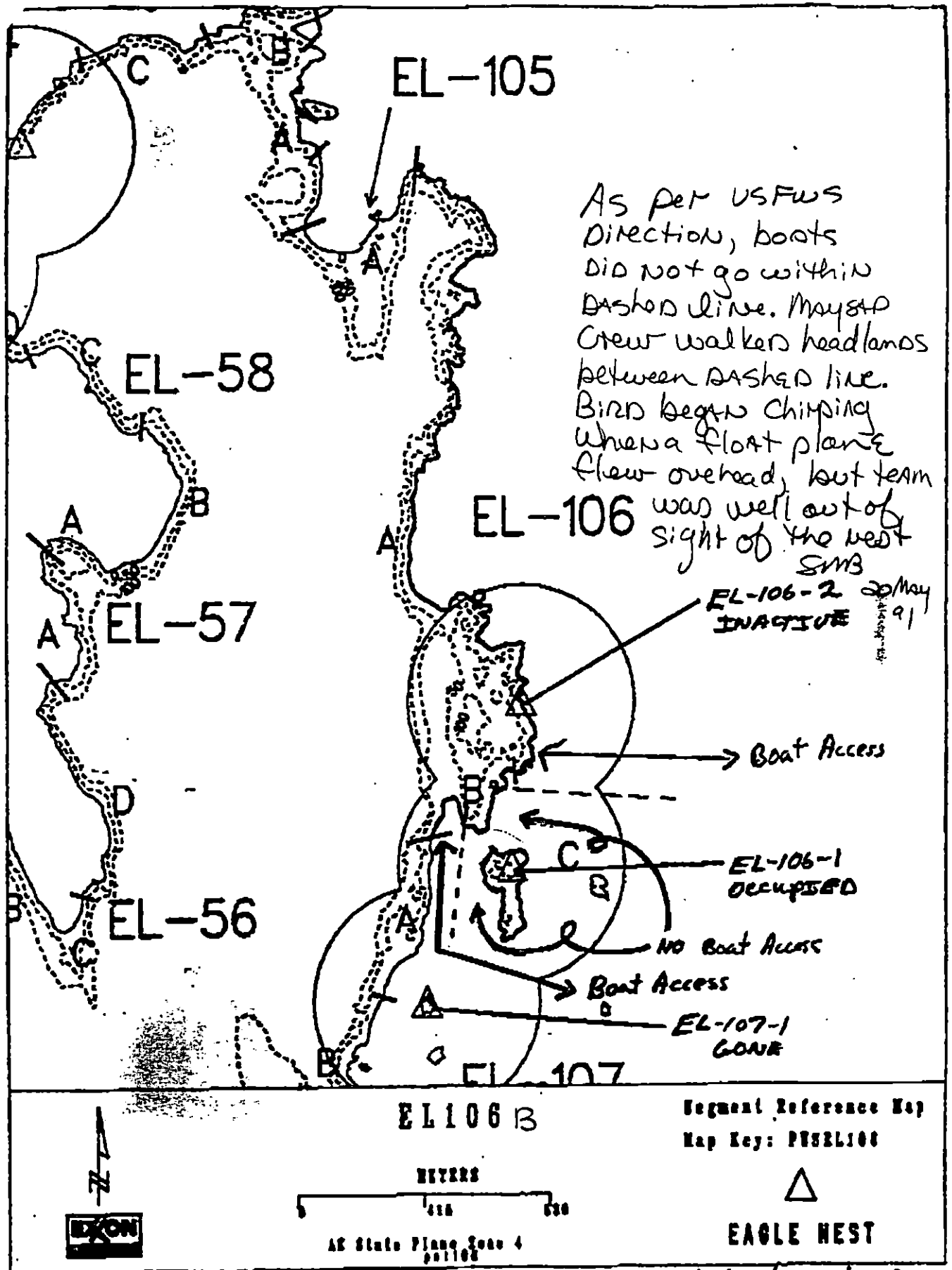
12:00 - 14:25

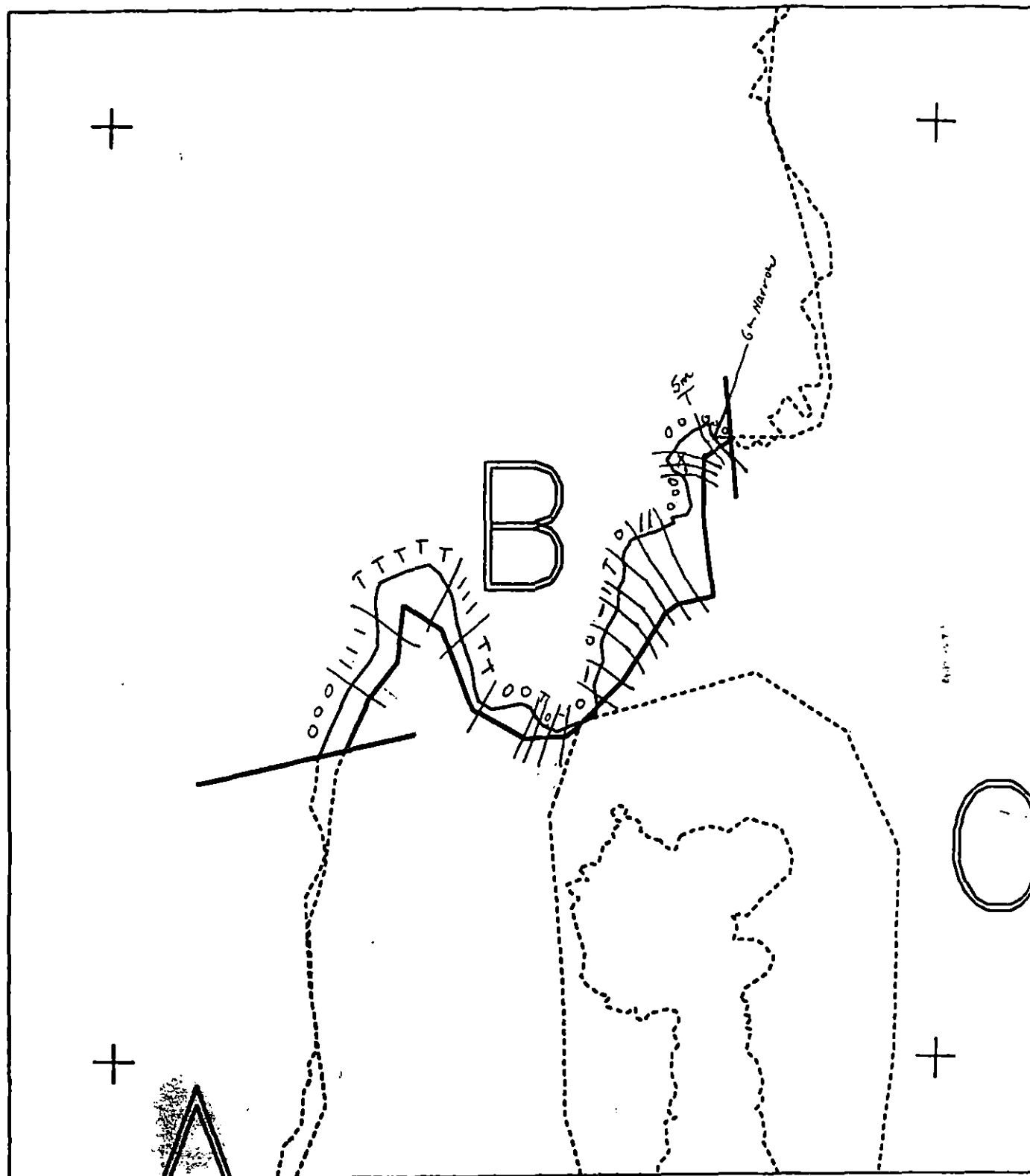
Doug Reimer

SMB 20 May 91



Continued
on SKETCH MAP #2
(Slight overlap)
Reviewed: MC 5/30/91





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

EL106 B
 ADEC Subsegment Length: 549m
 METERS
 0 100 200
 AK State Plane Zone 4
 601100b



Subdivision Field Map
 Map Key: KNIEL100B
 Name: Reimer
 Date: 5/20/91
 Date Entered:

Reviewed: MC 5/30/91
 revised 5/28/91 KB

1991 MAYSAP EVALUATION

SEGMENT: EL 106 SUB: B REGION: PWS SURVEY DATE: 5/20/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

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

COMMENTS:

INITIAL: Manual pickup of easily accessible AP and HSOR at
locations A and C, follow with Inipol and Customblen.

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____ FOSC APPROVAL DATE: _____

ADEC _____ FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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

ADEC

NAME Peter Montano

SIGNATURE [Signature]

☐ NTR ☒ TREATMENT RECOMMENDED ADNR LISTS THIS SUBDIVISION AS A RECREATIONAL DESTINATION AREA "A" HAS SOME TAIN BUT HARD AP WHICH GIVES THE SEDIMENTS TOGETHER - EASY BREAKUP. AREA "C", SCR/AP WHICH I RECALL FROM SSAT - REMOVE IT! THE B/C IN AREA "C" ARE SPACED FOR EASY ACCESS. BEACHES ON SKETCHES #2, #3 ARE IN EXTREMELY POOR CONDITION AND WILL REQUIRE TAG REVIEW. #3 IS WORSE OFF AND ASAP DOCUMENTED THE OILING TO 50cm. #2 IS Barely/IF AT ALL ACCESSIBLE FOR MECHANICAL WORK WHICH IS Marginally APPROPRIATE. MECHANICAL TREATMENT SHOULD BE CONSIDERED FOR #3; IT WOULD HAVE TO BE EXTREMELY AGGRESSIVE. THESE SITES PUSH THE LIMITS OF AVAILABLE AND DESERVED MORE TREATMENT IN 1989.

EXXON

NAME FRANK Box

SIGNATURE [Signature]

☐ NTR The only thing that I would recommend for this area would be the use of Bioremediation on the worst area of the site for oiling as indicated on sketch map #2 (section K) - Also on sketch #1 sec. A+C to include break-up of SCR. and Bio-Bath in oil + custom bln.

ANDMANAGER

NAME DENNIS S Kennedy OF WSFS

SIGNATURE D.S. Kennedy

☐ NTR This subdivision showed quite a bit of oiling, but, oil would be hard to work. at location A and C handwork and bioremediation would be possible, although work would be slow and results minimal.

USCG/NOAA NOAA SINGCOR - BEATTY D. SINGCOR - Beatty

NAME BMI M.P. ZEMKE USCG

SIGNATURE [Signature]

☐ NTR Sections A & C contain SCR and asphalt that could be manually broken-up, however, the oil was found from the supratidal zone (beach grass) to the LITZ (tide pools and seagrass bed). Areas adjacent to the remaining and further clean-up may hamper the recovery. Do B

CG- CONCUR W/ EXXON REP, W/ CONSIDERATION TO NOAA REP. COMMENTS. MANUAL WORK WOULD BE TEDIOUS AND OF QUESTIONABLE BENEFIT. MINIMAL MANUAL IN TERMS OF BREAKUP OF AP & SCR THEN BIOREMEDIATE. 3

TEAM NO. 2OG ReimerBIO BanSEGMENT EL 106ADEC MontesaroLANDMANAGER Kennedy for USFSSUBDIVISION BEXXON BoxUSCG/NOAA D Simecek - BeattyDATE 5 / 20 / 91TIME 12 : 00 to 14 : 25TIDE LEVEL 1.06 ft. to 1.09 ft.ENERGY LEVEL: ☒ H ☐ M ☐ LSURVEYED FROM: ☒ FOOT ☒ BOAT ☐ HELOWEATHER: ☒ SUN ☐ CLOUDS ☐ FOG ☐ RAIN ☐ SNOWTOTAL LENGTH SHORELINE SURVEYED: 549 mNEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONEEST. OIL CATEGORY LENGTH: W 10 m M 20 m N 61 m VL 115 m NO 243 m US 0 m

L O C	SURFACE OIL CHARACTER										SURFACE SEDIMENT TYPE	SHORE SLOPE V H M L	AREA		ZONE				NOTES
	AP	MS	TB	SOR	CV	CT	ST	FL	DB	NO			WIDTH m	LENGTH m	S	UI	MI	LI	
A	P			P		P	P				BR	H	20	50		X			
B						T	T				PC	M	15	40		X			
C	P			P	P	P					BC	M	10	30		X			
D				S		S	S				BR	H	3	15		X			
E						S	S				R	V	1	15		X			
F						S					R	V	0.5	10		X			
G						S					R	V	2	10		X			
H						P	P				R	V	1	20		X			
I						S					R	V	1	20		X			
J						P					R	V	1	20		X			
K				S	P	P					B	H	4	15		X			
L						S					R	V	1	20		X			
M				S	P	P					B	H	10	25		X			
N						P	P				R	V	2	15		X			
O				S		B	B				B	H	10	10		X			
P						T					P	M	3	5		X			

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

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

PHOTO ROLL # MAYSAP-

2-22 FRAMES 6-9

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER							OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO					S	UI	MI	LI		
1	45							X	-								P-GSP	
2	45							X	-								P-GSPD	Protat bottom
									-									
3	15						X		0-10	Y				X			B-PG	BLACK FIRM ON CLASTS
4	10		X						0-9	Y		9	B		X		R	
5A	13							X	0-8	N							B-PFB	Nit boulders
5B				X					B-13									
6	20						X		6-11	Y		10	B				B-PCG	drops on H2O
7	25							X	-						X		B-P	

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

OG COMMENTS:

44 Dug in heavy SOR area between BLDs - VERY coarse BLD/Rock outcrop beach, similar subsurface oil character may be found in same area as surface oil, but will not be continuous due to nature of beach material. Irregular Rocky coastline with CT/CV on cliff sections mostly in crevices or behind near shore Rock. SOR across UITS on boulder beaches. Pebble/Cobble beach, sketch map # 1 is clean except for a few drops on pebbles/cobbles

revised 5/28/91 KLG

SEGMENT EL-106

SUBDIVISION B

DATE 5 / 20 / 91

ENERGY LEVEL: ☐ H ☐ M ☐ L

WEATHER: ☐ SUN ☐ CLOUDS ☐ FOG ☐ RAIN ☐ SNOW

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

EST. OIL CATEGORY LENGTH: W_____m M_____m N_____m VL_____m NO_____m US_____m

[illegible]

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- - FRAMES

[illegible]

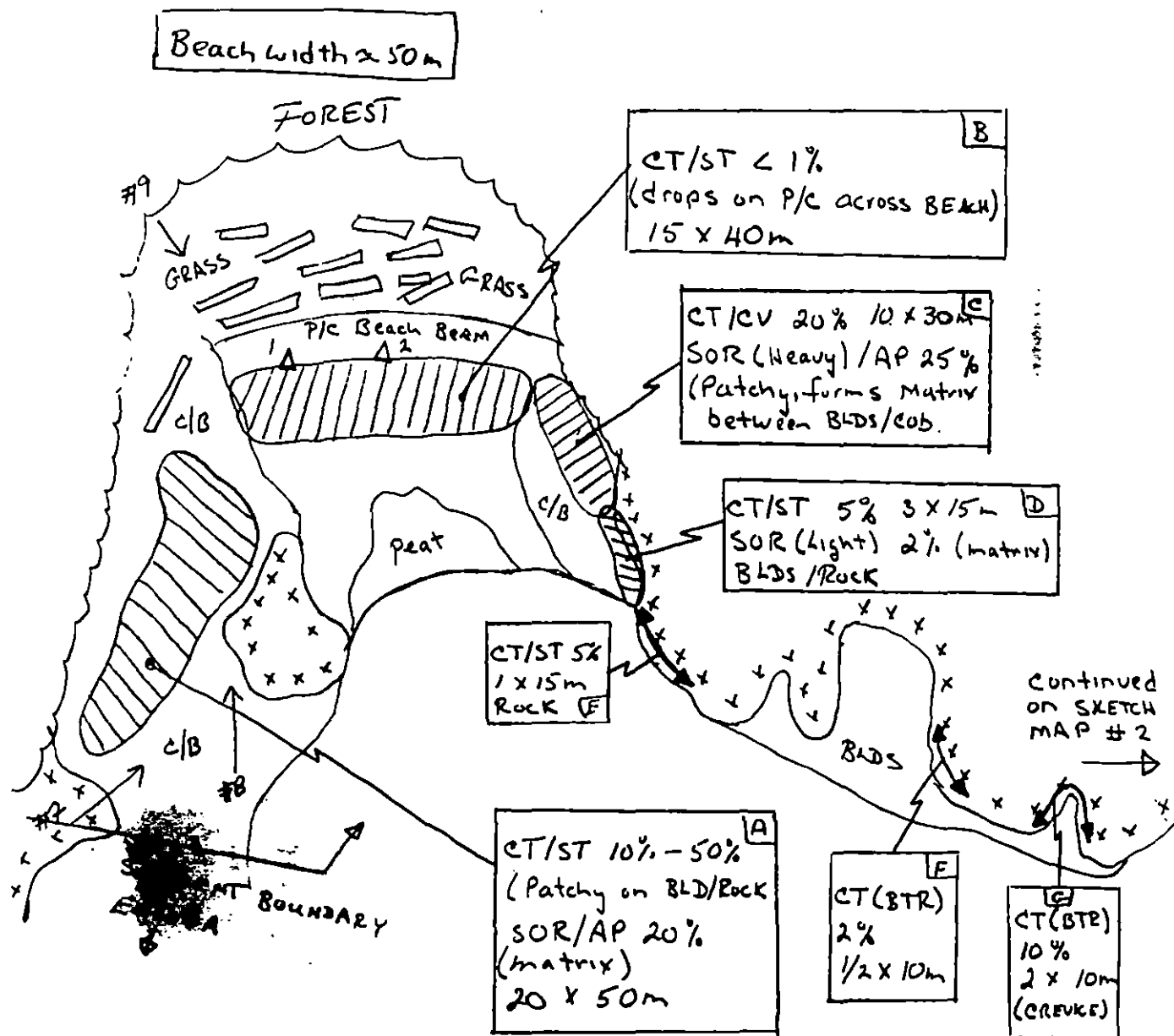
SHEEN COLOR: B = BROWN: R = RAINBOW: S = SILVER: N = NONE

OG COMMENTS:

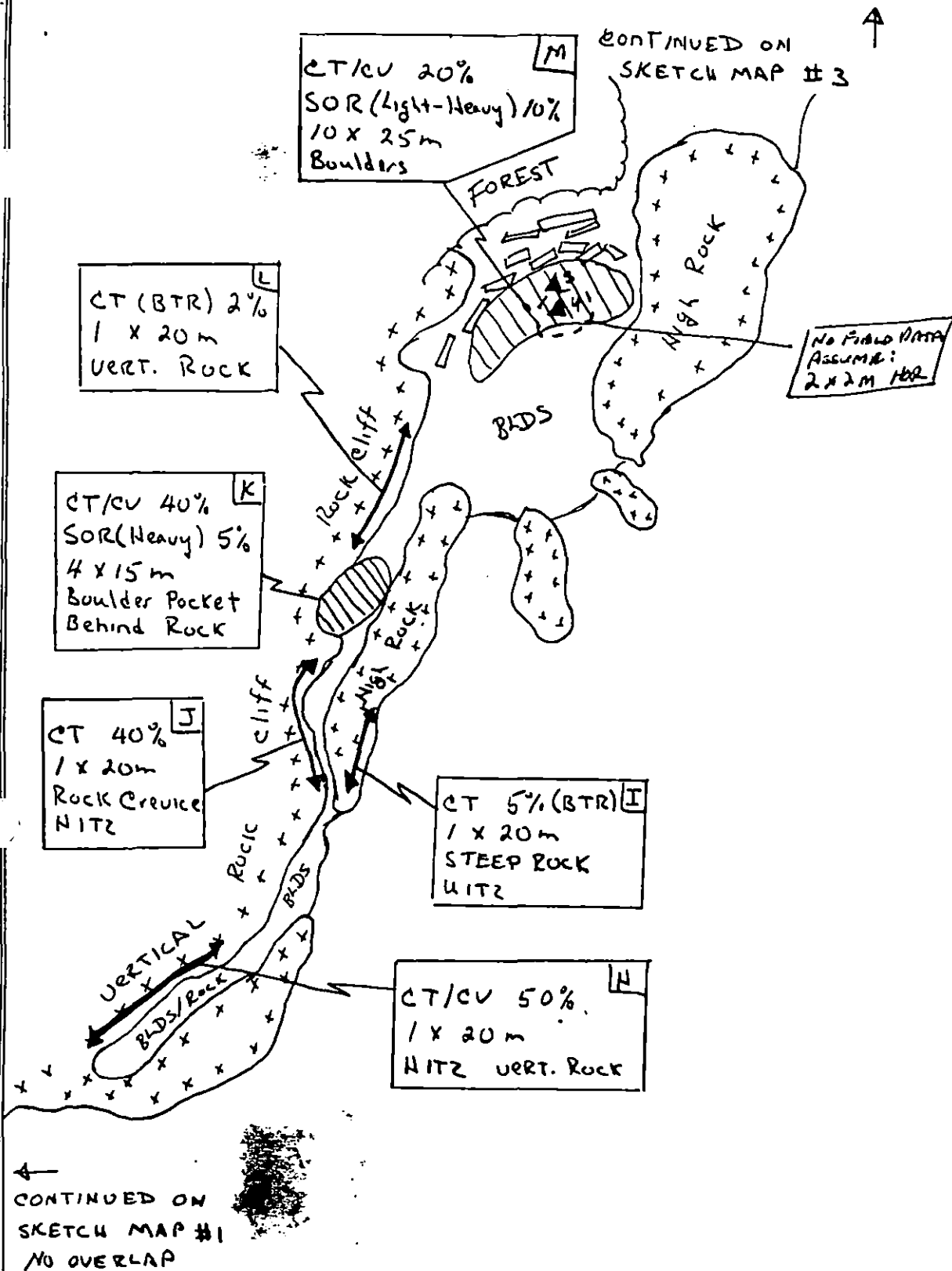
reviewed 5/28/91 KG



OG SKETCH #1
EL 106 B
MAY 20, 1991
12:00 - 14:15
Doug Reimer



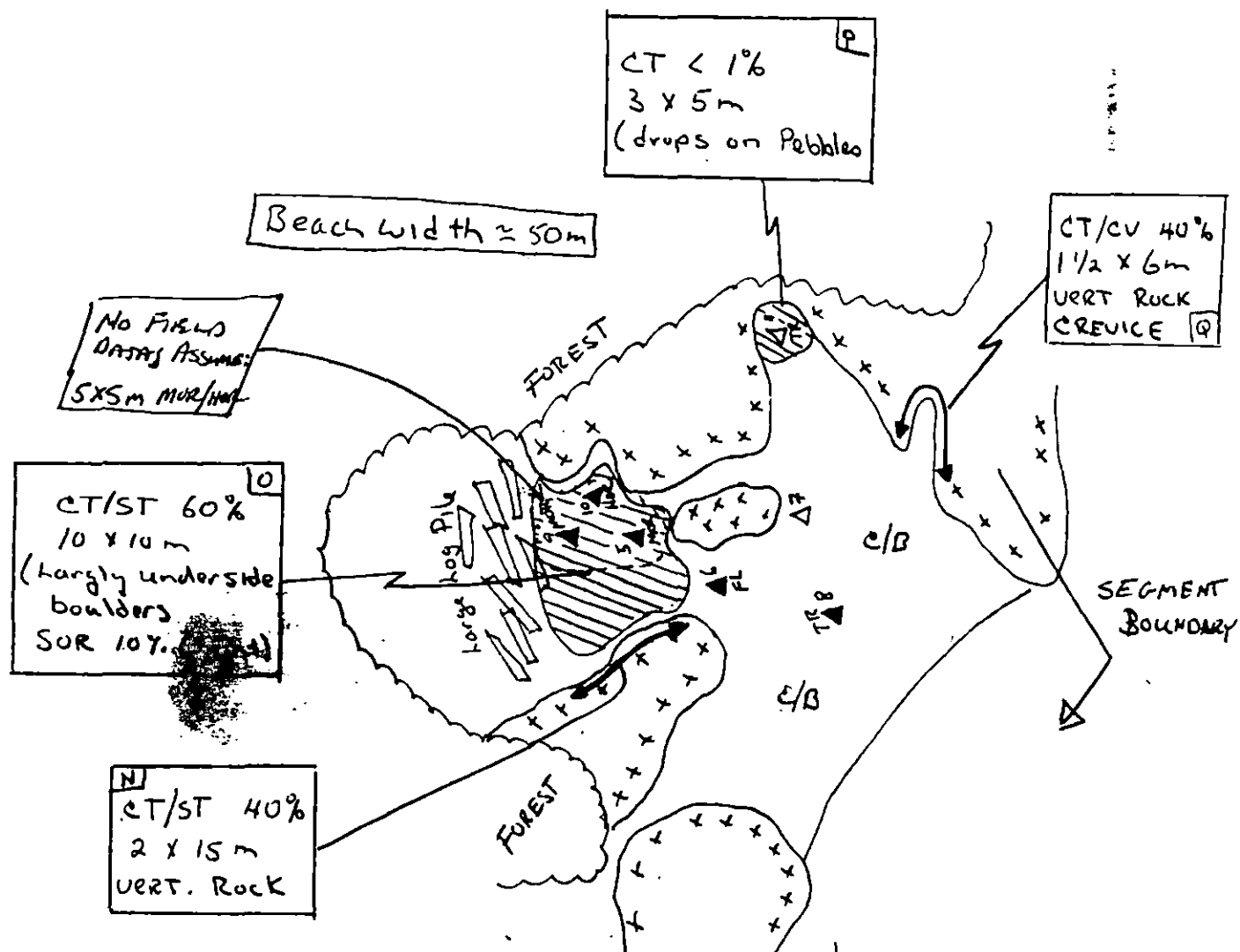
REVIEWED: MC 5/30/91
revised 5/28/91 LG



OG SKETCH #2
EL 1068
MAY 20, 1991
12:00 - 14:25
Doug Reimer

REVISOR: MC 5/30/91
revised 5/28/91 KG

OG SKETCH #3
EL 106 B
MAY 20, 1991
12:00 - 14:25
Doug Reimer



Continued
on SKETCH MAP #2
(slight overlap)
REVISED: MC 5/30/91
reviewed 6/28/91 KG

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 **DATE** 20 May 91
SEGMENT # EL-106 **TIDAL HEIGHT (Range)** 10+
SUBDIVISION **BIOLOGIST** S. BAN
SEA STATE calm **WIND SPEED/DIRECTION** calm
PHOTOGRAPHS: ROLL # **FRAME #**

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

A: Oil in the mapped area is found over a wide tidal range. Oil is high in the ITZ was observed in the lichen zone. A patch of silt/AP was encountered in a grassy area. Additional silt/AP was scattered throughout the area NW of the mapped boulders. This area supported biota as indicated on the map. Living oiled bivalves & shells were also observed here.

B: Fine sediments near post area did not have evidence of living clams (no siphon holes). However Saxidomus and Protothaca shells were scattered on the surface here.

C, D, E, F, G: As indicated on map. Lower intertidal area dense & diverse on bldgs/rock

H, I, J, K, L: Oil is oil/BTR high in ITZ, sporadic within lichen zone. No biota were seen at "K".

M: No biota in upper ITZ of beach. Biota is well below oiled zone as indicated.

N, O: BTR high in ITZ - Lichen zone -

P: Lichens and green algae in oiled zone as indicated. Area seaward shows numerous, dense bivalve shells & scars - an artifact of 1989 washing - However, litter/moss are dense in the area and some recent spot was observed.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles			
Seabirds			
Waterfowl			
Gulls/Kittiwakes			
Shorebirds			
Corvids			
Other Birds	Snipe	1	

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)			
Seal	1		
W es (specify)			

Shoreline subdivision map showing important biological features attached.

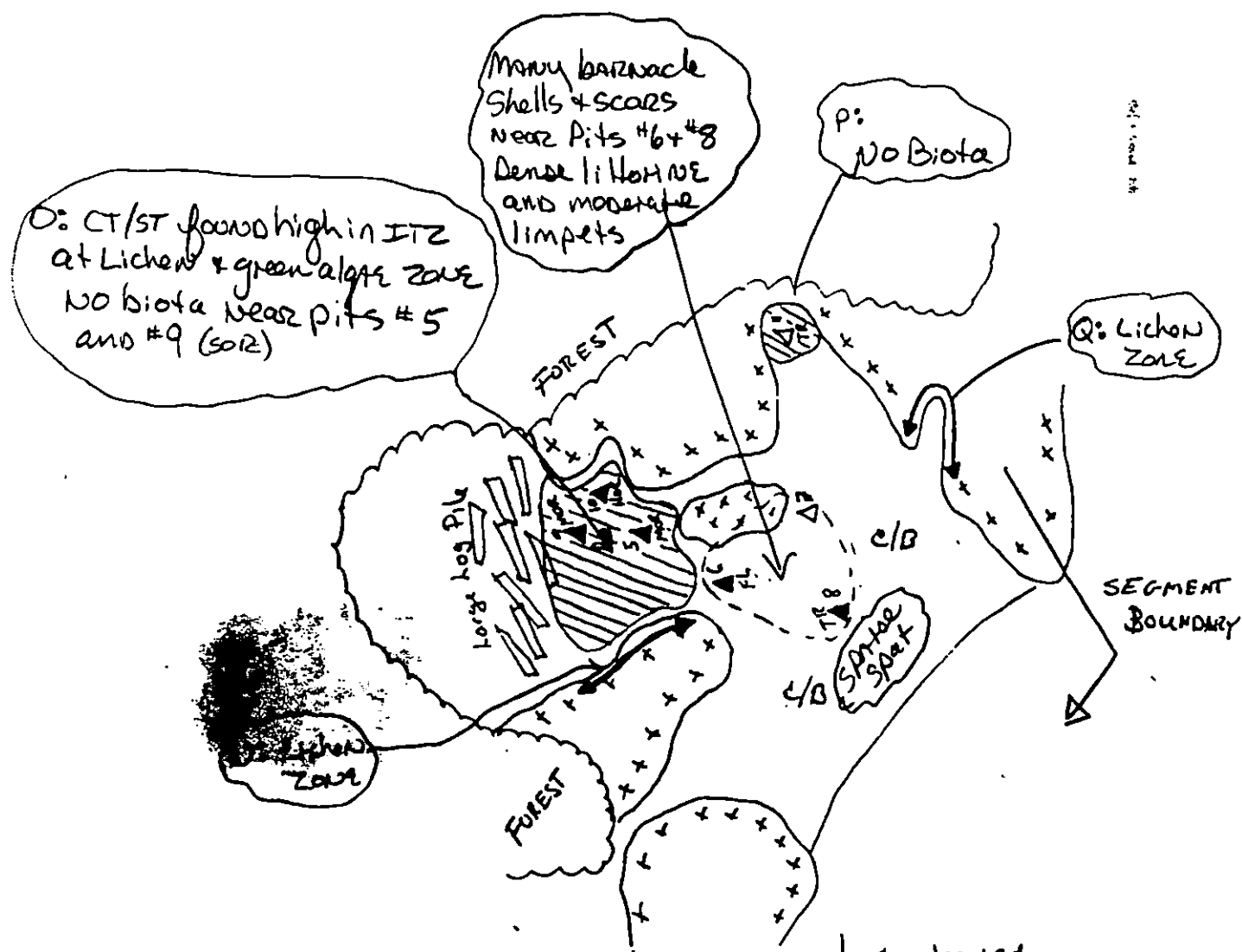
REVIEWED: MC 5/30/91

SMB May 20 '91



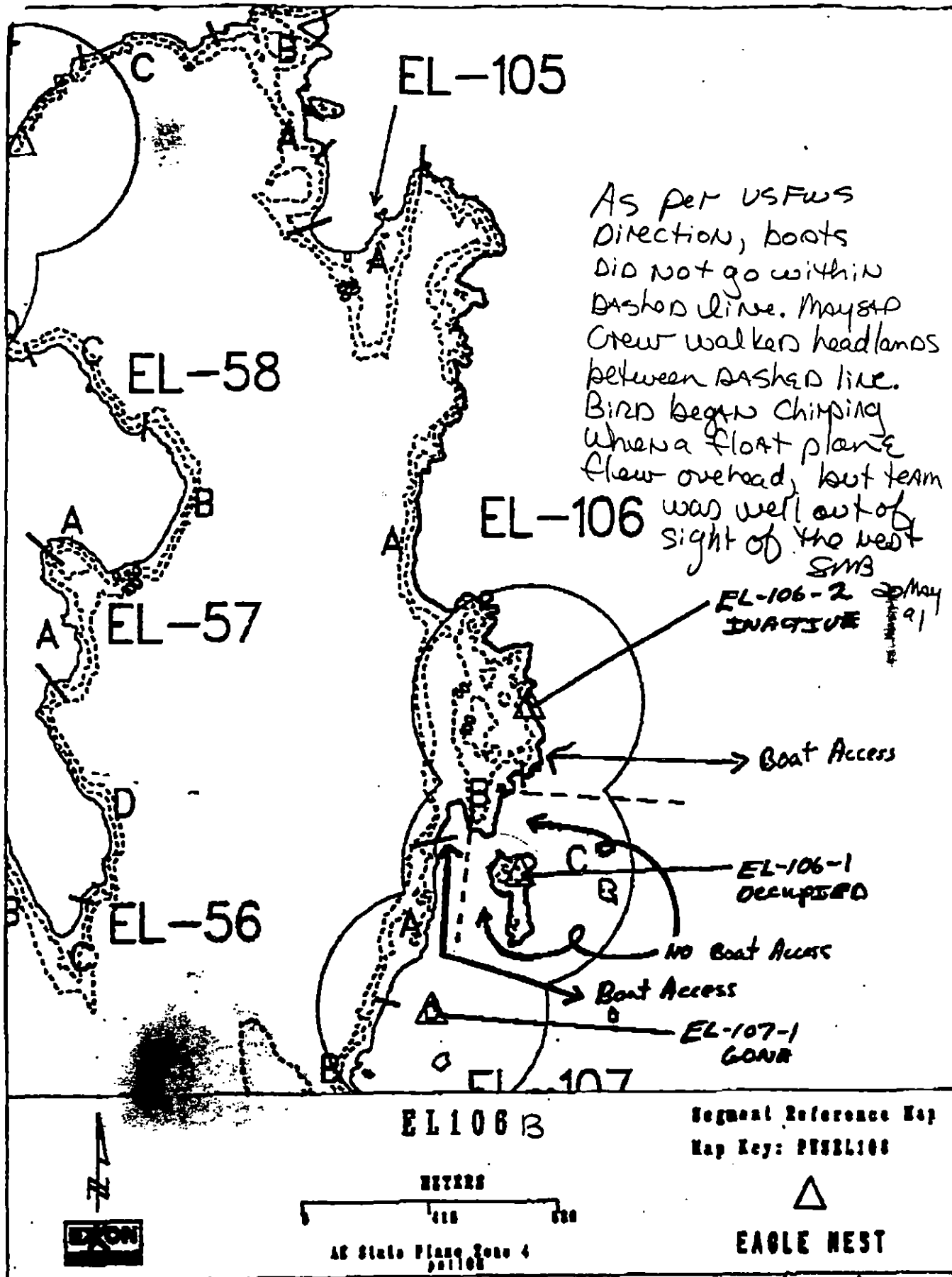
Doug Reimer

SMB 20 May 91



continued
on SKETCH MAP #2
(Slight overlap)

Reviews: MC 5/30/91



1991 MAYSAP EVALUATION

SEGMENT: EL 106 SUB: A REGION: PWS SURVEY DATE: 5/20/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Eagle nest

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Timothy A. Smith

Date: 6/07/91

RECOMMENDATIONS:

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

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: JUNE 6 1991

FOSC APPROVAL DATE: 6/10/91

ADEC John Bane

FOSC E. E. PAGE

EXXON Beal

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

USCG Edmond

NOAA James

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

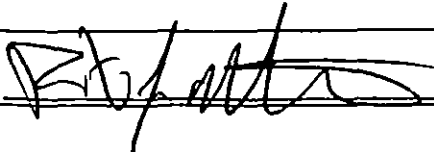
TEAM NO. 2 SEGMENT CL-106 SUBDIVISION A DATE 5/20/91

ADEC

NAME

Peter Montenegro

SIGNATURE

☒ NTR

TREATMENT RECOMMENDED

The oiling is well documented. The only treatable area is "F" with some surface AP/SOR and H&R over a 3x3M area very near the surface. This area is small and the shoreline presents difficult access for any sort of crew.

EXXON

NAME

Frank Bat

SIGNATURE

Frank Bat☒ NTR

Most of the segment is high energy shoreline with only remnants of remaining oil. I think no net benefit could be obtained with further activities.

ANDMANAGER

NAME

DENNIS S. Kennedy OF USFS

SIGNATURE

D.S. Kennedy☒ NTR

This is a long vertical rock coastline with mostly CT & S oiling. Area [F] has the most significant oiling. Though treatment is not recommended in this boulder field.

USCG/NOAA NOAA D. SIMONEK - BEATTY

NAME

BRI M.P. ZENONE USCG

SIGNATURE

Bri M.P. Zenone☐ NTR

Only small amounts of oil found along this segment. Since the shoreline consists of cliffs and large boulders, removal or break-up of SOR would be very difficult for clean-up crews. Our team surveyed this segment under ideal weather conditions, less than perfect weather (i.e. rain) could make this area unsafe for crews. DSB

h- No TREATMENT RECOMMENDED. 3

REVISED: MC 5/29/91
revised 5.28 91

4 Y 30m
 CT/CV/ST 5%
 Back Skies BIDS
 SOR 1% (Light)
 TB < 1%

Beach width = 30m

VERT. CLIFF (SKIFF)

Beach site #2

Steep Rock (SKIFF)

A Vert cliff
 CT (BTR) 1%
 1/2 x 30m

B Small Beach
 Pebble Beach
 1/2 in CT 1%
 Behind nearshore
 Rock (Beach site 1)

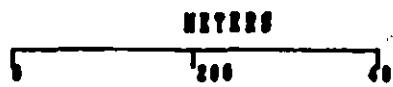
High Rock cliff (SKIFF)

OG SKETCH #1
 EL 106 A
 MAY 20, 1991
 14:26 - 16:00
 Doug Reimer

6



EL106 A

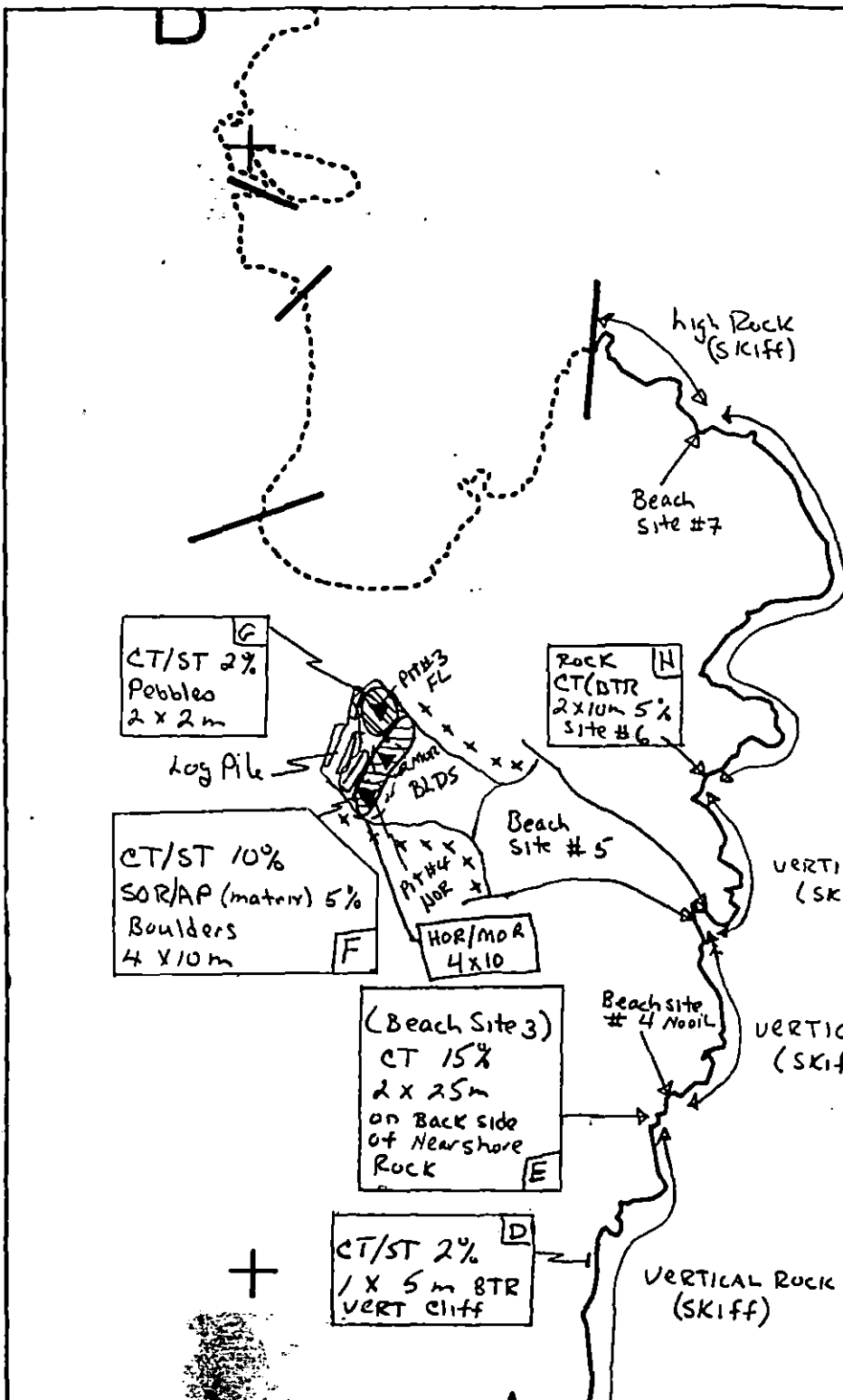


AK State Plane Zone 4
 60110000

Subdivision Field Map
 Map Key: KNIEL106Aa
 Name: Reimer
 Date: 5/20/91

Reviewed: MC 5/29/91
 reviewed 5.28.91

OG SKETCH #2
EL 106 A
MAY 20, 1991
14:26 - 16:00
Doug Reimer



EL106 A

METERS

0 100 200

AS State Planning Dept 4

Subdivision Field Map

Map Key: KNI2100AB

Name: Reimer

Date: 5/20/91

REVIEWED: MC 5/27/91
reviewed 5.28.91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 DATE 20 May 91
 SEGMENT # KN-106 A TIDAL HEIGHT (Range) 1 to 4 ft
 SUBDIVISION A BIOLOGIST SM Bar
 SEA STATE calm WIND SPEED/DIRECTION calm
 PHOTOGRAPHS: ROLL # — FRAME # —

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

- A: AS characterized on the maps. Lower ITZ in cliff area supports mussels, dense barnacles, Fucus & red brown algae
 B: Small pebble beach is totally depauperate. Nearshore rocks with IT support green algae & very few littorines.
 C: AS indicated, Littorines were not alive, most oiler barnacles were alive. Mussels and barnacle spot below oiler zone and seaward of oiler Boulders
 DEFGH: AS indicated on map. Oil is high in ITZ in lichen zone. Lower zones support dense & diverse biota

→ If oil is removed from boulders at "C", additional area for barnacle settlement would be provided. However, the small amount of area affected here may not be worth risking mussel beds seaward of boulders.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	2 immature, 2 adults	3	salmon(?) fry
Seabirds			- lg school
Waterfowl			
Gulls/kittiwakes			
Shorebirds			
Corvids			
Other Birds			

LAND MAMMALS

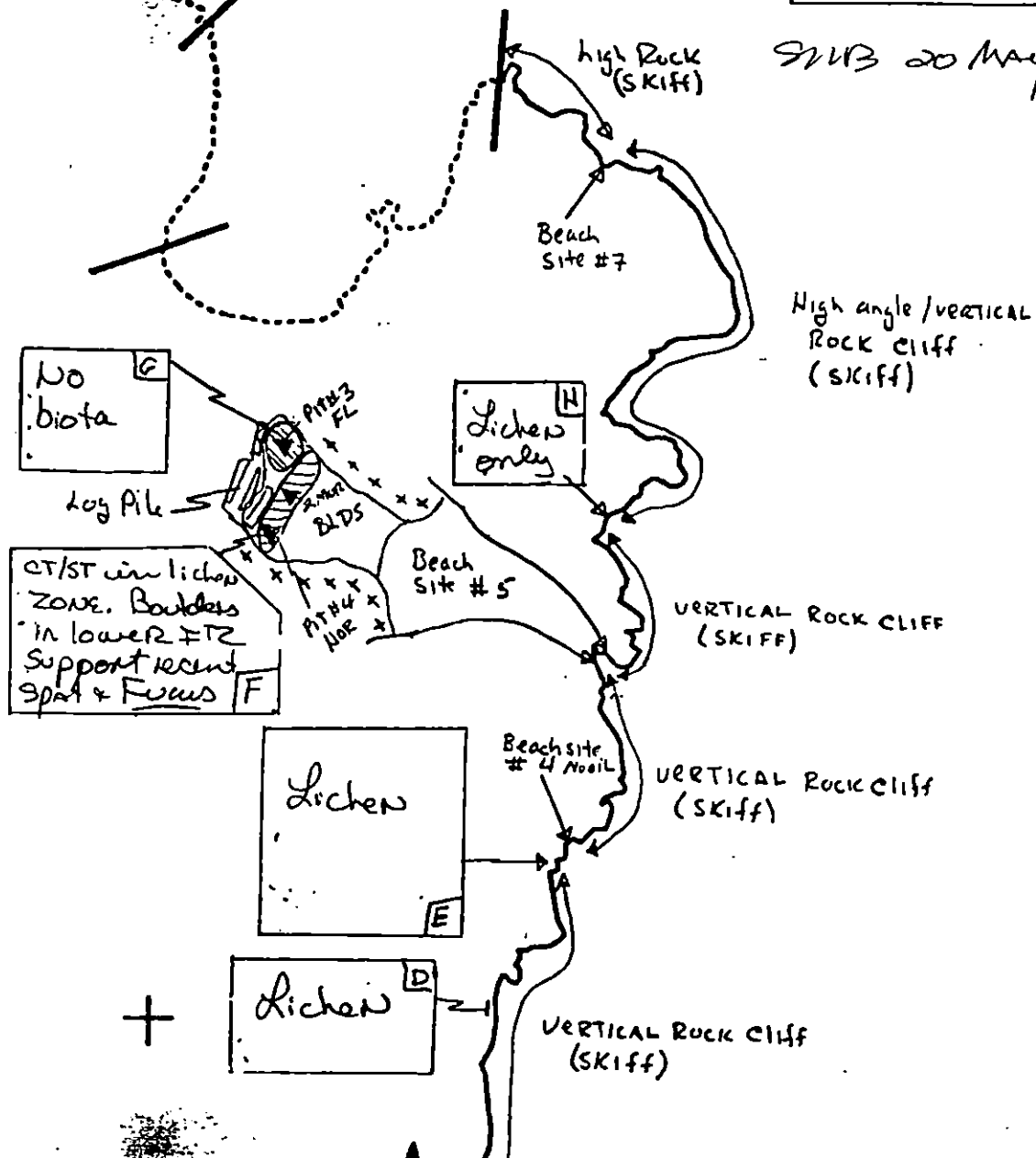
MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)			
<u>Seal</u>	1		
les (specify)			

Shoreline subdivision map showing important biological features attached.

Reviewed M.B. 5/24/91

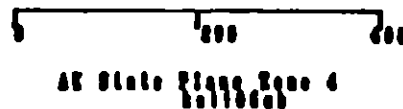
OG SKETCH #2
EL 106 A
MAY 20, 1991
14:26 - 16:00
Doug Reimer

SWB 20 May 91



EL106 A

METERS



Subdivision Field Map

Map Key: ENR106A

Name: Reimer

Date: 5/20/91

Reviewed M.B. 5/22/91

Y. Horino shells
Embedded in CV
Oiled barnacles &
barnacle shells
in CT area

VERT. CLIFF
(SKIFF)

Beach site
#2

Steep Rock
(SKIFF)

A BTR IN
Lichen zone
dense mussel
patches below

Mussels
Pisaster

B
Green algae
N. sparse
L. Horino in
CT area

High Rock cliff
(SKIFF)

Dense
Fucus

Naturally
deposited
beach

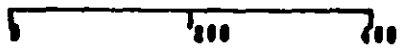
OG SKETCH #1
EL 106 A
MAY 20, 1991
14:26 - 16:00
Doug Reimer

6 Smb 20 May 91



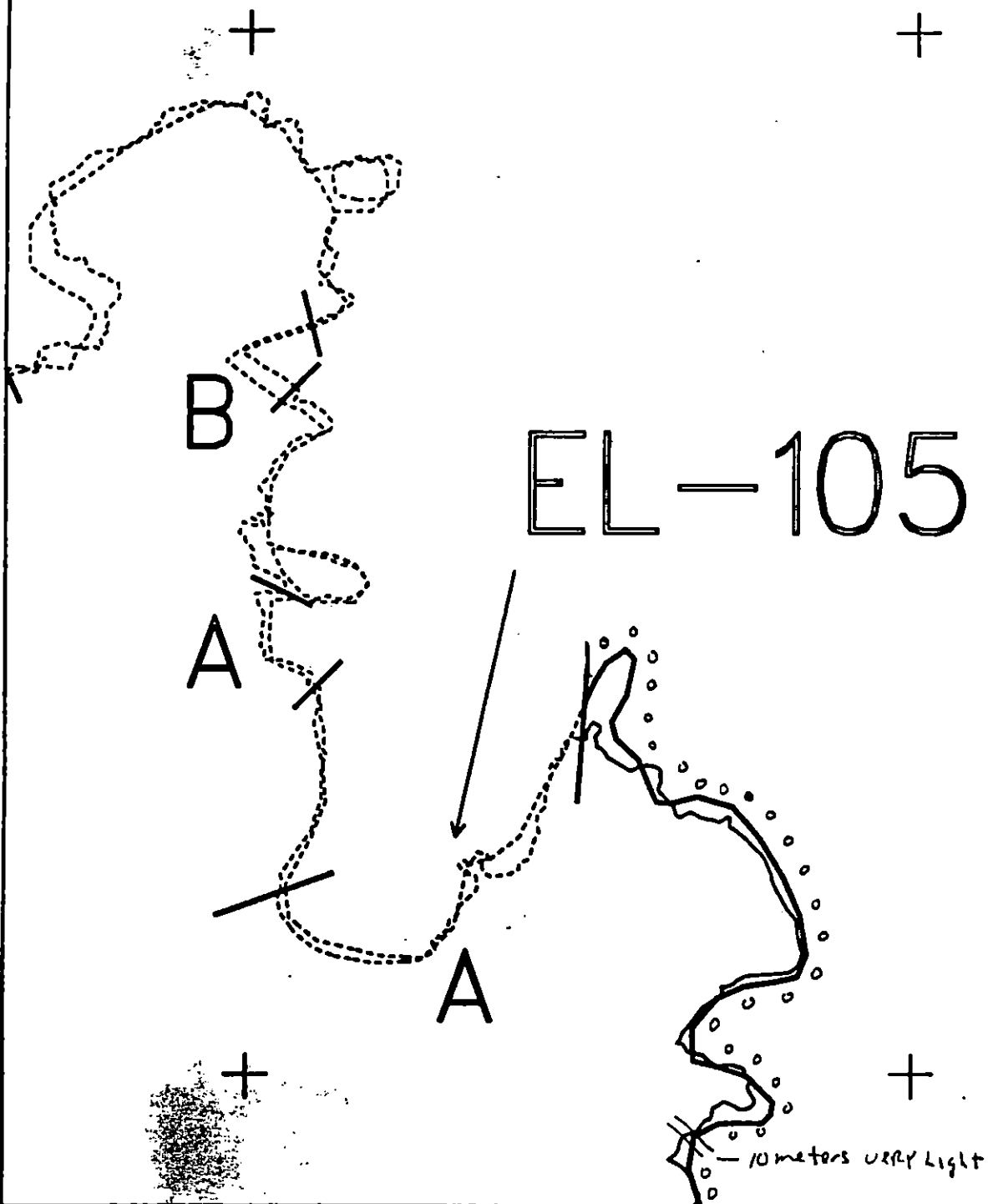
EL106 A

METERS



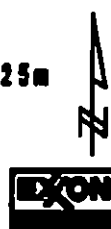
AS State Plane Zone 4
NAD83

Subdivision Field Map
Map Key: EN106A
Name: Reimer
Date: 5/20/91



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

EL106 A
 ADEC Subsegment Length: 3325m
 METERS
 0 200 400
 AK State Plane Zone 4
 601106ab



Subdivision Field Map
 Map Key: KNI106Ab
 Name: Reimer
 Date: 5/20/91
 Date Entered:

Reviewed: MC 5/24/91
 reviewed 5.28 9y

58 +

A

EL-106

57

B

10 meters moderate

FG

25 meters narrow

5 meters very light

1 meter very light

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

EL106 A

ADEC Subsegment Length: 3325m

METERS

0 200 400

AK State Plane Zone 4
NAD83



Subdivision Field Map

Map Key: KNIEL106Aa

Name: Reimer

Date: 5/20/91

Date Entered:

Reviewed: MC 5/29/91
Reviewed 5.28 91

1991 MAYSAP EVALUATION

SEGMENT: EL 106 **SUB:** A **REGION:** PWS **SURVEY DATE:** 5/20/91

ENVIRONMENTAL SENSITIVITIES:

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

Ecological/Constraints (see page two for details) Eagle nest

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ **Date:** _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC _____

FOSC _____

EXXON _____

USCG _____

NOAA _____

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL-106 SUBDIVISION A DATE 5/20/91

ADEC

NAME

Peter Montesano

SIGNATURE

[Signature]

☒ NTR

☐ TREATMENT RECOMMENDED

The oiling is well documented. The only treatable area is "F" with some surface AP/SOR and H&R over a 3x3m area very near the surface. This area is small and the shoreline presents difficult access for any sort of crew.

EXXON

NAME

Frank Bet

SIGNATURE

[Signature]

☒ NTR

Most of the segment is high energy shoreline with only remnants of remaining oil. It is not felt that any benefit could be obtained with further activities.

LANDMANAGER

NAME

DENNIS S Kennedy OF USFS

SIGNATURE

[Signature]

☒ NTR

This is a long vertical rock coastline with mostly CT & S oiling. Area [F] has the most significant oiling. Though treatment is not recommended in this boulder field.

USCG/NOAA

NAME

BUH M.P. ZIMMERMAN USCG

SIGNATURE

[Signature]

☐ NTR

Only small amounts of oil found along this segment. Since the shoreline consists of cliffs and large boulders, removal or break-up of SOR would be very difficult for clean-up crews. Our team surveyed this segment under ideal weather conditions, less than perfect weather (i.e. rain) could make this area unsafe for crews. DS-B

6- NO TREATMENT RECOMMENDED. 3

REVISED: MC 5/29/91
revised 5.28.91

4 Y 30-
 CT/CV/ST 5%
 Back sides BLS
 SOR 1% (Light)
 TB < 1%

Beach width ≈ 30m

VERT. CLIFF
 (SKIFF)

Beach site
 #2

Steep Rock
 (SKIFF)

A) vert cliff
 CT (BTR) 1%
 1/2 x 30m

Small B
 Pebble Beach
 1/4 in CT 1%
 Behind nearshore
 Rock
 (Beach site 1)

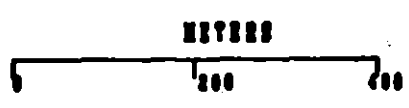
High Rock cliff
 (SKIFF)

OG SKETCH #1
 EL 106 A
 MAY 20, 1991
 14:26 - 16:00
 Doug Reimer

6



EL 106 A

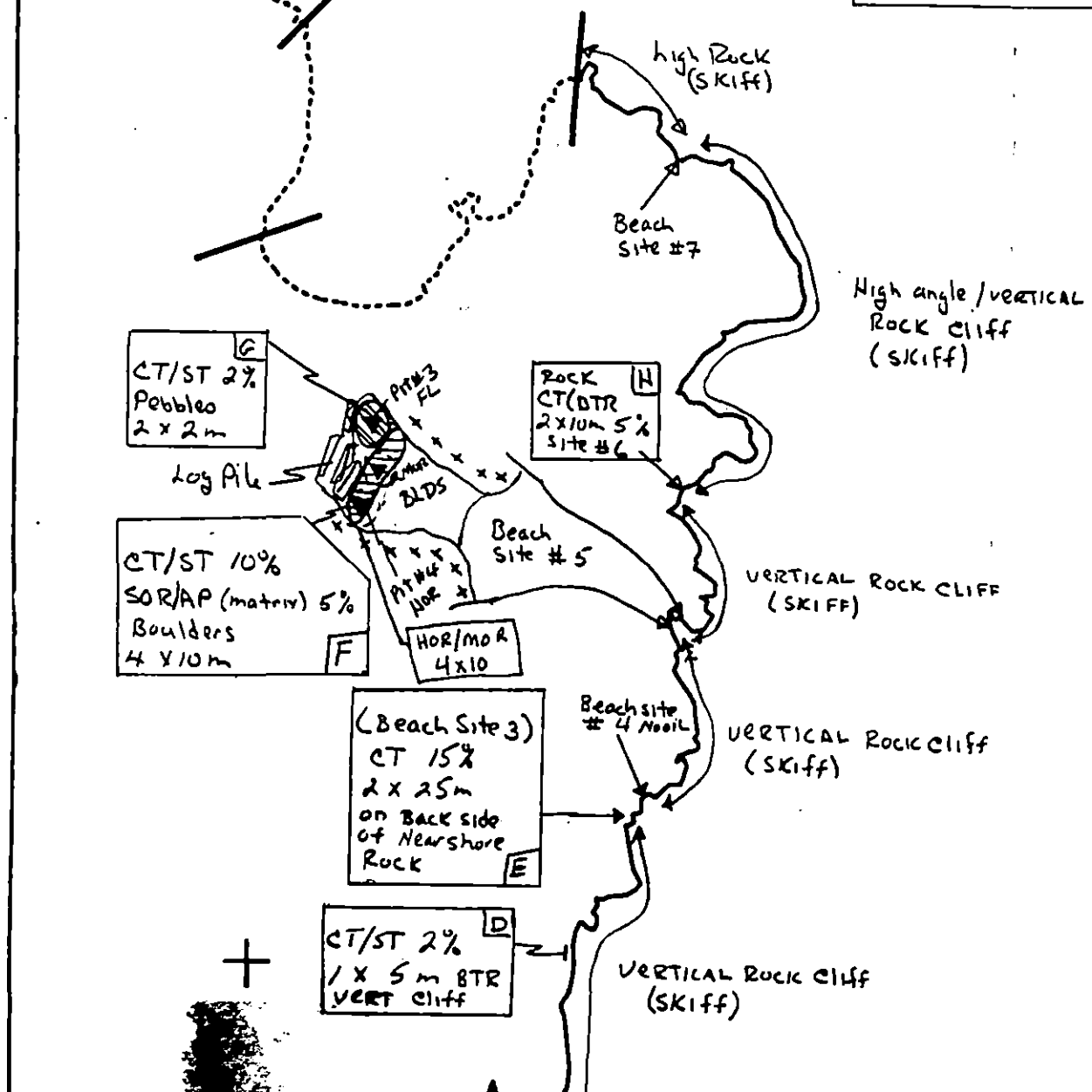


AK State Plane Zone 4
 6011000

Subdivision Field Map
 Map Key: ENBL100Aa
 Name: Reimer
 Date: 5/20/91

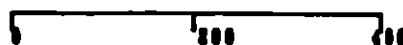
Reviewed: MC 5/29/91
 reviewed 5.28.91

OG SKETCH #2
 EL 106 A
 MAY 20, 1991
 14:26 - 16:00
 Doug Reimer



EL 106 A

METERS



AS State Plans, Sheet 4

Subdivision Field Map
 Map Key: EN1810045
 Name: Reimer
 Date: 5/20/91

REVIEWED: MC 5/27/91
 reviewed 5.28.91

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 2 **DATE** 20 May 91
SEGMENT # KN-106 A **TIDAL HEIGHT (Range)** 1 to 4 ft
SUBDIVISION A **BIOLOGIST** SM Ram
SEA STATE calm **WIND SPEED/DIRECTION** calm
PHOTOGRAPHS: ROLL # — **FRAME #** —

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

A: As characterized on the maps. Lower ITZ in cliff area supports mussels, dense barnacles, *Fucus* + red + brown algae.
 B: Small pebble beach is totally depauperate. Nearshore rocks with IT support green algae + very few *Littorines*.
 C: As indicated, *Littorines* were not alive, most other barnacles were alive. Mussels and barnacles sp. below oiled zone and seaward of oiled boulders.
 DEFGH: As indicated on map. Oil is high in ITZ in lichen zone. Lower zones support dense + diverse biota.

→ If oil is removed from boulders at "C", additional area for barnacle settlement would be provided. However, the small amount of area affected here may not be worth risking mussel beds seaward of boulders.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	Immature, 2 Adults	3	salmon (?) off
Seabirds			- lg school
Waterfowl			
Gulls/Kittiwake			
Shorebirds			
Corvids			
Other Birds			

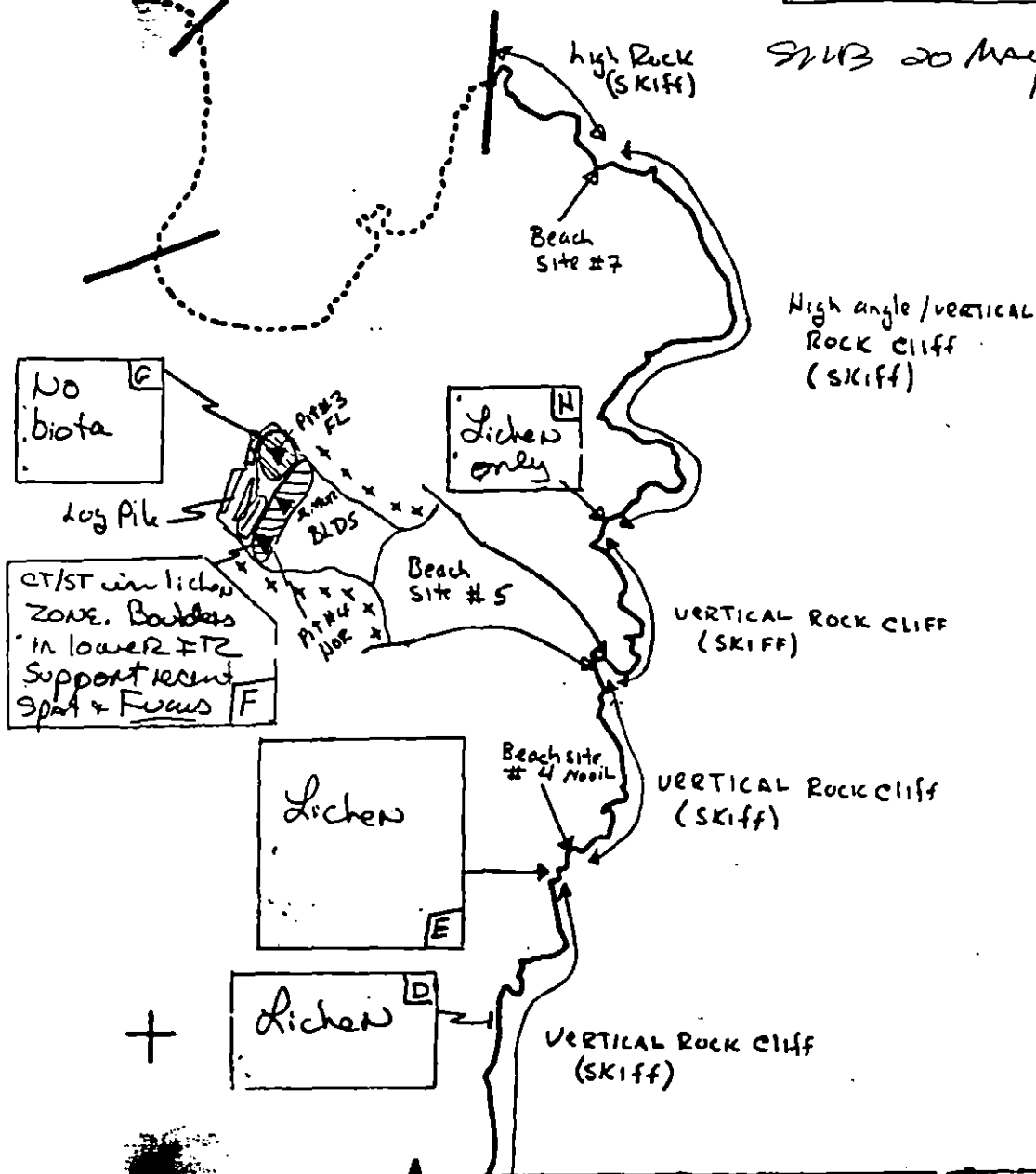
MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)			
Seal	1		
Ies (specify)			

Shoreline subdivision map showing important biological features attached.

Reviewed M.B. 5/24/91

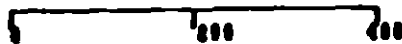
OG SKETCH #2
EL 106 A
MAY 20, 1991
14:26 - 16:00
Doug Reimer

SLIP 20 May 91



EL106 A

METERS



AK State Plane Zone 4
Datum: NAD83

Subdivision Field Map
Map Key: ENR106A
Name: Reimer
Date: 5/20/91

Littorina shells
Embedded in CV
Oiled barnacles
barnacle shells
in CT/CT areas

VERT. CLIFF
(SKIFF)

Beach site
#2

Steep Rock
(SKIFF)

A BTR in
lichen zone,
dense mussel
patches below

Mussels
Pisaster

B Green algae
N. sp. in
Littorina in
CT area

High Rock cliff
(SKIFF)

Dense
Fucus

Naturally
degenerate
beach

OG SKETCH #1
EL 106 A
MAY 20, 1991
14:26 - 16:00
Doug Reimer

6

SMB 20 May 91

EL106 A

METERS

0 100 200

AR State Plane Zone 4
Datum: NAD83

Subdivision Field Map

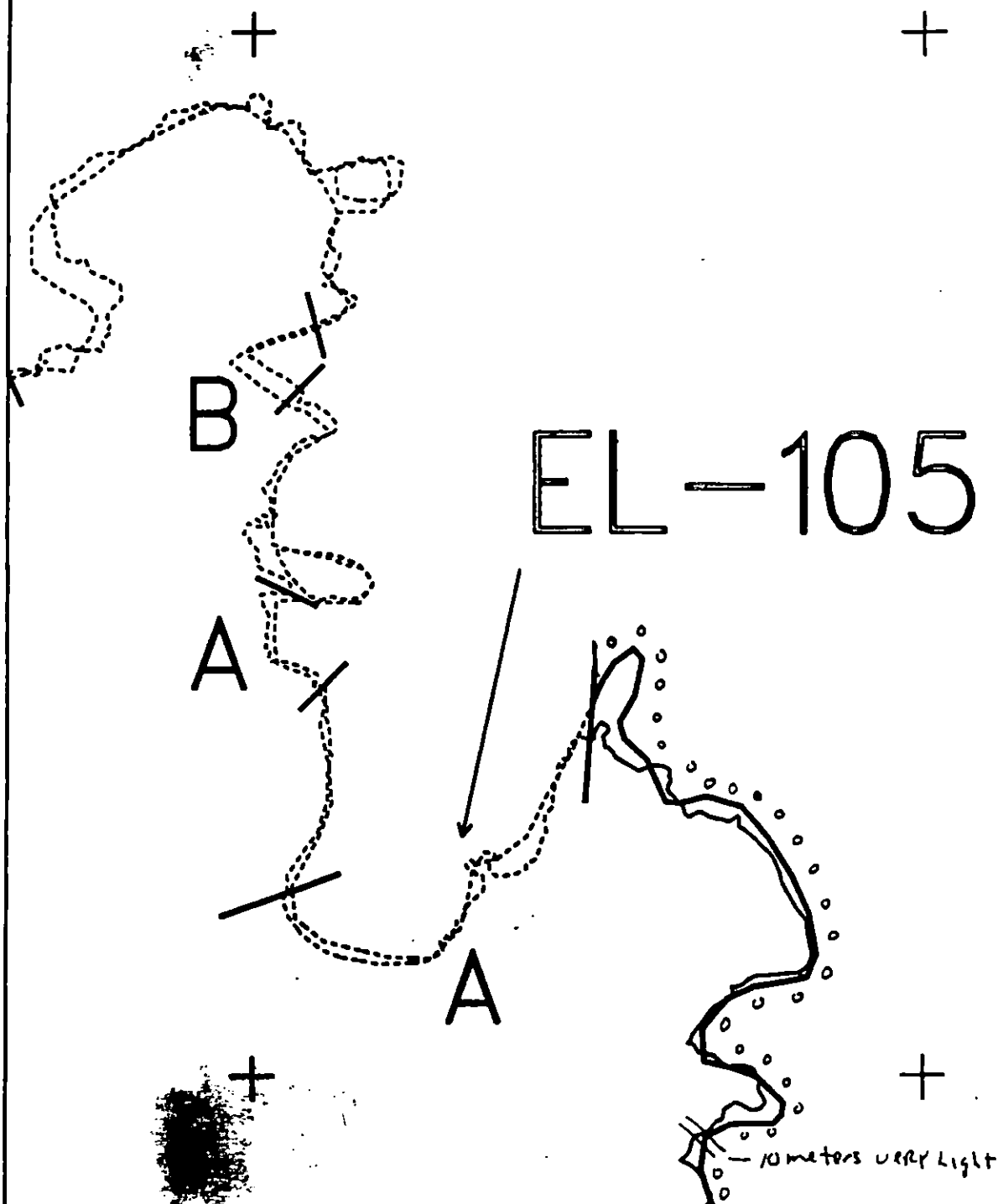
Map Key: EN106Aa

Name: Reimer

Date: 5/20/91



Reviewed M.B. 5/24/91



Reviewed: MC 5/29/91
reviewed 5.28 9y

58 +

57

A

EL-106

10 meters moderate +

25 meters narrow

5 meters very light

1 meter very light

B

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

EL106 A

ADEC Subsegment Length: 3325m

METERS

0 200 400

AK State Plane Zone 4
Datum: NAD83



Subdivision Field Map

Map Key: KHEL106Aa

Name: Reimer

Date: 5/20/91

Date Entered:

Reviewed: MC 5/22/91
Reviewed 5.28 91

1991 MAYSAP EVALUATION

SEGMENT: EL 106 SUB: C REGION: PWS SURVEY DATE: 6/13/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: _____ Date: _____

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL: _____

TAG: _____

FOSC: _____

TAG APPROVAL DATE: _____

FOSC APPROVAL DATE: _____

ADEC

FOSC

EXXON

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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

EXXON COMPANY, U.S.A.
ALASKA OPERATIONS

M E M O R A N D U M

To: File
From: Julie Arin
Date: June 17, 1991
Subject: MAYSAP Subdivisions EL-106C, GR-103B, GR-103C, & KN-15A

Additional surveying was performed on the subdivisions listed above. These subdivisions were not completed during the initial survey due to eagles in the area. These survey reports are addenda to the survey information previously submitted (EL-106C was not previously surveyed).

CENTRAL FILE
OFFICIAL COPY

TEAM NO. 00 SEGMENT EL106 SUBDIVISION C DATE 13 JUN/91

ADEC

NAME Marianne Profita SIGNATURE Marianne Profita

- ☒ NTR Beach A LOR under large cobble. Access is difficult due to depth a cobble cover. Steep slope beach.

EXXON

NAME Rex Coulter SIGNATURE Rex R. Coulter

- ☒ NTR EVIDENCE OF SURFACE OILING IS MINIMAL IN CHARACTER AND DISTRIBUTION. SUBSURFACE OIL VARIES IN CHARACTER AND DEPTH BUT POSES NO THREAT TO THE BIOTA IN THE AREA. ANY ATTEMPT TO REMOVE SUBSURFACE OIL WOULD BE MORE DETRIMENTAL THAN BENEFICIAL. ONLY THE THREE SMALL POCKET BEACHES ARE ACCESSIBLE AND ACCESS IS NOT EASY.

LANDMANAGER

NAME _____ OF _____ SIGNATURE _____

- ☐ NTR

LANDMANAGER NOT PRESENT.

USCG/NOAA

NAME CWO R.P. SPURD SIGNATURE R.P. Spurd

- ☒ NTR LOR in area A and SOR in area F on OG map is difficult to access and poses minimal environmental threat.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL-106 C SUBDIVISION C DATE 5/30/91

ADEC

NAME

Peter Montesano

SIGNATURE

[Signature]

☐ NTR

☐ TREATMENT RECOMMENDED

SURVEY AFTER EAGLE RESTRICTIONS END.

EXXON

NAME

FRANK BOE

SIGNATURE

[Signature]

☐ NTR

Not Surveyed because of eagle constraint

LANDMANAGER

NAME

DENNIS S KEUVEDY OF USFS

SIGNATURE

[Signature]

☐ NTR

agree with USFWS

USCG/NOAA

PORT N. SIMESBORO COUNTY

NO. 10-10-10-10

NAME

BILL M. P. ZENONIS USCG

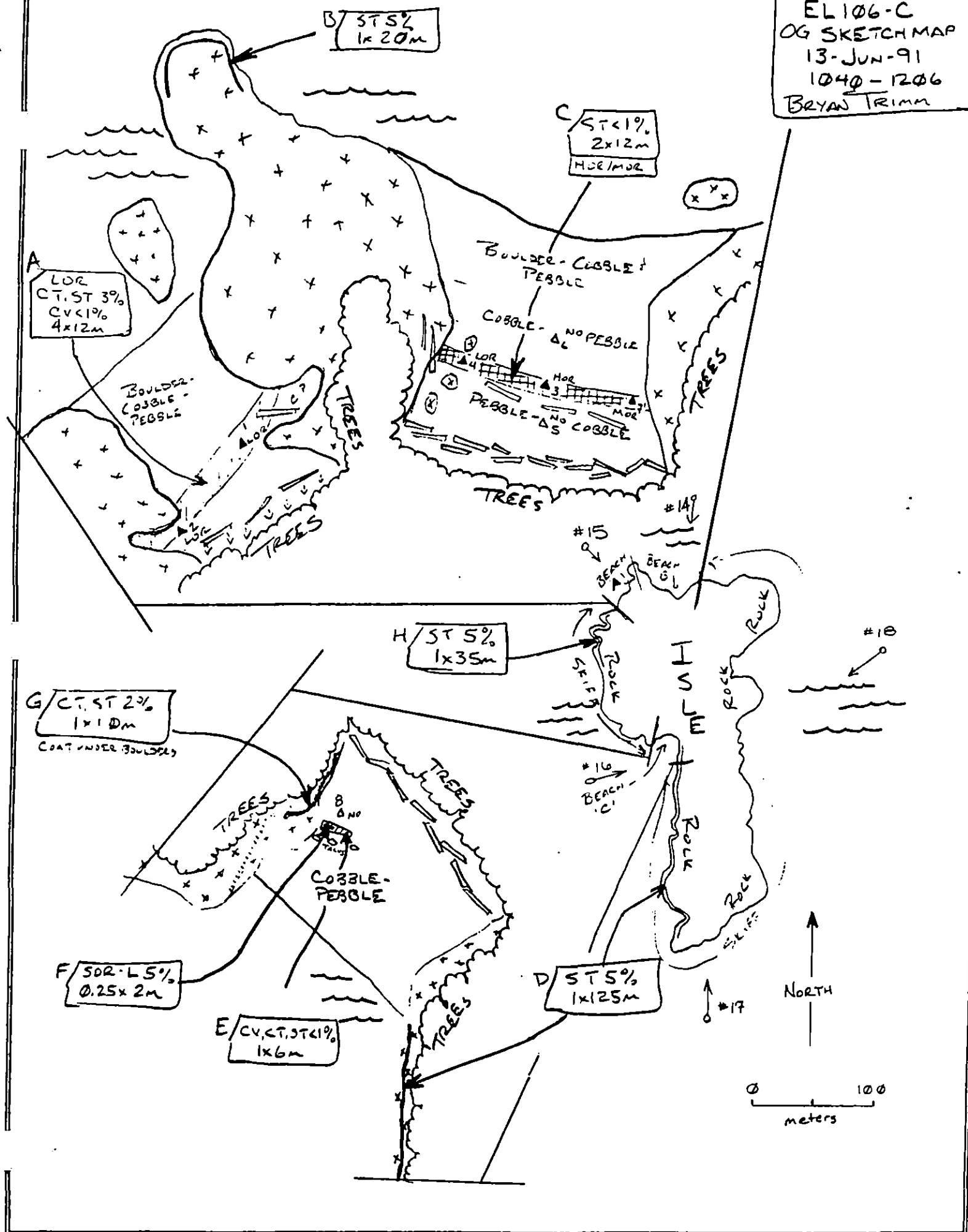
SIGNATURE

[Signature]

☐ NTR

Agree with USCG - 10-10-10-10

EL106-C
OG SKETCH MAP
13-JUN-91
1040-1206
BRYAN TRIMM



REVIEWED CB 18 JUN

MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 00 DATE 6/13/91
 SEGMENT # EL106 TIDAL HEIGHT(Range) - 2.0 ~ -2.0'
 SUBDIVISION C BIOLOGIST D. McCoemick
 LA STATE 0.0' WIND SPEED/DIRECTION Calm
 PHOTOGRAPHS: ROLL # — FRAME # —

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

- (A) This pocket beach has no biota in the UITZ (oiled area). Below this (>20m) in the MITZ, mostly juvenile littorines & barnacle spat were noticeably dense. LITZ algal cover includes filamentous green, *Palmaria*, turpate algae (*Ralfsia*?), *Halosaccus*, *Alaria*, *Ulva*, *Sargassum*, other unidentified branched reds, and a dense subtidal *Laminaria* bed. On bedrock outcrops (at either ends of beach), dense barnacles occur with (mostly juvenile) blue mussels, (mostly juvenile) littorine snails, and many *Nucella* feeding on barnacles. The sea stars *Pycnopodia* and *Pisaster* were seen in association with the algal cover (some brooding eggs, others feeding on barnacles).
- (B) Stain observed from aerial survey: Black lichen in UITZ; MITZ - Mussel / *Fucus* zone (assume littorines & limpets present here); LITZ - 100% algal cover.
- (C) This pocket beach has little to no biota in the mid-to-upper ITZ. The significant intertidal communities occur on the bedrock faces bordering the beach. Here, strong recruitment by littorines and mussels is evident amongst a dense barnacle cover. The LITZ on the beach itself contains the major indicator species (as described in "A" above) primarily on the 100% algal cover.
- (D) Stain above and/or within black lichen zone (hard to tell); same zonation as in "B" above.

(E & F) No biota at all in the mid-to-upper intertidal zones on this beach. Minor concentration of barnacles, littorines, limpets, & mussels. Algal cover LITZ to subtidal.

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

FISH OBSERVED SPECIES PRESENT

BIRDS	# OF SPECIES	TOTAL BIRDS	
Eagles	/	/	
Seabirds			
Waterfowl			
Gulls/kittiwakes			
Shorebirds			
Corvids			
Other Birds			

LAND MAMMALS

MARINE MAMMALS	# OBSERVED	SPECIES	# OBSERVED
Sea Otters			
Pinnipeds (specify)			
" Harbor seal es (specify)	/		

Shoreline subdivision map showing important biological features attached.

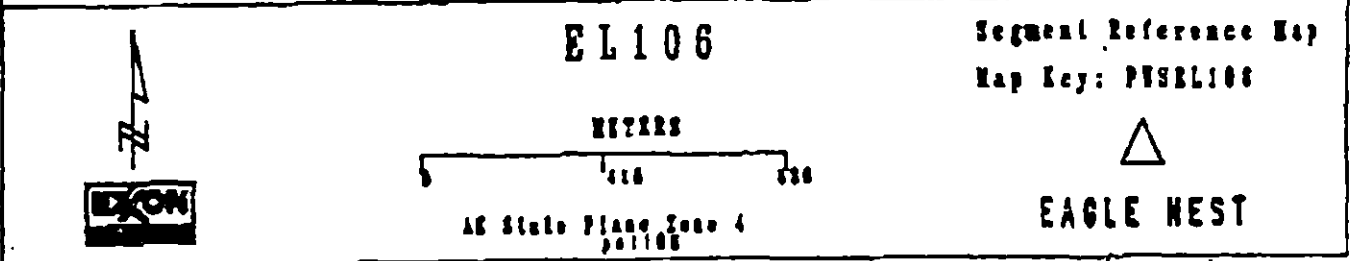
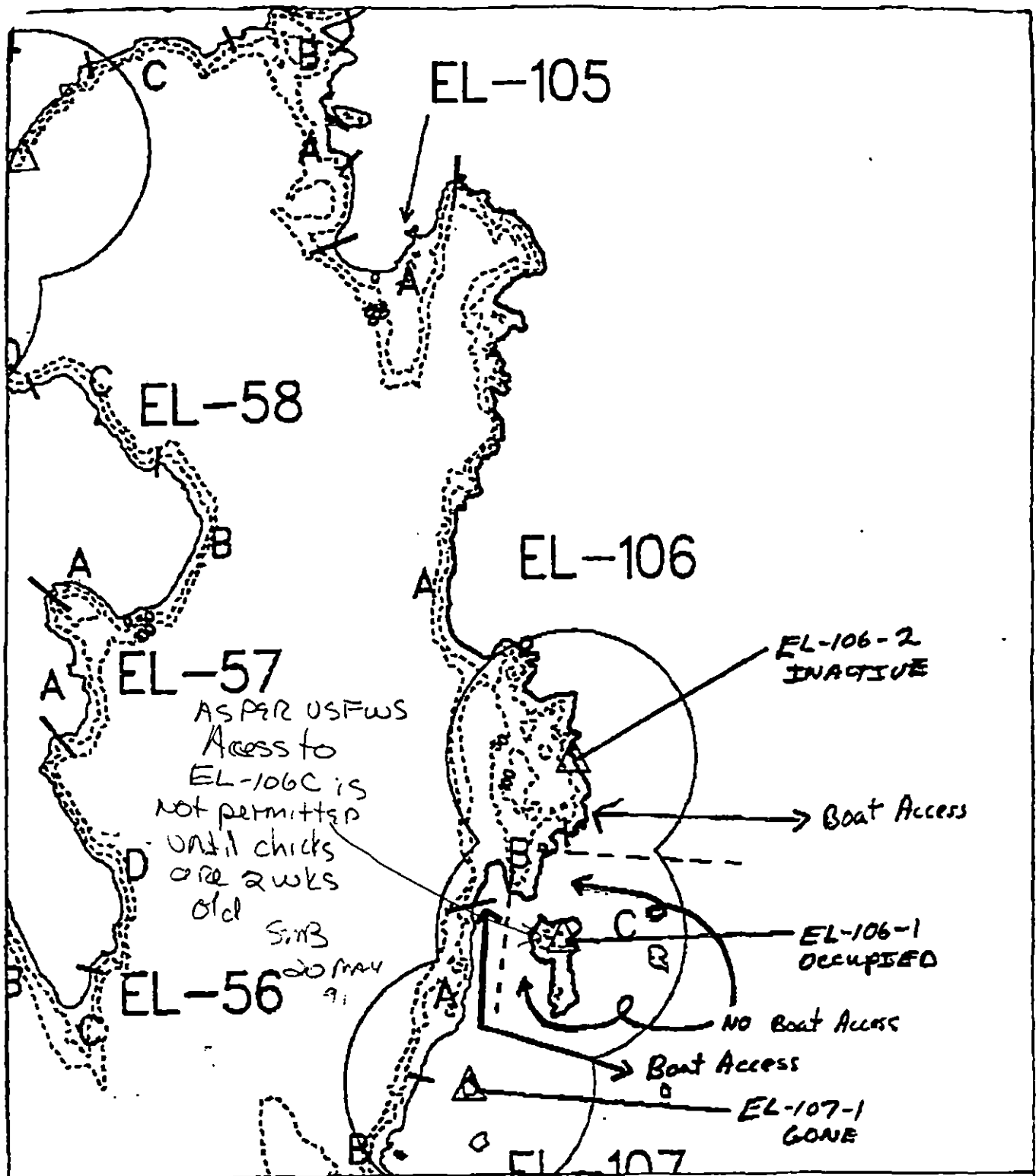
Reviewed 6/17/91 MB

6/13/91

EZ 106 C (Con)

- (G) Bedrock faces approximately 90% covered with adult barnacles and spat. In bedrock cracks and crevices, recently-settled littorine snails and mussel spat are abundant. Juveniles of limpets, littorines and mussels are well represented. Graysia seen on encrusting red algae (Hildenbrandia) in tidal pools associated with bedrock.
- (H) Same as "B" + "D".

The remaining oil on this island is exerting no obvious adverse impact to the existing intertidal communities or to the successful recruitment and settlement of the major indicator species.



Attachment 1

EL 106-C
 SKETCH MAP
 13-JUN-91
 1040-1206
 Bio Sketch
 McCormick

SKIFF survey
 (B) UITZ: Black lichen
 MITZ: Fucus/mussel zone (presumably grazers present also)
 LITZ: 100% algal cover

harbor seal
 (C) No biota at all in UITZ near oil zone. The lower-mid and lower ITZ support the same algal/faunal assemblage at that described in A. Again, the bedrock at either end of the beach is covered with barnacles, mussel, littorines, limpets, & algae in the lower zones. Strong recruitment by littorines and mussels at this site.

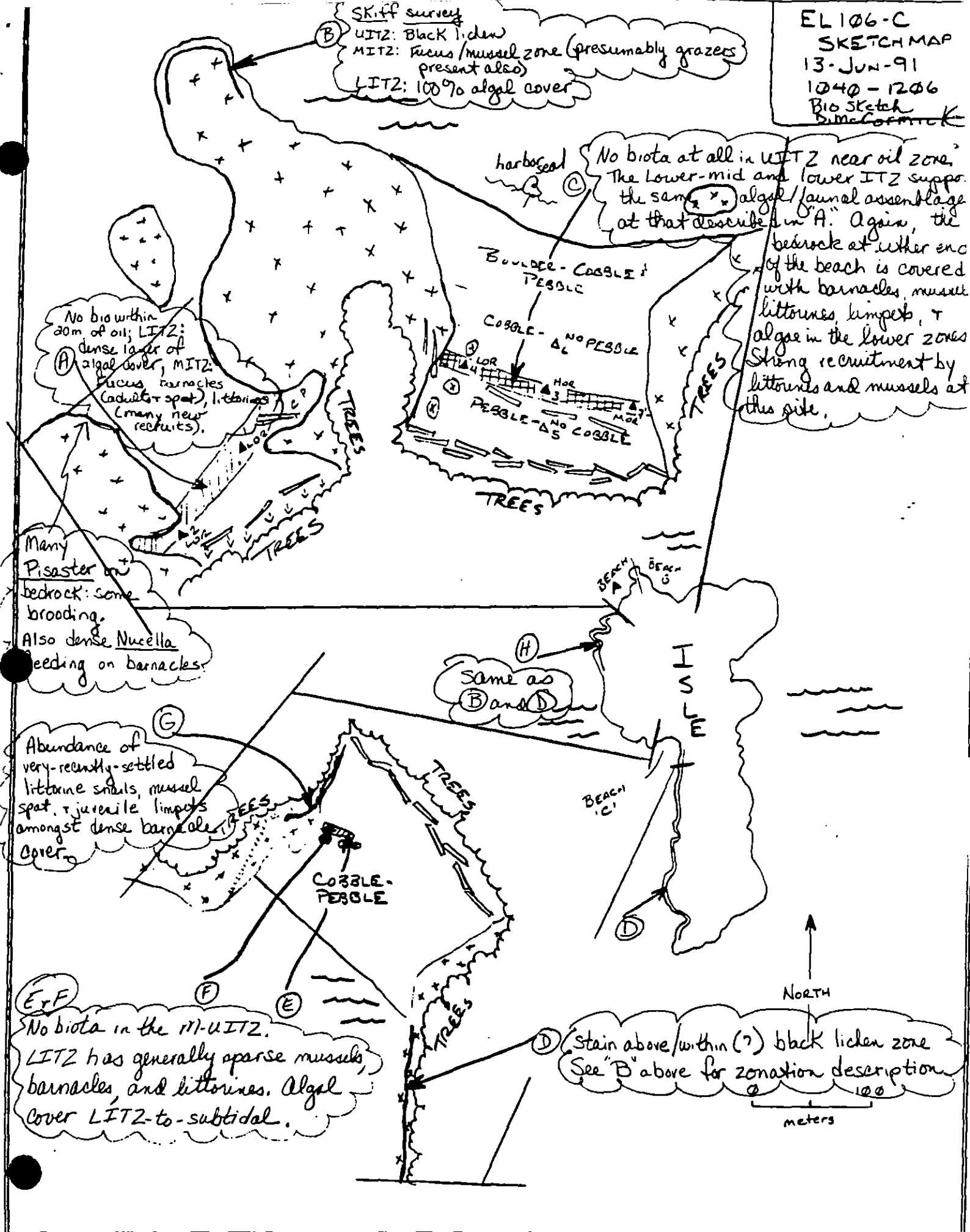
No bio within 30m of oil; LITZ: dense layer of algal cover, MITZ: Fucus barnacles (adult + spat), littorines (many new recruits).

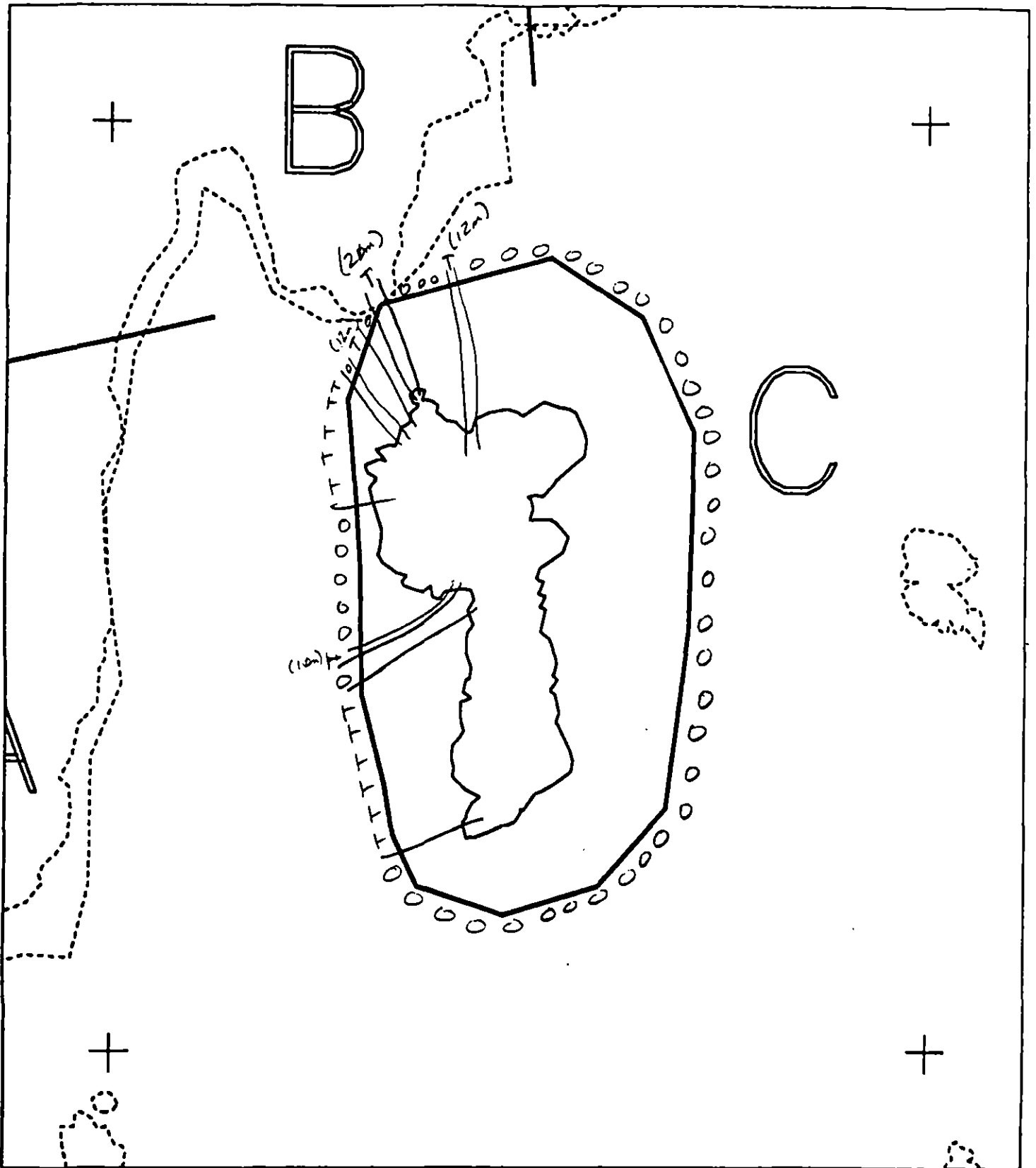
Many Pisaster on bedrock: some brooding. Also dense Nucella feeding on barnacles.

(G) Abundance of very-recently-settled littorine snails, mussel spat, & juvenile limpets amongst dense barnacle cover.

(E & F) No biota in the M-UITZ. LITZ has generally sparse mussels, barnacles, and littorines. Algal cover LITZ-to-subtidal.

(D) Stain above/within (?) black lichen zone. See "B" above for zonation description.





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

EL106 C
 ADEC Subsegment Length: 1208m
 METERS
 0 100 200
 AK State Plane Zone 4
 601106a



Subdivision Field Map
 Map Key: KNIEL106C
 Name: TRIMM
 Date: 13-JUN-91
 Date Entered:

SURFACE OIL CATEGORY MAP

REVIEWED CD 18 JUN

1991 MAYSAP EVALUATION

SEGMENT: EL 106 SUB: C REGION: PWS SURVEY DATE: 6/13/91

ENVIRONMENTAL SENSITIVITIES:

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

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

ARCHAEOLOGICAL CONSTRAINTS:

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

SHPO Signature: Timothy A. Smith

Date: 6/28/91

RECOMMENDATIONS:

INITIAL

TAG

FOSC

TREATMENT REQUIRED (Y or N)

N

N

2

Manual Pickup (Check as Req.)

Spot Washing

Bio-Customblen Only

Bio-Inipol/Customblen

Other

Other

COMMENTS:

INITIAL:

TAG:

FOSC:

TAG APPROVAL DATE: JUNE 19 1991

FOSC APPROVAL DATE: 6/21/91

ADEC

FOSC

EXXON

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

USCG

NOAA

**ECOLOGICAL CONSTRAINTS
1991 FIELD ACTIVITIES**

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

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

**EXXON COMPANY, U.S.A.
ALASKA OPERATIONS**

M E M O R A N D U M

To: File
From: Julie Arin
Date: June 17, 1991
Subject: MAYSAP Subdivisions EL-106C, GR-103B, GR-103C, & KN-15A

Additional surveying was performed on the subdivisions listed above. These subdivisions were not completed during the initial survey due to eagles in the area. These survey reports are addenda to the survey information previously submitted (EL-106C was not previously surveyed).

CENTRAL FILE
OFFICIAL COPY

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 00 SEGMENT EL106 SUBDIVISION C DATE 13 JUN/91

ADEC

NAME Marianne Proffitt SIGNATURE Marianne Proffitt

- ☒ NTR Beach A LOR under large cobble. Access is difficult due to depth a cobble cover. Steep slope beach.

EXXON

NAME Rex Coulter SIGNATURE Rex R. Coulter

- ☒ NTR EVIDENCE OF SURFACE OILING IS MINIMAL IN CHARACTER AND DISTRIBUTION. SUBSURFACE OIL VARIES IN CHARACTER AND DEPTH. BUT DOES NO THREAT TO THE BIOTA IN THE AREA. ANY ATTEMPT TO REMOVE SUBSURFACE OIL WOULD BE MORE DETRIMENTAL THAN BENEFICIAL. ONLY THE THREE SMALL POCKET BEACHES ARE ACCESSIBLE AND ACCESS IS NOT EASY.

LANDMANAGER

NAME _____ OF _____ SIGNATURE _____

- ☐ NTR

LANDMANAGER NOT PRESENT.

USCG/NOAA

NAME CWO R.P. Spurr SIGNATURE R.P. Spurr

- ☒ NTR LOR in area A and SOR in area F on 06 map is difficult to access and poses minimal environmental threat.

MAYSAP FIELD SHORELINE COMMENT SHEET

TEAM NO. 2 SEGMENT EL-106 C SUBDIVISION C DATE 5/30/91

ADEC

NAME

Peter Montesano

SIGNATURE

[Signature]

☐ NTR

☒ TREATMENT RECOMMENDED

SURVEY AFTER EAGLE RESTRICTIONS END.

EXXON

NAME

FRANK ROX

SIGNATURE

[Signature]

☐ NTR

Not Surveyed because of eagle constraint.

LANDMANAGER

NAME

DENNIS S. KENNEDY OF USFS

SIGNATURE

[Signature]

☐ NTR

agree with USFWS

USCG/NOAA

NOAA N. SIMONEK-SENITY

NOAA N. SIMONEK-SENITY

NAME

Bill M. P. ZENONE USCG

SIGNATURE

[Signature]

☐ NTR

concur with ADEC - 1253 - 3y

PAGE 1 OF 2

DATE June / 13 / 91

ENERGY LEVEL: ☒ H ☒ M ☐ L

WEATHER: ☐ SUN ☒ CLOUDS ☐ FOG ☐ RAIN ☐ SNOW

NEAR SHORE SHEEN: ☐ BR ☐ RB ☐ SL ☒ NONE

EST. OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 222 m NO 986 m US 0 m

[illegible]

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

SLOPE: V = VERTICAL; H = HIGH ANGLE; M = MEDIUM ANGLE; L = LOW ANGLE PHOTO ROLL # MAYSAP- 00 - 03 FRAMES # 4-18

PIT NO.	PIT DEPTH (cm)	SUBSURFACE OIL CHARACTER								OILED ZONE cm-cm	CLEAN BELOW Y/N	H2O LEVEL (cm)	SHEEN COLOR B R S N	PIT ZONE				SURFACE-SUBSURFACE SEDIMENTS	NOTES
		OP	HOR	MOR	LOR	OF	TR	NO	S					UI	MI	LI			
1	20				X				8 - 20	N	—			X			BCP - GPL		
2	25				X				2 - 25	N	—			X			CP - GPL	5-7cm above MOR	
3A	34				X				17 - 20	Y	32	B		X			GPL - GP		
3B				X					20 - 32								- GP		
3C			X						32 - 34								- GPL	H ₂ O Content	
4	12		X	X					3 - 12	N	12	5		X			CPB - PG		
5	50							X	—	Y	—			X			PC - SPC _{org}		
6	38							X	—	Y	—				X		CP - PSMC _g		
7	25			X					7 - 25	N	—			X			PC - GPL		

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

OG COMMENTS:

- THREE POCKET BEACHES ON ROCK SHORELINE OF ISLE
- SUBSURFACE OIL TRENDS WITH SURFACE OILING AT LOCATIONS A & C.
- SOMETIMES DIFFICULT TO DISTINGUISH STAIN & BLACK LICHEN, ESPECIALLY EAST SIDE OF ISLE

REVISED 12-11-71

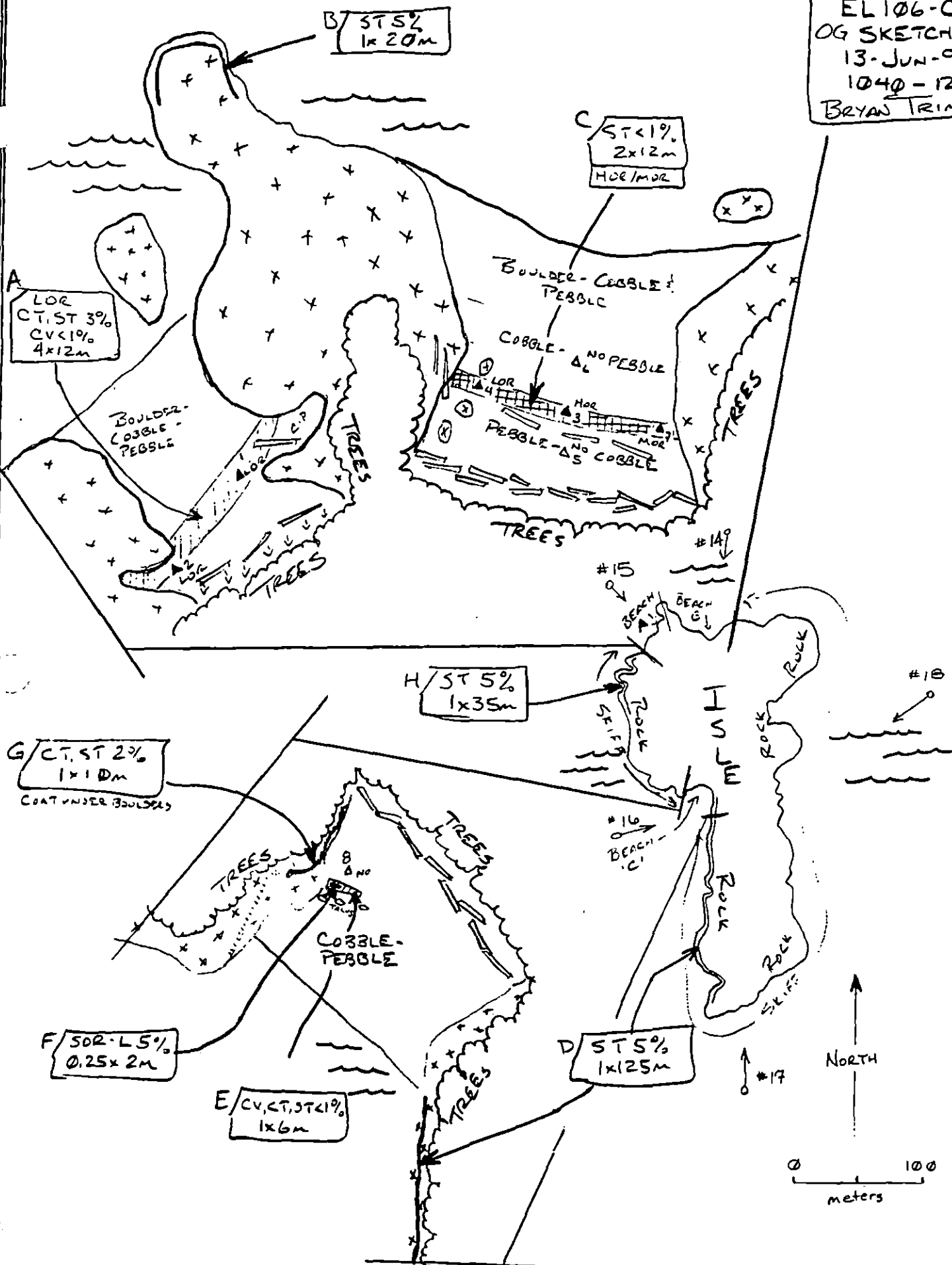
PAGE 2 OF 2

DATE Jun, 13 191

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

REVIEWED CB 18 JUN

EL106-C
OG SKETCH MAP
13-JUN-91
1040-1206
BRYAN TRIMM



MAYSAP BIOLOGICAL SUMMARY FORM

TEAM # 00 DATE 6/13/91
 SEGMENT # EL106 TIDAL HEIGHT (Range) -2.0 ~ -2.0'
 BDIVISION C BIOLOGIST D. McCormick
 SEA STATE 0.0' WIND SPEED/DIRECTION Calm
 PHOTOGRAPHS: ROLL # — FRAME # —

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

(A) This pocket beach has no biota in the UITZ (oiled area). Below this (>20m) in the MITZ, mostly juvenile littorines + barnacle spot were moderately dense. LITZ algal cover includes filamentous green, Palmaria, turbot algae (Ralfsia?), Halosaccion, Alaria, Ulva, Desmarestia, other unidentified branched reds, and a dense subtidal Laminaria bed. On bedrock outcrops (at either ends of beach), dense barnacles occur with (mostly juvenile) blue mussels, (mostly juvenile) littorine snails, and many Nucella feeding on barnacles. The sea stars Pycnopodia and Pisaster were seen in association with the algal cover (some brooding eggs, others feeding on barnacles).

(B) Stain observed from skiff survey: Black lichens in UITZ; MITZ - Mussel / Fucus zone (assume littorines + limpets present here); LITZ - 100% algal cover.

(C) This pocket beach has little to no biota in the mid-to-upper ITZ. The significant intertidal communities occur on the bedrock faces bordering the beach. Here, strong recruitment by littorines and mussels is evident amongst a dense barnacle cover. The LITZ on the beach itself contains the major indicator species (as described in "A" above) primarily on the 100% algal cover.

Stain above and/or within black lichen zone (hard to tell); same zonation as in "B" above.

(Erf) No biota at all in the mid-to-upper intertidal zones on this beach. Minor concentration of barnacles, littorines, limpets, + mussels. Algal cover LITZ to subtidal (cont.)

WILDLIFE OBSERVATIONS

TO BE COMPLETED IN ALL SUBDIVISIONS

BIRDS	# OF SPECIES	TOTAL BIRDS	FISH OBSERVED SPECIES PRESENT
Eagles	/	/	
Seabirds			
Waterfowl			
Gulls/Kittiwakes			
Shorebirds			
Corvids			
Other Birds			

MARINE MAMMALS	# OBSERVED	LAND MAMMALS SPECIES	# OBSERVED
Sea Otters			
Pinipeds (specify)			
Thou seal is (specify)	1		

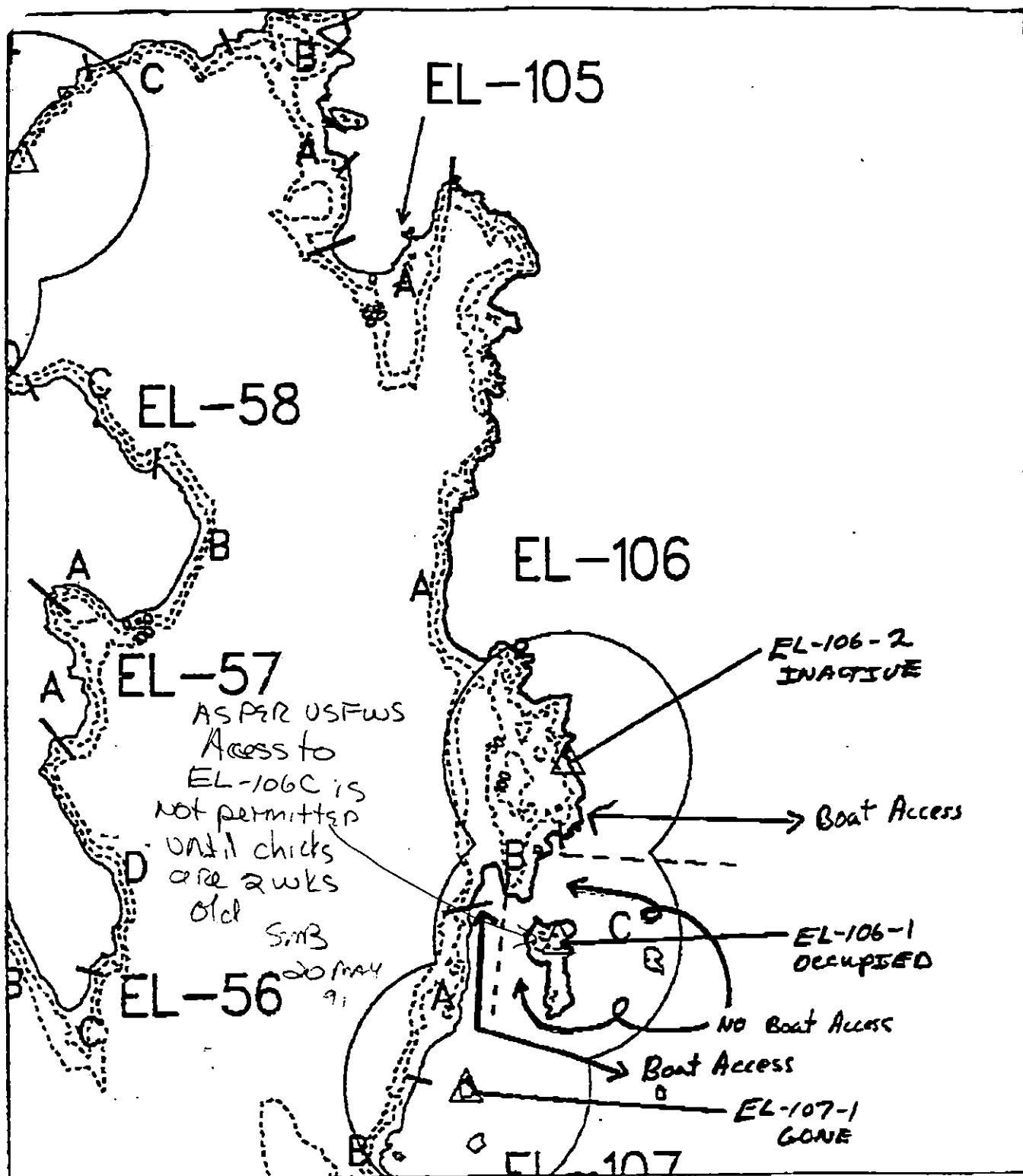
Shoreline subdivision map showing important biological features attached.

6/13/91

EL 106 C (Cont)

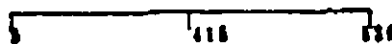
- (G) Bedrock faces approximately 90% covered with adult barnacles and spat. In bedrock cracks and crevices, recently-settled littorine snails and mussel spat are abundant. Juveniles of limpets, littorines and mussels are well represented. Grangers seen on encrusting red algae (Hildenbrandia) in tidal pools associated with bedrock.
- (H) Same as "B" + "D".

The remaining oil on this island is exerting no obvious adverse impact to the existing intertidal communities or to the successful recruitment and settlement of the major indicator species



EL 106

METERS



AS State Plane Zone 4
datum

Segment Reference Map
Map Key: PUSBL106



EAGLE NEST

Attachment 1

EL 106-C
 SKETCH MAP
 13-JUN-91
 1040-1206
 Bio Sketch
 B. McCormick

SKIFF survey

UITZ: Black lichen

MITZ: Fucus/mussel zone (presumably grazers present also)

LITZ: 100% algal cover

harbor seal

No biota at all in UITZ near oil zone. The lower-mid and lower ITZ support the same ~~algal~~ faunal assemblages at that described in "A". Again, the bedrock at either end of the beach is covered with barnacles, mussels, littorines, limpets, & algae in the lower zones. Strong recruitment by littorines and mussels at this site.

No bio within 30m of oil; LITZ:

dense layer of algal cover; MITZ: Fucus barnacles (adult & spat), littorines (many new recruits).

Many *Pisaster* on bedrock: some brooding.

No dense *Nucella* feeding on barnacles.

Abundance of very-recently-settled littorine snails, mussel spat, & juvenile limpets amongst dense barnacle cover.

No biota in the M-UITZ.

LITZ has generally sparse mussels, barnacles, and littorines. Algal cover LITZ-to-subtidal.

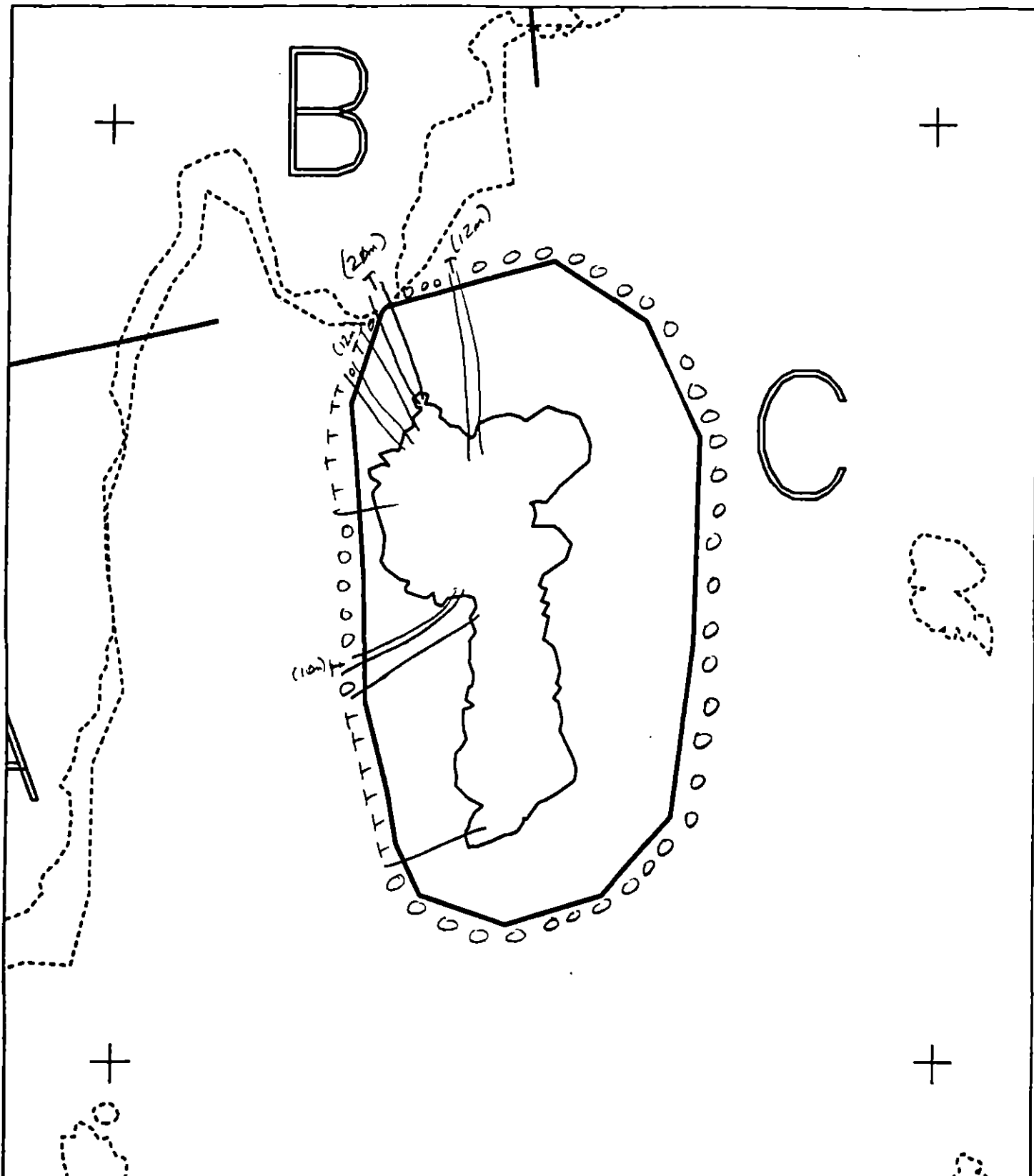
Same as B and D

Stain above/within (?) black lichen zone. See "B" above for zonation description.

NORTH

meters

Reviewed M36/17/91



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

EL106 C
 ADEC Subsegment Length: 1208m
 METERS
 0 100 200
 AK State Plane Zone 4
 601100s

Subdivision Field Map
 Map Key: KNIEL106C
 Name: TRIMM
 Date: 13-JUN-91
 Date Entered:

SURFACE OIL CATEGORY MAP

REVIEWED CD 18 JUN

ASAP TAG REVIEW SHEET

Segment: FL 106 Subd: B Site: 1

Date
PRE-Review 14 AUG 90

Priority For Addressing In 1990

HIGH

MEDIUM

LOW

X NTR

Treatment
Recommended:

NTR

As per
Recommendation
Sheet

SKETCH - shows Heavy SOR
OG SHEET - " Heavy SOR

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

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

Priority Site For Reassessment In 1991

YES NO
X CG

YES NO
X ADEC

YES NO
X EXXON

YES NO
X LAND MGR

TAG 15 AUG 90

BIO

already scheduled
reassess 91

ASAP TAG REVIEW SHEET

Segment: EL 106 Subd: B Site: 2

Date
PRE-Review 14 AUG 90

Priority For Addressing In 1990

 HIGH

 MEDIUM

 LOW

X NTR

Treatment
Recommended:

NTR

*As per
Recommendation
Sheet*

OG sheet - NTR

Rec. sheet asks for STORM
BREM Relocation and
log removal ops like SITE 1.

TAG VISIT

Rec TAG VISIT

Priority Site For Reassessment In 1991

YES NO
X CG

YES NO
X ADEC

YES NO
X EXXON

YES NO
X LAND MGR

TAG 15 AUG 90

BIO

already sched
reassess 91

ASAP TAG REVIEW SHEET

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

Priority For Addressing In 1990

 HIGH X MEDIUM LOW NTR

Treatment
Recommended:

Manual Pickup AP and HSDR
& BIO

LOW - MEDIUM ENERGY

Priority Site For Reassessment In 1991

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

TAG 15 AUG 90

BIO (already sat)
Reassess
(AP patch thin +
crusty)

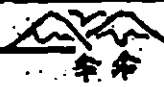
FOLLOWUP RECOMMENDED HOT

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

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

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

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

ADBC: Wesley Ghermley Wesley Ghermley  **

Comments: I highly agree with relocation of storm berms. In addition
I recommend Hot H2O Flooding thru entire area. This is the only thing
that will migrate oil. There is a tremendous amount of oil present.
Log Berm needs to be burned and moved to export oiled sediment.
 Extra: Ray Sotelo Ray Sotelo

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

USCG: PS/Lee Bercalona Lee Bercalona
 NOAA: Art Weiner Art Weiner

Comments: AGREE W/ RECOMMENDATIONS

and Rep: Toku Ebel Toku Ebel

Comments: I concur w/ recommendation of relocating the storm berm
and to remove all oiled logs and oiled debris.

A-CAP FOLLOWUP RECOMMENDATION

Segment: AS/EL106 Subd: B Site: 2 Date: 8/8 1990

Conditions Observed: OILED AREA BENEATH DRIFT LOG JAM IN SUTZ. A 2x4 meter AREA WAS EXPOSED TO REVEAL COVERS ON BOULDER ARMOR AND A SUBSURFACE PENETRATION OF OR (M) TO 5 CM. THE EXTENT OF OILING BENEATH THE REMAINDER OF THE LOG JAM WAS NOT DETERMINED. ASPHALT PAVEMENT AND CV/3 WAS FOUND IN THE UETZ + MITZ.

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

Completed by Pickup Crew: ☐ YES ☒ NO

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

ADEC: Wesley Ghormley (signature)

Wesley Ghormley (signature)

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

BOON: REY SUTZ (signature)

REY SUTZ (signature)

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

USCG: PS1 Leo Bersolina (signature)
NOAA: Art Weiner (signature)

Leo Bersolina (signature)
Art Weiner (signature)

Comments: AGREE TO RECOMMENDATIONS

Lead Rep: John Ebel (signature)

John Ebel (signature)

Comments: I concur w/ recommendation & Priorify for treatment. ~~Initial treatment of this site is to be completed by the end of the month.~~

ASAP FOLLOWUP RECOMMENDATIONS

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

Conditions Observed: Tar mats are observed in between buildings
on N.E side of Cove. Sub Surface oil present in Center of Cove to 20-40
N.W side of Cove has a huge area (50x10m) of Heavy OR sediment
The OG Survey (SSAT) did not do this area justice it is much worse.

Followup Recommendations: - Mechanical excavation of areas with
Sub Surface oil. Expose saturated sediments and remove OP and
OR/H from beach. Spread custom blend thru out area in complete
Possible flush system to migrate oil to water line. A curtain box
will be needed to contain oil in Cove.

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

ADEC Wesley Ghormley Wesley Ghormley
(signature) (signature)

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

Extra REV SATO REV SATO
(signature) (signature)

Comments: I don't agree with the recommendations as stated above. This
site should be custodialized and re-surveyed in '91 instead.

USCG PSI LEO BERSALONA
(signature)

NOAA ART WEINER
(signature)

Comments:

MANUALLY RAKE CUSTOMBLEND INTO IMPACTED AREA.

Land Rep. JOHN EBEL
(signature)

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

FIELD SHORELINE COMMENT SHEET

SEGMENT AS/ 100 SUBDIVISION: B SITE: 1 DATE 8-8-90

JSCG/NOAA PSI Leo Berzalona Leo Berzalona

NAME ART WEINER SIGNATURE Art Weiner

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

TO EVALUATE TREATMENT ON THE TWO OILED STORMBERMS.

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley 

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

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

- Mechanical Treatment a must -

LAND MANAGER

NAME John Ebel SIGNATURE John Ebel

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

To evaluate effectiveness of 90 treatment. This site was recommended for a storm berm relocation and oil removal. High priority 90 treatment. Multiple resources (land & water) affected by impact at this site. 3H, O, P, Q; 5T, R; 6Y, 7U. JSCG/NOAA

EXXON

NAME Ray Sotelo SIGNATURE Ray Sotelo

☒ YES

☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

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

FIELD SHORELINE COMMENT SHEET

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

SCG/NOAA PSI Leo Bersalona Leo Bersalona

NAME Art Weiner SIGNATURE Art Weiner

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

EVALUATE EFFECTIVENESS of INITPOL + CUSTOMBLEND
TO INSPECT AREA UNDER + ADJACENT TO LOG TANK IN SUTZ.

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley 

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

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

LAND MANAGER

NAME John Ebel SIGNATURE John Ebel

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

Shoreline and surface oil present hazards to Marine intertidal life forms
and all animals using area.
The effects of storm berm relocation is high priority for reassessment.

EXXON

NAME Ray Sotoca SIGNATURE Ray Sotoca

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

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

FIELD SHORELINE COMMENT SHEET

SEGMENT AS/EL 106B SUBDIVISION: B SITE: 3 DATE 8-8-90USCG / NOOA PSI Leo Bersalona Les Bersalona
NAME Art Weiner SIGNATURE Art Weiner☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

- ① SIGNIFICANT AMOUNT OF OIL REMAINING.
- ② EVALUATE CUSTOMER'S EFFECTIVENESS.

ADEC

NAME Wesley Ghormley SIGNATURE Wesley Ghormley☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

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

LAND MANAGER

NAME John Ebel SIGNATURE John Ebel☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

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

EXXON

NAME Ray Satch SIGNATURE Ray Satch☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

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

2423. 2423. 2423.

[illegible]

SITE 3

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

165

NAT OBSERVED

Photographs:

Frames

8/13/90 *W*

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

REVISION NO. 7/27/85

OILING IS VERY SIMILAR TO WHAT IS NOTED
 ON THIS MAP THE PAVEMENT IS THINNER DUE
 TO THE REMOVAL OF THE PAVEMENT

OG C.D. IN
 SEGMENT ST/EL-106 TO MANUAL
 SUBDIVISION B REMOVAL.
 DATE 07 APR 90
 CHECKLIST
 ASAP #2
 AUG 8 1990
 MAP FROM SSATU
 CHANEY

- 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
 - Cited Vegetation
 - 1 ●
 - Photo location, direction, and number

SKETCH MAP

BROKEN SOFT PATCHY ASPHALT PAVEMENT

SITE 3

BROKEN SOR/H

PIT #5

PIT #4

RAINBOW SHEEN

M-UITZ 10-12m wide 10m long 10-12m long B/c thick Red/Son

RAINBOW SHEEN

CT/C 5-6m wide 25m long

CT/C 2-3m wide 25m long

UP TO 14 meters wide

CT/C 10-12m wide 7.5m long M-UITZ full black tarlike coat on B/c Soft patchy pavement on URTZ 3m wide x 7m long

12m wide 20m long CT/B at high tide line

PIT #3

SOR UNDER LOGS

2000s Paving?

large amount of oil, sand and absorbent boom, M. ant. and logs

3m wide x 5m long area next to pit 3 covered vegetation

SITE 2

CT/C and CT/B 12m wide x 50m long M-UITZ Long CT/B beach

THE SPRAYING TO M/TZ

CT/C 20m wide 75m long M-UITZ B/c

SCHNEIDER

SEG. INTEL-106
 SUBDIVISION B
 LENGTH - 650 MET

OG FAH/1STRONG OIL SMELL
AROUND LOGS.

TCH MAP

SEGMENT S' L 106SUBDIVISION B OILED NEEDLES ETC.DATE Aug 8 90

UNDERLINGS

PIT #2

CHECKLIST OILING EXTENDS

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

SOR/H
 Rainbow Sheen
 BROWN SHEEN
 BEACH
 SILVER SHEEN
 WATER

LEGEND

1 ▲
 Pit - No Subsurface Oil

2 ▲
 Pit - Subsurface Oil

CT/C
 Continuous Distribution

CT/B
 Broken Distribution

CT/P
 Patchy Distribution

CT/S
 Splashed Distribution

Oiled Vegetation

Photo location, direction,
 and number

TIME DID NOT ALLOW FOR EXTENSIVE
 SURVEY AND ALL OIL PRESENT WAS
 NOT DOCUMENTED.

SITE 2

OIL SMELL

PIT #3

SEE OG MAP
 FOR FURTHER OILING
 INFORMATION.

SITE 1

CV/C 2m high
 9m long on
 Rock walls of
 Crevice

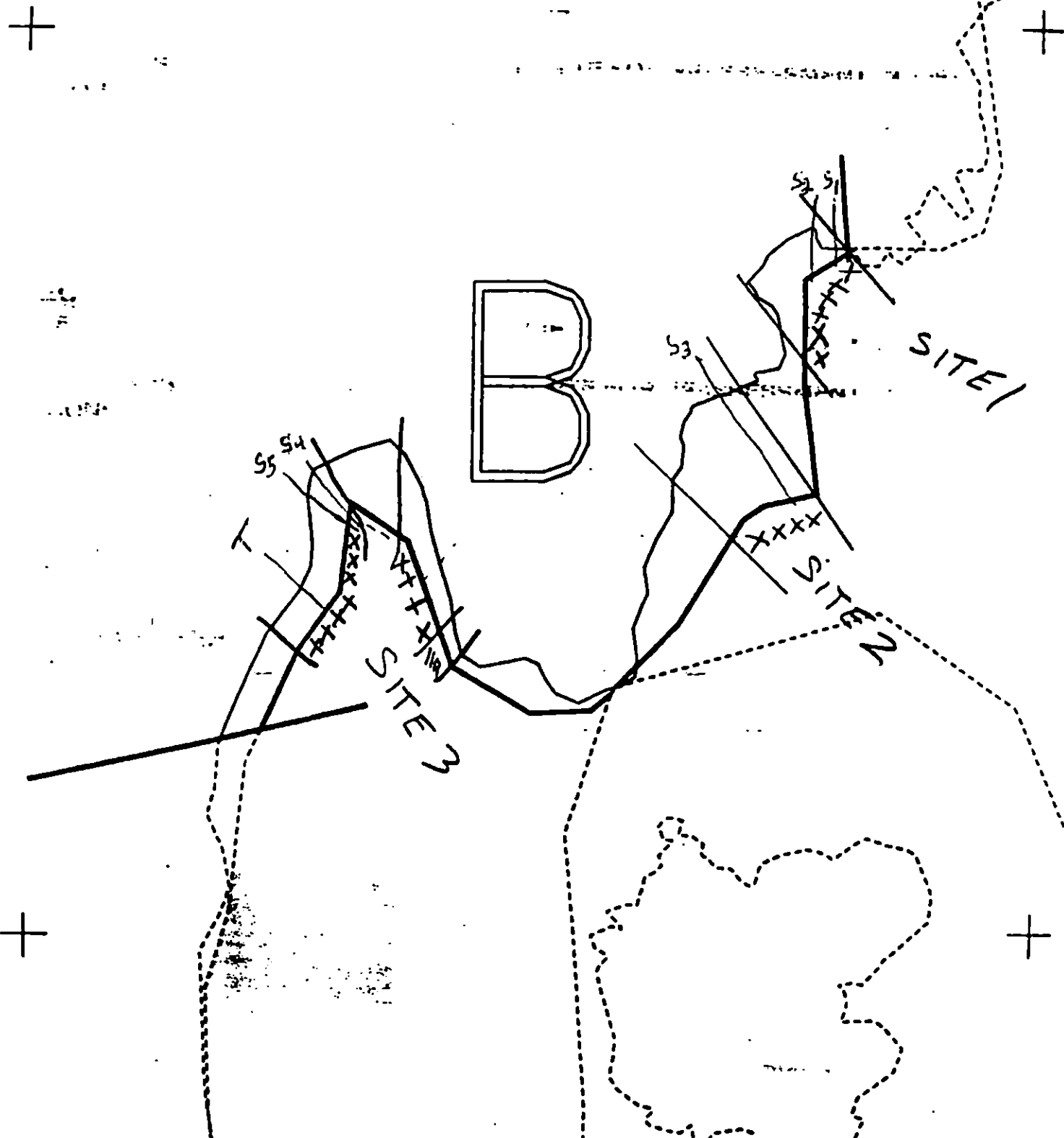
1.5x4m SOR

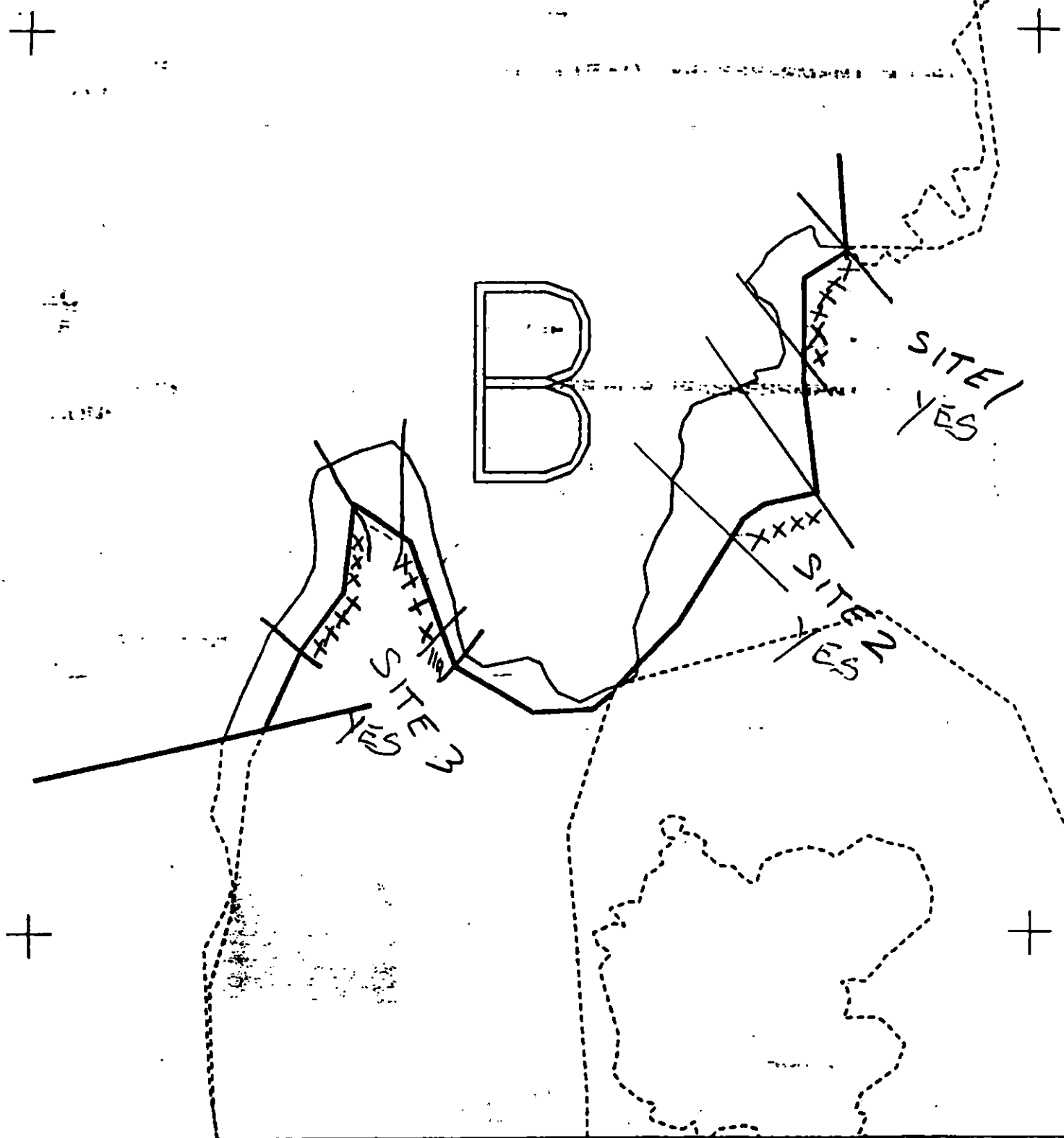
SITE 3

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

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

REVISION 000000





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

EL-106 B
 ADEC Subsegment Length: 549m
 METERS
 0 16 33 67 135
 AR State Plane Zone A 1-2000

Subdivision Field Map
 Map Key: KNIEL-106B
 Name: CHANEY
 Date: AUG 8 1990



ARLIS
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